

End to End Plant Automation

idsolutionsindia.com

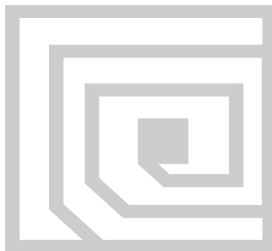


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About ID Tech

18

18 years of
Manufacturing

150

150 million RFID Tags
Sold

1

Largest Seller for RFID Tags In
India

10K

10 Thousand RFID
Devices Sold In India

30K

Boom Barriers Sold Till Date

7

7 Offices In India

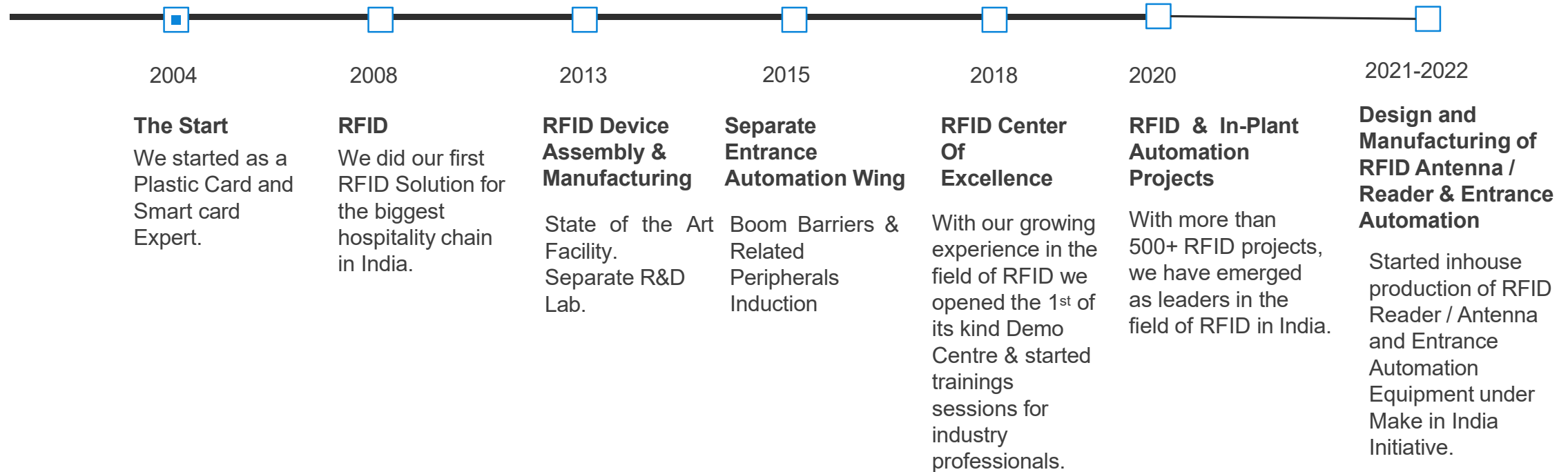
3K

3000+ Customer Base

200

200 employees PAN
India

History & The Journey



360° RFID Solution Provider



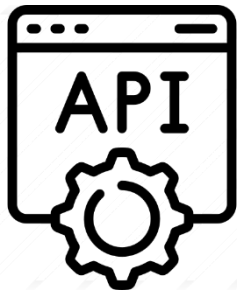
Hardware

- ❖ RFID Tags
- ❖ RFID Labels
- ❖ RFID Readers
- ❖ RFID Antennas
- ❖ RFID Printers
- ❖ RFID Accessories



Training

- ❖ Solutions Architecture
- ❖ RFID Resources
- ❖ Installation
- ❖ Hardware Selection
- ❖ POC



Software

- ❖ Strong Domain Expertise
- ❖ On Time Delivery
- ❖ Next-Gen Technology Provider
- ❖ Specialized Developers



Support

- ❖ Technical Support
- ❖ Warranty /Spare management
- ❖ Extended Warranty Contracts
- ❖ AMCs/CMCs

Certifications/Memberships



Products



Our Services

Identity Management

Parking Management

Inventory Tracking

Waste Management

Vehicle Tracking

Laundry Tracking

File Tracking

Plant Automation

Weapon Tracking

HR & Payroll

RTLS

Event Management

Jewelry Tracking

Campus Management

Access Control System

Our Services

Fixed Asset Management

Library Automation

Livestock Tracking

Hospital Management

Document Tracking

Retail Automation

Mining operations
Automation

Weighbridge
Automation System

Stone Crusher
Automation

E-Invoicing
Automation

Web Development

Warehouse
Automation

Mobile App
Development

Business Verticals



Technology Introduction

Software Solutions

Technology Used:

- Back End – Microsoft Dot Net Core Technology (Open Source)
- Front End – Angular / HTML / Java Script
- Database – Microsoft SQL Server 2016 and above
- Mobile App – Ionic , Flutter
- Integration – Web API, XML, Excel, Web Service, SOAP UI
- Server – AZURE / AWS / Windows Hosting
- Payment Gateway – RazorPay, Instamojo, Paytm, UPI, CC Avenue

