



Charting the future of logistics management

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Key takeaways

01

Transit delays are the biggest concern across all segments (shippers, carriers and 3PLs), with routing issues also having a major impact.

02

Asset utilization and real-time visibility/tracking are viewed as the greatest areas for improvement, especially among carriers who can substantially boost profitability through better asset usage.

03

Integration with existing systems is the biggest challenge when optimizing and adopting new technologies, due to fragmented and disparate systems across the industry.

04

Cost reduction and improving process efficiencies are the top desired outcomes when evaluating new solutions, as companies aim to drive cost savings and productivity gains.

Overview

As supply chains speed up, keeping pace is top of mind. A recent survey conducted by FreightWaves in partnership with Unisys sheds light on the FreightTech industry's technology priorities and capabilities.

The need for robust technology solutions and integrations has become paramount as supply chain complexities continue to escalate. However, a significant portion of respondents lack a dedicated IT budget, placing them at risk of falling behind in an increasingly tech-driven environment.

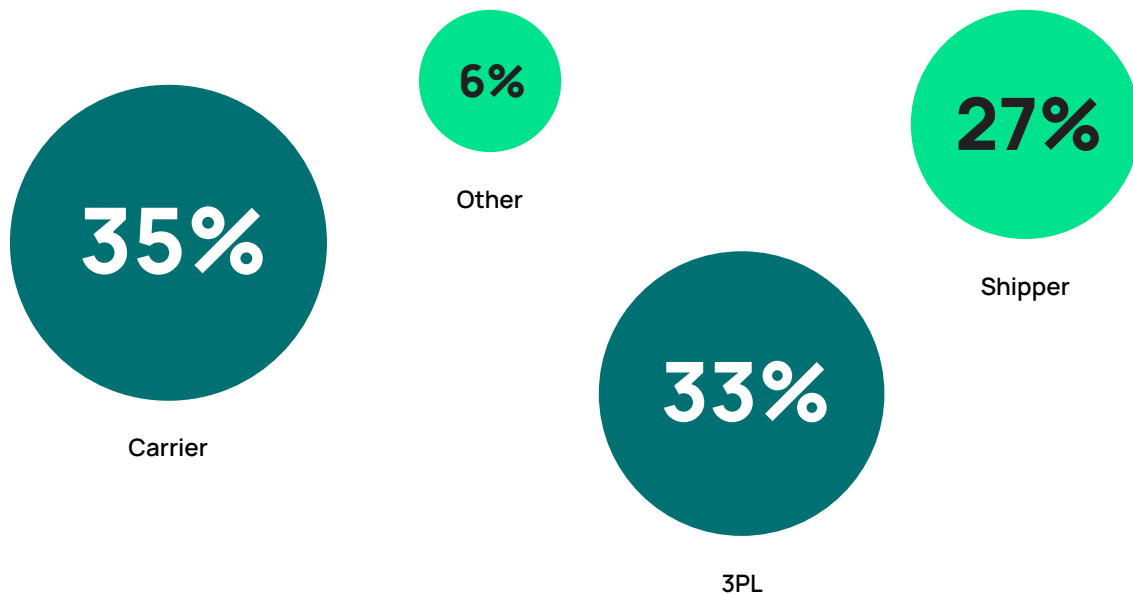
This survey illuminates the industry's technology priorities and capabilities, from cost savings and integrations to transit delays. In the report, you'll gain

valuable insights into:

- The primary concerns and challenges faced by shippers, carriers and third-party logistics providers (3PLs)
- Key areas for improvement in asset utilization and real-time visibility
- Obstacles to optimizing and adopting new technologies
- Top priorities when evaluating new solutions for cost savings and efficiency gains

Don't let outdated processes and fragmented systems hold you back. Discover how industry leaders are navigating the complexities of the freight market and harnessing technology to stay ahead of the competition.

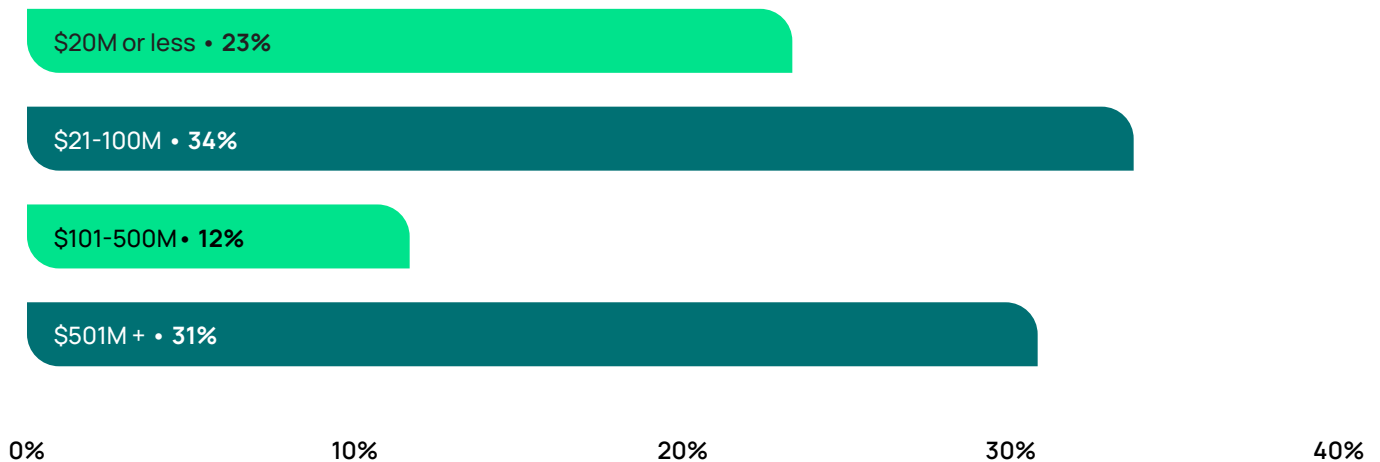
Which best characterizes your company?



