**Project Design Phase-I Proposed Solution**

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| Date | 09 OCTOBER 2022 |
| Team ID | PNT2022TMID03560 |
| Project Name | IOT Based Smart solutions for railways |

**Proposed Solution :**

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| **S.No.** | **Parameter** | **Description** |
| 1. | Problem Statement (Problem to be solved) | * Keep track of passengers and   schedule their journey accordingly   * Information about the route cancellation of tickets ,departure time , arrival time ,number of trains available and other such information. * Store and retrieve information about the various transactions related to rail travel. * Mostly railway gates are operated manually by labours this can be digitalized by automatic gate system. |
| 2. | Idea / Solution description | * . Smart sensors can be used to track important assets, manage passenger flow, and enable predictive maintenance. * IoT devices can also monitor the driver's behaviour and can inform about the driving style and idling time. * The railway gates are operated by automatic gate system. |
| 3. | Novelty / uniqueness | The uniqueness of our proposed paper is that it helps railways successfully manage passengers safety ,operational efficiency and passenger experience. |
| 4. | Social Impact / customer satisfaction | Information regarding train arrival and departure time, no of trains available, train current location makes the customer more satisfied. |
| 5. | Business Model (Revenue Model) | It is the cheapest mode of transportation and attracts many customers. |
| 6. | Scalability of the Solution | * Iot sensors, vibration and temperature sensor, rail crossing sensors , rail friction sensor , obstacle detecting sensor. * These sensors are used for safety and greater reliability .Thus by this proposed solution we can avoid rail line crossing deaths ,monitor rail friction , detect obstacles and track maintenance. |