RFID Introduction

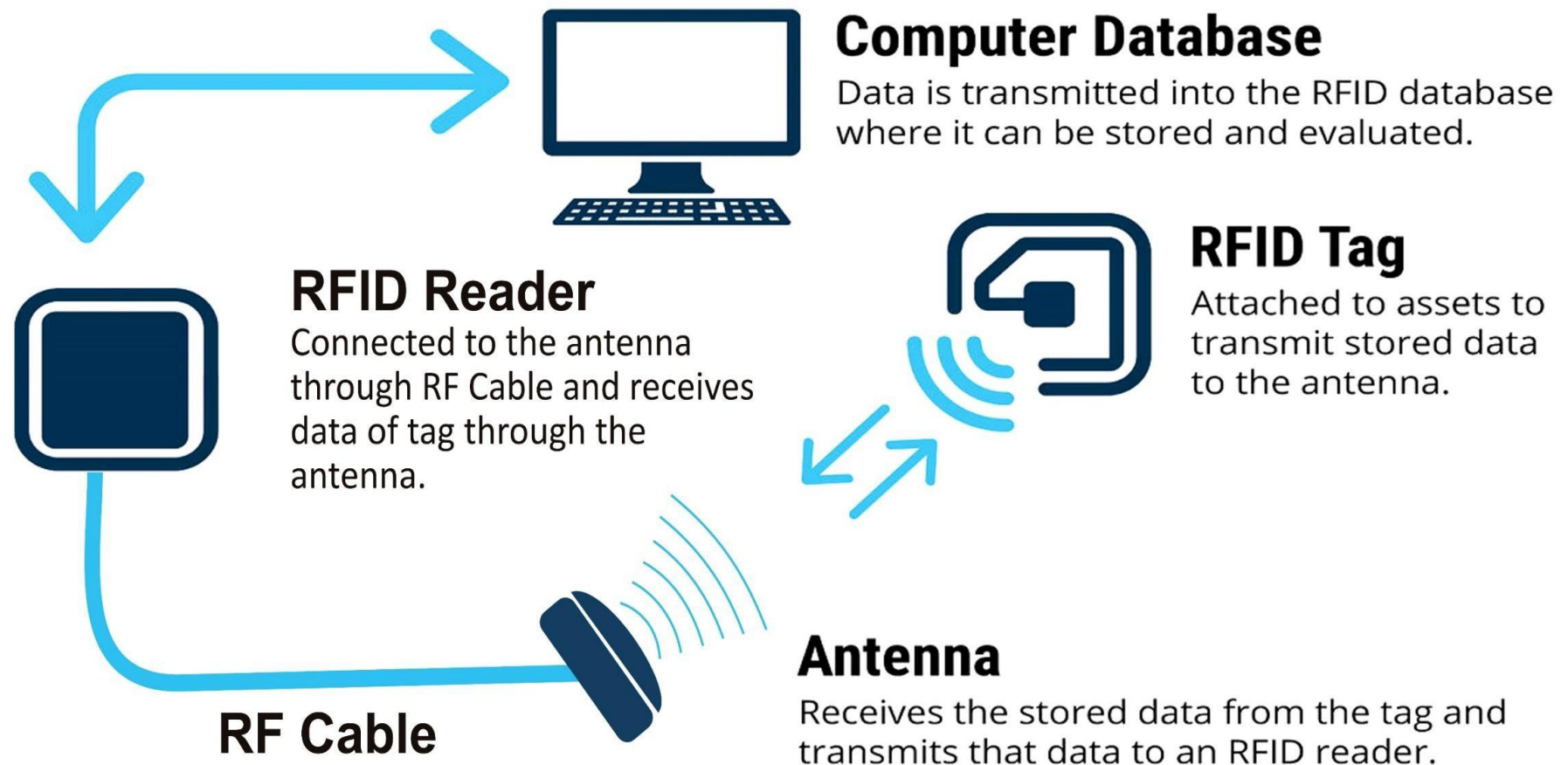
RFID (Radio Frequency Identification) technology is one of several technologies known as auto-identification (Auto-ID) & IoT technology.

It uses radio-frequency waves to transfer data between a reader and movable or stationary objects to identify, categorize and track the object.

It consists of a combination of technologies, such as :

- RFID Tags
- Sensors
- Software
- RFID Readers and Antenna
- Networking – Wired & Wireless
- Business Process management

Basic Overview of a RFID System



Why US?

Quality Hardware



We are the leading manufacturers for RFID Tags and Readers.

Experience



We have been providing solution to multiple industries and have the perfect experience.

Warranty



We stand behind our hardware, software and systems.

Versatile Software



Versatile software that can be customized to adhere to the needs of industry.

Global



We have installed multiple systems at various locations and hence can handle any need.

Tech Support



Our Experienced Technicians are always there to support you when you need them.

1st RFID Tag Manufacturer in India

Approved For All Three Major Government Initiatives



Ministry Of Finance

RFID E-Seals
CBIC Approved

For Exporters



Ministry Of Railways

RFID Wagon Tags
RDSO Approved

For Wagons & Coaches



Ministry of Road Transport and Highways

RFID FasTags
ARAI Approved

For Vehicles



Project Achievements

- ❑ Managing large government project of Animal tracking.
- ❑ Managing the railway rolling stock asset tracking project for Indian Railways.
- ❑ Managing the large asset tracking(Tracking of containers) for DMICDC Logistics Data Services (DLDS) and National Industrial Corridor Development .

Project Achievements

- ❑ 1st in India to conduct RFID based File Tracking for a Public Sector Bank, Reserve Bank Of India.
- ❑ 1st in India to manufacture RFID Tags for Tyres and implement solution for Tyre Identification.
- ❑ Only Indian Company to have supplied more than 50 million ear tags for livestock collectively across all State Governments.
- ❑ 1st In India to implement RFID based RTLS System for a Government Hospital under NDMC, Palika Maternity Hospital.

Project Achievements

- ❑ 1st Manufacturer of Tamper Proof Windshield Tags in collaboration with 3M Adhesives.
- ❑ 1st in India to conduct RFID based event Petro Tech 2017 in association with Indian Oil for the Ministry of Petroleum.
- ❑ 1st in India to implement RFID based Animal Identification System using Injectable Transponders, Government of Gujarat.
- ❑ 1st in India to help companies Setup RFID & IOT based Labs. HCL Technologies and TATA Consultancy Services
- ❑ 1st in India to implement RFID based Vehicle Tracking System for River Basin, Uttarakhand Forest Reserve.

Manual Operations Pain Areas

Current Pain Areas

No Automation

No automation in access control, no automated system to track and trace movement of vehicles.

Malpractices

Lots of unethical practices are being followed at sites, in terms of passing of vehicle without official permission etc.

Entirely Manual Intervention

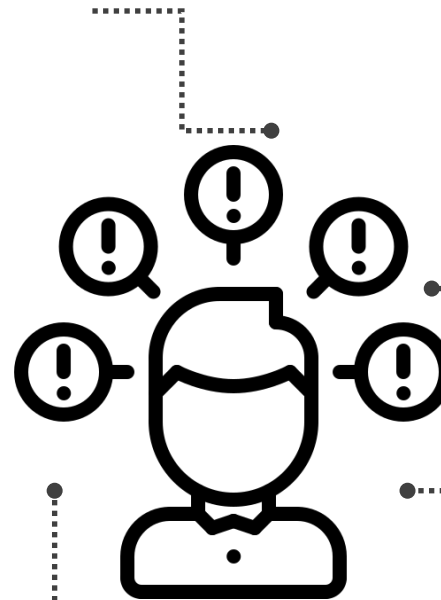
All record of trucks in and out with date, time and duration data is recorded on manual sheets.

Un-organised Working

There is no tracking, managing and set pattern of working at premises, there is no organised access control management at site.

