

Ideation Phase

Brainstorm & Idea Prioritization


Date	07 October 2022
Team ID	PNT2022TMID06413
Project Name	Project – Real Time River Water Quality Monitoring System
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

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.

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



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

➔

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

🕒 10 minutes

A Team gathering
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

B Set the goal
Think about the problem you'll be focusing on solving in the brainstorming session.

C Learn how to use the facilitation tools
Use the Facilitation Superpowers to run a happy and productive session.

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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 STATEMENT

Farmers put fertilizers and pesticides on their crops so that they grow better but these fertilizers and pesticides can be washed through the soil by rain to end up in the rivers.



If the large amount of fertilizers on the farms waste drain into river the concentration of **nitrate and phosphate** in the water increases considerably algae uses these substances to grow and multiply rapidly turning the water green.



The massive growth of algae called **eutrophication** that leads to pollution! When the algae die they broken down by the action of bacteria which quickly multiply using up all the oxygen in the water which leads to the death of many animal.

Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm

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

🕒 10 minutes

Kiran S

Keep the data design

Use minimal number of parameters with cheap sensors for predicting water quality

Timeline of measurement must be recorded

Data modeling to use the past dataset

Mowleeshwaran K

To measure perious quality metrics like physical, chemical and microbial properties

Finding the deviations in measured metrics and give timely warning in recognition threats or hazards

Collect data at each node such as turbidity, oxygen level and pH values from different sensors

Developed model comprises of different sensors

Rakshitha P

Developed model is accurate, economical and requires less manpower

pH sensor is communicated to the base station using Zigbee module

GSM technology was efficaciously implemented for sending alarm

Continuous monitoring of quality of water for ensuring safe supply of water

Nishalini S

The built-in Wi-Fi module associated with Node-MCU

Wi-Fi facilitates connectivity of internet, and transmits the data measured from the sensor to the Cloud

The designed prototype monitors a number of contaminants present in the water

The obtained results are stowed in the Cloud and deep learning techniques

3

Group ideas

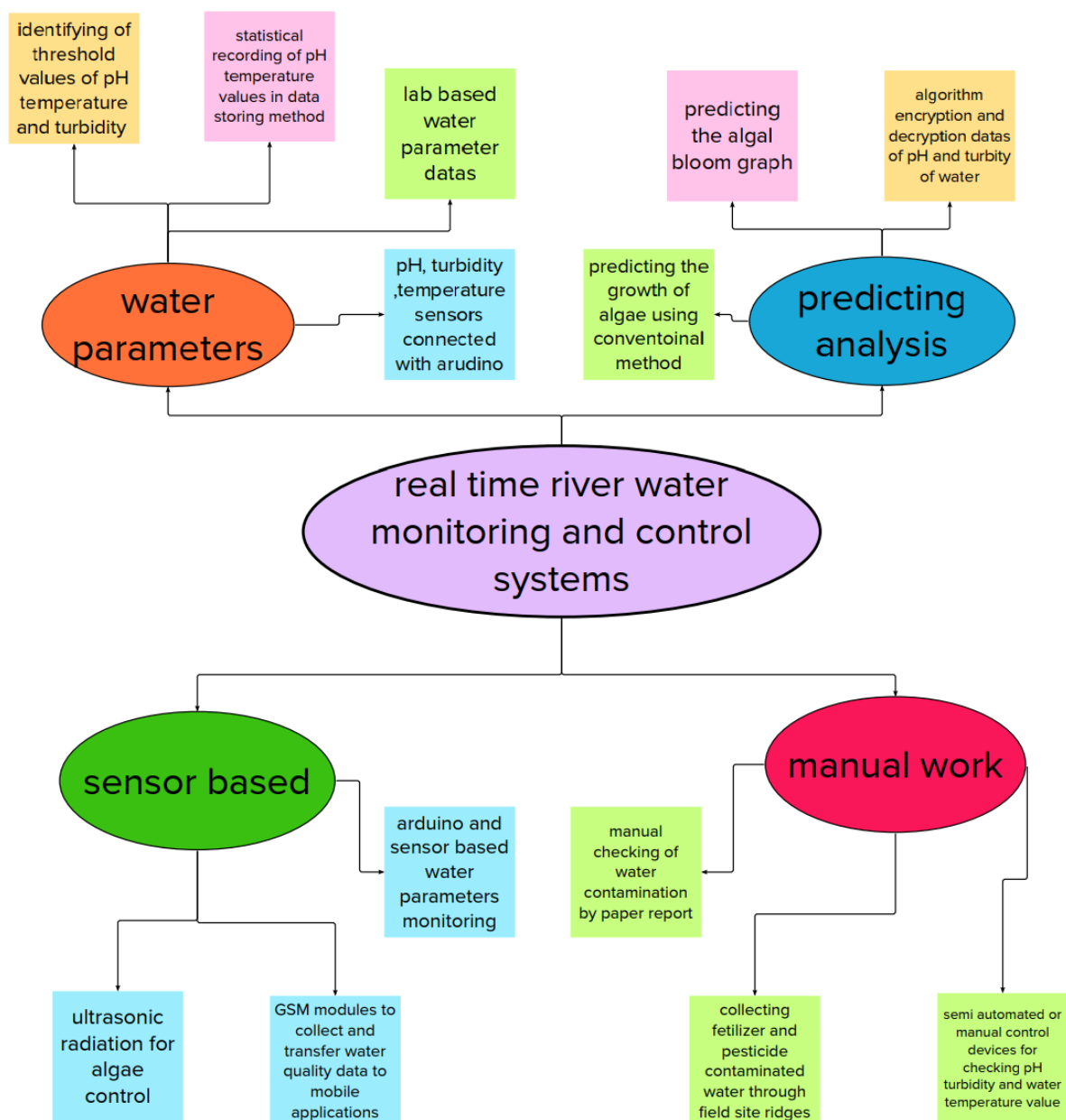
Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

🕒 20 minutes

TIP

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

Group ideas



Step-3: 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

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the **H** key on the keyboard.

