

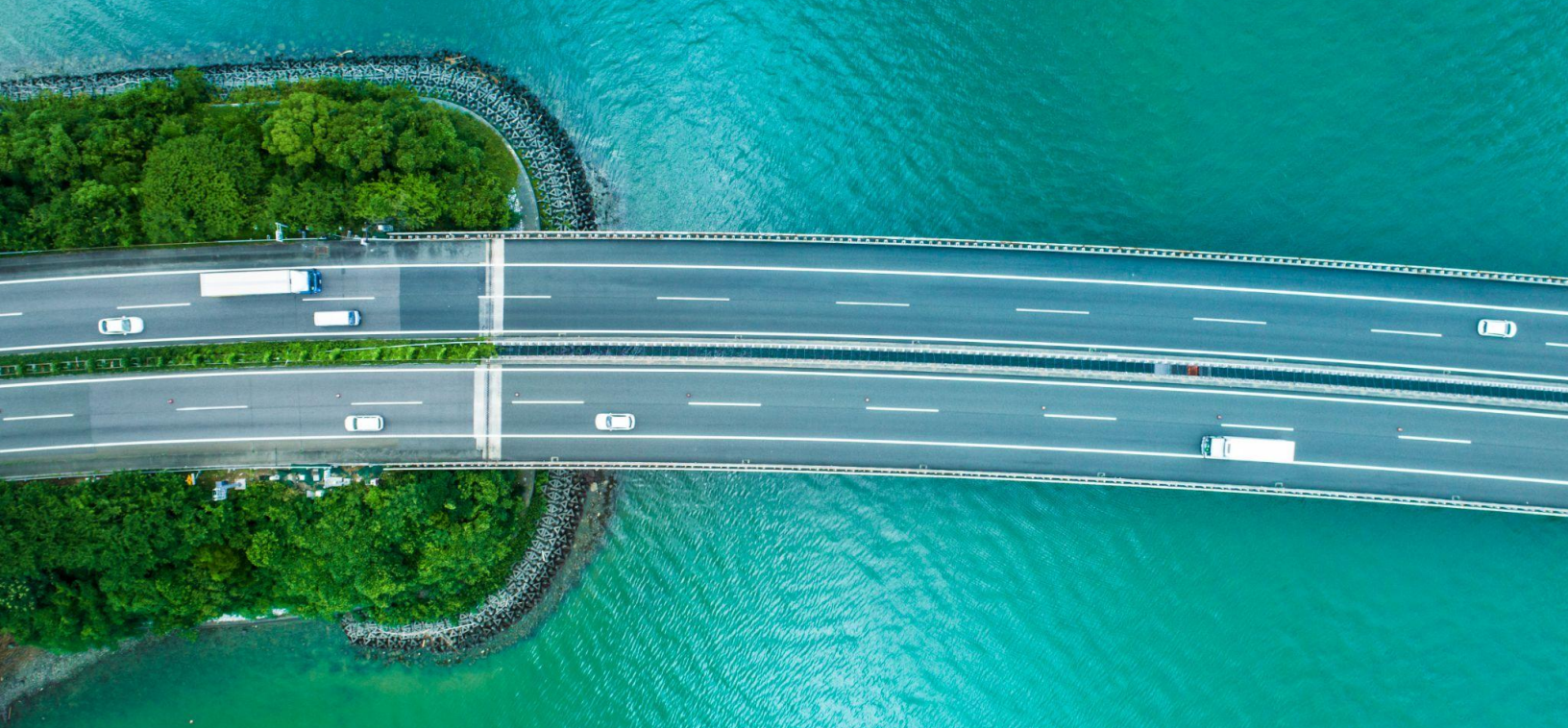
Truck Driver Shortage in Canada

Whitepaper



FOOD, HEALTH &
CONSUMER PRODUCTS
OF CANADA





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Introduction

In a recent poll, more than half of Canadians considered trucking to be the number one mode of transport to get their goods delivered — higher than all other modes combined (rail, air, maritime). The fact that Canada, similar to other countries, is experiencing a country-wide truck driver shortage poses a risk to our national economy given the significant impact that trucking has on the country's supply chains.

Although there was a trucker shortage prior to COVID-19, the pandemic made the shortage more apparent to the wider public. This heightened visibility mainly results from a palpable impact on consumers' daily lives due to an insufficient number of drivers on the road. The lack of drivers leads to shipment delays, out of stocks on retail shelves, and, in turn, increased prices for consumer products due to the lower level of supply available for purchase. In addition, extreme weather conditions like the floods in British Columbia in 2021 are disrupting supply chains and delaying deliveries, further exacerbating the impact of the truck driver shortage.

The Canadian trucking industry shows over 20,000 vacant driver positions. Trucking HR Canada's Labour Market Snapshot: November 2022 estimates that 34,300 truck drivers will leave the industry in 2023. If nothing is done about the current situation, the trucking industry's struggle with more people exiting than entering will lead the vacancy number to increase to 30,000.

In addition to the driver shortage, driver utilisation is also an opportunity area. Empty miles and driver wait times at distribution centres are a drain on system capacity.

Industry surveys peg empty miles in the range of 30-35% and wait times associated with shipment loading and unloading cause over-the-road truckers to drive fewer hours daily than what the law permits.

Further, Trucking HR Canada reports that the average age of drivers has increased from 44 to 49 years old, which is significantly older when compared to other industries. If everything remains status quo, the average age will increase further, with a larger percentage of truck drivers approaching retirement age. Data from IRU also shows that only 3% of the drivers in Canada are women. These numbers indicate that there is a need to recruit young professionals and find new demographic groups to help bridge the skill gap.

To get a better understanding of this burning topic, we conducted extensive desk research enhanced with executive interviews, surveys, on-site visits at trucking facilities, conversations with truck drivers, and data analysis.

In this paper, we will focus on identifying solutions that aim to address the truck driver shortage by suggesting new ways to attract drivers, retain the current driver pool, and increase efficiency of the current driver pool by applying technological advancements and strengthening industry cross-collaboration.

Changing perceptions: Improving the image of the trucking industry



According to industry executives, improving the image associated with the trucking profession will have a significant impact on relieving the truck driver shortage, particularly with the younger generation. Younger individuals are unaware of the positive changes achieved in the trucking industry, and thus tend to perceive the industry as lacking technological advancement and providing a poor work-life balance. Despite greater awareness of trucking's importance during COVID-19, the industry still grapples with the public's outdated view of truck driving. To alter this perception, associations within the trucking industry should create campaigns, social media postings, and school collaborations with the aim to showcase the trucking industry's critical importance and bring awareness of its evolution towards technological innovation and environmental consciousness.



Leveraging social media to reach a diverse audience

The use of social media has become more prevalent in the trucking industry. Drivers have formed various online forums and groups, which serve as valuable resources for sourcing recommendations and reviews about driving schools, employers, and new technology.

There are even television shows and podcasts created specifically for truck drivers and individuals aspiring to become a truck driver that provide not only a different perspective of the industry for viewers and listeners, but also drivers' insights into the industry, tips, events, and other opinions.

