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The future of freight
Navigating a volatile time



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Deloitte's Transportation practice applies a six-force model to evaluate impacts on freight markets today and into the future. Since our last report in 2022, significant shifts have taken place in each of these domains.

Some of what we are seeing:

- Nearshoring will likely continue to confer benefits and challenges to trucking, third-party logistics (3PL), and rail companies.
- Technological shifts appear to be picking up across all modes of transportation, necessitating partnerships with both technology providers and outsource partners.
- Some incumbents are looking to disrupt markets as much—or more—than startups, as they continue to evaluate their configuration across markets to maximize shareholder value.
- Innovations in autonomous vehicles, electric vehicles, alternative fuel, and telematics are expected to continue to front-run significant changes to fleets.
- Companies that want to shape better government policies are finding ways to collaborate with the public sector to help allocate capital effectively.

Freight's resilience may hinge on recognizing its geopolitical interdependence, deepening public-private collaboration, and rigorously scenario-planning for uncertain futures.



The six forces that shape the future of freight

1. Nearshoring
2. Technology and data
3. Changing competitive dynamics
4. Restructuring
5. Fleet transformation
6. Public/private partnerships

Living in a wildcard world

Now more than ever, the future is a moving target

The freight landscape is increasingly unpredictable. Geopolitical tensions, macroeconomic shifts, new technologies, and business models are creating an operating environment unlike any we have seen.

69%

Increase in value of global trade from 2019 to 2024 (\$19T to \$33T)¹



10%–245%

Current range of proposed tariffs between the US and other countries²



\$145B

In North American transborder freight, an increase of 8.4% March 2024 to March 2025³



35

Today, there are 35 deals above US\$1 billion totaling roughly US\$400 billion in deal value, pending approval by regulators



45%–60%

Estimated probability of recession in the US in the next 12 months, driven by a number of macroeconomic factors⁵



\$15B

Amazon's investment in ~80 additional logistics facilities in the US, among other companies⁶



Bottom line

Fundamentals of economic truth will remain. Until then, uncertainty is the only safe bet.

1. Coleman Nee and Victor Stolzenburg, "Trends in trade and emerging data needs," World Trade Organization, September 24, 2024. 2. Eugenio Catone, "Tariffs increase to 245% on China: What's the limit?," Seeking Alpha, April 16, 2025. 3. US Department of Transportation [BTS Data Inventory](#), accessed July 2025; 4. Troy Hooper, "Deal activity cools amid global economic uncertainty," Mergermarket, May 8, 2025. 5. Preston Caldwell, "US recession chances jump in new post-tariff forecast," Morning Star, April 7, 2025. 6. Natalie Wong and Spencer Soper, "Amazon seeks partners for \$15B warehouse expansion plan," Bloomberg, April 9, 2025. 7. Gordon S. Barker, "The legacy of tariffs in US history: Renewing the McKinley-Hawaii strategy?," *Active History*, March 19, 2025.

The golden rule of volatility:

Stay open to multiple futures

Plotting a path in an unsure time

When you predict a single future, you are almost guaranteed to be wrong.

“
Fooling around with alternating current is a waste of time, no one will use it, ever.”

—Thomas Edison, 1889

“
I think there is a world market for maybe five computers.”

—Thomas Watson, chairman of IBM, 1943

“
There's practically no chance communications space satellites will be used to provide better telephone, telegraph, television, or radio service in the United States.”

—T. Kraven, FCC Commissioner, 1961

“
There's just not that many videos I want to watch.”

—Steve Chen, founder of YouTube, 2005

Where we're headed

Deloitte Chief Futurist Eamonn Kelly on what we think about when we think about the future of global transportation



“The global transportation industry is expected to be reshaped by geopolitical trends, the impact of environmental changes, and exponential advances in technology.”

Eamonn Kelly
Chief Futurist

Deloitte Office for the Future

Geopolitical trends: Trade, tariffs, and national industrial policies show an ongoing trend away from global trading, which underpinned the development of supply and transportation networks over the past few decades. Choices made during the pandemic era have unleashed consequential changes that will likely demand the attention of transportation leaders, boards, and policymakers for decades to come.

