

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

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|---------------------|---|
| Team ID | PNT2022TMID28640 |
| 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 | 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 administration. |
| NFR-3 | Reliability | Traffic lights and signalling can be made accurately with the help of sensors. so 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 sec. Adhoc is easy to handle. |