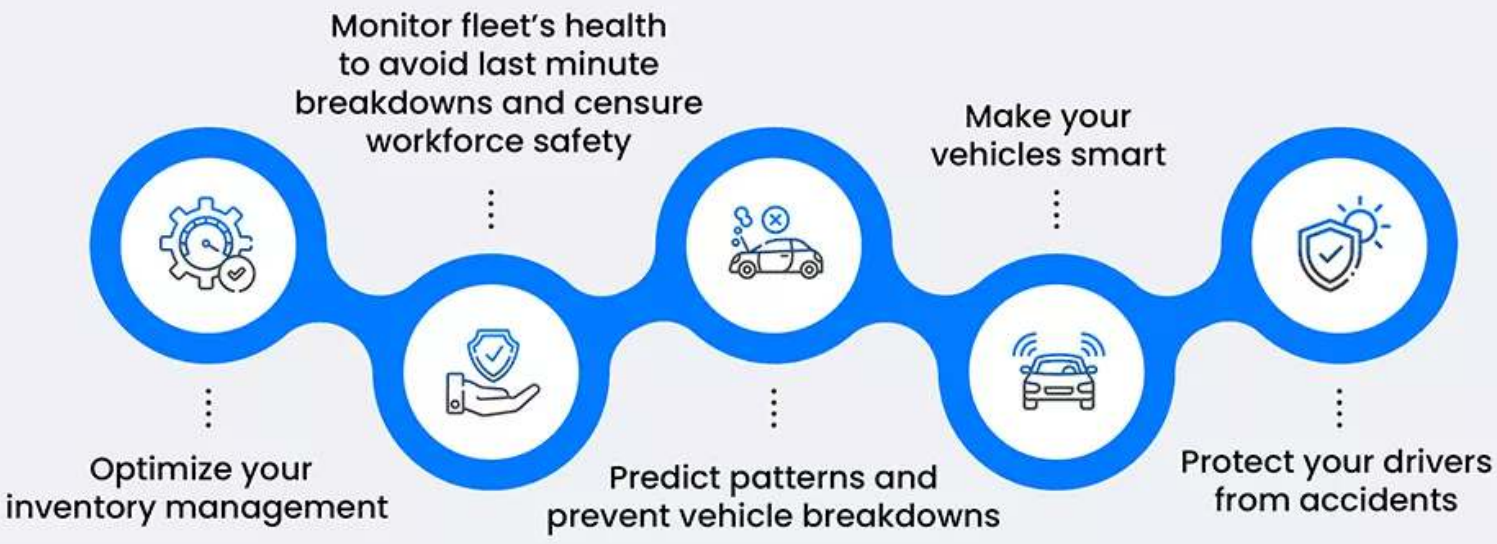
IoT Use Cases for Logistics Industry

IoT is becoming the de-facto technology in tackling the challenges of continuous and real-time tracking, warehousing, and fleet management. With a dual approach to minimize manual workloads and accelerate an uninterrupted flow of everyday operations, companies are breaking the data silos in their systems and processing the data in a smart way with IoT. With onboard sensors, tracking your assets becomes transparent and hassle-free. IoT applications coupled with big data analytics, advanced robotics, and an interconnected network have given rise to Supply Chain 4.0. You can address discrepancies in real-time and achieve comprehensive fleet visibility and maintenance even for remote geographical locations by digitizing your supply chain.



1. Optimize your inventory management

In the logistics sector, stock fulfillment at all times is mandatory to meet fluctuating demands. Overstocking or last-minute stocking can raise to decrease ROI and increase variable expenses. Changes in environmental conditions like temperature impact product quality, if not monitored, can lead to monetary loss. A holistic approach to last-mile logistics and fleet management becomes crucial for product quality and maintaining a healthy supply chain.

With IoT-enabled RFID tags, manufacturers get real-time visibility into their inventory operations. As the data gets automatically stored in the cloud, IoT makes the tracking of each asset effortless. With instant updates about the items' movement, location, and status, workers and managers gain complete visibility into the flow of materials, work-in-progress, and delivered goods.

2. Monitor fleet's health to avoid last minute breakdowns and censure workforce safety

Drivers form the backbone of the logistics sector, A crucial link in the supply chain. They transport goods from factories and distribution centers to retail outlets. However, fleet tires are prone to punctures, leading to vehicle downtime, accidents, and fatalities. Research indicates that 20% of fleets are involved in accidents annually. Equipping vehicles with smart sensors is vital to monitor potential risky maneuvers like backing up and lane changes.

Tire Pressure Monitoring Solution (TPMS) informs drivers of any unexpected drop in tire pressure or an increase in tire temperature. Fitted inside the wheel rims or tire valves, TPMS optimizes tire maintenance, rotation, regrooving, and retreating, along with scheduling all the maintenance procedures in one go.

3. Predict patterns and prevent vehicle breakdowns

The application of IoT in the logistics sector is not limited to asset management and health monitoring. Instead of scheduling maintenance for breakdowns, companies can opt for preventive maintenance and eliminate accidents and hazards even before they occur.

