

About the Survey

Since 2017, Descartes has conducted an annual benchmark survey of global transportation professionals to identify the strategies, tactics and technology thinking of top-performing organizations.

Survey participants represented a wide range of industry leaders including Descartes customers and followers, trade association members and industry publications readers to provide a balanced view of transportation management. Only the last five years of results are used to keep the study relevant.

Each year our benchmark survey:

- explores how companies view the role of TM
- identifies key industry trends driving the market
- examines how transportation value is measured
- uncovers which capabilities, technologies, and competitive strategies/tactics are making the greatest impact
- provides the outlook for future IT investment

The 2022 survey: What has changed 2 years into the pandemic?

Strong economies are driving consumer demand for goods, which has put tremendous pressure on transportation organizations to move goods reliably and cost effectively. The combination of capacity constraints and driver shortages in many countries has only added to the challenges transportation organizations face. As it appears, there won't be a quick resolution to the situation any time soon, supply chains, and in particular transportation, have become a board level discussion.

Supply chain and logistics leaders are rethinking their transportation management strategies, tactics and technologies to mitigate supply chain impacts. Top performers are taking more aggressive actions to turn transportation challenges into opportunities to become more competitive and grow their business.



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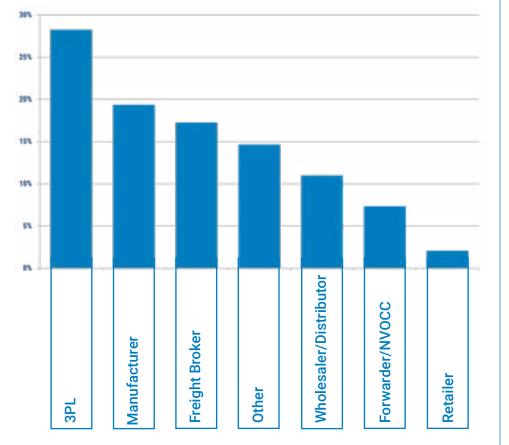
Who We Surveyed

This year's 285 survey participants represent the logistics community and shippers from a wide variety of industries. There was a significant emphasis on garnering more respondents beyond North America, which resulted in significantly greater global coverage. Here's a quick snapshot of their business type and global footprint, plus the transportation modes they use.

Growing participation by logistics community

- 3PLs are the top business type represented (28%)
- Over half of respondents (52%) work in the logistics community
- Similar to the past three surveys, manufacturers (19%) lead the shipper group

What is your business type?



Greater geographic coverage

- 2022 respondents reported significantly more operations across the globe.
- Respondents continue to have a strong North American presence for operations. The U.S. and Canada were again cited as the top two locations, but closely followed by Western Europe.
- On a percentage basis, there were less 2022 respondents (12.6%) who spent \$100M+ on transportation than in 2020 (25.2%). Some of this can be attributed to broader global coverage.

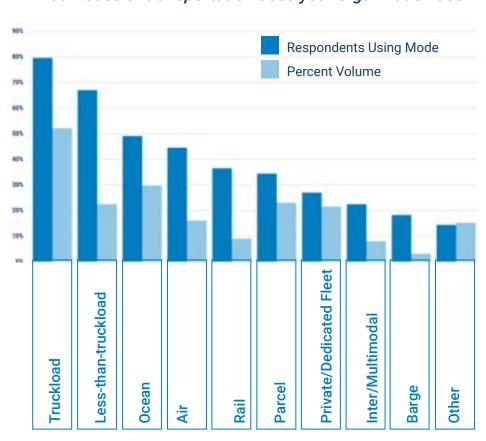
Where are your operations?



Truckload continues to dominate

- As expected, truckload leads other modes in percentage of survey respondents (80%), as well as in volume (52%).
- · LTL and ocean ranked second and third in both categories, with (67%/22%) and (49%/30%) respectively.
- Respondents using air, rail, parcel and fleet declined 8% 10%+ in 2022 versus 2021.

What modes of transportation does your organization use?



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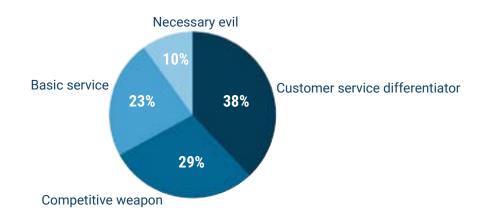


Respondent Perspectives

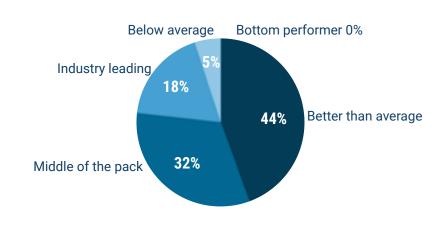
We asked respondents to rate their companies on senior management's strategic view of transportation and overall financial performance. Based on their ratings, respondents were consolidated into groups for further analysis and to compare results from the five benchmark surveys.

