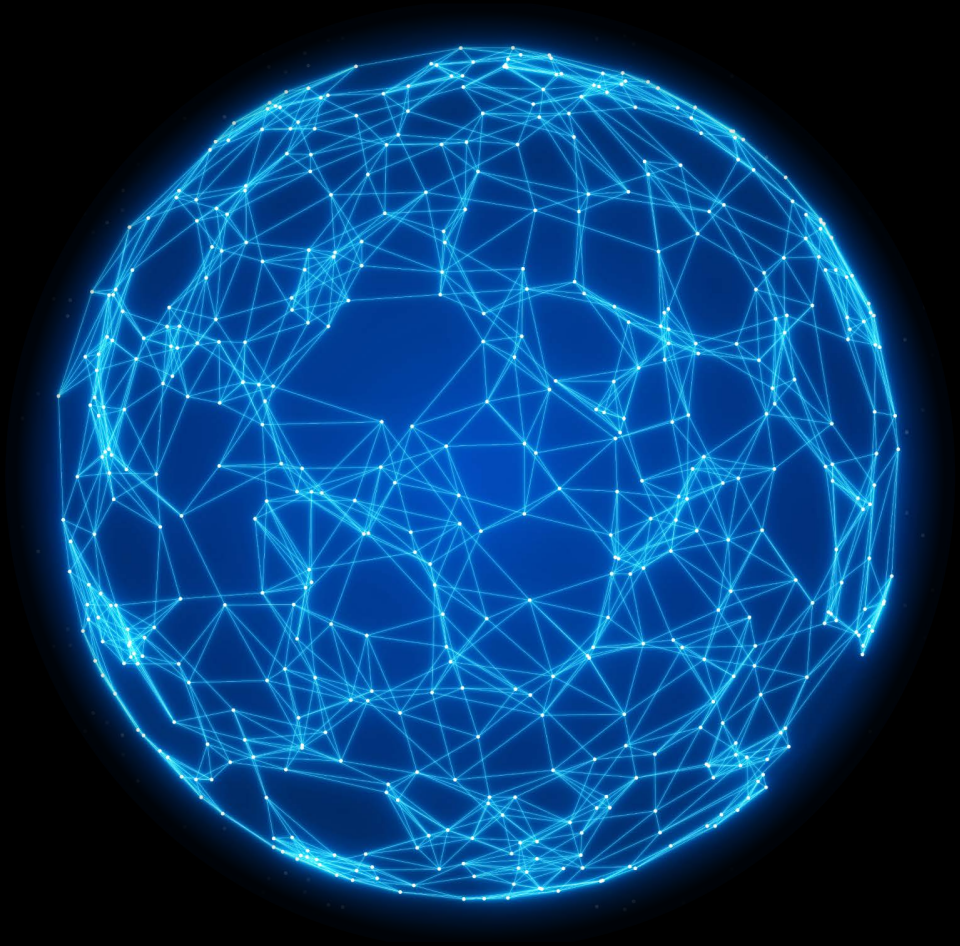
Deloitte.



Fleet Telematics: Mobilizing IoT

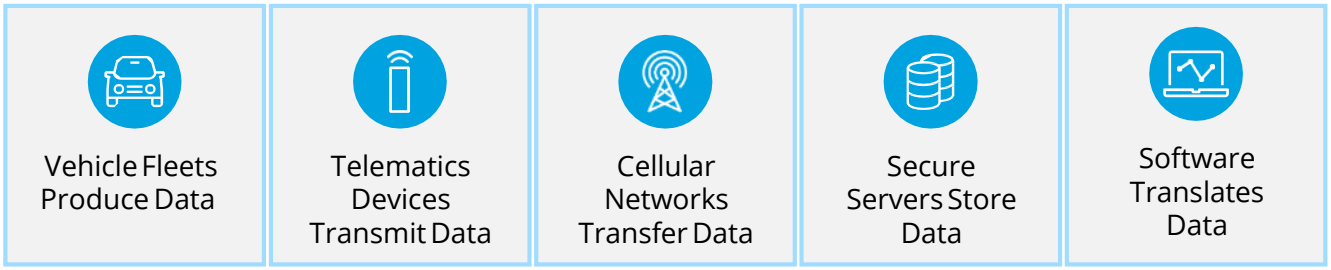
The Future of Fleet Management is Here

Fleet Telematics

Overview of Telematics

Telematics refers to the process of sending, receiving, and storing vehicle data using telecommunications devices. In vehicle fleets, these devices connect the vehicle's onboard diagnostics port with a SIM card and an onboard modem for wireless communication. These devices transmit data on vehicle use, including idling time, location, acceleration and speed, driver behavior, fuel consumption, engine diagnostics, and other sensor data. The value of this data is increased when coupled with a fleet management system that converts this raw data into visualizations and fleet management insights. Analyzing the data produced by telematics devices can provide fleet managers with insights across the entire fleet lifecycle. The power of these devices is only growing, and will continue to get exponentially stronger with the advent of emerging technologies such as 5G, artificial intelligence and machine learning.

