

CRITICAL ISSUES IN THE TRUCKING INDUSTRY – 2018



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American Trucking Associations

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Critical Issues in the Trucking Industry – 2018

The strengthening economy and robust freight demand have made 2018 a strong year for the trucking industry. However, the economic activity fueled, in part, by federal tax reform has not been without challenges for motor carriers and professional drivers. The driver shortage continues to exacerbate industry capacity and the questions of how to fund transportation infrastructure continue to go unanswered, leaving roads in a state of disrepair and congestion levels at all-time highs.

The implementation of the Electronic Logging Device (ELD) mandate at the end of 2017 has allowed trucking industry stakeholders to shift to other issues on the legislative and regulatory agenda, such as the Federal Motor Carrier Safety Administration's (FMCSA) Hours-of-Service (HOS) provisions, tolls, and the federal preemption of state regulation of interstate trucking (F4A).

The long-running economic expansion gained momentum in 2018 with the passage of significant corporate and personal tax cuts in December 2017. Due to this growing economic activity, the trucking industry is thriving in a business environment characterized by strong demand for freight and industry capacity constraints.¹ These capacity constraints, attributable to shipper demand exceeding truck volume capacity and truck driver availability, have resulted in substantial increases in driver compensation – pay,² benefits, and bonuses³ – as well as commensurate increases in the rates charged to shippers.⁴ With the economic consequences of the driver shortage and growing levels of driver turnover clearly articulated, the capacity constraints have provided national attention to these critical trucking industry issues.

Moreover, driver turnover has continued to impact fleet operations. The structural, demographic factors that underpin the truck driver shortage crisis remained firmly in place over the past year, and viable solutions to this pervasive staffing challenge have been slow to emerge. One potential solution – the DRIVE-Safe Act – was proposed this year in the U.S. House of Representatives. This legislation proposes to create an entry-level path for truck drivers between the ages of 18 and 21.⁵ While the potential implementation of such a policy may mitigate the effects of an aging truck driver workforce by recruiting younger drivers to the industry, its deployment will require strong industry and government partnerships to ensure success.

¹ Clevenger, Seth. "Strongest Trucking Market in History Has Legs, ATA's Bob Costello Says." Transport Topics. July 25, 2018. Available online: <https://www.ttnews.com/articles/strongest-trucking-market-history-has-legs-atas-bob-costello-says>.

² "Several Carriers Fine-Tune Compensation in Face of Driver Shortage." Transport Topics. July 16, 2018. Available online: <https://www.ttnews.com/articles/several-carriers-fine-tune-compensation-face-driver-shortage>.

³ "ATA Driver Compensation Study." American Trucking Associations. March 2018.

⁴ Black, Thomas. "There Aren't Enough Truckers, and That's Pinching U.S. Profits." February 9, 2018. Available online: <https://www.bloomberg.com/news/articles/2018-02-09/there-aren-t-enough-truckers-and-that-s-pinching-u-s-profits>.

⁵ Abt, Neil. "Proponents say DRIVE-Safe Act will create safe way to bring in younger drivers." FleetOwner. March 26, 2018. Available online: <https://www.fleetowner.com/driver-management/proponents-say-drive-safe-act-will-create-safe-way-bring-younger-drivers>.

The final implementation of FMCSA's ELD mandate on December 18, 2017 ended a heated debate within the trucking industry that made its way all the way to the U.S. Supreme Court.⁶ Since implementation, the industry's focus has quickly shifted to the closely related issue of HOS reform. In response, FMCSA issued an Advanced Notice of Proposed Rulemaking (ANPRM) in August seeking public comment on several HOS provisions, including split sleeper-berth, in an effort to add more flexibility to the regulations.⁷

The trucking industry has also had to fend off the expansion of tolls, targeted specifically at trucking, to fund much-needed infrastructure improvement. Rhode Island, for instance, imposed tolls on out-of-state tractor-trailers to fund a \$5 billion program to repair and upgrade roads and bridges throughout the state.⁸ While Rhode Island is currently being sued by the trucking industry over this funding approach, a similar plan was recently announced in Indiana. The state's proposed \$1 billion infrastructure plan will rely on an increase in the rates charged to trucks classified as Class 3 and above on the Indiana Toll Road.⁹

Given these and numerous other issues impacting the nation's freight system, the American Trucking Associations (ATA) and its Federation partners in the State Trucking Associations (STA) continually seek opportunities to identify and prioritize the industry's most pressing concerns. For the past 14 years, the industry has relied on the American Transportation Research Institute's (ATRI) annual survey to better understand trucking's most critical issues as well as to identify preferred strategies for addressing these issues.

ATRI's Top Industry Issues report is based on a robust survey methodology. The initial issues and potential strategies are first identified by a collaboration of various trucking stakeholder groups. ATRI then conducted a large-scale survey distribution using its own contact database, ATRI's regular Sirius/XM radio shows, major trucking industry trade press, and through the 50 State Trucking Associations.

Survey respondents were asked to select their top three choices from the list of 26 critical issues, and subsequently rank their top three preferred strategies corresponding to each selected issue.

As evidence of the numerous and varied challenges currently facing the industry, this year's survey generated 1,539 responses. Respondents represented industry stakeholders across North America. A plurality of respondents were motor carriers (47.5%), with commercial drivers making up 41.3 percent of the respondent pool, and other industry stakeholders accounting for 11.2 percent. Recognizing that the top

⁶ "Supreme Court Denies Hearing on ELD Lawsuit." Transport Topics. June 12, 2017. Available online: <http://www.ttnews.com/articles/house-rejects-bid-delay-dec-18-eld-mandate>

⁷ Miller, Eric. "FMCSA Seeks Industry Comment on Several Potential HOS Changes." Transport Topics. August 21, 2018. Available online: <https://www.ttnews.com/articles/fmcsa-seeks-industry-comment-several-potential-hos-changes>.

⁸ Seay, Bob. "Rhode Island Sued Over Truck Tolls." WGBH. August 7, 2018. Available online: <https://www.wgbh.org/news/local-news/2018/08/07/rhode-island-sued-over-truck-tolls>.

⁹ Lamb, Eleanor. "Trucks Targeted for Toll Increase in Indiana's Infrastructure Plan." Transport Topics. Available online: <https://www.ttnews.com/articles/trucks-targeted-toll-increase-indianas-infrastructure-plan>.

industry issues impact motor carriers and commercial drivers differently, this report includes separate “Top Ten” lists specific to commercial drivers and motor carriers, in addition to the overall ranking.

This report presents the findings of the 2018 annual survey and analysis, and compares the findings of previous years’ results (Table 3) – providing insight into both the changing and emerging priorities of the trucking industry.

