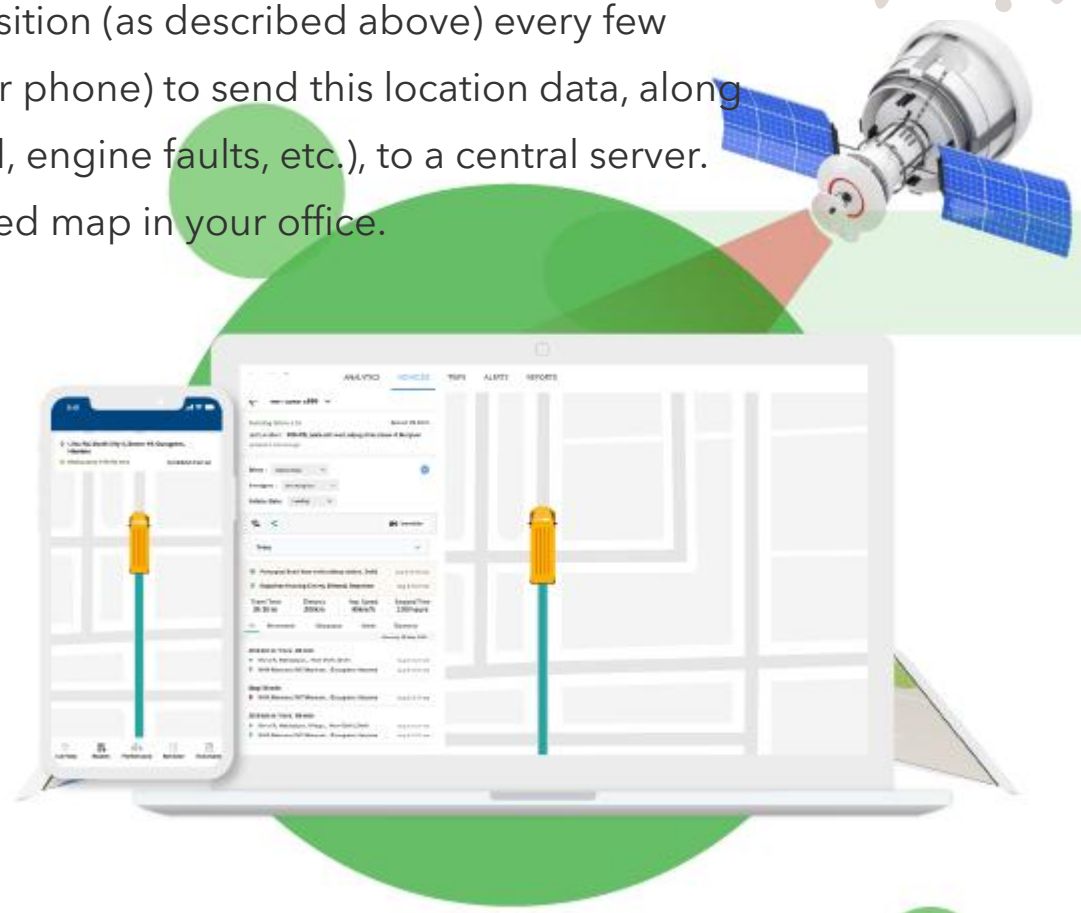
Fleet management solutions

Fleet management system

Fleet Management?

In fleet management, the GPS receiver in the vehicle calculates its position (as described above) every few seconds. It then uses a **cellular network** (like the mobile data on your phone) to send this location data, along with other information from the GPS Device in the vehicle (like speed, engine faults, etc.), to a central server. This server processes the data and displays it for you on the web-based map in your office.



- GPS device / Fuel senser/ Door senser
- Connectivity
- Monitoring / Maintenance /Warranty
- Reporting

How fleet management system works?

