# What's Next for the Digital Transformation of Fleet-Based Businesses

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THE TECH INTELLIGENCE EXPERTS™

**RIDECELL**

## Executive Summary

Connecting fleets has been the leading edge of digital transformation for fleet-based businesses for the past several decades, as it enables fleet managers to better monitor and optimize their operations in real time. Connectivity has been transformative, but it is just the first step toward the digital transformation of fleets and fleet-based businesses.

One of the many key benefits of having a connected fleet is the ability to track vehicle location and performance data, allowing managers to streamline processes like dispatch and routing, while improving vehicle maintenance, fleet safety, and driver behavior. In recent years, an abundance of fleet data and advancements in technology have also allowed for the more sophisticated use of fleet telematics data. Predictive analytics can be used to anticipate maintenance needs and schedule repairs before they become a major issue. Connected vehicles can also be used to track inventory and monitor cargo conditions, making it easier to manage logistics and reduce delivery times.

Today, most of the systems that interpret vehicle data are generating an increasing number of recommended actions, which, in turn, lead

to additional manual tasks. The next horizon of the digital transformation of fleets is incorporating automation in today's manual workflows, making fleet management cheaper, faster, and better.

ABI Research conducted an in-depth survey of 300 fleet professionals, deriving insights and actionable intelligence for fleet-based businesses looking to digitally transform fleet operations. In this whitepaper, ABI Research provides comprehensive insight into how fleet management will be transformed by deploying automations positioned as "digital workers" using fleet management insights as real-time triggers for workflow automation.

**62% of businesses stated that fleet management digitization is their top priority.**

# Introducing Digital Transformation for Fleets

Digital transformation for fleets refers to the use of data analytics and automation to optimize and simplify fleet management. This can range from simple processes, such as Global Positioning System (GPS) tracking to automated maintenance scheduling and routing. The overall goals of operational efficiency and cost reduction mean that the importance of digital transformation for fleets cannot be overstated. By leveraging technology to optimize fleet management, companies can improve their bottom line, enhance customer experience, and reduce risk. According to the survey, fewer than 50% of businesses have a digital transformation strategy in place for their fleet operations.
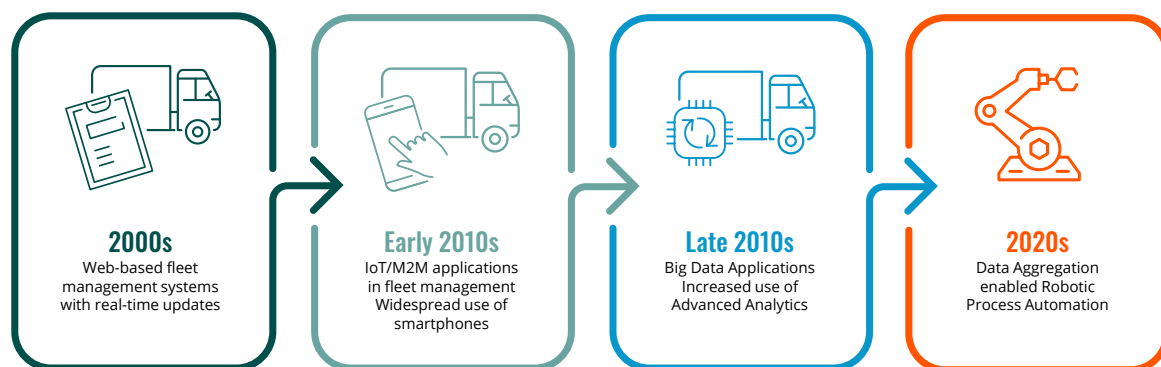
Digital transformation of fleet operations can help businesses reduce expenses and improve efficiency in different ways, including:

- Being able to provide more accurate and timely delivery times to customers
- Enhanced driver safety and productivity
- Better decision-making and risk mitigation
- Enabling preventive maintenance to identify potential vehicle maintenance issues before they impact productivity
- Downtime and idle time minimization
- Reduced operational costs

Figure 1 shows the evolution of fleet automation technologies and the next stage of digital transformation of fleet management.

