



REUTERS EVENTS™

In partnership with



THE STATE OF SUPPLY CHAIN EXECUTION

A joint report from
Reuters Events & Blue Yonder

Case studies and perspectives from:



CONTENTS

Introduction 3

Chapter 1 Optimizing the Omni-channel Experience 4

Chapter 2 Driving Sustainability in Logistics Networks 6

Chapter 3 Tackling Risk through Supply Chain Technologies 8

Chapter 4 Case Studies and Perspectives 10

Chapter 5 Concluding Remarks 12

About Blue Yonder 13



INTRODUCTION

The dust has settled (somewhat), after a prolonged period of supply chain upheaval, and supply chain execution operations finally have a moment to catch their breath.. Over the last 3 years, supply chain executives were tasked with getting their products to their customers, no matter what, whether they were paying over the odds for a last-minute emergency supplier or resorting to carbon intensive air freight to bypass a logistics bottleneck.

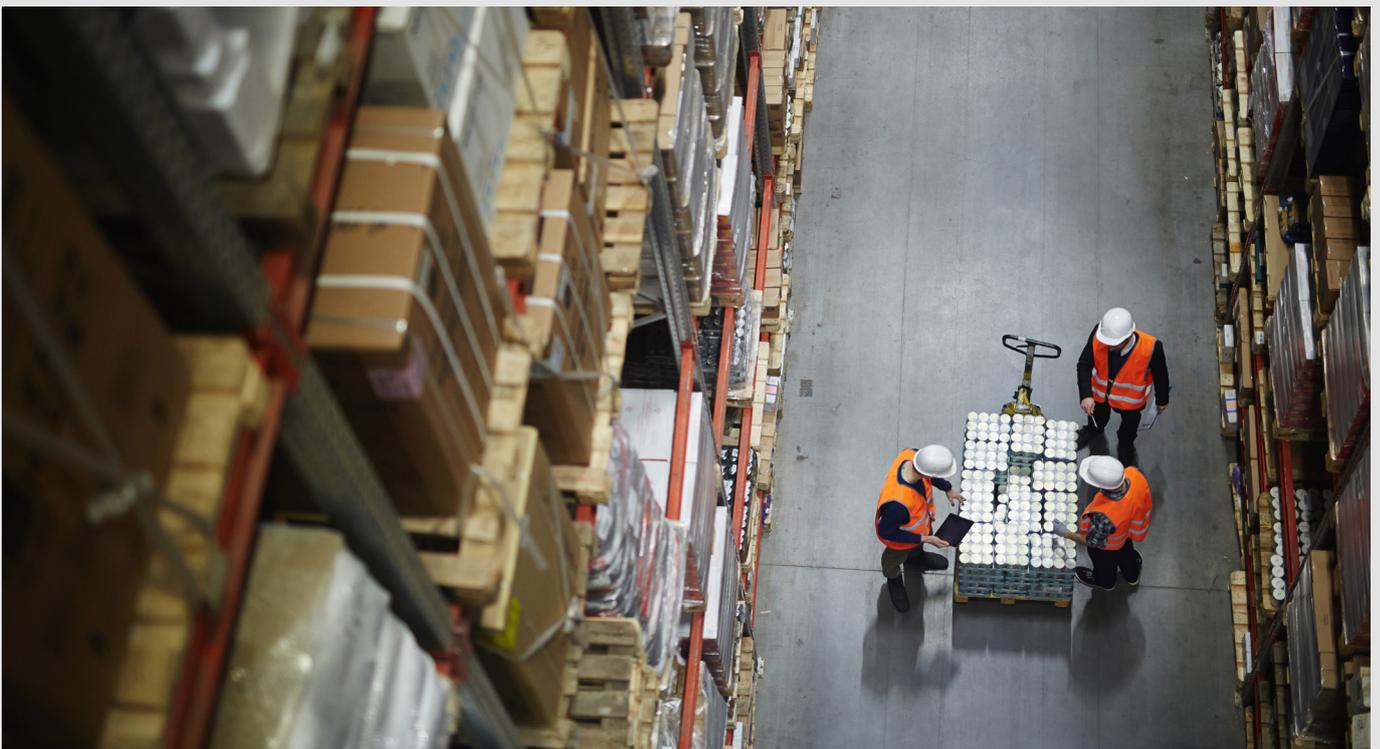
These expensive quick-fixes were needed to keep up with seemingly unending consumer demand but clearly neglected sustainability targets and cost-management. Now that we are in a period where consumer demand is more stable but inflation seemingly unabating, supply chain executives are being tasked with refocusing on improving profitability, positioning their supply chains and logistics networks for long-term viability, and attaining ESG goals.

