



CHALLENGES, TRENDS & TECHNOLOGY IN TRUCKING 2023 OUTLOOK

Unprecedented times call for modern solutions

Labour shortages, global supply chain disruptions, skyrocketing fuel prices – the trucking industry has experienced unprecedented volatility over the past several years.

Now, more than ever, carriers and brokers are turning to new solutions to unlock efficiencies, increase asset utilization, and protect their margins.

Transportation and logistics are the backbone of our global economy, representing more than \$2 Trillion a year in US gross domestic product (GDP). Yet despite their immense importance and impact, the people that keep our physical operations running—drivers, dispatchers, safety managers, brokers, and beyond— have historically been underserved by technology.

Now, that is changing.

The purpose of this report is to present data collected from a diverse set of sources – including proprietary research data, market data, and aggregate Rose Rocket TMS usage data – to paint a comprehensive outlook of the challenges that are experienced by the trucking industry, and how companies intend on tackling them.

The resulting analysis provides a benchmark that teams can use to measure themselves against, understand the current market conditions, and inform future technology decision-making.

“The similarity of responses seen from this diverse set of leaders makes it clear – most of us in trucking are encountering the same challenges. How we tackle these challenges could make the difference between struggling and thriving in this uncertain environment.”



ALEX HURAS

HEAD OF MARKET RESEARCH, ROSE ROCKET

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Introduction

- Why should you care about this research?
- Methodology

Providing a 360 degree view into the industry

There's no shortage of data available for trucking. From news reports and articles, to siloed publications, it's easy to find individual data points that speak to a certain aspect of the industry.

While these resources can be helpful on their own, Rose Rocket believes that the strength of data lies in comprehensive analysis. That's why we're combining 3 sources of data to provide a *complete* outlook into the current challenges of our trucking industry, and some inspired approaches to solve them. The three sources are:

Data Source: **Survey**

Rose Rocket conducted a proprietary survey to carriers and brokers to identify their experienced challenges, and approaches to solving them. *More on the makeup of this survey on the next page.*

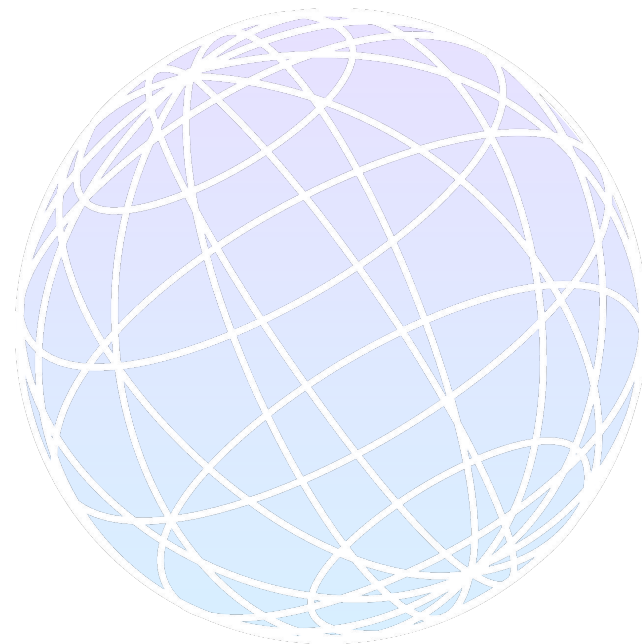
Data Source: **Product**

Rose Rocket looked at real, aggregated TMS usage data that would inform an unbiased view of the state of affairs to add a usage-level view.

Data Source: **Market**

Rose Rocket gathered external data from news sources, research reports, and other trusted sources to add an industry-level view.

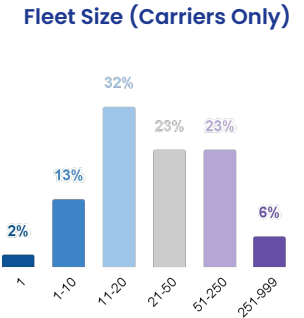
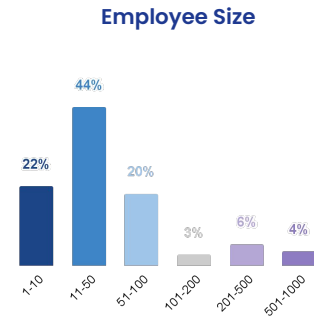
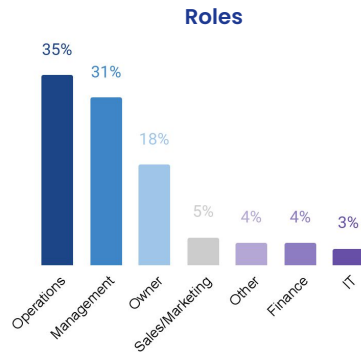
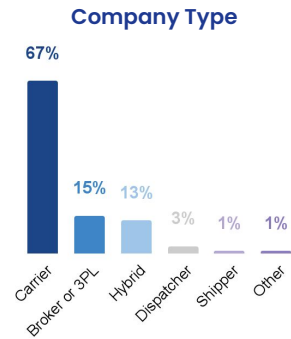
When combined, these sources enable a better understanding of the industry's current challenges, and some ideas to solve them. With the data in this report, you can benchmark your challenges with companies of various sizes, and better plan future technology investments.



Rose Rocket Survey – Who Participated?

RESPONDENT PROFILE

We surveyed leaders from 108 brokers and carriers of varying sizes.



Insights

68% of the companies surveyed were carriers and private fleets, while 28% were brokers & 3PLs or hybrid

Respondents held a diverse set of roles and responsibilities, however the majority primarily identified as being in a management and operations role (88%).

Insights

[Mirroring the fragmentation of the US market](#), 68% of respondents have 50 or fewer employees

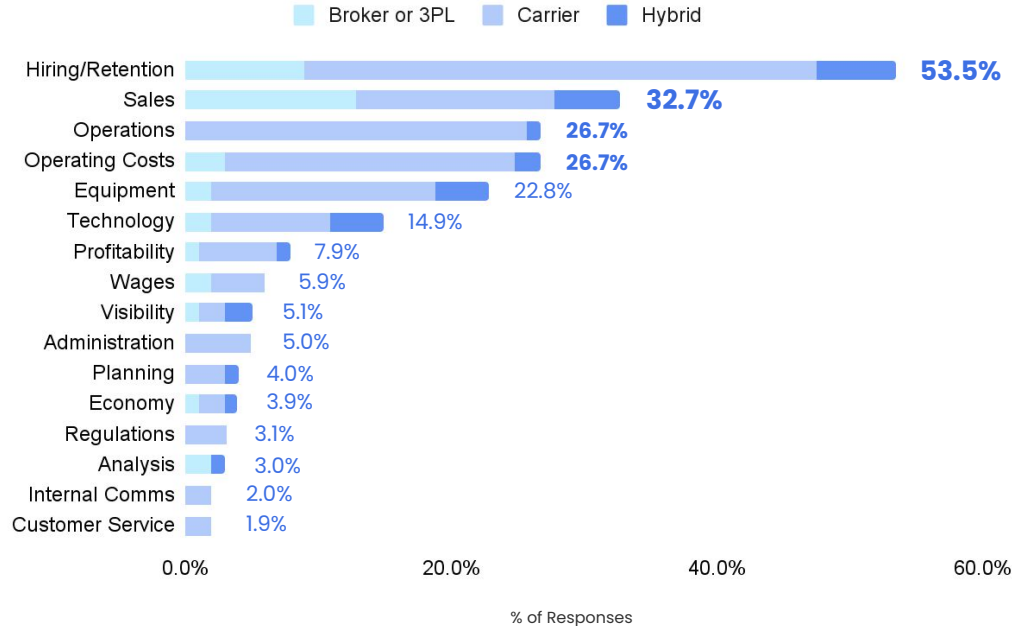
However, we still had representation from larger companies, with 14% having 100+ employees

Part One

Trucking's top challenges



Hiring, Sales, & Operations are the top challenges in trucking



Insights

While the transportation industry has certainly felt the impacts of COVID and the economy, many of the top challenges have remained constant from pre-pandemic times – particularly those related to staffing and operations.

