

# CSCMP hottopics

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## How Technology and Data will Help the Trucking Shortage

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First, starting out in trucking is hard, but technology makes it easier by reducing risk and the unknown

1

Second, technology is making life as a trucker easier by reducing stress and the hours spent away from home

2

Third, technology is simplifying the running (and growing) of a trucking business

3

About Convoy

4

Author

4

Footnotes

5



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The challenge of finding enough high quality and reasonably priced trucking capacity is as daunting as ever. The surging economy and rising consumer demand has created even more pressure. Earlier this year, *Wall Street Journal Logistics* [reported](#)<sup>1</sup> that one truck was available for every 12 loads needing to be shipped, making this the most unbalanced market since October 2005. The Federal Motor Carrier Safety Administration's April 2018 rule requiring most commercial truck drivers to record their hours of service via Electronic Logging Devices (ELDs) has tightened capacity further (by 5% to 8%, according to FTR Transportation Intelligence). Even though last year was tough, this year might be even tougher. A [report in MarketWatch](#)<sup>2</sup> stated that in December 2017, carriers charged an average 22% more than they did a year ago in the spot market.

All of this has reinforced the concern that there is not sufficient capacity in the marketplace.

In two parts, we're going to explore this issue, and specifically, how digital freight services are using new approaches based on advances in technology and data to help counter the capacity crunch:

Part 1 (this issue): Technology and data will help the industry be more attractive for drivers and carriers

Part 2 (next issue): Technology and data will make the drivers and carriers we have more efficient.

### **Trucking's challenges and how technology makes it more attractive for drivers and carriers**

A 2017 report from [The American Trucking Associations](#)<sup>3</sup> shows that fewer drivers are entering the industry and more are retiring/leaving. This is most pronounced amongst independent owner-operators and small trucking carriers (5 or fewer trucks), [with an annual turnover rate of 80%](#)<sup>4</sup> and an average age demographic that hovers around 50-years old.

There are a lot of factors contributing to this trend. Here are the three broad themes of the challenges and how technology and data are addressing them:

### **FIRST, STARTING OUT IN TRUCKING IS HARD, BUT TECHNOLOGY MAKES IT EASIER BY REDUCING RISK AND THE UNKNOWN**

Starting any new business is risky, and one of the biggest unknowns is usually who your customers are going to be. In trucking, this unknown is magnified because, as an owner-operator, not only do you not know who your customers are, but your schedule is unpredictable, making it hard to plan financially. Even after you pay the start up costs, consistently finding work (often while on the road), can be very stressful. Many owner-operators have to pay a brokerage or other dispatch service to help them find work, which takes a cut from their bottom line, or they have to build their business from the bottom up through relationships (or by

“It’s not just apps that are making things better, but it’s also the data and science under the hood that’s improving the situation.”

taking shipments that are especially hard, due to locations that aren’t close to where they are, or where they want to go). Even though drivers are generally in demand, there’s not a clear path for a new owner-operator to find the right lanes from the right shippers to fit their needs.

These challenges are being reduced significantly through the proliferation of affordable smartphones (including GPS and data working consistently beyond urban areas) and mobile apps that take advantage of that technology. For a new owner-operator, getting a steady stream of well-paying, ideally-located loads won’t depend on building up relationships with individual brokers or shippers, or by spending days with stressful calls back and forth negotiating. Convoy’s free app empowers any quality owner-operator to find truckloads quickly and easily at their fingertips through a few touches on their phone.

It’s not just apps that are making things better, but it’s also the data and science under the hood that’s improving the situation. Machine learning supports the creation of smart matching algorithms, recommending more and better-suited jobs for trucking companies. Not only can carriers easily find jobs, they can find jobs that match their location preferences, often as [ideal reloads](#)<sup>5</sup> or [backhauls](#).<sup>6</sup> Carriers using the Convoy app, get access to instant pricing and booking confirmation for personalized job offers, as well as the option to bid for jobs they really want but at a different price.

