

# Automotive and Transportation: A Practical Guide to Digital Commerce and Transformation



## Who is This Guide For

This guide is designed to provide a comprehensive overview of the key digital transformation challenges in the B2B automotive and transportation sectors, and how a modern, composable ecommerce platform can address them.

This document will benefit professionals and decision-makers working within:

COMMERCIAL VEHICLE FLEET MANAGEMENT AND SUPPLY

ORIGINAL EQUIPMENT MANUFACTURER (OEM)

ORIGINAL EQUIPMENT SUPPLIER (OES) ARs

AUTOMOTIVE PARTS AND COMPONENT DISTRIBUTION

B2B AND B2B2C AUTOMOTIVE AND TRANSPORTATION COMMERCE

PROCUREMENT FOR DEALERSHIPS AND SERVICE NETWORKS

## This guide is particularly relevant to:

DIGITAL TRANSFORMATION AND ECOMMERCE LEADERS

CIOs, IT DIRECTORS, AND ENTERPRISE ARCHITECTS

COOs AND OPERATIONS EXECUTIVES

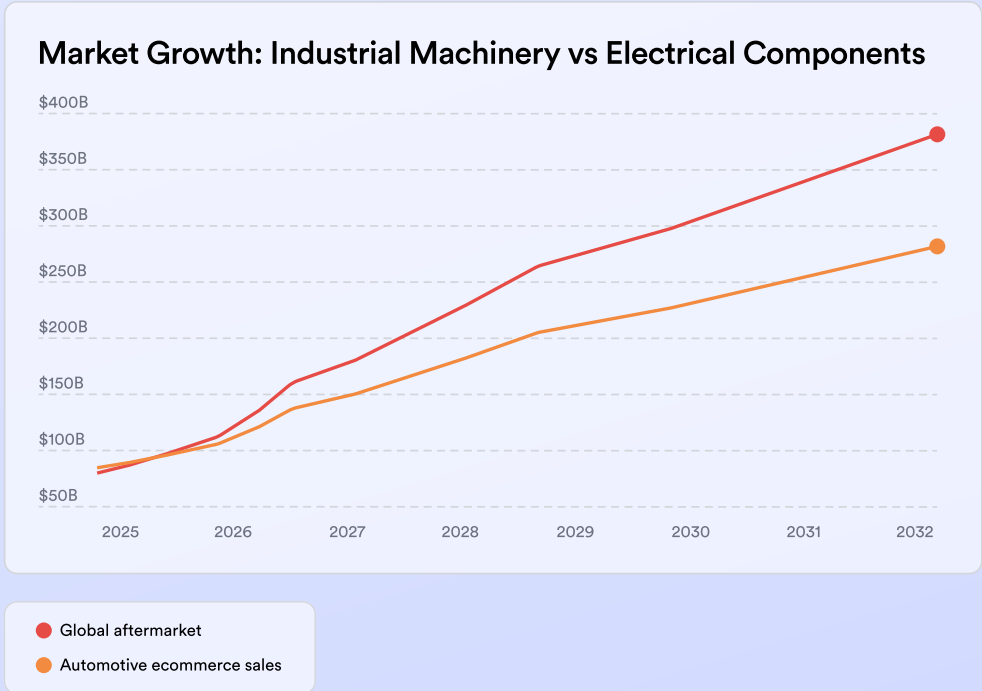
CEOs, FOUNDERS, AND BUSINESS OWNERS

# Automotive and Transportation Industry Statistics and Forecasts

By 2032, automotive ecommerce sales are projected to reach US \$267 billion, with the global aftermarket segment estimated at US \$360 billion. While leading OEMs, ARs, and distributors have been embracing digital transformation for years, many sectors and regions around the world are only beginning this journey.

According to [Deloitte's report](#), OEMs expect digital innovation and subscription services to be the driver of revenue growth in the coming years, and the industry largely agrees. A [LinkedIn poll](#) conducted by Virto Commerce in one of the largest automotive-themed groups showed that digital transformation is considered the primary instrument of efficiency boost and cost reduction.

