

# TURVO



WHITE PAPER

## LOGISTICS TECHNOLOGY **BUILD VS. BUY**

The DIY approach to software is old, tired and fading fast.  
Learn how adopting off-the-shelf logistics technology can synchronize  
your people, systems, trading partners and supply chains to differentiate  
your customer experience.

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[turvo.com](http://turvo.com)

# DIGITALIZATION IS THE 'IT' FACTOR FOR LSP'S

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Let's consider how we got here, and why now?

Looking ahead into 2021, it's clear that supply chain leaders face great uncertainty. The inefficiencies of existing logistics technologies have finally come to light as a topic headlining boardroom discussion around the globe.

Geopolitics, international trade wars, Brexit, the US election, and a global pandemic resulting in unprecedented demand for essential goods, shortages in supply, and stringent requirements for compliance have forced logistics providers to rethink their operating models with a focus on automation.

Further, customer experience is becoming more important to every participant in the supply chain network from the operators down to the end user.

The year 2020 will go down in history as the tipping for digital transformation in supply chains. So digitalization is inevitable, but how? Build or buy?



## INTRODUCTION

In this paper, we explore the path to digitalization in the context of building a system in-house or purchasing an off-the-shelf (OTS) solution.

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## Key Themes

The Shortfalls of Legacy SC Systems

The Challenges of DIY Solutioning

OTS Solutions' Opportunities

The Value of Collaboration



# THE RACE TO AUTOMATE

Predictions indicate that supply chain technology adoption will soar as participants join the race to automate post-pandemic. Our current market environment begs the question, "have we been here before?". Let's go way back to 1848, the year of the California Gold Rush, an event that brought California into statehood and revolutionized logistics. Similar to the cause-and-effect we've experienced amidst COVID-19, one event led to catastrophic disruption and volatile market conditions triggering shortages of essential goods that crippled California, which lacked the infrastructure to support the supply chain. In time, gold boosted the economy sparking industrial and infrastructural advancements, including steamships and railroads that streamlined the movement of goods across uncharted territories around the world. So maybe there is a silver lining after all? What is our proverbial steamship, and where the hell is the gold?

While it's difficult to see now, supply chains are poised to greatly benefit from emerging technologies and future-

proof for the next disruption. The key to implementing a digitalization strategy is finding a single solution that can bridge the necessary operations tools with a more common environment. It's about removing the friction between existing legacy systems, point solutions for visibility, ERP, FMS, TMS, WMS.... (and now I've said my ABCs). You get the point! Having the alphabet soup provides no value if the people and systems behind the alphabets are not tightly integrated for bi-directional collaboration and sharing across every participant in the supply chain. In the end, supply chains are not chains, they are complex networks, and networks are human beings. We must first connect these humans in a single platform with execution capabilities to reap the reward of true collaboration.

If we were to give the supply chain technology landscape a profile on Facebook, we'd tick the box for 'it's complicated' for relationship status to reflect our inability to connect with and engage our partners.

# PARTNERING IN SUPPLY CHAIN INNOVATION

Unfortunately, the “great logistics software debate,” as noted [by Shannon Vaillancourt via DC Velocity](#), continues. Supply chains still struggle with the age-old question of whether to build logistics technology in-house or buy an off-the-shelf (OTS) solution. On the surface, building an in-house, fully customized solution sounds like the ideal option. However, in-house systems increase operating costs by requiring full-time integration, configuration, maintenance, and continued development. Building software is incredibly complex, and by building your own you continue to silo systems in the ecosystem. More organizations realize that an outsourced solution is the best path forward.



With the right partner who has the expertise to deliver, outsourcing is the smart choice. Operators should look to proven leaders of innovation to automate their business for a fraction of the costs.