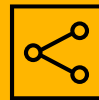


Backroad Truckers, a Canadian TV series that debuted in 2021, features rival owner-operator families that compete to deliver cargo in geographically challenging areas in British Columbia. The series demonstrates how a sense of independence and adventure can come with being a truck driver. Further, the strategy skills needed to complete the challenges show trucking in a gamified light — an aspect appreciated by younger audiences and something they might take into consideration when job searching. Another good example is **The Lead Pedal Podcast** for truck drivers, which is an entertaining and educational show available via various streaming platforms such as Spotify and Soundcloud.

Each recording focuses on the experience of truck drivers in Canada and aims to help truck drivers excel in their careers. The hosts collaborate with transportation industry specialists to bring meaningful content to the trucking community, covering trending topics and fostering discussion utilizing a contemporary platform that reaches a global audience. This type of online presence is helping to promote the trucking profession with an extended reach to global communities via social media.

Social platforms and targeted posts allow marketers to reach underrepresented populations in the trucking workforce (women, BIPOC populations, individuals with disabilities, those who identify as LGBTQ+) thus expanding the demographic reach of potential truck driver segments. Leading companies will also leverage the use of targeted advertisements, posts, and search engine optimization to improve the image of the profession, in the hopes of eventually leading to an increased rate of applicant submissions. These optimized posts can target specific groups to increase attention and eventual recruitment in the transportation industry. Geofencing is also an efficient method of drawing attention to the transportation industry. Through this technology, carrier companies can set predetermined ranges where certain advertisements or posts are displayed to individuals within the vicinity. This strategic advertising method can be viewed as gently influencing viewers through useful informational posts. Additionally, the use of trucking families gives representation to women drivers and truckers of varying ages, helping to shift the image of the industry as one fostering diversity. In turn, the diverse image of trucking in the media will help with recruitment of a broader pool of potential drivers.

TikTok has also become an avenue to bring awareness of the trucking industry to the younger generation, particularly women. Most of the popular trucking TikTok accounts are run by females and feature videos of the trucking lifestyle overlaid by trending soundtracks. The short videos challenge current trucking misconceptions, which help the trucking industry seem less intimidating. An example of this is the largely held misconception that trucking is physically demanding, causing women to rule out truck driving as a career option. TikTok videos challenge this view by showcasing the technology-savvy aspects of trucks and reveal to viewers that trucking equipment is in fact user-friendly (e.g., automatic transmissions are now common). By extension, this TikTok content is helping to shift women's perception of trucking to one where the industry is accessible for women. As the accounts have gained popularity, more females have started following. The trucking TikTok accounts hope to portray the industry in a positive light and influence the younger generation to consider trucking as a career.



As seen by these examples, social media can be leveraged at an individual level, or by companies and associations, and can play an effective role in changing the trucking industry's image.

Changing perceptions: Improving the image of the trucking industry





Revamping the perception of trucking: creative campaigns and collaborating with schools

Recently, we have seen associations begin to address the negative connotations surrounding trucking through online campaigns aimed at a young audience. In 2021, a Canada-wide video-based campaign was launched towards teenagers as they make career-related decisions. The campaign is still active and has contributed to over 1,200 employment inquiries. The main message — Trucking is Driving Change — is displayed alongside examples of how the trucking industry is progressive and innovative. In addition to addressing the industry's image, the campaign emphasizes the importance of truck drivers as individuals who help uphold people, businesses, and Canada as a whole. Overall, the number of Canada-wide trucking campaigns is limited, presenting an area of growth for Canada to help revamp the perception of trucking. Across Canada, we see several regional campaigns. For example, the Saskatchewan Trucking Association (STA) launched a series of short videos in 2020 called WE are TRUCKING. The videos use text bubbles and emojis to convey to youth a newer, positive, image of the trucking industry while also educating them on ways to start a career in trucking. Across the video collection, messages such as Trucking is Tech-Savvy, Driving is a Better Tomorrow, and Trucking is Everywhere showcase the industry's evolution and importance in every industry's operation. While campaigns represent a good start to tackling the trucking industry's image, having positive personal interactions with carriers within the trucking industry will help to overcome the younger generation's image of trucking.

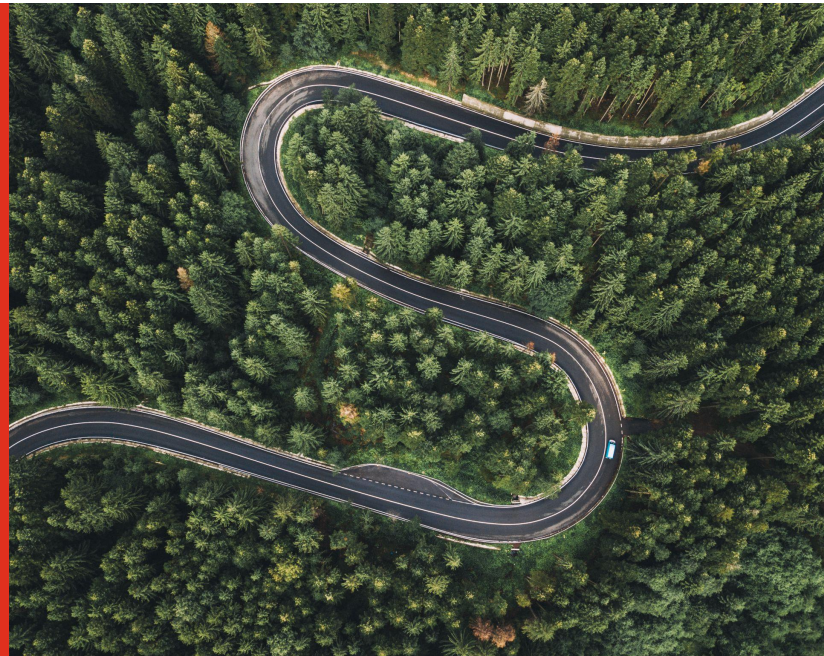
On top of creating campaigns, companies, associations, and governments could attract younger drivers by establishing closer relationships with schools, exposing students to the trucking profession prior to making career decisions and mitigating unawareness surrounding the age at which one can obtain truck driving licensing. Outreach can take form by establishing relationships with guidance counsellors, in hopes to develop trucking-related school clubs and participate in school career fairs. Smaller carriers consider this form of communication particularly important when working towards improving the image of the transportation industry, as their online job postings tend to generate less traffic compared to large carriers. Due to the very fragmented nature of the trucking industry, governments and associations play an important role in generating campaigns and outreach. Since smaller truck companies face the disadvantage of limited capacity to create campaigns and outreach on their own, the attention that the government and associations draw to the trucking industry most heavily touches small businesses looking to hire truck drivers.