Top Issues Summary

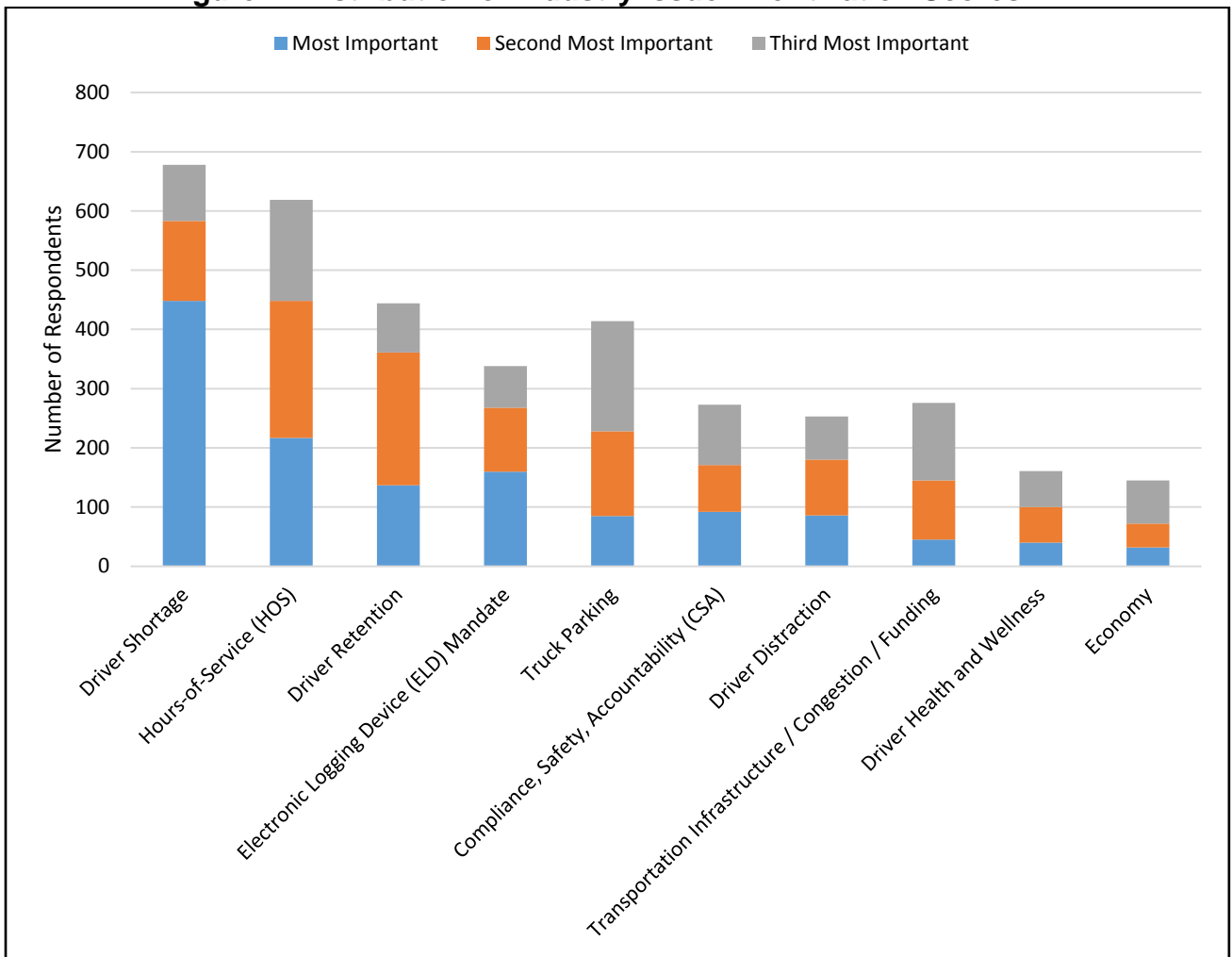
Among all respondents, the Driver Shortage held firmly atop the list of industry concerns while the potential for regulatory reform boosted the profile of the HOS rules as the second most-critical industry issue. Given the capacity constraints exacerbated by shortage of drivers, Driver Retention moved up two spots to become the number three issue in 2018. Post-implementation, the ELD mandate dropped two spots this year to the number four issue and the lack of safe parking locations for trucks moved down one spot to round out this year's top five issues (Figure 1).

ATRI develops the "Top Ten" list using a formula assigning quantitative values to respondents' rankings of issues facing the industry. An issue that is ranked by a respondent as most important receives three points, while an issue ranked second receives two points and an issue ranked third receives one point. Issues that were not ranked by respondents do not receive any points.

The total number of points for each issue are used to generate a prioritized list of industry concerns. The issue with the highest number of points is identified as the top industry issue and an Industry Concern Index (ICI) is presented to illustrate the relative level of concern from one issue to the next. The Top Industry Issue receives an ICI of 100, and then all other issues are indexed against this value. For example, if an issue receives an ICI of 50, it was calculated to have half the level of concern as the top issue.

Each respondent was asked to rank three strategies to address their top three issues. The strategies were identified by trucking stakeholders for their potential to impact or mitigate each industry challenge. Values were assigned to respondents' rankings for each of the three strategies and an average score is calculated based on all of the rankings to determine the most preferred strategy.

Figure 1: Distribution of Industry Issue Prioritization Scores



1. Driver Shortage

Ranked 1 st 29%	Ranked 2 nd 9%	Ranked 3 rd 6%	Total Share 39%	Industry Concern Index 100
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The Driver Shortage, a perennial top industry issue, ranked as the industry's top concern for the second consecutive year in 2018. Growing demand for truck transportation over the past year has exacerbated industry capacity constraints as carriers continue to struggle with recruiting and retaining a qualified truck driver workforce. The current driver shortage, which the American Trucking Associations (ATA) estimates to be over 50,000 drivers,¹⁰ and the competitive freight market have served to boost driver pay¹¹, benefits, and bonuses¹² over the past year.

Proposed Strategies (in rank order):

a) *Advocate for Congress and federal agencies to develop an apprenticeship program to attract, train and retain safe 18-20-year-old interstate drivers to the industry.* With 28 percent of truck drivers age 55 and older,¹³ the aging demographic of the trucking industry's workforce puts significant pressure on the industry to increase the available pool of qualified truck drivers. To combat the pending wave of driver retirements, nearly half of respondents (47.5%) indicated that the industry must continue to work with state and federal authorities to attract a new generation of qualified drivers to the industry. This strategy gained some traction this year with the introduction of the DRIVE-Safe Act to the House of Representatives. The DRIVE-Safe Act would lower the interstate commercial truck driving age to 18 in concert with on-the-job training for these potential new entrants to the trucking industry.¹⁴

However, there are some who feel that the industry's focus on recruiting younger drivers may create additional safety concerns. To this end, ATRI is currently researching how to identify and recruit safe, younger drivers to the trucking industry.¹⁵ Building from a volume of research that has identified the characteristics associated with both safe and unsafe driving habits, this research seeks to develop an assessment tool the trucking industry can use to identify younger individuals whose personality traits more closely mirror those of safe, older drivers. ATRI's Driver Safety Assessment tool is currently being tested on experienced truck drivers to validate its efficacy.

b) *Work with the U.S. Department of Transportation and the Department of Labor to harmonize regulations with the White House efforts to expand apprenticeships and*

¹⁰ Kingston, John. "ATA's Costello projects out the driver shortage, and it's a big number." Freight Waves. April 3, 2018. Available online: <https://www.freightwaves.com/news/driver-shortage-ata-estimates>.

¹¹ "Several Carriers Fine-Tune Compensation in Face of Driver Shortage." Transport Topics. July 16, 2018. Available online: <https://www.ttnews.com/articles/several-carriers-fine-tune-compensation-face-driver-shortage>.

¹² "ATA Driver Compensation Study." American Trucking Associations. March 2018.

¹³ Current Population Survey (CPS) 2016. U.S. Census Bureau and Bureau of Labor Statistics.

¹⁴ "H.R. 5358: DRIVE-Safe Act." GovTrack. Last updated August 27, 2018. Available online: <https://www.govtrack.us/congress/bills/115/hr5358/summary>.