This report examines how leading brands like Bayer Crop Science & Henkel are evolving their logistics networks in light of these new priorities, whilst understanding how logistics service providers like DHL and Ryder System, Inc are

assisting customers to achieve their business expansion, cost-management, and sustainability goals. We also learn from experts from Blue Yonder and EY, to understand how they are seeing the modern supply chain execution landscape.

We would like to give our thanks to those who gave their time and expertise to this project:

- **Johnny Ivanyi**, Global Head of Distribution Excellence, Bayer Crop Science
- **Mladjan Jovic**, Director - Global Logistics, Henkel
- **Saul Resnick**, Chief Executive Officer, DHL Supply Chain, UK and Ireland
- **Gary Allen**, Vice President Supply Chain Excellence, Ryder
- **Vivek Chhaochharia**, EY US Digital Supply Chain Leader
- **Chirag Modi**, Corporate Vice President, Industry Strategy – Supply Chain Execution, Blue Yonder
- **Roy Bridgland**, Senior Industry Strategies Director, Blue Yonder
- **Terence Leung**, Senior Director, Solutions Marketing, Supply Chain Management, Blue Yonder



CHAPTER 1

OPTIMIZING THE OMNI-CHANNEL EXPERIENCE

The modern shopper demands optionality, the ability to choose how they buy a product; whether that's in store, on their tablet, on their computer, or on their mobile device. In a recent Incisiv report in collaboration with Blue Yonder and Microsoft, titled "2023 Omni-channel Experience Index", it was found that 93% of all shopping journeys now starts online, up from 81% in 2020. According to Roy Bridgland, Senior Industry Strategies Director, Blue Yonder, "brands need to have a robust omni-channel strategy; failure to do so will have large negative impacts on revenue and consumer satisfaction. It is now table-stakes for leading brands to be able to offer a full-service experience."

Relating this directly to Supply Chain Execution, brands must have the ability to offer a wide range of fulfillment options. The same Index mentioned above, found that 56% of shoppers abandon their carts due to concerns about delivery time. This exemplifies just how intertwined the customer experience has become with the logistics experience. The challenge for brands is to understand where exactly their inventory is in real-time, this allows

them to then show the shopper the fastest options for them to get a certain product.

With the rise of omni-channel, it is no surprise to see companies like Henkel are prioritizing omni-channel innovation. Mladjan Jovic, Director - Global Logistics, Henkel states "the omni-channel world is becoming more and more important. It requires a different supply chain management system. As a supply chain function at Henkel, we are working very closely with our sales team and with our customers to adjust our systems and capabilities to meet the requirements of the omni-channel world."

Given the importance of this area for retailers and manufacturers, it is no surprise to see leading logistics service provider DHL prioritize omni-channel innovation to aid their customers. According to Saul Resnick, Chief Executive Officer, DHL Supply Chain, UK and Ireland, "we've made global investments in best of breed components to create a fully integrated omni-channel solution architecture. This incorporates omni-channel Warehouse Management solutions and a digital exchange to enable efficient flow of APIs from customers and other enabling platforms and solutions, including end-consumer facing online stores or marketplaces."

The rise of omni-channel is having a large impact on logistics networks, brands are also looking at their fulfillment footprints, according to Vivek Chhaochharia, EY US Digital Supply Chain Leader, "both manufacturers and retailers are trying to get closer to their customers. Whether it is having a multi-tier DC network in the case of manufacturers, or investing in micro-fulfillment DCs for retailers, the goal is to serve customers with faster and flexible delivery options. These flexible delivery options can include buy online pick up in store (BOPIS) and curbside delivery."

"THE RISE OF OMNI-CHANNEL IS HAVING A LARGE IMPACT ON LOGISTICS NETWORKS, BRANDS ARE ALSO LOOKING AT THEIR FULFILLMENT FOOTPRINTS, BOTH MANUFACTURERS AND RETAILERS ARE TRYING TO GET CLOSER TO THEIR CUSTOMERS."