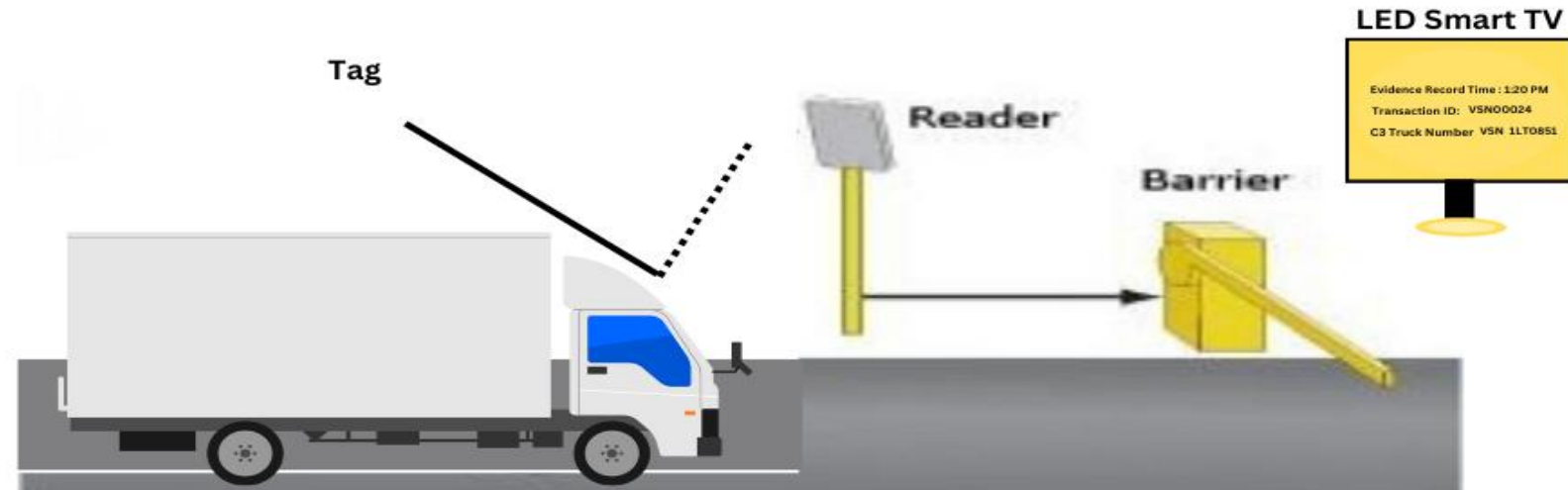
Data Complexity & No Milestone Tracking

The org might have no visibility over movement of vehicles with in and out of the premises. There is huge number of trucks plying each day with products and there is no system to enforce their movement.



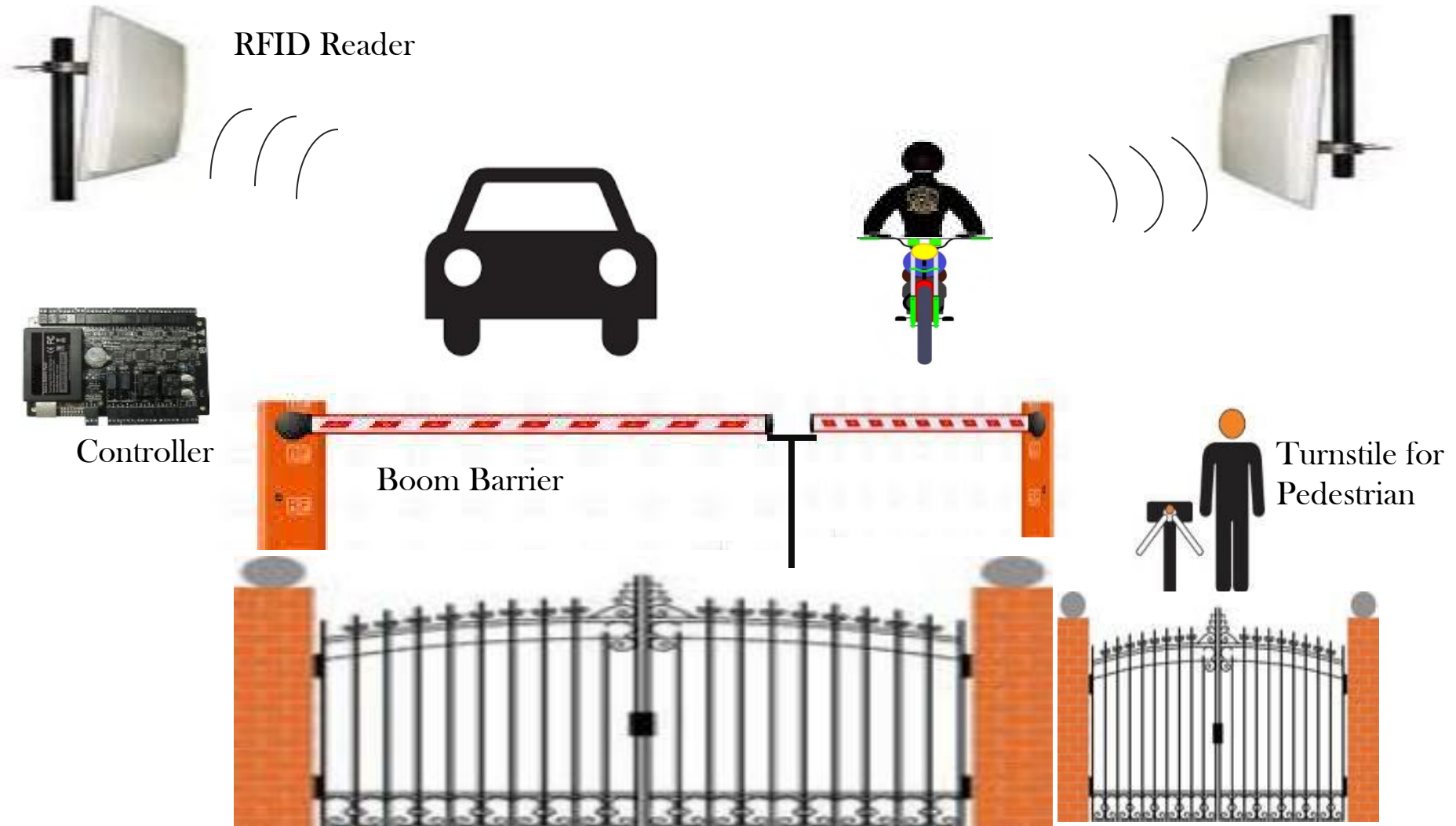
Proposed Solution

Gate Access Control System



- Vehicle can be identified from a distance of 7-8m even when moving at a speed of 20 kmph
- Verification allows only registered vehicles to enter ensuring greater security
- Vehicle information will be displayed in LED TV. Security will verify the details and trigger the boom barrier
- Records the time and date of all vehicles at entry and exit point.