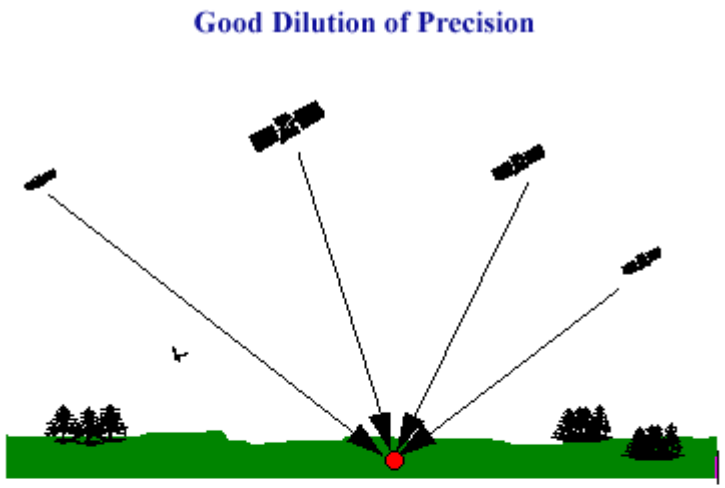
Fleet Data integrate with ERP solution

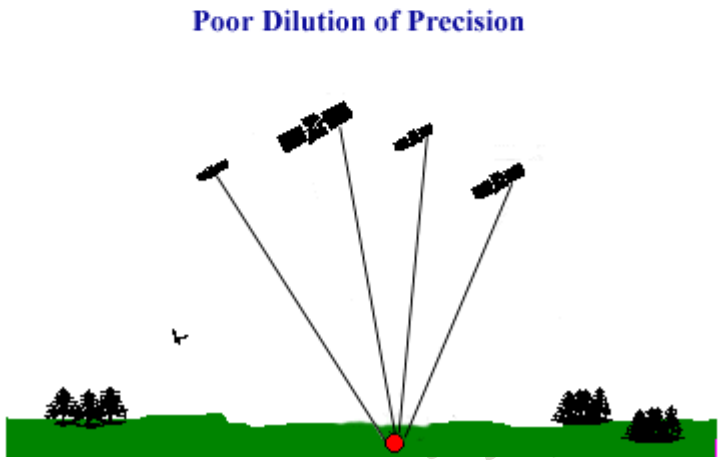
What is the fleet management with GPS

(Global positioning system)

Key Factors Affecting GPS Accuracy

- **Atmospheric Conditions:** The ionosphere and troposphere can slow down the signal.
- **Signal Blockage:** Buildings, tunnels, and dense forests can block or reflect signals (called "multipath").
- **Satellite Geometry:** The relative position of the satellites in the sky matters. If they are clustered close together, accuracy decreases.
- **Number of Satellite Systems:** Modern receivers often use multiple constellations simultaneously (like the Russian GLONASS, European Galileo, and Chinese BeiDou in addition to GPS), which significantly improves accuracy and reliability, especially in urban areas.





Where Does the Internet/connectivity Come In?

Mandatory for Fleet Management?
YES, for data transmission and visibility. The internet (via cellular data) is the communication link that allows the vehicle's location to be sent to the office and displayed on the web-based software

Function	Without Internet (Standalone GPS)	With Internet (Smartphone/Fleet Tracker)
Getting Location	YES. Uses satellite signals only.	YES. Primarily uses satellite signals, but can use Wi-Fi/cell towers to get a location faster indoors (Assisted GPS).
Viewing Your Location on a Map	YES, if maps are pre-loaded. Dedicated GPS units (like Garmin/TomTom) have built-in maps.	YES. Downloads map tiles from the internet (e.g., Google Maps). Without internet, you just see a dot on a blank or cached screen.
Sending Your Location to Someone Else	NO. There is no way to transmit the data.	YES. This is the key for fleet management. It uses cellular data to send the location to a server so the fleet manager can see it.
Getting Real-Time Traffic & Updates	NO. Uses older, pre-loaded traffic via radio in some cases.	YES. Uses internet to download live traffic, road closures, etc.

How google identify the exact location in google map without GPS sensor

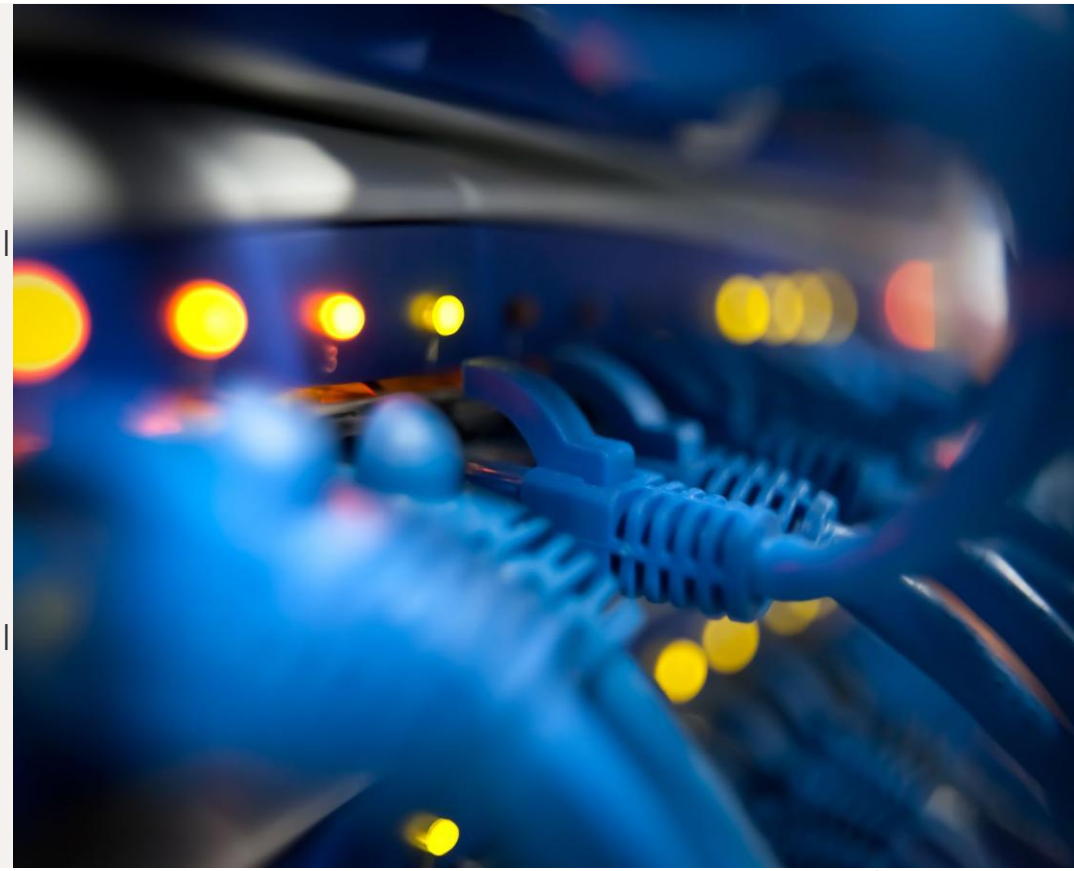
- **Wi-Fi Positioning System (WPS)**
- Your device scans for nearby Wi-Fi networks, noting their MAC addresses (a unique identifier for the router) and signal strength.
- This information is sent to Google's location servers.
- Google maintains a massive global database that maps Wi-Fi MAC addresses to physical locations.

