Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	15 October 2022
Team ID	PNT2022TMID39931
Project Name	Project – Signs with Smart Connectivity for Better Road Safty
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP, Message
FR-3	User input	Input as program and sensor
FR-4	Processing of user input	Image acquisition, Voice note ,Image Segmentation
FR-5	Feature extraction of sensor	Data mapping, Machine learning
FR-6	Result of user input	Display the sensor density of traffic .

PROJECT FLOW:

Users can configure the traffic by area name, and time through a web application. All the Traffic detecting Sensor details will be stored in the IBM Cloudant DB. The web application will send the sensor to the IoT device at the desired time. After getting the level of the traffic density the device will speak out the traffic density using IBM text to speech Service to take the car according to the traffic sensor.

To accomplish this,we have to complete all the activities and tasks listed bellow:

- ➢ Create and configure IBM Cloud Services
- ➢ Create IBM Watson IoT Platform
- ➢ Create a device &configure the IBM IoT Platform
- ➢ Create Node-RED service
- ➢ Create text to speech service
- ➢ Create a database in Cloudant DB to store traffic density details
- ➢ Develop a web Application using Node-RED Service
- ➢ Develop a python script to subscribe to the IBM IoT platform & Generate voice alerts.