This omni-channel model, requires a different logistics approach, as Blue Yonder's Roy Bridgland mentions, "omni-channel growth leads to higher transaction rates within warehouses. It requires more staff and cost to run multiple locations rather than a traditional central distribution center model. From a labor perspective, there is a recognized shortage across the industry which in turn leads to an employee retention challenge. This is causing companies to look at more warehouse automation solutions whether that is hardware (autonomous mobile robots) or software like best-in-class warehouse management solutions."

DHL has prioritized warehouse automation in order to speed up fulfillment, as DHL's Saul Resnick mentions, "as part of our Accelerated Digitalization agenda, we have also deployed the latest assisted picking robots, from several robotic suppliers, to enable efficient operations and productivity achievements for B2C volumes. This is supported by our Robotics Hub solution that decreases the integration time by more than 90%. We have also invested significantly in the digital customer experience and ensuring end-to-end visibility of all omni-channel movements via our internally developed DHL MySupplyChain solution."

Logistics networks are physical networks, no matter the level of automation, through which goods will still need to physically pass through the supply chain. As such, it is essential that a fulfillment network is analyzed in conjunction with warehouse automation in order to allow product to seamlessly flow through. According to Blue Yonder's Roy Bridgland, "the ability for brands to truly understand where their inventory is, is critical. Is it in the micro-fulfillment center? Is it in the store? Is it in the DC? This is where significant efficiency gains can be made. Micro-fulfillment capabilities with complete inventory visibility can significantly increase sales if executed correctly. Being able to manage such a high level of complexity requires actionable dashboards and real-time tracking so that brands can optimize performance."

In general, inventory management has been such a challenge, that many companies have moved to "just in case" inventory management. As Chirag Modi, Corporate Vice President, Industry Strategy – Supply Chain Execution, Blue Yonder, states, "so much has been invested in terms of the real estate footprint of these supply chains and companies are now holding more inventory. This has naturally resulted in a much higher capital and operating expense. These costs cannot be absorbed and are being passed onto consumers. This has resulted in the inflation we are seeing all around the world."

He also provides advice for brands navigating the omni-channel world, "brands are asking themselves difficult questions. Many companies don't have the footprint to operate 2-day free delivery or micro-fulfillment centers. Brands are battling difficult decisions and asking themselves difficult questions like 'should I put in a constraint on minimum order size? Should I continue operating stores? Do I need to provide 2-day delivery options to my customers?'"

No doubt, omni-channel offers exciting opportunities, but it is essential all brands continue to analyze and iterate upon their current systems. Asking questions are essential to navigate a cost-constrained environment.



CHAPTER 2

DRIVING SUSTAINABILITY IN LOGISTICS NETWORKS

Sustainability has taken a back seat in recent years due to the well-documented supply chain challenges we have faced. Executives have been tasked with getting their product into the hands of their customer at seemingly any cost. Often turning to more carbon-intensive quick fixes like air freight as an emergency solution to the port strife we have seen around the world.

However, now that things have normalized somewhat, sustainability has re-emerged as a key strategic priority due to a combination of consumer and government pressure. It must be mentioned that sustainability should not be considered a luxury, “nice-to-have” but an important consideration in strategic and operational plans. For Chirag Modi at Blue Yonder, “we’re seeing a slow but increasing interest in sustainability in the supply chain. Large organizations like Pepsi have prioritized sustainability efforts for many years. It’s typically the



mid-size companies that don’t have a lot of resource and are much more driven by regulation. The momentum is building and the synergies between sustainability and cost-reduction are clear for many organizations.”

Gary Allen, Vice President Supply Chain Excellence, Ryder agrees with Chirag’s assertions, “we focus on finding efficiencies that turn supply chains into competitive advantages; and, in doing so, we drive waste out of the supply chain. At Ryder, we focus on continuous improvement across all functions, analyzing process flows to identify sources of waste and eliminate anything that doesn’t create value. That’s a benefit to both Ryder and our customers.”

Similarly for Vivek Chhaochharia from EY, “companies are adopting sustainability targets and planetary boundaries

“AT RYDER, WE FOCUS ON CONTINUOUS IMPROVEMENT ACROSS ALL FUNCTIONS, ANALYZING PROCESS FLOWS TO IDENTIFY SOURCES OF WASTE AND ELIMINATE ANYTHING THAT DOESN’T CREATE VALUE. THAT’S A BENEFIT TO BOTH RYDER AND OUR CUSTOMERS.”

as capacity constraints to hit ESG targets. By optimizing their supply chain for sustainability, companies can reduce their environmental impacts, improve their reputation, and lower costs.”