Real-time insights enable companies to analyze parameters that define a vehicle's performance. These insights can be engineered to also deliver instant alerts on possible breakdowns and unexpected malfunctions and prevents them via a condition-based maintenance approach. Identifying defects before they take a catastrophic turn is crucial to thriving in the logistics industry. With IoT, industry players use available data to reduce risks, modernize the shipment process and improve vehicle performance.

4. Make your vehicles smart

IoT sensors embedded in vehicles present logistics operations teams with real-time analytics regarding vehicle condition, fuel amount, and insights into driver behavior. Logistics players can prevent any possible casualties or breakdowns by monitoring conditions such as tire pressure and coolant levels. IoT solutions help in maintaining the right temperature and humidity inside the vehicle. This becomes exceptionally crucial when transporting foods or perishable items through long-hauls.

5. Protect your drivers from accidents

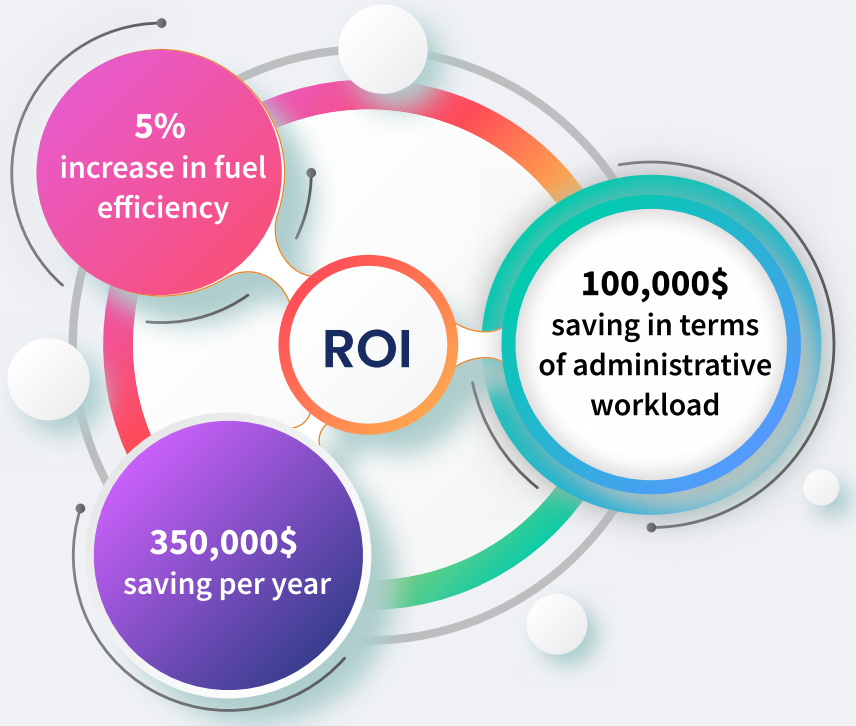
Driving itself is a complex psychomotor skill. Drowsiness or fatigue during journeys often leads to fatalities. Remaining alert always is necessary to ensure driver safety. Research indicates that 21% of all fatal accidents occur due to drowsy driving. Solutions like Advanced Driver Assistance Systems (ADAS) reduce human errors by alerting drivers of potential road accidents. With vision-based ADAS solutions, cameras are installed inside the vehicle to send out collision warnings while parking. While driving, the intelligent solution also assists in lane detection, object recognition, automatic braking, driver drowsiness detection, and pedestrian detection.

IoT's game-changing potential in the logistics sector is quite evident. The data collected from IoT sensors provide logistics managers with greater transparency from production and transportation to timely delivery. However, logistic companies have a long way to go in realizing the maximum benefits of IoT. Industry players who adopt this state-of-the-art technology will inevitably steer ahead of their competitors.

Acuvate's Intelligent IoT Solution: Providing Real-Time Visibility, Reducing Costs for a Client with 800+ Vehicles on the Fleet

With Acuvate's holistic IoT approach, the client availed a 360-degree view with a live feed of critical parameters like harsh braking, fuel efficiency, idling, weather data, document management, etc.

By implementing telematics solutions that included GPS tracking, real-time vehicle diagnostics were made accessible for planning the most efficient routes based on data points. Acuvate's holistic IoT solution enabled the business to track and tackle issues from any location through a simple, easy-to-use mobile app.



The Acuvate Promise to Enhance your Fleet Management Operations

- Improved vehicle routing and tracking
- Engine performance and fuel efficiency analysis
- Predictive fleet maintenance
- Driver safety control
- Modernized vehicle maintenance
- Perfected delivery management

Summing up

Recent years have proven that IoT is not a flash-in-a-pan moment in the logistics sector. Shipping companies are fast adopting this avant-garde technology to upgrade their warehouse inventory, accelerate transportation and stay ahead of delivery timelines. As data becomes readily available, the future looks bright for companies keen to jump on the IoT bandwagon.

Avoid roadblocks and steer ahead of the competition. Make the most of your data with Acuvate's holistic approach to transforming your business with IoT. To know more talk to our IoT experts.

About Acuvate

Acuvate Software is a global player in next-generation digital services and consulting with 15+ years of experience improving business efficiencies and revenue for numerous automotive enterprises worldwide. As a Microsoft Gold Partner, we leverage all things Microsoft to build enterprise apps that support intelligent analysis, collaboration, and orchestration of information, to redefine sales, service, mobility, and experience.

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