**LET THE EXPERTS  
BE YOUR GUIDE**



Would you let your neurosurgeon perform your appendectomy? Would you let your uber driver manicure your lawn? Probably not. To that end, why enlist IT personnel or managers to lead the charge on building, implementing and supporting a digitalized, cloud-based, collaborative logistics technology? Leave the minutia of supply chain collaboration and orchestration to the experts and save time and resources. Eliminate the overhead and apply it back to your business to support customer growth.

“Turvo is a game-changer for the supply-chain. I have been fortunate enough to work with some of the largest and fastest growing logistics companies whose strategies around and investments into technology are industry-leading. Turvo's mix of product functionality, user experience, and world-class talent is special. At Taimen, our partnership with Turvo enabled double-digit growth with new and existing customers accelerating us to be listed on the 2019 Inc. 5000 of fastest growing private companies in America.”



Ryan Pamplin  
Director of Innovation





# KNOW THE MATURITY LEVEL OF YOUR TECH STACK

Every supply chain struggles to balance resources with consumer and partner demands. Logistics systems have the potential to increase efficiencies, identify weaknesses, intervene before a minor problem causes disruption, and keep everyone informed. This is the collaboration and agility that powers a modern, technology-driven supply chain. Many organizations fail to realize when their tech stack is insufficient to meet those changing demands.

Top indicators supply chains are struggling with the maturity level of their logistics technology within the manufacturer and supply chain network include:

## **Dramatic inconsistencies within inventory levels and expected inventory needs.**

While the over or under reporting of inventory within the supply chain might seem frivolous, it represents a grave concern. Any inaccuracies will inherently lead to problems with managing inventory replenishment and avoiding the undesirable “out-of-stock” designation for your SKUs.

## **Inability to track the speed and accuracy of order fulfillment.**

Failure to understand the process and journey of all shipments after they leave your facilities will result in many problems. Supply chain systems have inventory inaccuracies which create challenges to store freight properly. That is only the tip of the iceberg, as this poor inventory management results in problems managing cash flow. This then creates a self-propagating cycle of continuous inefficiencies and problems maintaining the quality and consistency of the order fulfillment timeline.

## **Inability to guarantee and meet on-time delivery key performance indicators (KPIs).**

Regardless of the cause, the blame for a missed delivery or late delivery will always fall on the shipper. And if a carrier assumed this risk, a clear and transparent process for sharing the shipment information with real-time status updates (including possible changes to the ETA) for all deliveries is critical for a shipper to stay proactive with customers and to provide a positive experience.

