

**Project Design Phase-I**  
**Proposed Solution Template**

Date	22 September 2022
Team ID	IBM-Project-13896-1659534693
Project Name	Signs with Smart Connectivity for Better Road Safety
Maximum Marks	2 Marks

**Proposed Solution Template:**

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Around the world, road traffic injuries cause 1.35 million deaths and up to 50 million injuries each year. These injuries can lead to lifelong disabilities including brain and spinal cord injury. Road traffic injuries are the leading cause of death among young people aged 15-29.
2.	Idea / Solution description	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.
3.	Novelty / Uniqueness	We validate the work through a case study based on data available for New York County, NY, USA. Maps and shapefiles were sourced from Open Street Maps (OSM), United States Census Bureau, and David Gleich's US Roads extracts. We utilized collisions data sourced from the New York City (NYC) Open Data portal. Notwithstanding, the model applicability extends to all localized data. Core processing were performed in Matlab, with some preprocessing made in Geomatica 17.
4.	Social Impact / Customer Satisfaction	As aforementioned, especially equipped vehicles within the xRAP programmes are optimal in how they facilitate exhaustive road inspections and ratings. Alternative approaches, however, have been sought using various cost-effective setups.
5.	Business Model (Revenue Model)	We must develop some checks and balances to create transparency and integrity: Ultimate control and approval of violations only by police or authorised officials, Independent approval and regular verification of accuracy and overall

		performance, Surplus fine revenue to be reinvested into road safety projects, Longer term contract with capped revenue, Maintain lower financial incentive to continue to issue tickets beyond cap
6.	Scalability of the Solution	To prevent and reduce the number of road related accidents and improve road safety.