According to the International Energy Agency, transport accounted for 37% of CO₂ emissions from end-use sectors in 2021. Given the lack of renewable options, companies turned to more fossil fuels to meet evolving consumer demands that have been mentioned in this paper.

Given the urgent need to reduce reliance on carbon-intensive transportation services, it is no surprise that DHL has a large focus on sustainability. According to DHL’s Saul Resnick, “sustainability is a priority among our customer base and it’s a journey we are well and truly committed to. DPDHL has committed to invest € 7bn into sustainability until 2030. We have sourced new fleets of biofuel truck assets across the UK & Ireland and we’re investing in partnerships to guarantee supply of sufficient volumes of biofuel. This is in parallel with ongoing investments in electric fleets globally, as well as trials of hydro fuel vehicles. All warehouses which have been built in the last three years are 100% environmentally compliant and classified as carbon neutral. Our warehousing will be carbon neutral by 2025 and we will reduce our carbon footprint for transport by 50% by 2025.”

Blue Yonder’s Roy Bridgland sees the links between sustainability and omni-channel capabilities that were discussed in Chapter 1, “as we know from the omni-channel world, consumers want choices in terms of fulfilment, but they also want choices when it comes to sustainability. We are seeing consumers now wanting to understand the carbon impact of their consumer decisions from a logistics perspective. This will allow them to weigh up whether they really need that package within 1 or 2 days, or if they are willing to wait a little longer to have a greener solution where their order can be consolidated with others.”

Sustainability is clearly not something that only the logistics part of the business is focused on. For brands like Henkel and Bayer Crop Science, sustainability is embedded within the whole supply chain and indeed the entire company. From the sourcing of raw materials, to the production of finished goods to the transportation of

these products, sustainability decision making needs to be embedded into every single process to minimize waste and drive down carbon footprints.

For Henkel’s Mladjan Jovic, “sustainability is in the DNA of Henkel, we aim for climate-positive operations by 2030. So, sustainability has become one of the most important criteria for any decision that we make, not just in logistics & supply chain, but for the company in general. From a logistics perspective, in all our tenders, we are looking to analyze how these decisions will impact sustainability and in how far they will help us achieve our targets. We are using digital tools that are showing us the CO₂ emissions per kilometer. It’s no secret that rail is cleaner than road, and ocean is cleaner than air. We are proactively designing our transportation networks to optimize for the use of rail and ocean.”

Similarly, for Bayer Crop Science, “sustainability is one of the key priorities for the company as a whole. We believe in it and we act on it. When we look at logistics specifically, sustainability is such a big term, we have a strong carbon-reduction focus in a few key areas. The first is how we are working with our logistics service providers on sustainability because these are the companies with initiatives such as electric vehicles. The second element is creating an incentive structure to have accountability. As we put in sustainability initiatives to reduce the carbon footprint across our logistics network, we are constantly measuring the impact. We have a new tool that is allowing us to measure the CO₂ footprint of our global transportation network in real time. This is allowing us to create a base line and identify room for improvement, based on the region.”

These sustainability focused transportation solutions and models used by the likes of Bayer Crop Science and Henkel are driving down carbon usage. These models allow supply chain decision-makers to leverage more signals to increase the efficiency of their networks. This will be discussed in depth in the next chapter.

No doubt, many leading brands are making significant steps from a sustainability perspective, but there is still much to be done. With regulation no doubt on the horizon, companies should be proactive to ensure a manageable transition towards sustainable operations.

CHAPTER 3

TACKLING RISK THROUGH SUPPLY CHAIN TECHNOLOGIES

Clearly, given the breadth of modern supply chains, there is a lot of scope for disruptions. EY's Vivek Chhaochharia identifies five key areas of disruption that companies should be planning for, "companies should be prepared to plan for a wide range of potential micro and macroeconomic disruptions, and develop contingency plans to minimize the impact of these disruptions on their operations and supply chain partners including: 1) Economic turmoil, 2) Supplier threats, 3) Transportation capacity demand and supply, 4) Rapid swings in consumer preferences and demand and 5) Geo-political uncertainty."