¹⁵ Boris, Carolina and Monica Luciana. "Developing a Younger Driver Assessment Tool Technical Memorandum #1." American Transportation Research Institute. Arlington, VA. August 2017.

other workforce development initiatives in the trucking industry. With truck driving projected to be one of the occupations with the most job growth between 2016 and 2026, recruiting a steady flow of new drivers into the industry workforce will prove essential in the years ahead.¹⁶ Further corroborating the industry's significant recruiting needs is the estimated 898,000 new truck drivers that will be needed over the next decade, half of whom are needed just to *replace* retiring truck drivers.¹⁷ As such, one-third of respondents believe that the industry should focus on workforce development initiatives in concert with the U.S. Department of Labor and Department of Transportation to meet the industry's growing workforce needs.

c) *Collect and analyze safety performance data on 18-20 year olds who operate commercial vehicles intrastate.* Current law allows 18-20 year olds to operate commercial vehicles within state borders in 48 states. This means that a commercial driver 18-20 years of age can drive from Miami to Tallahassee, Florida (482 miles) but that same driver is not legally allowed to drive from Tallahassee, Florida to Thomasville, Georgia (34 miles). To better understand the real-world driving experience of commercial drivers 18-20 years old, 19.7 percent of respondents believe that research on the safety performance of those drivers would better inform the discussion of lowering the age for an interstate CDL.

¹⁶ "Occupations with the most job growth." United States Department of Labor, Bureau of Labor Statistics. Last updated April 11, 2018. Available online: <https://www.bls.gov/emp/tables/occupations-most-job-growth.htm>

¹⁷ Costello, Bob. "Truck Driver Shortage Analysis 2017." American Trucking Associations. Arlington, VA. October 2017.

2. Hours-of-Service (HOS)

Ranked 1 st 14%	Ranked 2 nd 15%	Ranked 3 rd 11%	Total Share 40%	Industry Concern Index 75.1
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HOS is a top-three industry issue for the eighth consecutive year in 2018, as the final implementation of FMCSA’s ELD mandate in December 2017 has underscored the industry’s desire for increased flexibility in the current HOS provisions. The industry has continued to push for increased flexibility in the current sleeper berth provision over the past year, which was ranked as the top strategy to address HOS issues in 2017. These efforts have culminated in FMCSA’s ANPRM seeking comment on several HOS provisions, including split sleeper-berth.¹⁸

Proposed Strategies (in rank order):

a) *Continue to push for increased flexibility in the current sleeper berth provision.* Added flexibility in the current sleeper berth rule was selected as the top strategy by a majority of respondents (54%). The current rule specifies that drivers using the provision must take at least eight consecutive hours in the sleeper berth, plus a separate two hours in either the sleeper berth, off duty, or any combination of the two.¹⁹ Additional flexibility in the rule would allow drivers to rest when tired and would provide an opportunity for drivers to adjust their driving schedules to avoid some of the worst congestion chokepoints. A recent ATRI study into the latter point identified potential productivity gains and industry operational cost savings (\$150+ million) by using a more flexible 6-4 split rest schedule to avoid operating during peak traffic congestion.²⁰ FMCSA also has a pilot study underway assessing how more flexible split-rest provisions affect driver safety and fatigue.²¹

b) *Research and quantify the true safety and economic impacts of customer detention on truck drivers and trucking operations.* Concern over the adverse safety and economic impacts of driver delays at customer facilities resulted in 37 percent of respondents selecting this as the top strategy. This follows the release of the U.S. DOT Office of Inspector General’s (OIG) audit of customer detention impacts, which found that dwell time increased crash risks and also reduced incomes for drivers and motor carriers in the for-hire sector.²² However, the OIG’s report also emphasized the lack of

¹⁸ Miller, Eric. “FMCSA Seeks Industry Comment on Several Potential HOS Changes.” Transport Topics. August 21, 2018. Available online: <https://www.ttnews.com/articles/fmcsa-seeks-industry-comment-several-potential-hos-changes>.

¹⁹ Federal Motor Carrier Safety Administration. “Summary of Hours of Service Rules.” Last updated March 9, 2017. Available online: <https://www.fmcsa.dot.gov/regulations/hours-service/summary-hours-service-regulations>.

²⁰ Short, Jeffrey. “Technical Memorandum: Hours-of-Service Flexibility.” American Transportation Research Institute. Arlington, VA. August 2018.

²¹ Michel, Nicole. “Overview of FMCSA Pilot Programs: Flexible Sleeper Berth and Military Under-21 Studies.” U.S. Department of Transportation, Federal Motor Carrier Safety Administration. January 9, 2018. Available online: <https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/safety/research-and-analysis/research/395151/michel-trb-pilot-program-overview-final-508c.pdf>.

²² “Estimates Show Commercial Driver Detention Increases Crash Risks and Costs, but Current Data Limit Further Analysis.” U.S. Department of Transportation, Office of Inspector General. January 31, 2018. Available online: <https://www.oig.dot.gov/sites/default/files/FMCSA%20Driver%20Detention%20Final%20Report.pdf>.

accurate data on driver detention, and recommends improving future data collections to facilitate further study of driver detention issues. The ELD mandate may provide the opportunity for collecting this data in a more robust way than has been done in the past. Additionally, ATRI has collected commercial driver input on detention impacts on safety, productivity and HOS compliance and will publish the results of this study in early 2019.

c) *Analyze how HOS rules might be modified for highly automated trucks, and identify what research and data would be necessary to justify future rules changes.* The U.S. Department of Transportation recently issued updated guidance on the deployment of highly automated vehicles.²³ As the federal and state role in highly automated vehicles continues to evolve, 10.7 percent of respondents believe that it will be important to define what changes might be necessary to the HOS rules once drivers are operating highly automated trucks. The current rules were developed to ensure adequate off-duty time for truck drivers operating large vehicles requiring full driver attention.²⁴ However, ATRI is conducting additional research into how these rules might be amended to allow for increased flexibility as more advanced automated technologies are adopted.

²³ "Preparing for the Future of Transportation." U.S. Department of Transportation. October 11, 2018. Available online: <https://www.transportation.gov/av/3>.

²⁴ Short, J., and Dan Murray. "Identifying Autonomous Vehicle Technology Impacts on the Trucking Industry." American Transportation Research Institute. Arlington, VA. November 2016.