Vehicle Telematics Data Flow



What data is captured by telematics devices?

Telematics devices are able to produce an enormous amount of information in in real-time to provide to fleet, property, and financial management personnel. This data differs across vendors but most telematics devices capture the following data elements:

Vehicle Identification	VIN, make/model, fuel type
Utilization	Miles traveled, number of trips, odometer reading
Fuel	Consumption, miles per gallon, emissions
Sensor Data	Fluid levels, tire pressure, oil life, hardware alerts
Maintenance	Diagnostic alerts, trouble codes
Driver Behavior	Crash events, seat belt detection, rapid acceleration/deceleration

What does telematics enable?

Telematics hardware and software, enables numerous services spanning the entire fleet management lifecycle. The breadth and dept of the high-value telematics data leads to insights previously unavailable due to lack of real-time data capture and software integration.

Asset Tracking

Both motorized (vehicles) and non- motorized (trailers) assets can be tracked by GPS satellite, ensuring that assets do not go missing and enabling optimized routing, geofencing, and dispatching.

Data Capture

Telematics bring accurate, real-time data straight from each asset. This improves data quality and availability while also enabling data-driven decision making.

Maintenance & Repairs

Telematics devices automatically pull engine data, fault codes, and recall information in real-time. This enables more effective maintenance operations.

Driver Safety

Telematics devices allow for capture and monitoring of driver behavior data, such as speeding incidents, seat belt alerts, rapid accelerations, harsh braking, and accidents.

These four core functions can provide significant operational benefits leading to more effective management, increased vehicle readiness, and greater cost savings.

- Improved fleet utilization and right-sizing
- Predictive maintenance
- Reduced fuel consumption and cost
- Streamlined fleet reporting and compliance
- Route optimization
- Vehicle idling reduction
- Alternative fuel vehicle management
- Improved driver safety

Market Trends

Government agencies continue to adopt and install telematics technologies on new and existing fleet vehicles. Telematics will soon cover over **220,000+** federal government vehicles.

State governments continue to mandate agencies to install telematics devices on **all state-owned vehicles as an effort to optimize fleet operations and minimize costs.**

Deloitte's Telematics Maturity Model

Substantial operational benefits can be realized as fleet organizations reach higher levels of technological maturity in their telematics programs. Deloitte has worked with clients across maturity levels to enhance capabilities for increased efficiency, cost savings, and fleet readiness benefits.

LEVEL 1

Disconnected Fleet
No telematics capability leading to a lack of data driven insights. Multiple disconnected data sources and underlying data quality issues due to manual data capture practices. Operational costs are high and driver safety awareness is limited.

LEVEL 2

Post Pilot
Organization has deployed a pilot to show the ROI and proof of concept related to telematics. Fleet leadership clearly sees the benefits of telematics deployment but is struggling with wide-scale deployment planning, systems integration, and potential change management concerns.

LEVEL 3

Limited Visibility
Organization has invested and uses a telematics system to track vehicles. Organization has initial grasp of the telematics potential, champions arise, and operational processes are being supported by telematics capabilities. Organization still lacking data driven insights needed to realize full potential and cost savings telematics can enable.

LEVEL 4

Embedded
Telematics is real. A standard operating model for telematics is embedded in the organization. Telematics capabilities are matured with resources dedicated to continual realization of value from telematics technologies. A cultural change in driving behavior and fleet management practices are evident. Data insights lead to optimization in fleet operating costs. Employees proactively engage with telematics technology.

LEVEL 5

Insight-Driven
Telematics has now transformed the organization. Fleet and telematics data are fully integrated with core operational data and processes. Fleet management practices are optimized and decisions are made in real time. Financial and safety benefits are methodically realized. Data becomes the fuel for more effective management and vehicle readiness. Advanced analytics, machine learning, and predictive models are now a reality.

Pilot

Deloitte has helped clients develop the scope, identify technology providers, implement, and evaluate telematics pilots to show both proof of concept and ROI.

Implement

Deloitte supports clients with technology evaluation and selection through full scale implementation. Our support includes project management, network integration, change management, and analytics.

Enhance

Deloitte brings advanced analytics and task management capabilities to enhance clients ability to turn telematics into actionable insights. Ensure that actionable insights lead to realized cost avoidance and efficiency gains.

Fully Optimize

Deloitte's artificial intelligence and machine learning based analytics engines fully enable predictive and prescriptive analytics abilities. Connecting disparate data sources and enabling real-time and historic data to optimize fleet operations and cost efficiency.

Get in Touch with Deloitte's Fleet Team

Deloitte is committed to helping clients identify the best path forward towards initial telematics deployment or enhancement of current telematics capabilities. Our strength lies in providing the industry insights, technical expertise, broad analytics (AI & ML) and change management capabilities to ensure our clients realize their fleet management goals through telematics.

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