

Project Design Phase-I

Proposed Solution

Date	05 November 2022
Team ID	PNT2022TMID29479
Project Name	Project –Signs With Smart Connectivity for Better Road Safety
Batch	B3-3M5E

Proposed Solution :

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Project - Signs with Smart Connectivity for Better Road Safety is used to educate the drivers digitally using IOT who do not have knowledge about traffic signs and weather indication for the drivers and passengers convenience. Based on the traffic and fatal situations the diversion signs are Displayed. Guide(Schools), Warning and Service(Hospitals, Restaurant) signs are also displayed accordingly.
2.	Idea / Solution description	Replacing the man made painted signs into digital as well as their name which is more visible compared to current signs and also indicating weather in the same sign boards for driver where weather is not predictable. The weather and temperature details are obtained from the OpenWeatherMap API. Using these details, the speed limit will be updated automatically in accordance with the weather conditions. Also, the pedestrians are given an option to change the traffic signs if they want to cross the road.
3.	Novelty / Uniqueness	Weather indication on sign boards is unique which will help mostly the two wheelers from unfortunate heavy rains and winds. Digital traffic signs also educates the drivers to follow traffic rules easily.
4.	Social Impact / Customer Satisfaction	It makes the people to know about traffic signs if they don't know ,it shows signs digitally to avoid the accidents and weather indication based on IOT to avoid accidents

		and it helps mostly for two wheeler passengers .
5.	Business Model (Revenue Model)	This project can make revenue by selling many equipments to the government sector and also private sectors(educational & medical institutions). Maintain services are also taken by the company. The public will also gain all the information about the road, even if they are checking for an alternate path because of some mishaps that happen on the roads and these functionalities will increase the value of the product in the global market.
6.	Scalability of the Solution	It makes the daily life of drivers and passengers better. The product can be scalable by adding new features to the product makes more revenue. The hardware components can be directly interfaced with the microcontroller and small modifications can be made in the programming of the existing product. In case of the software, the website application has to be updated with the additional functionality by creating a new section for the updated hardware. So this will not affect the existing functionality of the product and new functionality can be easily integrated. In addition, a separate circuit will be kept along with the hardware to detect any problem which informs the web application. Also a notification will be sent to the product service department.