3. Driver Retention

Ranked 1 st 9%	Ranked 2 nd 15%	Ranked 3 rd 5%	Total Share 29%	Industry Concern Index 55.1
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With a strong economy bolstering demand for both truck capacity and truck drivers, Driver Retention has continued to move up the list of critical industry issues. Driver turnover increased through the first half of 2018, particularly at large truckload carriers, and the industry is on pace to have the highest annual turnover rate since 2013.²⁵ To combat turnover, which dramatically increases recruitment and training costs, motor carriers continue to seek new retention strategies, including raising sign-on and retention bonuses.²⁶

Proposed Strategies (in rank order):

a) *Research the relationship between driver compensation models and driver productivity.* While driver pay is only part of the equation, it plays a leading role in maintaining and/or enhancing driver satisfaction. However, understanding the various truck driver compensation models and their relationship to driver productivity and retention is a necessary first step in advancing the most appropriate compensation schema. 48.3 percent of respondents believe an analysis of driver compensation approaches to be the best strategy for addressing Driver Retention.

b) *Study the effectiveness of carrier retention programs that financially incentivize drivers for performance in the areas of safety, fuel economy, and trip productivity.* Financial incentive systems that award the safest and most productive drivers in a fleet may potentially boost driver retention; performance-based bonuses, in particular, could also improve overall fleet safety and productivity as more truck drivers in a fleet work toward receiving the bonuses. ATRI’s latest Operational Costs of Trucking analysis found that motor carriers paid drivers an average of \$1,317 in safety bonuses in 2017, while drivers awarded on-time delivery bonuses received \$2,542.²⁷ 33.4 percent of respondents believe that understanding the role of such bonuses in driver retention is an important step in mitigating driver turnover.

c) *Create an online compendium of retention strategies and best practices, customizable by carrier fleet size and sector.* Once research into the effectiveness of carrier retention programs and compensation models has been completed, it will be important to establish a centralized repository for this information to facilitate the adoption of the best retention strategies and practices. Accordingly, roughly one-fifth of respondents (18.2%) indicated that compiling the results of this research was their preferred strategy to address the Driver Retention problem.

²⁵ Gilroy, Roger. “Driver Turnover Rises 4% at Large Truckload Fleets, ATA Reports.” Transport Topics. October 3, 2018. Available online: <https://www.ttnews.com/articles/driver-turnover-rises-4-large-truckload-fleets-ata-reports>.

²⁶ “ATA Driver Compensation Study.” American Trucking Associations. March 2018.

²⁷ Hooper, A., and Daniel Murray. “An Analysis of the Operational Costs of Trucking: 2017 Update.” American Transportation Research Institute. Arlington, VA. October 2017.

4. Electronic Logging Device (ELD) Mandate

Ranked 1 st 10%	Ranked 2 nd 7%	Ranked 3 rd 5%	Total Share 22%	Industry Concern Index 44.8
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After full implementation of the ELD Mandate at the end of 2017, concern over the mandate’s implications have begun to abate, dropping this issue two places to fourth overall in 2018. In the first full year of the mandate, the industry is beginning to assess how ELD deployment is affecting industry safety and productivity, while some concerns remain regarding how the data collected may be used beyond HOS compliance.

Proposed Strategies (in rank order):

a) *Research and quantify industry impacts on safety and productivity from full deployment of ELDs.* A majority of respondents (55.3%) indicated that further research is needed in order to fully assess the industry impacts of ELDs. In its Regulatory Impact Analysis, FMCSA projected that the industry would save \$2.44 billion in administrative costs and save 31 lives annually.²⁸ Additional research is needed that utilizes more robust ELD data to help the industry and FMCSA understand if the estimated benefits have been realized.

b) *Assess the extent and impact associated with growing requests for ELD exemptions.* As the April 1, 2018 hard enforcement date for the ELD Mandate approached, there were petitions filed with the agency by various industry groups requesting exemptions from the mandate. Included in these petitions was one submitted by agricultural haulers who were successful in obtaining a temporary exemption, and legislation has been proposed to make this exemption permanent.²⁹ As a result, nearly one-quarter of respondents (24.3%) selected assessing the extent and impact of these exemption requests as their top strategy in relation to the ELD Mandate.

c) *Assess the landscape of appropriate and inappropriate uses of newly available ELD data.* Given the scope of information that ELDs are capable of tracking and the scale of their adoption, concern remains regarding how this information will be used beyond the stated purpose of logging HOS. While language in FMCSA’s final rule prohibits driver harassment and provides a channel for drivers to file a complaint regarding harassment,³⁰ 21.8 percent of respondents indicated a desire to establish limitations on the use of ELD-generated data.

²⁸ “Electronic Logging Devices and Hours of Service Supporting Documents.” U.S. Department of Transportation, Federal Motor Carrier Safety Administration. Available online: <https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/ELD%20Final%20Rule.pdf>.

²⁹ Straight, Brian. “ELD ag exemption’s fate tied to government funding deadline.” FreightWaves. September 28, 2018. Available online: <https://www.freightwaves.com/news/federal-regulation/eld-ag-exemption-expiring>.

³⁰ “Electronic Logging Devices and Hours of Service Supporting Documents.” Federal Motor Carrier Safety Administration. Washington DC. December 16, 2015. Available online: <https://www.gpo.gov/fdsys/pkg/FR-2015-12-16/pdf/2015-31336.pdf>.

5. Truck Parking

Ranked 1 st 6%	Ranked 2 nd 9%	Ranked 3 rd 12%	Total Share 27%	Industry Concern Index 42.5
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The growing scarcity of available truck parking creates a dangerous and costly dilemma for truck drivers who are often forced to drive beyond allowable HOS rules or park in undesignated and, in many cases, unsafe locations. The Federal Highway Administration (FHWA) is preparing this year to update the original 2015 *Jason's Law Truck Parking Survey Results and Comparative Analysis*,³¹ which confirmed that the lack of safe truck parking continues to be a major issue in the United States. FHWA has indicated that the new survey will include drayage and short-haul drivers in order to assess the parking situation around the nation's port facilities.³² The results of this year's top industry issues survey corroborate the truck parking challenges faced by drivers. While the issue is ranked fifth overall, it is the number two concern among truck driver respondents.

Proposed Strategies (in rank order):

a) *Identify strategic locations on the National Freight Network for new or expanded truck parking due to increased traffic congestion and industry / regulatory changes.* A majority of survey respondents (50.2%) have indicated that identifying strategic locations to expand truck parking capacity is their preferred strategy for addressing the pervasive shortage of truck parking. In particular, re-opening shuttered parking facilities and investing in new facilities are the most direct strategies aimed at alleviating the chronic and growing shortage of truck parking along the National Freight Network. Other options, such as repurposing vacant urban and suburban land parcels for truck parking, are also being explored as potential solutions to this critical industry issue.³³

b) *Educate the public sector on the safety consequences that result from closing public parking facilities and/or failing to expand truck parking availability.* The Jason's Law Report first brought attention to the safety risks commercial drivers face as a result of the truck parking shortage, and more recent research continues to quantify the safety impacts of an inadequate supply of truck parking.³⁴ ATRI's truck parking diary research quantified the frequency in which drivers are forced to park in undesignated or unauthorized truck parking locations like highway shoulders or ramps, with 48.7 percent of drivers reporting that the parking shortage leads them to do so between three to

³¹ Federal Highway Administration and Department of Transportation. "Jason's Law Truck Parking Survey Results and Comparative Analysis." August 2015. Available Online:

http://www.ops.fhwa.dot.gov/freight/infrastructure/truck_parking/jasons_law/truckparkingsurvey/jasons_law.pdf.

³² Fisher, Tyson. "Second Jason's Law parking survey to include drayage and short-haul drivers" Land Line. July 24, 2018. Available Online: <http://www.landlinemag.com/story.aspx?storyid=72689#.W8yJamhKiM9>

³³ Perry, Earnest et al. "An Evaluation of Vacant Urban Land for Truck Parking." Mid-America Freight Coalition. February 2017. Available online: http://midamericafreight.org/wp-content/uploads/MAFC-White-Paper_Truck-Parking.pdf.

