Project Design Phase-I
Proposed Solution

Date	17 October 2022
Team ID	PNT2022TMID23778
Project Name	Project – Phase one 1 – proposed solution
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	To replace the static signboard, smart connected sign board are used. These smart connected sign boards get the speed limitation from a web app using weather API and update automatically. Based on the weather changes the speed may increase or decrease. Based on the traffic and fatal situations the diversion signs are displayed. Different modes of operations can be selected with the help of buttons
2.	Idea / Solution description	The Weather and temperature details are obtained from the open weather Map API. Using these details, the speed limits will be updated automatically in accordance in accordance with weather conditions. Also, details regarding any accidents and traffic congestion faced on the particular road are obtained . Based on this, the traffic is diverted followed by a change in map path and the traffic is cleared. So in the traffic sign board, some buttons will be placed which will be used to make it generic; where each button will be given a functionaliaty such as changing the warning signs, Which are predefined and separate signs will be present for both school and hospital zones.

		By activating this button, either through the web application, and the speed limit will also be set depending upon the zones. Also, the pedestrians are given an option to change the traffic signs if they want to cross the road. If the pedestrian presses the button that is present on the post at the end of the road, then the traffic will be analyzed immediately. Accordingly, the signs of the traffic signals will be changed. This inturn reduces the freduent changing of the traffic signs even if the pedestrains are not present.
3.	Novelty	Generic Signs board for all applications that uses both buttons and web service for updation. Pedestrains are given tne access to request the signs change of the signal to cross the roads.
4.	Customer Satisfaction	Diversion reasons will be displayed. If there is no traffic, Pedestrains can cross the street without waiting. Customer can reach the destination before the expected time.
5.	Business Model	Since APIs are used to actively monitor the customer's environment, this project employs a business strategy in which revenue will be generated on the basis of the length of time in which the customer actively interact with the product. This product is aimed to be free of cost to the public, but the revenue will be generated by selling this product to the government at a low cost, So there will be less accidents and the public will be aware of the discrepancies or accidents in a particular road. 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 happens on the roads and these functionalities will increase the value of the product in the global market.

6.	Scalability of the Solution	In the future , if any update is required either on the hardware or software side, it can be easily implemented . The hardware components can be directly interfaced with the microcontroller and small MODIFI IONS CAN be directly interfaced with the product. So this will not affect the existing functionality of the project and new functionality can be easily integrated. In addition, a separate circuit will be kept along with the hardware to detect ant problem which inform the web applications. Also a notification will be send to the product service department