

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

Team ID	PNT2022TMID01080
Project Name	Project - Smart Solutions for Railways

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Passenger ticket booking	Booking through the online railway mobile app and website.
FR-2	Booking Confirmation	Booking Confirmation via Email Booking Confirmation via SMS
FR-3	Passenger objections and feedback	Through the online application, SMS, and email to the respective authority.
FR-4	Passenger schedule	Passenger can see their train timing through the mobile app
FR-5	Passenger Emergency	Passengers in an Emergency, in case of accidents, natural disasters, or theft during the journey can complain through online applications, emergency calls, SMS, and email.

**Non-functional Requirements:**

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

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	Within periodic maintenance, we can detect cracks in the railway track. which will be highly usable on remote railway tracks.
NFR-2	<b>Security</b>	Accidents and property damage can be prevented with the help of our smart sensors which immediately send the fault to the pilot and administration.
NFR-3	<b>Reliability</b>	Traffic lights and signalling can be made accurately with the help of sensors. so it is more reliable.
NFR-4	<b>Performance</b>	Communication plays a vital role in transferring the crack-detected signal to the responsible authority so that they can take appropriate measures within a short span.
NFR-5	<b>Availability</b>	Our idea is to make the crack alert to all the trains passing through that fault-prone area.
NFR-6	<b>Scalability</b>	Our project is based on IoT & cloud, which makes the pilot and authority updated every single sec. Adhoc is easy to handle.