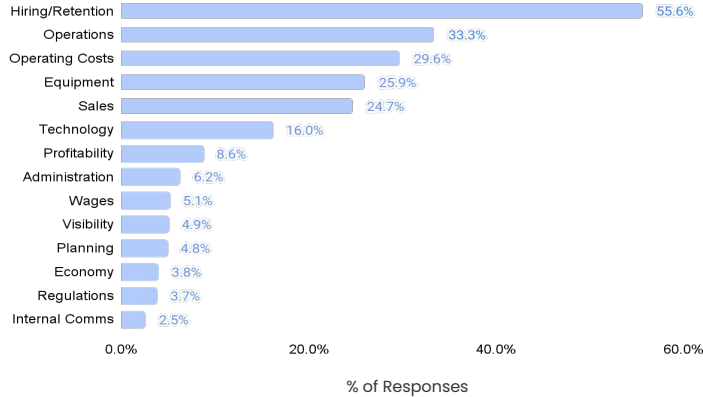
The top 3 challenges experienced across brokers and carriers are:

1. Hiring & Retention (53.5%)
2. Sales (32.7%)
3. Operations & Operating Cost – Both at (26.7%)

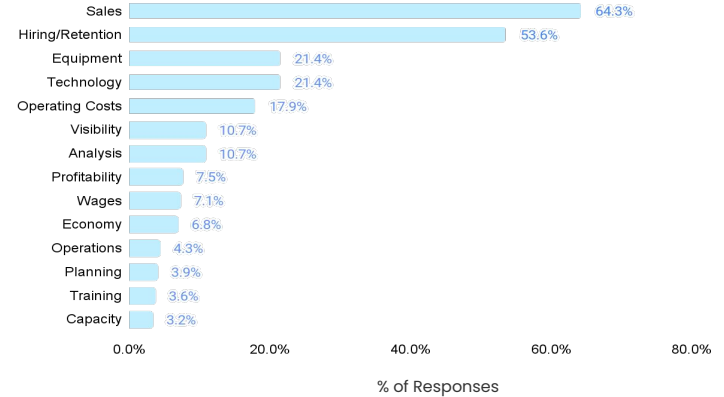
Data Source: **Survey**

Small but important differences between carriers and brokers

CARRIERS



BROKERS



Insights

Carriers find hiring to be the top challenge, while feeling an outsized impact in operations.

1. Hiring & Retention (55.6%)
2. **Operations (33.3%)**
3. Operating Costs (29.6%)

Insights

Above all else, Brokers find sales to be the top challenge.

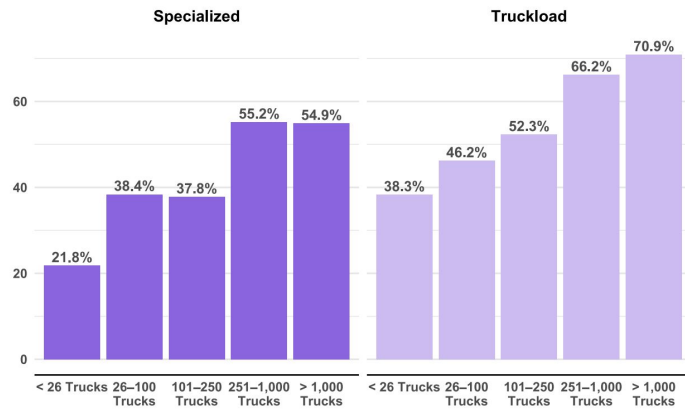
1. **Sales (64.3%)**
2. Hiring & Retention (53.6%)
3. Operating Costs (21.4%)



Challenge #1:
Hiring & Retention

Driver turnover at historic high – Carriers with more than 250 trucks disproportionately impacted

Average Annualized Driver Turnover Rate by Fleet Sector and Size



Source: American Transportation Research Institute, 2022

Data Source: **Market**

Insights

According to the American Transportation Research Institute (ATRI), driver shortages and turnover are at historic highs. With truckload carriers of more than 1,000 trucks seeing turnover north of 70% – it's not surprising that finding and retaining quality drivers is at the top of carriers' minds.

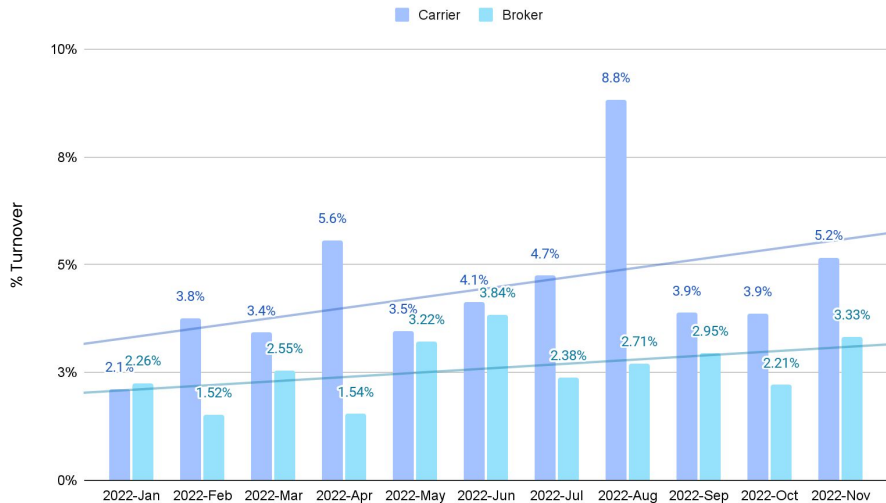
Some sources say this is all a [retention issue, not a shortage](#), while the [American Truckers Association's](#) chief economist predicted that we'll be short as many as 160,000 drivers by 2030. Either way, it's not a problem that seems to be going away anytime soon.

To combat this, the Infrastructure Investment and Jobs Act (IIJA) was signed into law at the end of 2021, kickstarting some positive initiatives, like:

- A pilot program for 18–20-year-old truck drivers to operate in interstate commerce
- Announcing its Women of Trucking Advisory Board to identify ways to increase the number of female truck drivers.

Employee turnover rates growing – Carriers facing higher rates than brokers

Monthly User Turnover Rate In Rose Rocket (Brokers vs Carriers)



Data Source: **Product**

Insights

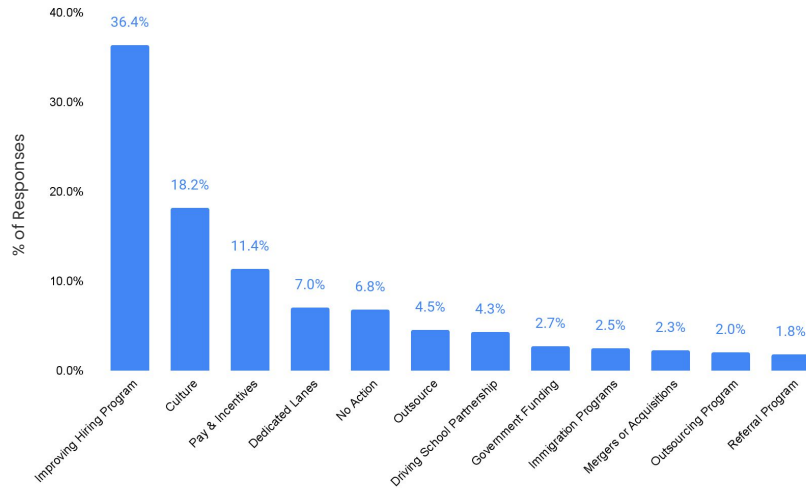
Supporting the data from the ATRI, Rose Rocket has also seen an increase in staff turnover rate in its active organizations over the course of 2022.

