Ideation Phase
Brainstorm & Idea Prioritization

Date	9 September 2022
Team ID	PNT2022TMID12813
Project Name	SmartFarmer - IoT Enabled Smart Farming Application
Maximum Marks	4 Marks

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

1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

⏱ 5 minutes

PROBLEM

How might we able to come up with a better solution for sustainable farming using modern technologies?

PROBLEM

How might we able to create a better environment for farmers?

PROBLEM

How might we able to incorporate the modern technologies to have a better agriculture?

PROBLEM

How might we able to make the life of farmers easier by have a great yields and good nutritional produce?
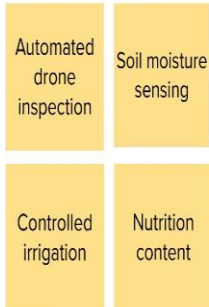
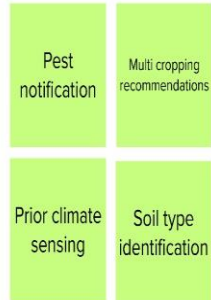# Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm

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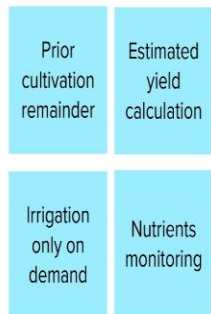
🕐 10 minutes

Person 1

Automated drone inspection	Soil moisture sensing
Controlled irrigation	Nutrition content

Person 2

Pest notification	Multi cropping recommendations
Prior climate sensing	Soil type identification

Person 3

Identification of optimal growth condition	Crop tracking
Yield monitoring	Real time nitrogen monitoring

Person 4

Prior cultivation remainder	Estimated yield calculation
Irrigation only on demand	Nutrients monitoring

3

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

Idea Grouping

- Automated drone inspection
- Pest notification
- Prior climate sensing
- Soil moisture sensing
- Identification of optimal growth condition
- Controlled irrigation
- Soil type identification
- Irrigation only on demand
- Nutrients monitoring
- Real time nitrogen monitoring
- Nutrition content
- Multi cropping recommendations
- Yield monitoring
- Crop tracking
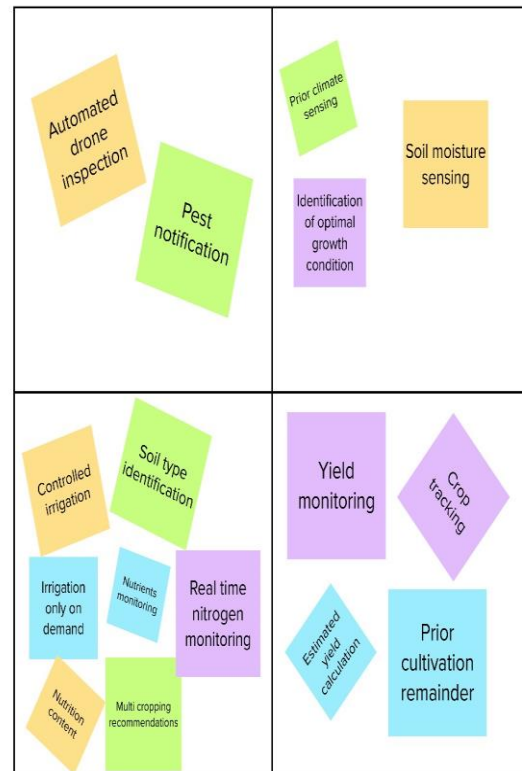- Estimated yield calculation
- Prior cultivation remainder

3

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🕐 **20 minutes**

monitor soil nutrition	conduct field assessment before harvest	increase yield
we can set a time for motot on and off	work efficiency	we improve seed quality
use robots in future	soil testing	improved sustainablity

Step-4: Idea Prioritization

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

⏱ 20 minutes

Importance

♡

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

- Identification of optimal growth condition
- Crop tracking
- Nutrients monitoring
- Automated drone inspection
- Irrigation only on demand
- Nutrition content
- Real time nitrogen monitoring
- Multi cropping recommendations
- Yield monitoring
- Prior cultivation remainder
- Soil moisture sensing
- Prior climate sensing
- Estimated yield calculation
- Pest notification
- Controlled irrigation
- Soil type identification

⚑

Feasibility

Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)