This large number of potential threats, require companies to truly understand where their products are, as the products move through the supply chain. This is where visibility comes in. There is vast supply chain literature on supply chain visibility, but what does the term actually mean? Overall supply chain visibility is much more than simply tracking a product from A to B. Supply chain visibility is cross-functional, where companies can understand where things are on a component level, the risks to their networks, and then proactively switch to other options, e.g. a different carrier during an extreme weather event or a different supplier due to a manufacturing plant issue.





For Chirag Modi at Blue Yonder, “visibility is the single biggest challenge we see. Most companies are just trying to figure out where everything is. What do I have? When do I have it? What will I do with it? And if I don’t have what I want when I want, what do I need to change? Having visibility and the means to orchestrate and solve problems are key to tackle exceptions and disruptions in a timely-manner.”

For Bayer’s Johnny Ivanyi, this is an emerging area that is yielding major results, “we see visibility as a system that allows our people to make decisions based on facts and not on feelings. It is not about somebody that has 20 years of experience moving a product from this location to that

location. It is about using a system that outlines a process that we can follow to make the right decisions at the right time.”

Naturally, visibility has different contexts depending on the organization. The visibility that a retailer would need is different to what an automotive manufacturer would require. As Chirag from Blue Yonder mentions, “it cannot be understated just how large the global supply chain is. For example, large automotive companies are still trying to get visibility into their tier-1 suppliers, and now they are looking to add tier-2 visibility. The visibility challenge is all about inventory because inventory on the move is not making any money for you.”

Having that visibility into your inventory often requires a robust partnership with your logistics partners if your logistics is outsourced, and leading logistics companies are recognizing the need to provide this inventory visibility to their customers, for Ryder’s Gary Allen, “we implement technology that enables real-time, end-to-end visibility and collaboration across the supply chain, so that we can proactively manage exceptions at every stage of the journey. This gives our customers a direct line-of-sight into their inventory, and it helps improve productivity, labor efficiency, on-time delivery performance and provides instant revenue recognition. Additionally, the use of historical data combined with real-time transactions allows us to appropriately plan for potential risks before they occur.”

“IT CANNOT BE UNDERSTATED JUST HOW LARGE THE GLOBAL SUPPLY CHAIN IS. FOR EXAMPLE, LARGE AUTOMOTIVE COMPANIES ARE STILL TRYING TO GET VISIBILITY INTO THEIR TIER-1 SUPPLIERS, AND NOW THEY ARE LOOKING TO ADD TIER-2 VISIBILITY.”

CHAPTER 4

CASE STUDIES AND PERSPECTIVES



BAYER CROP SCIENCE

For Bayer Crop Science, supply chain visibility has emerged as a key strategic priority, according to Johnny Ivanyi, Global Head of Distribution Excellence, Bayer Crop Science. "At Bayer Crop Science, we see visibility as being able to track the raw material, to the manufacturing plant, to the warehouse, and then to the customer. We unpack this into two: upstream and downstream. We have much more control over the downstream experience, as that is where our products are then going to the customer. Upstream visibility is from the suppliers into our manufacturing facility. The upstream experience is far more complex, as we have more than 1000 tier-one suppliers which are then in turn using 1000s of carriers. We don't have responsibility for these carriers. Naturally, issues in the upstream supply chain can have major impacts on the downstream. From port to port we have 90+% visibility. We are working with one partner on this. The portion that is missing, is from the origin plant to the origin port. We are looking to get that visibility, for example in China, of the locations of trucks from the manufacturing plant of supplier A to the port of Shanghai. We are working on getting more visibility into the upstream supply chain but the barriers there are the connections with suppliers and carriers that are using different systems and processes. This visibility will allow us to make more proactive decisions in the face of disruptions."



HENKEL

From a holistic transportation perspective, Henkel's Mladjan Jovic mentions "we are focused on not having choke points. We want to have flexibility in our transportation networks. For example, 10 years ago we would be running one route with just domestic trucking. Now using digitalization, we are able to have multiple options and then switch as needed if there is a disruption."

For Henkel, logistics planning is essential to risk mitigation and resiliency, "in our organization logistics planning is part of the overall supply chain planning, which is essential to coordinate all material flows. We are working as one global supply chain. We sit together as one supply chain team, including logistics, planning, purchasing. By involving all parts of the team and understanding the impacts of each decision, we have a fundamental basis for our management decisions. This collaboration helps us to identify the vulnerable parts of the supply chain and to further drive resiliency for the whole organization."