Regulatory impacts along with the shift of ownership to usage with Mobility-as-a-Service (MaaS) and private-to-corporate will transform customer profiles and their demands. A third of respondents between the ages of 18 and 34 expressed their interest in subscriptions as opposed to vehicle ownership.



# Global Automotive Industry Challenges

Despite the positive projections and booming EV and aftermarket segments, the automotive industry is facing several external and internal challenges that need to be addressed to secure long-term sustainable growth and scalability.

## 01

### Global Supply Chain Volatility

- **Supply chain fragmentation:** Tariffs, protectionist regulations, pandemics, and trade wars create tensions and disruption risks, and lead to fragmentation of global supply chains and increased dependence on a limited number of suppliers.
- **Margin erosion:** Sudden shocks in existing supply chains and last-minute adjustments force manufacturers and suppliers to absorb increasing costs while being locked in long-term contracts that limit them from passing the extra expense onto customers.
- **Planning gaps:** Outdated legacy systems prevent real-time visibility and create blind spots across the supply chain. Lack of transparency results in inventory imbalances (stockouts and excess inventory), poor demand forecasting, and delays in delivery.

## 02

### Regulatory Pressure and Compliance

- **Data protection and privacy:** Technology-infused services (telematics, infotainment, over-the-air updates, feature subscriptions) raise compliance issues with telecom licensing requirements, GDPR, CCPA, General Safety Regulation, and other guidelines.
- **Environmental and emissions regulations:** Aggressive sustainability targets push the adoption of hybrid and electric vehicles (EVs). The shift in consumer behavior promotes longer fleet life cycles through repairs, affecting OEMs and aftermarkets.
- **Safety compliance:** The rise of connected car technologies, EVs, and autonomous vehicles (AVs) creates regulatory and manufacturing challenges. Legislation struggles to keep up with the market, leaving consumers and businesses vulnerable.
- **Supply chain compliance:** Sanctions, tariffs, and rigid trade agreements put constraints on supply chains, further amplified by ethical sourcing policies and rules of origin (USMCA, TCA, ASEAN, WTO). Traceability and transparency become increasingly complicated with outdated non-digital systems. Volvo and BMW implemented blockchain to trace cobalt used in the batteries of their electric cars, while Mercedes-Benz launched supplier emissions tracking with the same technology.

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## 03

### Operational Inefficiencies

- **Legacy processes and standards:** Paper-based processes and manual workflows slow down growth, reduce operational transparency, and result in fragmented data, inefficient sales and stock management, and errors that delay operations.
- **Data Silos:** Fragmented data across company departments and supply chain hinders coordination, promotes inefficiencies, adds cost pressure, and jeopardizes revenues.
- **Workforce shortages and skills gaps:** Most segments of automotive, particularly Forklift and material handling and commercial transportation, traditionally relied on manual labor and suffered from the shortages of skilled workforce. The rising trend of fully and semi-autonomous vehicles represents a powerful opportunity for these sectors to accelerate digital transformation and boost operational efficiency.

## 04

### Organizational and Workforce Challenges

- **Operational restructuring:** Shifts in B2B consumer behaviors (rapid adoption of digital channels) and end-user patterns (switch to usage models, longer ownership cycles) force automotive market players to fundamentally rethink their operations and reallocate existing talent to focus on digital commerce and service innovation. [Deloitte's analysis](#) on the future of automotive predicts 50-50% higher profits in vehicle management across multiple life cycles compared to traditional OEM business models or one-off vehicle sales.
- **Change management:** Automotive companies that navigate organizational transformations also face disruption caused by workforce resistance to digital transformation and must implement effective change management strategies to minimize employee confrontations.
- **Workforce reskilling:** Skill gaps present significant risks to increasingly advanced automotive systems. Implementing digital solutions that automate and foolproof large portions of the workflow and simplify complex structures will reduce delays in technological adoption and help businesses maintain competitiveness.