- **Cell Tower Triangulation**

- Your phone constantly communicates with nearby cell towers.
- It can identify the towers by their unique Cell ID.
- Google maintains a massive global database that maps Wi-Fi MAC addresses to physical locations.

- **IP Address Geolocation**

- Your internet connection has a public IP address assigned by your Internet Service Provider (ISP).



GPS Tracking system Vs fleet management system

Feature	GPS Tracking System	Fleet Management System
Core Purpose	Locate and track assets on a map.	Optimize the entire fleet operation for efficiency, safety, and cost.
Primary Question	"Where is my vehicle?"	"How is my entire operation performing?"
Key Features	Real-time location, historical routes, geofencing.	Everything in GPS Tracking PLUS: Driver behavior monitoring, fuel management, maintenance scheduling, compliance (ELD), advanced analytics, route optimization.
Data Focus	Location Data (Latitude, Longitude, Speed).	Operational & Business Data (Location, Vehicle Health, Driver Performance, Fuel Costs, Maintenance Costs, Compliance Status).
Hardware	Basic GPS tracker.	Advanced telematics device (often with OBD-II/CAN-Bus connection) and sometimes dashcams.
User	Dispatcher, security personnel, maybe owner.	Entire Organization: Fleet Manager, CFO (reports), Safety Manager, Maintenance Manager, Dispatcher.
Business Goal	Security and basic visibility.	Profitability through cost reduction, safety improvement, and efficiency gains.

To whom this can serve

- Ambulances – Health
- Garbage collection trucks – Municipal councils
- School transportation - Education
- Public transportation - Transport
- Ministries - Government
- Heavy vehicles - construction

Key benefits of fleet management system

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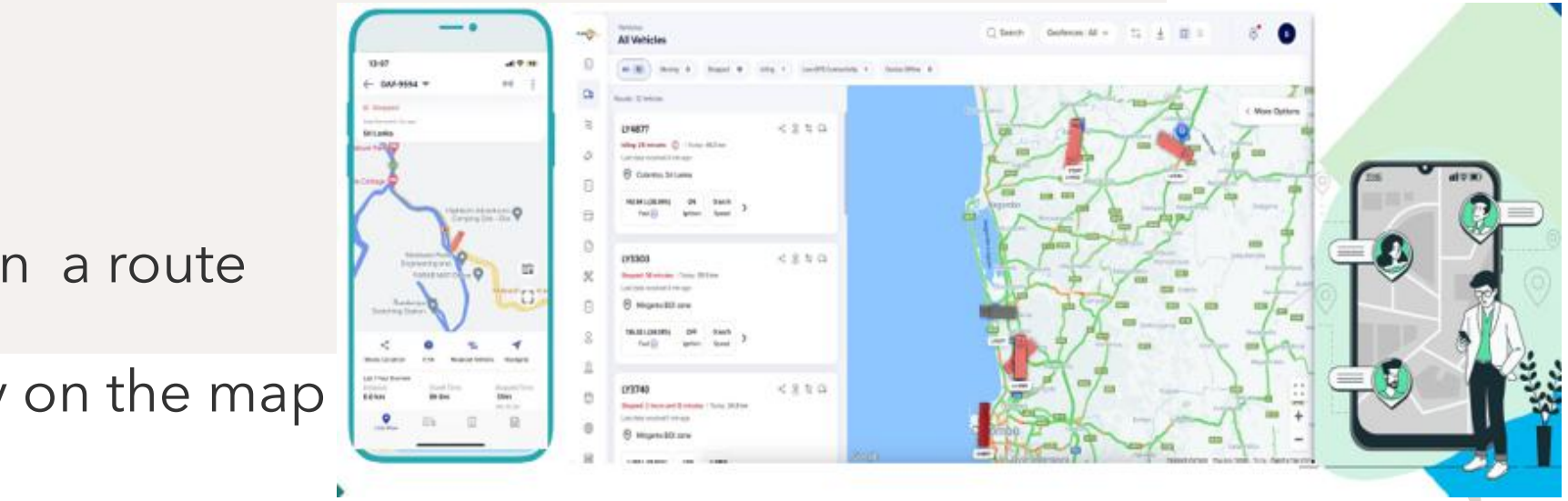
Live tracking and trip management

