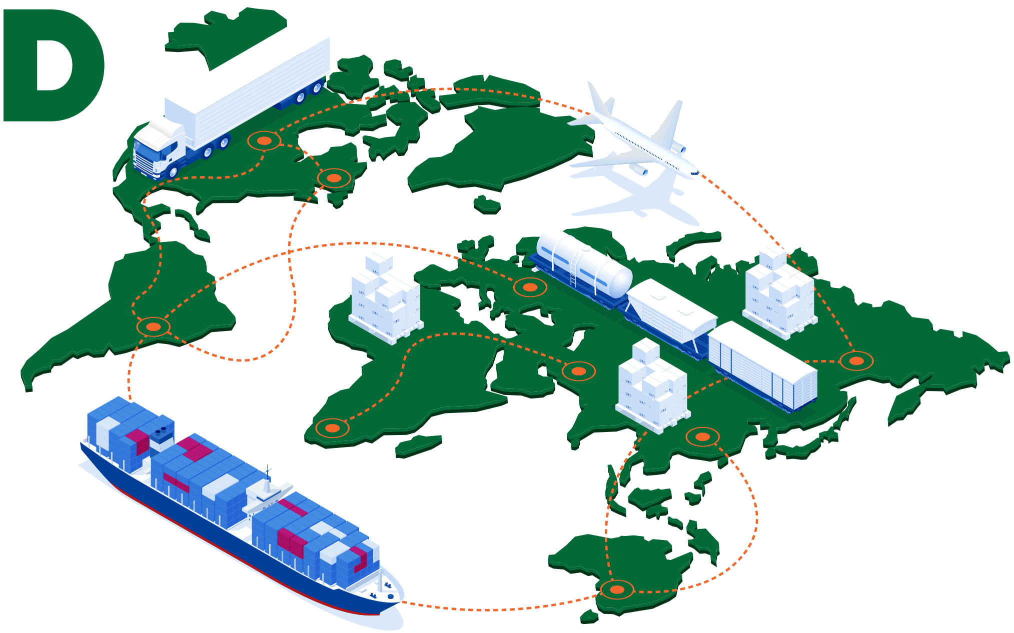
MANAGING COMPLEXITY IN A CHANGING WORLD



Helping The World
Keep Promises

A LETTER FROM OLD DOMINION'S CEO

In my more than four decades in the logistics industry, I've learned that transportation never sits still. Business models may shift slower or faster at times, but they are never static. This is no business for the complacent. But it's the constant challenges of a changing industry that fuel the passion of the team at Old Dominion.

In the last few years, shippers and carriers have been tested like never before. Some bore up under the strain while others buckled. As the most flexible portion of the logistics sector, the LTL market tends to pick up the slack when there is disruption, so we've seen these changes from the front lines as labor markets shift, maps are redrawn, and technology drives new innovations. It's been an intense time, but we'd like to think this stress test has taught us a lot. Ultimately if we take its lessons, we will emerge as a stronger industry as we reevaluate operations, pioneer new models, and find ever-better ways to serve our customers.

It's human nature to want things to be easy, but in logistics we welcome the challenges that make us stronger. As a result of these extraordinary times, the industry is in the midst of reorganization on several levels. Rules are being rewritten, assumptions are being challenged, and there is a tremendous possibility for positive change. This is a chance to remake the world's supply chains, embedding intelligence, efficiency, and resilience so that the next set of challenges we face can be met with simple adjustments and little to no disruption.

Actively preparing ourselves for the next few years ensures we're not only prepared for tomorrow, we're solving the problems of today. This report outlines some of the key issues in logistics today, and the ways manufacturers, retailers, and logistics companies can improve their performance to both win in the short term and build resilience over the long haul. A remade world requires remade thinking. We hope to do some of that thinking with you.