*Figure 1: Fleet Automation Evolution and Fleet Management Digital Transformation*

*(Source: ABI Research)*



**2000s**
Web-based fleet management systems with real-time updates

**Early 2010s**
IoT/M2M applications in fleet management Widespread use of smartphones

**Late 2010s**
Big Data Applications Increased use of Advanced Analytics

**2020s**
Data Aggregation enabled Robotic Process Automation

# The Impacts of Fleet Automation

Manual fleet management processes can be cumbersome and time-consuming, leading to several pain points for fleet managers. These labor-intensive and cumbersome processes can often contribute to inefficient data collection and analysis, making it difficult to identify trends and patterns in fleet data, as well as creating challenges around optimizing fleet performance. Additionally, fleet managers may struggle to keep track of maintenance schedules for each vehicle, leading to increased downtime and higher maintenance costs. This can prove to be extremely costly, especially for long-haul trucking and leasing companies, for which vehicle lifecycle management is key.

Failure to digitize and automate processes, such as managing driver behavior, can also lead to challenges in identifying and addressing unsafe driving habits, contributing to higher accident rates and increased insurance costs. In addition, manual fleet management processes can be time-consuming and labor-intensive, requiring fleet managers to spend significant amounts of time on administrative tasks, such as record-keeping, scheduling, and tracking vehicle usage. This can detract from more strategic fleet management tasks, such as optimizing fleet performance and reducing costs. Based on the survey conducted by Ridecell and ABI Research, 79% of businesses have issues with inaccurate Estimated Times of Arrival (ETAs) and inefficient Service-Level Agreement (SLA) management in their fleet operations, highlighting the need for fleet automation.

There is a growing need for fleet managers to move beyond interpreting data toward automated actions based on data insights. Fleet data must be integrated and actionable for businesses to enjoy real returns. If managers are suffocated by information overload

and ignore valuable fleet insights and recommendations, they are missing an enormous opportunity to boost efficiency, increase the safety of their fleet, save money, and much more. Reducing information overload in a systematic way can help fleet managers get on top of mountains of information by adding fleet management systems that interpret and recommend actions based on the wealth of data.

Fleet data aggregation has been successful at interpreting the growing sources of fleet data and making recommendations and insights from the information provided. The current state of fleet management finds the typical fleet owner awash in an increasingly sophisticated set of insights and recommended actions, yet without additional manpower to perform all the work requested or required by these systems. Over time, fleet management systems have become more sophisticated, and new technologies, such as Robotic Process Automation (RPA) and trigger-based workflow automation, have been introduced to help automate and streamline fleet management processes. In the same way enterprises use RPA to automate white-collar jobs, companies are now able to use fleet automation to automate their vehicle fleets.

Using fleet automation, Artificial Intelligence (AI) "bots" can be deployed to replace time-consuming and monotonous fleet management tasks. One of the many benefits is the ability for fleet managers to save time and money by automating these tasks, giving human employees more time to focus on other important jobs. Automation excels at routine and predictable tasks, which are frequently considered part of the drudgery of a job. By automating these boring and predictable assignments, work happens faster, and employees are more satisfied with their work.

In the context of fleet management, fleet automation can automate scheduled tasks, such as driver onboarding, vehicle inspection, vehicle onboarding and offboarding, and scheduled maintenance. By automating these processes, many of which involve issuing work orders to multiple vendors for vehicle processing, organizations can improve efficiency, reduce costs, and free up staff time for more strategic tasks.



**45% of fleets have considered workflow automation as part of their digital transformation initiatives.**

Real-time workflow automation is another technology that has been introduced in recent years. This technology allows organizations to automate workflows based on specific triggers, such as a new vehicle being added to the fleet, a reported maintenance issue, or a driver reaching a certain mileage threshold. By automating these workflows, organizations can improve efficiency, reduce errors, and ensure that critical tasks are completed in a timely and efficient manner.

