

## Project Design Phase-I

Date	12 October 2022
Team ID	PNT2022TMID21659
Project Name	Project - Signs with Smart Connectivity for Better Road Safety
Maximum Marks	2 Marks

### Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	In Static Signboard, the road sign and the speed limits are static. In some cases, due to heavy traffic or accidents then we can change the road signs accordingly if they are digitalized.
2.	Idea / Solution description	<ul style="list-style-type: none"><li>➤ Replacing traditional roadside signage with IOT-enabled smart ones. Smart signs are built using LED and the Internet of Things.</li><li>➤ The problem of this project is to potholes and climate change. So basic concept to solve this is that to detect the potholes and the change in climate and then convey the intermediate person to maintain the speed if the user is connected to internet and for the user who are not connected to the internet will receive the information by the digital board placed at a particular interval of distance.</li><li>➤ If there is rainfall then the roads will be slippery and the speed limit would be decreased by dynamically change signs. To avoid the traffic by prediction of traffic jam or accidents in earlier to take diversion of road.</li></ul>
3.	Novelty / Uniqueness	<ul style="list-style-type: none"><li>➤ Traffic detection using IOT.</li><li>➤ We detect the climate change and convey about the safety measures to be followed users.</li><li>➤ It gives information about nearby places like hospitals, schools, etc. so that customers may make decisions based on that knowledge, such as</li></ul>

		speeding.
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> <li>➤ There is no more waiting time in the traffics.</li> <li>➤ Decrease in the number of accidents.</li> <li>➤ Disaster updates can be shown on the signboard.</li> <li>➤ Customers can travel peacefully at all type of climatic changes because of the earlier intimation.</li> </ul>
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"> <li>➤ It doesn't require more cost because in most of the junction already contains camera in the top of the signal towers, we just analyse the number of vehicles in the lane by a Python code and change the signals accordingly with the help of IOT.</li> <li>➤ The government's implementation of these for common citizens is an excellent endeavour to increase public awareness. This can be funded separately by the government, which lays the groundwork for a safer environment.</li> <li>➤ The installation of digital smart sign boards cost about (1.5lakh) approximately which helps to drastically reduce the accidents and vehicle collision</li> </ul>
6.	Scalability of the Solution	<ul style="list-style-type: none"> <li>➤ Using weather Prediction in earlier stage that will lead to help the people to slow down speed by indicating the sign and by knowing the accident or traffic jam before that leads to people take diversion other way.</li> <li>➤ This solution will help to decrease the death rate up to 80%.</li> <li>➤ Most of the people are struggling in the traffic signal by waiting for a long in the same lane. They can be cleared by this idea.</li> </ul>