Wishing you speedy deliveries,

Greg Gantt
CEO

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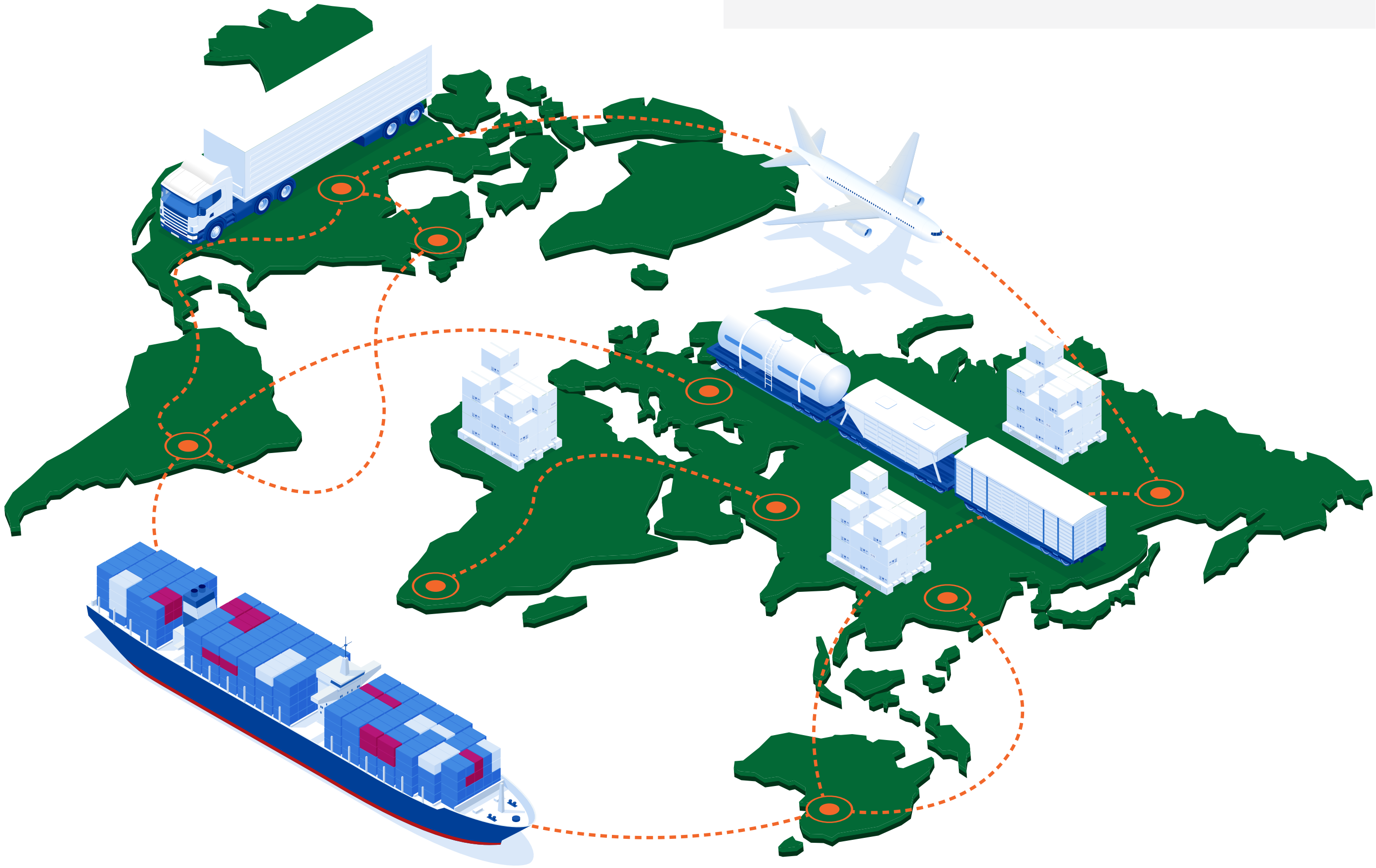
This report outlines some of the most relevant issues in today's shipping landscape.

These issues are also the areas where manufacturers, retailers and logistics companies can best improve short- and long-term outcomes.

As inventory strategies adjust in the wake of the pandemic and global manufacturing trends continue to shift, relationships between shipping partners will emerge as the most important differentiator across the business landscape over the next five years.

Maintaining focus on all three of these areas is not easy, but it is the key to peak performance in challenging times.



JUST-IN-TIME AND JUST-IN-CASE: A NEW BALANCING ACT

FINDING THE GOLDILOCKS ZONE: JUST ENOUGH TRANSPORTATION CAPACITY AND JUST ENOUGH INVENTORY.

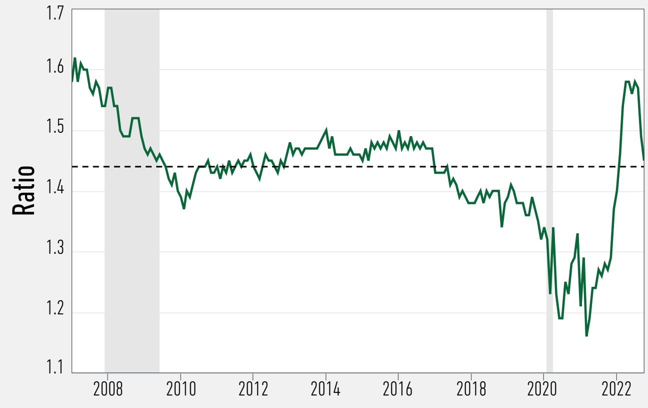
When the supply chain was disrupted in 2020, much was made in the press and elsewhere of the supposed failures of the Just-In-Time (JIT) logistics model. In the supply chain crunch when shipments were delayed, canceled, or unpredictable, retailers and manufacturers were caught without material to sell or manufacture, causing the system to grind to a halt, creating uncountable downstream effects.

Everyone in the world's value chain, from raw material producers to end customers, was suddenly and painfully aware of how fragile the world's supply chains had become, thanks to a seeming over-reliance on Just-In-Time logistics. But the way to create better resilience is far more complex than simply holding more inventory.

"In the heat of a crisis you hear a lot of bold pronouncements about how everything is going to change, but most of the time it isn't lasting," says Thom Albrecht, Chief Revenue Officer for Reliance Partners, a commercial insurance agency for the transportation and logistics industry. "There's a warehousing boom right now as companies emphasize keeping some safety stock on hand. But even now you're already seeing large retailers such as Walmart and Target getting caught with bloated

Inventory-to-Sales Ratio: General Merchandise Stores 2007–2022

Inventory-to-sales ratio for general merchandise stores reached 1.58 in April and May 2022, higher than the 1.44 average of the pre-Covid period of 2011–2019.



Source: U.S. Census Bureau, Retail Inventories/Sales Ratio: General Merchandise Stores [MRTSIR452USS], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/MRTSIR452USS, December 21, 2022.

inventory. There's always some overcorrection, and things will continue to settle for some time to come."