- Track moment of any vehicle
- Analysis of route/ traffic and idle times
- Hawk-eye view of entire journey

- Create /edit routes
- Add check points within a route
- View entire trip /history on the map

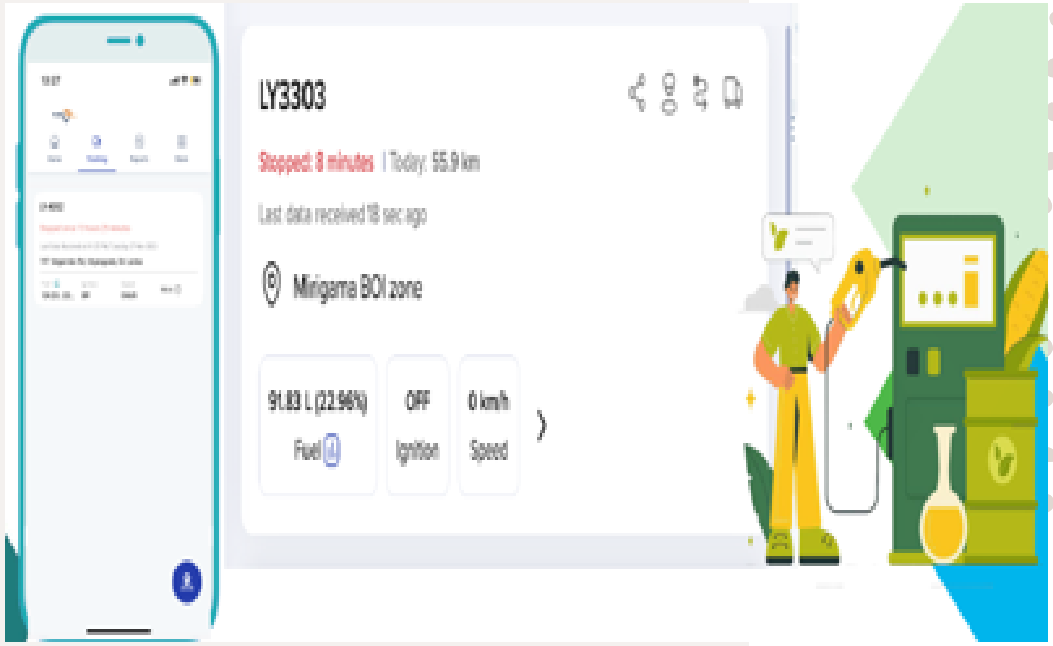


Managing Vehicle pool

- Alerting routing service activities
- Recording repair/ accident expenses
- Tire /Battery management
- Alerting expiration or revenue / insurance
- Driver license derails update
- Manage any kind of expenses and merge it with ERP
- Manage/pre decision expenses relevant to the vehicle pool

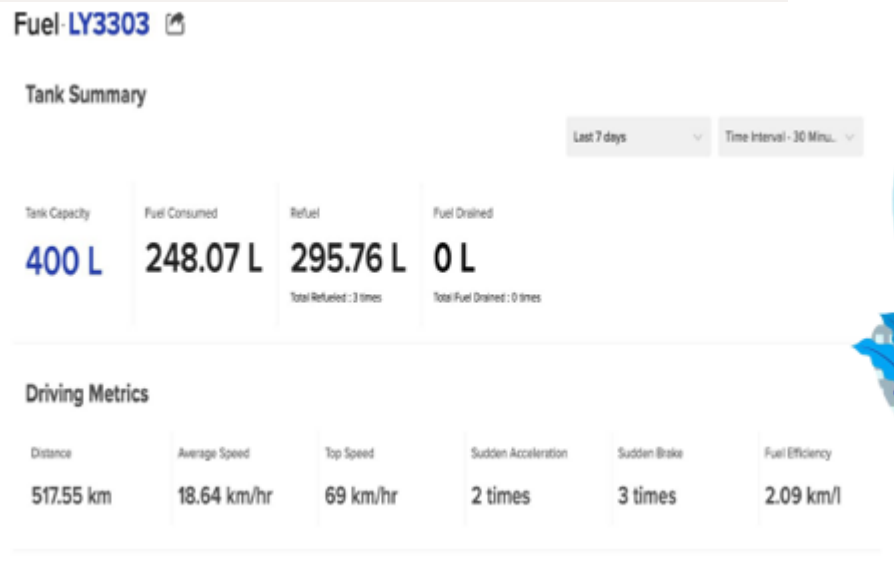
Fuel Related Matters

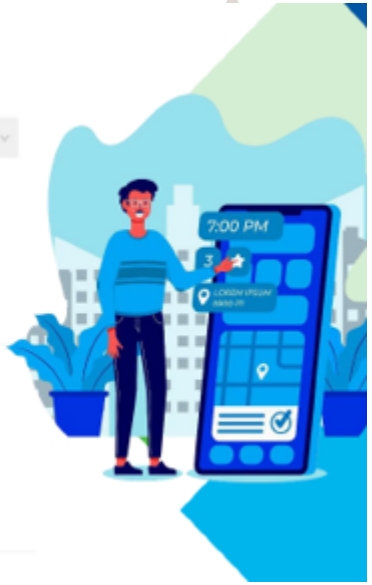
- Fuel Monitoring
  - Real time updates
  - Pilferage Detection
  - Analysis Driven Data
- Refilling and Draining
  - Realtime updates of refilling/draining fuel
- Checking ignition modes