Environmental impact: This area will emerge as a counterbalance to the economic advantages of global trade. Global supply chains have a significant impact on the environment. In the coming decades, broad societal forces will demand the restoration of balance. Extreme weather and environmental shifts may cause disruptions to the predictability of long-distance and nearshore maritime shipping.

Technology: Over the next few years, expect to see advances in technologies including machine learning, computer vision, artificial intelligence, large-scale simulation, and more. Transportation is adopting these technologies at a pace dictated by their economics—a pace that can be expected to increase, as gains rise and costs fall.

Scenario planning hedges uncertainty: The process of working with multiple potential scenarios—including worst- and best-case scenarios, and the possibilities in between—remains leaders’ best hedge against the uncertainties of a volatile world.

Forces shaping the future of freight

Six interrelated and overlapping forces help understand the dynamics of freight now and into the future

			POTENTIAL IMPACT	CURRENT PACE OF CHANGE
1	Nearshoring	Manufacturing continues to move closer to consumers, helping to reduce risks and costs.	HIGH	RAPID
2	Technology and data	While new technologies are developing, the freight sector is experimenting but maintains a conservative adoption curve.	HIGH	MODEST
3	Changing competitive dynamics	New challengers and shifting lines of business constantly remake the competitive landscape.	MODERATE	RAPID
4	Restructuring	Acquisitions and divestitures appear to be creating synergies, improving operational efficiency, solidifying market positions, and expanding capabilities.	MODERATE	RAPID
5	Fleet transformation	New fuels, advanced telematics, and autonomous features, driven by tech and policy, are creating new rules and dependencies in a changing industry.	HIGH	GRADUAL
6	Public/private partnerships	Governments have deep pockets that could allow them to take on the world's most ambitious transportation projects while private industry appears to have the agility needed to pull them off.	HIGH	MODEST

Sources: Future of Freight: Transforming the Movement of Goods, Deloitte Insights, November 2022 Gartner, S&P Capital IQ Pro

1

Nearshoring

Manufacturing, closer to consumers

POTENTIAL IMPACT



PACE OF CHANGE



Nearshoring is impacting foreign direct investment, manufacturing, and shipping in North America. The trend is now also evident in Europe, while India may be the next block of consumers large enough to draw significant manufacturing near- or onshore.

8%

Rise in trade value between US, Mexico, and Canada, from January 2024 to January 2025¹

3.9%

Increase in value of North American transborder freight from December 2023 to December 2024²

64%

Amount of cross-border freight with Canada and Mexico transported by truck in 2023³

62%

Increase in FDI flowing to Eastern European, Central European, and North African manufacturing projects, 2018 to 2023⁴

200%

Increase in average capital expenditure of FDI projects in Central and Eastern Europe, 2019 to 2023⁵

250,000

Annual production capacity of cars bound for the Indian market at Suzuki's new plant in Kharkhoda, India⁶

Bottom line

As increased manufacturing capacity comes online, trucking, 3PL, and rail companies should find ways to capitalize on these opportunities.

1. Noi Mahoney, "Borderlands Mexico: US trade with Canada, Mexico hit \$134B in January," *FreightWaves*, March 16, 2025. 2. Bureau of Transportation Statistics (BTS), "North American transborder freight rose 3.9% in December 2024 from December 2023," February 20, 2025. 3. BTS, "Value and tonnage of U.S. freight trade with Canada and Mexico by transportation mode," December 2024. 4. Alex Irwin-Hunt, "The rise of nearshoring FDI close to Europe," *FDI Intelligence*, February 21, 2024. 5. CBRE, "Three trends driving resurgent 3PL industrial demand this year," November 11, 2024. 6. Suzuki, "Suzuki starts operations at Kharkhoda plant in India," press release, February 25, 2025.