The freight industry is highly fragmented, with low barriers to entry for carriers and 3PLs. For shippers, additional barriers include capital investments in property and infrastructure, as warehouses and the added complexity of inventory management and demand planning create a higher barrier for entry.

Large distribution of annual revenues highlights a fragmented freight industry

What is your company's annual revenue?



The large distribution of revenues among respondents highlights the fragmented nature of the freight industry. Over half of the total respondents had revenues under \$100 million. Scaling and expanding is challenging for shippers, carriers and 3PLs, as evidenced by only 11.63% of respondents reporting revenues of \$101 million - \$500 million.

Leveraging and deploying IT solutions successfully is a bottleneck for smaller capitalized businesses wishing to expand their revenues.

Do you have a planned IT budget to invest in capabilities such as capacity utilization, revenue management, multimodal routing and real-time visibility in the next 24 months?

Yes • 58%

No • 42%

0% 10% 20% 30% 40% 50% 60%

Technology upgrades are expensive and time-consuming; allocating funds and creating a budget is the first step. A slight majority of total respondents, around 58.14%, have a planned IT budget to invest in these capabilities in the next 24 months. However, a troubling substantial minority of respondents, 41.86%, did not have a budget.

As supply chain complexities increase, the need for technology solutions and integrations will put further pressure on operators who cannot keep up with the pace of change. For example, shippers and 3PLs may require carriers to sign up for or use integrated electronic

logging device (ELD) tracking solutions. Still, for smaller fleets and owner-operators, these requirements may be beyond the scope of their expertise, and they may lack the resources to compete. Tech-savvy carriers who allocate resources to these increasing demands will gain greater access to favorable loads. A similar challenge exists for 3PLs that may not fully utilize a transportation management system or even back-office technology to pay carriers and collect invoices promptly.

The gulf between the haves and have-nots continues to grow, and segments that do not plan and budget risk reduced service quality and lack of access.

Do you have a planned IT budget to invest in capabilities such as capacity utilization, revenue management, multimodal routing and real-time visibility in the next 24 months?

Shipper

Yes • 57%

No • 43%

Carrier

Yes • 50%

No • 50%

3PL

Yes • 68%

No • 32%

0% 10% 20% 30% 40% 50% 60% 70%

Looking at budget disparities by segment, 3PLs were the most likely to have a planned budget, with 67.86% of respondents reporting they have an IT budget to invest in improved capabilities in the next 24 months. Being an intermediary between carriers and shippers creates additional pressure to innovate, whether improving back-office broker efficiencies or tracking and visibility solutions required by shippers while attempting to get carriers to sign up to their platform for tracking or load management.

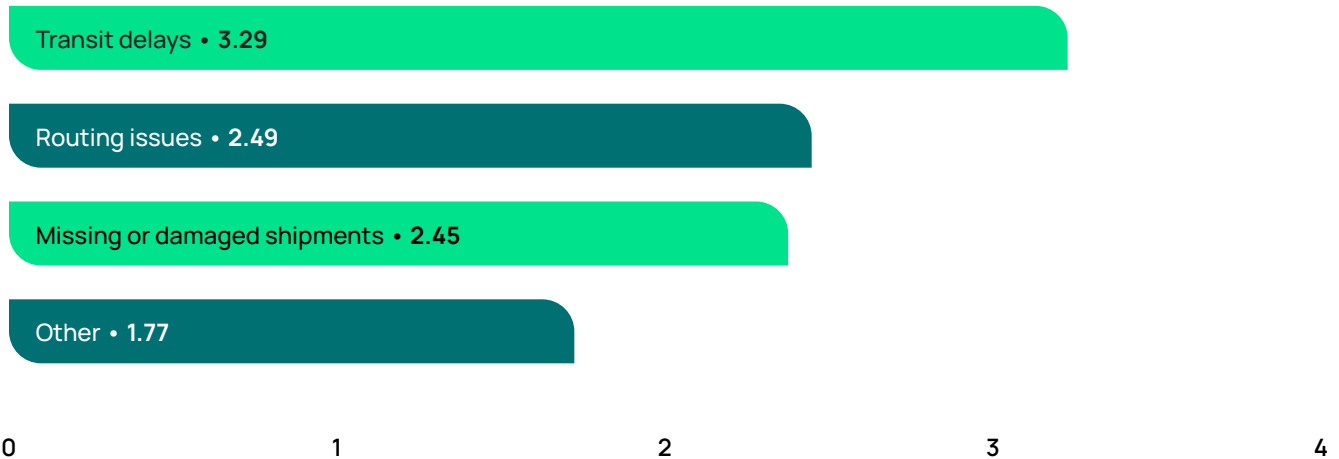
Carrier respondents were split 50/50 on whether they had an IT budget allocated. Size may be a factor. Smaller fleets and owner-operators rely on off-the-shelf software solutions, while the largest carriers have access to resources to fund a developer team and try to attract larger shippers that are more technologically