# Uncovering Macro Trends in the Mobility Industry

**Staffing Complexities:** Since the pandemic, supply chains have been experiencing staffing complexities and shortages in various markets. The year 2020 saw labor shortages in the warehouse and retail worker market. From 2021 onward, we have seen shortages in the truck driver market. The truck driver shortage eased slightly in 2022, after more than 90% of truckload carriers raised pay last year, but the industry still faces its second-largest number of vacancies on record.

According to the American Trucking Association, a trade association made up mostly of large trucking fleets, the United States was short 78,000 truck drivers in 2022. Despite this, the issues surrounding staffing complexities still persist. Around half of fleet managers said not enough drivers and technicians in the field is one of their biggest operational challenges. Technology advances that improve the driver's experience become advantages in the talent war.

**High-Velocity Supply Chains:** The nature of supply chains differs by product and industry vertical. Industries like pharma and Fast-Moving Consumer Goods (FMCG) have the quickest supply chain from the point of production to the Point of Sale (POS), for example. As a result, lead times for fresh produce are extremely short, with minimal stock kept at warehouses, fulfillment centers, or the back of the store.

Distributors rely on efficient cross-docking and Just-in-Time (JIT) to accelerate the efficient movement of goods. FMCG goods like produce items are usually delivered from regional distribution centers or warehouses to stores. This entails optimized route planning and the ability to quickly react to any disruption. Short lead times also require coordination throughout the supply chain; a disruption upstream may mean out-of-stock products within days.

Several supply chains continue to rely on rapid and highly efficient processes, with ever-higher production volumes accompanied by less manpower, requiring increasingly automated supply chain processes. Investments in technologies that remove the manual steps and automate the repeatable and simple tasks have become a focus to ensure speed, while allowing for cost optimization.

**45% of fleet managers are looking to streamline and automate workflows for better stakeholder collaboration.**

**Focus on Vehicle Utilization:** Tracking vehicle utilization is crucial for commercial fleets, as it provides valuable insights into fleet performance and helps with optimizing operations. With real-time vehicle utilization tracking, fleet managers can see how each vehicle is being used, how much time is spent idling, and how long it takes to complete a delivery or route. This information can be used to make adjustments that improve efficiency and reduce costs.

Tracking vehicle utilization also helps identify patterns of wear and tear on vehicles, allowing for proactive maintenance planning, and reducing the risk of breakdowns and unplanned downtime. Tracking Key Performance Indicators (KPIs), such as vehicle uptime and downtime, can also help with resource allocation. By tracking vehicle utilization, fleet managers can see which vehicles are idle and which are in use. This information can be used to ensure that vehicles are available when and where they are needed to meet customer demand.

Tracking vehicle utilization is also imperative for enhanced safety, providing data on driving behavior and habits, such as speed, harsh braking, and sudden acceleration. This information can be used to provide feedback to drivers, helping improve both safety on the road and the vehicle's lifetime.



**68% of fleet managers deem vehicle utilization as an important KPI.**

**Field Service Management:** Field Service Management (FSM) is the process of managing and coordinating the activities of commercial fleets and related technicians as they perform work in the field. This includes coordinating tasks such as dispatching, scheduling, tracking, and billing. FSM is critical for commercial fleets as it helps optimize operations and improve efficiency, leading to increased profits and enhanced customer satisfaction.

FSM helps streamline the dispatch and scheduling of fleet vehicles, reducing the time and resources required to manage field operations. This can result in improved productivity and increased profitability. FSM also aids in ensuring fleet vehicles and technicians are equipped with the necessary safety equipment and training, reducing the risk of accidents and enhancing safety on the job. Systems specific to FSM can collect and analyze data on field operations, providing valuable insights into efficiency, productivity, and resource utilization. These data can be used to make informed decisions about how to optimize operations and improve performance.