³⁴ Hernandez, Salvador and Jason Anderson. "Truck Parking: An Emergency Safety Hazard to Highway Users." Oregon State University. July 2017. Available online: https://ntl.bts.gov/lib/62000/62200/62247/SPR783_TruckParkingHaz.pdf.

seven times per week.³⁵ As such, this is the preferred strategy for 38.2 percent of respondents, up from 29 percent in 2017, as a growing number of industry stakeholders hope that educating state and local officials on the critical need for safe truck parking facilities could lead to new investments.

c) *Research the role and value of real-time truck parking information availability and truck parking reservation systems.* Leveraging technological advancements to develop real-time truck parking solutions was the preferred strategy for a small, but growing percentage of respondents. The share of respondents selecting this strategy increased from 7.2 percent to 11.7 percent reflecting the considerable public sector interest and investment in these systems. ATRI initially designed the Truck Parking Information Management System concept (TPIMS) used by the Minnesota Department of Transportation, which was later expanded to the Mid America Association of State Transportation Officials (MAASTO) Truck Parking Information Management Systems (TPIMS), which is being funded through a \$25 million TIGER grant. On track to be launched by the summer of 2019 after a soft launch this fall,³⁶ the MAASTO TPIMS will deliver real-time truck parking availability information to commercial drivers in eight Midwest states when fully deployed.³⁷

³⁵ Boris, Caroline and Rebecca Brewster. "Managing Critical Truck Parking Case Study – Real World Insights from Truck Parking Diaries." American Transportation Research Institute. Arlington, VA. December 2016.

³⁶ Fisher, Josh. "Real-time truck parking data aims to strengthen Midwest freight corridors." FleetOwner. May 2, 2018. Available online: <https://www.fleetowner.com/driver-management/real-time-truck-parking-data-aims-strengthen-midwest-freight-corridors>.

³⁷ "Truck Parking Information Management Systems." MAASTO Regional Truck Parking. Available online: <http://www.maasto.net/documents/TPIMS-Summary.pdf>.

6. Compliance, Safety, Accountability (CSA)

Ranked 1 st 6%	Ranked 2 nd 5%	Ranked 3 rd 7%	Total Share 18%	Industry Concern Index 31.4
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CSA held steady as the sixth-ranked issue facing the trucking industry in 2018. Earlier this year, FMCSA withdrew a 2015 proposal to revise the safety-scoring program that was intended to better align BASIC scores with a carrier’s crash risk.³⁸ Instead, the agency is now pursuing the recommendations proposed by the Congressionally-mandated National Academies of Sciences review of CSA.³⁹ The recommendations include a carrier rating system based on Item Response Theory (IRT) and improving both data collection and the system’s transparency. Meanwhile, FMCSA continues to accept Requests for Data Review for eligible crashes as part of its Crash Preventability Demonstration Program.⁴⁰

Proposed Strategies (in rank order):

a) *Advocate for FMCSA to expand the list of crash types currently available for review and reclassification as non-preventable as part of the federal crash accountability pilot program.* ATRI’s crash accountability research quantified how carrier Crash BASIC scores can be impacted once non-preventable crashes are removed from the calculation and industry interest is high in ensuring that FMCSA’s pilot program delivers similar results.⁴¹ However, the pilot program has limited the types of crashes that are eligible for review,⁴² and nearly half of respondents (49.1%) indicated a desire to expand the pilot program to include more crash types as their top strategy for addressing CSA in 2018.

b) *Advocate for CSA score reductions in existing BASICs rather than a new BASIC for carriers who choose to participate in FMCSA’s Beyond Compliance program.* As proposed by FMCSA, motor carriers participating in the Beyond Compliance program would voluntarily implement programs that exceed regulatory requirements to reduce both the number and severity of crashes.⁴³ The program was modeled after ATRI’s “Alternative Compliance” research from 2011, which listed among the potential

³⁸ Jaillet, James. “FMCSA scraps 2015 proposal to alter CSA to pursue larger reforms to program.” Commercial Carrier Journal. July 13, 2018. Available online: <https://www.ccdigital.com/fmcsa-scraps-2015-proposal-to-alter-csa-to-pursue-larger-reforms-to-program/>.

³⁹ Ibid.

⁴⁰ “Crash Preventability Demonstration Program Overview.” U.S. Department of Transportation, Federal Motor Carrier Safety Administration. April 3, 2018. Available online: <https://www.fmcsa.dot.gov/safety/crash-preventability-demonstration-program>.

⁴¹ Boris, Caroline and Dan Murray. “Assessing the Impacts of Non-Preventable Crashes on CSA Scores.” American Transportation Research Institute. Arlington, VA. November 2015.

⁴² “Crash Preventability Demonstration Program Frequently Asked Questions (FAQs).” U.S. Department of Transportation, Federal Motor Carrier Safety Administration. March 2018. Available online: <https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/safety/81271/crashfaqd26.pdf>.

⁴³ “Beyond Compliance Program.” Federal Motor Carrier Safety Administration and U.S. Department of Transportation. Docket No. FMCSA-2015-0124. 23 April, 2015. Available online: <https://www.gpo.gov/fdsys/pkg/FR-2015-04-23/pdf/2015-09463.pdf>

incentives a reduction in corresponding CSA BASIC scores for participating carriers.⁴⁴ However, the agency has proposed incorporating this credit into a newly created BASIC. As such, 28.6 percent of respondents indicated that they would like to see the credit as a reduction in existing BASICs as opposed to creating a new BASIC, up from 20.3 percent of respondents in 2017.

c) *Work with FMCSA to ensure that the recommendations of the Congressionally-mandated National Academies of Sciences review of CSA are successfully implemented.* The 132-page NAS study provided FMCSA with multiple recommendations to improve the evaluation of carrier safety performance.⁴⁵ Chief among these recommendations is a call for adopting a data-oriented Item Response Theory model for assessing carrier crash risks.⁴⁶ As this program is piloted by FMCSA, 23.7 percent of respondents indicate that it will be critical for the industry to remain actively involved to ensure that the recommendations are successfully implemented.

⁴⁴ Murray, Daniel C. et al. *Assessing the Benefits of Alternative Compliance*. American Transportation Research Institute. Arlington, VA. January 2011.

⁴⁵ Miller, Eric. "FMCSA Outlines Plans for Public Meeting on CSA Study." *Transport Topics*. August 25, 2017. Available online: <http://www.ttnews.com/articles/fmcsa-outlines-plans-public-meeting-csa-study>.

⁴⁶ Ibid.

7. Driver Distraction

Ranked 1 st 6%	Ranked 2 nd 6%	Ranked 3 rd 5%	Total Share 16%	Industry Concern Index 30.4
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Distracted driving and its impact on highway safety remained a top priority for the trucking industry in 2018, as the growing use of smartphones has raised the profile of distracted driving as a major public safety issue. According to data from the National Highway Traffic Safety Administration (NHTSA), 3,450 people were killed in motor vehicle crashes involving distracted drivers in 2016,⁴⁷ while distracted driving was a factor in 14 percent of all police-reported traffic crashes.⁴⁸

Proposed Strategies (in rank order):

a) *Encourage harsher penalties and more aggressive enforcement of distracted driving violations for drivers of all vehicle types.* Although all 50 states now have some form of restriction on the use of mobile phones while driving, there are significant differences in how states define and enforce these provisions. Some states ban use for novice drivers, while other states classify it as a primary or secondary citable offense.⁴⁹ Accordingly, 39.1 percent of respondents would like to encourage harsher penalties and more aggressive enforcement of existing laws as a means of reducing distracted driving, down from the 47.7 percent of respondents that selected this strategy as their top choice in 2017.

b) *Advocate for national standards for distracted driving laws for all motorists.* With varying definitions and enforcement strategies employed at the state level, uniformity in laws across state lines would reduce motorist confusion and promote more uniform enforcement. To this end, 37.7 percent of respondents indicated a desire to develop a national standard for distracted driving laws as the top strategy for addressing Driver Distraction, up nearly 10 percentage points from 2017.

c) *Recognizing the growing role of onboard technologies, identify solutions that support safe technology usage in the truck cab.* Use of in-cab technologies such as collision warning, automatic braking, and forward- and driver-facing cameras are proliferating throughout the trucking industry. In fact, roughly one-quarter of respondents (24.5%) believe that it would be counterproductive to ban certain telematics solutions that streamline decision-making and enhance vehicle safety. As such, it will be crucial to identify solutions that maintain this tenuous balance between technology-related safety and operational efficiency.