capable. The gamut of carrier technological capabilities is wide. It ranges from an owner-operator using an Excel spreadsheet, doing invoicing via QuickBooks and tracking via text, to a multibillion-dollar truckload carrier utilizing API and EDI integrations into a homemade transportation management system that also covers dispatching, maintenance, payroll and tracking while heavily relying on automation to process thousands of shipments each week.

Only a slight majority of shippers, 56.52%, noted they had an IT budget planned for the next 24 months. Compared to carriers and 3PLs, shippers face additional technological demands and complexities in their internal supply chain, demand planning and traffic management systems.

Transit delays are a top concern

Please rank the following shipment exceptions in terms of the impact they have on your business (a score of 4 is the most impactful).



Most respondents rated transit delays as the most significant shipment exception impacting their business. Depending on suppliers' resupply strategy, this can lead to product shortages or even plant shutdowns. For carriers, transit delays impact both their current and future load, with delays in pickup and delivery cascading and leading to missed freight. For 3PLs, transit delays cause added friction between shipper and carrier and risk endangering their business if a shipper or carrier decides to work with another 3PL.

Routing issues and missing/damaged shipments were moderately important to all respondents, at 2.49 and 2.45 points, respectively. Routing issues translate into transit issues, but better routing software and GPS capabilities have improved carriers' and shippers' experiences. Missing or damaged shipments typically appear as overages, shortages and damages (OS&D). They can be a byproduct of shippers' and carriers' failure to pack and secure the load before or during transit.

Impacts of shipment exceptions vary by segment

Please rank the following shipment exceptions in terms of the impact they have on your business (a score of 4 is the most impactful).



Breaking down shipping exceptions by segment, all three noted transit delays as having significant impacts. Shippers scored them at 3.52, carriers at 3.13, and 3PLs at 3.29 out of 4 points total. Shippers' second most impactful exception was missing or damaged shipments in the form of OS&D. Routing issues were only a moderate concern for shippers who may have private fleets or managed distribution centers with drivers familiar with the routes.

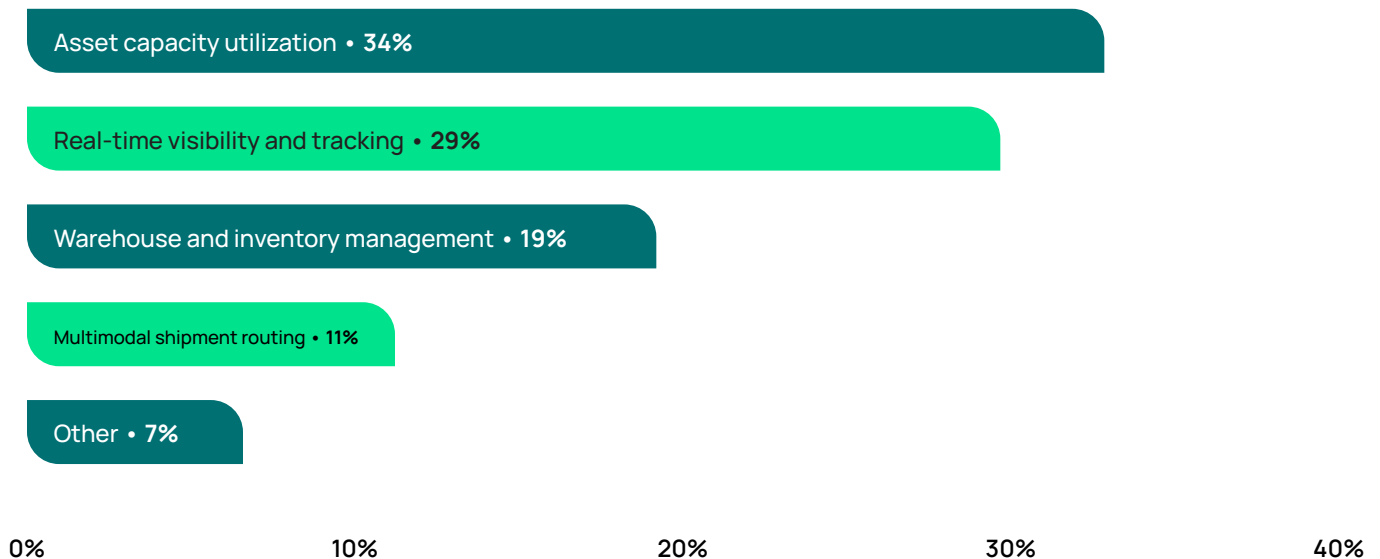
For carriers, routing and transit delays were large impacts at 2.77 and 3.13 points, respectively. Transit delays can be

