



# **WAGON MANAGEMENT** and **OBSERVATION SYSTEM**



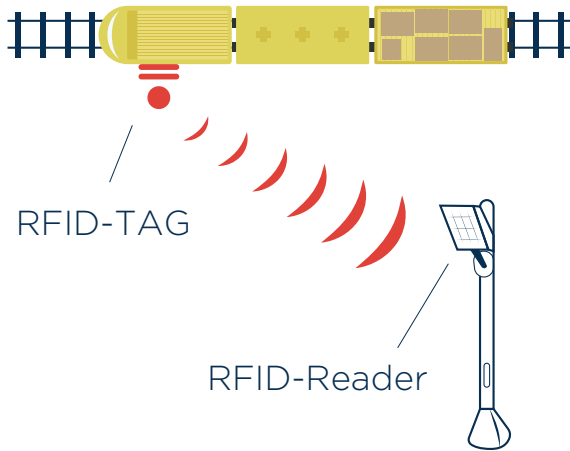
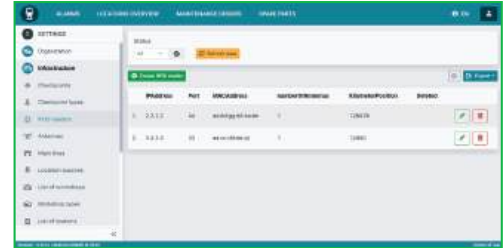
# WAGON MANAGEMENT AND OBSERVATION SYSTEM

**Wagon Management and Observation System** tracks the wagons / locomotives / coaches via RFID Readers.

System creates a Maintenance Plan by analyzing recorded data of each Rolling Stock. Each planned maintenance could be tracked by Maintenance Team. If a planned maintenance is not completed, maintenance alerts are automatically created by the system.

RFID readers are located at the entrances and exits of stations, workshops, depot freight stations, respectively. Each RFID unit transfers rolling stock data to redundant data centers.

The systems are also interfaced to wayside sensors (HWD/HBD/DED/WILD etc.) and TMS for a more comprehensive rolling stock monitoring.



- Milage information of each wagon / locomotive / coach.
- Track maintenance period of each wagon / locomotive / coach.
- Freight Management System Data;
  - The last location of each wagon / locomotive / coach.
  - The availability of each wagon / locomotive / coach.

## Features

- Maintenance Tracking System
- Maintenance Pricing System
- Reporting System
- KPI Reporting System
- Alarm Monitoring
- Rolling Stock Tracking System
- Interface with Locomotives
- Spare Part Management

## Functions

- User Recognition System
- Monitoring events, alarms, interventions
- Reporting System
  - Location Information Report
  - Alarms Report
  - Maintenance History Report
- Dynamic User Roles
- Maintenance Tracking System
- Maintenance Time Tracking System
- Maintenance Spare Part Usage and Requirements Analyzing
- Maintenance Pricing System
- Personnel Maintenance Tracking
- Rolling Stock Milage Information
- Rolling Stock Tracking
- Alarm, Events, Interventions Monitoring System
- RFID Tag Checking
- Locomotive Monitoring

## Configurations

- RFID Readers
- RFID Tags
- System integration for alarm management;
  - HBD/HWD detects temperature of the axle bearings and brakes
  - DED detects dragging
  - WILD detects wheel shape errors and flat wheels to warn operators and prevent possible derailment
  - Interface with Freight Management System
  - Off-line integration with TMS

## Advantages/Benefits

- Reporting System
- User friendly Screens
- Dynamic User Roles
- Sensor Control Safe Journey
- Maintenance Tracking
- Rolling Stock Tracking
- KPI Reporting System

## References

- **Awash - Kombolcha - Hara Gebaya Railway / Ethiopia**
- **Dar es Salaam - Morogoro Railway / Tanzania**
- **Morogoro - Makutupora Railway / Tanzania**