

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

Date	12 October 2022
Team ID	PNT2022TMID48351
Project Name	Project – 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	Ticket Booking through application Ticket Booking through Gmail
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP

**Non-functional Requirements:**

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

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	To reduce accidents and safeguard of things. To track the current running status of the train in smart railway system.
NFR-2	<b>Security</b>	To avoid the sudden accidents, check whether the tracks to be maintained properly and identify the weather conditions.
NFR-3	<b>Reliability</b>	To improve critical issues like safety, delays and overall system capacity.
NFR-4	<b>Performance</b>	To Detect the faults through sensors and forward the information to the server in which the information was being checked by the station officers to identify and repair the faults.
NFR-5	<b>Availability</b>	By using IR sensors to detect objects in the surroundings, GPS tracker used to track the fault in track, Using Ultrasonic sensor to detect the crack in rail track with measuring the distance from the track to sensor to reduce the accidents.
NFR-6	<b>Scalability</b>	Both passenger and railways must continually improve, innovate and enhance the traveller and customer experience to drive revenue, maximize the availability of assets and infrastructure, and improve operational efficiency