2

Technology and data

New abilities, new insights

POTENTIAL IMPACT



PACE OF CHANGE



As digital technologies continue to advance, the freight industry is becoming increasingly consumerized, data is being harnessed for efficiency gains, and AI is enabling more accurate planning for labor, assets, and shipments.

See Deloitte's latest insights:

[Gen AI in transportation | Deloitte Insights](#)

51%

CAGR for AI/ML technologies between 2022 and 2032, expected to grow from \$40B to \$1.3T¹

32.1B

IoT devices connected worldwide by 2030 (up from 15.9 billion in 2023)²

100,000

Number of AI-enabled customer service responses handled daily by one technology logistics company³

75%

Of supply chain executives surveyed have one or more GenAI pilots or implementations underway⁴

48%

Of freight companies surveyed apply AI to improve customer relationship management³

82%

Of organizations surveyed characterize their level of AI adoption limited in scope or impact³

Bottom line

When it comes to making technological shifts, one important question to answer is when, followed by whom to collaborate with, and how to structure partnerships and outsourcing.

1. Bloomberg, "Generative AI to become a \$1.3 trillion market by 2032, research finds," press release, June 16, 2023. 2. Lionel Sujay Vailshery, "Number of Internet of Things (IoT) connections worldwide from 2022 to 2023, with forecasts from 2024 to 2034," Statista, June 26, 2025. 3. Deloitte, "Is GenAI the future of transportation efficiency?," *That Makes Cents* podcast, February 21, 2025. 4. Larry Hitchcock et al., "Gen AI transforming transportation: Lessons from the frontier of an emerging technology," *Deloitte Insights*, November 21, 2024.

3

New competitive dynamics

New challengers, novel opportunities

POTENTIAL IMPACT



PACE OF CHANGE



Big moves by incumbents combined with disruption by new entrants continue to reshape competition in the global transportation industry.

\$200B

Growth in the global Last Mile Delivery market by 2028 representing a CAGR of 16.4%¹

60%

Of traditional freight broker business at risk from emerging digital marketplaces²

\$31B

Estimated industry savings expected by 2030 by leveraging blockchain technologies for transparency³

\$800M

Loss taken on the sale of a logistics business; some legacy carriers appear to be accepting short-term losses to pivot toward higher-margin services⁴

80%

Of private fleet loads that run empty during backhauls; a funded startup has plans to capitalize on this excess capacity⁵

10M+

Autonomous miles logged by one OEM's autonomous Class 8 trucks, signaling a shift from pilot to real-world deployment⁶

Bottom line

Innovation is not the exclusive birthright of startups. Incumbents must know their exposures and find markets to disrupt with their scale, resources, and expertise.

1. Daniel Martinez, "Last mile delivery: What you need to know," *Ryder's Last Mile Blog*, May 9, 2025. 2. Tim Jay, "Nearly 60% of freight brokers still use paper checks but most think digitalization would improve operations," *Global Trade*, November 16, 2022. 3. Conor Cawley, "Logistics statistics 2025: Industry numbers you need to know," *Tech.co*, March 26, 2025. 4. James Matthews, "UPS takes \$800M loss on Coyote Logistics sale," *ShipRX*, July 1, 2024. 5. Trigent, "Maximizing fleet efficiency and driving sustainability for PFNZ," Trigent, accessed July 2025. 6. TuSimple Holdings, Inc., "TuSimple's autonomous trucks commence testing on expressway in Japan," press release, June 5, 2023.

4

Restructuring

Ever-changing, value-oriented

POTENTIAL IMPACT



PACE OF CHANGE



Consolidations, acquisitions, spinouts, and divestments continue to impact the freight sector, offering operational cost savings, vertical integration, and new ways to compete to help bolster resilience and versatility.