Breakdown of 2022 respondents

Strategic View of Transportation Management

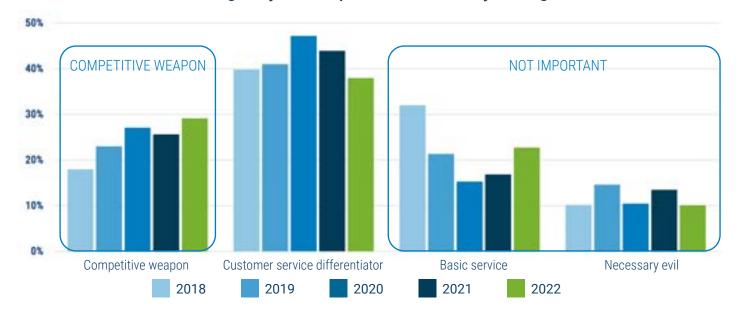


Financial Performance



Have perspectives changed?

How strategically is transportation viewed by management?



TOP PERFORMERS POORER PERFORMERS 40% 20% Industry leading

2020

How well is your company doing financially?

- · Respondents with management that views transportation as a competitive weapon have grown during the last 5 years of the benchmark study to an all-time high (29%).
- However, for the last 3 years respondents who believe management views it a basic service have also increased.
- Top Performers returned to a 5-year high (18%)

2018

• But Poorer Performers also maintained their 5-year high (37%)

2019

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2021

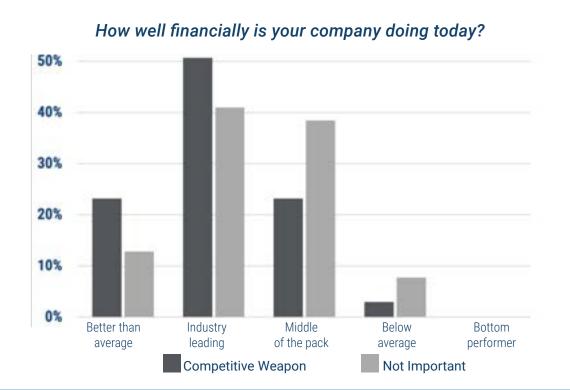
2022

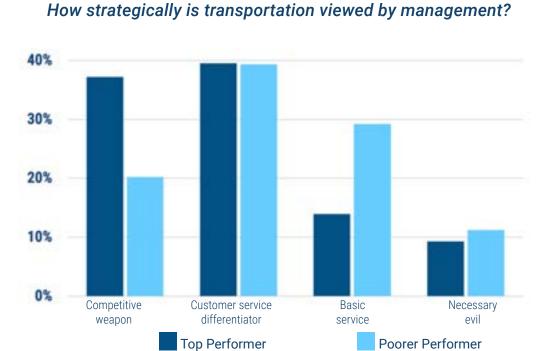
TM Strategy, Financial Performance & Growth: A Strong Correlation

As in previous surveys, the 2022 results once again indicate a correlation between how well a company performs financially and the strategic importance senior management places on transportation management.

Survey findings

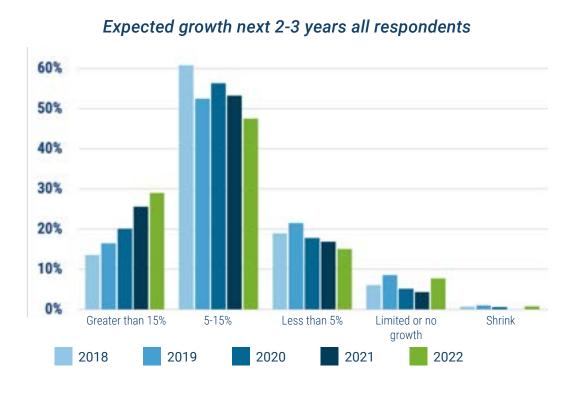
- Industry leading financial performance increased significantly in 2022 (37% vs 29% in 2021) for those companies that viewed transportation as a Competitive Weapon.
- 74% of the companies who believed transportation was a competitive weapon had better than average financial performance.
- 40% of companies with poorer financial performance had management that did not believe that transportation management was important.

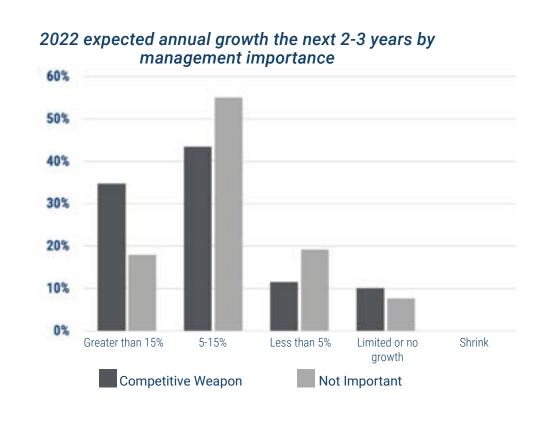




Company Growth: Looking forward

- Overall, the 5 year trend is increased growth. The number of respondents citing growth expected >15% was 29% -- a 3% increase over 2021.
- Competitive Weapon respondents are almost 2X more likely to grow >15% annually than those who believe transportation management is Not Important.
- Top Performers (44%) are over 2X more likely to grow >15% than Poorer Performers (21%).





