# Making the industry safer -Reducing accidents in FVL

# 2020 incidents & analysis

**JUNE 2021** 



**ECCG** The Association of European Vehicle Logistics

# About the ECG Health & Safety Working Group

The <u>ECG Health & Safety Working Group</u> (H&S WG) was established in 2018 with the initial focus on safety in road transport and, particularly, falls from height. The objective of the working group is to bring about a mindset change in the Finished Vehicle Logistics (FVL) industry when it comes to driver safety. It is divided into 5 sub-groups.

The key objective of Sub-Group 1 (SG1) in the Health & Safety Working Group is to gather details of **severe accidents**<sup>1</sup> and **near misses**<sup>2</sup> in truck transportation and identify safety risk trends in the industry. By identifying key trends, the work of SG1 informs and guides the work carried out by Sub-Groups 1, 2 and 3. A future goal of SG1 is to also share individual reports and analyses of significant accidents which may occur in the industry, so that companies can quickly learn and implement countermeasures.

SG2 is responsible for developing and improving standards for loading and unloading car transporters and produced the <u>ECG Guidelines - Safe Loading Process</u> (referred to as 'ECG Guidelines' in this report). SG3, meanwhile, aims at developing standards for a safe environment in hubs & compounds and produced the <u>ECG Guidelines - Safe Yard Design</u>. SG4 is looking at delivery at retailers to ensure driver safety in this environment. Lastly, SG5 is set-up to risk assess and identify safety features for car transporters.



<sup>&</sup>lt;sup>1</sup> Accidents are defined as "an occurrence arising out of, or in the course of, work that *does* result in an injury". Severe accidents are categorized as:

<sup>•</sup> Fatal (Death of a person).

<sup>•</sup> Unrecoverable (Amputation, Head trauma with unrecoverable consequences, Permanent damage/loss of eyesight (1 or 2), Serious burns causing permanent scarring).

<sup>•</sup> Recoverable but Serious (Fractures, Any crush injury to the torso causing damage to internal organs, Non-permanent serious burns including scalding, Any admittance to hospital for more than 24 hours, Cuts if an internal organ or tendon is hurt or in case of hemorrhage, Any loss of consciousness caused by head injury or asphyxia, Electric shock resulting in an injury.

<sup>&</sup>lt;sup>2</sup> Near misses are defined as "an occurrence arising out of, or in the course of, work that *could* result in an injury".

# Summary

The online database which can be used by <u>all</u> truck operators to report incidents and accidents was set up to facilitate the work of SG1 on incident reporting. In October 2020 <u>the first annual report</u> was published based on 2019 incidents marking the full first year that the ECG Incident Reporting Database has been online and operational. Thanks to the contribution of our members, we are now able to publish this report based on 2020 incidents.

A total of 85 incidents were uploaded to the database for 2019. For 2020, the number is 160 of which 136 have been used for this analysis. This marks a significant increase in reporting from 2019. Ever more member companies are reporting their incidents on a regular basis and as accidents happen in their daily operations for which we thank all concerned.

The incidents reported for 2020 show again that companies *are* having incidents which the industry can collectively learn from.

We are very pleased to see such a big increase in the number of incidents being shared with us, though we still believe there are still many not being uploaded on our website. We would like to take the opportunity to remind you once again that all data is treated anonymously.

This year one Unrecoverable incident (amputation of a finger) has been uploaded. However, no 'Fatal' reports have been uploaded to the ECG website **despite the WG being aware of at least one such severe incident in the period.** 

Nevertheless, the analysis is highly important for the following reasons:

- 1. To continue demonstrating to the industry the value of sharing incident reports
- 2. To use the data, we *do* have to proactively tackle some of the risks which we know exist

Related to the latter point in particular, the 2020 analysis shows trends similar to 2019. Once more the report clearly demonstrates that many incidents could be avoided by following the 'ECG Guidelines - Safe Loading Process'. Therefore one of the key conclusions of the report remains the recommendation to all truck operators **to fully adopt the <u>ECG Guidelines -</u>** <u>Safe Loading Process</u>, and to train and audit their drivers in line with this.

In issuing this report, we strongly encourage those members who are already contributing to keep on submitting incidents from within your own organisation so that we may collectively learn as an industry. To those who are still not using the database, please start doing so – your contribution is important to make our analysis as accurate and informative as possible.