caused by poor routing and require carriers to contact the shipper or 3PL if the address provided on the rate confirmation or order details cannot be found. Additional challenges for carriers included following specific truck routing and, depending on the product (e.g., potato chips), avoiding routes involving higher elevations.

3PLs highlighted transit delays as a major concern with a score of 3.29 points but experienced moderate impacts with routing issues at 2.43 points and missing or damaged shipments at 2.36 points.

Asset utilization, visibility and tracking are the most significant areas for improvement

In your view, which part of your logistics operations has the greatest opportunity for improvement?



Utilizing assets and knowing their location continue to be challenges for the freight industry. More than half, 62.79%, of respondents viewed asset capacity utilization and real-time tracking visibility as the greatest areas for improvement, at 33.72% and 29.07%, respectively. These twin challenges heavily impact all three respondent categories, and disparate and fragmented tech solutions continue challenging providers at the integration level.

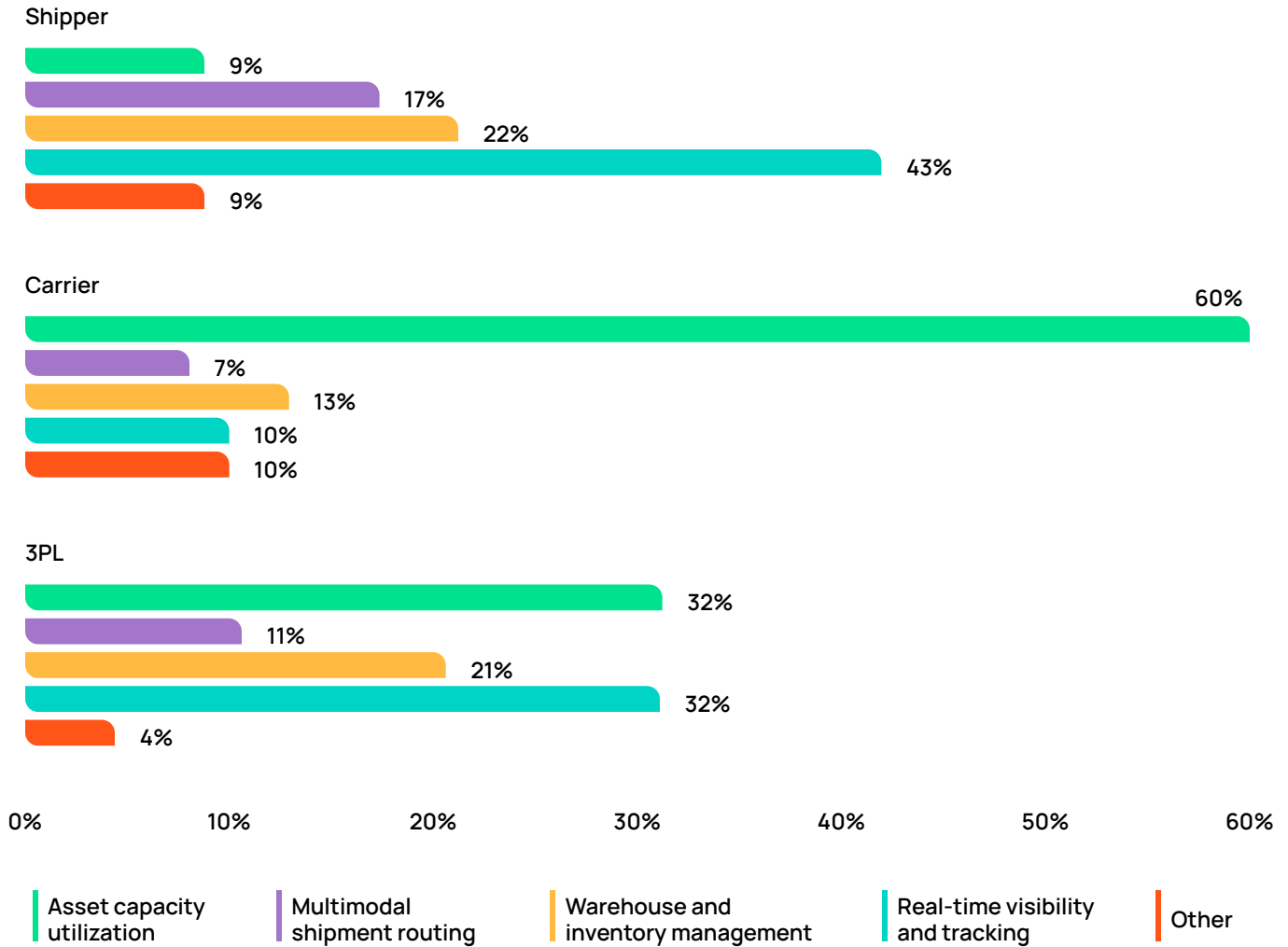
Warehouse and inventory management was the third-greatest opportunity for improvement, at 18.6%, followed by multimodal shipment routing at 11.63%. Since most respondents are 3PLs and carriers, a smaller emphasis on