\$1.1B

Invested by CMA CGM to acquire a 48% stake in Santos Brasil, which operates five container terminals and three logistics facilities, including South America's largest, Tecon Santos¹

\$456M

Acquisition cost of reverse logistics provider Happy Returns in 2023; the company enables no-box, no-label returns for merchants and consumers²

\$6B

Total cost of Maersk acquisitions of Pilot Freight, Senator International, and LF Logistics³

11%

Share of FedEx's 2024 revenue that came from FedEx Freight, which is expected to become the nation's largest LTL carrier when fully spun off⁴

600,000

Number of shipments handled per year by cold-chain logistics provider CRYOPDP, acquired by DHL in 2025⁵

220M

Number of annual containers MSC could handle by 2028 after recent acquisitions; MSC's fleet currently has 900 vessels⁶

Bottom line

Restructuring continues to be a powerful competitive tool for transportation companies to maximize shareholder value. Companies should continuously evaluate whether fine-tuning their portfolio of businesses unlocks shareholder value, while also balancing factors such as labor disputes and regulations.

1. CMA CGM, "CMA CGM to acquire a c.48% stake in Santos Brasil," press release, September 23, 2024. 2. Andrew Adam Newman, "The CEO of Happy Returns explains 'the bright side of return fees,'" *Retail Brew*, December 15, 2023. 3. S&P Capital IQ Pro, *Maersk Mergers and Acquisitions*, accessed April 28, 2025. 4. FedEx, "FedEx announces intent to separate FedEx Freight, creating two industry-leading public companies," press release, December 19, 2024. 5. DHL, "DHL Group acquires CRYOPDP from Cryoport to strengthen 'DHL Health Logistics,'" press release, March 31, 2025. 6. Manal Barakat, "MSC becomes top port operator with Hutchison Ports acquisition," *Kuehne + Nagel*, March 14, 2025.

5

Fleet transformation

High innovation, constrained adoption

POTENTIAL IMPACT



PACE OF CHANGE



Advances in electric vehicles, alternative fuels, autonomous vehicles, and telematics continue to move ahead, but regulatory uncertainty, combined with reluctance to take on unnecessary expense has resulted in a slow pace of adoption across the freight industry.

8.9%

Expected growth in the US vehicle telematics market from 2024 to 2032¹

75

Top speed in miles per hour of autonomous tractor trailers operated by Aurora on its Dallas-Houston route²

8M

Liters of B20 fuel used over 1,100 fueling events during a biofuel trial in British Columbia conducted by CPKC³

24

Number of dual-fuel ships with fuel-efficient engines ordered by Hapag-Lloyd to be delivered between 2027 and 2029⁴

2,600

Number of Vectron electric/diesel dual-fuel locomotives Siemens Mobility has sold across 16 countries⁵

150

Number of MAN eTrucks Volkswagen AG plans to deliver to DB Schenker by 2026⁶

Bottom line

While technology is expected to continue to advance quickly, risk and capital expenditures, combined with a potentially lighter touch regulatory environment could push meaningful adoption levels past 2030.

1. Fortune Business Insights, [Vehicle telematics market report](#), April 7, 2025. 2. David Taube, "Aurora trucks without drivers reach highway speeds on test track," *Trucking Dive*, April 24, 2024. 3. CPKC, ["CPKC publishes update on low carbon transition,"](#) press release, February 20, 2025. 4. Hapag-Lloyd, ["Hapag-Lloyd orders 24 new container ships,"](#) press release, November 6, 2024. 5. Siemens, ["Northrail expands fleet with up to 50 new Vectron locomotives,"](#) press release, February 20, 2025. 6. Zsófia Pölös, ["DB Schenker adds first 10 of planned 150 MAN electric trucks to fleet,"](#) *Motor Transport*, January 31, 2025.

6

Public/private partnerships

Collaborating for the public good

POTENTIAL IMPACT



PACE OF CHANGE



In the wake of COVID-19-related challenges, the capital needed to remediate the vulnerabilities exposed by the pandemic exceeded the capacity of the private sector. Public/private partnerships (PPPs) emerged to reimagine logistics networks and to address maintenance and modernization needs. They continue to be a driving force in modern freight.

