

PROJECT DESIGN
PHASE-II
SOLUTION REQUIREMENTS (FUNCTIONAL & NON-FUNCTIONAL)

Team ID	PNT2022TMID32810
Project Name	Smart Solutions for Railway systems

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 via online Railway mobile app and websites.
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 authorities.
FR-4	Passenger schedule	Passenger can see their train timing using the mobile application.

FR-5	Passenger Emergency	Passengers in an Emergency, in case of accidents, natural disasters, or theft during the journey can be able to complain through online applications, emergency calls, SMS, and also through email.
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NON-FUNCTIONAL REQUIREMENTS:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Within periodic maintenance, we can detect cracks in the railway track which will be highly usable on remote railway tracks.
NFR-2	Security	Accidents and property damage can be prevented with the help of our smart sensors which immediately send the fault to the pilot and the administration.
NFR-3	Reliability	Traffic lights and signaling can be made accurately with the help of sensors. Hence it is more reliable.
NFR-4	Performance	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	Availability	Our idea is to make the crack alert to all the trains passing through that fault-prone area.

NFR-6	Scalability	Our project is based on IoT & cloud, which makes the pilot and authority updated every single second. Ad-hoc is easy to handle.
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