⁴⁷ "2016 Fatal Motor Vehicle Crashes: Overview (Traffic Safety Facts Research Note No. DOT HS 812 456)." National Highway Traffic Safety Administration. Washington DC. October 2017. Available online: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812456>.

⁴⁸ "Distracted Driving 2015." U.S. Department of Transportation, National Highway Traffic Safety Administration. March 2017. Available online: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812381>.

⁴⁹ Governors Highway Safety Association. "Distracted Driving Laws". Washington, D.C. September 2016. Available online: http://www.ghsa.org/html/stateinfo/laws/cellphone_laws.html.

8. Transportation Infrastructure / Congestion / Funding

Ranked 1 st 3%	Ranked 2 nd 6%	Ranked 3 rd 9%	Total Share 18%	Industry Concern Index 27.3
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Recognizing that the trucking industry hauls 70.2 percent of the nation’s freight tonnage and 79.3 percent of freight revenues,⁵⁰ the state of the nation’s roadway infrastructure is a critical issue for trucking. Poorly maintained roads and traffic congestion create wear and tear on vehicles, waste fuel and increase emissions, create additional stress for drivers, and negatively impact industry productivity. ATRI research estimates that congestion-related delays cost the trucking industry \$74.5 billion in added operational costs during 2016.⁵¹

ATRI has also published research that details the significant and growing shortfalls to the Highway Trust Fund Highway Account -- resulting in a serious deterioration of the nation’s road network.⁵² This research documented federal fuel tax increases as the optimal mechanism to fund much-needed infrastructure improvements. While efforts to raise the federal fuel tax have stalled, multiple states have increased their fuel tax to help bolster local infrastructure budgets.⁵³

Proposed Strategies (in rank order):

a) *Continue to advocate for long-term highway funding through an increase in the fuel tax or other direct user fees, and prevent additional diversion of revenue to non-highway projects.* The persistent shortfall of highway funding in the United States is due, in part, to an erosion of federal motor fuels tax revenue. This erosion can be attributed to improvements in fuel economy, inflation and stagnant fuel tax rates.⁵⁴ Research has demonstrated the administrative efficiency of the fuel tax,⁵⁵ and as such, 40.8 percent of respondents selected an increase in the fuel tax or other user fees as their top strategy to improve the nation’s surface transportation infrastructure.

b) *Create a new funding program to focus federal resources on truck bottlenecks along major freight corridors.* Another solution to address the broad range of transportation infrastructure issues is to target funding on transportation bottlenecks along major freight routes, a strategy that was selected by 30.5 percent of respondents. This is particularly timely as states are now required to identify and report on truck freight bottlenecks as part of FHWA’s Transportation Performance Management (TPM)

⁵⁰ American Trucking Trends 2018.” American Trucking Associations. Arlington, VA. 2018.

⁵¹ Hooper, Alan. “Cost of Congestion to the Trucking Industry: 2018 Update.” American Transportation Research Institute. Arlington, VA. October 2018.

⁵² Short, Jeffrey. “Highway Funding Analysis: Update 2017.” American Transportation Research Institute. Arlington, VA. November 2017.

⁵³ Lamb, Eleanor. “Several States Phase In Fuel-Tax Increases.” Transport Topics. July 3, 2018. Available online: <https://www.ttnews.com/articles/several-states-phase-fuel-tax-increases>.

⁵⁴ Short, J. et al.. “Defining the Legacy for Users: Understanding Strategies and Implications for Highway Funding.” American Transportation Research Institute. Arlington, VA. May 2007.

⁵⁵ Ibid.

program.⁵⁶ To this end, ATRI monitors congestion at 300 freight-significant locations and produces an annual ranking of top truck bottleneck locations as a means for prioritizing infrastructure investments.⁵⁷ For example, the Jane Byrne Interchange (formerly Circle Interchange) in Chicago is the focus of a \$450 million reconstruction effort to improve truck freight mobility as a direct result of ATRI's bottleneck research.⁵⁸

c) *Utilize the Congressionally-mandated National Freight Policy and National Freight Network as tools to ensure adequate investment in critical highway infrastructure.* As part of the MAP-21 authorization passed in 2012, Congress mandated that the U.S DOT develop a National Freight Policy and a National Freight Network to assist with long-term infrastructure planning and investment prioritization. Additionally, the FAST Act apportioned up to \$10.8 billion for improvement projects that take place on the National Freight Highway Network.⁵⁹ 29.9 percent of respondents considered this the best strategy for dealing with infrastructure funding in 2018, up from 21.8 percent of respondents in 2017.

⁵⁶ "Truck Freight Bottleneck Reporting Guidebook." U.S. Department of Transportation. Federal Highway Administration. July 2018. Available online: <https://www.fhwa.dot.gov/tpm/guidance/hop18070.pdf>.

⁵⁷ "2018 Top 100 Truck Bottleneck List." American Transportation Research Institute. Arlington, VA. January 2018. Available online: <http://truckingresearch.org/2018/01/25/2018-top-truck-bottleneck-list/>.

⁵⁸ <http://circleinterchange.org/about/>. Accessed September 21, 2016.

⁵⁹ *Summary of FAST Act Issues of Interest to ATA Members.* American Trucking Associations. Arlington, VA. December 2015. Available online:

<http://www.trucking.org/ATA%20Docs/News%20and%20Information/Testimony%20and%20Comments/12%2002%2015%20--%20Highway%20Bill%20Comprehensive%20Issues%20Summary%2012%202.pdf>.