\$86B

Private participation in infrastructure projects worldwide in 2023; the world continues to rely on PPPs for financing key transport and logistics assets¹

\$1.3T

Total capital raised for infrastructure investment in the US through PPPs²

€6.5B

Euros invested through PPPs in Europe's transportation sector³

100%

Government cargo will be transported on US-flagged vessels, as outlined in the 2025 US Executive Order via public-private partnerships to enhance domestic shipbuilding and maritime sectors

\$13B

Dollar value of public and private investment in the Intercoceanic Corridor of the Isthmus of Tehuantepec (CIIT) freight corridor in Mexico, an alternative to the Panama Canal⁵

30%–40%

Reduction in freight transit times using India's dedicated freight corridor⁶

Bottom line

Partnering with governments can offer private companies potentially significant ways to impact both transportation infrastructure and public policy. Consider seeking out ways to take part, while remaining cognizant of geopolitical situations.

1. Deblina Saha et al., *Private participation in infrastructure (PPI) annual report*, World Bank Group, 2023. 2. TC Rolfstad, "The case for private infrastructure in the modern era," Hamilton Lane, June 5, 2024. 3. European Investment Bank, *Market update: Review of the European public-private partnership market in 2024*, March 2025. 4. Christoph Nedopil, *China Belt and Road Initiative (BRI) Investment Report 2024*, Griffith Asia Institute and Green Finance & Development Center, February 2025. 5. Abdel El Makhoulfi and Miguel Mujica Mota, "Navigating Mexico's interoceanic corridor," Multilog Conference 2024, June 6–7, 2024. 6. Corporate Website, *DECC New Pt. Deen Praval Unadhyaya*, GMIR Group, accessed July 2025.




































Putting it all together

Looking ahead to 2030, six forces impact modes of transportation in different ways

Bottom line

Parcel, trucking, and 3PL are seeing high impacts across multiple forces. Impacts on ocean and rail appear to be more subdued, due in part to their more consolidated nature and the higher overall cost of infrastructure updates.

Technology and fleet transformation appear to have very high potential impacts, followed by nearshoring and restructuring, with new competitive dynamics and public/ private partnerships seeing slightly less action.

		FORCES					
MODE		1 Nearshoring	2 Technology and data	3 New competitive dynamics	4 Restructuring	5 Fleet transformation	6 Public/private partnerships
	Parcel	 MEDIUM	 HIGH	 HIGH	 HIGH	 HIGH	 LOW
	Trucking	 MEDIUM	 HIGH	 LOW	 HIGH	 HIGH	 LOW
	3PL	 HIGH	 MEDIUM	 HIGH	 MEDIUM	 MEDIUM	 LOW
	Ocean	 HIGH	 MEDIUM	 LOW	 MEDIUM	 MEDIUM	 MEDIUM
	Rail	 LOW	 MEDIUM	 LOW	 LOW	 MEDIUM	 LOW

Summary

Plotting a path in an unsure time



Interdependence

The freight subsector is expected to be impacted by geopolitical forces that cross regions and countries. Given the international nature of supply chains, and changes in consumption patterns, the transportation industry is both complex and critical to the global economy.

Nuanced understanding of the future forces of freight can help to navigate these waters.



Collaboration

Volatility creates both risk and opportunity. These factors are likely to spur an increase in foreign direct investment as industries look for potential ways to capitalize on opportunities and hedge risk.

We expect continued collaboration between the public and private sectors to improve the infrastructure and effectiveness of freight flows.



Scenario planning

In an era of uncertainty, boards and management teams should consider engaging in scenario planning to consider a range of possible futures and a variety of potential responses to fulfill their fiduciary duties to shareholders.

Passive approaches that allow events to “play out” is a non-strategic option that can cause companies to forgo opportunities that add value for shareholders.

Let's talk

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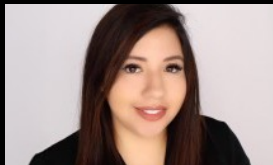
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