What's more, turnover doesn't seem to be isolated to just drivers.

Our data indicates there's also an increase in turnover in broker organizations, suggesting that companies are facing retention problems in all positions, including sales and back-office.

Hiring programs, culture, and pay incentives are the preferred approaches to hire and retain employees

How Do You Plan To Solve Your Hiring & Retention Challenges?



Data Source: **Survey**

Insights

When asked about how they plan to solve staffing challenges, these were the most popular approaches mentioned by the respondents:

1. Improving Hiring Programs (36.4%)


- From increasing job postings to finding recruiters, most of this approach is centered around increasing the number of candidates coming through the door.

2. Improving Culture (18.2%)

- Companies recognize that a strong culture can help both attract and retain employees. Approaches include better understanding driver needs, establishing mentorship programs, and improving employee respect.

3. Improving Pay & Incentives (11.4%)

- When thinking about pay and incentives, companies are prioritizing overall pay structure, with few listing out-of-the-box ideas, like establishing a driver pension program.

 **Interesting Stat:** Nearly 7% of companies mentioned offering dedicated lanes as an effective tool for recruiting and retaining drivers.

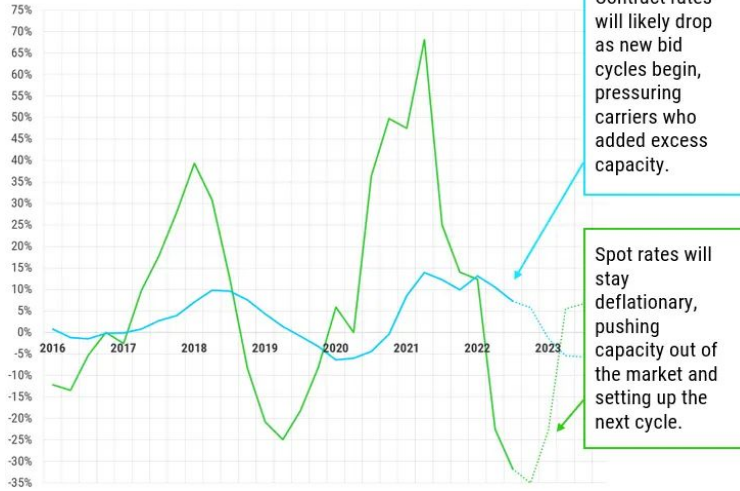


Challenge #2:
Sales

Inflationary pressures and reduced demand contributing to excess capacity and skidding spot market

Q4 2022 Forecast

Spot & Contract TL Rates



Contract rates will likely drop as new bid cycles begin, pressuring carriers who added excess capacity.

Spot rates will stay deflationary, pushing capacity out of the market and setting up the next cycle.

Source: Q4 2022 Truckload Market Guide, Coyote 2022

Insights

Analysts often look to the trucking industry as an indicator of the economy's health, and the back half of 2022 did not paint an optimistic picture.

Inflation, while trending downward, is still far above target, clocking in at [6.5% in December](#). To combat this, the Fed continues to increase rates, making new debt more expensive for holiday shopping and new construction.

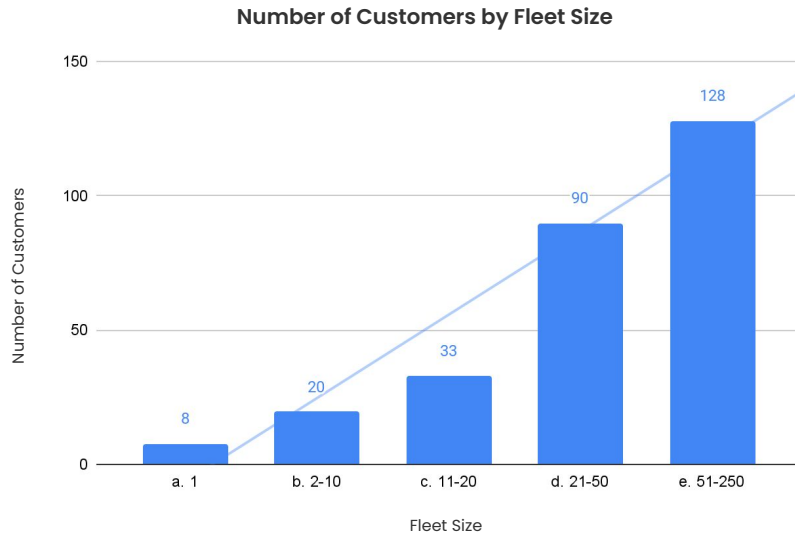
Reduced demand for goods and housing has resulted in retailers facing a massive glut of inventory, leading to ample capacity on select lanes, and driving spot rates down from COVID peaks (-24% YoY), dragging down contract rates with it.

Accepted tenders are down [-14.9% YoY](#), suggesting actual cracks in freight demand, and not merely declining rejection rates.

When taken in the context of the multi-year trucking capacity cycle, it's clear we're in a deflationary period. Many analysts are predicting rates will stabilize in 2023, before slowly increasing again back to equilibrium.

Data Source: **Market**

Number of customers scales linearly with fleet size – sales development essential for companies to grow



Data Source: **Product**

Insights

As demand wanes, companies are fighting for a larger piece of the existing pie. To do so, companies can either expand their existing accounts by servicing more of their customers' needs, or acquire new customers.

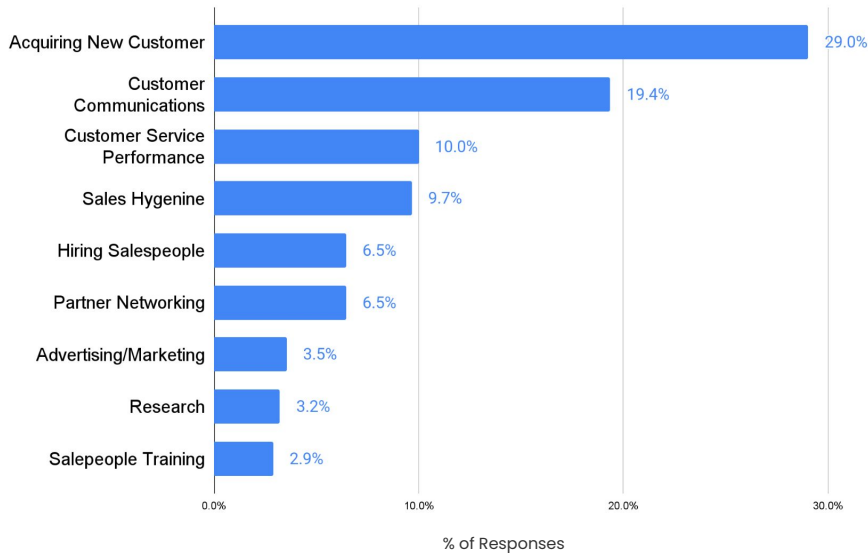
When looking at the number of customers against fleet size for Rose Rocket's carrier organizations, we find that this relationship scales linearly. This tells us that as carriers scale, so do their customer accounts. Put another way, it appears most companies have historically relied on capturing more customers rather than upselling to their existing base. Given the importance of having a diverse set of customers for efficiency, for example to reduce deadhead miles, this approach makes sense.

Setting up a successful sales program will no doubt be a major consideration over the next few years for both carriers and brokers.

Interesting Stat: There seems to be a large inflection point in customers once reaching a fleet size of 21-50 trucks, suggesting dedicated sales teams are introduced at this size.