Gate Access Control System Overview



Turnstile



Tripod Turnstile



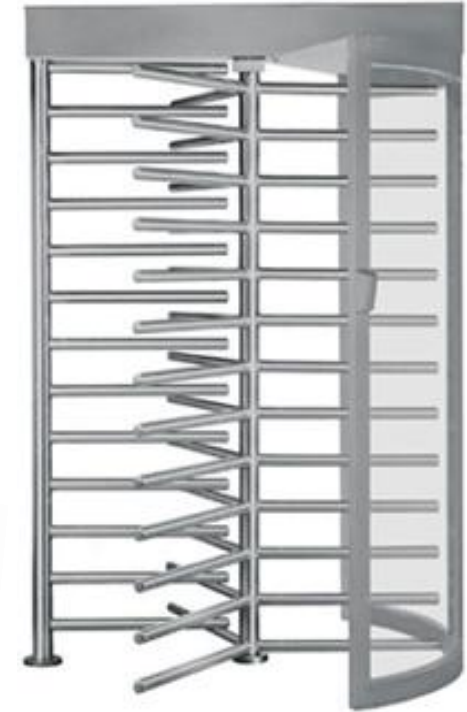
Swing Gate Barrier



Dual Lane Tripod Turnstile



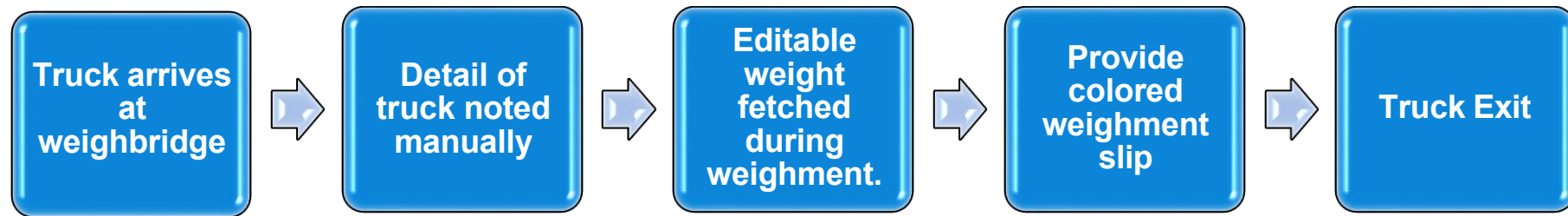
Flap Barrier



Full Height Turnstile

Weighbridge Manual Operations

Weighbridge Manual-Process Flow



Proposed Process Flow



- Truck approaches the barrier at approach ramp of weighbridge. If vehicle is mapped and weighment is allowed, barrier will open and truck will enter at weighbridge
- Weighment Centering System will access the truck on the weighbridge and command the driver through PA Speaker and LED light to bring truck in the correct position
- When vehicle is in center of weighbridge, controller triggers command to weighbridge software to allow weighment of truck
- Vehicle weight is captured and linked with the required ERP/SAP or is stored in the local system and a print slip is generated
- Departure barrier opens up to allow vehicle to exit the weighbridge

Advantages of RFID

Applicable Across

Gate Management, Record Automation ,
Asset Management, Identification.

Fast and time saving

Whether annually, semi-annually, monthly
or weekly, using technology can speed
audit time allowing data center staff to
focus on higher-priority tasks.

Duplicacy is not possible

Duplicity of data will not be there;
accuracy will be the prime factor
with effectiveness.



Efficient

RFID tags can be read at a
faster rate , also, it can be run
with minimal human
participation.

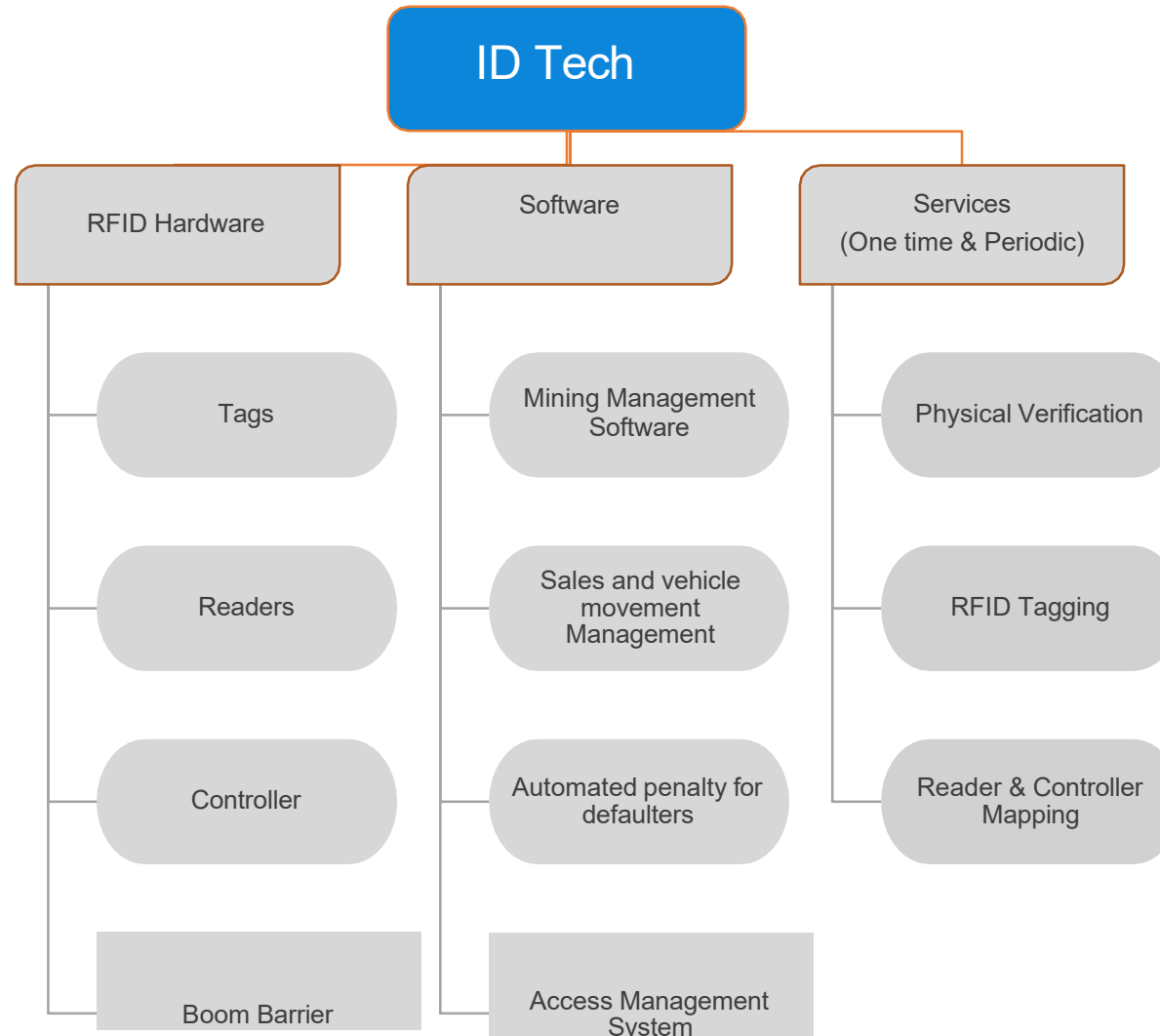
Secure

RFID contain high levels of
security; data can be encrypted,
password protected or set to
include a 'kill' feature to remove
data permanently.