9. Driver Health/Wellness

Ranked 1 st 3%	Ranked 2 nd 4%	Ranked 3 rd 4%	Total Share 10%	Industry Concern Index 17.6
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Driver Health and Wellness moved up one spot this year and now ranks as the ninth-biggest issue affecting the trucking industry. Many in the industry recognize the critical connection between improved driver health and wellness and the industry’s ability to retain qualified drivers -- as roughly 20 percent of drivers that leave their jobs cite health problems as a factor in their decision.⁶⁰ In addition to obvious lifestyle benefits, an improvement in driver health may also have positive implications for industry safety as research has identified a positive correlation between driver health and driver safety.⁶¹

Proposed Strategies (in rank order):

a) *Encourage increased availability of exercise facilities and healthy food choices at truck stops/travel plazas.* Encouraging more exercise facilities and healthier food choices at truck stops remained the top strategy, for six years running. To this end, a majority of all respondents (51.2%) believe that healthier food options and exercise facilities will help mitigate the impacts of a sedentary occupation. This strategy ranked even higher among driver respondents, with 60 percent of drivers selecting it as the preferred approach for addressing driver health and wellness concerns. As the industry continues to push for solutions to the truck parking shortage, it will be important to ensure that parking facilities are equipped with amenities that address driver health and wellness concerns.

b) *Continue industry data collection and analysis on driver health-related issues to ensure that any future regulatory actions are based on recent and best available data.* Just under one-quarter of respondents (24.1%) believe that up-to-date data and analysis on health-related issues will prove essential in improving the efficacy of future regulatory actions on the trucking industry. FMCSA’s permanent suspension of the restrictive HOS restart provisions, in light of data showing that they did not lead to improved safety outcomes, is an example of how real-world industry data can be used to guide regulatory decisions.

c) *Undertake research that quantifies the return-on-investment for driver health and wellness programs.* Similar to the previous strategy, many in the industry want to utilize data to better understand and quantify the effectiveness of driver health and wellness programs. 21.5 percent of respondents indicated this to be their preferred strategy to address the issue of Driver Health and Wellness.

⁶⁰ “One in Five Truck Drivers Leaves Job Because of Health Issues, Survey Finds.” Transport Topics. 11 May, 2016. Available online: <http://www.ttnews.com/articles/one-five-truck-drivers-leaves-job-because-health-issues-survey-finds>

⁶¹ Transportation Research Board. “Research on the Health and Wellness of Commercial Truck and Bus Drivers: Summary of an International Conference.” November 8-10, 2010.

10. Economy

Ranked 1 st 2%	Ranked 2 nd 3%	Ranked 3 rd 3%	Total Share 9%	Industry Concern Index 14.6
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U.S. economic activity has grown at a robust pace through the first half of 2018, matching growth rates last seen during the early years of the recovery from the Great Recession. However, the Economy has re-emerged as a top-10 critical issue for the trucking industry as the otherwise positive economic outlook has been clouded by uncertainty surrounding emerging trade disputes. The U.S., Canada and Mexico were able to reach deals revamping the North American Free Trade Agreement (NAFTA) after more than a year of tense negotiations.⁶² Meanwhile, the growing trade dispute between the U.S. and China may devolve into a protracted trade war, with the two parties currently imposing tariffs on a wide variety of goods.⁶³ This has generated significant concern among industry stakeholders, many of whom depend on strong import and export activity to drive freight demand.

Proposed Strategies (in rank order):

- a) *Advocate for reforming/repealing ineffective and burdensome regulations that add to industry costs without providing benefits.* Given the scope and scale of regulations affecting the trucking industry, over half of respondents (56.4%) feel that regulatory reform is the best strategy for improving the economy and driving up the demand for freight. This is in line with the Trump administration’s goal to broadly reduce regulations and red tape -- an effort that the White House estimates has already saved U.S. taxpayers roughly \$1.6 billion annually.⁶⁴
- b) *Continue to advocate for policies that will further stimulate the economy.* Given the strong relationship between consumer spending and freight demand, 35.3 percent of respondents would like to see policies that boost consumer confidence and spending. The share of respondents selecting this strategy as their top strategy declined 5 percentage points over the year, likely due to the stimulus already provided to the economy with the passage of the Tax Cuts and Jobs Act at the end of 2017.
- c) *Research and quantify the impacts of e-commerce on the trucking industry.* Consumer spending is the biggest component of the U.S. economy, accounting for over

⁶² Diamond, J., Liptak, K., Newton, P., and Donna Borak. “US and Canada reach deal on NAFTA after talks go down to the wire.” CNN. October 1, 2018. Available online: <https://www.cnn.com/2018/09/30/politics/trump-nafta-canada/index.html>.

⁶³ Mayeda, A., and Enda Curran. “Trade War Reality Sets In as U.S. and China Stick to Their Guns.” Bloomberg. September 24, 2018. Available online: <https://www.bloomberg.com/news/articles/2018-09-24/trump-imposes-next-batch-of-china-tariffs-as-trade-war-escalates>.

⁶⁴ Levin, A., and Alyza Sebenius. “Trump Claims \$1.6 Billion a Year Saved From Cutting Red Tape.” Bloomberg. October 16, 2018. Available online: <https://www.bloomberg.com/news/articles/2018-10-17/trump-administration-claims-23-billion-in-regulation-savings>.

two-thirds of the nation's total economic output.⁶⁵ At the same time, e-commerce now accounts for nearly 10 percent of total retail sales in the U.S., and sales derived from e-commerce are growing more than three times as fast as overall consumer spending activity.⁶⁶ As such, 9.7 percent of respondents indicated that they would benefit from research into the impacts of e-commerce on the trucking industry. To this end, ATRI is conducting research on emerging e-commerce trends and mapping the effects of these trends to the industry's most critical issues.

⁶⁵ Chandra, Sho. "U.S. GDP Grows Below-Forecast 2.6% on Trade, Inventory Drags." Bloomberg. January 26, 2018. Available online: <https://www.bloomberg.com/news/articles/2018-01-26/u-s-gdp-grows-below-forecast-2-6-on-trade-inventory-drags>.

⁶⁶ Quarterly E-Commerce Report. "Estimated Quarterly U.S. Retail Sales (Not Adjusted): Total and E-Commerce." U.S. Census Bureau. Retrieved October 17, 2018. Available online: <https://www.census.gov/retail/mrts/www/data/excel/tsnotadjustedsales.xls>.

Emerging Issues

As part of its analysis of the most critical industry issues, ATRI also tracks the emerging topics that generate significant industry interest but fall just outside of the top 10 concerns (Table 1). This analysis can provide insight on the issues that may emerge in the future as a top industry issue..

Table 1: Issues 11 – 13

Rank	Issue	ICI
11	Highway Safety and Crash Reduction	13.4
12	Tort Reform	10.9
13	Automated Truck Technology	10.7

Highway Safety and Crash Reduction ranks as one of the industry’s emerging issues for the first time since this study’s inception, as the trucking industry continues to place an emphasis on its safety record. Fatal crash rates for large trucks have been on a downward trend since 1975, declining 71 percent over the last four decades. However, the rate has started to climb again since reaching an all-time low in 2009.⁶⁷ As a result, respondents would like to gain a better understanding of truck crash increases by causal factors and vehicle type.

Last ranked as a top industry issue in 2011, Tort Reform is re-emerging as a critical industry issue, particularly among motor carriers. While Tort Reform ranks 12th overall, it is the 8th biggest issue from the perspective of motor carrier respondents (Table 2). This is driven, in part, by recent large jury awards against motor carriers regardless of negligence. Additionally, there are initiatives at the state level to address tort reform, including an item on the ballot in Arkansas aimed at capping attorney fees and damage awards in lawsuits (Arkansas Issue 1).⁶⁸

Automated Truck Technology ranked as one of the industry’s emerging issues among all respondents again in 2018 after cracking the list for the first time in 2017. Driver-assistive technologies have seen increased deployment in recent years, while high-profile demonstrations of emerging automated technologies continue to generate significant attention among industry stakeholders.⁶⁹ For drivers, in particular, the potential job-changing impacts from greater deployment of automated truck technologies is creating concern. Previous research conducted by ATRI on Automated Truck Technology hinted at what truck drivers might expect from increased deployment

⁶⁷ Large Truck and Bus Crash Facts 2016. “Trends Table 4. Large Truck Fatal Crash Statistics, 1975-2016.” U.S. Department of Transportation, Federal Motor Carrier Safety Administration. Last updated May 8, 2018. Available online: <https://www.fmcsa.dot.gov/safety/data-and-statistics/large-truck-and-bus-crash-facts-2016>.

