Ideation Phase
Brainstorm&Idea Prioritization

Date	12 September 2022
Team ID	PNT2022TMID41539
Project Name	Signs with Smart Connectivity for Better Road Safety
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization:

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.

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 go
session. Here's what you ne

🕐 **10 minutes**

A **Team gathering**
Define who should participa
invite. Share relevant inform

B **Set the goal**
Think about the problem you
the brainstorming session.

C **Learn how to use the facilit**
Use the Facilitation Superpo
productive session.

Open article →

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

This project will replace the static boards to smart signed boards that will change the speed limits according to the weather climate and show diversion messages if there is accidents in the road and alert messages if there is hospital,schools or any roadworks.

Key rules of brainstorming
To run an smooth and productive session

- 😊 Stay in topic.
- 😐 Defer judgment.
- 🔒 Go for volume.
- 💡 Encourage wild ideas.
- 👂 Listen to others.
- 👁 If possible, be visual.

Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm

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

🕐 **10 minutes**

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 and break it up into smaller sub-groups.

🕐 **20 minutes**

Team Lead
MUGILA R-621119106017

- We can digitalize the boards that can even more clearly visible to drivers.
- The sign boards have button mode and that button is used when there is no network connectivity.
- Using IOT device,the accidents happened in the road can be alerted to the other drivers.
- Traffic signals will change automatically by detecting the moving using PIR sensor on the crosswalks.
- Using cloud communications the data can be shared through network and the functions of the signs of the board can be controlled.

Team Member 1
ISHWARIYA P-621119106008

- High brightness signs are used to improve road safety.
- Using AI the traffic signals would be controlled for the people who using the crosswalks.
- During off peak hours weather based speed limit is avoided and the speed limits can be changed according to the traffic.
- Landslide will be detect using the sensors in the mountain roads and alerted to the smart signed boards.
- Using weather API,the weather can be predicted and the weather will be displayed in the smart sign boards.

Team Member 2
KALPANA T-621119106014

- Regulatory checks of the sign boards improve the reliability of this system
- Using GPS and radar the collision avoidance system can be introduced.
- Driver attention detection by using sounds in the sign boards
- Emergency numbers are provide to display in sign boards
- Sensors are used to calculate the vehicle speed

Team Member 3
SHREEIN FATHIMA S

- Smart signs are displayed through sign boards
- Road diversion due to construction and traffic can be avoided
- Based on the weather the speed limit in the sign board may increase or decrease using weather API.
- Road safety digitalized and we'll improved through digital sign boards
- Sign boards may not work some times due to no solar power and weather conditions
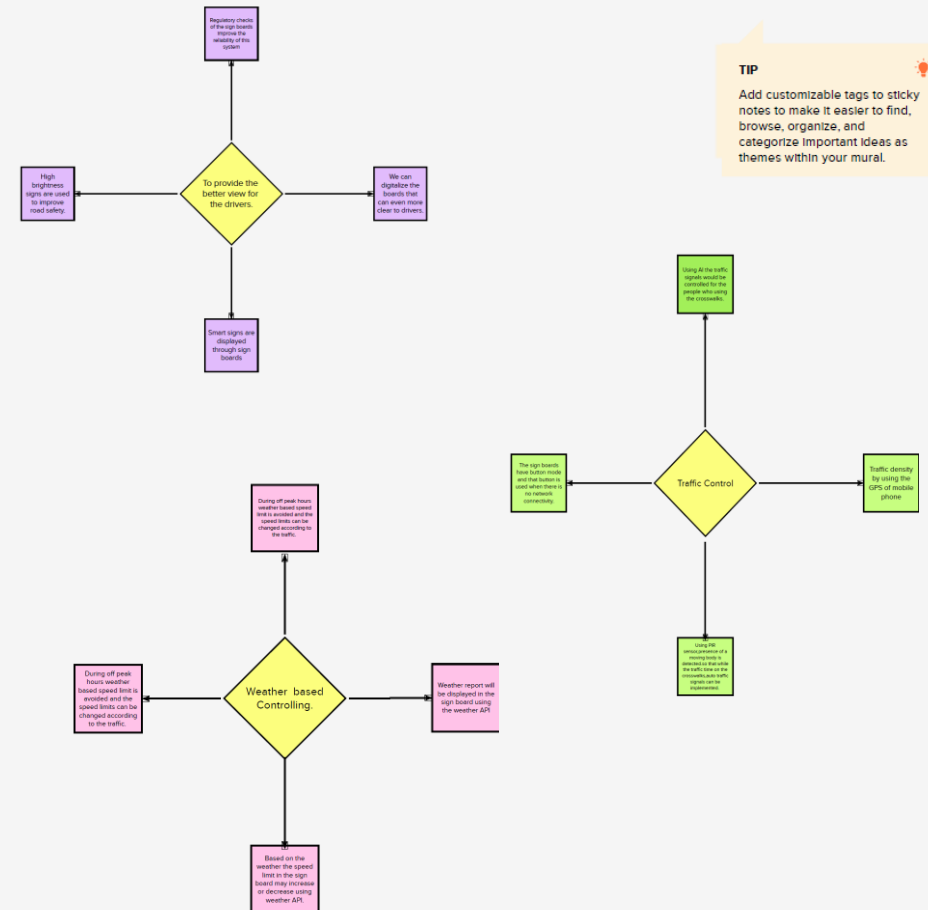
Step-3: Idea Prioritization

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**

Importance

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

- High brightness signs are used to improve road safety.
- Using PIR sensor,presence of a moving body is detected.so that while the traffic time on the crosswalks,auto traffic signals can be implemented.
- Using IOT device,the accidents happened in the road can be alerted to the other drivers.
- The sign boards have button mode and that button is used when there is no network connectivity.
- During off peak hours weather based speed limit is avoided and the speed limits can be changed according to the traffic.
- Using AI the traffic signals would be controlled for the people who using the crosswalks.
- Sign boards may not work some times due to no solar power and weather conditions
- Emergency numbers are provide to display in sign boards
- Weather report will be displayed in the sign board using the weather API
- Traffic density by using the GPS of mobile phone
- Sensors are used to calculate the vehicle speed
- Driver attention detection by using sounds in the sign boards

Feasibility

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