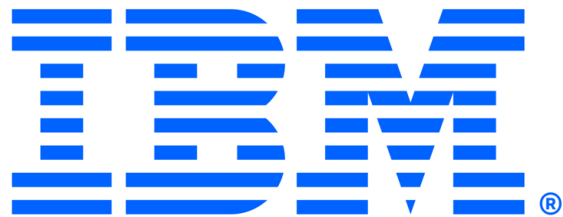


# Welcome to: Leading in the New Era of Automotive Supply Chain



# **IBM Supply Chain**

## *Upcoming Events & Resource Links*

**Here are some links you might find helpful.....**

[IBM Sterling Order Management](#)

[IBM Sterling Order Management: B2B](#)

[IBM Supply Chain Intelligence Suite](#)

Explore the [Sterling Order Management Benefits calculator](#) in more detail;  
please contact [IBM](#) to arrange a meeting to review your personalized results.

[IBM Supply Chain Community for Order Management and Fulfillment Resources](#)

[IBM Supply Chain Community for Supply Chain Intelligence Suite](#)

*Please RSVP or reach out for more details to [Donna.Smith@IBM.com](mailto:Donna.Smith@IBM.com)*

Supply Chain Showcase Webinar  
Leading in the New Era of Automotive Supply Chain

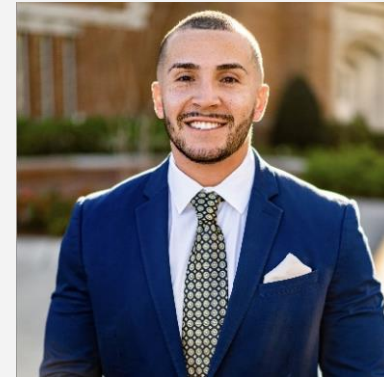


# MEET OUR SPEAKERS



**Dane Hunter**

Associate Partner - Digital Commerce, IBM Consulting



**Mateo Canarte-Toro**

Associate Supply Chain Technical Specialist, IBM  
Sustainability Software



# Our Discussion Today

1. Automotive Manufacturing Landscape
2. Business Drivers
3. What's Needed To Excel
4. Journey to End-to-End
5. Departing Thoughts





# Automotive Manufacturing Sustainability Landscape:

## Market Forces, Customer Findings, & Benefits of Action

No other industry is undergoing as rapid technological change as the automotive industry

This is driven by the need to address impending, evermore stringent CO2 and criteria emission regulations, while sustaining unprecedented rate of progress with development of automation and infotainment, and meeting the customer expectations regarding performance, comfort, and utility.

Once, software was a part of the car. Now, software determines the value of a car

The success of a car depends on its software much more than the mechanical side

Today, high-end cars (e.g., BMW 7-series) with advanced technology like advanced driver-assist systems (ADAS) may contain 150 ECUs or more, while pick-up trucks like Ford's F-150 top **150 million lines of code**

Sustainability unites automotive companies, OEMs, suppliers and technology providers

As OEMs migrate their business from internal combustion engine vehicles (ICEVs) to battery electric vehicles (BEVs), auto companies advance unprecedented innovation

Components made from recycled or light composite materials reduce energy consumption and emissions while forging new supply partnerships

# Disruptive sustainability forces are reshaping the Automotive Manufacturing industry

## **#1** Highest electricity consumption per manufactured product

Automotive companies have the highest electricity consumption per manufactured product in comparison to all other manufacturing segments

## **Innovative design is key to sustainability**

Up to four-fifths of a product's lifetime emissions are determined by decisions made at the design stage

R&D accounts for 5% or less of a product's total cost, but it influences up to 80% of its resource footprint in use

## **Timelines accelerate for ICEV to BEV change**

New regulations are changing with stringent norms on emissions, materials and scrappage. In the US, the recent passage of the IRA will be adding even more consumer incentives to shift to electric cars. CA regulators have banned gasoline cars from being sold after 2035 in-state.

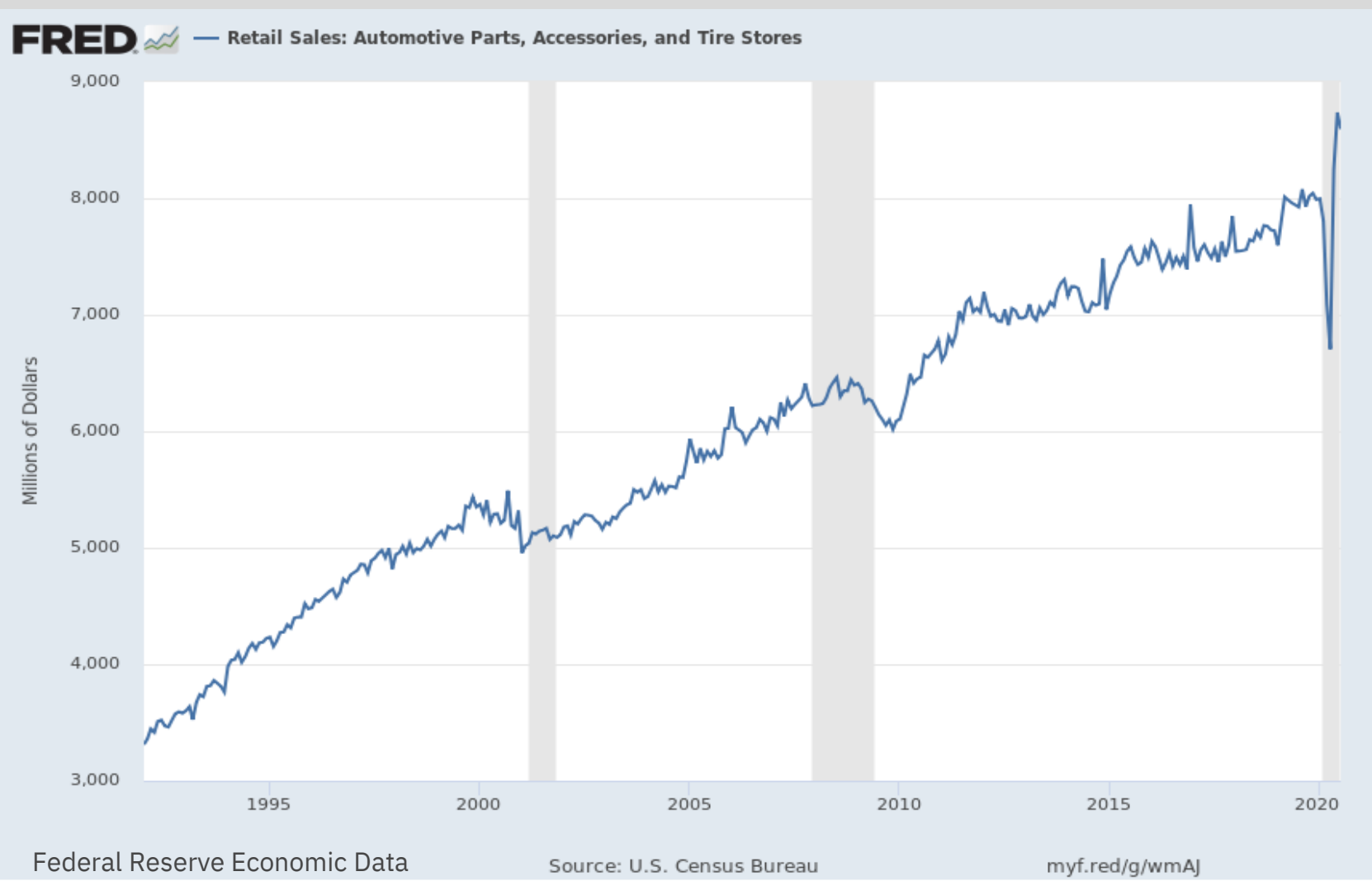
## **Circularity enhances supply chains**

