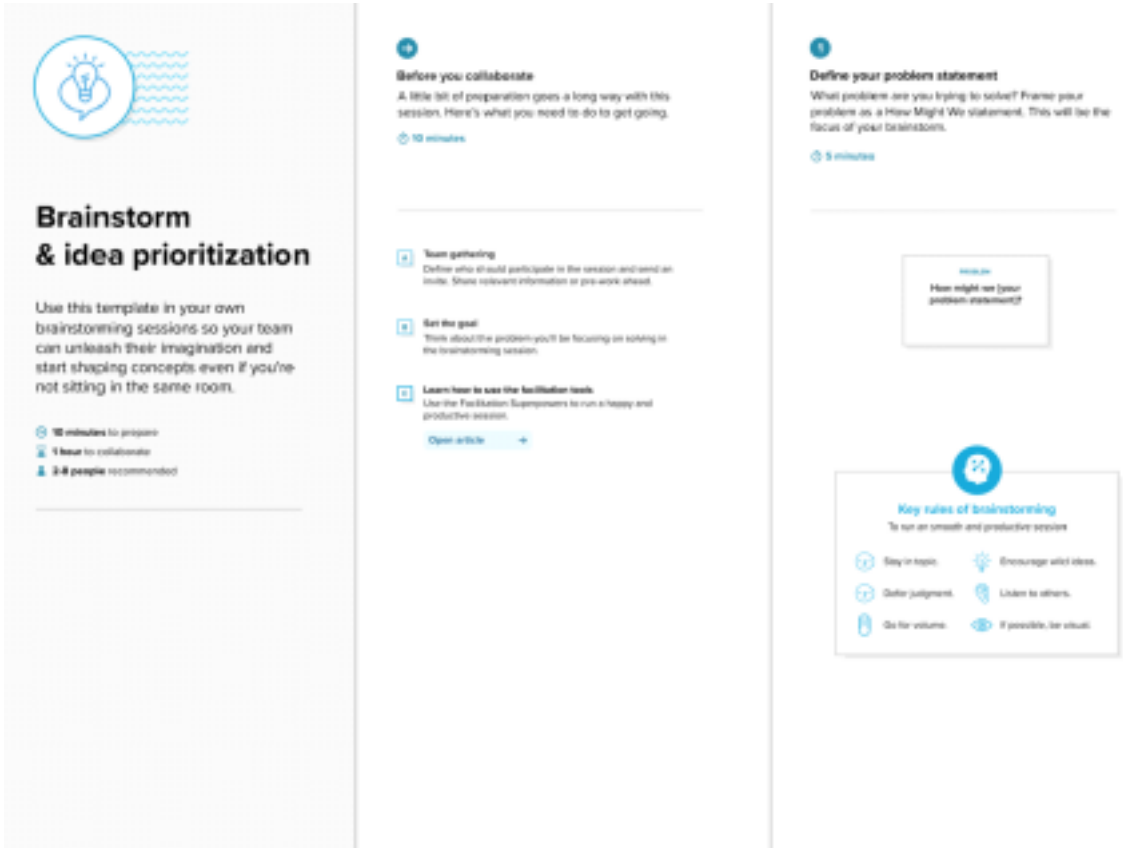
Ideation Phase
Brainstorm & Idea Prioritization Template

Date	27 October 2022
Team ID	PNT2022TMID52180
Project Name	IoT based Smart Crop Protection system for Agriculture
Maximum Marks	4 Marks

Brainstorming **Brainstorm & Idea Prioritization Template:**

Step-1: Team Gathering, Collaboration and Select the Problem Statement



Step-2: Brainstorm, Idea Listing and Grouping

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Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

TIP

You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

Sharmini.S

- Monitoring environmental factors is the major factor to improve the yield of the efficient crops
- Iot are applicable in various methodologies of agriculture
- Estimates crop water requirements
- Detecting animal entry in the farm

Aiswarya.A

- Internet of things is used with IoT frameworks to handle and interact with every data and information
- The level of water is maintained by the sensor in the tank
- Water level is managed by farmers both manually and automatic using mobile application
- Monitoring humidity and temperature

Nanthini. N

- Monitoring water level in the tank
- Facilitates even distribution of labour
- Maintaining physical and chemical properties of soil
- Encouraging microbial activity

Thasleema. J

- Crop protection combines strategies, tools and products that protect against various pests
- The components required is Arduino UNO, NodeMcu,LCD Display, Flame sensor, PIR Sensor
- decrease farm input requirements
- crops in farms are ravaged by goats, cows,birds

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Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

PROTECTION OF CROPS

Crop protection by using modern technologies allow farmers to keep plants healthy and achieve stable and high fields.

The role of crop protection is to efficiently control the residual harmful species, with minimal use of selected pesticides.

The importance of crop protection in agriculture lies in conserving bio diversity and nutrients in the earth by optimizing the resouce used

Avoid mechanical soil disturbance and maintain or improve organic matter during rotations until reaching an equilibrium level.

SENSORS

The air temperature and humidity sensor can monitor the air temperature and humidity changes in angriculture area.

Electro-chemical sensors are used to monitor and analyze the soil quantity and measures the pH level of the soil.

Location based sensors like GPS sensors and GIS sensors can help farmers to get greater insights on cultivable lands.

Smart cameras which helps to maintain the overall productivity of the crop and reduce the occurance of pesticides.

MERITS

Crop protection helps to keep plants healthy and maintain sustainable crop yields.

An ideal crop rotation helps in controlling insects, pests and diseases and also controls weeds in the field.

Crop protection combines strategies, tools and products that potect against various pests.

The advantage in crop protection involves decrease farm input requirements

IMPORTANCE OF CROP PROTECTION

Reducing pests and creating the most adverse conditions for their adaptation.

Reduction in market value

Increased production costs.

Source of transmission of other crop disease.

Step-3: Idea Prioritization