Cold calling and customer relationship management – top approaches to build business

How Do You Plan To Solve Your Sales Challenges?



Data Source: **Survey**

Insights

When asked about how they plan to remedy slower sales, these were the most popular approaches mentioned by respondents:

1. Acquire New Customers (29.0%)


- For companies looking to add more customers, many are still looking to cold calling as a strategy, while few mentioned leaning on referrals

2. Improve Customer Communications (18.2%)

- Recognizing that better customer relationships means more revenue, companies are looking to increasing transparency and overall customer communications to capture more share of wallet from key customers

3. Improve Service Performance (9.7%)

- From ensuring that drivers are on time, to finding better and more consistent lanes and rates, companies are looking to bring more value to customers to retain and grow their book of business.

 **Interesting Stat:** 70% of responses were focused on acquiring new customers and sales process, as opposed to improving their service and expanding existing customer accounts.



Challenge #3: Operations

Infrastructure issues, detention times, and weather events impacting on-time performance

Headwinds



Infrastructure Issues: Growing infrastructure issues from ports, parking, to roads can set back a delivery hours. In fact, a simple bridge closure can add up to **millions of dollars per day** in additional carrier costs



Driver Detention: Every moment a driver is waiting to load or unload can wreak havoc on their HOS, and their scheduling of future loads. In fact, drivers spend approximately **20%-33% on average** of their possible compensated drive time in detention.



Weather Events: Trucking companies lose an estimated **32.6 billion** vehicle hours a year due to weather-related congestion. Nearly **12% percent** of total estimated truck delays are due to weather, which results in an estimated **\$2.2-3.5 billion** dollars lost annually.

Tailwinds



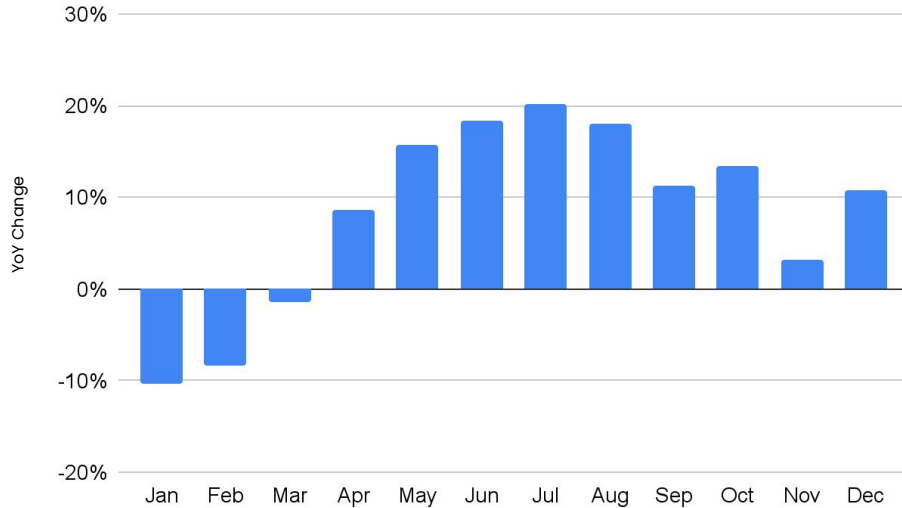
To combat this, the Infrastructure Investment and Jobs Act (IIJA) has helped in a couple ways:

- U.S. House bill awaiting passage in late 2022 would provide nearly \$800 million to transportation agencies to expand truck parking facilities.
- A federal judge struck down as unconstitutional a truck-only toll program in Rhode Island in September

Data Source: **Market**

On-Time Performance

YoY Change In On-Time Delivery Performance (2022/2021)



Insights

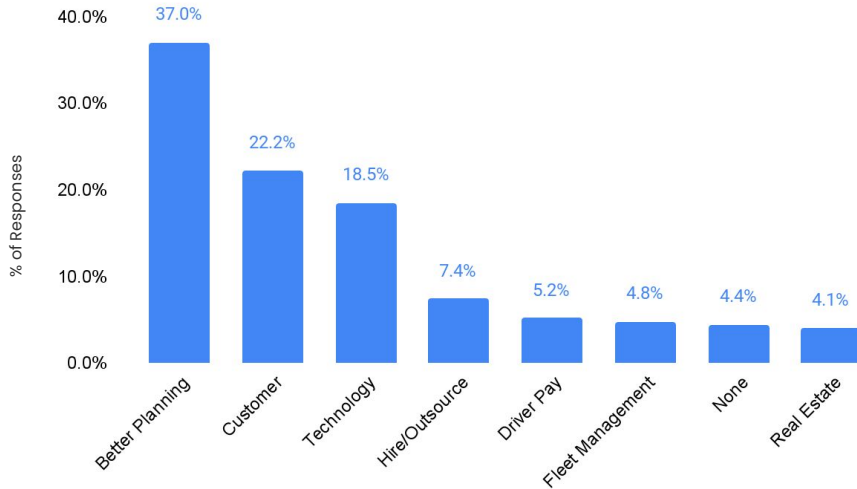
Observing Rose Rocket data, we found 2022 on-time delivery performance of carriers has increased an average 8%, compared to 2021, with performance improving significantly starting in April.

Aligning with macro economic trends, it follows that as demand has reduced, carriers have had more time, equipment, and staff to improve performance of their deliveries.

Data Source: **Product**

More proactive planning – companies looking to mitigate as many exceptions as possible

How Do You Plan To Solve Your Operational Challenges?



Data Source: **Survey**

Insights

Transportation and logistics companies are no stranger to operational challenges, and here are their top 3 approaches to tackling them:

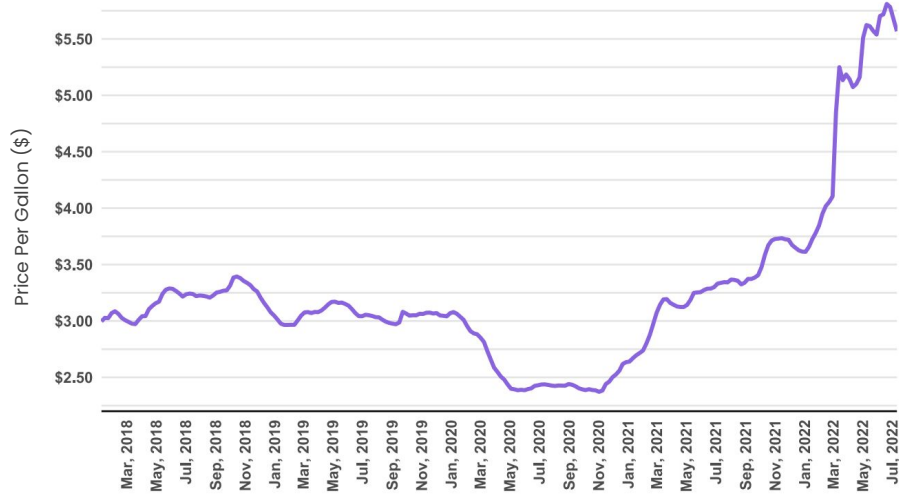
- 1. Better Planning (37.0%)**
 - Working with the current circumstances, the top approach proposed by companies was to simply start earlier, and incorporate traffic & weather management in their planning processes.
- 2. Customer Management (22.2%)**
 - Of course, you can't plan for everything. Setting more realistic expectations with customers, as well as improved customer communication can go a long way to reduce detention time, and improve exception-management.
- 3. Technology Investment (18.5%)**
 - Investing in software to improve efficiency, such as route optimizers and a TMS, can find saved time, especially at scale.