70% of the vehicle is contributed by its suppliers. The industry has a heavy focus on circularity and aims to reduce carbon emission per passenger km – from product manufacturing to supply chain to usage and end of life.

## **A paradigm shift favors shared mobility**

Increased awareness of environmental and sustainability issues within society and a growing interest among consumers in green energy vehicles. Sharing instead of owning is a suitable option for many consumers.

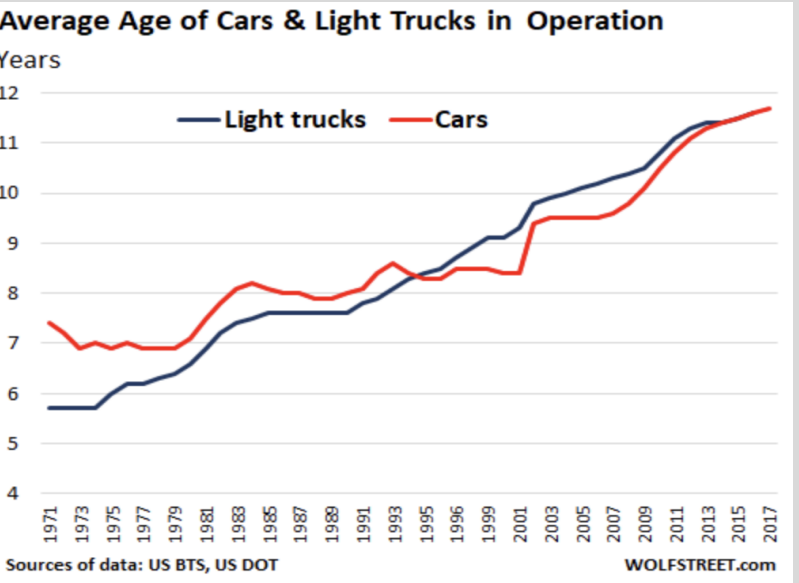
# Parts and Accessories retail sales continue to grow, albeit with COVID induced volatility



Source: Federal Reserve Economic Data - Retail Sales: Automotive Parts, Accessories, and Tire Stores

Parts and Accessories sales dropped, but quickly recovered partly through economic stimulus

With average vehicle age approaching 11.9 years repair parts demand will continue



# Vehicle Repair Revenue Continues to Increase

Typically: Vehicle Age, Miles Driven and Weather are the drivers of vehicle repair spend

## Average age continues to increase:

The average age of a car on U.S. roads is now a little over 12 years, marking a new record, [according to S&P Mobility](#), continuing a five-year climb.

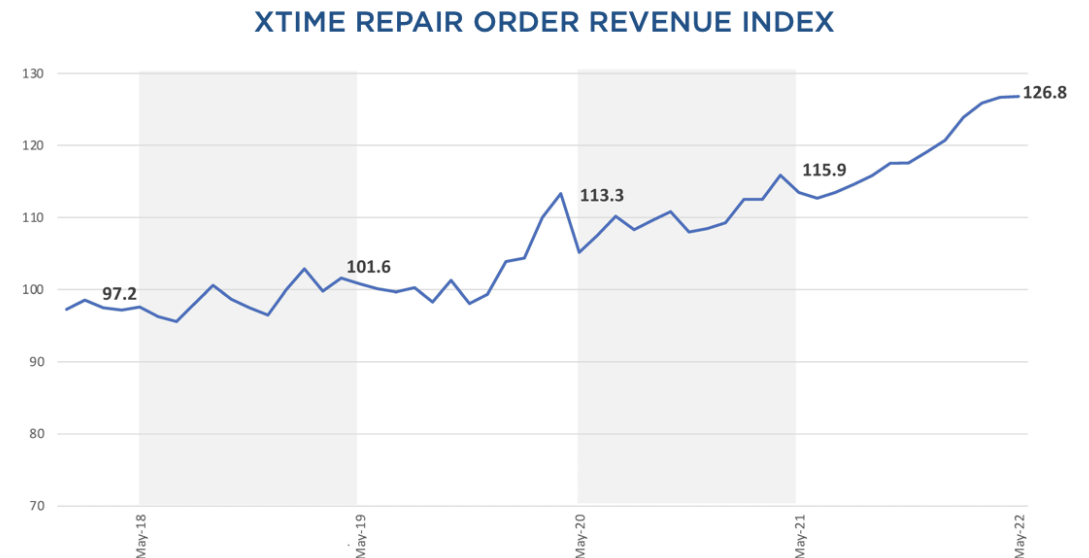
## Mileage shoots back up:

The S&P report also found that the number of miles driven has largely returned to pre-pandemic levels, with the average car owner putting 12,300 miles on their odometer in 2021.

Source: USA Today – May 24, 2022

## At the same time **revenue per repair** is increasing

The average revenue generated per repair order rose for the sixth consecutive month after leveling off in November 2021. At 126.8, the Repair Order Revenue Index for May was up 11.7% year over year and up only 0.08% from April.

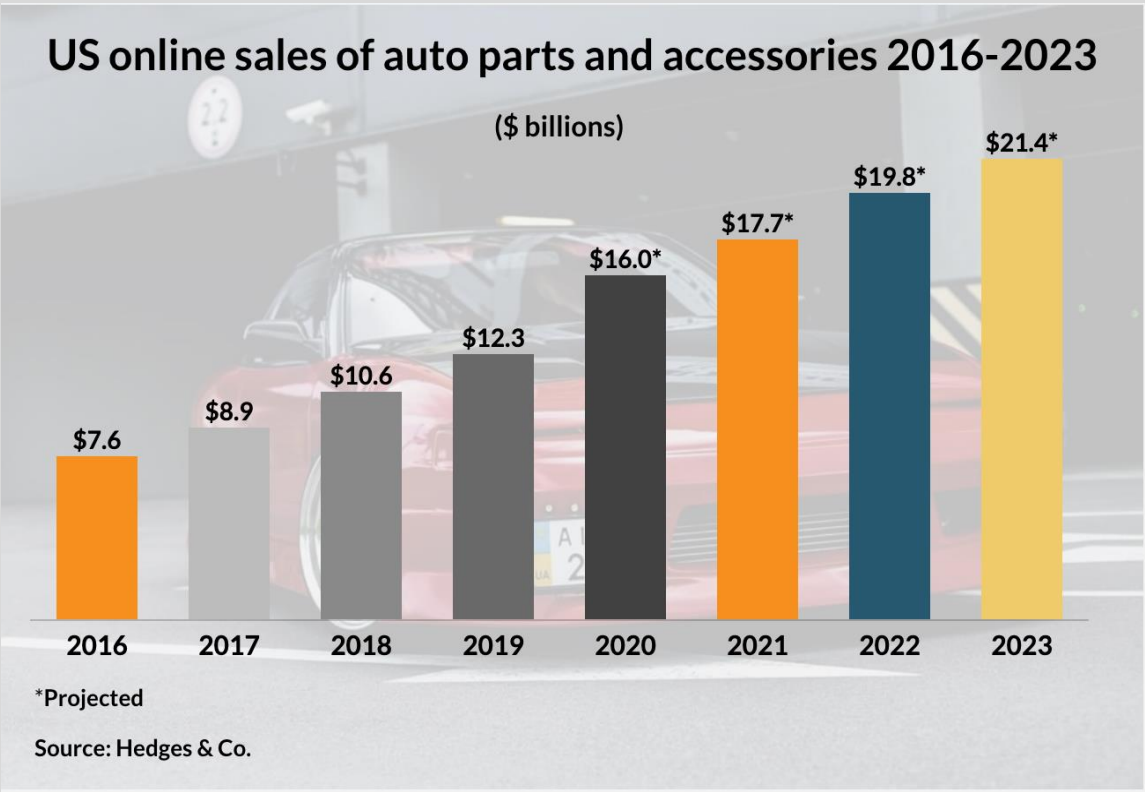


Source: Cox Automotive June 20, 2022

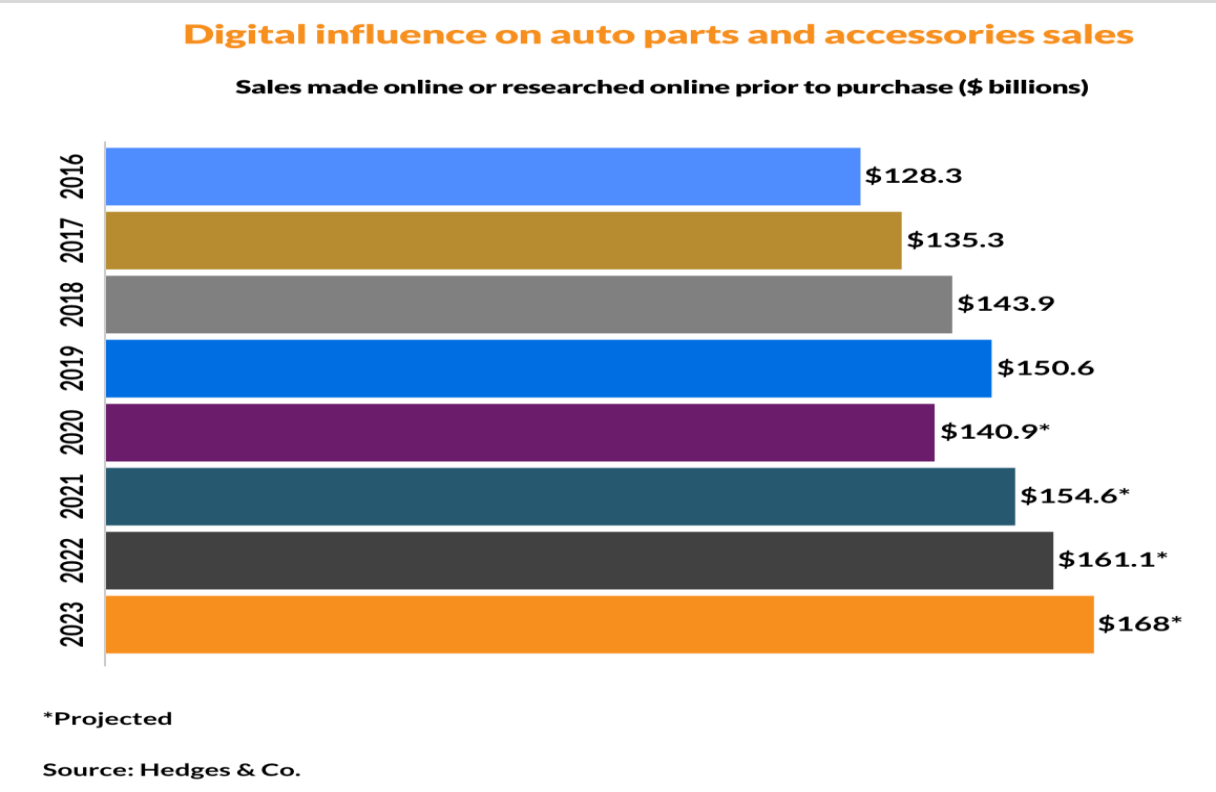


# Online channels are becoming increasingly strategic to influence and drive sales

Online auto parts and accessories sales projected to grow 29.9% in 2020



By 2023, U.S. online sales of auto parts and accessories will reach \$21.4 billions and digital influence will increase to over \$168 billions



“Amazon would have sold \$8 billion worth of OEM replacement parts and car care products before 2020 arrives”

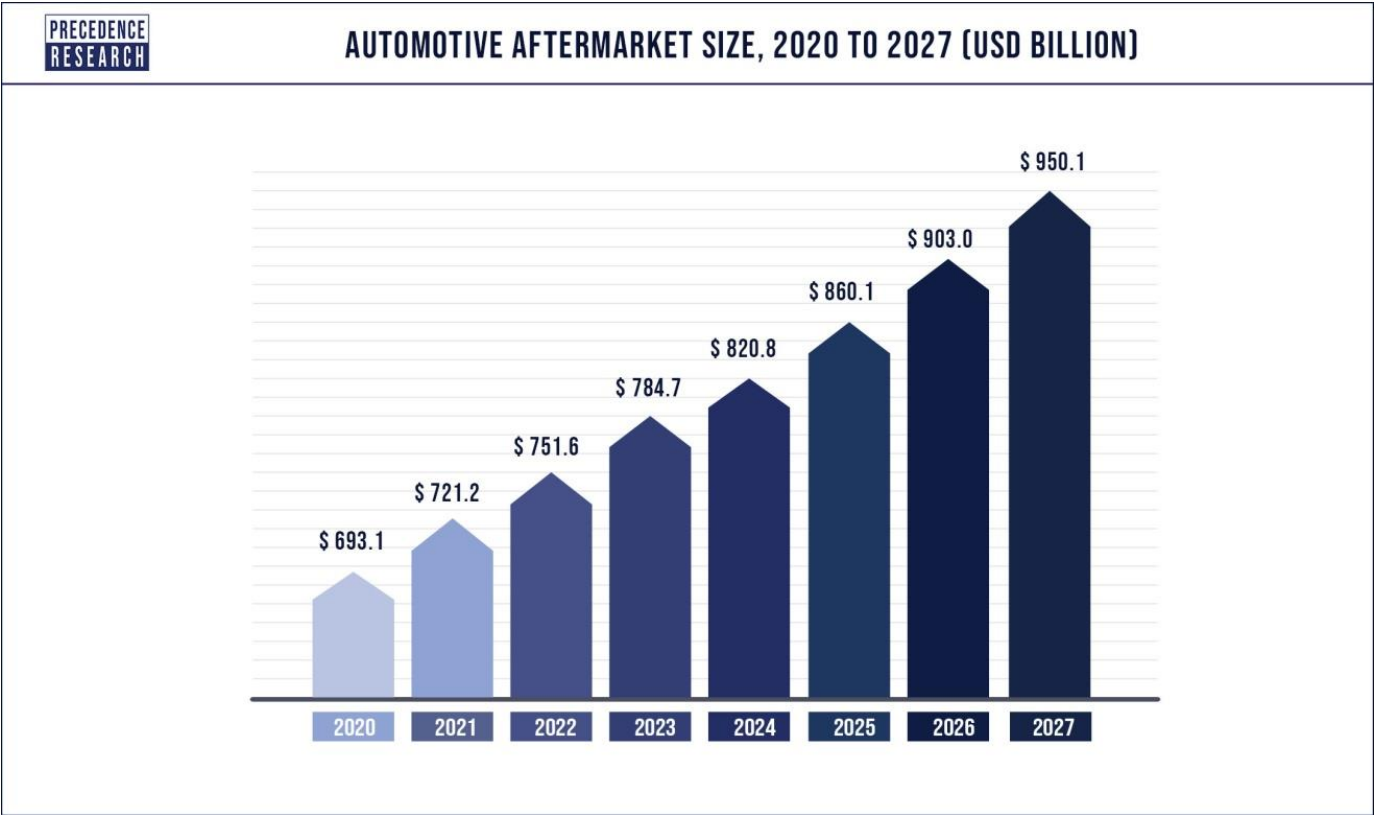
# Automotive Aftermarket Parts Business Growth Continues

The global automotive aftermarket size is expected to hit US\$ 950.1 billion by 2027 from at US\$ 721.2 billion in 2021 with a registered CAGR of 4.61% from 2021 to 2027.

Application Segments	2016	2019	2027	CAGR %
DIFM (Do it for Me)	454.58	507.32	515.08	4.45 %
DIY (Do it Yourself)	186.50	215.09	238.35	5.60 %
OE (Delegating to OEM's)	182.68	201.70	196.67	3.91 %
Total	823.76	924.10	950.09	4.61 %

Region	Market Share
North America	35.50 %
Europe	24.15 %
Asia Pacific	22.03 %
LATAM	10.79 %
MEA	7.54 %

Automotive Aftermarket Market Analysis by Regions (2016-2027)



Automotive Aftermarket Market Revenue (USD Billion) and Growth Rate Comparison by Application (2016-2027)

# Everchanging customer expectations will require OEMs to deploy essential capabilities to enable unique Digital Sales Experiences

Consumers expect...

- To Know Where Their Car Is
- To Know When It Will Be Delivered
- To Know How To Change / Manage Their Order
- The Experience To Be Seamless Across Channels (Web, Mobile, Dealership, Finance, Service, Etc.)

To deliver the right experience, OEMs must...

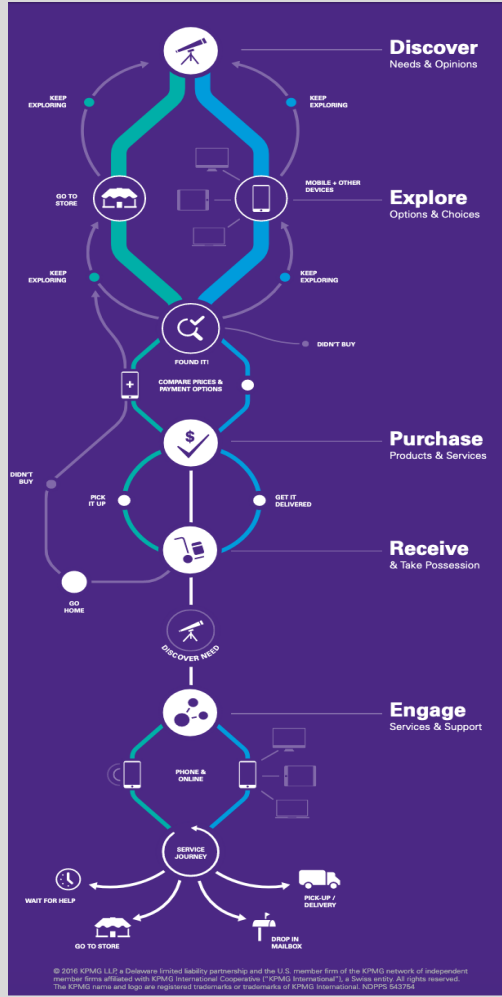
- Establish Supply Chain Visibility And Transparency.
- Integrate & Coordinate Across Their Ecosystem (Enterprise, Dealers, Partners).
- Enable The Business To Execute And Sustain End-to-End Operations.





# OMS Enables an Optimal & Profitable Online Customer Journey

A Complete Order Management Solution Enhances Every Phase Of The Customer Journey



## Customer Journey

- **Discover** – Inventory Visibility across the Enterprise and Supply Chain
- **Explore** – Inventory Location (In-Store, Online, Available-To-Promise Delivery Dates)
- **Purchase** – Select inventory from lowest cost to fill including messaging to customer with order status
- **Receive** – Ship from the optimal location to manage cost to fill, as well as meeting customer delivery dates
- **Engage** – Include additional services / warranty
  - Integrate To Call Center
  - Reverse Logistics

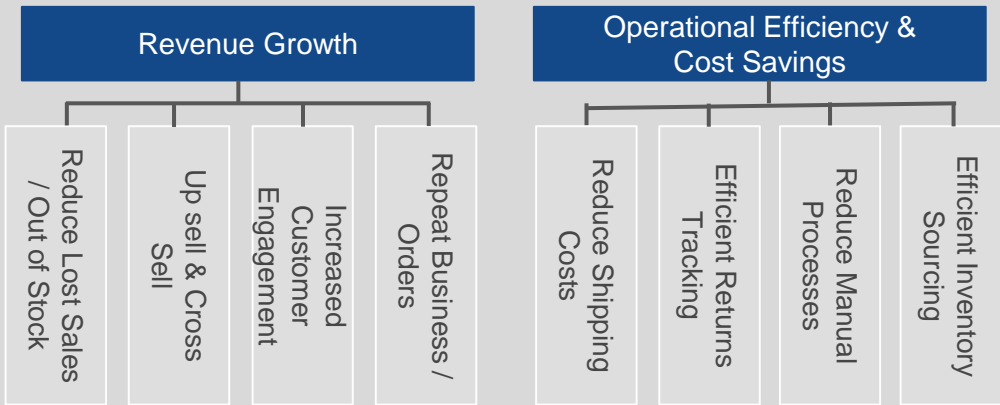
Source: KPMG

# IBM's Sterling OMS Platform Delivers Profitable Growth

## IBM Sterling Order Management Platform



## Omni-Channel Benefits<sup>(1)</sup>



- 3-10% increase in overall **inventory turn**
- 5-10% improvement in **fill rates**
- 5-10% increase in overall **return on inventory investment**
- 2-10% decrease in **warehouse space** requirements
- 5-10% improvement in **gross margin percent**
- 5-25% sales lift on **cross-channel promotions**
- 85% of clients report improved **customer satisfaction** due to consistent cross-channel product information and pricing
- 2-5% increase in **eCommerce profitability**

(1) Sources:  
> Cross-Channel Retailing For The Anytime, Anywhere Consumer; Benchmark Study – Brian Kilcourse, Paula Rosenblum, RSR [“benefits achieved by retailers who enable cross-channel order and inventory visibility and enabling cross-channel processes”]  
> Results reported by IBM OMS clients across multiple retail industry sectors; results varied by client, not all reported benefits for each benefit area

# Case Study Example: Global Auto OEM

- Better visibility to inventory and lifecycle of orders
- Ensure SLAs are met for contracts
- Pricing and promotions engine to help with contract pricing
- Predictive stockouts
- Consolidate inbound shipments
- Visibility to inbound parts in the supply chain
- Alerting, playbooks and resolution for potentially delayed shipments



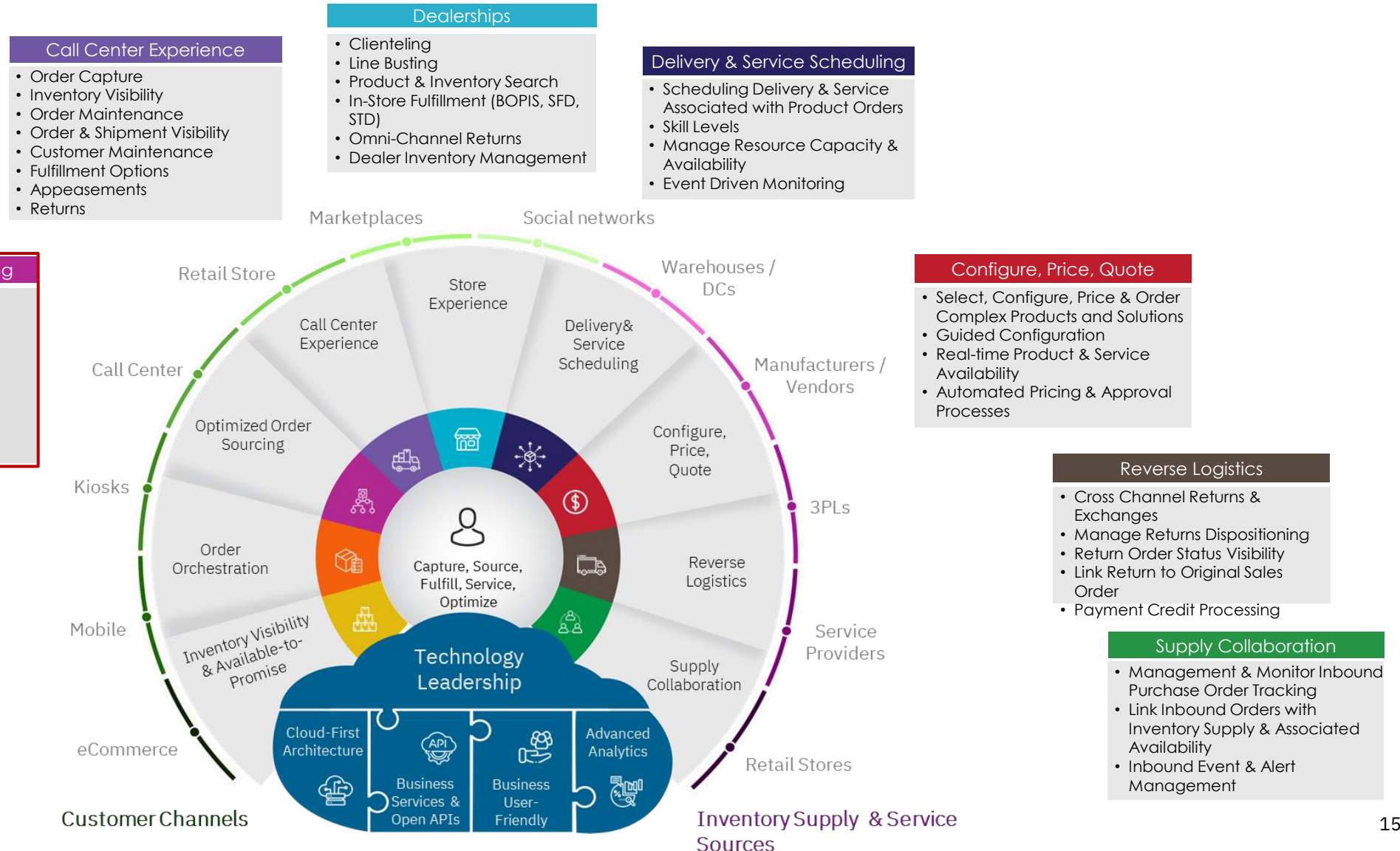
Leading North American auto manufacturer establishes digital capabilities to grow their aftermarket business and deliver a modern customer fulfillment experience. [redacted] implemented new capabilities that allow customers to place orders online and then select from flexible options to fulfill from internal warehouses & fulfillment centers or the choice of one of [redacted] 4,000+ network of dealers; including the option for delivery or pickup in-dealership with options for dealer installation

4,000+	3+	1
Dealer Network Participants	Demand Channels Direct to Consumer/Dealer	Enterprise OMS Solution





# Case Study Example: Global Auto OEM Selective Usage of OMS Capabilities

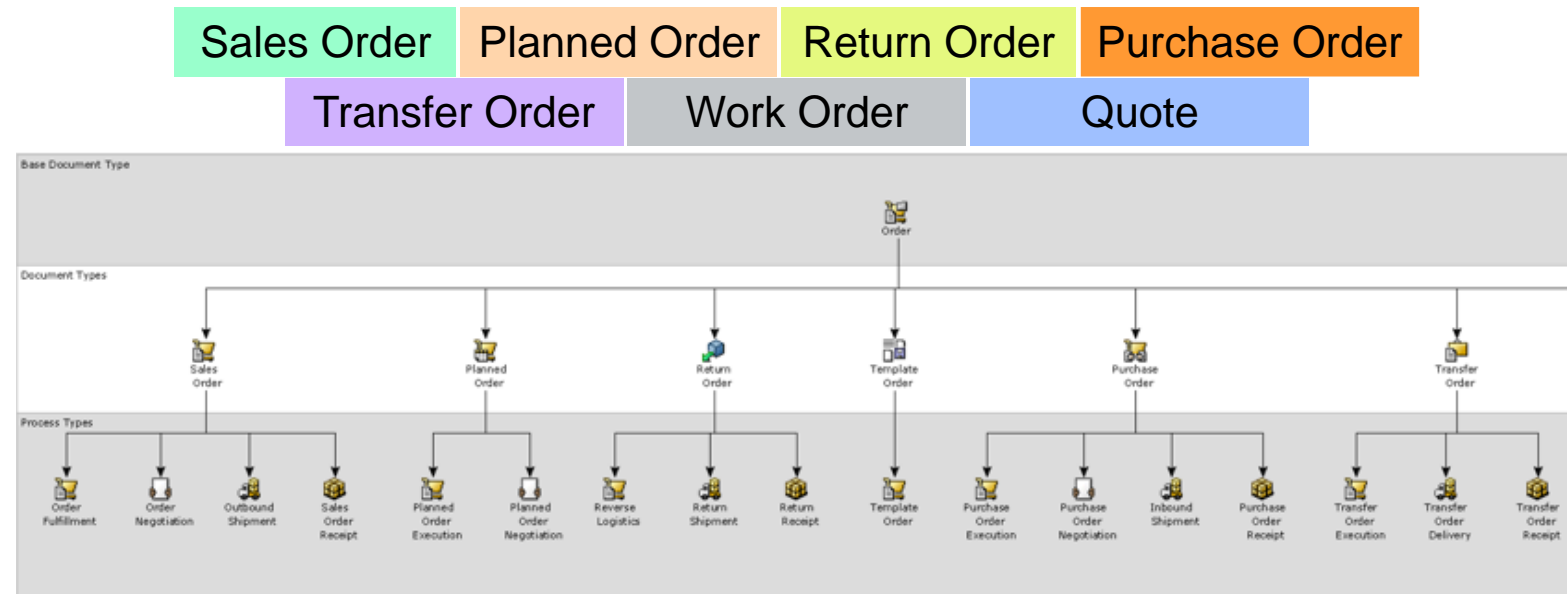




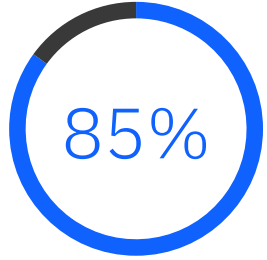
# Automotive “Orders” are Complex

Order Management Platforms Enable OEMs To Manage:

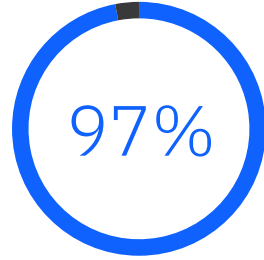
- Multiple Order Types
- OEM / Dealer / Franchise Inventory Allocation
- Bridge Across Disparate Platforms To Deliver Consistent Experiences Across Channels



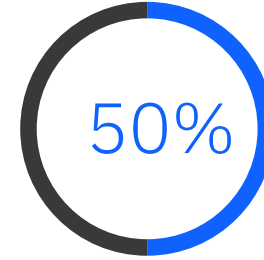
# Supply chain leaders are looking for visibility and transparency based on real-time analytics



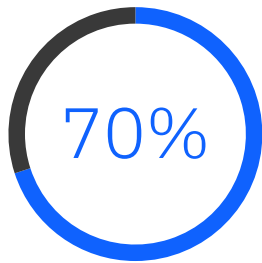
of companies felt that [supply chain complexity](#) is a significant and growing challenge for their operations



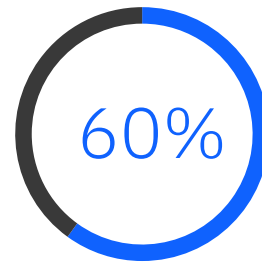
of companies recognize the importance of and are prioritizing efforts to improve [end-to end supply chain visibility](#)



of manufacturers will use supply chain orchestration tools for [innovation delivery](#) and [disruption avoidance](#)



of consumers look at very specific attributes and willing to pay 37% premium for [full transparency](#)

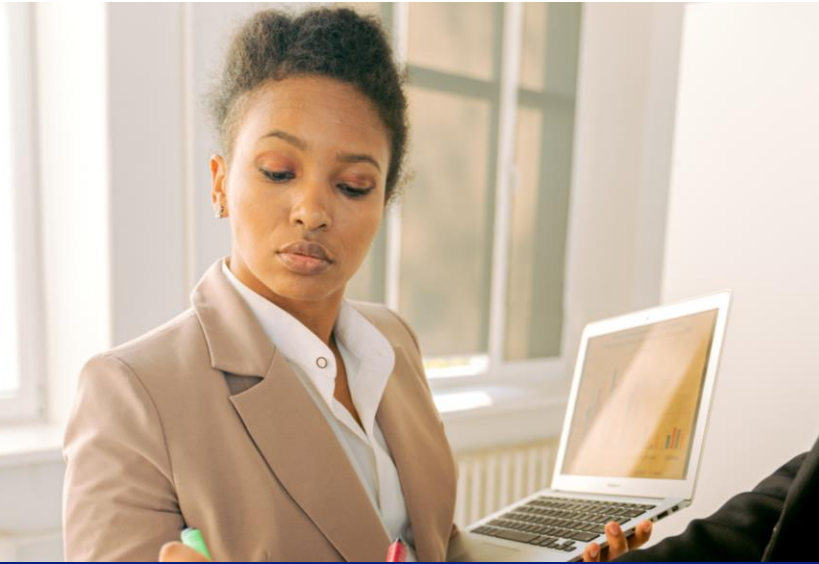


of consumers willing to change shopping habits to reduce [environmental impact](#)





# Supply chain professionals need an intelligent tool now



## VP of Supply Chain

- Do I have end-to-end visibility across all my supply chain systems?
- Can I anticipate supply chain disruptions and act effectively?
- Can I leverage actionable intelligence to detect, predict, and remedy supply chain disruptions?