DHL

In reference to Chapter 1 – it is critical that inventory is correctly managed to account for potential disruption. According to DHL’s Saul Resnick, “the COVID-19 Pandemic has taught us about the impact of global supply chain disruptions and the impact of inventory shortages at point of distribution. Building robust supply chain planning across multiple stocking locations, with sufficient inventory levels to meet order volume demand is one aspect we have catered for.” Clearly, with global supply chains, there are many potential disruptions whether that is weather or political challenges, which is why many logistics service providers overlay key risk data into their networks, as DHL notes, “We have built best-in-class visibility and predictive analytics tools which identify natural and socio-political disturbances globally, and the impact these will, or could, have in locations all round the world. By utilizing Resilience360 we enable our customers to constantly monitor supply chain disruptions and implement quick responses.”



RYDER SYSTEM, INC

Many of the technologies and strategies mentioned in this whitepaper are fairly accessible for organizations but one of the biggest barriers to implementation is having the right talent to ensure these solutions are applied correctly. As Ryder’s Gary Allen notes, “technology is the most influential disruptor in supply chain management today; and, given the seismic change it’s creating across the industry, talent management isn’t far behind. While the right technology can turn big data into actionable information, it’s critical that supply chain leaders develop or recruit talent with analytical skills and the ability to turn disruptive trends into strategic opportunities.”

CHAPTER 5

CONCLUDING REMARKS

Comments Attributed to Terence Leung, Senior Director, Solutions Marketing, Supply Chain Management, Blue Yonder

The events of recent history have put supply chain management in the spotlight. With inflation, disruptions, and sustainability challenges, supply chain executives are now tasked with managing costs, planning for long-term viability, and driving carbon-reduction throughout their networks.

The current lack of digital penetration in the supply chain industry is leaving glaring weaknesses in terms of risk with quick and often carbon-intensive fixes needed to ensure that our products are getting into the hands of our customers. With the help of technology, companies can unlock a strategic level of resilience that not only proactively identifies risk but can also drive down cost and increase environmental sustainability while improving customer service. It is clear now, more than ever, that supply chain technology for better visibility, automation, and optimization is the priority.

Firstly, in the omni-channel world, being able to have true visibility of where exactly your inventory is, will allow you to offer timely fulfilment options for your customers. However, companies must be wary of simply offering a plethora of expensive fulfilment options. A more prudent option is to truly analyze the need for these offerings and the cost of fulfillment, only then can brands optimize for cost and customer satisfaction.

Secondly, when it comes to sustainability, supply chain technology can unlock waste in your networks, which

can then in turn reduce cost and drive down carbon-consumption. Leading companies like Henkel and Bayer Crop Science are already deploying sophisticated technologies that are allowing them to measure the carbon footprint of their transportation networks. This is a growing area of importance and there is no doubt more regulation on the way that will have large impacts on the supply chain. Acting now to drive down carbon footprints will allow companies to transition more effectively.

Finally, in terms of risk management, leveraging technology to provide end-to-end visibility and orchestration of your supply chain network will allow you to act proactively at the first sign of any disruptions. Whether that be port closures impacting supply of goods, or extreme weather conditions causing a spike in demand, having complete visibility and orchestration allows you to act in order to mitigate the risk.

We are in an exciting space as supply chain and logistics professionals. As supply chain technology continues to evolve, more and more decisions will be made based on facts, enriched with artificial intelligence (AI) and machine learning (ML) insights rather than feelings. The gains are expanding in magnitude and type across all aspects of the supply chain, and rather than react to disruptions, supply chain professionals will become the conductors, orchestrating an advancement towards an autonomous supply chain of tomorrow.



ABOUT BLUE YONDER

Blue Yonder is the world leader in digital supply chain and omni-channel commerce and fulfillment. Blue Yonder's Luminate® Platform is an end-to-end platform that provides synchronized business planning, execution, delivery and labor solutions that optimize clients' businesses and people from end-to-end. Luminate Platform leverages industry-leading artificial intelligence (AI) and machine learning (ML) capabilities and workflow-driven user experiences to help clients better predict, prevent, and resolve disruptions across their entire business. At the time of writing, Blue Yonder highlighted its standing as the [only company recognized a Leader in three Gartner Magic Quadrant reports](#) covering Supply Chain Planning, Transportation Management Systems and Warehouse Management Systems – consistently for the past three years. Please read our [TMS](#), [WMS](#), and [SCP](#) blog posts for details. If you would like to learn more, visit blueyonder.com.