

## IDEATION PHASE BRAINSTORM & IDEA PRIORITIZATION

DATE	19 SEPTEMBER 2022
TEAM ID	PNT2022TMID47454
PROJECT NAME	SMART FARMER-IOT ENABLED SMART FARMING APPLICATION
MAXIMUM MARKS	4 MARKS

### STEP-1: TEAM GATHERING, COLLABORATION AND SELECT THE PROBLEM STATEMENT

#### 1: DEFINE PROBLEM STATEMENT:

Farmer are under pressure to produce more food and use less energy and water in the process. A remote monitoring and control system will help farmers deal effectively with these pressures.

### STEP-2: BRAINSTORM, IDEA LISTING AND GROUPING

#### 2: BRAINSTORM :

ADHIBA. P			KAVINKUMAR. K		
One of the benefits of using IoT in agriculture is the increased agility of the processes. Thanks to real-time monitoring and prediction system, farmer can quickly respond to any significant change in weather, humidity, air quality as well as the health of each crop or soil in the field	Majority of Indian farmers use traditional tools for agriculture such as plough, sickle, etc.. This leads to the wastage of energy and manpower and less yield per capita labour force. Only little use of the machine is seen in irrigation, harvesting and transportation	In farming, watering the plants is one of the difficult process and they have to wait for the whole field to pour water. He had to check the field for 30 min once	Smart farming based on IoT technologies enables growers and farmers to reduce waste and enhance productivity ranging from the quantity of fertilizer utilized to the number of journeys the farm vehicles have made and enabling efficient utilization of resources such as water, electricity, etc.	Overuse of pesticides and fertilizer in agriculture fields leads to destruction of the crop as well as reduces the efficiency of the field increasing the soil vulnerability toward pest. IoT applications may be used to update the farmer User about type & quantity of pesticides required by the crop	The biggest challenges faced by IoT in the agricultural sector are lack of information, high adoption costs, and security concerns, etc.. Most of the farmers are not aware of the implementation of IoT in agriculture.
NITHYA SRI SANTHOSHINI K V N S			ARTHI. S		
Remote sensing in agriculture. In revolutionizing the way data is acquired from different nodes in a farm IoT-based remote sensing utilizes sensors placed along with the farms like weather stations for gathering data, which is transmitted to analytical tools for analysis	Sensors placed along the farms monitor the crops for changes in light, humidity, temperature, shape and size. Any normally detected by the sensors is analyzed and the farmer is noticed. Thus remote sensing can help prevent the spread of diseases and keep an eye on the growth of crops	The data collected by sensors in terms of humidity, temperature, moisture precipitation and dew detection helps in determining the weather pattern in farms so that cultivation is done for suitable crops	Smart farming is a management concept focused on providing the agricultural industry with the infrastructure to leverage advanced technology-including big data, the cloud, and the internet of things (IoT)-for tracking, monitoring, automating and analyzing operations	It consists of Temperature sensor, Moisture sensor, DC motor and GPRS module. When the IoT based agriculture monitoring system starts it checks the water level, humidity and moisture level	Cope with climate change, soil erosion and biodiversity loss satisfy consumers changing expectations. Meet rising demand for more food of higher quality invest in farm productivity.

#### 3: GROUP IDEAS:

- > soil moisture, temperature, humidity should be monitored.
- > In farming, watering the plants is one of the difficult process and they have to wait for the whole field to pour water. He had to check the field for 30 min once.
- >Intensive research on various plant diseases.
- >It should operated in online mode only.
- >Application should alert to monitor the crop field.

### Step-3: Idea Prioritization:

#### 4: Prioritize:

