ACQUIA
EXPERIENCE DIGITAL FREEDOM

The Transportation and Logistics Sector Today

CATCHING UP WITH TRANSFORMING CUSTOMER EXPECTATIONS

Introduction

Thanks to rapidly evolving technology, the transportation and logistics industry is more competitive than ever before.

Transportation and logistics companies have one shared goal: delivering an item at the right time, in the right place and in good condition. But expectations for the first element of that list—the time frame—are becoming increasingly high. In a time where customers expect faster and faster service, transportation and logistics companies are facing an expectation to provide just-in-time and near-real-time service that can only be fueled by technological innovation and digital transformation.

The stakes are higher than ever. Every element of the supply chain must move faster and be more interconnected with data from multiple sources. Today's customers demand the information they want, and the service they expect, on the platforms of their choosing.

It's a huge demand. And the ability to offer what customers now expect will be key to success.

TRANSPORTATION AND LOGISTICS SECTOR TRENDS

Advances in technology and changes in customer expectations certainly have upsides for transportation and logistics companies going forward. But to make the most of these developments, organizations must keep pace with several trends impacting the industry.

TREND 1

Customer Demands are Increasing

At the end of every supply chain sits a real, live customer, who has increasingly higher expectations about the shipping and delivery of their purchases. That demand for speed and accuracy challenges every element of the supply chain, forcing foundational changes to processes and services, while boosting both wages and competition for labor.

As explained by GTG Technology Group in 2019 Transportation Industry Trends, "Growing prominence of the tariff wars and their effects on global supply chain have led executives, trade compliance personnel, and supply chain professionals to revamp the current supply chain strategy and operations."

At the same time, transportation and logistics organizations are also dealing with impediments to increasing speeds, including the impacts of aging infrastructure system, a condition worsened by more frequent and severe natural disasters that have affected ports and major highways.

Technology and Analytics are Constantly Evolving

As in other industries, transportation and logistics companies are presented with a constantly expanding range of innovations. Taking advantage of the developments that can make a difference requires the implementation of new technologies across business processes, all with the goal of gaining efficiencies and increasing revenues. As GTG Technology Group notes in the report referenced previously, approximately 54% of companies expect that digitization will increase their revenues. Those increases are realized through the benefits of redesigning services, managing labor gaps and streamlining processes.

Some of the most potentially transformative innovations on the horizon include:

INTERNET OF THINGS (IOT) - Devices capable of in-vehicle health monitoring, electronic logging and much more utilize the cloud to gather data that can drive new efficiencies and improve safety.

AUTONOMOUS VEHICLES - Driverless cars and trucks may bring a wealth of benefits, including increased safety and decreased fuel emissions. The vehicles will be powered in part by artificial intelligence (AI), which can enable them to react to important travel variables like weather conditions and pedestrians.

BIG DATA - Tracking devices and other technologies will enable companies to maximize efficiencies and get the most from their assets. Route planning, shipment combining and other strategies can all be optimized based on information collected.

ROBOTICS - Warehouse operations, loading processes and other systems can all be optimized through innovations in robotic technology.

As more benefits are realized, digitization efforts are certain to continue. An article from SupplyChain247 titled Transportation & Supply Chain Predictions for 2019 predicts, "... [the] transportation industry and supply chain professionals will place more emphasis on digitization within the supply chain to help them address future complex challenges."

The transportation and logistics sector is increasingly reliant on data analytics to understand the evolving marketplace and drive better informed decision-making that accounts for risks and costs. Experienced IT professionals with expertise in utilizing advanced analytics software to mine and report data to help companies make better decisions are invaluable. Advanced analytics tools can empower companies to optimize pricing, routing, load consolidation and much more.
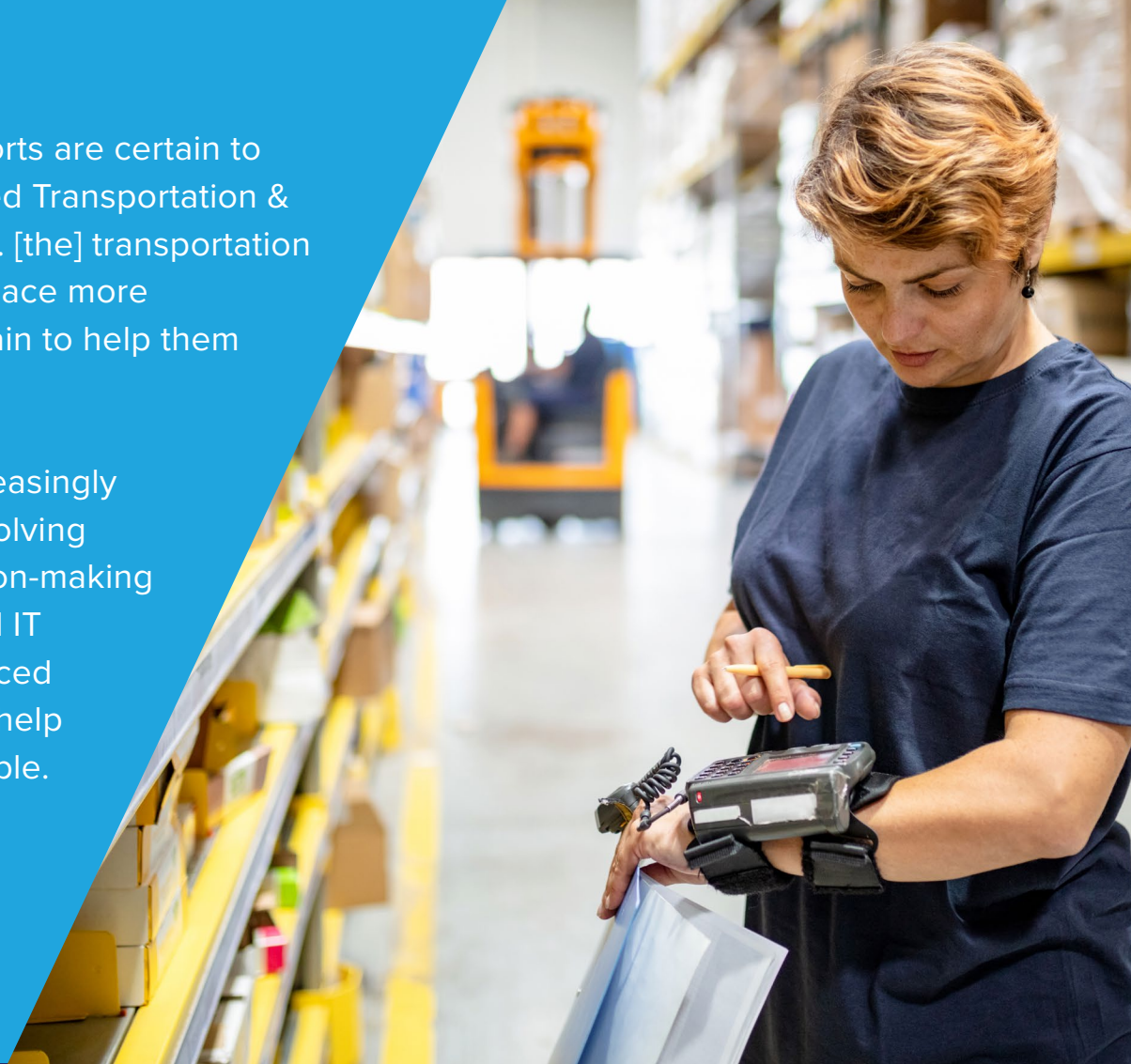
"The percentage of T&L companies that rated themselves as 'advanced' on digitization was just 28%. ... The lack of a 'digital culture' and training is thus the biggest challenge for transportation and logistics companies."

PWC, The Future of the Logistics Industry

New Entrants and Innovations are Disrupting the Status Quo

The disruptive energy impacting nearly every industry has not spared the transportation and logistics sector. Perhaps the most disruptive technology on the horizon is autonomous (driverless) vehicles. While their implementation may help trucking companies solve for driver shortages and increased demand, it may also threaten other parts of the sector, including railroad and car rental companies.

Profound digital transformation in areas like data analytics, IoT and cloud technology are also causing disruption, with established companies often lagging behind new entrants in adoption and expansion.
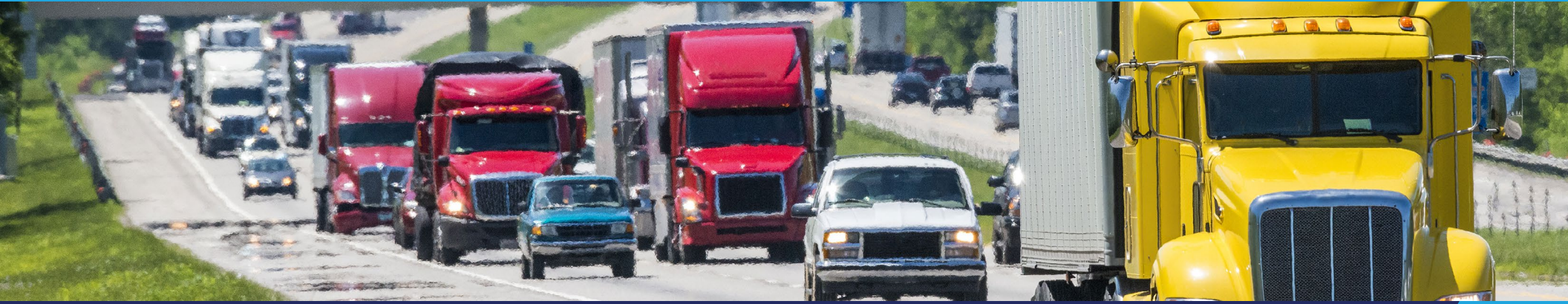
Growing costs, expanding regulatory requirements and increasing competition are driving change, as well. Companies like Amazon and other relative newcomers have been focused on speed from the outset, and often work to control larger parts of the supply chain and reduce or eliminate intermediaries.

As competition heats up, relationships along the supply chain are becoming more volatile.

There are additional technological disruptions in the marketplace, including smart trucking applications, real-time asset maintenance tracking, capacity load sharing and semi-autonomous or autonomous freight trucking. Additionally, integrators are eating into logistics companies' business, offering streamlined, end-to-end services.

"Google's same-day delivery, Amazon's drone package delivery testing, self-driving trucks, and the inevitable Uber for Trucking with supply chain load sharing are examples of disruptions. The influx of new market entrants is armed with new technologies and unburdened by legacy systems."

Bruce Orcutt, "Why Digital Transformation Matters in Transportation," Supply Chain Management Review

TREND 4

Environmental Impact Concerns are Front and Center

As business thrives, the transportation and logistics sector's environmental impact grows, leading to new regulations designed to reduce emissions and decrease the industry's carbon footprint.

According to the U.S. Department of Energy, the average vehicle miles traveled (VMT) by class 8 trucks in the U.S. was approximately 68,115 in 2016, and is widely expected to grow, which will increase CO_2 emissions from the trucking industry. Complying with existing and future emissions limits will require either advanced engine technologies or after-treatment devices, both of which lead to increased truck prices.

As Amey Amanaji wrote, "...after the implementation of fuel consumption standards in the U.S., the class 8 truck prices showed an increase of 6.2% percent between 2014 and 2017. Considering the European and the U.S. CO_2 targets and the increasing truck prices, the truck industry is projected to move toward electrification in the next 7-8 years*."

That move is underway. Big names like Tesla, Daimler and Waymo-Peterbilt, along with new entrants such as Orange EV and Wrightspeed, are investing heavily in electric truck development. Analysis by MarketsandMarkets expects the global electric truck market to account for 10-15% of total sales by 2025.

The same dynamic applies to public transportation. While diesel still dominates the global bus market, the demand for battery-electric and alternate fuel buses is projected to grow. And, a shift to more "connected" public transportation systems—incorporating CCTV, GPS, digital displays, automated announcements and more—can help alleviate congestion and emissions.

CHALLENGES FACING THE TRANSPORTATION AND LOGISTICS SECTOR

While digital advancements and changing expectations undoubtedly present significant opportunities to transportation and logistics companies, those opportunities aren't without their unique challenges.

Reducing Costs and Increasing Profitability

An encouraging economy portends an increase in shipping activity, which would lead to increased revenue. But that growth may be offset somewhat by an expected driver shortage, along with increases in wages and fuel prices. According to an analysis from MarketsandMarkets, the industry should expect to combat rising costs with innovations such as truck platooning — linking two or more trucks with the help of connectivity technology — which can help negate the impacts of driver shortages and higher wages.

Other methods of managing costs and boosting profitability can include electric trucks, autonomous driving and smart transportation solutions.

25%
of enterprise costs will be devoted to digital transformation in leading organizations

2016   **27%**   **2027**

Freight tonnage moved by trucks
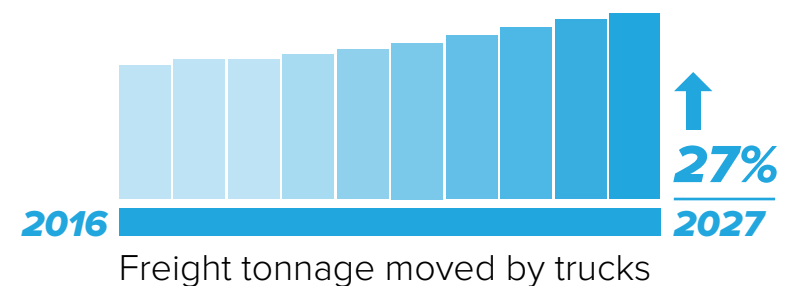
Proactively Innovating to Meet Speed and Efficiency Demands

The demand for faster, better service is higher than ever and shows no signs of abating. Transparency about shipping status and control over delivery are also increasingly expected. According to a survey by Deloitte, nearly half of online shoppers reported abandoning a seller due to poor order tracking and insufficient transparency about deliveries. While the trend is particularly pronounced with the consumer market, many businesses are beginning to expect the same level of transparency and speed in their B2B transactions.

Meeting those expectations and creating competitive differentiation requires speed and timing. Data-driven marketing can enable transportation and logistics companies to engage with customers at the best time and in the right context, in turn increasing conversions and boosting engagement.

Utilizing data to keep the customer informed can help meet the growing desire for speed and efficiency. Fast, timely and accurate dashboards that provide visibility and transparency are key in today's digitized economy. Customer engagement applications that streamline onboarding, tracing and tracking, along with omnichannel invoice validation processing can enhance both the customer experience and overall perception. Some forward-thinking transportation and logistics companies are utilizing digital and omnichannel communications to deliver customized experiences that open new revenue streams.

"Digital fitness is a challenge for the sector, which is currently lagging many of its customers in this respect. Attracting the right skills is one issue, but developing the right strategy is even more crucial."

PwC, The Future of the Logistics Industry

Developing and Implementing a Cohesive Digital Strategy

The new business models that digital innovations require encompass a wide range of business processes, and can be focused on everything from solving problems to adding value and reducing costs. But transportation and logistics organizations may lack an integrated digital platform that can support all business functions. According to Capgemini Consulting, most organizations today still operate on hybrid systems, meaning a combination of paper-based and IT-supported processes.

A reliance on outdated processes presents several risks, including fraud, a lack of visibility and poor resource allocation. As explained by i-SCOOP in Digital Transformation in Transportation and Logistics, "Digitization is still a big challenge in transportation and logistics and there is ample room to optimize processes and capture information close to the source or point of 'action/origination' to speed up processes and enhance transparency while increasing agility (remember the need for speed). Moving from hybrid supply chains to digital supply chains is one of the key evolutions in T&L."

According to a survey by Russell Reynolds Associates, over a quarter of transportation and logistics companies don't have a digital strategy in place. A full 80% of respondents report that their CEO doesn't recognize the potential digital holds. And, in 80% of companies, digital implementation is hampered by departments within the company competing for ownership.

That said, spending on digital transformation in the sector is growing. According to a report from Adroit Market Research, "The global market size for digital transformation and logistics was valued at USD 54.92 billion and is anticipated to rise up to USD 145.28 billion by 2025."

TO GROW AND THRIVE, TRANSPORTATION AND LOGISTICS IT TEAMS MUST PRIORITIZE:

1.

Application Functionality and Speed to Market

Transportation and logistics companies can benefit significantly from digital solutions related to asset underutilization, supply chain inefficiencies, demand-supply side matching and connectivity and visibility across systems. However, in the ongoing shift to an on-demand real-time economy, few things are more important than speed. As i-SCOOP explains in Digital Transformation in Transportation and Logistics, "76.9% of executives agree or highly agree that the evolution toward a real-time economy has an impact on their business processes. And, obviously, in transportation and logistics (and supply chains), processes are ubiquitous and hyper-connected. A majority of executives also feel that the move to a real-time economy affects their organizational structure and business strategy."

Failure to keep pace and execute quickly may hold dire consequences for companies across the transportation and logistics sector. Efficiency, optimization and speed have always been important. But in today's accelerated — and increasingly digitized — environment, they are even more so.
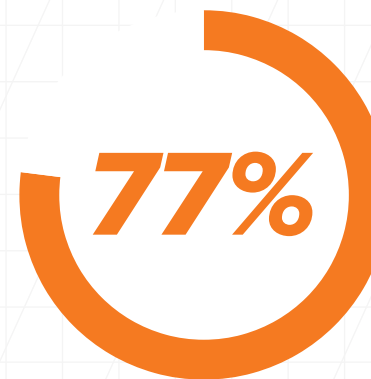
77% of executives believe evolution towards a real-time economy is impacting their business processes.

2. Flexibility to Respond to Changing Business Requirements

As customers demand better, faster service, the industry is recognizing the importance of moving toward a state of unceasing evolution. Access to previously unparalleled amounts of data, increased connectivity, cloud technology and other developments combine to enable companies to converge operational and information technologies, support ongoing, end-to-end digital transformation and quickly turn insight into action.