## SECOND, TECHNOLOGY IS MAKING LIFE AS A TRUCKER EASIER BY REDUCING STRESS AND THE HOURS SPENT AWAY FROM HOME

Most of an owner-operator and driver’s life is on the road, and that life can be challenging. The challenges make it hard for both the people driving the trucks and the carriers who have to keep them happy. Rules and regulatory pressures around truck drivers’ Hours of Service add another layer of stress. In addition to ELD enforcements (which materially impacts earnings - see Figure 1), one of the most common pain points is a lack of parking at many facilities. After driving potentially several hours to a facility, it can be maddening to not have a place to stop your truck. Further, even if they find parking, drivers often deal with long delays at facilities, which causes more frustration, and hurts their ability to earn money via other opportunities. For those who have scheduled their next pick up, delays can also harm their reputation by increasing the chance that they’ll be late. [DAT research](#)<sup>7</sup> shows that nearly 63% of drivers spend more than 3 hours at the shipper’s dock each time they load and unload, adding up to to more than 4 billion hours that truck drivers spend waiting at facilities each year. Michael Babak of Westland Trucking LLC emphasized this point, saying, “It’s just really frustrating. We work hard, and we have to be there on time. We should get paid if we’re waiting around.”



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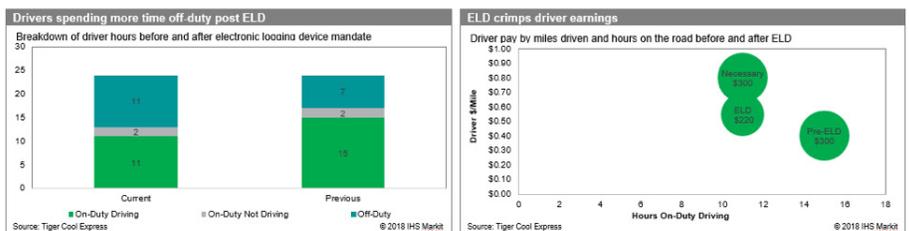


Figure 1

## About CSCMP Hot Topics

Issues of CSCMP Hot Topics may include early results from ongoing research being conducted for CSCMP or other organizations; new supply chain practices, thought-provoking ideas, or emerging trends; discussions of changes in the broader business and regulatory environment that may impact the supply chain and logistics field.



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As Greg Simmons 55-year old truck driver, shared in a 2017 [New York Times article](#)<sup>8</sup>:

*Everybody's constantly looking at the clock. If you get caught in a traffic jam for four hours, that's four hours of your productivity gone. Or if you go to pick up a load and these people take five and a half hours to load you, they've killed five and a half hours of your day. The clock's ticking, the clock's ticking. Got to go, man, got to go!  
The 14-hour rule has created an unnatural amount of pressure. For the young fellows, after two or three months, they say the hell with this.*

Beyond the regulations and delays, truckers are also forced to be on the road for extended periods of time, leading to [health issues](#)<sup>9</sup>, and other personal sacrifices. They are away from their families and friends most of the time; on average, small business truckers drive more than 115,000 miles per year (more than 3 million miles in their lifetime) [and spend more than 240 nights](#)<sup>10</sup> per year away from home.

Technology platforms like Convoy help with these issues in several ways: They not only are better at finding nearby jobs (reducing the number of empty miles and hours on the road), but they also inform shippers on the things they need to do to be more appealing to carriers - which in turn creates a better experience at the pick up and drop off locations. For example, carriers doing a 200-mile run may prefer picking up earlier in the day than carriers taking a longer run. A shipper with multiple facilities is also likely to uncover - through data - why drivers prefer (or avoid) specific facilities, and then make improvements based on the feedback. The data can be both quantitative (through automatically collected data) and qualitative (through driver feedback via an app). Driver feedback can shine a spotlight on the small things that can make a big difference. In one example, a facility got the highest marks among drivers by simply having fresh coffee ready for drivers as they pull in.

The data also disproportionately benefits the shippers that adopt these strategies, which fuels a positive virtuous cycle. Shippers who adopt best practices will get attention and preference from carriers, and they will gain a strategic advantage. Other shippers will be forced to do the same, and all drivers and carriers will benefit.