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## 05

### B2B Market Transformation

- **Digital integration and transformation:** The rise of Software-Defined Vehicles (SDVs) and over-the-air (OTA) software updates pioneered by Tesla, the incorporation of AI and ML, and other technological advancements require a new operational mindset and modern digital platforms to support it. This forces market players to rapidly adapt their entire workflows to implement new technology alongside existing mature systems.
- **Rising consumer standards:** B2B consumers (fleet managers, distributors, repair shops) expect the same level of convenience, personalization, and seamless experience they receive in B2C markets. Automotive companies must elevate their digital commerce capabilities or risk losing market shares.
- **MaaS impact:** The rise of the automotive Mobility-as-a-Service adoption transforms the core client and behavior patterns. Automotive enterprises must rethink vehicles' design, distribution, and aftersales services to accommodate the changing use patterns.
- **Omnichannel and hybrid buying journeys:** Successfully managing the integration of digital commerce platforms with traditional offline sales is essential to provide a consistent and satisfactory buying journey.

## 06

### Limited System Adaptability and High Cost of Change

- **Vendor lock-in:** Rigid legacy systems make it difficult to integrate new solutions and implement advanced data management, preventing enterprises from real-time insights, customizations, expansion, and innovation.
- **Costly replatforming to keep up with new standards:** Deep integration of existing legacy systems results not only in costly and complicated migration but also requires a workflow revamp as system limitations often lead to business processes being designed around them.
- **Inefficiencies from disconnected systems:** Outdated and inefficient systems create data silos, slow down workflows, and create inconsistent consumer experience.

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# Navigating Automotive Change Management with eCommerce Solutions and Beyond

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As automotive businesses go through digital transformation and deal with radical technological advances, navigating change internally becomes paramount to a smooth and successful transition.

Resistance to change, sabotage, and malicious compliance by employees are inevitable in times of change, but technology can not only be a disruptor but a facilitator of change that smoothens out the rough edges, making the whole process simpler and less stressful for the team.



## User-friendly interface

reduces adaptation and training timeframes.



## Modular architecture

allows incremental rollouts and gradual transformation.



## API-first approach

guarantees smooth connectivity with existing systems (ERP, CRM, PIM, TMS).



## Omnichannel support

syncs digital and offline sales channels.



## Scalable and future-proof build

supports evolving market trends.

# Navigating Change Management in Automotive and Transportation with eCommerce Solutions and Beyond

While an advanced eCommerce platform with built-in B2B logic will drive down the inconvenience factor related to digital transformation, a big part of the project will be smoothing the team's integration with new systems, rules, and workflow. That requires automotive businesses to invest time, patience, and empathy, dedicating extra hours to handling questions, objections, and silent protests.

The cost of ignoring or mishandling change management in automation is high. Back in 2019, Ford, GE, and P&G reported 70% or US \$900 billion wasted due to failed digital transformation efforts, citing failure to effectively communicate their goals and purpose with employees as the number one reason.

## Here are several actionable tips automotive enterprises can follow.



**Pay special attention to middle management** as they are the bridge between top-level vision and the regular workforce. According to McKinsey's study highlighted by Flevy, employees report that only 45% of middle managers champion digital transformation, as opposed to 62% of executives.



**Highlight employee benefits early on.** PwC reported that as many as 65% of employees are more accepting of change if they see the benefits early on. In automotive, employee benefits may be a lower workload associated with incorrect orders once AI recognition is implemented to scan manual order notes and identify parts. Volkswagen has introduced AR headsets for technicians to help them diagnose and troubleshoot vehicle issues faster, saving them guessing work, making repairs more straightforward, and preventing costly downtime for clients.



**Reduce the fear factor.** Although employee resistance manifests differently, the common denominator is often fear. Digital or any other transformation may affect people's employment status, and complex, non-transparent processes amplify the fear. What Mercedes-Benz did as they went through digitalization was embrace radical simplification and fearless organization principles. They reduced complexity, simplified and automated everything they could, and implemented a culture where mistakes, pain points, and inefficiencies could be discussed openly and with no repercussions.

# Automotive eCommerce Solution Must-Have Deliverables

In the automotive and transportation industry, robust ecommerce solutions are more than transaction facilitators.

They serve as the backbone of the enterprise, enhancing supply chains and fostering strong partner relationships. Ecommerce platforms balance between facilitating digital commerce, integrating with internal legacy systems, complying with regulatory demands, and adapting to rapidly evolving market expectations.