Real time Updates

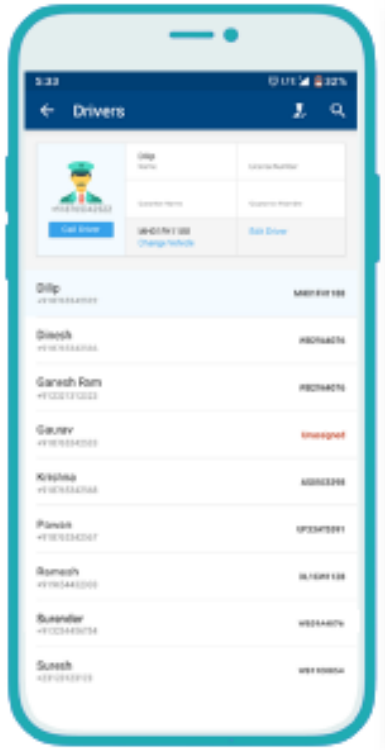
- Current Fuel level Monitoring
- Accurate vehicle location check
- Vehicle speed detection
- Mileage update

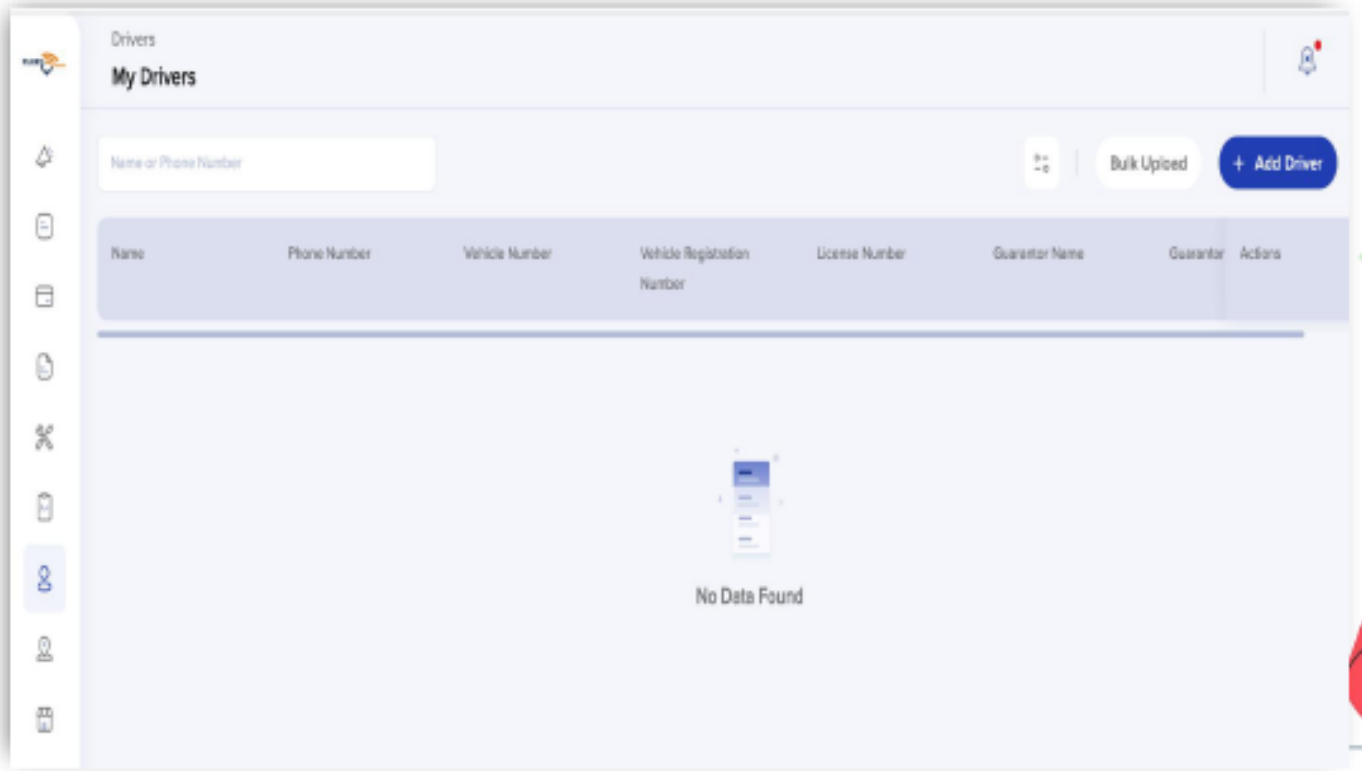




Managing Drivers and Transporters

- Assign the drivers to vehicles
- Make edits and changes in bulk
- Group vehicles as per usage
- Compare vendor performance