Government has the ability to create greater trucking industry advocacy at all education levels, to tie in with the school clubs and career fairs. Currently, the government primarily gives funding support at the college level for those wanting to enter trucking. While most outreach is commonly done at the community and technical college level, some carriers also expand the efforts to the high school level. Having a presence at a school club or career fair allows for students to have a more continuous awareness and education of the trucking industry. Further, these activities enable companies to convey information about the trucking profession in more depth compared with trucking campaigns. To begin and continue to change the truck driver industry image, the industry must introduce to youth from an early age the endless opportunities that come with the trucking profession. These exposures and outreach opportunities can begin as early as primary and secondary school, as discussed in an interview with a well-known Canadian carrier. An issue that arose regarding this topic was that parents of the younger generation believe that the only option for their children to be successful is to pursue a university education, therefore influencing what career their children ultimately decide on. To engage youth in the trucking industry, as a best practice, an interviewed carrier created a driver program for young people interested in becoming fully trained truck drivers. The program is akin to obtaining a trade apprentice certification; young drivers achieve a class I licence upon program completion and are then directly hired. The transportation industry must join to display the great opportunities and benefits that can come from pursuing a successful, professional career as a truck driver. Highschool is the time when students start looking at entry into trade programs. Interviewed companies shared that warehouse jobs are heavily promoted and trucking, in comparison, is not promoted enough. Governments can provide funding support for entrance into trade programs, so that the trucking industry is accessible to all teenagers who are curious about a career in the field. Currently, there is an age mismatch between when teenagers graduate from school (18 years old) and the minimum age to operate a simple truck (21 years old), unless one has served in the military. In the future, more flexibility could be considered to the age requirements surrounding short-haul trucks. To give teenagers a first-hand experience of the trucking industry of today, the US implemented a three-year federal pilot program called the Safe Driver Apprenticeship Program (SDAP), which lowers the eligible age of interstate truck driving to 18 years old. This program helps a younger audience gain exposure to the trucking industry; positive experiences within the program can incentivize other youth to give trucking a chance. Similar initiatives to train drivers at a younger age could be beneficial for Canada in improving both its trucking industry image and driver shortage.

Developing a comprehensive truck driver recruitment strategy



Driver recruiting is a top priority for truck companies and carriers. Together with the ageing population, difficulties attracting women and youth are one of the main drivers for labour supply challenges. To attract these labour pools, employers should invest in providing a fair and transparent wage, encourage direct referrals, recruit via social platforms, engage in support networks such as Women in Trucking, and collaborate with training schools. In addition, they should actively investigate expanding the current labour market by encouraging employees in other logistics areas (e.g. warehousing) to transition to a career in trucking and scouting immigrant workers, which is now supported by the Canada express country program.



Revitalising recruitment through fair wages, referrals, and support networks for women and youth

Research by Trucking HR Canada shows that approximately one third of current truck drivers are close to the age of retirement, which has affected the average age of truck drivers across Canada. In our survey, 33% of respondents identified attracting and motivating young drivers as a major enabler to battle the truck driver shortage. With employers in all sectors competing for the talent of the future, companies need to provide a fair salary package.

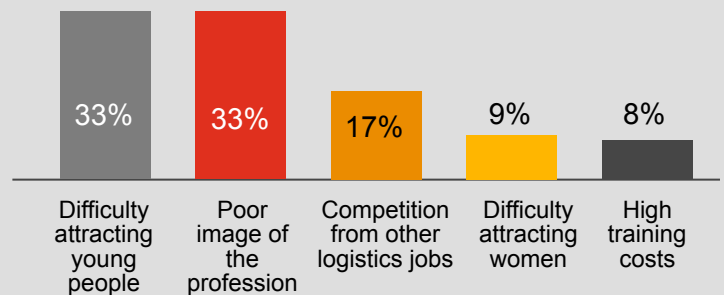
According to a study recently conducted by the American Transportation Research Institute, 40% of millennials and Gen Z said pay was most important when deciding on a trucking career. To attract drivers, increasingly more companies have included signing bonuses with their job listing; in 2021, 84% of truck driver job postings on ZipRecruiter had the word “bonus.” However, an executive from a carrier company pointed out that since everyone has been using signing bonuses, they have lost their attractiveness and it is harder to retain people. Correspondingly, companies need to be creative with how they make their compensation packages competitive.

Nearly half of companies with small fleets hire drivers by referral, therefore, they have begun to provide additional bonuses to employees who refer someone that remains a driver at the company for more than a year. When discussing referrals with a large Canadian transportation carrier it was found that their referral rate is currently over 40%. This portrays the fact that individuals currently involved in or interested in the truck driving industry are steered towards reliable and stable employment. In addition, re-engagement programs have been proven to be very successful for this transportation carrier. Roughly 10% of new joiners annually are past employees that have decided to return to the carrier. This influences past drivers to stay informed on the current structure and internal updates while keeping the door of re-joining open. Further, since companies with smaller fleets have less capacity to continuously increase signing bonuses, they focus on creating a warm family atmosphere to help attract drivers. A well-known Canadian food service producer and supplier that had been interviewed stated that they strive to establish family values across their team through fun and meaningful activities for all employees and their families such as recreational activities and team outings. This company does an amazing job helping foreign employees feel more comfortable by helping them with language barriers, involving them in religious customs, and assisting in finding housing. These actions allow for employees to feel more connected, heard, and respected. By embracing their employees and building a strong bond, they can confidently ensure success of not only the company but also the lives of their employees.

As work-life balance is more important than ever before, compensation should include health and wellness benefits. Incentives that support a healthier lifestyle are perceived as a critical enabler to attract qualified drivers, especially in an industry that is associated with long hours. At most of the interviewed companies, wait times during routes do not come at the expense of a driver's income; drivers are paid a flat salary or by the hour, with benefits and a retirement benefits plan. This technique helps with long-term employee retention. Another strategy mentioned by one multinational retailer is that they adapt schedules to their employees' likings, and a bonus system is provided should a driver need to work outside of their preferred schedule. The key objective with this system is to ensure that truckers do not feel pressured to drive faster when completing routes outside of their typical schedule. Some trucking companies in Canada are offering tuition and training reimbursement, lowering the barriers associated with becoming a trucker. Next to providing a fair wage, offering younger drivers sufficient salary transparency has been identified as necessary. Providing full disclosure on a driver's pay structure will help to build trust from the beginning of the relationship.



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Modernizing the trucking industry by embracing new driver training approaches and technology

Based on statistics, many companies require new drivers to have three years of driving experience. In our study, we found that companies are slowly altering this approach and providing opportunities for new drivers to learn on the job supported by mentorship/buddy programs, orientation experiences, and simulator training. A company that we interviewed stated that, “New truck drivers are given approximately 90 days of on-the-job training while new recruits that are experienced truck drivers are given around four weeks of on-the-job training.” Drivers are able to lock down the company’s expectations and standards through this training period and help build a stronger bond between the drivers and company. This strategy is particularly appealing to young drivers, as a study from the American Transportation Research Institute found “Younger drivers that are happy with their career often consider the supportive feedback of peers and supervisors as one of their favourite parts of the industry.” Some of the companies that have been involved with this study have discussed the steps taken to launch buddy programs to accommodate learning on the job by experienced drivers. Companies not only tailor these programs for external new recruits but also onboard current employees active in other logistics jobs such as warehousing.

Partnering up with a seasoned driver will provide valuable on the job experience and relevant skills in a short period of time. In addition to the great strides made to recruit new drivers through training programs, a specific carrier discussed the fact that approximately 25% of new truck drivers are recruited directly from training schools. This carrier makes an effort to collaborate with training schools to present in class to new and eager truck drivers, allowing the carrier to develop a personal connection to the students while the drivers are able to gain true field knowledge.