Error free

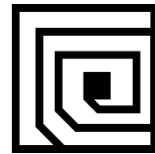
Using a Tag and Reader is a simpler, more
accurate method. It reduces human error by
removing the number of steps involved in
manual process.

RFID Management System

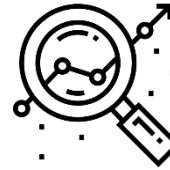


Features

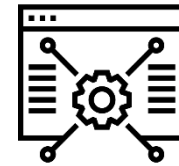
Tagging RFID tags on trucks



Master Data sync with Tags



Route mapping and movement recording of trucks with unique tag id



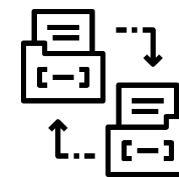
Optional Geo-tagging Of all assets



Customized Report Generation



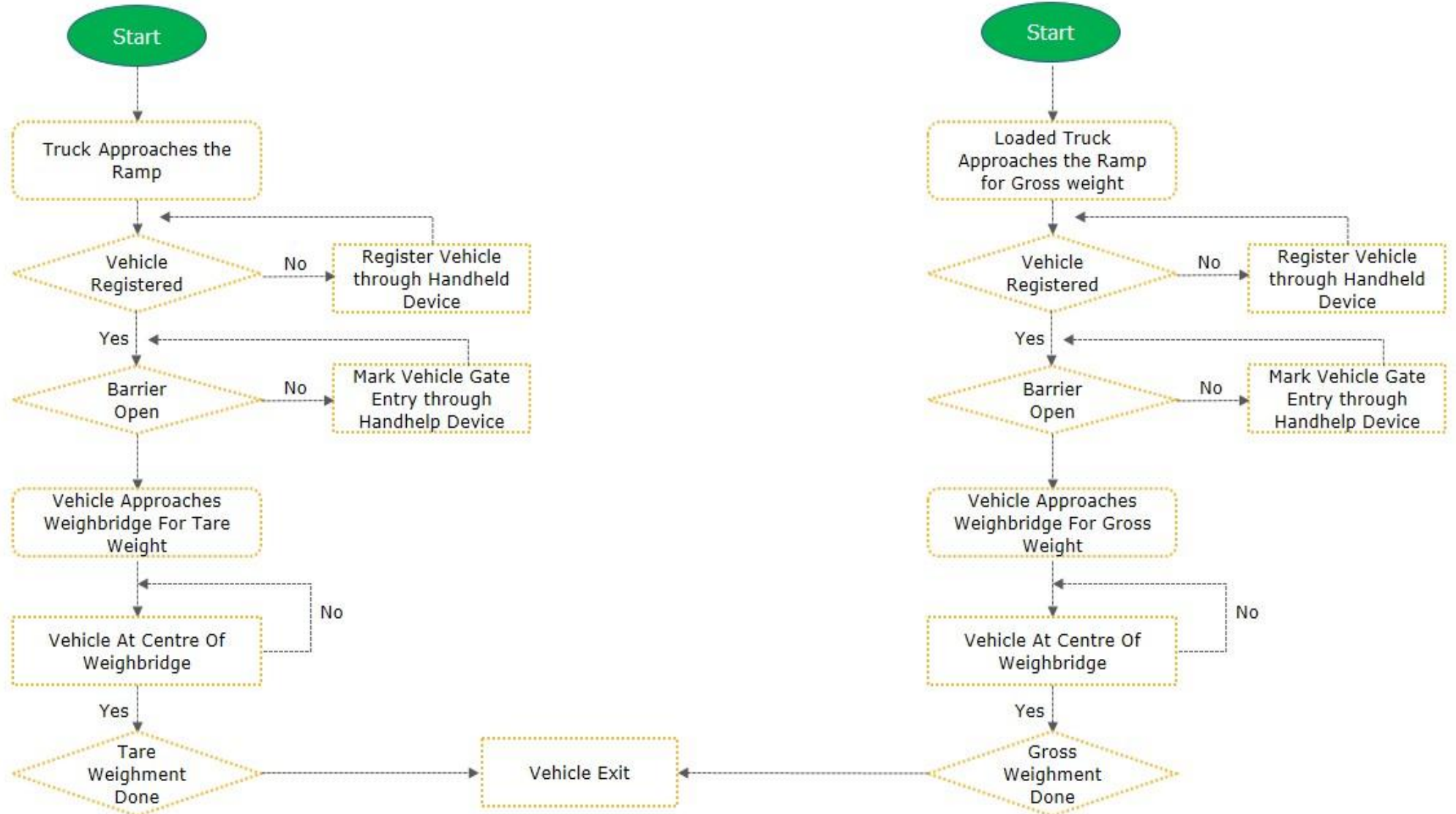
Real time Data Transfer



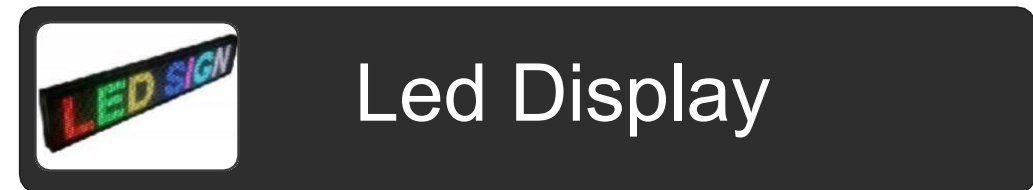
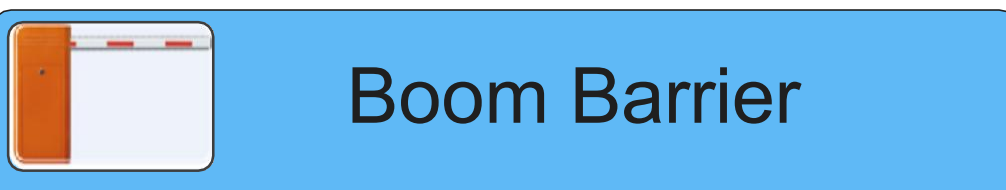
Daily Data Matching