> "There's always some overcorrection, and things will continue to settle for some time to come."
>
> – Thom Albrecht
> CFO & Chief Revenue Officer,
> Reliance Partners Insurance

The truth is that the world became deeply habituated to the JIT model over the past three decades, and fully walking it back is no longer a viable option. JIT boosted efficiency and cut costs. Companies simultaneously saved money on storing inventory while reducing the risk of getting stuck with obsolete, past date, out of style, or spoiled stock. Once companies adjusted to JIT, their bottom lines and profit margins adjusted as well. The new efficiencies of JIT allowed companies to compete on price. As prices fell, consumers reaped that windfall benefit. They began both consuming more and expecting pricing to continue at that level indefinitely.

Then came the pandemic. In 2020 and 2021 as the supply chain became overstressed, LTL shipping costs rose 13%. Companies spooked by shortages stockpiled to some degree. But as a result, over the same period, the cost to warehouse inventory jumped by 25%. The "safe" option was suddenly looking like it might also be the unprofitable option.

The difficult truth is that the brunt of these economic upheavals is being borne by manufacturers and retailers. Holding more inventory remains unattractive and thanks to consumers empowered by historic levels of market choice, there's no guarantee those

GLOSSARY

Just-In-Time (JIT) logistics: A manufacturing and retail practice in which materials for production or sale are delivered precisely at the time and in the amount they are needed.

Just-In-Case (JIC) logistics: The practice of maintaining additional inventory to allow sales or production to continue in the event of supply chain disruptions.

Just-In-Time Plus (JIT+) logistics: The merging and fine-tuning of JIT and JIC strategies to provide both safety and agility.

moves will actually help them down the line or build any meaningful additional resilience into their operations.

	2020	2021	YEAR-OVER-YEAR CHANGE
LTL SHIPPING COSTS	$73.3B	$83B	**13.2%**
INVENTORY CARRYING COSTS	$398.1B	$501.3B	**25.9%**

Shipping Costs Vs. Inventory Costs. Source: Council of Supply Chain Management Professionals 2022 State of Logistics report.

Getting half as many deliveries that are twice as big makes each delivery twice as important, and each disruption twice as harmful.

Companies can end up feeling more hamstrung than empowered. All of which makes it that much more incumbent on them to find new efficiencies within the JIT model.

“Manufacturing has become extraordinarily competitive worldwide and margins are as tight as they’ve ever been,” says Jeffrey Bergstrand, Professor of Finance at the University of Notre Dame’s Mendoza College of Business. “It’s going to squeeze out the least productive firms and cause some consolidation. The companies that can’t find the efficiencies are simply not going to be able to compete.”

Like it or not, the world is hooked on JIT, hemmed in on one side by consumer demand, and on the other by the high cost and inefficiency of holding significant stock levels. There is simply no going back. In fact, if anything we expect it to increase in the coming years, with the system overall moving to smaller, more frequent loads, requiring maximum coordination and flexibility to manage the additional complexity for shippers as the sands continue to shift under our feet.

MEET THE EXPERTS

Thom Albrecht
30 years in transportation with a focus upon key surface transportation freight trends. Career experiences include CFO and Chief Commercial Officer responsibilities.

Jeffrey Bergstrand
Professor of Finance in the Mendoza College of Business at the University of Notre Dame, author of over 50 papers on determinants of international trade flows, foreign direct investment, multinational firm behavior, and more.

Bob Costello
Senior Vice President and Chief Economist of the American Trucking Association, managing all of ATA’s collection, analysis and dissemination of trucking economic information.

Cathy Roberson
Founder and Head Analyst at Logistics Trends & Insights, LLC, a global logistics market research company, providing research and analysis for such initiatives as competitive analysis, new product development, mergers & acquisitions, IPOs, company strategic guidance and more.

"Anyone who's gone out and bought a car recently knows we're nowhere close to normal yet," says Bob Costello, Chief Economist of the American Trucking Associations. "It will take another year or two for things to fully normalize. At that point we will see a new configuration. It won't be the way it was before, and it won't be what we've seen over the past two years. It will be what I call Just-In-Time Plus (JIT+). Companies will hold more inventory than they used to, but the vast majority of goods will still be shipped either Just-In-Time or close to it. You can think of it as JIT with a little bit of cushion on it."

> "Manufacturing has become extraordinarily competitive worldwide and margins are as tight as they've ever been."
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> – Jeffrey Bergstrand
> Professor of Finance,
> Mendoza College of Business
> University of Notre Dame

In an LTL world defined by JIT+ accurately modeling demand will be even more challenging than it has been in the past decade. Retailers will need to operate with more precision, forcing manufacturers and carriers to follow suit. Delivery windows will become tighter, and penalties may increase. Albrecht sees technology as an important factor in this equation. "Predictive analytics are going to become incredibly important," he says. "You're going to see more resources than ever before going into that."

> "Predictive analytics are going to become incredibly important."
>
> – Thom Albrecht

MANAGING THE NEW WORLD OF "JUST-IN-TIME PLUS"

In this new world of an adjusted version of Just-In-Time shipping, balanced with Just-In-Case inventory, and mediated by tight shipping windows and unpredictable events, there is no such thing as a one size fits all solution. It is critical that manufacturers and retailers work with companies with the capacity, flexibility, and understanding to fine-tune your shipping needs to fit circumstances that may change on a weekly, daily, or even hourly basis.