Next to salary and working conditions, younger drivers are drawn to careers that incorporate the latest technology. The use of specific tools and technologies allows for many benefits to the drivers daily routine. The implementation of electronic logging devices (ELD), dashboard cameras, lane departure assistance, and satellite tracking allows for higher safety and reduced collision occurrences while enhancing the lifestyle of drivers. By investing in technology, such as advanced trucking equipment and telematics systems, trucking companies can increase the overall driving experience, ultimately making the industry more attractive to young drivers.

Developing a comprehensive truck driver recruitment strategy






Breaking barriers: How support networks and inclusive practices are changing the face of trucking for women

As the trucking industry copes with a widespread driver shortage, bolstering the recruitment of women has become a priority. For many females, the occupation still has significant perceptual challenges. Work-life balance in combination with safety is currently one of the major bottlenecks to attracting women to the profession. Interviewed companies highlighted that there is potential for increasing the number of female drivers, mainly in short haul trucking due to the better work schedules offered. Data from IRU shows that with women representing only 3% of the trucking workforce, Canada seems to have more opportunity for growth when compared to the US, where female drivers represent roughly 8% of the total trucking workforce.

In addition, interviewed companies acknowledged support networks, such as Women in Trucking and Women Building Futures, as an important enabler to support change. These networks provide a platform to address gender imbalance, nurture female talent, and provide networking opportunities through professional development events.

Some companies take matters into their own hands and make it a strategic mission to increase the percentage of female drivers. A Canadian carrier that was interviewed stated that recruiting women was at the top of their agenda and the carrier has taken on multiple initiatives to attract female drivers. Throughout this interview the carrier shared their experience with engaging female-specific driving schools and the extensive efforts placed on improving the gap between genders within the transportation industry. Some of the efforts discussed related to female specific conferences, sponsored spokeswomen, female in-cab instructors, and personal one-on-one phone calls with all female applicants. All these factors will impact and improve the number of women within their business. Larger fleets have had greater success at recruiting women, ranking the effectiveness of their women-driver recruitment practices three places higher (on a scale from 1-7) than small fleets do. To remain current and progress into the future, all carriers and companies should place similar efforts as high priorities.

Companies are recognizing the importance of having women in management positions, so that women truck drivers feel more comfortable joining. One carrier commented that as more women have joined their company in-house, they've seen more women attracted to their truck driving positions. Additional areas of focus for companies could be supplemental safety training to help ease safety concerns and ensuring facilities/truck stops are equipped with women's washrooms.



Scholarship-based training programs offered to women have been demonstrating success, as well as work mentorship programs. After completing these programs, nearly all participants chose to remain in the trucking industry.



From warehouse to wheels: Internal driver programs

Several major retail and consumer companies in the food industry have launched internal driver programs, where they help transition employees working in distribution and logistics jobs (e.g. warehouse associates) to a career in trucking. People get motivated by the move to trucking because the profession can provide better salary prospects, increased job security as they cross-train their skills, additional opportunities to advance their career, and more flexibility in their schedules. Interviewed companies highlighted that those internal programs had a positive impact on employee satisfaction and retention rate. Of note is that larger companies appear to have more success with internal driver programs given the size of their operations and the greater number of employees they can afford to transfer to trucking. Consequently, the target audience for motivating people into trucking will vary between large and small companies.



Opening up to new talent: Canada's updated immigration policies

Although there is a large domestic labour pool in absolute numbers, it remains a challenge to recruit enough truck drivers. According to interviewees, there is also a notable difference in hiring difficulty across provinces. To navigate the trucker shortage, most interviewed companies either look abroad to hire experienced truck drivers from countries with criteria such as comparable weather or challenging road conditions or turn to training their existing warehouse associates as truckers. A challenge with tapping into current warehouse employees is that they all require to undergo a lengthy training program, whereas truckers from other countries can skip most of the training due to their prior experience. Locating qualified truck drivers interested in coming to work in Canada has not been an issue in the past; the main bottleneck identified was getting immigrants in the country. An interviewed carrier mentioned that while the Express Entry Program is beneficial, bureaucracy limits its full potential.

The carrier has many foreign applicants to its job positions, but bureaucracy is the main barrier limiting how many truck drivers ultimately sign with the company. To navigate the nuanced and time-consuming immigration process, the carrier is looking to hire a specialist who will be dedicated to hiring immigrants. Most of the interviewed companies highlighted that having a clearer and faster immigration process would be a gamechanger for hiring workers. The temporary foreign worker program currently takes around 12 months to obtain a licence, which needs to be renewed every two years. Once permitted to enter Canada, there are difficulties finding housing for the temporary workers. These factors hinder the trucking industry's ability to operate. The government needs to take actions that empower trucking companies to be able to hire enough workers, thereby helping to generate business. Additionally, transportation of goods is hampered by interprovincial trade barriers. Interviewed companies cite that it is currently easier to transport loads along routes that pass through the US. The reduction of provincial trade barriers and introducing consistency in regulations across provinces plays a crucial role when optimizing travel routes. These changes will open the possibility of transporting goods along more efficient Canadian routes.

The Canadian government has now introduced updates to its immigration policies by opening Express Entry into Canada for foreign truck drivers — a very positive development for the industry. It will become easier for qualified truck drivers to enter the country and pursue a career in Canada; applicants who are selected and approved will be granted Canadian permanent residence under the program in less than a year. This change is welcome by employers as the recruits from this channel are experienced drivers who have chosen trucking as a profession.



Innovative training methods to overcome entry barriers for aspiring drivers



High training costs combined with lengthy training courses increase the entry barrier for future professionals. Providing the right level of funding, investing in hands-on training, and providing professional advice are three measures that can stimulate overall safety and the engagement level of new drivers.



Innovative ways to make truck driving more accessible and affordable

Entry-level training differs greatly by province but in general, the quality and price of entry level training has increased over the years. The high training cost makes it less accessible for professionals aspiring to become truck drivers. One solution to overcome this barrier is investing in initiatives that support aspiring drivers in financing their entry level training. This can be done in the form of (zero-interest) loans or external financing. For example, the government of Alberta financially sponsors the Driving Back to Work program. The program aims to give unemployed citizens of Alberta grant funding that will cover 90% of the cost of the Mandatory Entry Level Training (MELT) to gain a Class 1 licence. Most programs providing financial support are provincial, however, leading to only certain subpopulations enjoying the benefits.

This causes a disconnect in helping make truck driving more affordable and accessible nationwide and reveals the need for federal-scale help in lowering trucking training costs. In addition to lowering training costs, governments could create standardization in training subsidies throughout Canada by collaborating with carriers to find the optimal solution for all companies involved. This action ensures that the truck driver shortage is improved throughout the entire country, rather than only in certain provinces.



How truck driving simulators are changing the game

Another strategy for enhancing hands-on training has been the implementation of truck driving simulation programs. A major draw to this technology is the capacity to rigorously train individuals without environmental or safety risks. Further, the simulations replicate vehicle-specific behaviours and offer the ability to mirror weather and road conditions often not captured in standard training methods environments.