Weighbridge Automation Flow Chart



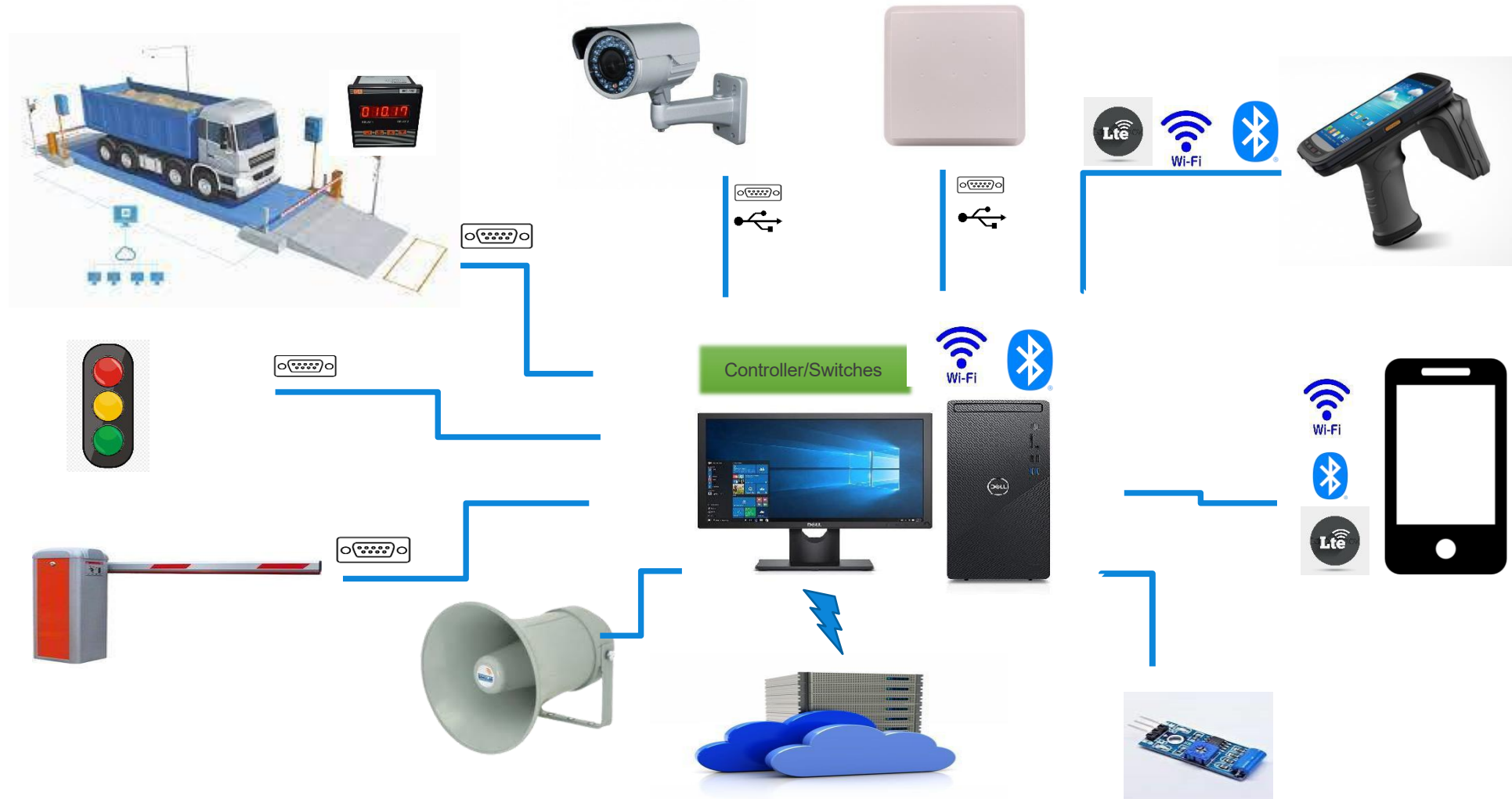
Key Hardware Component- Weighbridge Automation system



Current Working Site for Weighbridge Centering System



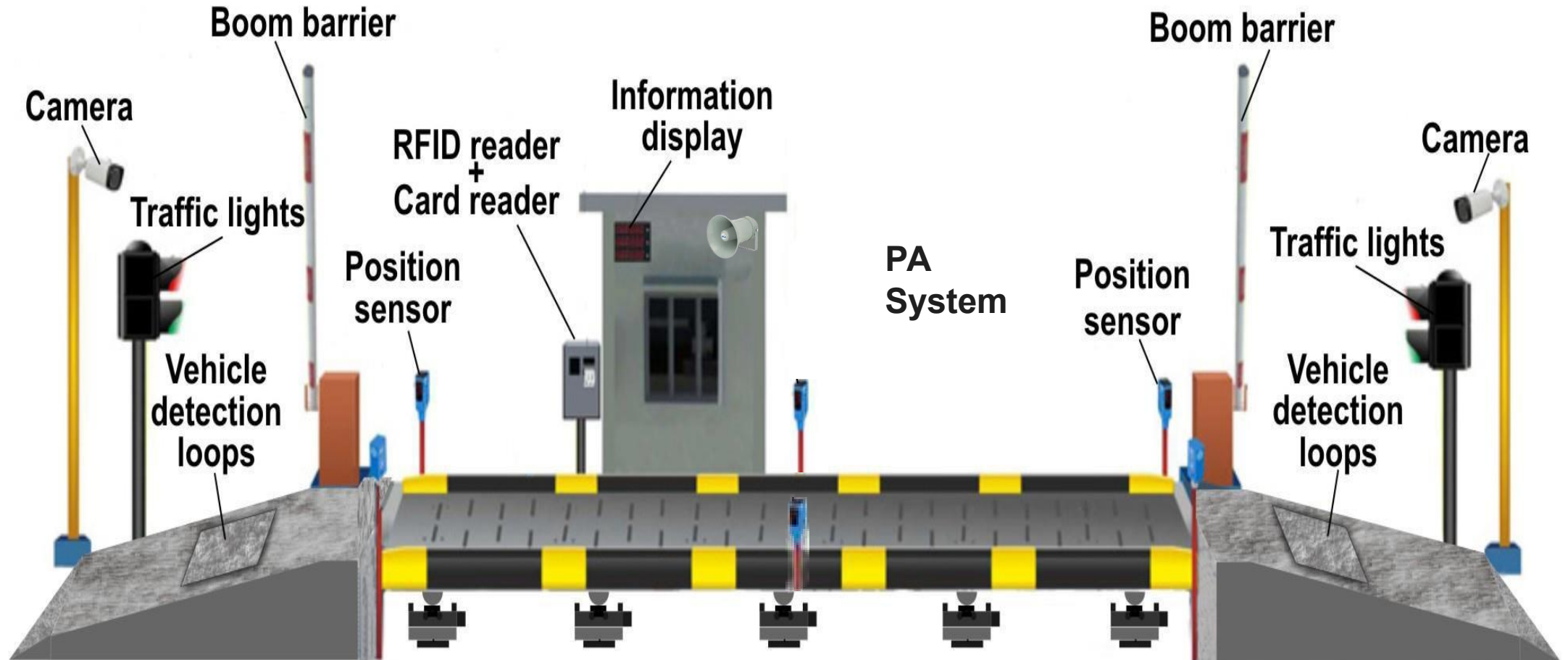
Weighbridge Centering System-Physical Architecture