**65% of businesses are planning to integrate FSM with workflow automation solutions into their organizations.**

**Information Overload:** More than half of the survey respondents said that information overload is an extremely impactful detriment to achieving their business goals. Information overload can be a major problem in fleet management due to the large amounts of data generated by GPS tracking, telematics, and other systems. With so much data available, it can be difficult to identify the most important information and to make informed decisions based on the data. Additionally, the sheer volume of data can make it difficult to ensure that all data are complete and accurate, which can lead to incorrect decisions being made based on incomplete or inaccurate data.

Collecting, storing, and analyzing the data generated by various fleet management systems can also be extremely time consuming and resource intensive, leaving little time for other tasks. It is important for fleet managers to adopt a data-driven approach, using technology and software to automate data collection, storage, and analysis, and to identify the most important information. It is also important to establish clear processes and protocols for data management, and to prioritize data quality and accuracy to overcome information overload issues in fleet management.

**50% of fleet managers are looking for a single data view when looking to digitize their fleet operations.**

**Reduction of Notification Overload:** To overcome notification overload in fleet management, it is important to adopt a data-driven approach, using technology and software to automate data collection, storage, and analysis, and to identify the most important information. It is also important to establish clear processes and protocols for data management and to prioritize data quality and accuracy.

Reducing notifications is one proven way to overcome notification overload, as it allows for better prioritization of critical tasks. This enables fleet managers to focus on what matters the most, which assists them in making quick decisions, a requirement for fleets today to eliminate productivity disruptions.

Fleets often have a common issue of receiving too many notifications and only having one specific resource to manage them. Reducing notification overload gives fleet managers time and sanity back, allowing them to prioritize tasks and enable smart resource allocation so the right person is working on the right thing at the right time.

**Over 73% of businesses use multiple fleet management systems.**

# The Growing Relevance of Digital Transformation

**Emergence of Electric and Alternative Fuel Vehicles:** Fleet managers need to be mindful of the growing trend toward electric and alternative fuel vehicles, which offer significant benefits in terms of fuel efficiency and emissions reduction. It is critical to consider the costs and benefits of transitioning to alternative fuel vehicles and develop plans for charging infrastructure and maintenance when implementing clean vehicles in an existing fleet.

**Over 61% of businesses are looking for more insights on fuel spending and emissions as part of their fleet electrification goal.**

**Increased Focus on Sustainability and Environmental Impact:** Fleet-based businesses are under increasing pressure to reduce their environmental impact and meet sustainability goals. This includes reducing emissions, improving fuel efficiency, and reducing waste. Businesses that rely on fleets for daily operations need to be mindful of these trends and incorporate sustainable practices in their operations.

**Over 68% of businesses view enhanced sustainability of their fleet operations as an important goal of their business**

**Emergence of Autonomous Vehicles:** Autonomous vehicles are becoming increasingly common in the commercial fleet sector. It is important to fully understand this trend and the implications that autonomous vehicles may have on operations, including the need for new skills and training for technicians and drivers, and changes to maintenance and repair processes.

**Growing Use of Data and Analytics:** Fleet managers are using data and analytics to make informed decisions about fleet operations, maintenance, and procurement. Data-driven decision making allows fleet managers to optimize operations, reduce costs and improve efficiencies while turning insights directly into action.

> **57% of businesses deem data accuracy and device reliability as their ultimate goal when digitizing their fleets.**

**The Changing Nature of Work:** The changing nature of work, including the growth of remote and flexible work arrangements, is having a significant impact on fleet operations. Keeping these changes top of mind helps with developing strategies to accommodate the evolving needs of a fleet-based business' workforce and its customers.