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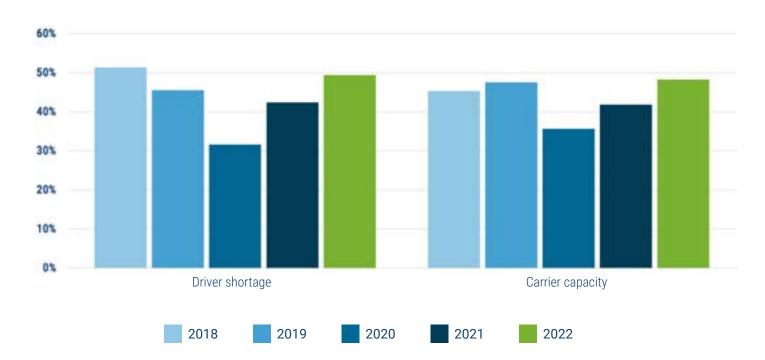


Key Trends & Practices

We asked respondents several questions related to transportation management regarding the future significance of current market and business drivers, value measurement, where information is used and concerns about competitive strategies.

Industry or Regulatory Changes with the Greatest Market Impact

Top 2 industry or regulatory changes that will have the greatest impact on transportation management over the next 5 years



- Driver shortage (49%) and carrier capacity remain (48%) the overall dominant market drivers.
- Carrier charges (31%) -- a new choice -- came in as the third overall most important impact.
- Fuel costs jumped from #11 in 2021 (5%) to #4 overall in 2022 (25%).
- Ecommerce was the #3 choice of Top Performers (26%), more than double the percentage of Bottom Performers (12%) rating its future TM impact.

What's Driving TM Expansion?

What business drivers are resulting in your expanded (or initial) use of a transportation management system?



- Growth (61%) & Service (59%) remain the top 2 overall business drivers for the 5th year, but cost (32%) continues to decline despite significantly higher transportation prices.
- New answer choices -- better leverage of staff (32%) and capacity shortage (30%) -- take the overall 3rd and 5th places.
- Business growth was significantly more important to Competitive Weapon (74%) and Top Performer (72%) respondents than Not Important (44%) and Poorer Performer (51%) respondents.

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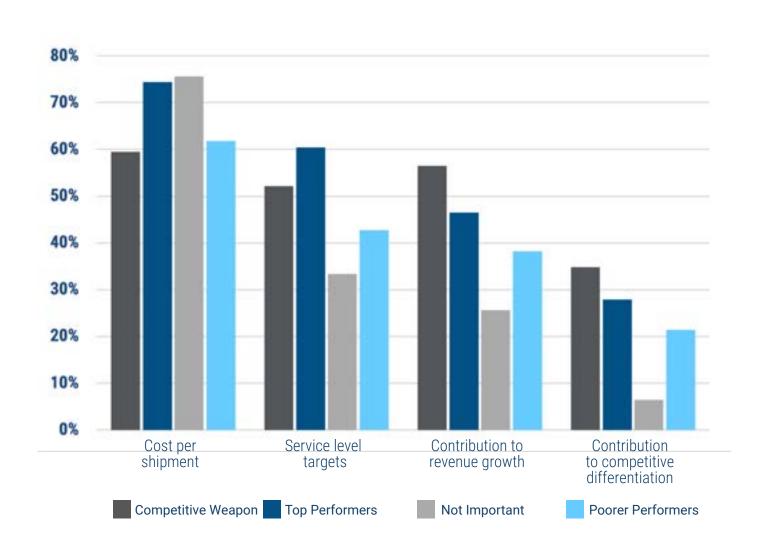


Key Trends & Practices (cont.)

Measuring Transportation Management Value

- Overall, contribution to revenue growth (42%) and competitive differentiation (24%) reversed their 4-year growth, declining 10%versus 2022 results.
- Competitive Weapon and Top Performers do a better job measuring transportation value, especially with those measurements of greatest significance to the C-suite.

How is the value of transportation measured?



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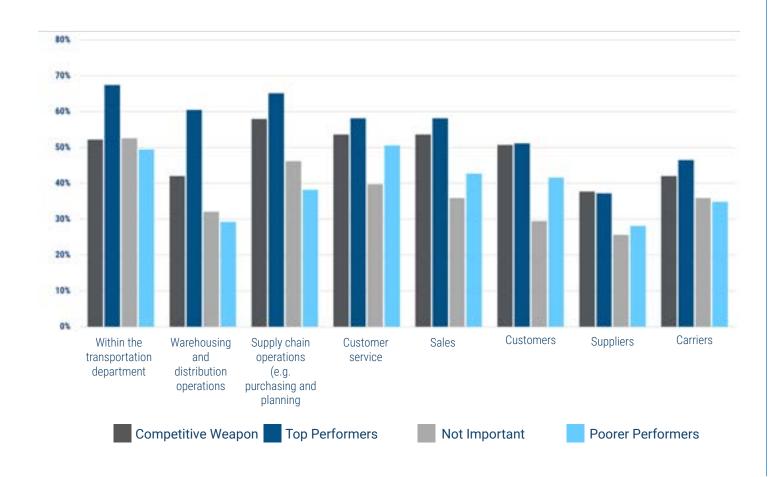


Key Trends & Practices (cont.)

