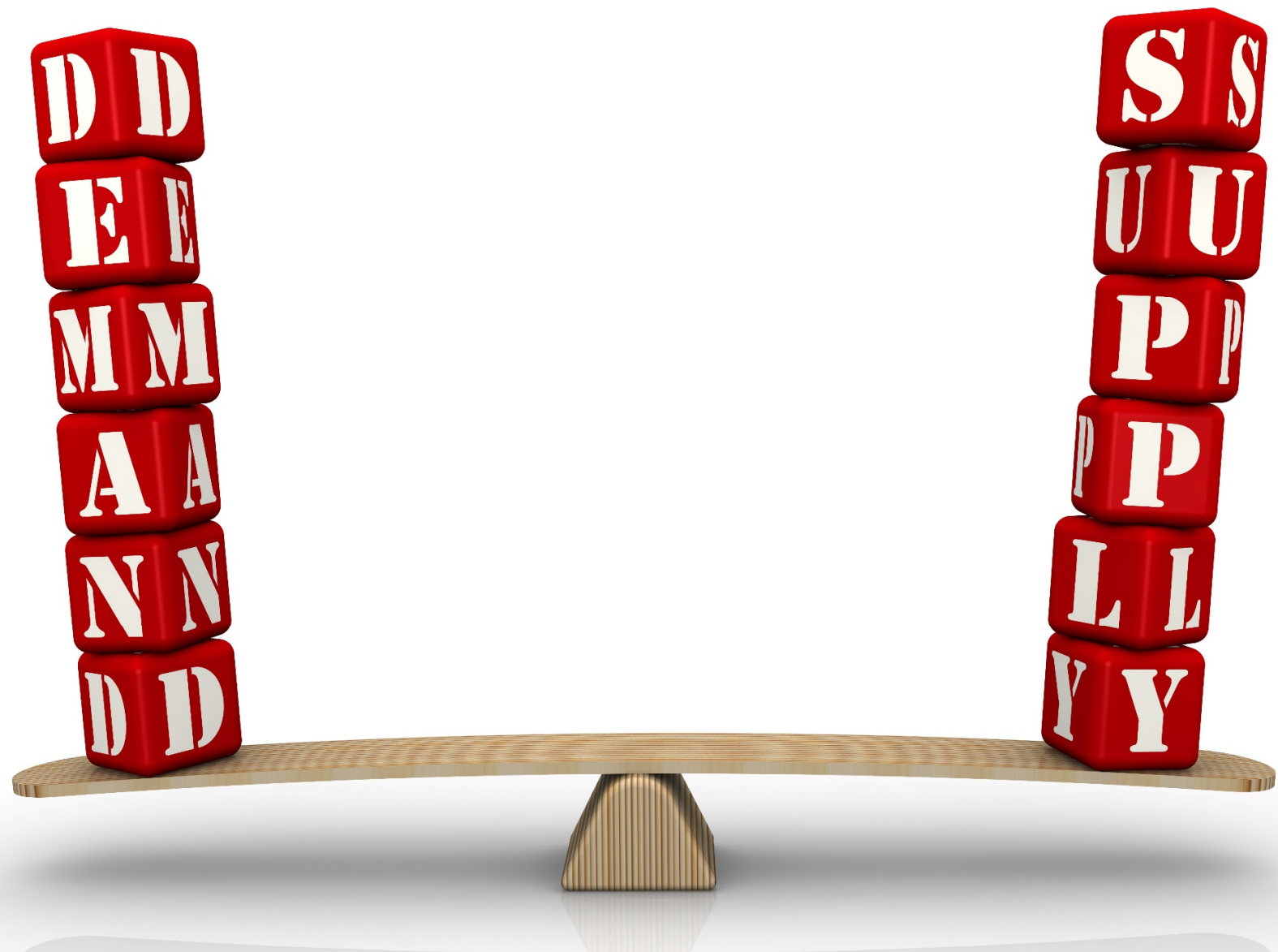


White Paper:

How Increased Technology Will Help Driver Retention

GTG Technology Group



GTG Technology Group, LLC builds software to manage global transportation management systems (TMS) for all sizes of intermodal brokerage, and drayage transportation companies. GTG is dedicated to providing TMS solutions designed to provide end-to-end visibility and connectivity. GTG's software is delivered as a Cloud-based Software as a Service and was engineered to help businesses in the transportation industry overcome their challenges faster, more cost effective, and more efficiently.