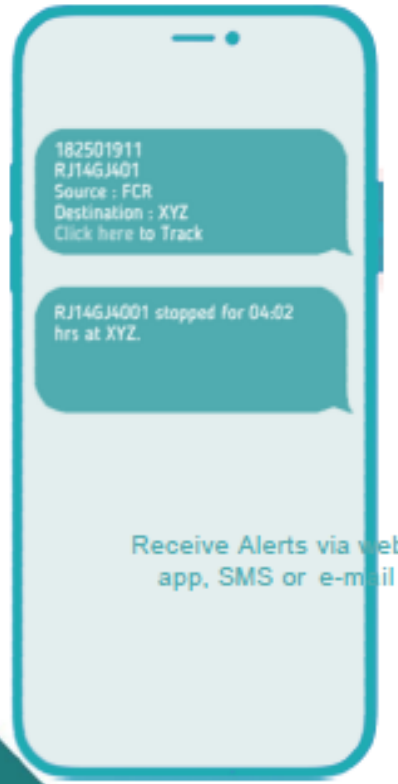


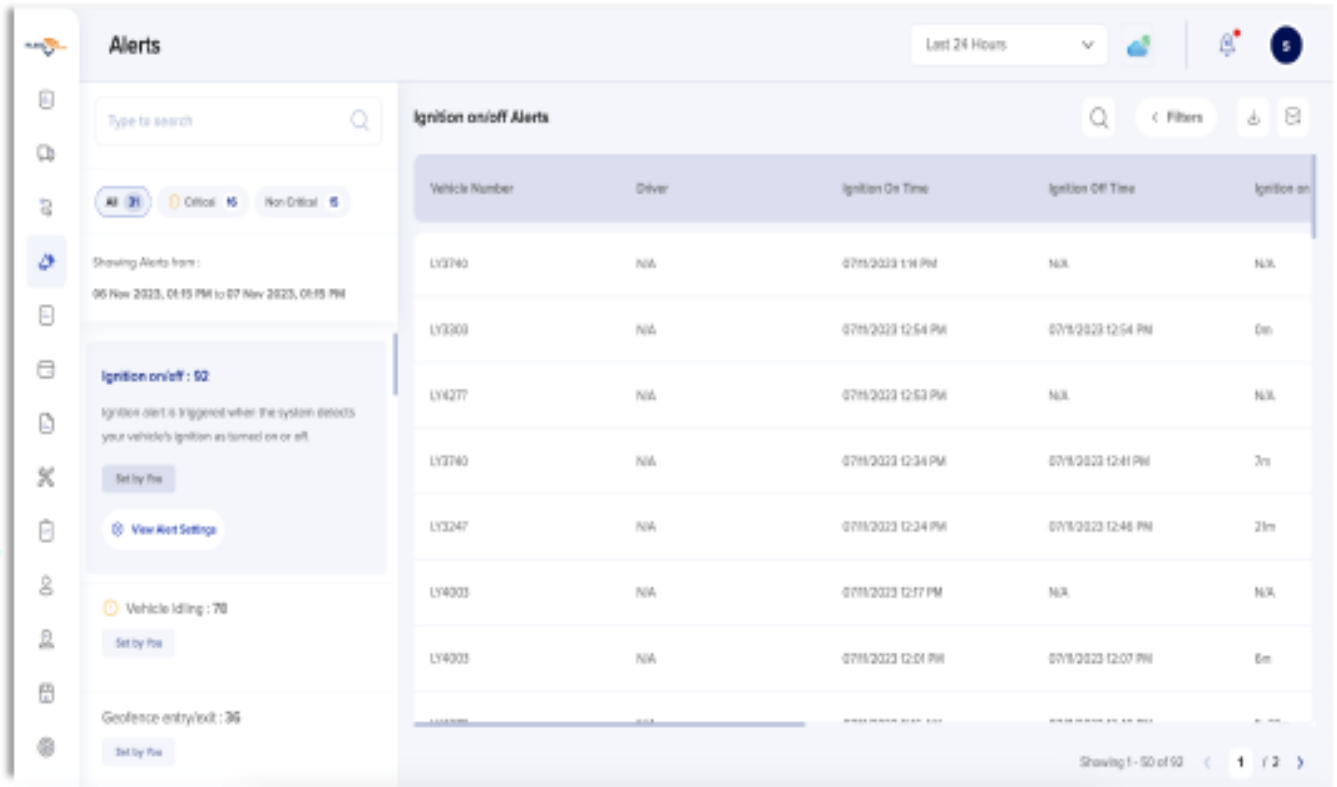


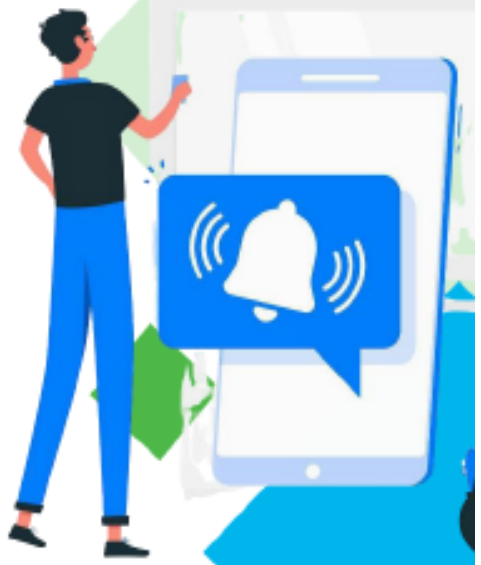
Real Time Alerts

- A log of all actions completed by a vehicle
- Sort by alert type, vehicle no. or time period