## Supply Assurance Manager or Inventory Manager

- Do I have a complete view of my materials and parts supply on hand and arriving next week?
- Can I prioritize my most critical work and complete my daily delivery and build schedules?
- Can I position inventory better to avoid expedite costs, transfer orders, waste and delays?



## Fulfillment Manager

- Are we providing the best fulfillment experience at the lowest cost?
- Are my orders delivered on-time and reliably?
- Can I manage obsolescence and anticipate stockouts and shortages better?
- Can I execute a recall efficiently?



## QA Manager

Ensure quality standards are met within trusted supplier network  
Easily and more quickly trace components and products from origin to consumer



## Operations Lead

Detect and resolve problems more quickly  
Monitor and manage workloads more easily  
Collaborate more effectively with internal and external teams



## Distribution Specialist

Make more confident decisions with true end-to-end shipment and delivery visibility  
More easily ensure adequate levels of supplies are on-hand  
Reduce loss of goods



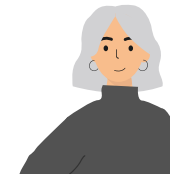
## Inventory specialist

Make more confident decision with true end-to-end inventory visibility  
Avoid stock-outs  
Reduce spoilage



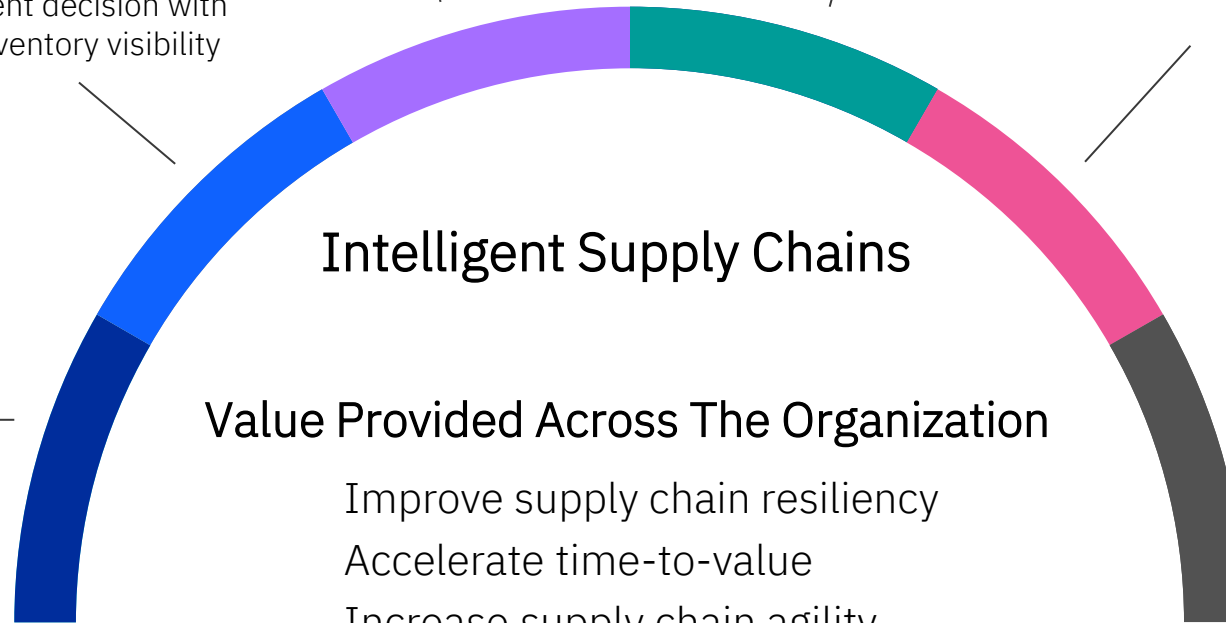
## Planning Analyst

Make more confident decisions with true end-to-end order, inventory and shipment visibility  
Improve forecasting using imbedded advanced analytics  
Respond faster to demand shifts based on alerts



## Supplier Manager

Onboard supplier more quickly  
Collaborate with suppliers more effectively  
Resolve issues with suppliers faster  
Build trust and stronger supplier relationships



# Intelligence platform

Intelligence and efficiency to improve supply chain resiliency



## VIEW

Visibility across  
silos data sources

External data  
Track & trace

---

End to end supply  
chain coverage



## DETECT

KPIs based on business  
rules and alerts

Analytics using AI  
and machine learning

---

Work queues  
of prioritized issues



## GUIDE

Defined best  
practice solutions

Context and  
recommendations

---

Determine best  
approach



## ACT

Intelligent workflows  
with guidance

Automation to  
back-end systems

---

Efficient and uniform  
problem resolution

## Better actions taken more quickly

empowering the workers, reducing manual steps, freeing up time to focus on higher value tasks



# Detect external risk impacts to operations



- Which suppliers may **not be able to ship** my supply?
- Do I have **in-transit** supply at risk?

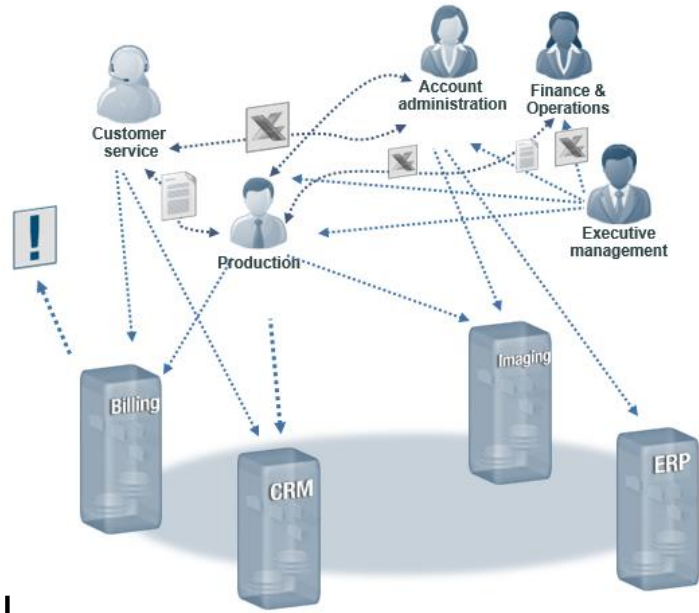
- Do I need to stage **emergency** materials?
- Will my warehouse inventory be **damaged**?
- Will my DCs receive shipments **late**?

- Will there be a **backlog** of inbound and outbound containers?
- Do I have **VMI locations** at risk?

- Will my stores be able to receive **replenishment**?
- Can the trucks **get to the store** or customer?