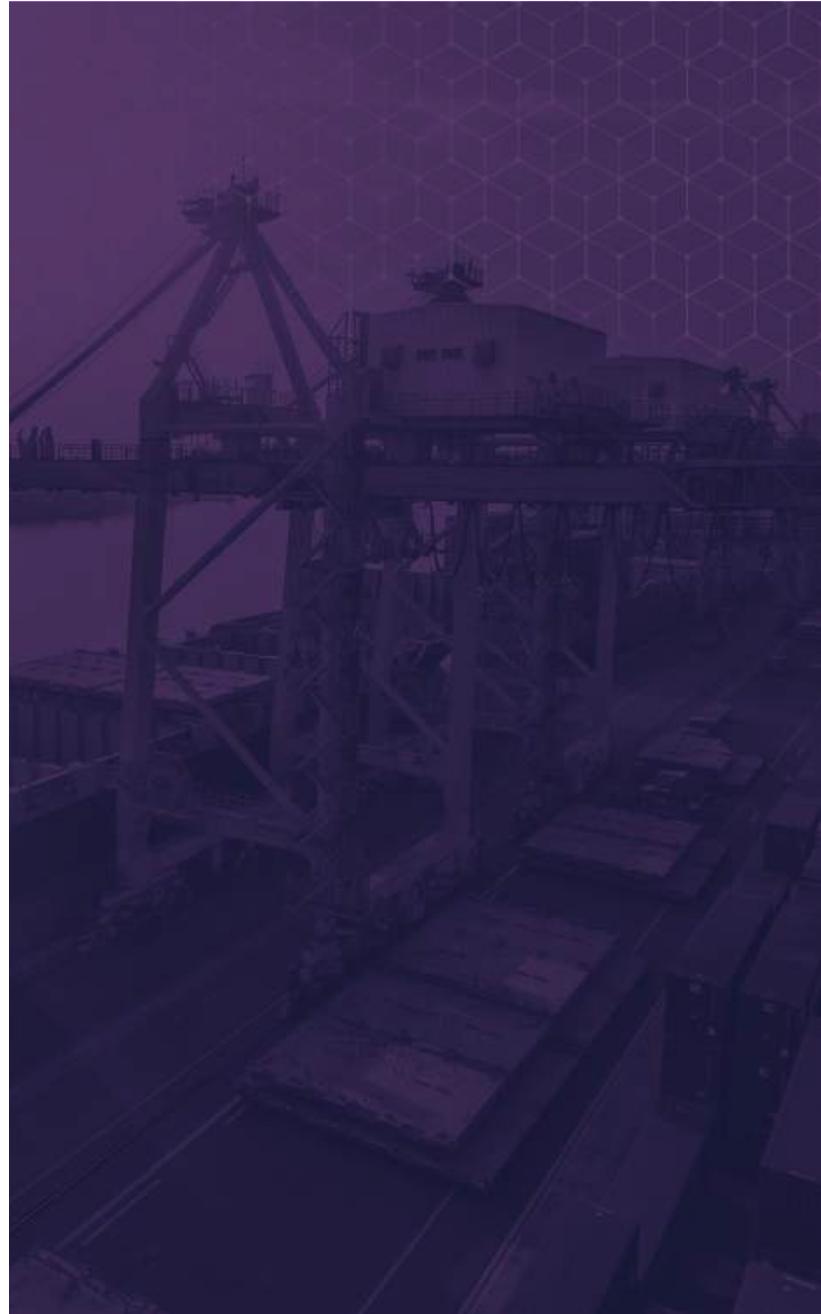


# KNOW THE MATURITY LEVEL OF YOUR TECH STACK

## **Increased rate of customer returns and complaints.**

Customer returns are inevitable, and e-commerce carries the highest consumer return rate of all possible retail channels. In today's world, returns must be handled swiftly and painlessly, and shippers need to know everything that happens to a return from the moment it leaves the warehouse to the moment it is processed for recycling, resell, or liquidation.

Of course, the most obvious characteristic of failing technology is unexpected downtime that leads to complete business disruption.





# THE CHALLENGES OF BUILDING & MAINTAINING LOGISTICS TECHNOLOGY IN-HOUSE

Now you know how to identify the signs of a logistics technology that falls short, but how do you know when it is best to build a new system or when to invest in a solution? If you're contemplating the DIY approach, consider these inadequacies:

- Existing platforms rely on outdated connectivity and integration capabilities.
- In-House IT's are limited to the view of their company needs instead of the entire ecosystem.
- Inability to share data and documents.
- Risk of data loss.
- Downtime that may lead to complete operating disruptions.
- Implementation barriers from lack of subject matter expertise.
- Lack of skills and documentation for proper on-boarding stunting adoption.
- Higher costs to train users.
- Low opportunity costs and decreased time to ROI.
- Higher total cost of ownership.
- Inability to collaborate with your supply chain network.
- Poor access to real-time data.
- Less attention given to building the core business.

"Turvo has given us the ability to grow revenue by 30% with two-thirds less people reducing operating costs by 60%.

With Turvo, we can onboard customers faster, giving them the ability to track every shipment from anywhere while having live interaction with our operators, in a single threaded, collaborative environment. The driver app has been a complete game changer in how we connect with our drivers and carriers enabling us to do more with less for greater ROI."