Companies should consider using truck driving simulations in their training curriculums to attract potential candidates. Among those who have already introduced truck driving simulations, the sentiment towards the software is largely positive. Simulator programs are commonly used by shipping and delivery companies. The simulators bring a gamification aspect to training, which has helped with recruitment of young drivers due to their learning styles. The standardized environment provided by the truck simulators ensures that all employees are trained and assessed in the same manner. Given the simulator's customizability, the hands-on program can be utilized by all employees, whether to train newcomers or help experienced hires maintain a certain skill level. Trainers have observed that the simulator helps establish a good introduction for young drivers. Truck driving simulations, therefore, help with the desire for greater hands-on training and the goal of attracting young drivers to the trucking industry. It was also identified that using the simulators has created a discernible difference in drivers' skill sets and confidence. While most of the feedback regarding the simulators is positive, there are some drawbacks.

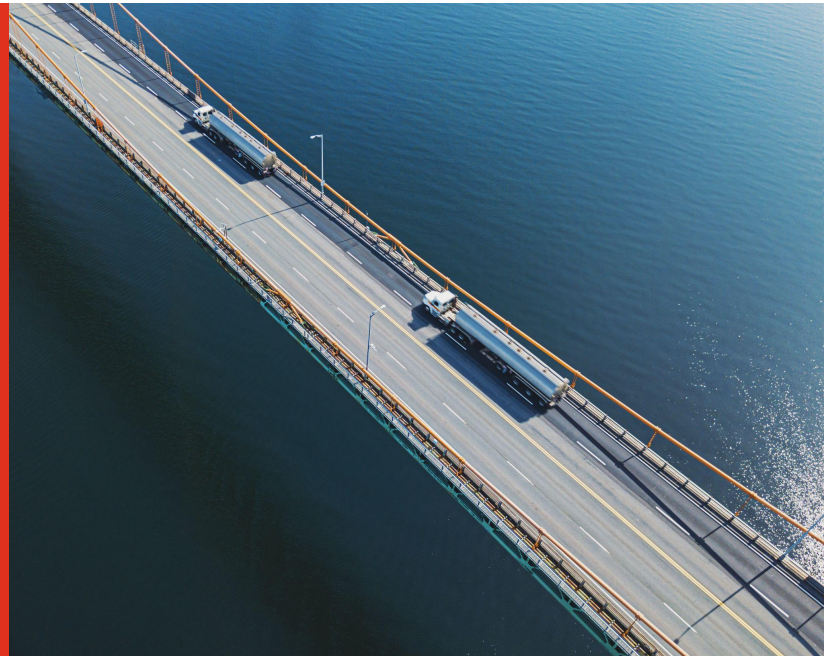
The simulators require an annual maintenance check, and some trainees cite motion sickness. Further, a company's scale of operations needs to be big enough for full motion simulators to be financially viable, though smaller companies could collaborate and use a shared simulator.

This problem presents an opportune area for governments to assist by investing in simulators or by facilitating a simulator collaboration platform with tax benefits for companies who choose to collaborate. At the carrier level, a discussed solution to the high investment cost of simulator programs was the use of mini-simulation systems. These systems are more cost effective and mimic a video game-like experience. The use of a mini simulator allows for the replication of the same goals as a full-scale simulation program while taking costs into account.

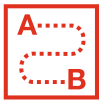
However, the drawbacks pale in comparison to the benefits when examining data. At a west coast-based carrier, the truck driving simulations have generated a significant reduction in fuel costs by instructing topics such as idling and virtual acceleration. Another company noted that the number of accidents and rollovers has decreased since the truck driving simulator was implemented. A greater sense of safety and control on the road helps with job confidence and lowering turnover rates. Ultimately, truck driving simulators help enhance hands-on training, driver confidence, sustainability, and training safety in the process of truck driver recruitment and onboarding.



Improving the lifestyle of truck drivers: Importance of respect, adequate facilities, and innovative solutions



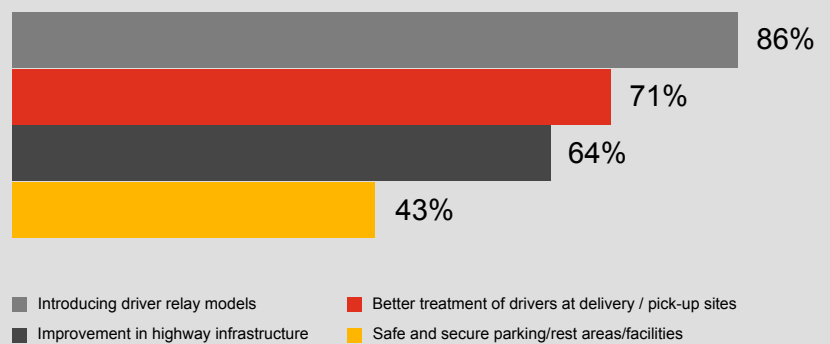
A major point of discussion that came up in the research for this whitepaper revolves around the lifestyle for a truck driver and appropriate work-life balance. Leading companies, associations, and truck drivers have noted several key areas for focused improvements, including respect for the individual driver, facilities, and wait times. By improving these factors, the image and idea of pursuing or continuing a role in truck driving will appeal to a larger group of candidates.










The road to retention: Why respect matters and how to keep drivers on the road









It was found that **71%** of participating companies agreed that better treatment at sites is necessary to keep more individuals in the truck driving field.

Highest Requested Improvements Relating to Working Conditions



Respect, or lack thereof, can be a large factor when deciding to remain in a role. Throughout the research phase of this whitepaper, several truck drivers were interviewed, and lack of respect was a common discussion point. The interviewed truck drivers stated that they have experienced negative interactions at some facilities. A negative experience can shape an individual's entire day, leaving them feeling underappreciated and uncared for. For example, when you have a negative experience at a restaurant or store, it not only influences your mood for the day but there is a good chance you may not return as a customer. Truck drivers can experience a handful of negative experiences within a week, and this can lead to job dissatisfaction. By implementing criteria from the checklist below, facilities, offices, and gate houses can ensure they are creating a welcoming environment for any transportation individuals either entering or leaving the facility. We believe introducing the characteristics below can play an important role in increasing the retention rate of truck drivers and will help to improve the overall image of the profession.

Aspects of An Acceptable Rest Stop Checklist	
	Clean amenities such as restrooms and showers
	Large parking lots and enough room to manoeuvre truck
	Access to food and beverages
	Access to mechanical and truck services
	Additional amenities such as gyms, resting spaces, laundry rooms, phone charging stations, ELD devices, WI-FI etc.
	Sleep-friendly rest stops
	Security features to maximise safety

Aspects of An Acceptable Pick-up / Delivery Facility Checklist	
	Proper treatment of truck drivers (i.e. respect, treatment equal to own employees)
	Clean amenities such as restrooms and showers
	Large parking lots and enough room to manoeuvre truck
	Security features to maximize safety
	Clear rules and guidelines of the facility / site
	Helpful customer service representatives
	Beverages, drinks, vending machines
	Waiting areas/rooms for use during long waiting times



Through discussions with both companies and trucking associations it was found that a satisfaction survey may lend a helping hand to facilities that would like to further understand their strengths and weaknesses regarding the treatment of truck drivers. This survey would include questions and statements that truck drivers could fill out based on their experience with that specific facility. After a decent number of surveys are filled out, the facility can leverage the information to improve the overall standards, experiences, and satisfaction of their facility.