Sharing Information Beyond Transportation Operations

- · Competitive Weapon and Top Performer respondents do a significantly better job sharing information across the organization and external supply chain.
- For the 5th year overall, customer service (55%) was the top sharing response, although it declined 8% from 2021.
- It is absolutely puzzling why overall respondents say sharing within transportation, warehousing and distribution is <50%.

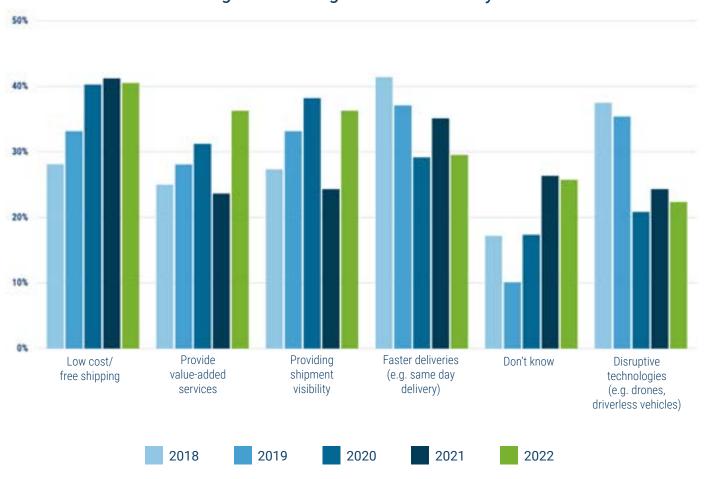
Where is transportation information used to create value?



Pinpointing Competitive Concerns

- Low cost/free shipping stabilized in 2022 (41%) as the top overall competitive concern.
- Providing value-added services and shipment visibility tied for #2 overall in 2022 (36%) and had significant rebounds versus 2021 (24%).
- Faster deliveries overall continued its 5-year general decline in 2022 (30%).

What transportation strategies or tactics are the competition using that are the greatest concern to you?



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Strategies & Tactics

Survey respondents were asked how they are planning to address the key trends and improve transportation value -- both strategically and tactically. In addition, they ranked the capabilities required to effectively manage transportation, then took a deeper dive into the highest ranked capability.

Preparing for Industry and Regulatory Change

- Overall, invest in technology was the top response (54%) for the 5th year, but declined 7% versus 2021 (61%).
- Top Performers were significantly more focused on investing in technology (72%).
- Not Important (52%) and Poorer Performer (52%) respondents were considerably more focused on looking for new transportation providers than Competitive Weapon (38%) and Top Performer (30%) respondents.

How are you preparing for the industry and regulatory changes? 60% 50% 40% 30% 20% 10% Invest in Look for new Change Cut costs Stay the course Outsource technology transportation transportation provider to a 3PL/4PL Competitive Weapon Top Performers Not Important Poorer Performers

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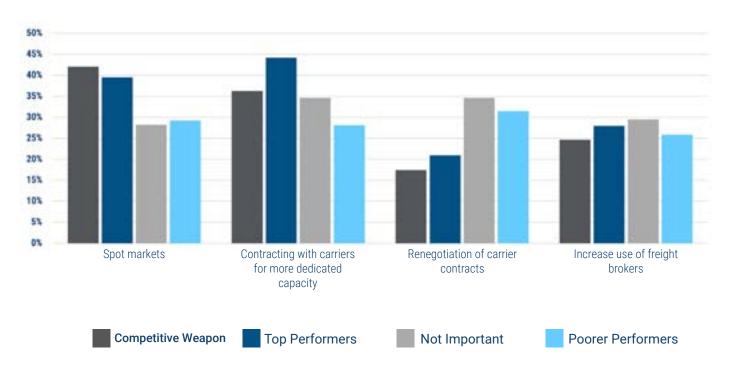


Strategies & Tactics (cont.)

Addressing the Capacity Crunch

- Using the spot market (37%) was the top overall response closely followed by contracting for dedicated capacity (34%).
- Competitive Weapon (42%) and Top Performer (40%) respondents were more focused on using the spot market and Top Performers (44%) were the most focused on contracting for more dedicated fleet.
- Not Important (35%) and Poorer Performer (31%) respondents were 2.5X more focused on renegotiating contracts.

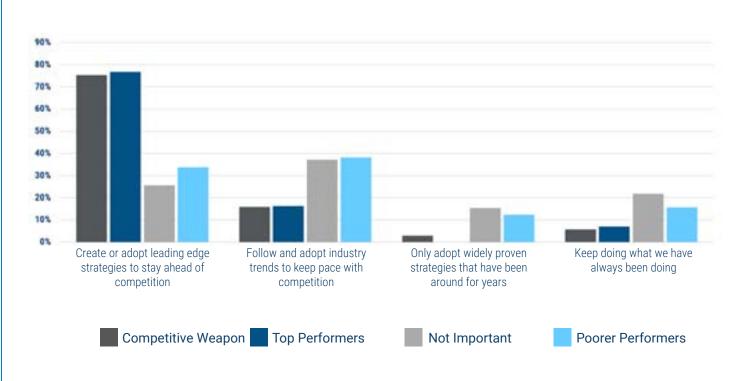
How are you addressing variability in capacity?