When models change, flexibility becomes the most important attribute. Make sure your carrier's fleet, tools, staff and procedures are all calibrated to meet the precision needs of this new era.

Are they building additional capacity before it is needed? Do they stay ahead of demand? Are they adopting the latest tools that provide peace of mind across the entire process? Do they offer full and easy to access documentation, regardless of your technology platform? Most importantly, make sure that whomever you work with, your communication channel is always available and wide open.

KEY TAKEAWAYS

- The shipping market has become markedly more complex in recent years and will only become more so.
- In the next few years, Just-In-Time logistics will stay with us, augmented by a slight increase in Just-In-Case inventory, on an industry-by-industry basis.
- Manufacturers will be under increased pressure in the form of tightening profit margins and more precise shipping windows. Efficiency and reliability are key to their long-term success.
- Shippers will be best served by carriers that carry excess capacity, maintain open lines of communication, and maximize flexibility at every stage of their logistics operations.
- Deployed together, these solutions can bulletproof supply chains against future challenges as well as the coming complexity crunch.

ONSHORING AND NEARSHORING WILL REDRAW THE SHIPPING MAP

Over the past 30 years, an unprecedented amount of manufacturing moved offshore, the bulk of it to China. Now, the global shipping crisis combined with a number of additional geopolitical and economic factors are combining to create a new set of forces that are poised to bring the manufacturing of goods closer to the people who use them.

As globalization grew over the past several decades, it attracted a steady drumbeat of naysayers who predicted or advised a movement back toward localized manufacturing. But relentless economic pressure from markets, plus favorable labor arbitrage combined to create a near constant departure of manufacturing out of developed nations and into China and the developing world. Now, however, multiple forces are aligned to meaningfully push back the wave of globalization. Over the next decade, thanks to a combination of geopolitics, economics, and concern about supply chains, more manufacturing will be closer to more consumers than ever before.

Perhaps most significantly, the COVID-19 pandemic demonstrated the fragility of transoceanic global supply chains as well as the consequences of disruption. Its fallout is still being felt, and retailers and manufacturers alike are both invested in ensuring domestic redundancy in the supply chain, and a resistance against overreliance on individual geographic regions, any of which could be cut off at any time.

GLOSSARY

OFFSHORING: Moving manufacturing out of the country where the resulting goods are consumed

ONSHORING: Moving manufacturing back into the country where the resulting goods will be consumed

NEARSHORING: Moving manufacturing to a country close to where the resulting goods will be consumed

FRIENDSHORING: Moving manufacturing to a place with whom a country has a more favorable relationship

Extended backups at US ports during 2020 also exposed a major bottleneck for offshore sourcing. We all saw first hand what happens when the supply of goods exceeds the ability to move them through ports. Onshoring and nearshoring diversifies pathways into a country. Unsurprisingly, in the wake of the port bottlenecks, container shipping costs rose sharply, peaking in late 2021 at around 8x baseline costs. Though they have receded from that peak, they remain elevated (4x baseline) and we expect them to stay at that level for some time.

“People have been talking about onshoring in the abstract as a political matter for a long time, but this is very different,” says Bergstrand. “This is a structural change in the global supply chain driven by economics, by technology, and by a global public health crisis. COVID is not going away, so companies will need to change the way they operate to make sure they are not spread across as many geographies as they have been in the past.”

> “This is a structural change in the global supply chain driven by economics, by technology, and by a global public health crisis.”
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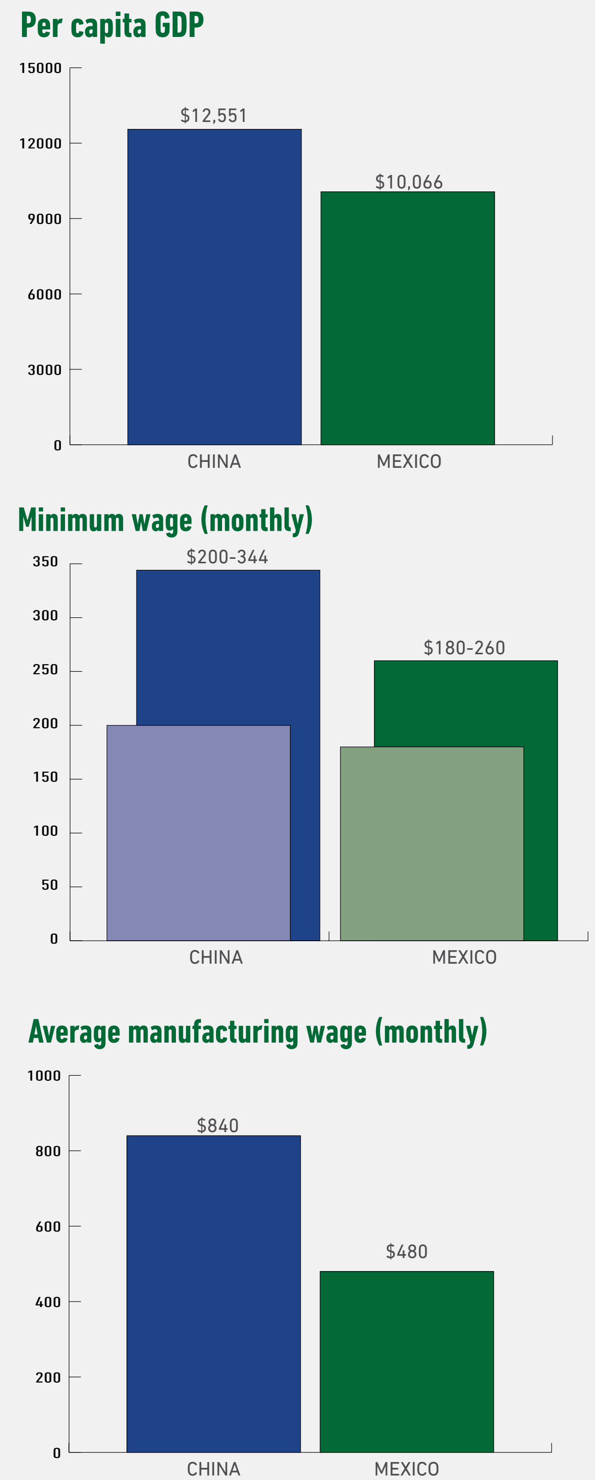
> – Jeffrey Bergstrand