- Entry or exit alerts through a preset geofence,
- Planned or unplanned stoppages during trips
- Any attempts made for tampering the devices







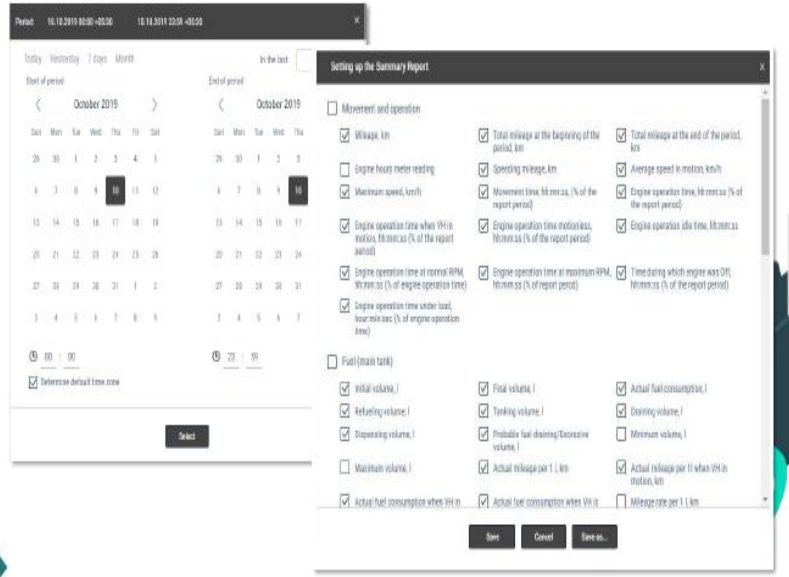
Reports and Analysis

Summary Reports

Obtain analytical reports about fuel volumes, speed, refueling and draining, and much more on a single dashboard

Customizable Reports

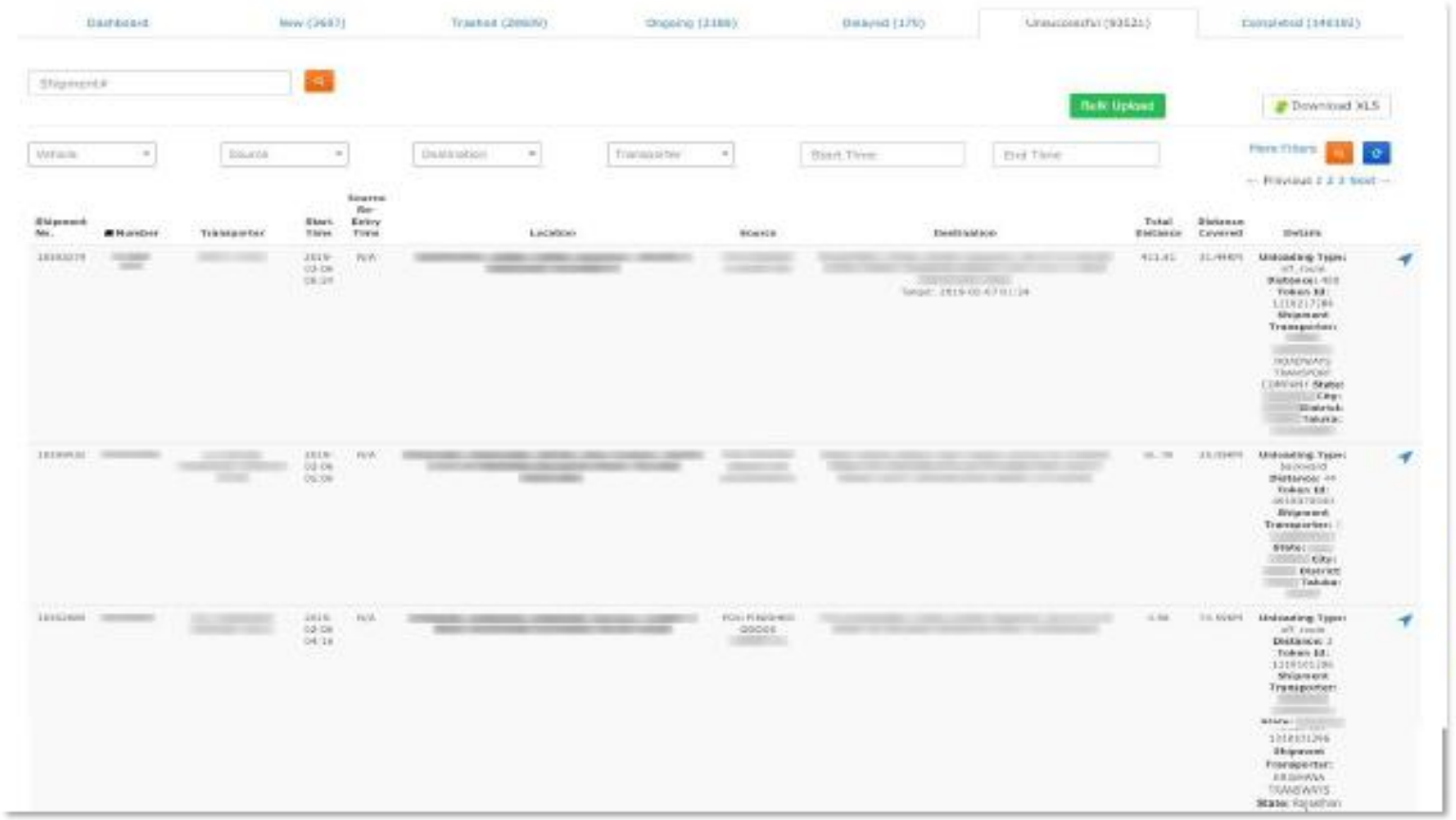
Take control over the data that is relevant to you and your business, and manage all the information your way