Organizational Approach to Transportation Strategies

- Overall, leading edge respondents again were at the top in 2022 (49%) and close to 2020 and 2021 results (51%).
- Competitive Weapon (75%) and Top Performer (77%) were respectively 3X and 2.5X more likely to be a leading strategy adopter than Not Important (25%) and Poorer Performer (34%) respondents.
- More than 90% of Competitive Weapon and Top Performer respondents considered themselves leaders or trend followers.

What is your organization's approach to transportation strategies?



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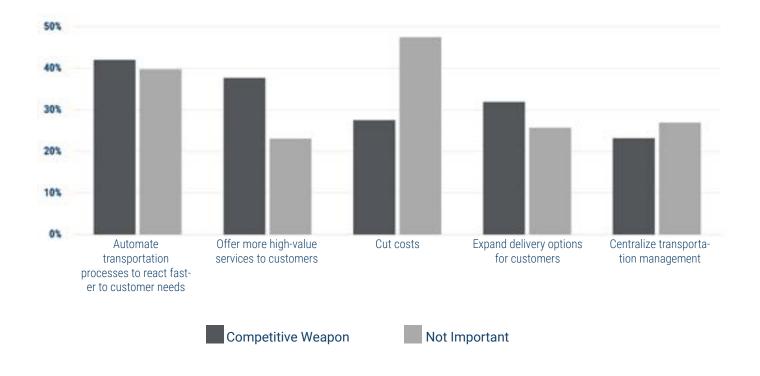


Strategies & Tactics (cont.)

Strategies and Tactics for Improving Transportation Value

- Overall, automating transportation processes (43%) was the top response.
- Offering more high-value services (37%) moved to #2 followed by cutting costs (34%).
- · Competitive Weapon respondents were more focused on offering customer-focused services (high-value services and expanded delivery options) than Not Important respondents.
- Not Important respondents were the most focused on cost reduction (47%), while Competitive Weapon respondents rated cutting costs much lower (28%).

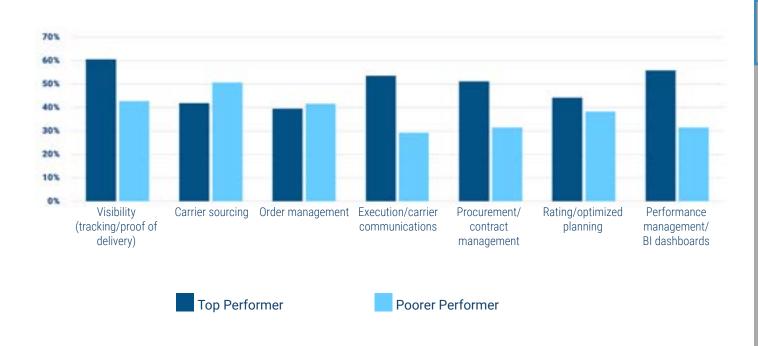
What are the most important strategies or tactics you are using to improve the value of transportation?



Capabilities Needed for Effective Transportation Management

- Visibility (50%) was the top overall capability for the fifth consecutive year, but declined slightly.
- Carrier sourcing, a new answer option, was a close second (48%).
- Top performers rely more heavily on transportation management capabilities than Poorer Performers, especially visibility, execution/carrier communications, procurement/contract management and performance management/BI dashboards.

Top 7 capabilities needed to manage transportation effectively



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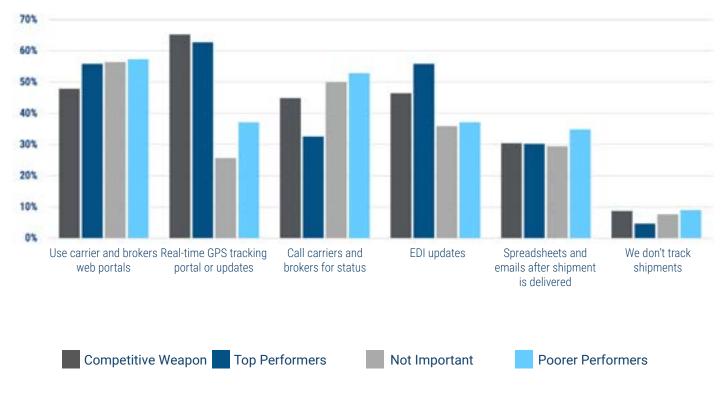


Strategies & Tactics (cont.)

Shipment Visibility Today

- A new answer option, use carrier's and broker's web portal, was the top overall response (57%).
- Competitive Weapon (65%) and Top Performer (63%) respondents were 2.5X and 1.7X, respectively more likely to use real-time GPS than Not Important (26%) and Poorer Performer (37%) respondents.
- Top Performers were the greatest users of advanced visibility updates (EDI + real-time GPS).