Other possible solutions that could be introduced are team building exercises or activities and events that include the truck drivers, allowing drivers to connect with other employees and build stronger relationships and deeper connections. Addressing the relationship aspect of trucking would help challenges associated with both long- and short-haul trucking. By first understanding a truck driver's experience with a facility, followed by making changes to the standards and encouraging stronger relationships with truck drivers, companies and associations will be able to retain more employees.

By building up the reputation of truck driving through increased care and respect, companies will be able to attract more individuals. Another major finding revolves around truck drivers receiving better treatment and care at delivery and pick up sites.

Safety, or lack thereof, can steer individuals away from a field if not paid attention to. Given that long-hauling involves overnight stays, individuals driving these types of shipments are more likely to feel vulnerable. A focus on rest area safety will prove particularly beneficial to improving long-hauling work conditions and help raise the number of employees choosing to do long-haul trips. In addition to facility safety, weather safety is also a concern for truck drivers. The increase in extreme natural events causes trucking conditions to more often be unpredictable and unsafe, creating job stress. Weather blackout periods are a source of financial strain for drivers if they are paid by the mile or by the load. A multinational retailer commented that natural disasters lead drivers to move province to province in search of better rates, better weather conditions, and increased job stability. Companies should accept weather blackouts as they come so that truckers do not feel pressured to drive in unsafe conditions and compromise their personal safety. These findings conclude that safety and work-life balance play a large role in the truck driver shortage.



43% of participating companies revolves around a lack of safe parking, rest areas, and facilities for drivers.



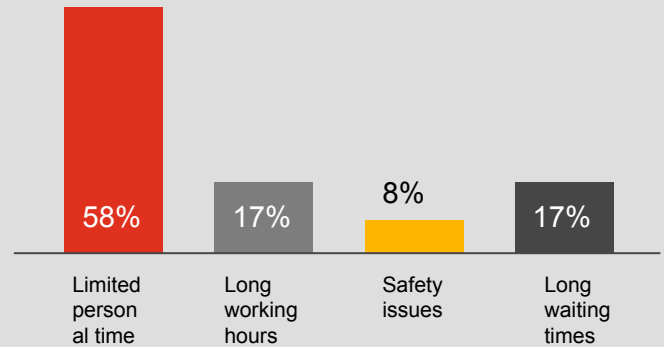
Addressing personal time and health concerns through innovative initiatives such as yoga and nutrition education

It is apparent that truck driving is not a “9 to 5” role; however, due to the current situation, the available pool of truck drivers does not offer much flexibility when it comes to time-off, sick days, and the standard hours that should be allocated as personal time. Through the survey conducted to support this white paper, limited personal time was ranked the largest inconvenience directly relating to the truck driver shortage. There are an increasing number of truck driving couples who alternate driving and passenger time within the same truck. Further, one of the companies we interviewed has worked towards resolving the lack of personal time by allowing pets or another person to accompany them during their workday.

Nowadays initiatives are launched to help with the physical demands of truck driving. A good example is yoga for truck drivers, whereby instructors teach truck drivers how to do yoga poses and where to do them within their trucks. Yoga for truck drivers helps not only with truck drivers’ health, but also their safety. The eventual goal is that truck drivers perform the moves throughout the day, rather than doing a singular yoga session.

The yoga program supports and guides truckers beyond stretches. Since food preparation on trucks may be limited, due to constraints such as not having a fridge, the program teaches truck drivers how to make better lifestyle choices at truck stops. The idea is that a driver can harness different menu offerings to craft their own healthy meals when a healthy meal is not explicitly presented as an option. The overarching aim of both the yoga and nutrition education is that truckers no longer must choose between their career and health. By improving the overall lifestyle of truck driving, a proper amount of employee working hours will follow, thus improving the work-life balance. More drivers spread the workload and this helps improve work-life balance.

The largest inconveniences with the role



In our survey, it was found that **58%** of participating companies agreed that balancing work responsibilities with personal lives, including spending quality time with family and friends, is the biggest inconvenience of the role.



The impact of technological solutions on drivers' work-life balance

In our survey, it was found that 79% of participating companies agreed that drivers should be introduced to advanced technologies such as driver relay models to improve drivers' work-home balance. Relay models would allow for drivers to hand off a truck or trailer to another truck driver at a pit or a rest stop after travelling a predetermined distance. Since relay models offer flexibility in the distance travelled, it opens the possibility for regional-only jobs in addition to the range of trucking jobs currently available. The truck drivers swap trucks and return to their designated radius to allow truck drivers to be with their families more often, contributing to a well-balanced lifestyle among a handful of other benefits. A carrier commented that truckers who participate in the relay model want reassurance that someone will be there to pick up their load and that there will be no interruptions in their plans to return home for the night. Adopting newer technology is a way to guarantee that the relay model will run smoothly, as new technology permits greater ease of communication between drivers whether they are from the same company or not. Further, the relay model pairs well with shorter driving hour limits. The structure of the relay model naturally lends itself to shorter driving routes, enabling truck drivers to complete work more efficiently and have greater control over work-life balance.

A Toronto-Montréal 401 Corridor example: Relay centers in Oshawa and Cornwall could drive efficiency and optimize operations by enabling delivery switches, allowing drivers to sleep at home and reduce time spent on the road while maintaining timely and efficient deliveries



Electronic Logging Devices (ELDs) monitor the number of hours driven and are a way to implement driving hour regulations.

Currently, ELD regulations differ depending on whether a commercial vehicle is federally or provincially regulated. ELD mandates are being rolled out across Canada, but each provincial mandate has a different enforcement timeline. ELD enforcement is quite a recent development; most provinces set a mandate only in the first few months of 2023. In the future, as ELD regulation rollout progresses, more ELD standardisation and thus more work-life balance will be present in the trucking industry.

Relay model trucking routes can be intentionally designed so that drivers hand off a truck prior to exceeding their travel hours, reducing fatigue and increasing compliance. A relay model should help truck drivers everywhere to make it to every graduation, birthday, and family celebration. A multinational retailer remarked that long-haul recruitment is difficult because most drivers greatly value returning home every night. Relay models are changing expectations within the trucking industry and are becoming almost a necessity. One company mentioned splitting up long-haul routes to help with recruitment. Drivers' desire for work-life balance is being strongly heard, sending a wave of adaptations throughout the trucking industry.

The daily experiences of truck drivers will be improved since they will be able to drive in familiar, previously travelled areas. Truck drivers will be able to travel at ease and with higher confidence as they will be more aware of the road, weather, and traffic conditions. The addition of a relay model will reduce unscheduled stops, inefficiency or unfamiliar driving situations, and empty miles, supporting the improvement of the truck driver's wellbeing. A major cargo deliverer in India introduced a relay model service for truck owners and drivers and experienced significant success regarding truck utilization, safety, and work-life balance. In addition to the improved efficiency, truck drivers were found to be four times safer in terms of familiarity on the roads when using the relay model compared to the standard point-to-point delivery.