## Key automotive ecommerce requirements include:



### Complex catalog management

to accommodate SKU hierarchies, dynamic filtering options, extensive documentation, and other supporting materials.



### Powerful pricing engine

that supports complex pricing structures, tiers, multiple currencies, bulk orders, and discounts (time- or volume-based).



### Advanced search functionality

from multi-language support to typo tolerance to full-text search options.



### Role-based access

to control permissions for different user groups to view specific sets of content, products, and tools.



### AI automation

with product recognition to identify items on the spot, cross-check them against catalog data, and auto-generate quotes and orders.



### Marketplace-ready build

with vendor management instruments, contract support, and customizable commission models.



### Robust integrations with API-first build

to ensure full compatibility with ERP, CRM, WMS, PIM, TMS, and the rest of the infrastructure.



### Scalable ecommerce architecture

that allows the business to add, swap, and remove modules as needed, ensuring the platform evolves in tandem with business growth and changing demands.



### Segment-specific customization

for workflows, catalogs, pricing, and UX.

The decision of what automotive ecommerce solution to go with is critical as it directly affects the organization's capabilities to:

- ✓ **Scale rapidly** and make the most of market opportunities.
- ✓ **Adapt quickly** to changing market realities and consumer preferences.
- ✓ **Optimize the cost** of expansion, support, and customization of the platform.
- ✓ **Avoid vendor lock-in** and dependence on the vendor's timeline.

## Success Stories

### Automotive and More: Real-Life Success Stories with Virto Commerce

Virto Commerce is helping enterprises around the world transform their B2B operations, including fleet management, OEM supply chains, and aftermarket parts distribution. Businesses globally rely on Virto Commerce to digitize their sales and supply models, enhance partner and consumer expectations, boost transparency, and reduce operational and other risks.



# 01

## Cadillac & KW Parts Boost Multi-Regional Sales

**Context:** Cadillac & KW Parts planned partnership expansion and looked to launch an ecommerce website for Cadillac accessories for customers across Europe. The existing ecommerce architecture had to be updated to maintain the performance, enhance the shopping experience, and reduce the time to market for new storefront launches.

**Solution:** Scalable, headless, and multichannel Virto Commerce Innovation Platform (CIP) was implemented together with Mardi Gras to enable seamless third-party integrations, allow Cadillac and KW Parts to rapidly launch webstores across Europe with multilingual and multi-currency support, streamline catalog management, and give the opportunity to both brands to customize their interfaces independently to meet B2B and B2C requirements across regions.

## The Results

4M

Products supported  
across catalogs

30

Countries powered by  
Virto Commerce

1 sec

Average indexing and  
search speed

3

Months to launch B2C  
webstore project.

# 02

## Aftermarket Distributor Upscales Quote Management and Enables Business Growth

**Context:** US-based automotive supplier has outgrown the existing platform that hinders expansion and complicates large volume orders and digital sales that the company is primarily focusing on. Customizing user experience for different buyer groups, managing complex quotes, and integrating with third parties proves to be cumbersome and time-consuming. A range of manual processes further slow down operations and limit growth potential.

**Solution:** Virto CIP was integrated as a replacement for the legacy underperforming system to provide a modular and scalable enterprise solution. The new, PaaS ecommerce platform with extensibility enables modular upgrades and scaling without disrupting the entire operations. The platform introduced a range of functionality to automate, streamline, and expedite workflows while providing deep-level customizations and personalization.

## The Results



Secured scalability and extensibility for future growth.



Removed operational limitations due to lacking functionality.



Reduced friction in processes, automated tasks, and enhanced user experience.

# 03

## Omnia Partners Transforms Procurement and Supplier Management Workflows

**Context:** Omnia Partners is a US-based group purchasing organization that serves both public and private sectors struggled with registering contracts across dozens of supplier portals. Similar to a common automotive pain point, the slow volume reporting and supplier billing created frustration, delays, and missed opportunities.

