

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

|               |  |
|---------------|--|
| Date          | 03 October 2022  |
| Team ID       | PNT2022TMID47905   |
| Project Name  | Project – SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY |
| 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<br>Registration through Gmail<br>Registration through LinkedIn |
| FR-2   | User Confirmation             | Confirmation via Email<br>Confirmation via OTP   |
| FR-3   | USER APPROVAL                 | DONE BY MAILS<br>DONE BY MESSAGES VIA SMS  |
| FR-4   | TESTING                       | TESTING IS DONE BY API AND UI  |
| FR-6   | END RESULT                    | PRODUCT FEATURES DECIDES THE END RESULT  |
|        |                               |  |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

| FR No. | Non-Functional Requirement | Description  |
|--------|----------------------------|--|
| NFR-1  | <b>Usability</b>           | 1. ROAD CONDITIONS WILL NOT REMAIN THE SAME ,<br>SO CONTINUOUS SENSING IS DONE THROUGH<br>SENSORS WHICH WILL SIMULTANEOUSLY CHANGE<br>THE SIGNS ON THE SIGN BOARDS<br>2. DIVERSE LANGUAGES MUST BE USED IN SIGN<br>BOARDS<br>3. NOTIFYING WARNINGS AND ALERTS THROUGH<br>SIGN BOARDS |

|       |                     |   |
|-------|---------------------|---|
|       |                     | 4.CUSTOMERS MUST READ THE USER INSTRUCTIONS BEFORE USING THE MOBILE APP TO UNDERSTAND EVERYTHING EFFECTIVELY  |
| NFR-2 | <b>Security</b>     | 1.A ROBUST SECURITY SYSTEM MUST BE USED SO THAT NO HACKERS CAN ENTER WITH UNAUTHORIZATION INTO THE IOT BASED SYSTEM   |
| NFR-3 | <b>Reliability</b>  | 1.SIGNS DISPLAYED ON THE BOARDS MUST BE CLEAR AND FLEXIBLE SO THAT THE PEOPLE CAN TAKE BEST DECISIONS WITHOUT CONFUSION WHILE TRAVELLING ON THE ROAD.<br>2. CORRECT AND AUTHORIZED SIGNS HAS TO DISPLAYED FOR HIGH RELIABILITY  |
| NFR-4 | <b>Performance</b>  | 1.PERFORMANCE MUST HAVE TO BE HIGH WHEREAS ITS COST MUST BE INVERSELY PROPORTIONAL WITH IT<br>2.SIGN BOARDS WILL BE USED EFFICIENTLY ONLY IF IT IS CLEARLY VISIBLE TO THE DRIVERS AND THE PUBLIC ,WE HAVE TO ENSURE TO KEEP IT IN THE CORRECT PLACE.<br>3. WEB APPLICATION'S NOTIFICATION HAS TO BE STRICTLY TAKEN INTO CONSIDERATION |
| NFR-5 | <b>Availability</b> | SIGNS BOARDS HAS TO WORK ALL THROUGH DAY AND NIGHT, SO PROPER POWER SUPPLYS OR BATTERY SHOULD BE GIVEN TO THE SIGN BOARDS   |
| NFR-6 | <b>Scalability</b>  | SCALABILITY IS AN IMPORTANT FACTOR AS IT HAS TO BE USED TO COPE UP WITH THE HIGH POPULATED AREAS  |