Contents

How Increased Technology Will Help Driver Retention.....	4
Emergence of the Trucker Shortage.....	5
Lower Driver Retention Rates Exacerbate the Shortage.....	6
Reason Behind Trucker Turnover Rates	7
Inefficiencies and Productivity Concerns.....	8
Trucker Health Issues.....	9
Technology Offers Hope to Increase Retention Rates.....	10
GPS Tracking	11
Electronic Logging Device.....	12
Telematics and Onboard Computers	13
Big Data	14
Dry Cab Amenities	15
Community-Based Mobile Apps	16
Health and Fitness Gadgets, Apps and Support.....	17
The Next Generation of Teamsters	18
Legal	19

How Increased Technology Will Help Driver Retention

The trucking industry is one that will always be in need of new drivers. The very nature of supply and demand in this country creates an ever growing need for transportation and competent truckers. However, turnover rates have recently become a significant issue. The industry is already suffering from a driver shortage, and the increasing turnover rates have left some fleets drastically short-handed. Without an improvement, the shortage will grow to the point of having a significant impact on our economy. Almost [70% of our nation's goods](#)¹ are shipped using trucks.

Our economy teeters on the edge of steep precipice. Unless efforts are made to replace the thousands of truckers needed, the economy may go over that edge. Thankfully, technology has entered the industry. The trucking industry has been given a wealth of technological advances over the past few years, and many think it may be a cure for the turnover rates – and consequently, the shortage.

¹ http://www.trucking.org/News_and_Information_Reports_Driver_Shortage.aspx

Emergence of the Trucker Shortage

[The trucker shortage](#)² first became evident in early 2009. Freight tonnage began skyrocketing, while the number of truck drivers began to plummet. The gap is partly due to ballooning transportation needs, as more and more people buy goods online. Between May of 2007 and May of this year, the amount of goods being shipped by freight increased by 15%. Meanwhile, truckers are becoming harder to recruit and retain. The trucking industry is already short an estimated 40,000 drivers, and that number continues to rise.

The American Trucking Association fears that number may reach 240,000 by 2023. The problem isn't due to any one specific cause, but rather [a combination of several factors](#)³. For one, recruiting young and viable drivers is an issue. The legal age for interstate truckers is 21, and by that time, most candidates are already in college or beginning another career. Likewise, the trucking industry isn't traditionally known as being tech-driven, and thus does not present much allure to jobseekers of the digital age. Currently, the median age for a driver is 42.3, and the industry is predominantly male.

Though some fleets have made efforts to recruit younger drivers and more women, modifying the trucks to be a more comfortable drive for those with smaller statures, the specs can cost up to \$130,000. Pair that with the fact that trucking isn't the most glamorous job – truckers work long hours on the road and are alone for the majority of the time – and it becomes obvious why the industry is facing such hardships. And recruiting new drivers isn't the only issue fueling the shortage.

² <http://www.businessinsider.com/american-truck-drivers-are-getting-squeezed-out-of-their-profession-2014-8>

³ <http://www.trucking.org/article.aspx?uid=ee5468d9-0b00-4e01-9f9b-42d970b1510c>

Lower Driver Retention Rates Exacerbate the Shortage

Driver retention rates have long been an issue, even before the trucker shortage became a problem. The trucking industry is huge, with about 2.9 million drivers alone. But that number isn't nearly enough to compensate for the billions of tons of freight shipped each year. The industry is notorious for its low retention rates. In fact, driver turnover has been a problem for so long that the issue has become a generally accepted one. There are a number of reasons the turnover rates are so high in the industry.