Challenge #4: Operating Costs

Fuel prices reached new heights in 2022 – and likely won't return to pre-pandemic levels in 2023

Figure 8: Monthly U.S. On-Highway Diesel Prices, 2018-2022



Source: American Transportation Research Institute, 2022

Data Source: **Market**

Insights

While there has been some minor relief at the pumps since July peaks, diesel is still up +30% YoY, increasing pressure on margins, and driving shipper demand lower.

Moving in to 2023, the **US Energy Information Administration** is predicting that diesel will average \$4.48 per gallon in 2023 – still down from 2022 but far above the \$3.29 average in 2021.

Fuel surcharges fluctuating with market –

Carriers pass on fuel charges to offset a portion of operating costs

YoY % Change In Fuel Surcharge (2022 vs 2021)



Insights

When looking at the impact of fuel costs for Rose Rocket users, we observed the same pattern, as seen in the YoY change in fuel surcharges.

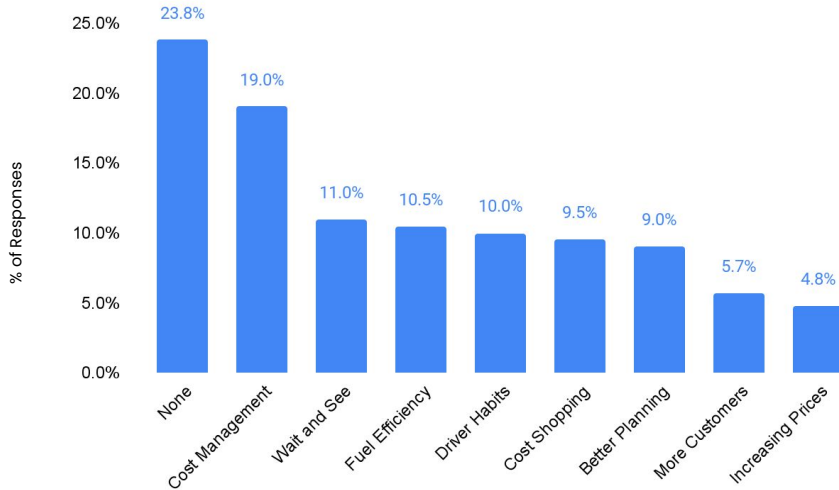
In line with market data, the increase in fuel surcharge from 2021 to 2022 was dramatic, with early June surcharges increasing 73% on average.

With operating margins being as slim as they are, we're seeing that increased fuel costs are generally passed onto the customer, further decreasing demand and adding more pressure to sales.

Data Source: **Product**

Costs are skyrocketing – companies are not seeing a clear solution

How Do You Plan To Solve Your Operating Cost Challenges?



Data Source: **Survey**

Insights

With equipment manufacturing delays limiting supply, and fuel prices skyrocketing to all-time-highs, it's no surprise that many carriers are finding their operating margins slimming.

Here are the top approaches for combating growing operating costs:

1. **None (23.8%) & Wait and See (9.5%)**

- Given the extraordinary circumstances that caused these costs to rise, it seems many businesses are anticipating costs to return to some level of normalcy, and plan to ride it out.

2. **Cost Management (19.0%)**

- With margins tighter than ever, many companies are starting to pay much closer attention to their costs - formalizing reporting processes, and even incentivizing employees for discovering new cost-saving opportunities.

Interesting Stat: Both *Fuel Efficiency* and *Driver Habits* are around 10%, which indicates that companies still believe there is efficiency to be found in the driving process. Companies looking to improve *Driver Habits* are turning to both stick and carrot approaches – instilling rules and rewarding good behaviours through incentive programs.

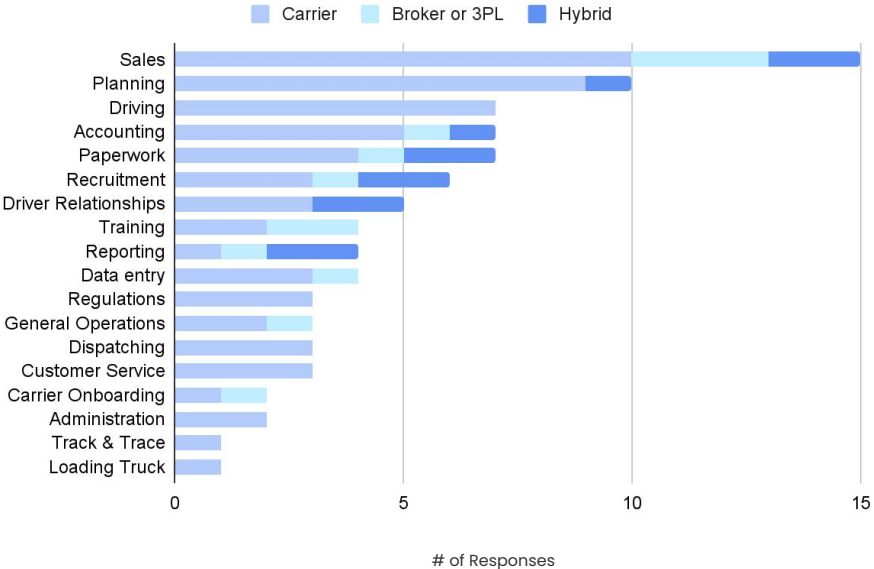
Part Two

Most time-consuming tasks



Sales demanding the most amount of time for both carriers and brokers.

What are your most time-consuming tasks when operating your company?



Insights

Given the aforementioned challenges in costs and demand, **sales** is, unsurprisingly, the most time consuming task across carriers (16%), and especially brokers (25%).

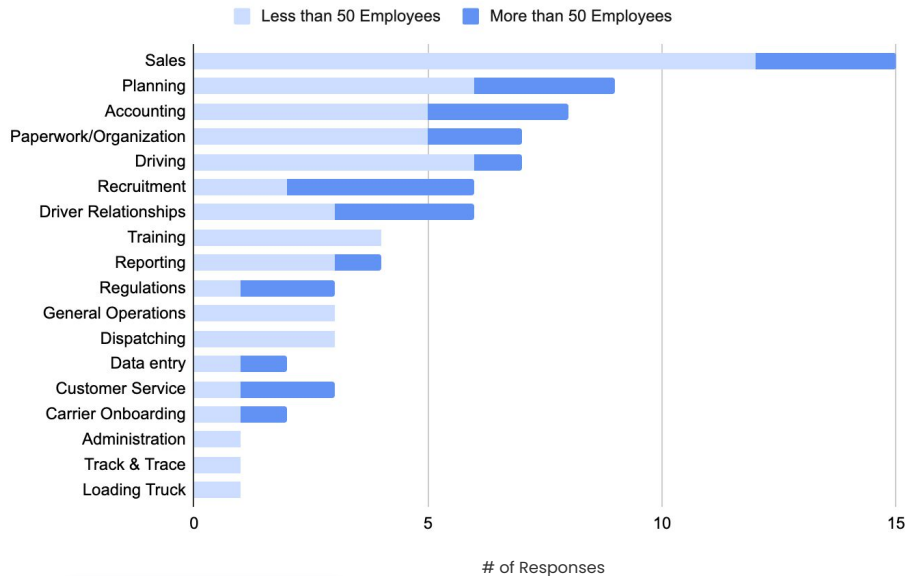
Following **sales**, carriers find themselves spending the most time **planning** (11%), **driving** (9%), and handling their **accounting** (9%).

Brokers on the other hand mentioned **training** (17%) as the second most time-consuming task, with the rest distributed evenly among carrier onboarding, recruiting, reporting, and other general operations.

Data Source: **Survey**

Sales the most time-consuming for smaller companies – larger focused on recruiting

What are your most time-consuming tasks when operating your company?