**Solution:** Virto's CIP Marketplace and Portal were introduced to enhance supplier integrations and enable real-time updates, unify multi-supplier catalogs, and enable single credit-card transactions with built-in order split. Single point of access to all supplier offers, revenue-share control, and automated reporting helped the company efficiently manage 6.5 million catalog items, dramatically reduce time to order, and expand the market share to 21,000 new users.

### The Results

6.5M

Catalog items supported  
across 600+ suppliers

58%

Reorder rate

≤1s

99th-percentile search  
latency

10

Minutes for orders instead  
of 3 hours

21K

Users added across 8K  
organizations

# 04

## Royal Brass & Hose Enhance Digital Experience with a Self-Service Customer Portal

**Context:** Royal Brass & Hose is a distributor of hydraulic and pneumatic products. The company's primary focus is currently on mobile equipment overlaps with commercial vehicles, for instance, heavy-duty trucks for agricultural, construction, and other sectors. Royal Brass & Hose war on a mission to transform into a self-service B2B and B2C ecommerce business with 24/7 access for clients to select, order, and track products digitally.

**Solution:** Ntara together with Virto Commerce rolled out Virto's B2B Self-Service Portal to empower clients to manage orders online in a user-friendly interface, while the system provided custom payment handling and rule-based pricing, alerts, targeted discounts, and bulk orders to cater to B2B and B2C clients.

## The Results

10

Agile launch in 10 months

11%

Increase in online sales

24/7

Round-the-clock sales

# Beyond eCommerce: More Automotive Real-Life Digital Transformation Success Cases

Powerful eCommerce solution is the cornerstone of successful digital transformation in the automotive sector, however upgrading your infrastructure and workflows is vital across all boards. Below are some examples of notable industry players' digitalization efforts.

## Toyota's Interactive Repair Manual

In order to help mechanics provide swift and accurate services, Toyota introduced interactive AI-driven repair manuals where mechanics ask questions on vehicle maintenance, and the system cross-checks references live sensor data with repair history and reduces diagnostic errors and time by up to 40%.



## AI scanning for BMW's Conveyor Belt

For its electric car production, BWM launched an AI-fuelled sensor technology that automatically scans the conveyor belt process and sends data to employees' smart devices. This allows to instantaneously detect anomalies, determine variants, and check completeness.



## Volvo Goes Fully Digital for Electric Car Sales

As a part of the efforts to develop a direct-to-consumer (D2C) sales channel, Volvo switched to 100% online sales for its electric cars. In addition to that, the automotive giant tapped into subscription services—a growing automotive trend—by adding convenient care packages that include service, warranty, roadside assistance, and insurance to improve customer experience.



## AI-powered Inventory Data on Ford's Used Cars

Ford empowered dealerships to learn the details of vehicle condition and owner history to be able to price it correctly on the marketplace with AI-powered insight into inventory. This helped streamline the valuation process for dealers, allowing them to provide more accurate pricing to end customers and optimize the time required to process each incoming vehicle.



## Choosing the Right eCommerce Solution: Key Steps and Tips

The choice of an eCommerce platform will define the whole trajectory of the company's digital transformation. Operational disruptions, safety risks, and costly recalls are all results of poor eCommerce integration.

In order to ensure the solution aligns with the organization's long-term strategy without escalating costs or vendor lock-in is paramount. A thorough evaluation of available options is required.