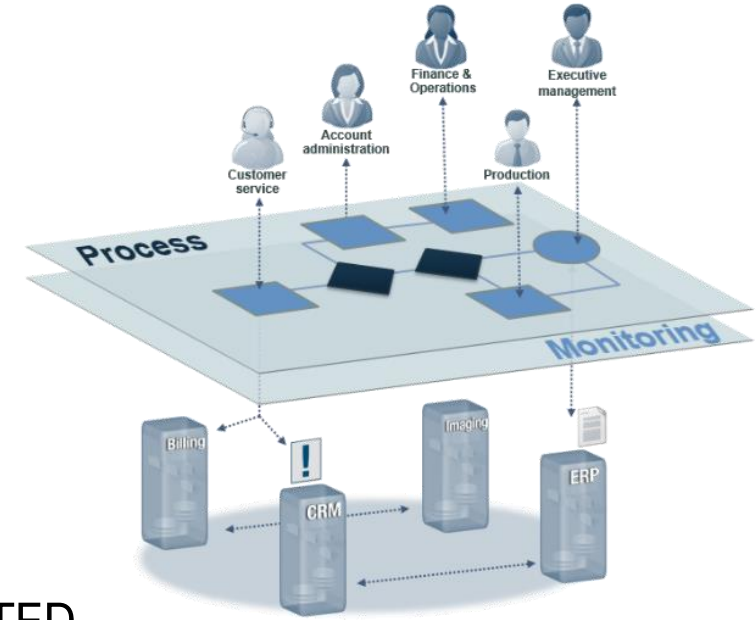


# Act with integrated business automation



## MANUAL

- Unstructured tasks and communication
- Inefficient working environment
- Incomplete or **inaccurate data** flow
- Lack of **control** over system and events
- Poor visibility** Into operations performance
- Paper-based** document routing



## AUTOMATED

- Automatically **prioritize** and route work
- Guide** users through decisions
- Leverage** existing systems and data
- Manage** digitized document content
- Respond** to business events and initiate action
- Real-time **visibility** and process control

# Build intelligent, resilient supply chains

52%

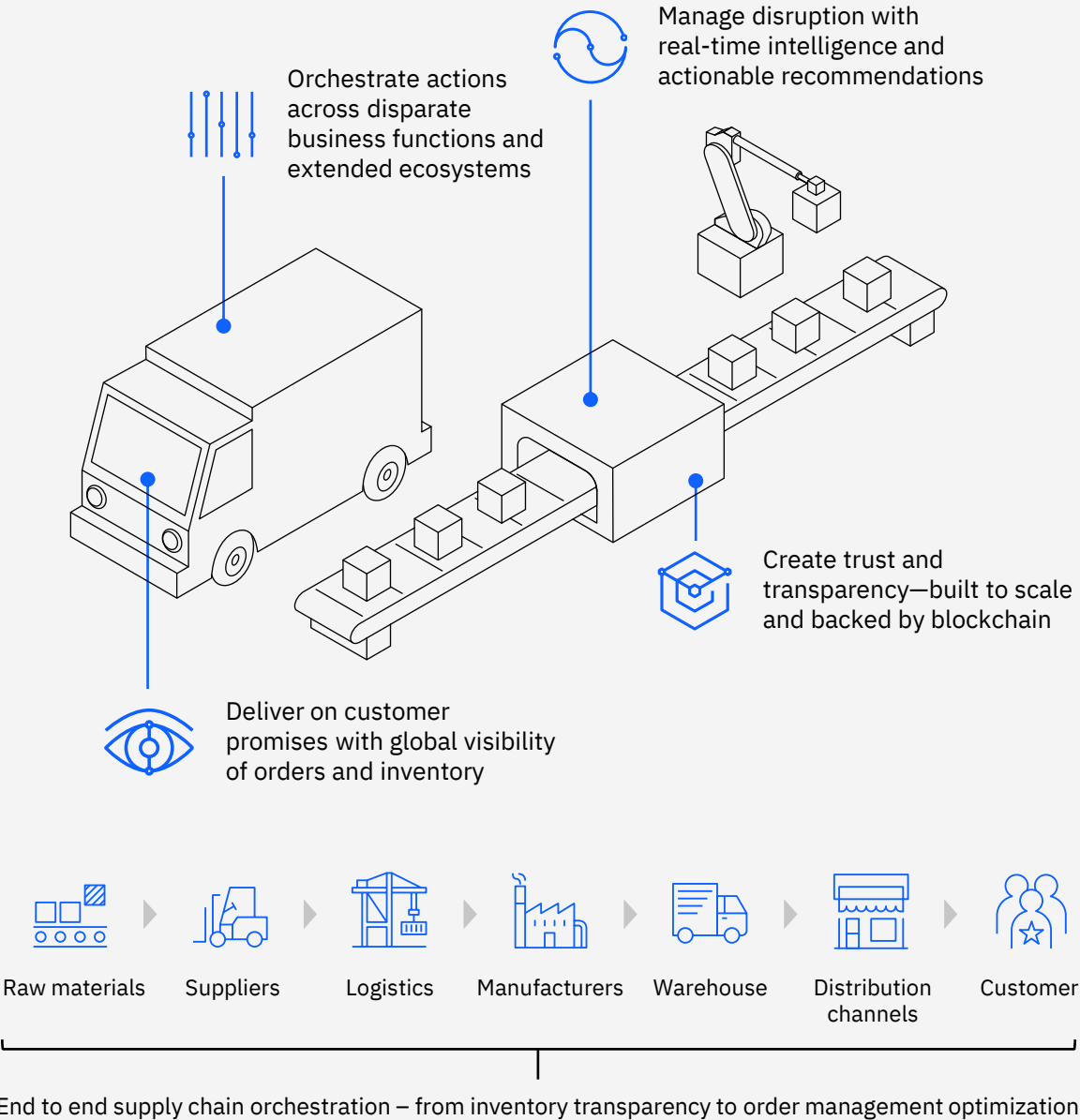
Reduction in expedited  
freight costs

18%

Reduction in inventory levels

75%

Reduction of late orders



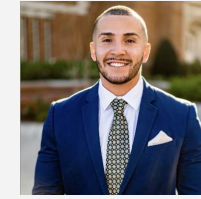


# Questions?

Supply Chain Showcase Webinar  
Leading in the New Era of Automotive Supply Chain



**IBM Supply Chain  
Support Team**



**Mateo Canarte-Toro**

Associate Supply Chain Technical Specialist  
IBM Sustainability Software

Email: [MateoCanarteToro@ibm.com](mailto:MateoCanarteToro@ibm.com)



**Donna Smith**

Business Development Leader Americas, Order Management & Supply Chain

IBM Sustainability Software

Phone: 1-303-908-5621

Email: [donna.smith@ibm.com](mailto:donna.smith@ibm.com)



**Dane Hunter**

Associate Partner - Digital Commerce  
IBM Consulting

Email: [Dane.Hunter@ibm.com](mailto:Dane.Hunter@ibm.com)