Insights

Sales as a time-consuming task is much more of a smaller company issue, while larger organizations are spending time on **Recruitment**. This aligns with earlier stats on how driver turnover highly impacts larger organizations as well.

Smaller companies are also spending too much time on **Training, General Operations, and Dispatching**, which companies above 50 employees don't seem to find as much as an issue in.

There may be an opportunity for smaller organizations to adopt formalized programs and softwares leveraged by larger companies to help with the time-consuming tasks.

Data Source: **Survey**

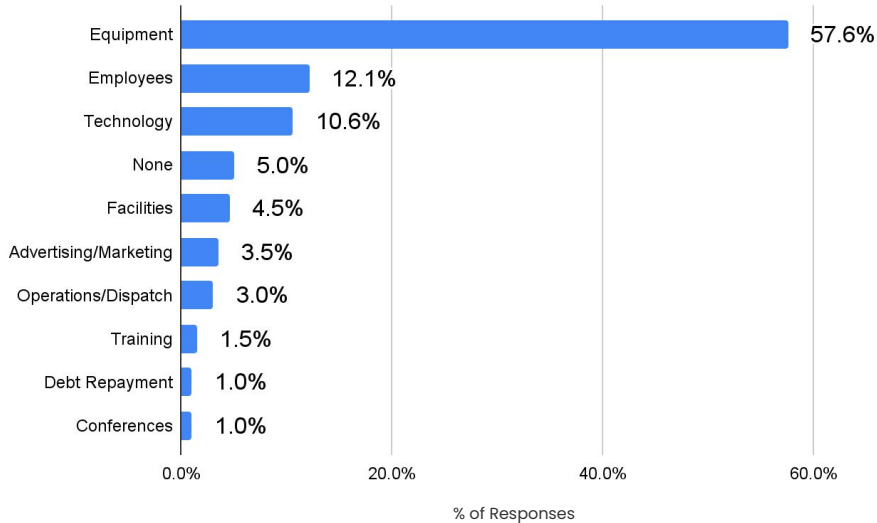
Part Three

Top trucking investments



Equipment, employees & technology – the trifecta to Carrier investments

Carriers, what are the main investments you're making in your business over the next year?



Data Source: **Survey**

Insights

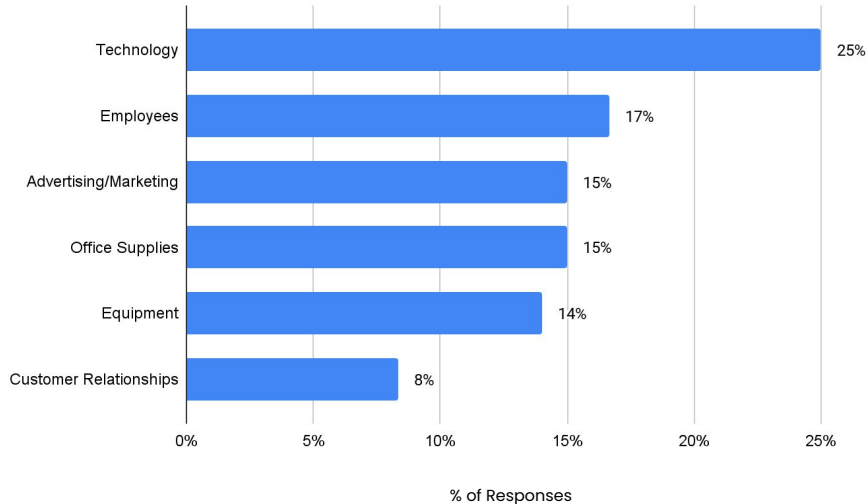
With cashflow tightening and debt becoming more expensive, deciding where to invest your company's money requires a lot of consideration.

Here are the leading investments from the carrier respondents over the coming year:

1. **Equipment (58%):** Carriers are allocating most of their capital to equipment – primarily trucks and trailers. This is no surprise, as manufacturing delays have greatly restricted available supply, skyrocketing the price of used equipment. Used Class 8 truck prices are up over **80% YoY**, for example.
2. **Employees (12%):** Carriers plan to increase their budget on attracting and retaining employees – primarily drivers. Higher wages and more benefits were the top mentioned incentives.
3. **Technology (11%):** Given rising operating costs and limited supply of assets and talent, carriers are turning to technology like TMS and ELDs to become more efficient and competitive

Brokers focused on more technology, with investments increasing across a variety of categories

Brokers, what are the main investments you're making in your business over the next year?



Data Source: **Survey**

Insights

On the Broker & 3PL side, the investments change significantly:

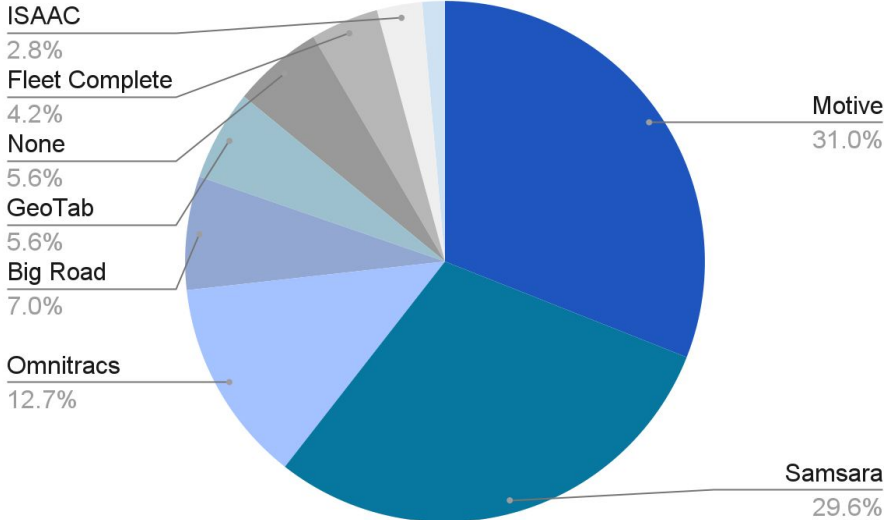
1. **Technology (25%):** Technology led the way as the top future investment, with a quarter of respondents looking to upgrade their tech stack to give them a competitive advantage.
 - a. Specifically, brokers mentioned a **TMS** as a way to improve their service offerings, customer service and operating efficiency.
2. **Employees (17%):** Like carriers, brokers are also planning to increase their incentives - wages and benefits - to help recruit and retain more sales agents.
3. **Advertising & Marketing (17%):** Brokers are looking to invest in advertising and marketing to improve their brand, and grow top-of-funnel qualified leads as demand for capacity wanes.

Part Four

Top trucking technology used today

Motive, Samsara, Omnitracs key winners in ELD space as mandate matures

What ELDs are you current using?



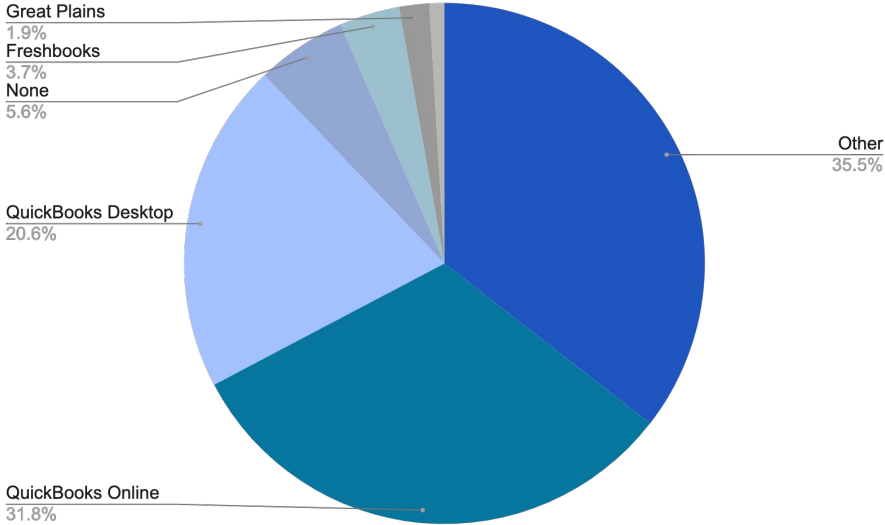
Insights

The top 3 ELDs –Motive (formerly KeepTruckin), Samsara, and Omnitracs – compose almost 75% share of respondent’s ELDs

Data Source: **Survey**

QuickBooks is market leader in managing trucking accounting

What Accounting Software are you currently using?



Insights

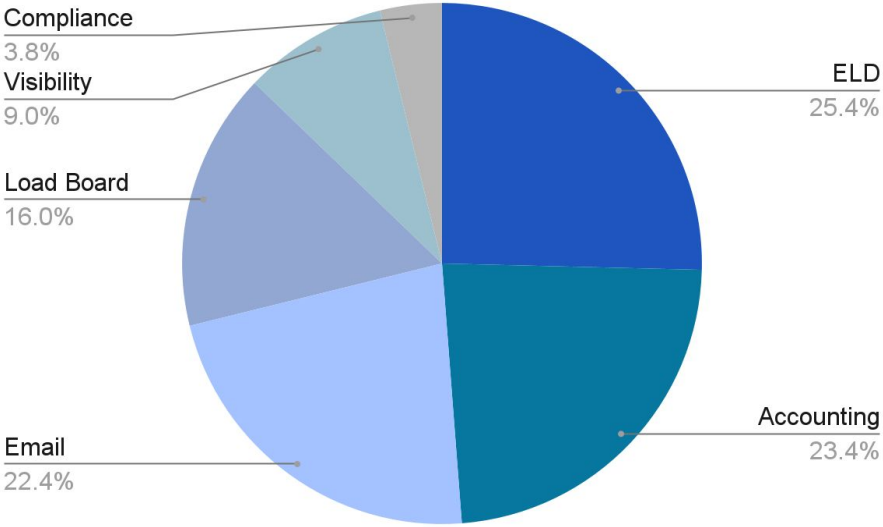
The majority of respondents used some form of Quickbooks (52%). As Quickbooks Desktop continues its migration to the cloud, we will see share shift further towards QuickBooks Online.

“Other” category includes using a TMS’ native accounting feature, and any other specialized trucking accounting program.

Data Source: **Survey**

Rose Rocket customers integrated to their most leveraged technologies

Top Integrations of Rose Rocket Companies



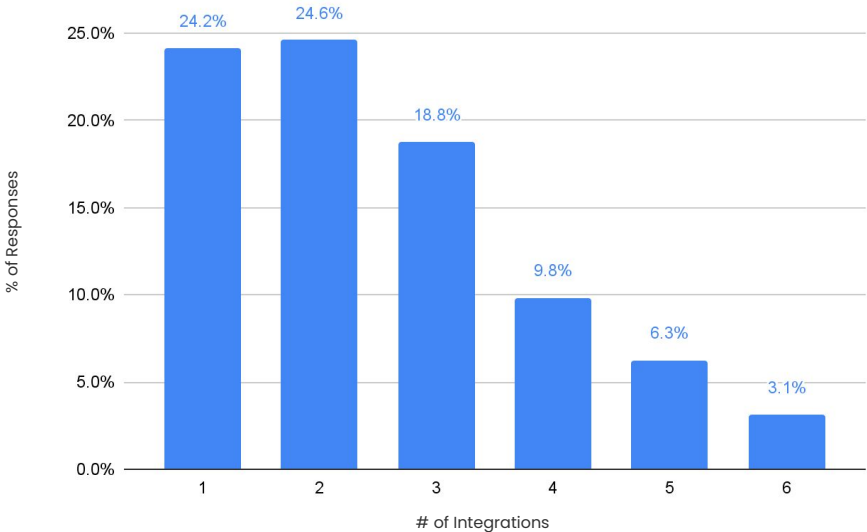
Insights

Bolstered by government mandates, ELDs are the most commonly used integration we offer at Rose Rocket, followed closely by Accounting and Email.

Data Source: **Product**

Rose Rocket customers have an average of 2.5 integrations

Number of Integrations leveraged by Rose Rocket Customers



Insights

As trucking catches up to more advanced industries, companies are realizing that one software cannot run every aspect of their business well, and choosing technology that prioritizes open API architecture is crucial to future performance.

Rose Rocket customers leverage an average of 2.5 integrations, with more than **50% leveraging 3 or more integrations**, with the number of integrations growing as companies mature and scale.

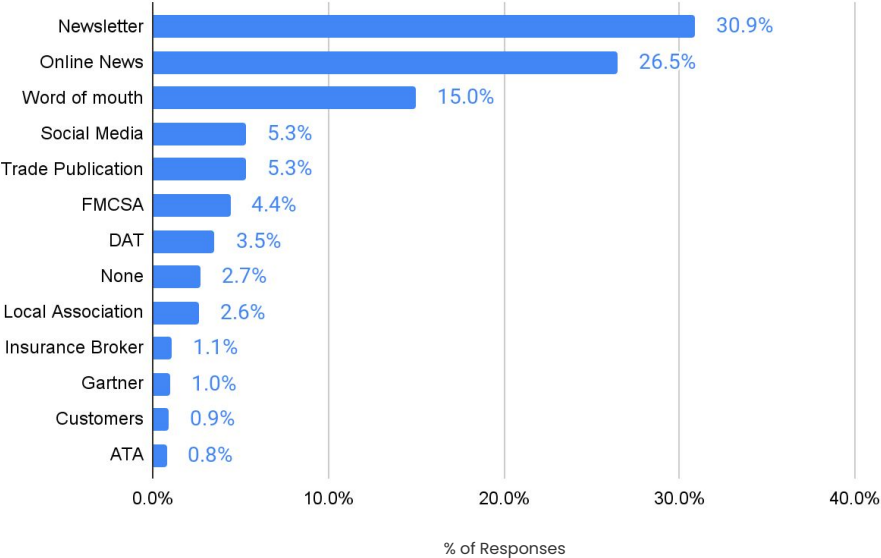
Data Source: **Product**

Part Five

Leading industry news & resources

Industry newsletters and generic online news keep most informed

Where do you do get the majority of your industry research and news?



Data Source: **Survey**

Insights

Trucking companies get their news and research from a diverse set of sources, ranging from Facebook, local associations, and truck stops. The leading sources are newsletters, online news, and word of mouth.

When asked about what specific media brands they rely most, there are some clear winners across carriers and brokers, namely: Freightwaves, Trucknews, DAT, Truckstop, and JJ Keller.

Top Trucking Media Brands

FREIGHTWAVES	33%
trucknews.com <small>By the editors of Today's Trucking</small>	23%
DAT	10%
TRUCKSTOP	10%
J. J. Keller <small>Business Services</small> (Newsletter)	7%

Looking Forward

Leveraging technology as a solution

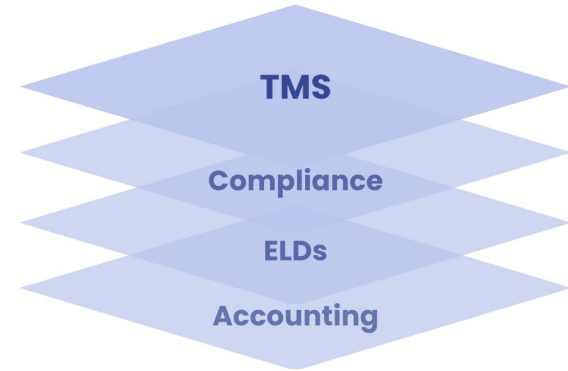
Opportunities to leverage technology to solve key challenges

Technology identified as a top 3 investment for both carriers and brokers.

