VSB Engineering College,karur-639111

Project Design phase – I

Problem Solution fit

Project Title: Smart Farmer - IoT Enabled Smart Farming Application

Project Domain: Internet of Things

Team ID **:** PNT2022TMID33523

Team Lead : KALPANA D
Team Member 1 : ABINAYA R
Team Member 2 : ABIRAMI R
Team Member 3 : DHANUSUYA M

1.Customer segments:- Farmers can be sub-segmented under three categories. ➢ Micro, small, or marginal ➢ Emerging and large ➢ Commercial Farmers Based on farm: ➢ Surplus ➢ Gross revenue ➢ Land under cultivation	**6.Customer constrains:-** 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 :- Smart farming involves providing training to farmers and local village based trained persons for using technology and incorporating data guided decisions with their traditional agriculture practices.	**9.Problem route cause:-** Farmers are under pressure to produce more food and use less energy and water in the process. The main problem is to feed an increasing global population while at the same time reducing the environmental impact and preserving natural resources for future generation. Agriculture can have significant impact on environment	**7.Behavior:-** The behavioral approach focuses on the nature of decision making by farmers and on the many influences which affect such decisions. Agriculture has been mainly of an economic nature but the quite different social approach has grown more recently.
3.Triggers:- Experimentation is an essential tool for farmers to develop their farming system. Through experimenting farmers learn, gain experience and innovate. 4.Emotions:- Every year planting season stirs up a wide range of feelings in farmers around the country, It's an emotional roller coaster.	**10.Solution**:- Smart agriculture aims to help farmers to make decisions to maximize crop yield and quality, optimize water and other inputs, and maintain soil health. This is important for livelihood of marginal farmers in the context of climate change uncertainty.	8.Channels of behavior:- Behavior change principles as evidenced across various sectors such as health, business, advertising and agriculture. The mediums used in smart agriculture are **Video, TV, Radio, Cell phone, The internet as a knowledge resource, Social media.**