⁶⁸ “Arkansas Issue 1, Cap on Attorney’s Fees and Damage Awards in Lawsuits Amendment (2018).” Ballotpedia. Available online: [https://ballotpedia.org/Arkansas_Issue_1,_Cap_on_Attorney%E2%80%99s_Fees_and_Damage_Awards_in_Lawsuits_Amendment_\(2018\)](https://ballotpedia.org/Arkansas_Issue_1,_Cap_on_Attorney%E2%80%99s_Fees_and_Damage_Awards_in_Lawsuits_Amendment_(2018)).

⁶⁹ Clevenger, Seth. “Embark Self-Driving Truck Completes Coast-to-Coast Test Run.” Transport Topics. February 6, 2018. Available online: <https://www.ttnews.com/articles/embark-self-driving-truck-completes-coast-coast-test-run>.

of driver-assistive technologies.⁷⁰ ATRI will be delving further into the effects that automated technologies will have on truck drivers in the year ahead, as this topic is one of ATRI's Research Advisory Committee top research priorities for 2018.

Commercial Driver vs Motor Carrier Issue Rankings

The Top Industry Issues report details the results of the overall industry survey of industry stakeholders including company and independent drivers, motor carriers, and other trucking industry stakeholders. However, each of the stakeholder groups surveyed have different levels of involvement in and perspectives on how these topics impact them. As a result of these varied experiences, the selection and ranking of issues will differ across these groups. To account for the wide-ranging experiences of the ATRI survey sample, particularly those between commercial drivers and motor carriers, ATRI provides a break out to illuminate how these rankings differ by stakeholder (Table 2).

The rankings of industry issues by commercial drivers and motor carriers are invariably influenced by their day-to-day experiences. A divergence of opinions between these two groups can provide deeper insight into the consequences of an industry issue and allow for more targeted strategies to address those issues. The Driver Shortage, for instance, ranks as the top issue for motor carriers, but ranks as the ninth-biggest issue from the perspective of truck drivers (Table 2). The divergence of opinions on this issue is to be expected: drivers benefit from the shortage through more competitive compensation, as wages, benefits, and bonuses increase, as cited in ATRI's most recent analysis of motor carrier cost data.⁷¹ At the same time, these growing compensation packages are squeezing profit margins for motor carriers, limited their ability to expand capacity in a strong market for truck transportation.⁷²

There are also regulatory and legal issues that rank highly in the minds of motor carrier respondents, but have not gained much traction among commercial drivers. Tort reform and F4A, for instance, are top-ten issues for motor carriers, but were ranked as critical industry issues by only a handful of commercial drivers. Conversely, drivers placed a greater emphasis on their health (Driver Health and Wellness) and the potential impact that Automated Truck Technology may have on their careers, relative to motor carrier respondents.

⁷⁰ Short, Jeffrey and Dan Murray. "Identifying Autonomous Vehicle Technology Impacts on the Trucking Industry." American Transportation Research Institute. Arlington, VA. November 2016.

⁷¹ Hooper, A., and Daniel Murray. "An Analysis of the Operational Costs of Trucking: 2018 Update." American Transportation Research Institute. Arlington, VA. October 2018.

⁷² Clough, Richard. "As Economy Heats Up, Truck Driver Shortage Burns More Companies." Transport Topics. June 8, 2018. Available online: <https://www.ttnews.com/articles/economy-heats-truck-driver-shortage-burns-more-companies>.

Table 2: Commercial Driver and Motor Carrier Issues

Rank	Commercial Drivers	Motor Carriers
1	Hours-of-Service (HOS)	Driver Shortage
2	Truck Parking	Driver Retention
3	Electronic Logging Device (ELD) Mandate	Hours-of-Service (HOS)
4	Driver Distraction	Transportation Infrastructure/ Congestion/Funding
5	Driver Retention	Electronic Logging Device (ELD) Mandate
6	Compliance, Safety, Accountability (CSA)	Compliance, Safety, Accountability (CSA)
7	Driver Health and Wellness	Driver Distraction
8	Transportation Infrastructure/ Congestion/Funding	Tort Reform
9	Driver Shortage	Truck Parking
10	Automated Truck Technology	Federal Preemption of State Regulation of Interstate Trucking (F4A)

That said, there are several instances in which the perspectives of commercial drivers and motor carriers are aligned – the ELD Mandate and Hours-of-Service ranked as top-five issues for both groups again in 2018. These stakeholder groups share a mutual concern regarding the flexibility of current HOS provisions, as well as how the move to ELDs is affecting industry safety and productivity. Driver Distraction, Driver Retention, CSA, and Transportation Infrastructure / Congestion / Funding round out the remaining similarities between the respective top ten lists compiled by commercial drivers and motor carriers.

Table 3: Top Industry Issue Rankings, 2009 – 2018

	Issue Rank									
	1	2	3	4	5	6	7	8	9	10
2018	Driver Shortage	Hours-of-Service	Driver Retention	ELD Mandate	Truck Parking	CSA	Driver Distraction	Infrastr./ Congestion/ Funding	Driver Health/ Wellness	Economy
2017	Driver Shortage	ELD Mandate	Hours-of-Service	Truck Parking	Driver Retention	CSA	Cumulative Impacts of Regs.	Driver Distraction	Infrastr./ Congestion/ Funding	Driver Health/ Wellness
2016	ELD Mandate	Hours-of-Service	Cumulative Impacts of Regs.	Truck Parking	Economy	CSA	Driver Shortage	Driver Retention	Infrastr./ Congestion/ Funding	Driver Distraction
2015	Hours-of-Service	CSA	Driver Shortage	Driver Retention	Truck Parking	ELD Mandate	Driver Health/ Wellness	Economy	Infrastr./ Congestion/ Funding	Driver Distraction
2014	Hours-of-Service	Driver Shortage	CSA	Driver Retention	ELD Mandate	Truck Parking	Infrastr./ Congestion/ Funding	Driver Health/ Wellness	Economy	Driver Distraction
2013	Hours-of-Service	CSA	Driver Shortage	Economy	ELD Mandate	Truck Parking	Driver Retention	Fuel Supply/ Fuel Prices	Infrastr./ Congestion/ Funding	Driver Health/ Wellness
2012	CSA	Hours-of-Service	Economy	Driver Shortage	Fuel Supply/ Fuel Prices	ELD Mandate	Driver Retention	Truck Parking	Driver Health/ Wellness	Congestion/ Truck Bottlenecks
2011	Economy	Hours-of-Service	Driver Shortage	CSA	Fuel Issues	Congestion	Transportation Funding	Tort Reform	Onboard Truck Technology	Truck Size and Weight
2010	Economy	CSA	Government Regulation	Hours-of-Service	Driver Shortage	Fuel Issues	Transportation Funding/ Infrastr.	Onboard Truck Technology	Environmental Issues	Truck Size and Weight
2009	Economy	Government Regulation	Fuel Issues	Congestion/ Highway Infrastr.	Hours-of-Service	Commercial Driver Issues	Environmental Issues	Tolls/ Highway Funding	Truck Size and Weight	Onboard Truck Technology

Note: **Bold** indicates first year in top ten.