# Benefits of the Ridecell Fleet Automation and Mobility Solution

## Intelligent Automation

Fleet automation is a core component of Ridecell's overall platform, providing fleet-based businesses with simple ways to not only understand vehicle data, but to turn insights into action. The highlight of this functionality is workflow creation leveraging data from disparate sources, such as vehicles, Information Technology (IT) systems, users, and vendors. Under the intelligent automation functionality, Ridecell can deploy an automation builder tool that acts as a visual tool for automation rule creation. This means fleet managers can use If This, Then That (IFTTT) functions to create and deploy automation.

The intelligent automation platform can also incorporate multiple systems under its platform and set data triggers. Triggers can be based on telematics data, IT system alerts, and partner systems according to the requirements of the operations. It also boasts market- and service-aware functionalities, enabling users to define rules for specific markets, service types, and vehicle types.

Leveraging partner orders via in-built Application Programming Interfaces (APIs), users can create work orders for yard employees and vendors, too. This allows fleet managers to define the personnel skills required for job execution and assign work orders automatically to internal employees or vendors qualified to complete the job.

## Keyless Vehicle Control

Remote keyless access is another technological advancement that has become increasingly important in the world of fleet management. While keyless access has typically been considered a technology useful only for shared vehicles, but combined with automation, keyless technology becomes a critical part of creating powerful automated workflows relevant for all fleets, not just shared fleets.

Keyless technology enables fleet managers to remotely lock and unlock vehicles, monitor vehicle access, locally activate access via a remote operator, and even remotely immobilize vehicles through an immobilizer wiring harness, preventing restart. This level of automation can help improve security, reduce the risk of theft or misuse, and enable fleet managers to better control vehicle access and usage. Of the many benefits of keyless technology, improved efficiency, reduced costs, and streamlined fleet management processes are making it easier for organizations to manage their fleets and improve operational performance. In fact, 77% of businesses say they have considered retrofitting their existing fleets with keyless technology.

The Ridecell platform allows keyless entry via third-party telematics vendors, including solutions from DENSO, Geotab, Continental, and INVERS. The keyless vehicle access technology Ridecell provides offers complete offline access, making the ease of access straightforward across different personnel. Employee badges and card keys can also provide keyless vehicle control through Near Field Communication (NFC). Similarly, smartphones can also enable complete offline access via Bluetooth and other systems through locally stored credentials.

## Flexible System Integration

Ridecell's core platform allows data integration from various systems, such as Original Equipment Manufacturer (OEM) vehicle devices and aggregators. The core platform also offers packaged components, such as driver verification, background checks, and payment processing. The core platform also offers front end creation capabilities to simplify workflow management automation tasks for fleet managers. It offers Software Development Kits (SDKs) to create iOS and Android apps on smartphones. It also offers APIs to integrate with existing apps and SDKs for custom website integration.

The core platform also offers back end integration. Data pipeline for data coupling systems and APIs for the tightest IT system and partner integrations can be consolidated into the core platform.

# Conclusions and Implementation Recommendations

Executives looking at options for digital transformation of their businesses should consider fleet automation. Prospective adopters should start by automating internal processes involved with the lifecycle of a vehicle to achieve a quick win. Automation that moves information between internal and vendor IT systems is a good starting point. Additionally, investigating keyless technologies and applications for advanced automated workflows will be important competencies to learn.

Some use cases will have higher priorities than others. The most pressing use cases that will drive the adoption of fleet automation and digital transformation solutions are regulatory compliance, brand protection, and fleet management. Other use cases on a broader spectrum can include stakeholder engagement and vehicle lifecycle management. Identifying key metrics of success for specific fleet operations and combining the value of a fleet automation platform with existing solutions will be key. By using a connected platform that turns insights into action, fleet-based businesses can simplify fleet management by providing a single place for all fleet data to be accessed and turned into automated responses.

To learn more about how digital transformation can help overcome common fleet challenges and improve overall operations, productivity, and security, visit Ridecell at https://ridecell.com/fleet-automation/.

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