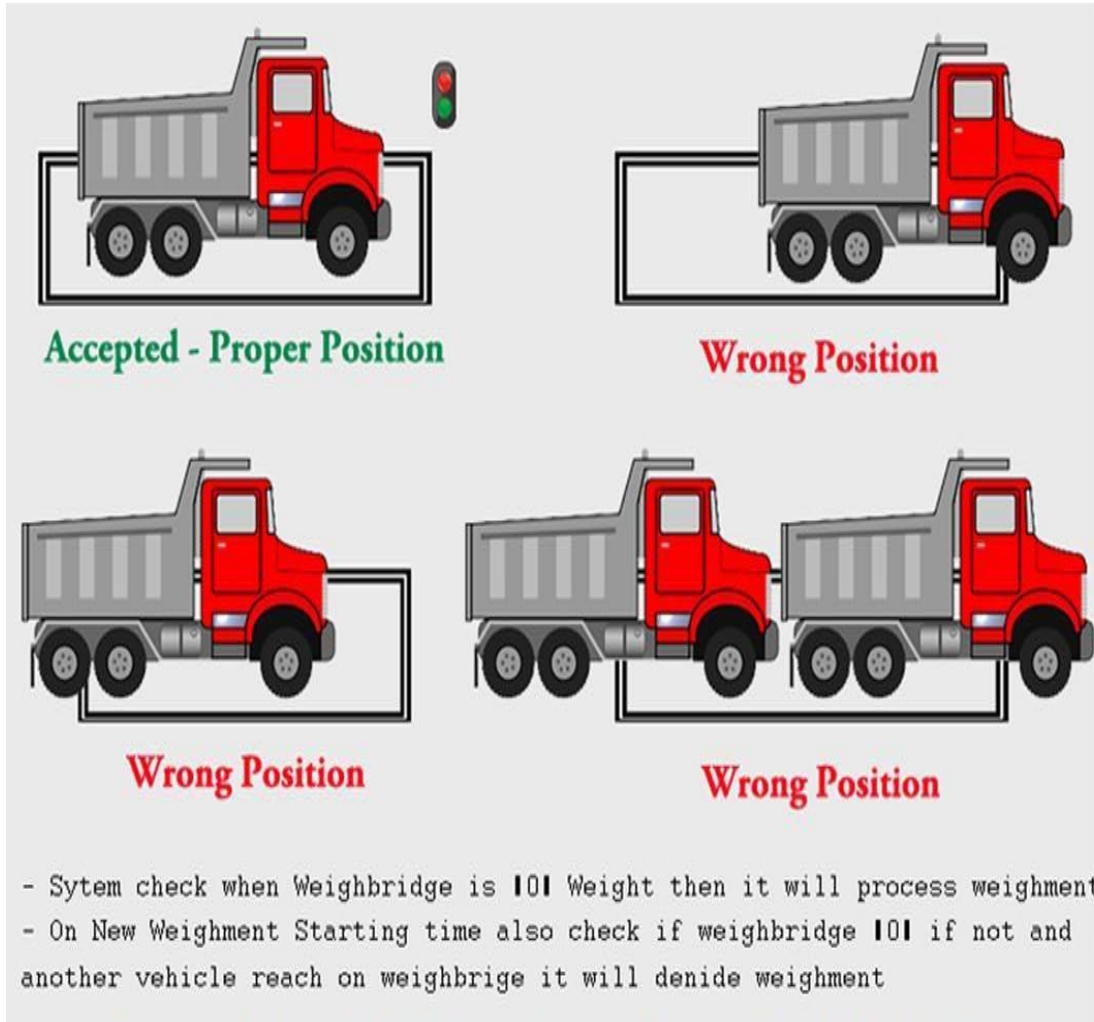
ANPR Cameras



Weighbridge Centering System-Process Flow



Weighbridge Centering System- Vehicle Positioning in Weighbridge



Proposed Software Solution

Equipment Registration

Equipment Authentication

Mining Site Vigilance

Integrated Weighbridges

Field Vigilance

State Check posts

Destination Verification

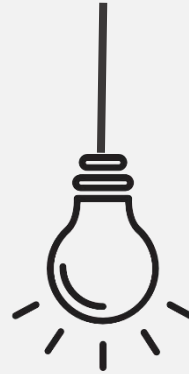
e-Challan and payments

Proposed Solution



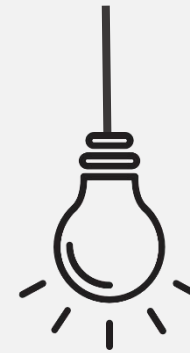
Equipment Registration

- Capturing of Equipment data such as Vehicle number, Vehicle Owner, Mineral Type, Quantum, Source and Destination
- Allocate RFID Windshield Tag having above mentioned equipment related information
- Equipment owner has to apply allocated RFID Tag on equipment



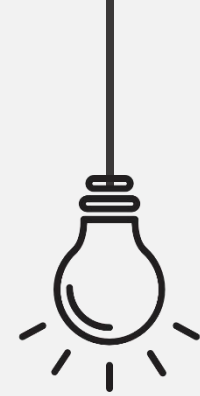
Equipment Authentication

- Mining Entry/Exit points shall have RFID readers, boom barrier and CCTV camera integrated with RFID Reader
- RFID reader shall capture equipment's identity from windshield tag applied on equipment, check authorization and allow or deny access using boom barrier at mining sites.
- CCTV & ANPR integrated with RFID reader shall capture images and validate passing equipment.
- System shall register time stamp-Entry/Exit Log



Mining Site Vigilance

- RFID readers at check post to record entry/exit of each vehicle within the mining site.
- RFID readers, boom barriers and weighbridge centring system at each weighbridge to track movement of vehicles and associated quantum.
- PTZ cameras to monitor the mining locations for better visibility and to prevent illegal mining.