Beginning with the Motor Carrier Act of 1980, which deregulated the industry, trucking companies started saturating the marketplace. This led to increased competition and de-unionization, which ultimately resulted in lower wages and poor working conditions. A survey by the American Transportation Association Foundation found that what was most important to improving retention rates were company support, incentives, non-driving activities, and family time. Still, many trucking companies are facing a growing turnover rate. Last year, the turnover rate was still at a very high 95%.

Surprisingly, this number is actually low for the industry: the turnover rate usually averages about 130% annually. Unfortunately, even though the retention rate has improved somewhat, it has little impact on the increasing need for truckers. The demand for truckers continues to rise exponentially, and the retention rates cannot seem to keep up; but there's hope yet. Fortunately, many of the causes behind the turnovers are, in fact, repairable.

Reason Behind Trucker Turnover Rates

In addition to the need to attract new drivers, [retaining existing drivers](#)⁴ is the main concern of every fleet. A study conducted by Avatar Fleet found some of the factors contributing to turnover rates include:

- Workplace conditions, such as having too much work, inadequate supervision, and inadequate pay.
- Personal issues, like an inability to perform the job correctly.
- Activities and incentives are not enough to retain employees.
- A lacking sense of belonging.
- The job demands are too challenging.
- Benefits and compensation aren't enough.

⁴ <http://avatarfleet.com/pdf/Driver%20Turnover%20Costs,%20Causes%20And%20Solutions.pdf>

Inefficiencies and Productivity Concerns

The shortage is being felt throughout the industry: fleets are having to deliver more goods with less man power, and the truckers are the ones bearing the brunt. Long hours, inefficiency due to crumbling roads and long idling times, and miscommunications between shippers and receivers all affect a fleet's capacity. Likewise, tightening regulations are making it even harder for truckers to do their jobs. Truckers are capped out at 70 hours per week, which they could previously reset if they took 34 consecutive hours off from driving. Now, federal regulations prevent truckers from doing so.

As a result, many carriers must hire even more drivers just to move the amount of freight they did before the regulation. Productivity loss has led to smaller fleets being unable to pay for operations and maintenance, which leads to inadequate equipment. The combination of demanding freight needs and improperly maintained vehicles results in driver violations, and of course, that can lead to license revocation. Unfortunately, it's an issue that fuels itself, unless efforts are made to increase efficiency.

Trucker Health Issues

Additionally, health concerns are a major issue [behind the high turnover rate](#)⁵. Because truckers drive for such long hours, they face very real health concerns. Trucking is a sedentary job, and healthy eating options are hard to find on the road. It's so easy to gain weight as a trucker that nearly 73% of truckers are overweight, and 50% are obese. Heart attacks, sleep deprivation, and strokes are all serious health risks that are prevalent in the industry.

Truckers have been asking for solutions to some of the factors behind the health risks, but it's only recently that the industry has provided answers. Technology seems to be the shining beacon of hope, delivering solutions to health risks, inefficiencies, and other reasons for turnover.

⁵ http://www.memphis.edu/ifti/pdfs/cifts_examining_driver_turnover.pdf

Technology Offers Hope to Increase Retention Rates

The influx of technology in the trucking industry could not have come at a more opportune time. GPS, E-logs, onboard computers, big data, and trucker health monitoring devices have taken the trucking industry out of the past, and opened up a more promising future. Not only does this technology attract new, younger drivers, but it also makes life on the road easier for existing ones.

GPS Tracking

One of the oldest of the new technologies, GPS has greatly increased the efficiency and safety of the trucking industry. Traditionally, truckers relied on paper maps to plan their routes and destinations. This was time consuming and inefficient, and obviously affected a fleet's ability to keep up with demands. Primitive GPS systems allowed truckers to get from A to B with less effort. GPS systems continue to evolve and benefit the industry, with tracking systems becoming the newest big thing.

Many fleets have already implemented trackers to monitor fuel usage, routes, and manage their vehicles more closely. With tracking systems, fleet managers can see where any given vehicle is wasting fuel, whether because of idling or improper vehicle use, and plan out a new route. This increases fleet efficiency while decreasing fuel costs. As shipping volume increases over the next several years, GPS tracking offers a solution to the demand for better management.