Royce Neubauer  
President & CEO





# ADDRESSING THE NEEDS OF THE SUPPLY CHAIN

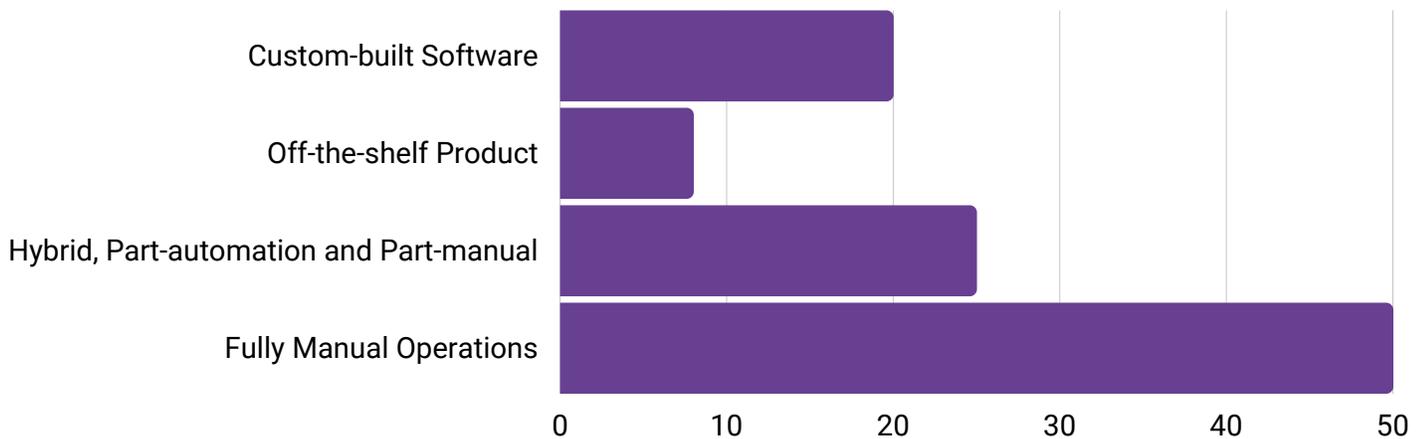
Building on these themes, [in a recent market analysis published by Haven and conducted by Shipping and Freight Resource on the topic of Freight Technology Readiness](#), 160 supply chain decision makers agreed that operational savings is the most important measure of ROI for new systems. The DIY approach to supply chain digitalization significantly increases overhead and operating costs, which counters the logic of the study - since you'll need to bring software experts in-house, and you'll add to the workload of your existing team, leading to overtime hours and a lack of focus on your core business and core competencies. The report also provided a look into how logistics service providers are currently applying technology and a staggering 50% admitted they use no technology with 20% stating they built in-house, proving opportunity for innovation and automation to be a true differentiator for early adopters of new, disruptive supply chain technology.