Integrated Weighbridges

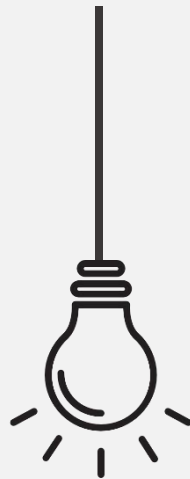
- Weighbridges shall have integrated RFID readers and CCTV cameras.
- Weighing System at weighbridge shall capture both equipment data using RFID reader and weight data automatically.
- Weighbridge operator has to manually insert Mineral Type and grade.
- Weighing system shall push all collected data to Punjab Government integrated lease management system.
- Weighing system shall generate Royalty pass code and challan for equipment operator and send required data to integrated system through API.

Proposed Solution



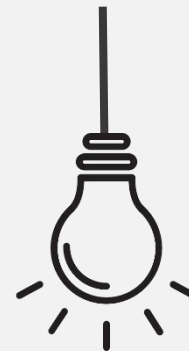
Field Vigilance

- Field Vigilance officer shall have handheld RFID devices with GPRS based data transfer facility.
- Vigilance officer shall be able to authenticate equipment and driver identity and royalty pass using RFID HH Reader.
- Vigilance officer will have rights to create challan in case of ambiguity.
- Generate legacy report and transfer it to central system



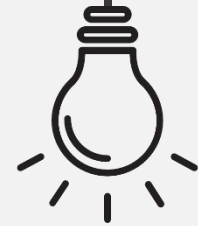
State Check posts

- Based on source and destination location, check post details will be identified.
- At check post shall capture RFID tag data of equipment and verify through installed ANPR, varifocal and bullet cameras
- Time stamp of Check post clearance will be logged.



Destination Verification

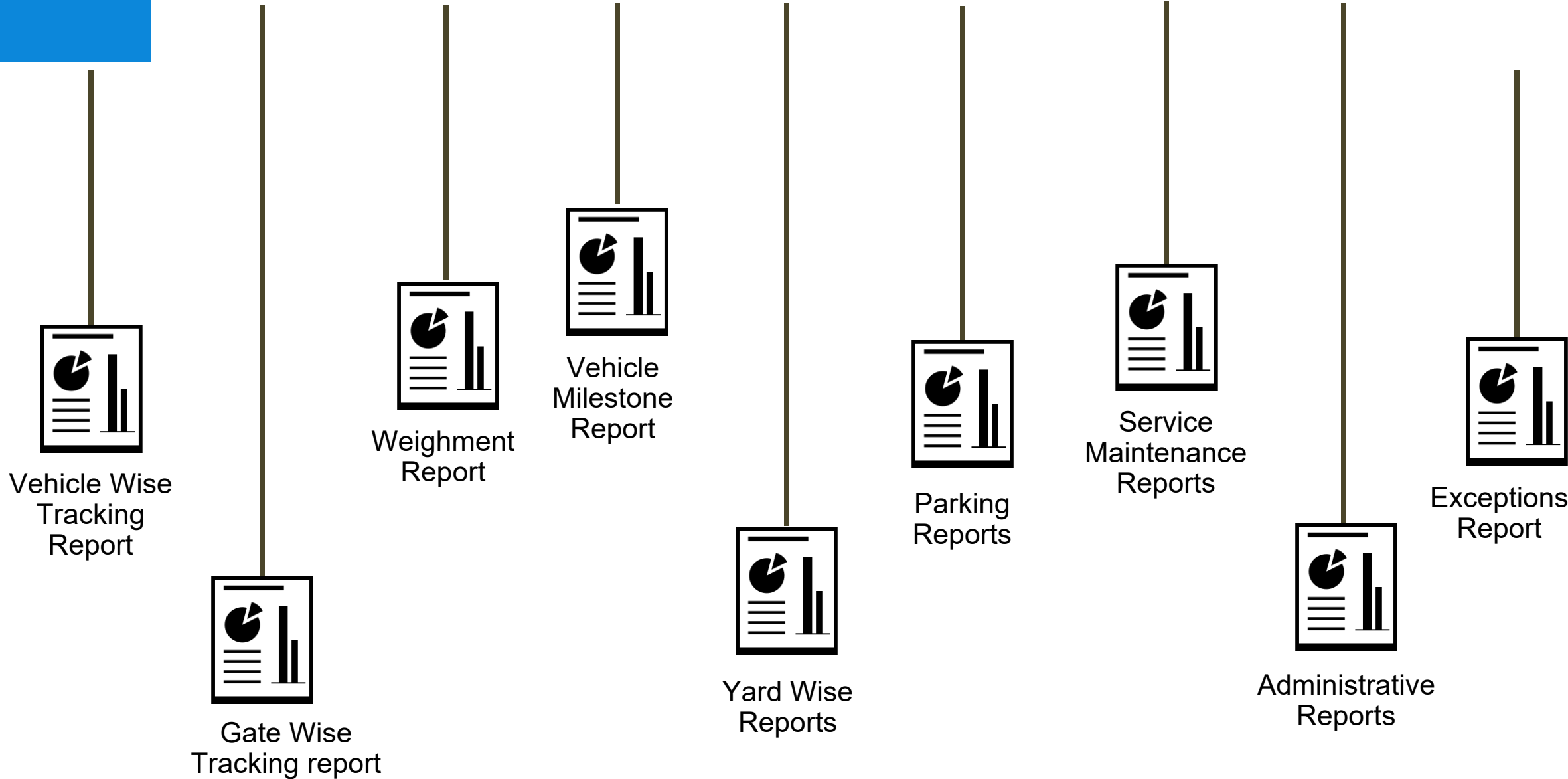
- Destination location Entry/Exit highway points shall have integrated RFID readers
- RFID reader shall capture equipment's identity from windshield tag applied on equipment, check authorization and send to central system.
- System shall register time stamp-Entry/Exit Log
- System shall issue a Challan in case of any ambiguity found.,



e-Challan and payments

- Creating challan of illegal/unauthorised vehicles.
- Identification of vehicle with deviation in number plate.
- Creating challan of vehicles with no transit permit.
- Facility to clear challan payments online, to enable vehicle to allow vehicle for further transport of mining mineral.
- Integration with Vahan to identify overload vehicles and to report created challans.

Reports



Implementation Road Map

- 1 • Registration of Mining Tags against vehicles
- 2 • Deployment of Check Post and route mapping
- 3 • Deployment of mining site vigilance system
- 4 • Deployment of field vigilance system
- 5 • E-Challan and online payment facility
- 6 • Setting up of control rooms
- 7 • Integration of all vigilance systems with control rooms
- 8 • Drone based surveys and reporting to the department

Our Clientele

ID Tech Solutions Pvt. Ltd.



Our Clientele