Adding to these pressures is a shifting labor market, with labor costs rising in China and declining elsewhere. Mexico, for example, has had lower labor costs than China since 2013, which, combined with its proximity to the US, makes it a very attractive option for manufacturing. Economic indicators in Central America, Southeastern Europe and Africa are telling a similar story.

SHIFTING LABOR COSTS: CHINA VS. MEXICO



Source: China National Bureau of Statistics, China Ministry of Commerce, INEGI, Trading Economics. All data is for 2021 unless otherwise stated.

CHINA DECLINES, THE WORLD STEPS UP

Experts predict China's export dominance to wane over the next five years with exports from other countries in Asia and South Asia, as well as the Americas and Europe, increasing.

As a consequence, experts predict China's export dominance to wane over the next five years. Its growth rate, in particular, is expected to be cut in half, from 26% to 13%. In that same period, global population and consumption will rise. This slack will be taken up in many places, including other countries in Asia and South Asia, as well as being onshored and nearshored to the Americas and Europe.

"Many companies are looking to deleverage China," Costello notes. "Plus, China has problems independent of geopolitics. Due to their one-child policy and other factors, it's actually experiencing a labor shortage that's driving wages up. They built their manufacturing dominance on the back of lower labor costs. What happens when other countries' costs are even lower?"

Geopolitics will also play a role as new competitive and conflictive dynamics emerge. The war in Ukraine has played havoc with oil, wheat, manufacturing supplies, and other commodity prices. New concerns from governments about long-term competition with China in the high-tech markets has sparked legislation designed to bring high-tech manufacturing back to the U.S., with Intel, Samsung, TSMC, Texas Instruments, and Global Foundries investing in new, multi-billion dollar manufacturing operations in the United States. Projects of this scope take years to come to fruition, but the drumbeat of investment in domestic manufacturing is becoming undeniable.

It's important to note that while onshoring, nearshoring, and deglobalization are real factors, they are not totalizing. These are factors that will affect manufacturing, retail,

INDUSTRIES MOST LIKELY TO ONSHORE

AUTOMOTIVE

PHARMACEUTICAL

HEALTHCARE

ELECTRONICS

FOOD AND BEVERAGE

and shipping, but do not represent wholesale changes in where goods come from. Costello says he's bullish on North America, but the transition will take time. "I think we're going to see a whole lot of reshoring, nearshoring, and friendshoring," he says. "But this kind of thing does not happen overnight. It took two and a half decades to move the bulk of manufacturing to China. You don't take it back home in two and a half years."

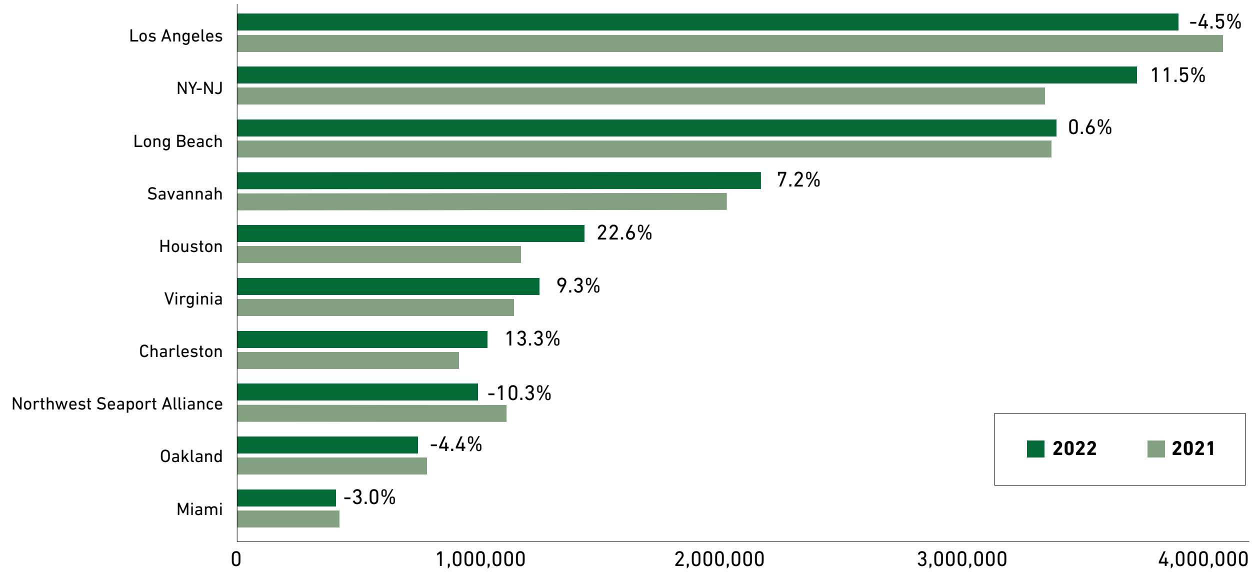
Albrecht notes some of the fundamental structural features that will maintain parts of the status quo: "Mexico's population is less than one-tenth of China's so while there is tremendous momentum with near-shoring it's not like all or even most of China's manufacturing will be moved to Mexico."

