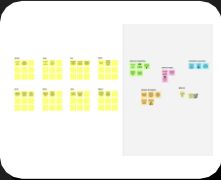# Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

10 minutes to prepare
1 hour to collaborate
2-8 people recommended

Share template feedback

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

1) How might we provide efficient decision support system using wireless sensor network?

2) How might we help the farmers to ease their work?

3) How might we identify nutrients and deficiency in the soil?

4) How might we monitor the crops and control pump(irrigation) remotely?

5) How might we save energy with less effort?

2

Brainstorm

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

10 minutes

Dhanasekar N.S
Team Lead

- Can identify nutrient levels and deficiency in the soil using sensors and intimate the farmer about the counter action required.
- Controlling water pump remotely through mobile app using relay, microcontroller and api key.
- Can use GSM module for transferring the data from the edge device to the cloud database.
- Machine learning can be used to analyse crop growth and predict the harvest time.

Arun.R

- Adding an artificial intelligent system to predict the production of goods.
- Using the App, the farmer can control the water pump through various options based on the requirement.
- The Real time data analyzer could be connected to the databases to obtain the results.
- The CCTV cameras, infrared cameras, weather monitoring systems can be used to monitor the farm.

Balaji.R

- The LoRa technology can be used to transmit sensor readings from the device and update the data in the cloud.
- Notification could be sent to farmer's phone about environmental conditions and water levels of the crop field with the help of an App.
- Prediction of water scarcity/drought situations and forewarning the farmer with the aid of AI
- Soil sensors measure soil moisture, temperature ,pH and electric conductivity enabling farmers to approach each crop's unique needs individually

Gokul.R

- Control irrigation, saves water using GreenIQ smart sprinklers controllers
- Monitor the water tank level in real time to avoid scarcity and make the irrigation process more efficient

---

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

20 minutes

Awareness

- Should intimate farmers about the recommended chemical levels in the soil for crop growth and the current levels of measurement
- Should inform the farmer about the soil's suboptimal moisture level
- Notify the farmer of any changes in weather conditions.

Sensor

- NPK sensor
- Soil moisture
- Temperature sensor
- pH sensor
- Rain sensor
- Humidity
- LDR

Report

- Alert messages in case of abnormality in the parameters and suggestion of ideal counter actions
- Notify the farmer about the weather conditions , fertilizer requirements, how much water the crops will need to be provided with.
- Display details analysis of the sensor data in the form of graphs/ charts and the implication of current readings

Actuations

- Climatic condition can be monitored with the help of rain sensor,LDR,temperature sensor and notify the farmer incase of emergency
- Based on soil moisture level and rain sensor readings appropriate amount of water can be supplied to the field using relaywith water pump
- Based on NPK,pH chemical nutrients and acidity of the soil can be determined and suitable action can be taken .

Data Analysis

- Data can be collected from environment using sensors and sent to cloud database to monitor the climatic condition
- Recommedation of suitable crop variety to be sown based on environmental conditions determined with the help of sensor data
- Based on scientific data, determining the minimal water/moisture level in the soil needed by the specific type of crop sowed
- Determination of chemicals level in the soil required by the particular variety of crop sown based on scientific data

Alert

- Notification is shown in farmer's phone using Wi-Fi about environmental condition,health and water levels of the crop field

---

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?

Feasibility

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

- Based on the water levels of the farm measured by the sensors , control the water pump remotely through the mobile app
- To the farmer, suggest the use or prohibition of fertilisers based on the chemical levels identified in the soil.
- Notify the farmer of any changes in weather conditions.
- Prediction of water scarcity/drought situations and forewarning the farmer with the aid of AI
- Adding an artificial intelligent system to predict the production of goods.
- Monitering animal movements using sensors/camera and preventing them from entering the field
- Machince learning can be used to analyse crop growth and predict the harvest time.

Need some inspiration? →
See a finished version of this template to kickstart your work.

Open example