



# Intelligent Fleet Management

Acacus provides a comprehensive fleet management solution that optimizes fleet dispatch and improves the safety of mobile fleets. It uses the latest telematics and machine learning technologies to schedule, dispatch, track and optimize fleets for a wide range of industries.

From car rentals to milk delivery, Lynx is versatile enough to manage the requirements of the most demanding and complex constraints.



# About ACACUS

Acacus Technologies was born in Dubai in 2013. We have since been developing innovative software and hardware solutions for global airlines and transportation companies.

We like to think that we are unique because we develop all of our solutions from the ground up with the specific needs of the industries that we serve in mind.

Based in a city that thrives on the use of cutting edge technology, we take to heart the need for continuous improvement and to push the boundaries of what transportation operation management solutions offer.



## Clients



هيئة الطرق والمواصلات  
ROADS & TRANSPORT AUTHORITY

# Solution in a Nutshell

Lynx is a state-of-the-art vehicle tracking solution that allows organizations to monitor and optimize fleet operations. It collects a wide range of vehicle location and diagnostics data that can be tracked remotely. It uses machine learning technology to provide unique alerting while optimizing fleet pickup and drop-off schedules.



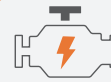
## Location Tracking

View current or historical vehicle location.



## Machine Learning

Embedded sensors analyze driver behavior and fleet operations.



## Vehicle Diagnostics

Track engine sensory data including speed, fuel levels, RPM and maintenance alerts.



GPS Position Data



Position  
Speed  
Heading  
Alerts



GSM Base Station



Acacus Cloud Servers



SMS Alerts



Web Browser



Tablet

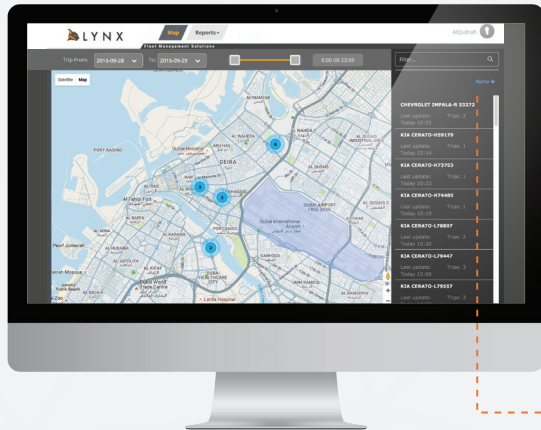


Mobile App

Our service includes all the software, hardware and devices that you need to get up and running with intelligent fleet management including:

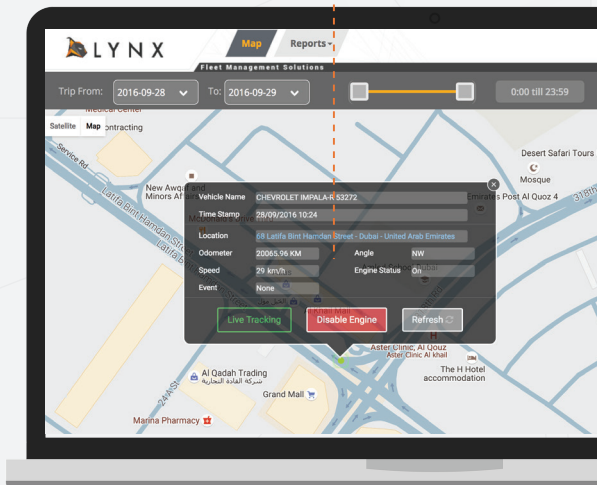
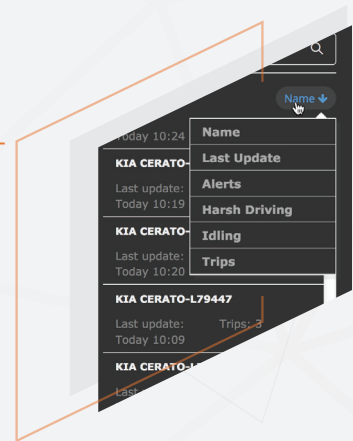
- ▶ Tracking devices
- ▶ Data communication network
- ▶ Optimization Engine
- ▶ Machine Learning Engine
- ▶ Maintenance
- ▶ Sensors: fuel, weight, cargo, temperature
- ▶ Tracking Software
- ▶ Fatigue Detection Software
- ▶ Installation

# Fleet Management Simplified



Lynx provides fleet managers with all the information that they need about their vehicles in a single map. Besides showing real-time data on the entire vehicle fleet, historical trip information and alerts are also accessible.