Training for a safer future

The importance of safety shows up in multiple areas within the trucking industry. Drivers' safety is directly linked to their number of work hours and work conditions. If drivers are subject to higher working hours, the risk of fatigue is a safety concern. Leading trucking associations expressed a concern that some companies may place primary focus on the number of deliveries versus placing safety first.

Safety standards and expectations are established right at job training. However, through interviews conducted with current truck drivers, it was found that many of the drivers had paid themselves for their driving training and safety courses. These high incurred costs may promote behaviour that encourages drivers to skimp or "shortchange" on training, and disincentivizes completion of subsequent updated training, leading to unsafe outcomes. In conclusion, to ensure a truck driver's safety, these training costs should be covered by the truckers' employers.

A study conducted in 2020 by the Women in Trucking Association discovered that women in trucking feel personal safety is present only 44% of the time, which is alarmingly low.

This study also states that approximately 60% of women drivers reported feeling unsafe at least once in a 12-month period. This can be improved by enhancements made to rest stops, overnight parking, and driver facilities with specific focus to restrooms, amenities, parking lots, and anti-theft monitoring.

An interviewed carrier uses on-the-road mentors and satellite communication platforms to help ease females into trucking and create a sense of safety surrounding the profession. The role of a mentor is to accompany a female driver during her training and provide a greater sense of comfort when completing long-haul training that involves an overnight component. As new drivers transition to doing trips independently, satellite messaging provides an avenue for drivers to ask other female drivers for advice, such as which truck stops they recommend for safety reasons. The goal with the satellite platform is to create a sense of companionship throughout the drive. A driver should never feel alone because there is satellite tracking to help with navigation and someone to reach out to on the platform. It is important to emphasize the need to articulate what technology is available to drivers, so that it can be used to its full potential. Given the reported safety concerns women have with trucking, a direct focus must be placed on safety for female drivers if carriers wish to improve retention of this demographic.



Strategic solutions for improving productivity



The opportunity to increase productivity within the existing pool of truck drivers was a recurring theme in many interviews. Enhanced productivity can be achieved from a variety of angles, including process efficiencies and implementation of new technologies.

In the previous section, the link was made between work-life balance and the current driver shortage. In the same vein, improved working conditions can also boost productivity as drivers are more likely to be productive and motivated to work when their health & wellness is prioritized and they are afforded more flexibility for time off.



Operational improvements to enhance truck driver productivity

Polled truck drivers and affiliated staff shared several operational improvements that could increase overall process efficiency. These enhancements can be harnessed to help organizations strategically tackle the driver shortage in Canada and increase the productivity of truck drivers working both short and long hauls.

From the perspective of short-haul drivers, extended wait times (sometimes up to 30% of their workday) amount to a significant loss of total transport system capacity. These wait times are related to several operational challenges that could be addressed through both process efficiency and enhanced communication.

The nature of some truck drivers' tasks allows for more process efficiency than others. For example, technologies to ensure driving quality are abundant, while speed of offloading, as mentioned by an interviewed retailer, is more limited. The items included in the checklist below address processes involved in trucking that, when implemented, will help enhance truck driver productivity.



List of Operational Improvements for Increased Productivity and Truck Driver Safety

- Increase receiving site communication regarding process/procedural information
- Introduce driver schedule predictability
 - Reduces of the likelihood unexpected schedule changes and therefore the chance of running empty
 - Use of long combination vehicles (LCV) in cases of longer-term contracts and high/steady goods volume
- Installation of hands-free technology
- Installation of ELDs/ dashboard cameras in trucks
 - Monitor driver fatigue to reduce the likelihood of accidents
- Installation of lane assist technology
 - Reduces of the likelihood of accidents
- Requirement of customer orders in full truckload units
 - Improves asset intensity on the road
- Use higher capacity vehicles (i.e. LCVs)
- Installation of yard management, and fleet management and real time visibility systems (e.g. FourKites, TruckNet, Project44)
 - Load monitoring, greater control over wait times, ability to track load timing and track empty miles
- Leverage logistics data
 - Operational efficiency improvements
- Introduction and installation of yard equipment: Tailgates, trailers, electric pallet jacks
 - Accelerates trailer offloads and reduces trucker wait times
- Relocation of production closer to the point of consumption
- Route optimization technology and planning





Technological innovations and sustainable solutions will pave the way for the future

Most, if not all, industries are now tech-enabled. It is critical for modern day truck drivers to be skilled at operating various forms of technology, including but not limited to the internet and global tracking systems (GPS). Advances in emerging technology have mitigated some operational challenges and have increased driver productivity and safety.

Vehicle manufacturers in the consumer and commercial space alike are creating more automated vehicles with features such as ELDs, GPS, geofencing, and other driver-assisted systems. More and more, truck drivers have access to various hands-free technologies that enable fatigue detection via dashboard cameras, signal lane departure and translating talk-to-text. One of the interviewed associations has observed that hands-free technologies have helped increase driver productivity. Geofencing is a newer technology that has been found to be extremely useful, as the system will inform a truck driver when a safe rest stop is approaching or when a specific facility is in the vicinity. For example, female truck drivers can be informed when a rest stop is approaching that has female-specific facilities, allowing for safer and more efficient travels. In addition, geofencing allows for tracking of trucks during a delivery, contributing to the overall safety of truck drivers. As these technologies become more commonplace, productivity increases will happen industry wide. New software and apps facilitate real-time communication and interaction between drivers, as well as with their employers and clients. These innovative and automated tools and devices represent a significant milestone in the evolution of commercial vehicles and are paving the way towards the future concept of fully autonomous long hauls, which will also expand the existing intermodal network.

An important consideration mentioned by a few of the interviewed retailers is that all companies need to utilize these available technologies for instances of collaboration, such as combined loads and relay models, to truly exhibit process efficiencies. Once this happens, there will be a productivity synergy between the improved communication methods and between the use of relay models and combined loads. To enable this collaboration and eventually reach technology standardization across trucks and companies, the government could provide subsidies for companies to afford the new tools. In addition to facilitating access to newly developed technology, the government must be cognizant of its role in the creation and testing of new innovations.

Currently, Canada is competing with the US for autonomous vehicle development. However, autonomous vehicle regulations are more stringent in Canada, making domestic testing more limited. Consequently, potential Canadian pilot projects are taken to the US for testing. In interviews, industry experts have highlighted that for long hauls, autonomous vehicles were seen as a potential solution for the truck driver shortage in the longer term. It would be beneficial for industry if governments reviewed and modified the regulations so that we are competitively positioned in this flourishing innovation sector.

Safety and driver productivity also go together. Driver assists technologies, such as collision prevention technology, use radars to alert drivers in real-time of any dangers further ahead on the road. While these technologies are becoming more prevalent, some still come with a purchase premium. Intelligent tires are now available and include sensors and algorithms to monitor tire conditions in real-time. Large trucks are now more frequently fitted with automatic transmissions, eliminating the need to shift gears while driving. This makes driving safer and easier. Technology to electronically track drivers' hours (ELDs) has helped improve work-life balance as well as road safety due to fewer concerns over driver fatigue. Similarly, dynamic routing notifies drivers of the most efficient and safest routes to travel. Standardising ELDs and dynamic routing as an industry-wide practice would help make the number of work hours and the job schedules in the trucking industry less intimidating, encouraging more people to become truck drivers.