inventories and multimodal shipment can be expected, as only the largest carriers and brokerages offer services to cover the added complexity.

Asset capacity and utilization extend across all segments, as shippers can have private fleets haul their inbound and outbound shipments in addition to using 3PLs and for-hire carriers. Similarly, the focus on real-time visibility remains a challenge, as visibility platforms can run the gamut of devices, from phone- and text-based tracking to integrated API connections with ELD providers.

Carriers overwhelmingly prioritize asset utilization

Please rank the following shipment exceptions in terms of the impact they have on your business (where a higher score is more impactful).



Regarding operational improvements, there were clear delineations in priorities among shipper, carrier and 3PL respondents. Sixty percent of carriers believe asset capacity utilization is the most critical area for improvement. Compared to 3PLs and shippers, carriers profit from revenue miles driven, and even slight improvements in empty miles, dwell time and hours of service directly lead to marginal improvements.

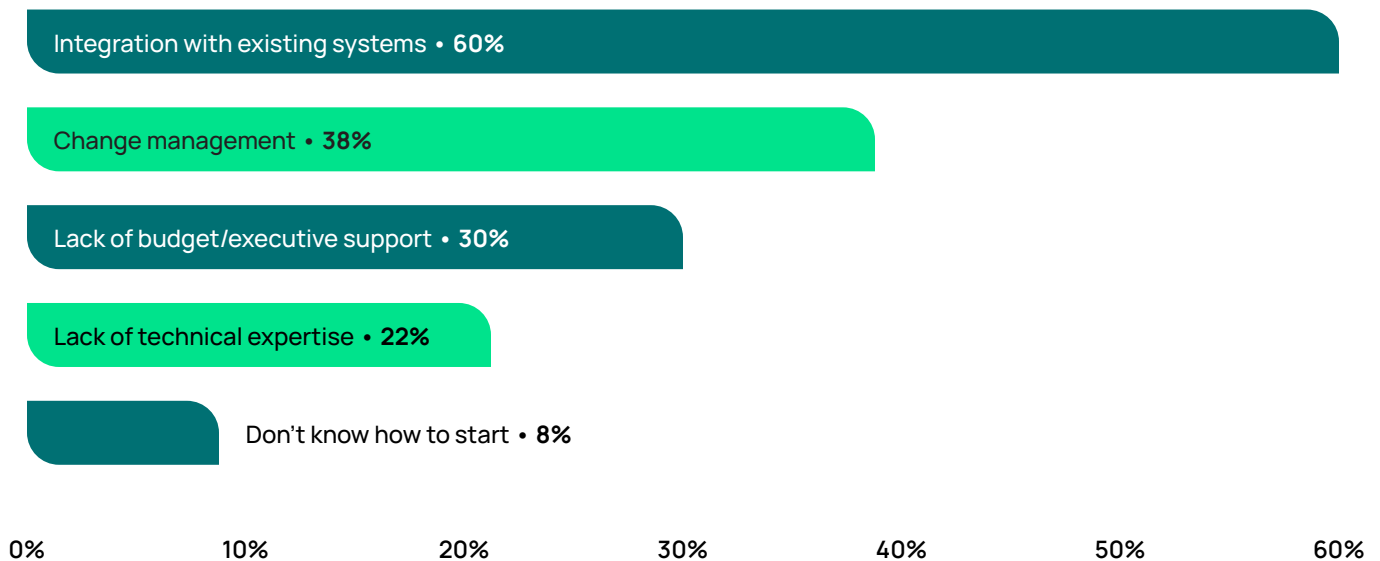
For shippers, real-time visibility and tracking was viewed as the greatest opportunity for improvement, according to 43.48% of respondents. Warehouse and inventory management came in second at 21.74% of respondents, while 17.39% of those surveyed viewed multimodal shipment routing as a priority. While the shipper may have a private fleet, visibility and tracking updates directly impact their ability to manage inventory and demand

planning. Visibility also directly impacts warehouse and inventory management. Too few or too many shipments at a given time can quickly overwhelm distribution centers if staffing and warehouse capacity are not adjusted.