## Freight Technology Areas of Improvement



\*Haven Market Analysis

Exhibit 1.A  
Freight Management Systems Used

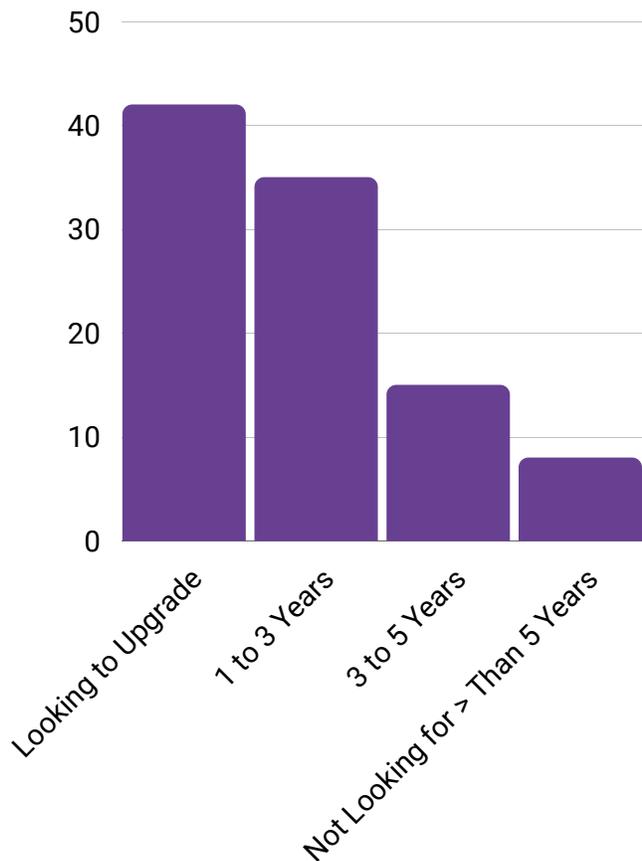


\*Haven Market Analysis

# THE APPETITE FOR TECHNOLOGY

## SUPPLY CHAIN DECISION MAKERS LOOKING TO INVEST

Although only a small percentage of those surveyed are currently using OTS products, we predict that market volatility and e-commerce demand will significantly increase the spending on OTS solutions. In fact, 42% of those surveyed said they are currently looking to upgrade their systems and 35% plan to upgrade in the next one-to-three years.



\*Haven Market Analysis



\*Haven Market Analysis

Additionally, only 8% of participants claimed to be satisfied with their current systems, which comes at no surprise since the market has traditionally been a laggard to technology adoption. The industry has essentially tried to solve for automation using a single blade when the problem is of much greater magnitude, requiring a swiss army knife approach. Transformation begins when operators can connect every person, system, workflow and process in the supply chain in a common network environment where users can collaborate within the context of shipment execution.



# THE ADVANTAGES OF OUTSOURCING SUPPLY CHAIN TECHNOLOGY

There are several advantages of outsourcing logistics technology to a supply chain and logistics technology vendor. Instead of trying to determine the what, where, how, when, why, who is involved, when it will happen, and the myriad of processes required to manage building an in-house solution, organizations can take advantage of flip-the-switch integration and implementation capabilities. For some software suites that are more advanced and require additional onboarding, technology vendors have a clear advantage. They have endured the process of onboarding carriers, logistics service professionals or providers (LSPs), shippers, and countless other types of supply chain partners. Thus, they have experience in getting other people to use the system and maximize its return on investment (ROI).

The advantages of outsourcing apply to all industries. Why would an organization try to develop something that someone else has already put the resources into and is ready for deployment at a fraction of the cost of building a technology platform from the ground-up? However, it is important to not discount the value of existing supply chain systems within an organization. After all, a company may have an excellent suite of systems and a fully realized tech stack. But, if the tech stack cannot fully share data and make it accessible to everyone within the supply chain, supply chain executives will struggle to see maximum performance and an ROI. Even if everything works smoothly, system users still need to keep track of countless logins, make sense of data, create manual work-arounds that are counterintuitive to automation, and hope for the best.

## **Instead, organizations can guarantee the best service level and performance by leveraging the full set of advantages of outsourcing, including:**

- Reduced operating costs.
- Decreased total cost of ownership.
- Decreased time to pay back.
- Increased return on investment.
- Less stress in managing logins, passwords, and servers.
- A focus on core competencies, not IT.
- The ability to scale without additional IT spend.
- Eliminated risk of tech and/or skillset becoming obsolete.
- Higher user adoption and satisfaction.
- Access to integration capabilities that bring your current tech stack and supply chain systems into the digital frontier with ease while maximizing their value.
- Additional functions that can be turned on from within an outsourced solution, such as payment processing capabilities, analytics, and more.

# OTS SOLUTIONS DIFFERENTIATE YOUR BRAND

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Furthermore, outsourcing offers another advantage—create market differentiation and gain competitive advantage. More than ever, companies across the global logistics landscape are turning to technology providers to stay competitive and relevant. Partnering with technology providers empowers companies to connect and have a more proactive supply chain where the focus is on the customer.