Electronic Logging Device

The Federal Motor Carrier Safety Administration is working diligently on the rule that will [mandate ELDs](#)⁶ (electronic logging devices) in freighters. The mandate is expected to be published by October 30th, and fleets will have two years to comply. E-logs have significantly changed the way drivers operate. Before this technology, teamsters were required to be compliant with HOS (hours of service) limitations.

To do this, they had to keep complex paper logs of their drive times, duty status, and any changes in status. HOS violations were commonplace in the industry, whether due to truckers driving longer than they should, losing paperwork, or other reasons. Now, E-logs automatically [manage this type of information](#)⁷. Many ELD systems are integrated into the trucks engine, where they collect information about how the vehicle is used.

Most systems transfer this data, along with data inputted manually by the driver, directly to the fleet manager in real-time. Some of the more advanced systems also integrate GPS technology as well, which helps truckers [avoid issues on the road](#)⁸. ELDs manage information like driver behavior and driver inspection reports, meaning they have significant safety applications. Safety will always be a main concern in the trucking industry, and ELDs provide an effective measure for compliance.

⁶ <http://eldfacts.com/eld-mandate/>

⁷ [http://www.teletrac.com/teletrac.com/assets/whitepaper_f%20\(2\).pdf](http://www.teletrac.com/teletrac.com/assets/whitepaper_f%20(2).pdf)

⁸ <http://www.usfleettracking.com/blog/2015/02/02/gps-trackers-will-improve-trucking-industry/>

Telematics and Onboard Computers

An advance in onboard computing is one of the most exciting [technologies to enter the industry](#)⁹. Like ELDs, onboard computers monitor how the vehicle is being driven. They share data with the fleet manager that can be used to increase efficiency. However, many fleets have taken this technology a step further.

Advanced telematics rely on the devices inside the truck communicating with each other. Sensors in the vehicle, GPS systems, ELDs, and other devices work together to create an overall view of the vehicle. Some fleets use integrated telematics software to monitor vehicle maintenance and mechanical issues. Others use a separate management system. Either way, these systems monitor the health of the vehicle and report data in real time to fleet managers. They're designed to warn the driver of engine failure before it happens and can be remotely diagnosed by a specialist.

Detroit Connects' Virtual Technician is one such system. Data from the vehicle is sent directly to factory technicians, who can diagnose the vehicle and order the necessary parts right away. Traditionally, drivers would have to pull over to avoid engine failure and wait to schedule a service appointment. Now, these systems deliver diagnostic information immediately and warn fleet managers when it's time for preventative maintenance to avoid engine failure altogether. Remote analysis cuts down on diagnostic times by 70% and repair times by 20%. Of course, these systems significantly increase driver safety, as well.

⁹ <http://www.ttnews.com/articles/printopt.aspx?storyid=35068>

Big Data

All of these technologies combined create the ultimate buzzword today in the trucking industry: Big Data. Working together, these technologies [deliver a wealth of information](#)¹⁰ that benefits drivers, fleet managers, and even companies on the receiving end of the freight. C.R England was one of the first fleets to install these multi-purpose monitoring systems in every one of its trucks. The in-cab systems track driving times, fuel efficiency, vehicle location and health, and safety risk factors.

The information is delivered in real time to fleet managers who make decisions for the driver or change the route. For example, if the system reports unsafe driver behavior, the fleet manager can address the issue immediately. If it shows heavy traffic on any given route, the manager can plan a different one. These systems also reduce deadheading, or the time drivers spend in empty vehicles between unloading and reloading.

Because they monitor workflow, cargo, and delivery statuses, managers can [pinpoint and eliminate inefficiencies](#)¹¹. This allows drivers to do more with their time and allows fleets to meet increasing demands with a limited amount of drivers. It also cuts down on driver fatigue and empty hours sitting in traffic or at loading docks.