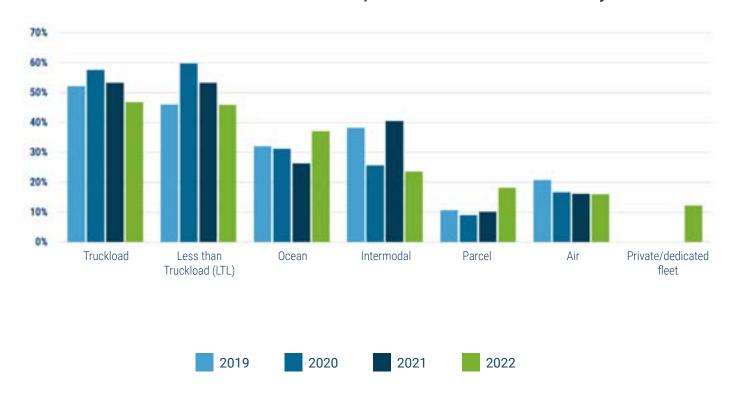
How is your organization getting shipment visibility today?



Real-time Visibility Performance

- Truckload (47%), closely followed by LTL (46%), are the modes perceived to have the worst performance overall and have been the poorest perceived performers for 4 years.
- Ocean visibility performance reversed a 3-year decline and was perceived to have the worst performance by Top Performer (53%) respondents.
- New answer option, private/dedicated fleet (12%), had the lowest responses for needing improvement.

What modes need the most improvement in real-time visibility?



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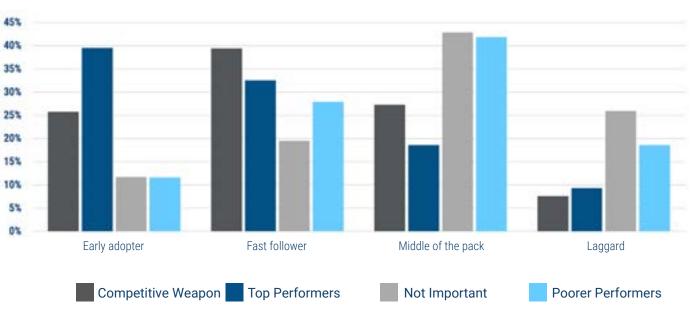
Technology Implications

This year's survey asked participants questions designed to learn how they view the role of technology as well as their plans and strategies for adopting, investing in and leveraging it to create value for their companies.

Technology Adoption Strategy

- 2022 had the most early adopter responses (22%) in the 6-year history of the study, with a 2% gain versus 2021.
- Competitive Weapon (26%) and Top Performers (40%) were respectively 2.2X and 3.3X more likely to be an early adopter versus Not Important (12%) and Poorer Performer respondents (12%).
- Not Important (26%) respondents were 3.3X more likely to be a laggard than Competitive Weapon (8%) respondents.

How would you describe your company's technology strategy?



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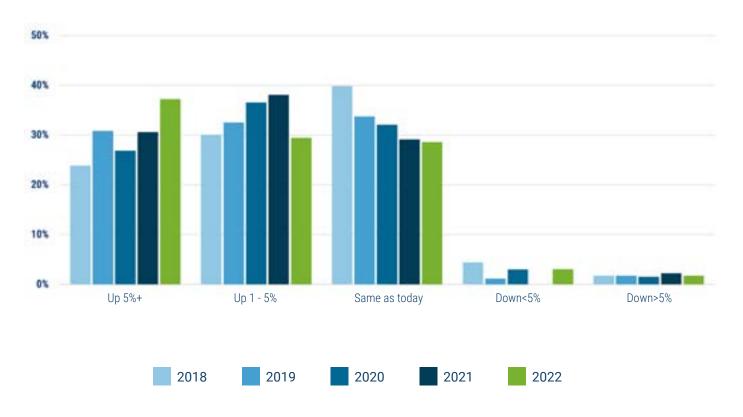


Technology Implications (cont.)

Transportation Management IT Spend Outlook

- Overall, 2022 had the greatest number (37%) of respondents planning to increase transportation spend by 5%+ in the history of the study.
- Overall, respondents indicating they're sticking with current spending levels continued its 5-year decline.
- Top performers (39%) were almost 50% more likely than Poorer Performers (26%) to increase TM IT investment by 5%+.

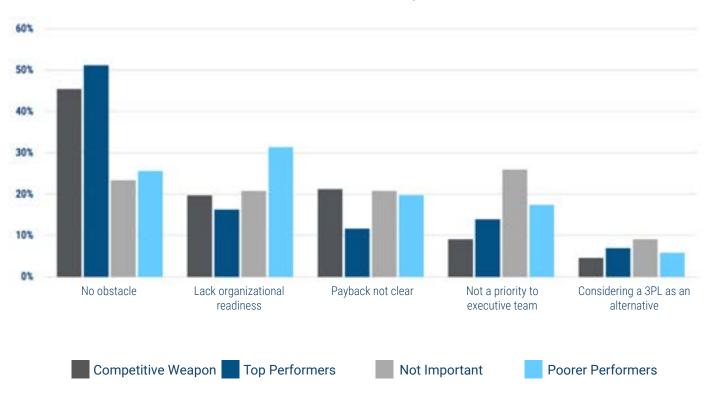
How will your Transportation Management IT spend change over the next 2 years?



