

## PROJECT DESIGN PHASE – 2

### Solution Requirements (Functional & Non – functional)

|               |  |
|---------------|--|
| Date          | 15 October 2022                                      |
| Team ID       | PNT2022TMID31413                                     |
| Project name  | Signs with Smart Connectivity for Better Road Safety |
| Maximum marks | 4 marks  |

#### FUNCTIONAL REQUIRMENTS:

| FR NO | Functional Requirements  |
|-------|--------------------------|
| 1     | IR sensor                |
| 2     | IBM cloud                |
| 3     | Open weather map         |
| 4     | Web application          |
| 5     | Access / modify database |

#### NON-FUNCTIONAL REQUIREMENTS:

| NFR NO | Non-functional requirement | Description  |
|--------|----------------------------|--|
| 1      | Usability                  | Smart road technology can assist in optimizing traffic flow and managing road conditions, creating more sustainable environment. |

|   |              |  |
|---|--------------|--|
| 2 | Security     | <p>Traffic signs provide valuable information to drivers and other road users. They represent rules that are in place to keep you safe,</p>  |
|   |              | <p>and help to communicate messages to drivers and pedestrians that can maintain order and reduce accidents. Neglecting them can be dangerous.</p>   |
| 3 | Reliability  | <p>The system uses data from the environment and processes it in real time so drivers can stay assure that the signs provide best results to them</p>  |
| 4 | Performance  | <p>The system is very efficient in periodic checking of traffic density and based on that traffic signal's duration is reduced. It reduces the passenger's waiting time and gives better performance.</p>                                    |
| 5 | Availability | <p>Availability of this system enable emergency response vehicles to arrive more quickly at a destination by dynamically changing traffic signals and blocking cars from entering the lanes before first responders have passed through.</p> |

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|---|-------------|---|
| 6 | Scalability | Extending functionality and features of the system on the regular basis based on traffic density. |
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