


Ideation Phase

Brainstorm & Idea Prioritization

Date	30 September 2022
Team ID	PNT2022TMID12777
Project Name	Realtime River Water Quality Monitoring and Control System
Maximum Marks	4 Marks

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



Brainstorm & idea prioritization

Real Time River Water Quality Monitoring and Control System

🕒 15 minutes to prepare
🕒 1 Hour 20 Minutes to collaborate
👥 4 Persons

➔

Preparation for the Brainstorm

Ample amount of time was given to the participants for them to prepare on problem statement and logistics

🕒 15 minutes

A **Gathering of students for the session**
Invite has been sent to the students of Realtime River water quality monitoring control system of batch B6-6M2E. The students are advised to have an idea about the topic before the session.

B **Goal of this session**
The goal of this session is to come up practical ideas that can be able to solve our problem statement

C **Usage of facilitation tools**
The facilitation tools are used for bringing up a productive conclusion of the session.

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Define your problem statement

The problem statement is defined below such that the session will be focused in coming up with ideas to solve it.

🕒 5 minutes

PROBLEM

How might we able to get real time data eliminating large man power and high cost provided that good quality water is ensured?



Key rules of brainstorming

To run an smooth and productive session

🕒 Stay in topic.

💡 Encourage wild ideas.

🕒 Defer judgment.

👂 Listen to others.

🗣️ Go for volume.

👁️ If possible, be visual.

Step-2: Brainstorm, Idea Listing and Grouping

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Brainstorm

Ideas that were put forwarded by the students have been listed out below.

🕒 20 minutes

Swetha S

Setting of Sensors at remote places	Since Sensors are used labor cost gets lowered	Setting Std. threshold to ensure quality
Immediate action is taken when there is any discrepancies in values		

Kiruba Shankari L

Real time Stream processing of Data	Quality of water is measured periodically	Comparative analysis of real time data with Std.
Storage of real time data for future use		

Praveen S

Stored data can be used to train ML & AI models	Solve and study the upcoming situations using trained ML models	Based on the study we can create awareness
Display the real time data using digital billboards for public		

Sakthi J

Efficient transmission of data from onsite sensors to base station	Proper networking to ensure on time delivery of data to responsible person	Publish - Subscribe model based design can be used
Cloud based storage can be used instead of physical storage		

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Group ideas

Ideas given by the students are grouped together based on the similarities in them and labels are given for each group.

🕒 20 minutes

🏠 Design Setup

Setting of Sensors at remote places	Real time Stream processing of Data
Publish - Subscribe model based design can be used	Storage of real time data for future use

🔍 Analysis

Setting Std. threshold to ensure quality	Comparative analysis of real time data with Std.
Quality of water is measured periodically	Study the upcoming situations using trained ML models

☁ Storage

Storage of real time data for future use	Cloud based storage can be used instead of physical storage
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👥 Efficiency

Since Sensors are used labor cost gets lowered	Efficient transmission of data from onsite sensors to base station
Proper networking to ensure on time delivery of data to responsible person	

👤 Public Usage

Display the real time data using digital billboards for public	Based on the study we can create awareness
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🔮 Future Scope

Setting Std. threshold to ensure quality	Proper networking to ensure on time delivery of data to responsible person
Stored data can be used to train ML & AI models	Solve and study the upcoming situations using trained ML models

Step-3: Idea Prioritization

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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

