

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

|               |                              |
|---------------|------------------------------|
| Date          | 3 October 2022               |
| Team ID       | PNT2022TMID 53940            |
| Project Name  | Smart Solutions for Railways |
| 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   | Dashboard                     | Search menu to find trains based on location<br>Selection menu to book tickets   |
| FR-4   | Uploads                       | Document upload portal<br>Document verification window<br>Document storage for future use  |
| FR-5   | Payment                       | Payment portal using third -party gateway  |
| FR-6   | Feedback                      | 24/7 chat menu (service provided using agencies) to raise issues<br>Google Form to register feedback and suggestions<br>Google Form to register complaints |
| FR-7   | Amenities                     | Portal to place food and medicines order   |
| FR-8   | Checking                      | QR scanner with access to local database   |
| FR-9   | Emergencies                   | SoS portal for contacting the train pilot, police and hospitals  |

**Non-functional Requirements:**

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

| FR No. | Non-Functional Requirement | Description  |
|--------|----------------------------|--|
| NFR-1  | Usability                  | The application comes with a entry demo that will walk the customer through the features of the proposed solution. A quick help menu will be present in every page describing the functionalities of the page. The page is user friendly with accessibility options thus helping people from all walks of life to easily book tickets. |

|       |                     |   |
|-------|---------------------|---|
| NFR-2 | <b>Security</b>     | Any and all data uploaded to the portal is encrypted during transmission and secured again while storing on the cloud. Documents uploaded to verify identity are checked thoroughly to avoid impersonation. |
| NFR-3 | <b>Reliability</b>  | Data will be sent to the cloud in a stream and important data will be cached to the local device to avoid data corruption. The application will run smoothly even in cases of low bandwidth network         |
| NFR-4 | <b>Performance</b>  |   |
| NFR-5 | <b>Availability</b> | Available to all users across all hardware and operating systems for which the corresponding manufacturer / company is providing support  |
| NFR-6 | <b>Scalability</b>  | Portal can be scaled to accommodate other modes of transportation. Portal can be scaled to support high network traffic due to advanced cloud capabilities.   |