When reviewing Trucking's Top Challenges, it's clear that companies understand the value technology can bring to making their **Operations** more efficient.

While important, there is still evidence that much of the trucking industry is still uncertain about just how broadly technology can positively impact their business.

While ELD technology can automate asset-tracking, and accounting software can streamline invoicing, that's just the tip of the iceberg when it comes to efficiency within trucking. There are many untapped opportunities to leverage technology to solve other key challenges trucking companies are struggling with today: Hiring & Retention, Sales and Operating Costs.



Leveraging technology to impact every key challenge

Key Trucking Challenges

How Technology Helps

Hiring & Retention

- **Improve the driver experience:** Tools that help remove tedious tasks like gathering and uploading paperwork, or help find more dedicated lanes will help make drivers' job easier and more enjoyable.
- **Simplified communication:** Investment in TMSs and ELDs allows track & trace to be without incessant status updates between drivers and dispatch. This allows drivers to drive without added distractions or nuances.
- **Transparency:** Having tools that digitally log communications or activities will protect drivers from being asked to do anything illegal, and automates their HOS for improved safety.

Sales

- **Differentiated Services:** Offering tools or services that make a customer's life easier is becoming a selling feature.
- **Improved Visibility:** Trucking operates between many parties: brokers, dispatchers, partner carriers, drivers & more. However, the customer only wants one streamlined communication, so look for tools that offer streamlined visibility.

Operations

- **Improved planning:** Tools with features like driver calendar, can automatically includes HOS and time-off which allows for proactive planning.
- **Optimized routing:** Leveraging tools that incorporate traffic and weather events will help avoid unplanned delays.
- **Automated communication:** Software that offer automated updates with your shippers and partners can help minimize detention time

Operating Costs

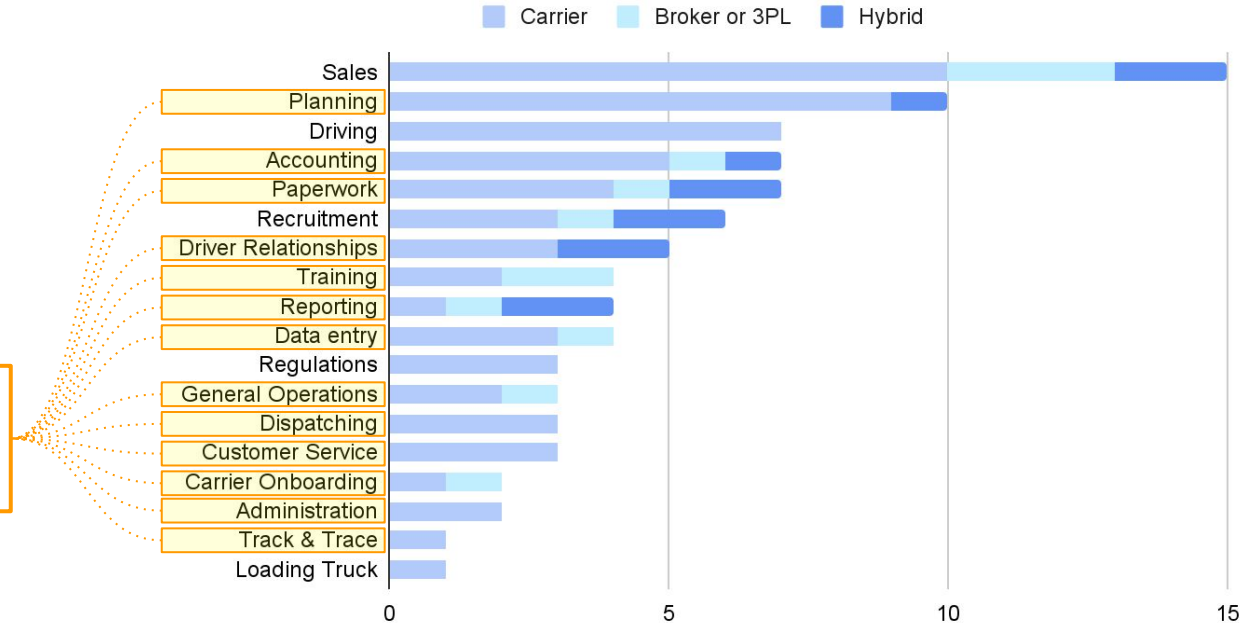
- **Driver & Customer Reporting:** Systems that identify patterns in idle time, speed, detention and routes can help you identify top drivers and customers, and which ones need attention.
- **Profitability Reporting:** Tools that allow for detailed and real-time reporting will allow companies to have more informed decisions on what factors impact profitability.
- **Efficiency:** Great technology saves your team time, which can improve revenue per driver or back-office employee

Leverage a TMS to streamline time-consuming tasks

TMS Software can make **13/18** of the most time-consuming tasks more efficient.

Many of today's TMS solutions have improved every workflow within a trucking and logistics company, and many are discovering they have more options today compared to 10 years ago.

Did you know that all of these tasks can be made more efficient with a TMS?



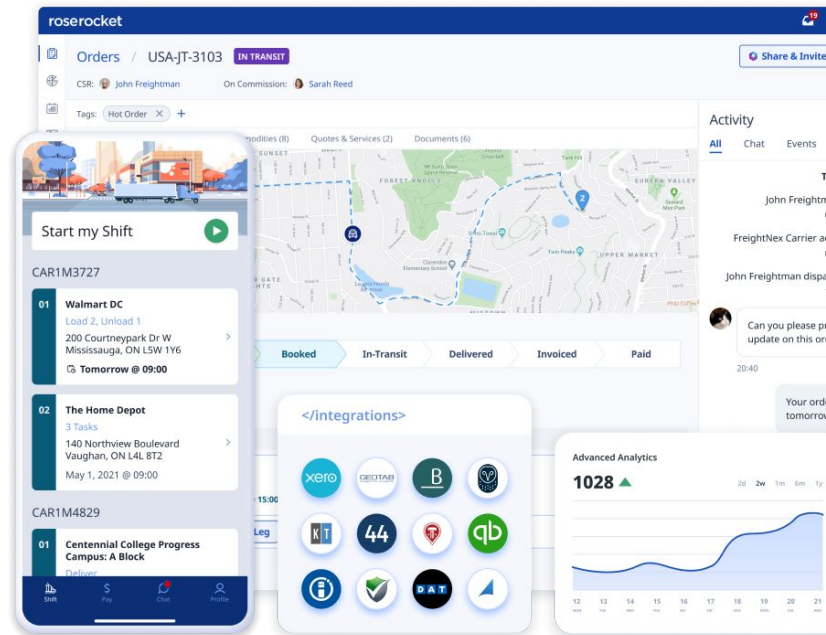
Opportunities to leverage technology to solve key challenges

As ELDs and Accounting are already well leveraged in trucking, Transportation Management Software (TMS) is the next major investment category for trucking companies.

TMS Software helps companies streamline their operations, from quote to cash.

TMS Software has advanced in many ways in the last 10 years, offering trucking companies of all sizes a solution that works for them.

To learn more about TMSes and Rose Rocket, visit www.roserocket.com





About Rose Rocket

Our Purpose

Founded in 2015 to solve efficiency, visibility, and collaboration challenges within the transportation industry.

Our People

130+ staff, with backgrounds in trucking & technology, with more than 60% of staff in Product and Engineering teams.

Our Product

Cloud-native TMS, built on a flexible architecture. Focused on connectivity, and customization, while SOC 2 Compliant.





THANK YOU