Identify Theft/Pilferage

With the help of our intelligent algorithms, track and identify the sources of pilferages

BACKLOADING | FORWARD UNLOADING | OFF-ROUTE | THEFT



FLEET & ASSET MANAGEMENT SYSTEM

- Trip Planning & Route Optimization
- Rich Analytics & Reports + Custom Report Builder
- Tyre & Inventory Management
- Performance Scorecards - Drivers & Vehicles
- Customizable alerts for email, SMS & App
- Real-Time Alerts for Geofence Entry/Exit, Stoppages, Idling, Route Deviation & more

- Fuel
- Load Monitoring
- Temperature Monitoring
- Engine Health Visibility
- eLocks
- Live Location Tracking
- Door Sensing
- SOS

SINGLE PLATFORM GETS IT ALL DONE

Track Anything On-the-Move
Works with all types commercial & passenger vehicles

Monitor What Matters
Integrates with 2200+ types of IoT devices & sensors for assets & vehicles.

Control Operating Expenses & Fuel Pilferage
Instant alerts on fuel drainage. Rich analytics on fuel usage

Manage Documents, Inventory, & Maintenance Schedules
Keep everything organized and running smoothly

Improve Trip & Route Efficiency
Automate trips & routes to improve TATs

Encourage Safer Driving
Gamify Driver Coaching and Rewards with Scorecards

Protect Drivers, Cargo, & Vehicles
Remote vehicle locks, immobilizer, SOS button, emergency alerts, eLocks & more

Get Real-Time Proof of Delivery
Pairs with driver-side app to automate tasks.

Optimization | Cost & Operations

Turn Around Time

Optimize both 'In-Plant' & Outbound movement using recursive analysis. Identify and take action against repetitive defaulters

Distance Correction

Create a repository of dealer locations & eliminate cases where the distances in the ERP system is leading to unnecessarily high payouts

Transporter Performance

Insightful reports & analysis on no. of trips
undertaken and their statuses. Incentivize or penalize based on their performances to ensure a higher standard of operations

Dealer Performance

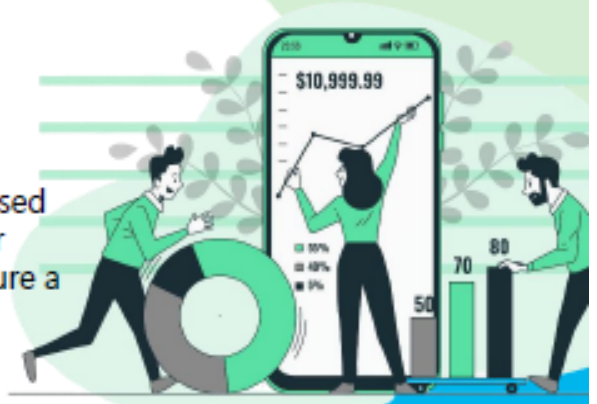
Identify dealer performance via reports generated using trip related metrics such as completed shipments, unsuccessful shipments, deviation, dealer detention etc.

Increased Trip Frequency

Provide visibility to dealers along with the ETA to ensure the detention time is reduced and thereby facilitate a quicker return to plant

Demand Forecasting

Daily report of vehicle status for precise planning to aid in increased serviceability to facilitate greater sales volumes and thereby capture a larger market share



Security Features

Vehicle Immobilization

In case of vehicle theft, the engine of the vehicle can be turned off with just one click and the nearest police station too will be informed

Post Accident Analysis

In the unfortunate cases of accidents, the recorded data can be analyzed to present a valid case for the insurance claims

Fuel Pilferage Detection

Using our advanced sensors, the accurare amount of fuel consumption can be known and hence, pilferages can be identified

Door Lock Detection

The exact time and location can be noted in the event of opening a door to provide a deeper visibility for controlling goods theft

Thank you