In addition, COVID-19 has accelerated the desire for “digital transformation” in the C-suite as executives realized their supply chains lacked resiliency in the face of disruption and are now incentivized to look towards technology and service partners to harden supply chains to overcome future disruptions. According to [Gartner](#), “Leading companies on the Supply Chain Top 25 (for 2020) are early and frequent adopters of digital technologies. More importantly, these investments enable business capabilities and outcomes that allow them to thrive in even the harshest economic conditions.”

**In the current environment, the natural tendency of many companies is to pull back spending, including money tied to transformational programs. Advanced supply chains are pressing forward, and in some cases, accelerating investments in real-time visibility, planning and agile supply execution capabilities that are well-suited for supporting uncertain demand mixes and volumes.”**

Clearly supply chain executives, including those of the top-performing companies in the world, are looking to partner with technology providers who are aiding leaders with the tools they need to create agile, responsive, resilient supply chains. However, which types of technology are best for improving supply chain management in the short and long term?

The Gartner logo is displayed in white text against a dark purple background. The background of the entire right-hand section of the page features a blurred image of a modern building with large windows.

**"In the current environment, the natural tendency of many companies is to pull back spending, including money tied to transformational programs. Advanced supply chains are pressing forward, and in some cases, accelerating investments in real-time visibility, planning and agile supply execution capabilities that are well-suited for supporting uncertain demand mixes and volumes."**

**\*2020 Supply Chain Top 25**



# IMPLEMENTATION

## IMPLEMENT SUPPLY CHAIN MANAGEMENT AND LOGISTICS TECHNOLOGY WHICH FOCUSES ON PEOPLE & SYSTEMS TOGETHER

The term, single pane of glass, gets tossed around a lot in supply chain discussions. It describes the unification of people, existing tech stacks, and features that bring together disparate and mildly connected systems and partners into a single platform.

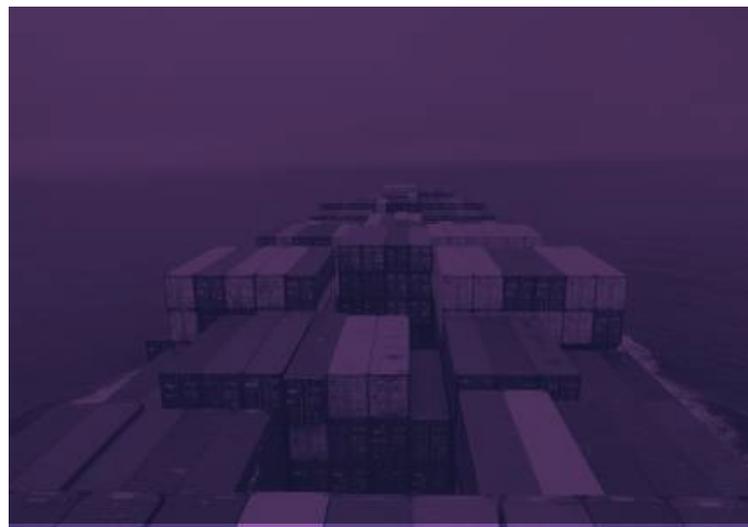
The single pane empowers organizations with an unmatched level of collaboration and visibility into all processes. Since everything resides within that platform, supply chain managers can immediately understand the health of their business, make informed decisions, and stay on top of high-priority items.

Creating a platform capable of achieving those goals in-house is simply cost-prohibitive as the technology vendor has already spent well in the multiple millions of dollars and work hours to develop the high-functioning platform.

Just think of the diversity between carriers, suppliers, customers, and third-party platforms... So much is happening that simply trying to connect these systems to a terminal-based, on-premises system will inevitably fall short.

Moreover, what happens when your business begins to rapidly grow and needs more logistics technology to effectively scale and remain profitable?

Customer expectations have changed, and the requirement for a one-stop-shop solution with a sophisticated, easy-to-use interface is now top of mind to all buyers.





