

Project Design Phase-I Proposed Solution Template

Date	1 October 2022
Team ID	PNT2022TMID17080
Project Name	Signs with Smart Connectivity for Better Road Safety
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	<ul style="list-style-type: none">• Smart connected sign boards are used to replace static signboards.• These intelligent connected sign boards update automatically and obtain the speed restrictions from a web application using weather API.• The speed may increase or decrease in response to changes in the weather.• The display of the diversion signs depends on the flow of traffic and possible fatalities.• The necessary guide, warning, and service signs are also posted at hospitals and restaurants.
2.	Idea / Solution description	<ul style="list-style-type: none">• Smart traffic signals can also be programmed to react properly to conditions like gridlock or blockage or to the movement of heavier vehicles.

		<ul style="list-style-type: none"> • Smart programming and digitization can be used to control traffic signal operations in both bigger and smaller metropolitan areas. Simple traffic programming can be utilised to avoid congestion and improve traffic. • Why Road capacity may be quickly increased when traffic lights coordinate perfectly and respond to demand in real-time. • With technical experience, all of this programming can be completed.
3.	Novelty / Uniqueness	<ul style="list-style-type: none"> • Pedestrians have ability to request sign changes for the crosswalk signal for any application that updates using both buttons and a web API.
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> • The purpose of the diversion will be shown. • Pedestrians do not need to wait to cross the street if there is no traffic. • Customer can reach at the target destination earlier than expected time.
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"> • This project uses a business approach where income is earned based on how long users actively interact with the product, since APIs are used to actively monitor the customer's environment. • This product is intended to be provided without charge to the general public, but cash will be created by selling it to the government for a reasonable price, reducing accidents and increasing public awareness of errors or accidents on a certain road. • These features will boost the value because the public will benefit from having access to all the information about the road, even if they are

		looking for an alternative route due to accidents that occur on the roads.
6.	Scalability of the Solution	<ul style="list-style-type: none"> • Future updates that are needed can be quickly applied, whether they are on the hardware or software side. • The programming of the present product can be slightly modified and the hardware components can be directly interfaced with the microcontroller. • The website application must be updated with the new capabilities in the case of software by adding a new section for the updated hardware. • As a result, the product's current functionality won't be impacted, and new functionality can be added with ease. • Along with the hardware, a separate circuit will be preserved to detect any issues and alert the web application. • A notification will also be forwarded to the product service division.