### Key Steps in eCommerce Solution Evaluation

- |   |  |
|---|--|
| <input type="checkbox"/> <b>Define the purpose.</b> Understand your core business needs, pain points, and priorities. These requirements will define the non-negotiables and good-to-haves.<br><br><b>Example:</b> Integrate online and offline sales, reduce the number of faulty orders, streamline bulk orders, scale to X orders per month, and improve personalization.  | <input type="checkbox"/> <b>Estimate your budget and timeline</b> for the evaluation, migration, replatforming, and fine-tuning of the platform.<br><br><b>What to consider:</b> Financial constraints, other strategic commitments and investments, available budget.                       |
| <input type="checkbox"/> <b>Put together the project team</b> that includes technical and business experts to guide the evaluation. Consider working with an external expert too. Your goal is to get the most well-rounded review of the options from multiple perspectives.<br><br><b>Example:</b> Project sponsor, Product Owner, eCommerce Manager, Business Analyst, System Integrator, Data Analyst, Consultant, CTO, or CIO. | <input type="checkbox"/> <b>Audit the existing solution</b> and create a list of features and architecture requirements that the new eCommerce platform must have.<br><br><b>Example:</b> Modular architecture for flexible feature rollouts, complex catalog management, or quotes support. |
| <input type="checkbox"/> <b>Build a list of eCommerce platforms to review</b> based on budget and feature-stack. Get your technology partner involved and look into real-life cases.<br><br><b>What to consider:</b> Industry reports, partner input, public case studies, past experience, and recommendations. Mix established brands with modern platforms to ensure you get robust technologies.                                | <input type="checkbox"/> <b>Create a shortlist of platforms</b> by cutting out rigid solutions with missing functionality.<br><br><b>What to consider:</b> TCO, innovation potential, vendor input (RFIs), alignment with your roadmap, cost, and timeframe for custom feature development.  |
| <input type="checkbox"/> <b>Do an in-depth evaluation.</b> Collaborate with vendors and system integrators, build a demo environment, and assess scaling and innovation potential.<br><br><b>What to consider:</b> Any technical constraints, MVP cost implementation, partner's and vendor's technical expertise.  | <input type="checkbox"/> <b>Plan implementation.</b> Lay out the timeline for the initial MVP rollout followed by the gradual implementation of the entire system.   |

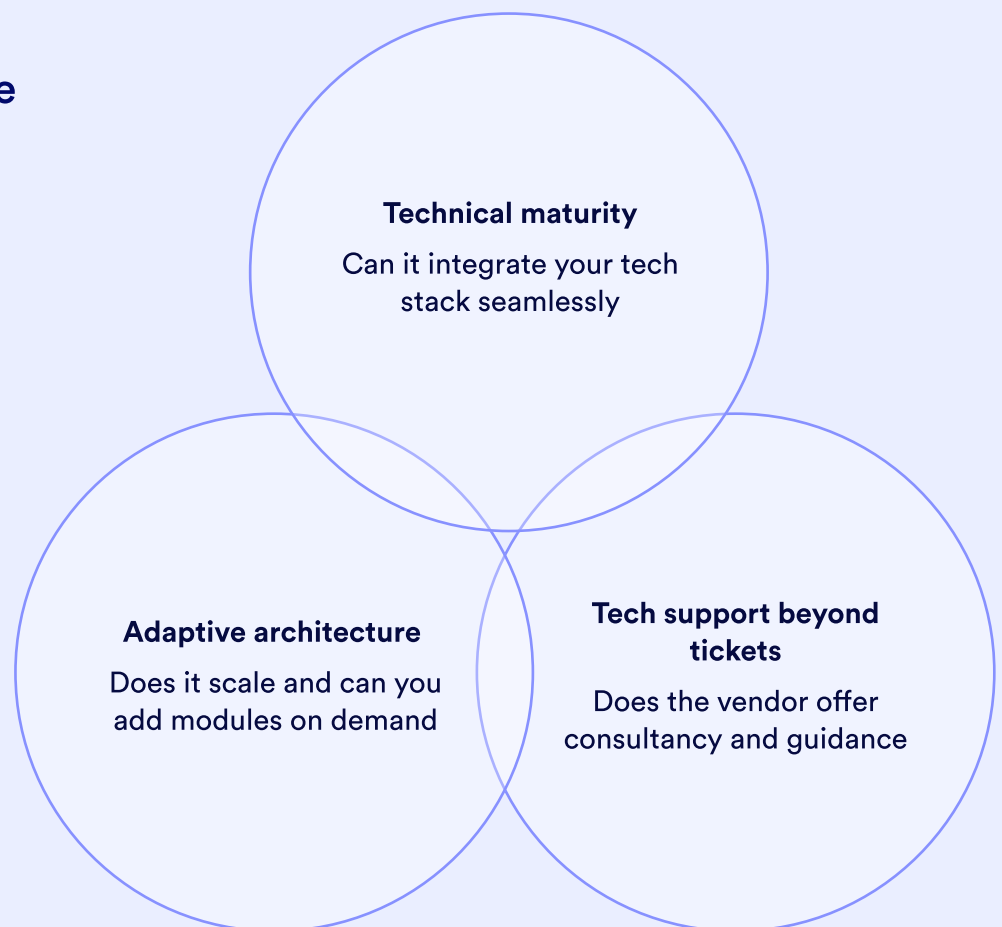
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## Making the Final Decision