3PL respondents placed an equal priority on asset capacity utilization and real-time visibility and tracking at 32.14%. Having no assets and relying on carriers and shippers to move freight, they are uniquely positioned to focus on shipper visibility concerns and carrier asset utilization. It's a balancing act, as failing to account for capacity utilization can negatively impact the quality of carriers that accept 3PL freight, leading to fewer high-quality carriers who provide timely tracking updates or are technologically savvy enough to use text- or ELD-based tracking platforms.

When optimizing, integration with existing systems is king

What challenges do you face while considering optimization initiatives?



Despite the high demand for technological optimization, integration and execution remain challenges for all respondents. More than 60% said integration with existing systems was the biggest challenge. Shippers, carriers and 3PLs may use various transportation management systems (TMS) that can be developed internally or purchased off the shelf. Each platform may provide only one solution, like a brokerage TMS that is a load-board but must link with a shipper's TMS via an EDI or API integration. The same is valid for carriers, which,

depending on size, may not have the capabilities and must rely on emailed rate confirmations compared to larger carriers with home-built TMS systems that provide visibility but must also manage other systems like ELD hours of service, vehicle status, maintenance and load dispatching.

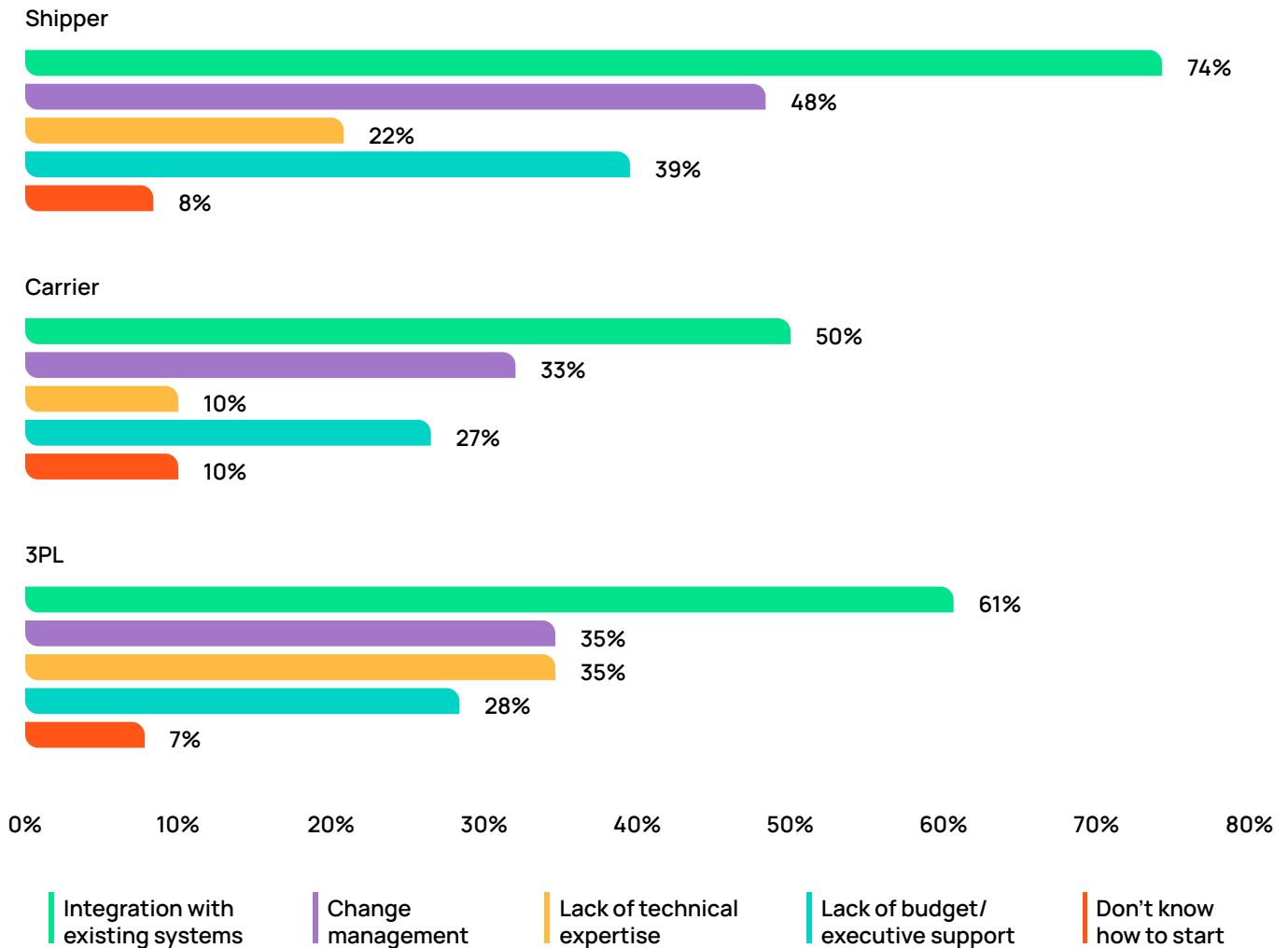
If an integration is successful, the second challenge is change management, which ensures that the right processes are implemented to utilize the new technology

or integration. More than 38% of all respondents viewed change management as a significant hurdle. Similarly, a lack of budget and executive support is another factor that 30.23% of respondents highlighted. Often, executive support and champions of a sought-after change are the first steps required to successfully implement a change management program, so a lack of one or both can derail a successful integration.