## THIRD, TECHNOLOGY IS SIMPLIFYING THE RUNNING (AND GROWING) OF A TRUCKING BUSINESS

Running a trucking business is a challenge. Often trucking companies wait weeks or even months to get paid, leading them to resort to factoring services that advance payment for a steep fee of 3%+ (equivalent to a 43% annual interest rate!). Managing paperwork and other administrative tasks also requires back-office support, adding to overhead costs. Many carriers can't grow their business beyond 3 or 4 trucks without paying for a back-office assistant. Taxes and equipment maintenance get expensive as well; according to the Owner-Operator Independent Driver Association (OOIDA), drivers typically pay in excess of \$10,000 in federal taxes and additional state taxes of more than \$6,000 per truck each year, and an average of \$14,000 in maintenance costs to maintain their equipment.

The pay makes the driver recruiting/retention challenge even tougher. After taxes and fees, the average owner-operator earns on average about \$40,000 per year, based on membership data from OOIDA, compared to better-paying blue-collar jobs which don't require someone to be away from home for weeks at a time.

“Technology and data is improving the capacity problem by making it easier to start in trucking.”



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Digital freight brokers are offering tech-enabled services that make it significantly easier to run a trucking business. Convoy, offers free QuickPay, whereby a carrier that uses the Convoy app to submit their signed BOLs will get paid within 24 hours of finishing a job. Carriers no longer have to deal with the headache and overhead of managing paperwork and tracking payments and pursuing delinquent accounts receivables. [Automated Detention](#)<sup>11</sup>, a recently-announced feature offered by Convoy, is another example of a tech-enabled solution that makes the business of trucking significantly easier. Before this, if a truck was delayed at a facility for over a certain number of hours, there would be an ugly, painful, and unpredictable negotiating process between the driver, the distribution center manager, the broker, the carrier, and potentially even more parties to resolve how much payment would be warranted. With Automated Detention, fueled by geo-fencing data and the app, Convoy simply pays the carrier for their wait time and then works out the payment with the shipper.

The above examples, in addition to other free tools like fleet tracking, help carriers manage multiple trucks, reduce overhead, and cut down paperwork. Together, these impacts can significantly lower both operating expense - and perhaps more importantly - the overall headache and stress of running a carrier business. The technologies improve carriers' and drivers' lives, which in turn will result in more drivers staying in the field, and more carriers growing their business.

In short, technology and data is improving the capacity problem by making it easier to start in trucking, making easier to stay in trucking, and making it easier to build a business around trucking.

In the next issue, we will cover how technology is creating capacity by making drivers more productive with fewer empty miles, fewer delays, and shorter wait times.

#### ABOUT CONVOY

With a mission to transport the world with endless capacity and zero waste, Convoy has built the world's largest network of tech-enabled trucks, with upfront pricing and real-time GPS tracking on all shipments. Through technology, Convoy connects shippers with reliable, flexible trucking capacity and delivers valuable business insights that help shippers improve operations and ship freight more efficiently. Convoy's free mobile app makes it easy for trucking companies to find jobs on demand and access free, custom tools that help them grow their earnings and reduce the amount of "empty miles" driven.

#### AUTHOR

Dan Lewis is the co-founder and CEO of Convoy. Before Convoy, Dan ran product development at Amazon, Microsoft and Wavii (acquired by Google). Dan started his career in technology and supply-chain consulting for Oliver Wyman, after studying cognitive science at Yale University.

#### FOOTNOTES

- <sup>1</sup> <https://www.wsj.com/articles/tight-trucking-market-has-retailers-manufacturers-paying-steep-prices-1515150000>
- <sup>2</sup> <https://www.marketwatch.com/story/trucking-adds-capacity-drivers-as-market-heats-up-2018-01-20>
- <sup>3</sup> <https://www.marketwatch.com/story/trucking-adds-capacity-drivers-as-market-heats-up-2018-01-20>
- <sup>4</sup> <http://www.trucking.org/article/Truckload-Turnover-Rate-Sinks-in-Final-Quarter-of-2017>
- <sup>5</sup> <https://convoy.com/blog/request-a-load>
- <sup>6</sup> <https://convoy.com/blog/request-a-load>
- <sup>7</sup> <https://www.dat.com/resources/white-papers/detention-survey-carriers>
- <sup>8</sup> <https://www.nytimes.com/2017/05/22/us/trucking-jobs.html>
- <sup>9</sup> <http://www.trucker.com/drivers/what-fitness-trends-will-attract-truckers>
- <sup>10</sup> <https://www.ooida.com/MediaCenter/trucking-facts.asp>
- <sup>11</sup> <https://convoy.com/blog/auto-detention/>



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