Similar to the shifts in Just-In-Time inventory, this is more a rebalancing than a wholesale rewrite of the rules of global trade. Still, these changes are significant enough to redraw the maps of domestic shipping, especially within the LTL market. Expect companies to need to redraw their regional transportation maps, reevaluate their infrastructure and rethink their strategies as overland routes into countries come into greater use, and load is balanced across historically underutilized seaports.

"There has been a big shift in the volume coming into east coast ports," Albrecht notes. "Places like Savannah, Georgia and Norfolk, Virginia have made millions of dollars of investments in their ports over the past few years and those investments are paying off in increased volume."

Top U.S. ports imports containerized imports (PIERS)

Laden TEU* volume import among top 10 U.S. ports, with year-over-year change



Notes: Data through November
Source: S&P Global

** TEU: Twenty-foot Equivalent Unit*

> "It took two and a half decades to move the bulk of manufacturing to China. You don't take it back home in two and a half years."
>
> – Bob Costello
> Senior Vice President and Chief Economist, American Trucking Association

In the coming years, both shippers and carriers will need to increase their agility, flexibility, and ability to handle rapid change. Carriers who are caught flatfooted by these changes court existential risk for both themselves and their customers.

KEY TAKEAWAYS

- Onshoring and nearshoring are being driven by a host of novel factors, including geopolitics, economics, the labor market, and public health issues.
- These changes will take time to take effect and will not be extreme. There will be no "flip" in the global markets.
- Still, the changes will be enough to have significant reverberations across the shipping and logistics field.
- Manufacturers, retailers and carriers must remain nimble and ready to adjust as conditions on the ground shift.

THE KEY TO LONG TERM SUPPLY CHAIN RESILIENCE

DEEP PARTNERSHIPS BETWEEN SHIPPERS AND CARRIERS

One thing everyone who gets into the logistics business learns very quickly is that only certain variables can be controlled. We can't change distance (without changing the laws of physics), and we can't change speed (without breaking the law).

For shippers and carriers to increase efficiency or lower costs, they must focus on variables that can be controlled and optimized. In fact, almost all of logistics gains are realized by focusing on **three key areas: Process, Planning and Communication.**

PROCESS

PLANNING

COMMUNICATION

The master lever that affects all three of these is the relationship between a shipper and their transportation partner. Deep collaboration starts with human connection, and that connection ultimately informs everything you do together. Once that relationship is established, you can move on to specific concerns and interventions that affect these three key factors.

CONTROLLING FOR PROCESS

The most significant shifts in logistics processes over the past decade have revolved around digitization. Today, the line between those who have digitized their process and those who have not is as stark as it's ever been. Companies that have embraced the digital revolution

are reaping benefits across the board, from increased efficiency and reduced costs, to better predictability, enhanced precision, and a reduction in fees and chargebacks.
Once digital processes are in place, data collection and analysis practices enable next-level insights through artificial intelligence and Internet of Things (IoT) information. This in turn enables next-level execution, potentially enhanced with machine learning.

"People want to make digitization sound complicated, but you're really just trying to make things fast and easy," says Cathy Roberson, founder of Logistics Trends and Insights, LLC, a global logistics market research company. "It's not a cure-all, but it can do wonders for efficiency and reduction of manual tasks that take time and cost you a lot of money."

> "People want to make digitization sound complicated, but you're really just trying to make things fast and easy."
>
> – Cathy Roberson
> Founder and Head Analyst
> Logistics Trends & Insights, LLC

With digital systems, the friction on information is radically reduced. Information doesn't have to be filled out and copied multiple times by hand, reducing errors, saving man hours, and reducing employee frustration. Getting files out of paper-based systems makes them less vulnerable to human error. Online appointments can be automatically ingested into both you and your carrier's systems. Coherent, consistent data records are created for every shipment as part of every order and they are instantly updated throughout the journey.

"Once companies get digitized, they can shift their focus fully to their customers and to creating new products and services," says Roberson. "There's also a great increase in transparency. I can look easily through invoices line by line or search for specific things. You can get dashboards and visualizations that help you understand where you're spending the most, see whether it's on the right things, and find where you might be able to reduce costs."

Making a digital transition (if you have not already) is the biggest differentiator in today's logistics market, followed closely by the ability to automate your processes to streamline workflows, allow data and information to flow freely between you, your customers and your shipping partner, and use the resulting knowledge to plan more effectively for the future.

CONTROLLING FOR PLANNING

It might sound obvious, but the best way to improve planning is to do it early and often. Today's most effective manufacturers and retailers integrate transportation partners early in their planning processes, making them an extension of their business. Just as there is much more to manufacturing than the cost of raw materials, there is much more to shipping than an up-front rate. Relying on one-off contracting with carriers, or viewing transportation as a standalone, bolted-on part of your overall process is an outdated mentality. By integrating shipping at the earliest stages of product planning, you ensure that manufacturing execution matches shipping execution, with no surprises anywhere along the line.