# IMPLEMENTATION

## SUMMARY: THE LOGISTICS TECHNOLOGY PROCUREMENT STRATEGY MAY VARY, BUT HOW YOU UNIFY IT WILL MAKE ALL THE DIFFERENCE

The state of logistics is changing, and in the wake of the COVID-19 pandemic, supply chains clearly need an alternate strategy that actively works to scale and avoids disruption.

Not all disruptions are avoidable, but the best option is to mitigate the losses during a disruption by rapidly changing one's operations to meet the changing demands of customers and network partners.

For organizations that built in-house systems, it is time to start seeking a more scalable solution to maintain a resilient and agile supply chain. As evidenced by the "Top 25 Supply Chain" report by Gartner, those that invested

in supply chain technologies through a logistics technology provider had a higher-performing and more effective approach to supply chain management. Supply chain technology platforms, such as Turvo, intuitively adapt to the changing workflows and accommodate the needs of businesses as they grow. These capabilities are exceptionally valuable. Remember that diversifying and expanding your supply chain network is the only way to mitigate the losses that are experienced during disruption.

As explained by Port X Logistics Founder & CEO, Brian Kempisty who partnered with Turvo to digitalize:

**"Our partnership with Turvo is helping us provide visibility for complex transportation moves. Every movement is visible on the customer's tenant. All stakeholders up and down the supply chain gain access to the shipment to track container status, view photos of the transload, and have 100% real-time visibility of the driver's progress across the country. Users around the world can view the shipment on any device at any time."**

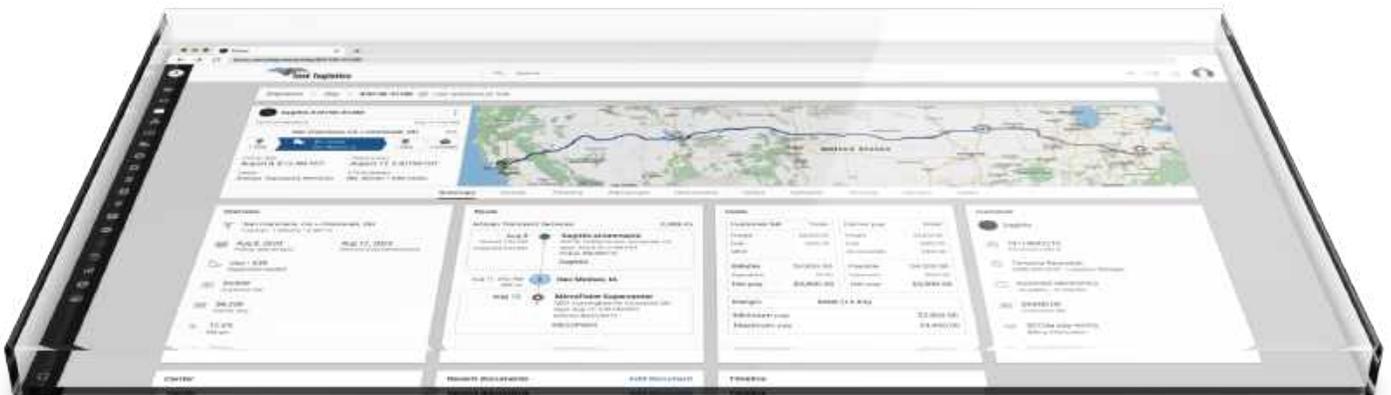


## FUTURE PROOF TO SCALE

BRING TOGETHER YOUR SUPPLY CHAIN WITH TURVO'S  
READY-TO-DEPLOY COLLABORATIVE PLATFORM

Turvo has the experience, resources, and solution for all your logistics technology collaboration, resiliency, agility, and compatibility needs within its single pane of glass.

**Find out how your organization can be better prepared for the future through disruption-ready, scalable, and responsive supply chain technologies by contacting Turvo online at [turvo.com](http://turvo.com).**



[turvo.com](http://turvo.com)