Choosing an ecommerce for your automotive operations is a long-term commitment. The platform of choice must align with the company's goals by supporting them technologically and making financial sense in the long term.

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### Automotive eCommerce Evaluation Points That Are Easy to Miss



**Tip:** Watch out for what the competition is doing. Track little shifts, arising trends, and market signals. The ecommerce platform must handle market disruptions and put you ahead of the curve.

## Signs That You Need to Act Now



Your ecommerce revenue flattens or falls.



You don't control where your data is stored.



The team avoids using the current platform.



Your visibility into digital sales is limited.



The market is growing but you don't.

## Summing Up

The automotive industry today faces regulatory pressure, fragile supply chains, and rapidly transforming consumer expectations. In this changing environment, the success of a business increasingly depends on the flexibility and robustness of the systems in place.

Choosing a platform that is adaptive, scalable, and future-proof becomes mission-critical. Virto Commerce is more than an ecommerce platform. It's a strategic technology partner that supports your business at every stage of its digital journey and helps you get to your goals faster and more effectively.

- Launch an MVP in 4-6 weeks
- Pace the rollout
- Control what modules you install
- Integrate fully with current systems
- Get DevOps support and version control
- Stay protected with enterprise-grade security
- Comply with GDPR, CCPA, and other regulations

## Ready to Transform Your Digital Commerce?

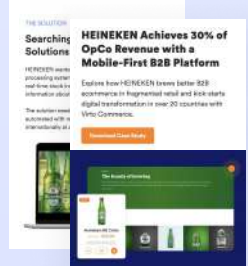
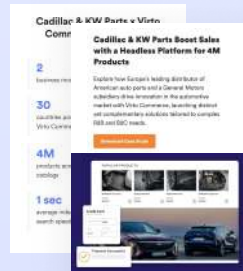
Planning to modernize your automotive and transportation digital commerce or looking to replace a legacy platform?

Virto Commerce provides a path to digital transformation without compromising flexibility, security, and functionality. Discuss your unique goals with one of our experts.

[Book a Demo](#)

# Recommended Reading

[Find out the details for Cadillac & KW Parts Digital Transformation with Virto Commerce and Mardi Gras](#)



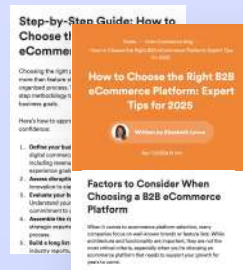
[Discover How HEINEKEN Achieved 10x Growth in Online Transactions in 20 Countries with Virto Commerce](#)

[See What Virto's Commerce Innovation Platform Is Made Of](#)



[Learn How to Successfully Replatform Your Current eCommerce Solution](#)

[Learn the Best Way to Choose the Right B2B eCommerce Platform with Expert Tips](#)



[Dive Deep into the True Cost of Owning an eCommerce Platform](#)

## About Virto Commerce

Virto Commerce, founded in 2011, is a global leader in B2B ecommerce and marketplace solutions, with offices in Los Angeles, Limassol, and Vilnius.

Virto Commerce specializes in innovative, highly customizable headless commerce platforms. Our mission is to empower businesses with cutting-edge ecommerce solutions through relentless innovation.

At the heart of our offerings is the Commerce Innovation Platform, which enables businesses to build commerce products that drive sustainable business transformation.

Powered by our proprietary Virto Atomic Architecture™ and Virto Cloud, our Commerce Innovation Platform offers unparalleled flexibility, seamless integration, and extensive customization, enabling businesses to create unique, high-performance digital experiences and to drive sustainable business transformation across various industries.

Book a Discovery Call

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