Primary Obstacle to TMS Investment

- Overall, no obstacle responses (36%) declined by 7% versus 2021's all time high (43%).
- Competitive Weapon (45%) and Top Performers (51%) were both ~2X more likely to be an early adopter versus Not Important (12%) and Poorer Performer (12%) respondents.
- Poorer Performer respondents cited lack of organizational readiness (31%) as their top obstacle.

If your organization is considering an investment in TMS but has not yet done so, what would be the primary obstacle?



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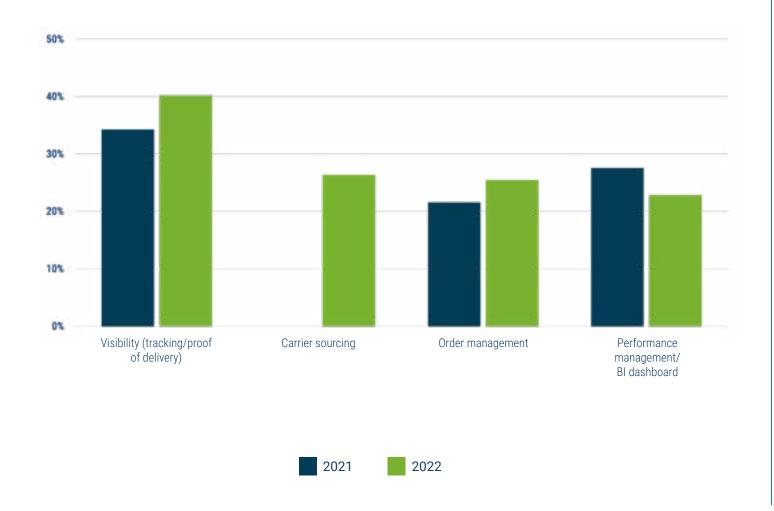


Technology Implications (cont.)

Greatest TMS Value Next 2 Years

- Overall, visibility (40%) is expected to deliver significantly more value than any other capability in 2022, up 6% from 2021.
- Carrier sourcing, a new answer option was #2 (26%) and for Competitive Weapon (30%) respondents ~2X more important for TMS value than Not Important (16%) respondents.
- Not Important (29%) respondents were 2.4X more likely to focus on order management for TMS value than Competitive Weapon (12%) respondents.

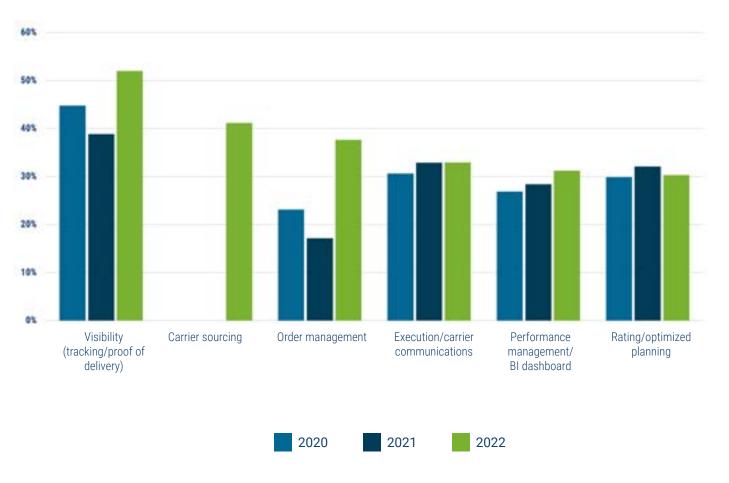
Top 4 TMS capabilities will deliver the greatest value to your organization in the next 2 years?



Greatest TMS Investment in the Next 2 Years

- For the 5th year, visibility is the top investment overall (52%), an increase of 15% over 2021.
- Carrier sourcing (41%), a new answer option, was the second most cited.
- There is good alignment between TMS key capabilities expected to deliver the greatest value and investment for the next 2 years for the top 3 capabilities cited: visibility, carrier sourcing and order management.

Top 6 greatest transportation IT investments in the next 2 years



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• There continues to be a direct relationship between management's perception of the strategic value of transportation management and a company's performance. Higher strategic value results in better financial performance and growth.

 Driver shortage and carrier capacity, the top overall respondent concerns impacting the industry, have been increasing in significance for the last 3 years.

 Competitive Weapon and Top Performer respondents are significantly more likely to have more aggressive operations and technology adoption strategies. The same goes for their investment plans.

 Competitive Weapon and Top Performers do a considerably better job measuring TM value and sharing TM information across the supply chain. As a result, securing additional TM investments is much less challenging for them.

 Technology investment is still the leading choice to address market trends and relates closely with using automation to get more value from transportation management.

• Visibility, carrier sourcing and order management are the top capabilities for TMS value and investment over the next 2 years.

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Descartes Transportation Solutions

Descartes' transportation solutions suite provides standard and advanced capabilities that improve transportation efficiency, coordination and visibility.