This holistic style of planning goes well beyond simply quoting rates and slotting schedules, and it has the overall effect of lowering **total cost of transport** (which takes into account all costs associated with shipping). When carriers are in the process early, they can execute more effectively, generating fewer additional costs down the line in the form of fees, fines, charge-backs, and disputes.

Technology is also a powerful tool to reduce total cost of transport. For decades, companies ignored a vast trove of specific shipping information within their business because that data could not easily be captured and analyzed. Major trends could be identified by observant people within the organization, but subtle information was often dispersed throughout the workforce across multiple roles. Digital, automated systems allow companies to compile and analyze information in a central location to provide critical insights into trends, tendencies, and other hidden areas for optimization and long-term planning. Think of it as your business's "backhaul" channel for information, adding significantly more value than it does cost.

TOTAL COST OF TRANSPORTATION

A SUPERIOR METRIC FOR CHOOSING A CARRIER

It's easy to be deceived by up-front shipping costs. However, it's important to identify the hidden costs hiding across the logistics value chain.

The best way to evaluate the true cost (and value) of shipping is to look at **Total Cost of Transport (TCT),** a metric that goes beyond a simple per-mile shipping rate to include chargebacks, breakage in shipments, and any additional fees that may apply.

It's not uncommon for high-touch logistics companies with higher per-mile rates to achieve lower total cost of transport, once all downstream factors are accounted for.

CALCULATING TOTAL COST OF TRANSPORT

Up-front shipping rates can be deceiving, as they do not take into account additional charges that some loads carry. The frequency and size of these charges is a critical piece of the puzzle.

Calculating the total cost of transportation across your entire shipping portfolio across a year is more accurate, taking into account:

- Your base shipping rate (your average carrier shipping charge) and number of shipments per year
- The average value per shipment, percentage of late shipments, chargebacks, and fine percentage
- Your claims ratio

Many times low up-front costs are undone by runaway fines and claims on the back end. This is more prone to happen when shippers do not have full control of their information, fleets, or personnel.

To get an answer in minutes using an automated TCT calculator, go to: https://odfl.us/ValueCalculator

CONTROLLING FOR COMMUNICATION

If planning is about the future, communication is about the present, and can be one of the most significant differentiators when it comes to shipping effectiveness. Good carriers don't just move goods, they move information. Communication is a critical, yet often underrated vector for excellence between shippers and carriers, and can make the difference between smooth, on-time shipments and a bumpy, headache-ridden experience.

In today's highly automated world, it's all too easy to end up trying to manage things through websites, or by talking to automated phone menus. In an uncertain world, it's critical for shippers to always know they have the ability to reach a competent, caring human directly.

Which is not to say digital systems can't be an effective piece of your feedback loops in their own right. Real-time feedback from digital systems and automated IoT devices can give you the ability to know where your loads are at any given moment. New abilities such as dynamic route planning, allow companies to modify shipments in real time, making them nimbler and able to make the most of every opportunity. In a JIT+ world, many companies are coming to think of their carriers' fleets as a kind of rolling warehouse for their goods. And it's always a good idea to know where your warehouses are.

Transparency is another critical component of a strong strategic relationship with a transportation partner. Carriers should be prepared to fully open their books and honestly discuss every cost area associated with shipping, including charge-backs, disputes, and breakage. These factors often significantly affect Total Cost of Transport (see previous page) and can significantly affect a manufacturer or retailer's bottom line.

The digital revolution has also been transformational in several areas around communications. The more of the process that becomes digitized, the more can be automated, and the more communication can happen instantly and effortlessly, preventing errors and improving productivity.

When the system automatically captures delivery data, shippers and their transportation partners have instant access to the same information, making planning, analysis, and negotiations more productive. Full, validated delivery manifests are crucial when disputes about chargebacks arise. It doesn't matter if your shipper is delivering on time if you don't have the receipts to prove it. Otherwise, you can end up paying for someone else's mistakes.
If you've already made your digital transition, make sure you're working with a shipping partner that offers API hooks into their system so information can flow freely between your organizations. If you haven't made your digital transition yet, make sure you're working with a shipping partner who can help you across this game-changing threshold.

Many logistics companies have turned to outsourcing to find efficiencies, but this can be a true communication killer. And today it's all too easy to begin a contracting relationship with a carrier without fully understanding the level of outsourcing the carrier is doing in terms of their personnel, their customer service, or their sales team. While outsourcing might allow a carrier to lower its upfront costs, if it comes at the expense of flexibility and control, it can end up costing more in the long run. When using a vertically integrated shipping partner, information flows are simplified and all but guaranteed. If shipments need to be rerouted or recalled, that information can be quickly and easily communicated to drivers, while advanced digital tools can instantly recalculate an optimal new route for the load.

While it's easy to fall in love with technology, it's important to remember that no technology is guaranteed to be an improvement. Take the "Uberization of freight" that started around 2015.

"People thought these apps were going to revolutionize everything, but that hasn't really proved out," Albrecht points out. "Drivers are frustrated, there are too many apps, and shippers need the human touch. They want to be able to reach out directly and talk to their trusted motor carriers. That can't be accomplished through digitization. As the larger carriers go back to more normalized volumes, their internal digitization will really shine, but at those key pinch points the human touch will continue to be invaluable."