On an optimistic note, only 8.14% of respondents are unsure how to start optimization initiatives.

All segments consider system integrations a top concern

What challenges do you face while considering optimization initiatives?



Integration with existing systems is the chief concern of all three segments. Nearly three-quarters, 73.91%, of shippers, who frequently rely on additional TMS features like inventory management and demand planning, view integrating with existing systems as their top concern. Change management was their second-highest concern, at 47.83%, while 39.13% cited lack of budget and executive support as hurdles. Shippers are in a unique position where visibility and integrations are crucial for improving their supply chain but also come with the most risk regarding successful integration and implementation of those changes.

Carrier respondents did not have an overwhelming consensus regarding the largest challenge, with only half naming system integrations. Notably, theirs was the only segment in which just a small minority felt a lack of technical expertise was a hurdle, compared to 21.74% of shippers and 35.71% of 3PLs. This can be attributed to the lack of technological complexities required for hauling

goods compared to the additional challenges of being either a direct shipper or intermediary who must deal with the added complexities required before the goods are picked up and delivered.

For 3PLs, like shippers, integrating existing systems remained a top challenge, according to 60.71% of respondents. However, unlike shippers and carriers, over a third of respondents viewed change management and lack of technical expertise as hurdles, and 28.57% said lack of budget and executive support were impediments. 3PLs are asset-light but require the tracking abilities of an asset-based carrier and the TMS capabilities for supply chain management if they manage transportation for a shipper. Being the intermediary creates greater technological pressures and explains the majority of respondents highlighting the need for successful integrations.

Respondents across segments are most interested in savings and improvements

Please rank the outcomes you're most interested in achieving from improved logistics operations (a rating of 5 indicates the most interested).



When ranking the outcomes that respondents across segments were most interested in achieving, cost reductions and improving process inefficiencies were standouts. Ranked on a scale of 1 to 5, with higher ratings indicating more interest, cost reduction was rated at 3.63 points, while improving process inefficiencies was rated at 3.51 points.

Respondents viewed on-time delivery and improved visibility as moderately important, with scores of 2.74 and 2.7, respectively. The least important outcome was revenue management capabilities, which scored 2.42 points.

Priorities in outcomes are mixed depending on segment

Please rank the outcomes you're most interested in achieving from improved logistics operations (a rating of 5 indicates the most interested).



Cost reduction rated as extremely important among all three segments. Shippers noted that cost reduction was their most important desired outcome with a score of 3.7 points but rated improving process efficiencies and on-time delivery equally at 3.26 points. Shippers were the only segment that showed a high interest in on-time delivery compared to carriers and 3PLs, which scored that category at 2.47 and 2.64 points, respectively.

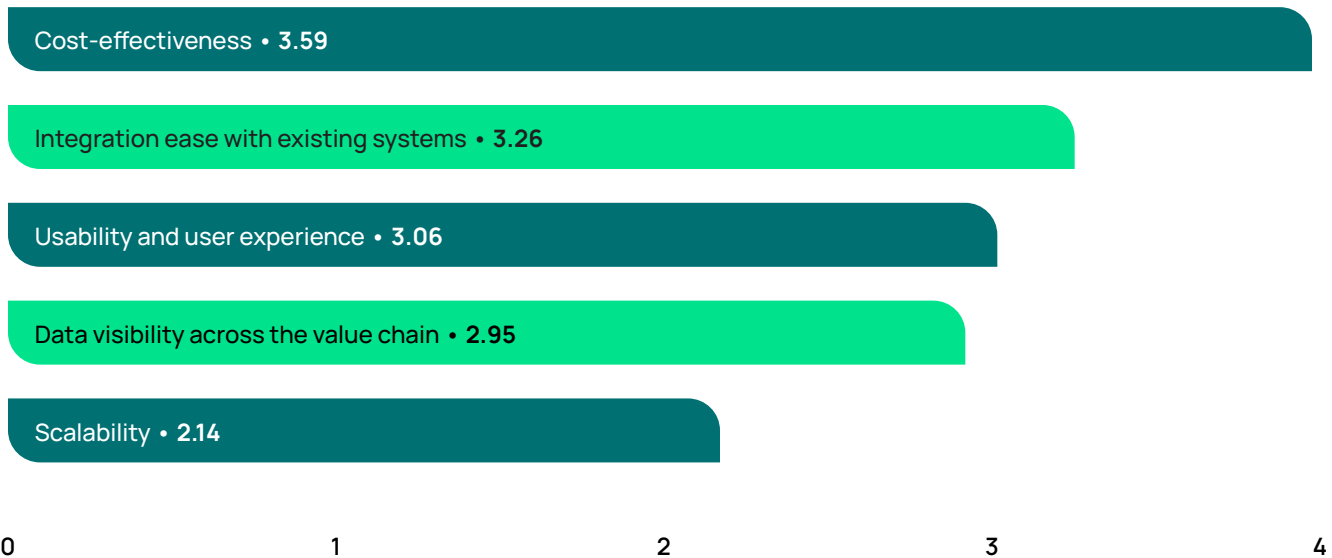
Carriers overwhelmingly prioritized improving process efficiencies, scoring 4.07 out of 5 points. Cost reduction came in second, scoring 3.47 points. Both outcomes have the largest impact on carriers' bottom lines, and the ongoing freight recession continues to put pressure on