¹⁰ <http://www.fleetequipmentmag.com/digging-diagnostics-sifting-onboard-data-put-fleet-analytics-work/>

¹¹ <http://www.forbes.com/sites/emc/2014/03/04/how-big-data-is-changing-long-haul-trucking/>

Dry Cab Amenities

Many fleets are taking technology to the dry cab to attract new drivers. Western Express recently added satellite TV systems in [1,600 of its freighters](#)¹². Because truckers don't always have a place to park that offers Wi-Fi, satellite TVs let them watch TV anytime and anywhere. The trucks were equipped with 24 inch TVs, DVRs, and satellite antennas. The company feels this is a big step to increasing driver retention and attracting new hires. C.R England added aesthetic features, like wood grain finishes and leather interiors to their line of Western Star trucks. Over the past several years, fleets have recognized the importance in making sure their drivers have all the comforts of home in their trucks.

¹² <http://www.truckersnews.com/western-express-adds-satellite-tv-to-1600-trucks/>

Community-Based Mobile Apps

Supplemental mobile device apps have also become increasingly popular in the industry. They're changing the way truckers communicate with each other and fending off long, lonely hours on the road. Waze, a community-based app, helps teamsters navigate their route based on what other drivers are sharing.

Drivers circulate information like traffic jams, accidents, road hazards, gas prices, and other information. It's a type of social GPS created by and for truckers. Other apps, like the popular TruckerPath, provide information on truck stops, weigh stations, rest areas, restaurants, and entertainment. Haulers use it to see if a weigh station is closed before arriving or to find detailed information on an upcoming truck stop.

[Trucker Tools](#)¹³ is a similar app, but it integrates information like up-to-date weather, truck stops with private showers and wireless internet, and lowest gas prices. It has a voice activated feature so truckers can leave messages for each other on a community forum as well as a live chat option to talk with other drivers. [Community-based apps](#)¹⁴ like these let truckers stay on the same page and take the edge off of those lonely long hauls.

¹³ <https://play.google.com/store/apps/details?id=com.salebug.truckstop&hl=en>

¹⁴ <http://northdixietruck.com/643/>

Health and Fitness Gadgets, Apps and Support

Lastly, the tech world has delivered many solutions addressing health concerns. Between wearable technology and integrated fitness apps, truckers can monitor everything from their eating habits to their daily exercise. Apps like Lose It work like a calorie budgeting system, managing caloric intake and expenditure, complete with a graph that displays weight loss progress. Diet Assistant provides customized diet plans, along with grocery lists and meal suggestions, to encourage [healthy eating on the road](#)¹⁵.

Wearable technology, like Jawbone and the Nike Fuelband, track physical activity throughout the day. These devices offer [exercise recommendations](#)¹⁶ and analyze sleep patterns for any issues that can be resolved. The Rolling Strong app for iPhone was created specifically for truckers and provides a database for clinics, health check areas, and coaching lessons nearby.

In an effort to address trucker health, Travel Centers of America and Petro have recently expanded their StayFit program, available in 42 states across the nation. The program offers healthy to-go meal alternatives and fresh produce in store. 57 locations have free fitness rooms, 51 have basketball courts, and 150 have mapped walking and jogging trails. Truck driver health has long been a major concern, but finally, truckers have the answers they've been seeking.

¹⁵ <https://www.thehealthytrucker.net/truck-driver-health-risks/>

¹⁶ <http://www.atbsshow.com/weightlossappsfortruckers/>

The Next Generation of Teamsters

The solution to increasing driver retention rate won't come with a black and white answer, but rather a group effort to bring the industry into the modern age. While the shortage remains an issue, and the aging infrastructure of our nation's roads looms overhead, technology has brought *some* light to the situation.

Working together, onboard computers, big data and telematics, supplemental apps, health support, and driver amenities have resulted in significant improvements to the trucking industry. Already, efficiency and safety ratings have improved thanks to these technologies. Retention rates seem to be on the upswing, and the future of the industry looks brighter every day.

Legal

Copyright ©2015 GTG Technology Group. All Rights Reserved.

GTG Technology Group logos, and trademarks or registered trademarks of GTG Technology Group or its subsidiaries in the United States and other countries.

Other names and brands may be claimed as the property of others. Information regarding third party products is provided solely for educational purposes.

GTG Technology Group is not responsible for the performance or support of third party products and does not make any representations or warranties whatsoever regarding quality, reliability, functionality, or compatibility of these devices or products.