Updated technologies improve the daily driving experience and by extension job satisfaction. An interviewed carrier mentioned that they replace their fleet entirely every three to four years. The carrier's employees have voiced that they greatly appreciate the company's efforts to remain up to date on the latest technology. An example of a well-received truck update was seats with anti-bounce technology, creating a better driving experience. Given the number of hours drivers are in a truck, equipment greatly matters to truckers. Continuous investment in state-of-the-art truck technology is a way to ensure that employees are satisfied with their job conditions and their job.

Other innovations help uphold the trucking industry as sustainable. Electric truck models are becoming available for use and are a major innovation. For fuel-run trucks, carriers are implementing renewable fuels and adopting trucks with aerodynamic skirts to reduce consumption. Truck driving simulators have helped make job training both safer and environmentally friendly by reducing fuel consumption. These developments help address the younger generation's concern about the lack of technology within the trucking industry and serve as proof that the industry is modernizing.



The impact of collaborative platforms on operational efficiency

A good example of tools that can improve operational efficiency are collaborative platforms such as Uber Freight. Platforms are used to allow shippers and carriers to have a more hands-on approach when it comes to the process of selecting the shipments that are of interest to them. Shippers can browse for exact specifications required for the delivery while getting insight on pricing and facility ratings upfront. This method is also extremely simple when it comes to signing up and getting started, all a shipper or carrier needs is a mobile device to install the platform's app. The overall methodology of a freight platform is to connect companies with truck drivers directly, which can improve shipper-driver communication, facility ratings, and work-life balance. Collaborative platforms are an important innovation as they bring solutions to both long-haul and short haul trucking alike. A particular advantage this technology brings to small carriers is that it increases the likelihood of finding freight that their current fleet can accommodate; platforms also provide the ability to combine loads from multiple companies onto one truck. Truckers identify people wanting to ship goods to the same destination, then go on to complete trips with a fully loaded truck, rather than driving with available cargo space. The organized trips provide both operational and cost efficiencies to all parties involved.



Improving equipment efficiency with relay models

Another good example of technology that will help to increase operational efficiency from both a company and a long-haul driver perspective is the previously introduced relay model. Use of the relay model is not limited to truckers within the same company. Rather, relay models exhibit network effects when there is heightened collaboration between multiple companies — the greater the number of truckers participating in the relay model, the greater the number of truckers experiencing shipment efficiencies. In addition, the route designs used in the relay model offer more opportunities for owner-operators to collaborate and integrate with large companies. The enhanced shipment accessibility reduces on-job stress and provides an increased sense of job security for owner-operators, helping to attract more individuals to trucking. In addition, a decrease in idling time is also a benefit of relay models. Successful implementation of relay models requires visibility, coordination, and planning to ensure success.





Conclusion / Recommendations

Without taking any actions to improve the current situation, the truck driver shortage in Canada will further worsen as the workforce ages and insufficient interest in the profession fails to bridge the growing gap in the number of available truck drivers. However, our research has shown that there are concrete solutions to mitigate this trend.

A young and diverse workforce could be attracted to truck driving by clearly advertising the supporting technological components, showcasing technological innovations (such as the Internet of Things, Drive Assist, Artificial Intelligence, and cloud-based platforms), and leveraging social media to share success stories from young drivers, female truckers, and other new target audiences. Providing visibility on all these matters should significantly improve the image of the profession.

During the recruitment process, employers will need to take measures to attract a new pool of drivers. Employers should expand their reach by leveraging social platforms such as Facebook and TikTok to strengthen their own personal branding. In addition, employers should actively collaborate with support networks. Good examples of these are partnerships with schools, associations, and specific organizations such as Women in Trucking Association.

In their recruitment strategy, companies can also enlarge the current truck driver pool by supporting and encouraging their own employees working in other logistic roles to transfer to truck driving and scouting immigrant workers, which is now supported by the Canadian Express Entry program.

Once candidates enter the interview phase, it is key to provide them with a wage that is not only fair but also transparent. Compensation packages should include benefits that support a healthier lifestyle, which is deemed critical for the new generation of truck drivers.

Providing the right level of training will not only play an important role in attracting new drivers but will also help retain the newly hired driver pool. Training is often expensive and perceived as lengthy. Therefore, investing in hands-on training, offering the right level of funding, and providing professional advice in multiple ways can go a long way. A good example is companies that are leveraging simulator programs that mimic real-life situations and gamify the training experience, which is seen as a plus by younger drivers. Other relevant examples are firms that launch buddy programs, where new drivers get on-the-job advice from seasoned drivers, and communities that launch initiatives such as Driving Back to Work in Alberta.

The key component to retain drivers is respecting them by supporting a healthy lifestyle and providing them with a seamless/positive experience at delivery and pick-up sites. Interviewees also highlighted that investing in team activities, such as family events and team building, had a positive impact on retention and driver satisfaction and made them feel valued and respected. The healthy lifestyle can be achieved by providing a solid work-life balance that enables truck drivers to be home more regularly and makes sure they are not fatigued, benefitting their overall safety on the road. Industry-wide adoption of driver relay models can bolster this initiative, and by leveraging community or government-sponsored strategic investments in high-volume corridors, around one hour away from major centres, both large and small companies can effectively access and benefit from a collaboration-centric work schedule.

Improving the on-site experience can be achieved by creating checklists supported by a satisfaction survey. This way companies can ensure that drivers are treated with dignity and respect once they arrive in a facility. The feedback that will be gathered from drivers can help

companies to make informed decisions about how to improve overall standards and experiences in their facilities. This will have a positive impact on the truck driver's lifestyle and level of safety.

On top of all the measures noted above, there is an equally compelling case for better use and improving the efficiency of the existing Truck Transport System capacity. Reducing wait times increases system capacity at no additional cost. Improved end-to-end supply chain collaboration through digitization also holds many untapped benefits. This latter measure needs an industry-type solution approach that leverages the entire network & stakeholders.

In conclusion, we believe that it is important for industry and government to act now to address the shortage, as this is an important building block to secure the future of our supply chains.

We want to acknowledge and thank all the companies and individuals who participated in the interview and survey process and look forward to working collaboratively together to drive improvements.





Methodology

Our methodology for this study combines primary and secondary research to provide an in-depth understanding of the truck driver shortage in Canada.

Primary research was conducted through a comprehensive approach involving direct engagement with key stakeholders. This phase of the study was made possible by the participation of 11 retail & consumer companies, 3 logistics service providers, and 3 associations. Each participating company was interviewed and asked to complete a survey regarding perspectives on the truck driver shortage and trucking driving as a profession. Furthermore, a site visit was conducted at one of the facilities to directly interview truck drivers, providing an on-the-ground perspective. Secondary research was conducted using publicly available sources to gather key data and facts relating to the truck driver shortage, which helped to contextualize primary findings, validate key trends, and provide a broader industry perspective.

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Thank you



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