All the vehicles are listed on the same screen that is used to monitor a fleet. This list can be filtered to view specific vehicles by name, registration number. The list of vehicles can also be filtered by the types of alerts that have been triggered such as speeding, idling or user-defined alerts.



Trip information on a selected vehicle shows distances travelled as well as start and end times for each trip. The following information is accessible from the trip logs:

- ▶ Locations and addresses visited
- ▶ Vehicle headings at any point of time
- ▶ Speeds
- ▶ Engine status
- ▶ Odometer readings
- ▶ Battery status
- ▶ Harsh braking, acceleration and towing alerts

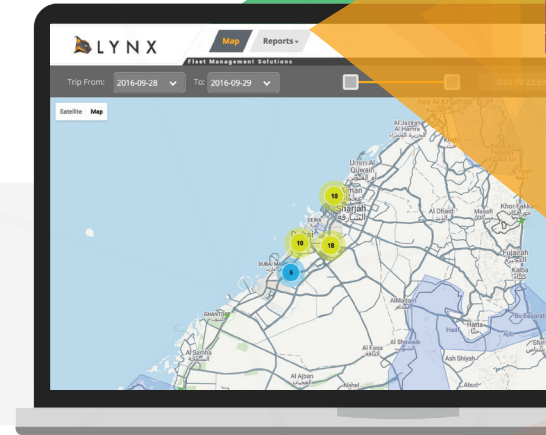
The following optional information can also be tracked if required:

- ▶ Cargo temperature
- ▶ Fuel levels
- ▶ Cargo/passenger information (RFID-based attendance and cargo tracking)

# Alerts

Our tracking solution supports a wide range of alerts. It also allows for organizations to create their own alerts by selecting combinations of events that trigger a custom alert. Default alerts include:

- ▶ Harsh braking / acceleration
- ▶ Driver fatigue
- ▶ Vehicle idling
- ▶ Vehicle tow
- ▶ Panic button pressed
- ▶ Geo-fence entry or exit
- ▶ Seatbelt not fastened
- ▶ Fuel theft
- ▶ Speeding (general, location based or speed-limit based)



*Custom alerts can also be defined by end-users with any combination of logged events.*

## Integrated Computer Vision

We give our clients the option of integrating high definition cameras and recording systems with our fleet management solution. Our software uses machine learning algorithms to monitor and analyze camera images so that objects in the video feeds can trigger alerts. Dispatchers get an alert when drivers are frequently tailgating or showing signs of fatigue.



### Use Case

Driver fatigue is the cause of about **20%** of fatal traffic accidents with over **30%** of severe rural vehicle crashes involving a driver being fatigued.

*[source: Vic Road Accident Facts Victoria]*

Working for Dubai Taxi, Acacus is installing in-vehicle driver cameras and sensory devices capture eye movement, head tilt, and driving behavior in real time. Our solution uses machine learning algorithms to analyze, detect and alert dispatchers when driver is showing signs of fatigue.



# Optimized Scheduling & Dispatch

Lynx includes a number of unique tools that allows fleet operators to optimize fleet utilization and automate dispatching. Our solution was reviewed in an independent study conducted by Advanced Logistics Group (ALG). One of the main findings of their study was that our dispatches fleets with at least 20% fewer vehicles their best attempts to optimize and plan fleet schedules.

## Resource Planner

Effective fleet management requires proper planning. Our software allows transport managers to determine how many and what types of vehicles are required in their operations with a wide range of configurable constraints.

## Automated Dispatch

Gone are the days where dispatchers need to call drivers. Lynx uses and optimization engine to monitor delivery schedules as well as traffic conditions to decide where each vehicle in a fleet should go next.

## Disruption Management

Real time re-optimization and dispatch in less than 30 seconds in the event of disruptions such as vehicle breakdown, driver call out or accidents



**Request a Demo**

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[www.acacusgroup.com](http://www.acacusgroup.com)



SOLUTIONS THAT COUNT