ProtelLabs Private Limited
Technology meets Innovation

CASE STUDY

IN Campus Vehicle Logging System – Hindustan Unilever (HUL)

Hindustan Unilever Limited (HUL) is a prestigious Indian FMCG Manufacturer with multiple factories across India. At Their Factories at Pondicherry & Haridwar they wanted a solution such that only authorized number of vehicles are allowed inside, to prevent traffic jam within the factory. Additionally, the vehicles should be monitored for movement inside the various locations along with weigh bridge integration. Further they wanted a system which can account for the time spent by the vehicle at each location against the earmarked time for that location. A centralized monitoring system was to be provided for with the plant manager with alarm so as to facilitate smooth movement of vehicles while avoiding bottle necks.

THE REQUIREMENT

A system to track all incoming & Out going vehicle inside the factory be it for loading or unloading and generate TAT for each vehicle. It should have special provision for self owned vehicles

The system should provide real time dash board for monitoring the activities with Alarm against set parameters

The system should generate MIS reports on TAT Vs Scheduled time

The system should reduce the congestion at the entry and exit gates

The system should capture all loading and unloading vehicle information thus should in turn help to Reduce evacuation time

The system should provide the operators with real-time information of the vacant bays in the factory

The solution should be able to capture details like vehicle number, time & date, GR No, Weight, Loading start time & End time along with operator details.

The system should be integrated with HUL's SAP system

The system should be equipped with Boom Barriers for providing access control at the gates

The system should be Integrated with the Weigh Bridge

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THE SOLUTION

The real-time dashboard provided by us will allow the operator to decide on the available bays and if vacancy is there then the operator can key in all details pertaining to the vehicle and issue smart card with validity. The smart card can be flashed by the driver at the main gate to allow access using boom barrier. Once inside the vehicle will report at the weigh bridge & flash the smart card. The settled weight of the vehicle is captured against the Vehicle automatically vide weigh bridge integration.

Post which the vehicle reports at the designated bay for upload / download by flashing card on the reader at the location. Once the job is finished, the bay operator flashes his card to denote the end of the process. Post which the vehicle can move to the next location. Provision is provided for loading / unloading at multiple bays with operator flash option.

At the control room the system continuously map the time spent by the vehicle against the standard set and provide audio visual alarm if required.

MIS Reports:

- Vehicle Category wise headcount
- User list based on category
- Inventory and issuance of smart cards
- Vehicle headcount
- Vehicle Overstay
- Gate-wise traffic movement
- Violation reports
- Card lost and find reports

TECHNOLOGY STACK

- RFID – UHF (ISO 18000)
- HF – Mifare and Desfire
- QR – Zebra OEM with EI RFID
- Web Portal - .NET framework with SQL server
- Mobile App - Android
- Notification - Whatsapp API

THE CHALLENGE

- Multiple pre-existing legacy systems
- Weather Proof QR, RFID and Smart card readers
- Weighbridge Incorporation
- Capturing of relevant details
- Smart card collection
- All hardware to conform with MAKE IN INDIA standards.