managing costs and doing more with less.

3PLs, despite being asset-light, also viewed cost reduction as their priority, with a score of 3.68. Compared to carrier truck payments or shipper warehousing and inventory costs, employee payroll is a huge driver of a 3PL's controllable costs. The second-highest priority for 3PLs was improving process efficiency at 3.14 points. 3PLs are often pioneers in TMS developments to increase worker productivity and automate back-office tasks. Being asset- and product-light, it's easier to deploy and innovate with fewer complexities, but it also requires a higher focus on integrations with carrier and shipper transportation management systems.

Cost-effectiveness is critical when evaluating new solutions

Please rank the following purchase criteria in order of importance when evaluating new solutions (where a higher score is more important).



The prolonged freight recession for carriers and 3PLs affected how most respondents prioritized cost-effectiveness when evaluating new solutions, scoring 3.59 out of 5 points. The explosion in FreightTech solutions in the past few years has placed additional emphasis on ease of integration, with respondents rating integrations at 3.26, a close second.

Using disparate in-house and off-the-shelf IT solutions has created additional usability and user experience challenges, with respondents deeming it moderately important at 3.06 points. Despite earlier data showing

the values of real-time tracking, complete end-to-end visibility across the entire value chain was only a moderate priority among total respondents at 2.95 points. Part of this can be explained by shippers, 3PLs and carriers selectively sharing information, such as real-time tracking. Still, few have taken the next step for end-to-end visibility and integrations.

The least important purchasing criterion was scalability, with users rating it 2.14 points out of 5. The challenge, it appears, is simply integrating and using the products before considering whether that technology can scale.

Shippers and carriers prioritize cost-effectiveness the most

Please rank the following purchase criteria in order of importance when evaluating new solutions (where a higher score is more important).



Shippers and carriers viewed cost-effectiveness as the most important factor when ranking the purchase criteria for new solutions. Shippers, leveraged by higher costs like warehousing and the associated staffing challenges, scored cost savings at 4.04 points out of 5. Carriers are also highly leveraged in assets such as equipment, property and wages, which explains their cost savings rating of 3.77. After cost savings, carriers ranked usability and user experience with a score of 3.27 and prioritized it over integrations, scoring 3.03. Asset-light companies like 3PLs face other challenges, such as the ease of integrating systems and the corresponding needs for usability, at 3.39 and 3.14 points, respectively.

Conclusion

The survey results clearly highlight the critical need for technology solutions that can directly address the top challenges facing the freight industry. Transit delays were overwhelmingly cited as the biggest concern across all segments, with routing issues also having a major impact. This points to a pressing need for robust routing and tracking solutions that can leverage real-time data and optimization algorithms to minimize delays and improve on-time performance.

Asset utilization emerged as the area with the greatest opportunity for improvement, especially for carriers. Solutions that can dynamically optimize asset usage, reduce empty miles and maximize driver hours could provide a tremendous boost to profitability and efficiency.

The largest barrier, however, is the ability to effectively integrate new technologies with existing systems

and processes. Fragmented and disparate systems make this integration difficult. To successfully adopt new solutions, companies should prioritize those with open architectures, developer-friendly platforms and integration capabilities that allow for fast implementation across the ecosystem.

Usability and integrations were moderate concerns among all segments. After years of FreightTech growth and investment, cost savings are prioritized when evaluating long-term IT strategies.

Interestingly, 3PLs gave the highest score to the overall lowest priority among segments, scalability. Unlike a shipper, which must plan and invest in costly CapEx to grow its footprint, 3PLs are asset-light and nimble, only hindered by their access to carriers, shippers and tech stacks to facilitate those transactions.

Freight companies can gain an edge by embracing innovative yet pragmatic technologies purposely designed to tackle vulnerabilities around transit times, asset usage and system integration. By overcoming these hurdles, they can elevate performance, reduce costs and deliver the real-time visibility that customers increasingly demand. The path is clear for those willing to be disruptors in their space.



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