TRANSPORTATION MANAGEMENT

Reduce freight spend and improve coordination

- Easily maintain multi-modal contracts
- · Automatically rate shipments, optimize loads, select carriers
- Streamline carrier interaction (tendering, booking, tracking, delivery)
- Audit freight bills to identify discrepancies



REAL-TIME VISIBILITY AND CAPACITY MATCHING

Make better logistics decisions

- Know load location & status, understand patterns
- Find open capacity using real-time tracking data
- Minimize disruptions with real-time ETA calculations
- Communication load status with customers and suppliers



PARCEL SHIPPING

Reduce costs and improve service with automation

- Optimize multi-carrier shipments
- Ensure rate & label compliance
- Manifest support for parcel & LTL
- Streamline the pick, pack & ship process
- Track deliveries and evaluate service performance



FREIGHT BROKERAGE AUTOMATION

Increase productivity and meet customer demands

- Shorten cycle times and reduce costs through integration
- Track loads in real time with Descartes MacroPoint™



RETAIL DISTRIBUTION

Gain control and lower costs

- Leverage a network to reduce costs and improve delivery frequency
- Track items from DC to store to reduce loss and claims
- Provide delivery visibility to stores to reduce labor costs
- Use a single view to manage all delivery operations



DOCK SCHEDULING AND YARD MANAGEMENT

Streamline truck flow and track in-transit inventory

- Reduce load/unload times, DC congestion, labor costs, inventory
- Gain control over supplier-managed freight
- Improve DC productivity and reduce loss

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About Descartes

Descartes is the global leader in providing on-demand, softwareas-a-service solutions focused on improving the productivity, performance and security of logistics-intensive businesses.

Customers use our modular, software-as-a-service solutions to:

- route, schedule, track and measure delivery resources
- plan, allocate and execute shipments
- rate, audit and pay transportation invoices
- access global trade data
- file customs and security documents for imports and exports
- complete numerous other logistics processes by participating in the world's largest, collaborative multimodal logistics community

Our headquarters are in Waterloo, Ontario, Canada and we have offices and partners around the world.

Learn more about Descartes Transportation Management Solutions and connect with us on LinkedIn and Twitter.

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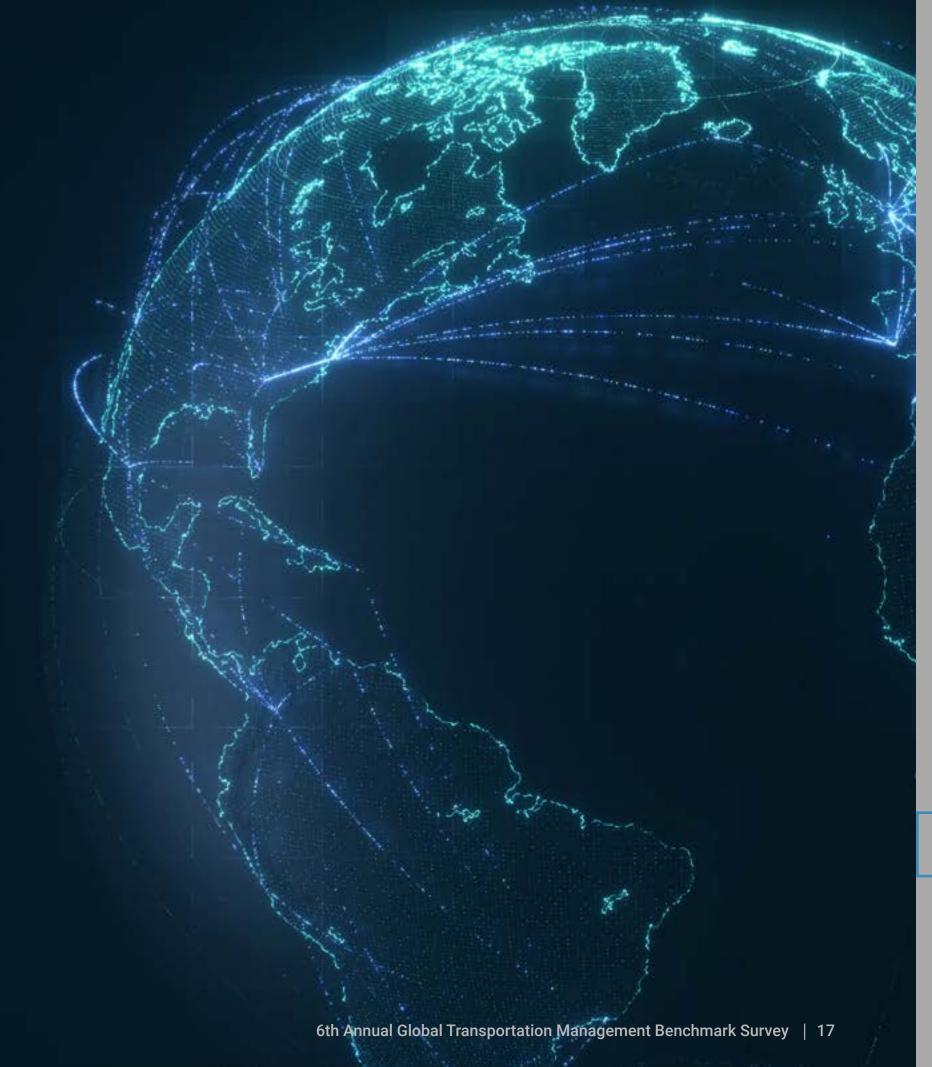






Content.

Community.



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