The key to robust communication is a combination of effective digital tools backed up by a strong personal relationship with your carrier so you can take advantage of the latest and greatest without losing control.

Automation is wonderful and can save immense amounts of time and money, but losing the ability to quickly change course has the potential to be disastrous.

THE DRAWBACKS OF OUTSOURCING

Logistics companies often outsource parts of their businesses to cut costs and offer attractive up-front rates. This up-front price advantage conceals several drawbacks.

Third parties can't guarantee quality control on drivers and trucks. This can lead to uneven training, breakdowns in customer service, and no guarantee of proper load packing to ensure minimal breakage.

Third parties introduce friction into an already delicate system. Communication becomes a game of telephone, which introduces errors and makes it hard to get documentation in case of chargebacks or disputes.

Third parties often have rigid scheduling structures that don't allow companies to reroute goods in transit.

Data from third-party shippers relies on additional back-end integrations between systems that are often either flimsy or nonexistent.

BEYOND THE TRANSACTION

Even when process, planning, and communication are optimized, there is no way to predict every unexpected outcome the world throws at you. In an unpredictable world, shippers need to know that when (not if) something changes, they have a single, reliable number to call to set things right, and that they will reach a person at the other end of the line, not an automated system.

“It might sound old fashioned, but at the end of the day, there’s no substitute for the collaboration between the shipper and their transportation provider,” Roberson says. “The smart companies don’t treat their transportation partner as just another vendor. In this new normal, they know they both depend on each other, and they’re all in this together.”

> “The smart companies don’t treat their transportation partner as just another vendor. In this new normal, they know they both depend on each other, and they’re all in this together.”
>
> – Cathy Roberson

The best way to improve your overall resilience is to improve your flexibility. One-off, ad-hoc relationships between shippers and carriers are inherently brittle. To improve your flexibility, improve your relationship with your shipping partner. Do you have visibility into every piece of their operations? Is there a single number you can call to address any issue that might come up? These are all issues that can ultimately drive up total cost of transportation.

KEY TAKEAWAYS

- You can’t control time and distance. You can control process, planning and communication.
- Optimize process by digitizing operations to take advantage of AI, ML and IoT.
- Optimize planning by bringing shipping partners into the process as early as possible and viewing them as an extension of your business.
- Optimize communication by using a combination of digital efficiencies, personal relationships, and transparency. Good carriers don’t just move goods, they move information.
- Pay attention to how much of your shipping partners’ operations are outsourced to third parties you do not have a relationship with.
- In a crisis, no amount of technology is a substitute for human ingenuity. Make sure there will always be someone on the other end of the phone for you.

CONCLUSION

THE JUST-IN-TIME MODEL IS HERE TO STAY, WITH A FEW ADJUSTMENTS

Though some companies in certain industries will begin holding more inventory, Just-In-Time logistics is not going away. It must be strengthened with new best practices and continuous optimization to keep up with the challenges of the coming years. Make sure your shipper has adopted all available modern methods and keeps excess capacity on hand for inevitable and unpredictable difficulties.

ONSHORING AND NEARSHORING WILL REQUIRE NEW AGILITY IN THE COMING YEARS

Make sure your shipping partner is able to quickly adjust to changes to keep up with any eventuality, whether it's a change in shipping volume at different ports, more overland travel from neighboring countries, or creating infrastructure around new domestic manufacturing facilities.

DEEP PARTNERSHIPS ARE THE KEY TO LASTING RESILIENCE

While automation and digitization are offering tremendous gains when it comes to optimizing process, planning, and communications, there is no substitute for bringing transportation partners into your processes early and making logistics partners an extension of your business. In turn, your shipping partner should be available to you when inevitable and unpredictable circumstances arise.

Cheap up-front costs may be enticing, but they can cost you in the long run if they don't come with high-quality, human-driven service to back it up. Vertically integrated logistics organizations are often better able to serve the totality of their customers' needs than those that rely on third party subcontracting, and they often provide lower Total Cost of Transport in the long run.

THE OLD DOMINION DIFFERENCE

For more than 85 years, Old Dominion has been helping the world keep its promises. Be ready to meet any opportunity with an LTL shipping partner who can meet any demand.

Helping The World Keep Promises

With an industry-leading on-time record and low claims rate, our premier LTL shipping service ensures your shipment is delivered on-time and damage-free. Solving your complex shipping problems is what we live for. At Old Dominion, your business is our business, and we make ourselves readily available as true shipping partners.

Our broad range of services and dedicated team members are backed by state-of-the-art technology, and we're ready to build custom solutions to meet any challenge you face and precisely match your business needs.

Rush shipping? No problem.
Vendor scorecard compliance? We can help.
Just-In-Time inventory management? OD will help you keep your promises to customers.

OD ranks #1 in flexibility of operations among all national LTL carriers.* From standard LTL to expedited shipping and everything in between, we offer a range of freight solutions to meet any business need across every region of the United States and North America.

Contact us today to start working with the #1 National LTL Carrier as awarded by Mastio & Company for 13 years running. We'll create a custom LTL freight solution to match your exact business needs. Our solutions specialists are ready to help.

Email us, contact customer service at **800-235-5569**, or call our corporate office directly at **800-432-6335.**

* According to 2022 Mastio & Company annual study of national LTL carriers.