Several factors can hinder speedy transformation at transportation and logistics companies. Crucially, IT capacity can be extremely limited. In a survey from Adroit Market Research, half of logistics executives expressed concern over a lack of technology expertise throughout the supply chain, forcing them to rely on external partners.

Collaboration between any in-house technology professionals and business development teams is often severely lacking. A successful digital transformation in this sector entails fully up-to-date systems, an appropriate allocation of resources and a cooperative approach that enhances existing business while opening avenues for new growth.

3. Maximizing Data Security

Data security is top of mind in any industry. The expansive amount of data available today gives companies the ability to deliver the information, speed and interactions today's demanding customer expects. Biometrics, authentication, asset tracking and other innovations are all producing vast amounts of information that must be protected. As processes become more digitized and interconnected, risk of data breaches and misuse increases. All of which means data governance is vital.

Strong data governance can help prevent breaches and control incidents to more quickly identify the scope and impact — an important part of limiting damage. When executed correctly, a strong data governance strategy is integrated throughout an organization's business processes and enterprise architecture. It enables the organization to understand the quality, value and relevance of data, and how it can be utilized by people and applications.

4. Innovating and Investing in the Right Technologies

The goal of digital transformation is to transform the customer engagement experience to deliver increased business value. In the transportation and logistics industry, it's an invaluable tool for improving ROI. However, as technological innovations continue to flow, transportation and logistics organizations must determine which developments will deliver results and offer ROI. The sharing economy, IoT, big data, on-demand logistics and automated solutions are all poised to have expansive impacts.

Trucking companies may capitalize on some of the biggest benefits offered by technology, in the form of telematics. According to PwC's 2017 Commercial Transportation Trends, "It will soon be possible to integrate trucks into logistics data across the entire supply chain. Advanced telematics will enable transportation companies, through cloud-based analytics, to track and check such factors as truck location, the health and fatigue of the driver, the temperature and barometric pressure of the freight, and so on. Telematics will also ease automated freight matching. The truck trailer, relying on sensors, will be able to determine available space and weight, route, and ETA, and send this information to software that can generate the most efficient and cost-effective scenarios for moving loads."

The focus on utilizing the right technological innovations exists in top-level management at many transportation and logistics companies. Capitalizing on the Internet of Things and cognitive computing can offer transformational benefits quickly. According to Peter Sondergaard of Gartner, "The focus is on how the supply chain can consume and leverage data, integrate sensors and other elements of the Internet of Things and software for customer segmentation and marketing automation."

> **"T&L CEOs see mobile technologies for engaging with customers, cybersecurity tools and data analytics as the three most important areas in which to invest."**
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> PwC, Transportation and Logistics Industry Snapshot

FINDING THE WAY: HOW ACQUIA CAN HELP

Savvy transportation and logistics IT teams aren't asking whether or not they need to transform their digital infrastructure to provide a better customer experience. They're figuring out what level of investment they need to put into digital platforms, personalization tools and better methods of engaging with existing and potential customers.

Moving ahead, transportation and logistics companies must offer a more intuitive, personalized digital experience, while gaining better control of their digital assets and effectively using analytics and insight to drive the most efficient journey for customers. Digging for data and insights to understand the true effectiveness of each effort is key. Knowing what's working, what's not, and where the gaps lie are all vitally important.

Acquia is the pioneering partner that can help build those experiences and relationships—on an organization's own terms.

"The percentage of T&L companies that rated themselves as 'advanced' on digitization was just 28%. Some of the industry's customers are already well ahead of this ..."

PWS, The Future of the Logistics Industry

Our suite of DXP solutions has empowered leading brands to create the world's greatest digital experiences. We help organizations establish the more intuitive, personalized digital experiences today's customers expect—all using open-source technology, all with the required security.

Acquia enables transportation and logistics organizations to gain control of digital assets, deliver the right content at the right time, and tap into the data and insights that lead to an understanding of what works, what doesn't and why, so they can meet prospective and current customers with what they need at every mile of the journey.

For more information about how we're transforming the digital experience in the transportation and logistics sector, visit www.acquia.com/solutions/transportation-logistics.

CONTACT ACQUIA

To learn about how Acquia can help you deliver a customer-first experience, please contact us at sales@acquia.com.

United States
888-922-7842

France
+33 01 79 97 25 70

United Kingdom
+44 1865 520 010

Australia
+61.2.8015.2576

Canada
647-953-4270

ACQUIA