

## Project Design Phase-I

### Proposed Solution Template

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|---------------|--|
| Date          | 15 October 2022                                      |
| Team ID       | PNT2022TMID09823                                     |
| 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) | Road traffic accidents (RTA) are defined as accidents that occurred or originated on a way or street open to public traffic. These collisions result in injury or death between automobiles or humans. RTA is a major problem worldwide resulting in significant morbidity and mortality. This problem is due to some inconvenience in signs placed in Highways and Roads. This issue regularly causes death to human's .  |
| 2.    | Idea / Solution description              | There are some road diversions due to heavy traffic or due to accidents then we can change the road signs accordingly if they are digitalized. This project proposes a system which has digital sign boards on which the signs can be changed dynamically. If there is rainfall then the roads will be slippery and the speed limit would be decreased. Using this we can enter the data of the road diversions, accident prone areas and the information sign boards can be entered through web app. This data is retrieved and displayed on the sign boards accordingly. |
| 3.    | Novelty / Uniqueness                     | This project is varies from others because here we are using our domain as Internet of Things (IOT).Then we use RAM-Minimum 4GB Processor-Min. Configuration OS- Windows/Linux/MAC and etc.. The methods used now are high in cost and not an easy task to implement over the world .But our idea has an easy impact to spread all over the world. This project comes under budget friendly for implementation.  |

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|----|---------------------------------------|--|
| 4. | Social Impact / Customer Satisfaction | Safety for all must be insured in today's world and it is necessary for efficient and proactive safety systems should be implemented in public places. If we used this, there might be a less in accident detection and traffic problems. So, there will be a reduction in death rate and loss in morality problem. Surely, it will help the people which helps in the problems comes under Social Impact.   |
| 5. | Business Model (Revenue Model)        | Route planning has become widely used in both personal and commercial use, resulting in an increasing dependence on its reliability. Various applications employ efficient algorithms for route planning. Trip time and cost, e.g., for tolls, have been the typical metrics for route planning applications, but other metrics, however, have been utilized, e.g., for fuel emission/consumption or energy requirements of electric vehicles. In this manner, drivers can be directed through routes that minimize their overall risk in traversing the road network. It is furthermore possible to target auxiliary mechanisms for safety-control across the network by controlling and redirecting traffic based on user driving behaviour or irrespective to incidental changes in the road network. |
| 6. | Scalability of the Solution           | The present framework is somewhat different from the others. <i>Road accidents</i> cannot be eliminated but can be reduced by enhancing the safety of the drivers. (This study developed a smart mobile-based application that uses in-built sensors to alert drivers with voice and image notifications. The application provides a voice alert to a needed action that enhances the driver's attention. The smartphone is used to avoid the need for on-board devices to detect and recognize road signs, sensors on road infrastructure, and the use of WLAN.   |