It is in everyone's interest to do all we can to improve drivers' safety and to reduce accidents.

Please encourage your colleagues to support this project via the website here: reports.ecgassociation.eu.

Mike Sturgeon Executive Director

# Table of contents

# 1. Overview

136 truck loading/unloading incidents have been analysed for 2020, as shown in Fig. 1 below.



Fig. 1 – Incidents' breakdown for 2020

The most common incidents reported for 2020 are Slips & Trips (S&Ts). S&Ts occurred both during loading/unloading and in yard operations. Of the 60 S&Ts in 2020, 15% of accidents resulted in Recoverable but Serious injuries, whilst 82% led to injuries that were Less than Serious. The proportion of serious injuries makes S&Ts the most serious incident category for the incidents reported in 2020. This was also the case in 2019.

In addition to S&Ts, there were two new categories of incidents added which occurred both during loading/unloading and during yard operations: Impact/Contact (where a member hit a body part against a fixed structure) and Material/Machine Handling (where injuries were sustained during handling of materials [e.g. chocks/lashes] or machines [e.g. truck decks]).

In the Impact/Contact category, 17% incidents resulted in Recoverable but Serious injuries, and the rest (83%) caused Less than Serious injuries. In the latter category of Machine/Material Handling, 1 incident was reported as Unrecoverable, whilst 5 (83%) were Less than Serious cases. The Unrecoverable incident was the most serious incident reported in 2020, and involved a member lowering a deck onto their hand without paying attention: this led to the tip of their finger being severed.

Roll-offs remain the second most common incident overall in 2020 for the second year, followed by falls from height as the third most common incident type. As in the previous year, the fall from height incidents reported in 2020 led to proportionally more severe injuries than any other category apart from Slips, Trips and Falls – with 50% Recoverable but Serious injuries out of a total of 12 incidents.

3 drive-offs were also reported in 2020, of which 66% caused Recoverable but Serious injuries, and 1 led to Less than Serious injury.

There were 10 collisions reported in 2020, of which 90% were near misses, and 1 incident with Less than Serious injury. While these incidents did not result in serious injuries, it still highlights the need for yard operator movements and truck driver movements to be segregated by either time and/or space to minimize the risk of car-man/car-car collisions.

Lastly, 7 accidents during transport were also reported in 2020. 5 of these incidents were near misses. 1 road accident led to Less than Serious injuries, whilst another caused a Recoverable but Serious injury.

# 1.1 Comparison to 2019 Incidents

A comparison between the ratios of incidents reported in 2019 and 2020 is shown in Fig. 2a below (2019 data is on the inner ring).



Fig. 2a – Incident breakdown comparison for 2019 & 2020.

Fig. 2a shows similar key trends between 2019 and 2020 reported incident data.

Slip & Trips *do* constitute the majority of the reported incidents in the FVL industry (~ 45-50%), followed by roll-offs (~15%). The proportion of fall from height incidents also shows a similar trend (~9-13%). The data also indicates that approximately 2-5% of FVL industry incidents are car-man collisions.

It is also noteworthy to compare the proportions of severe accidents reported in 2019 and 2020 (2019 data is on the inner ring) as shown in Fig. 2b below:



Fig. 2b – Incident severity comparison for 2019 & 2020

Fig. 2b clearly shows a similar breakdown in severity of reported accidents in 2019 and 2020. One key point is that there still appears to be reluctance to report more serious accidents which lead to fatalities or unrecoverable injuries.

As mentioned in the summary, it is vital for the industry to continue reporting the near misses, but also the severe, unrecoverable and fatal incidents as well, in order to truly understand and avoid future reoccurrences.

# 2. Breakdown of high-risk incidents

The following section provides an in-depth breakdown of the different types of high-risk and/or incidents reported in 2020. For the purposes of the report, high-risk incidents are defined as those which occur very frequently and/or can cause potentially serious injuries when they do occur.

# 2.1 Slips & Trips (S&Ts)

Slips & Trips covers a broad range of incidents related to walking, standing-on, and accessing decks.

#### **Key Highlights**

- 60 S&Ts reported: 3% Near miss, 82% Less than Serious & 15% Recoverable but Serious
- 40% S&Ts due to unsafe walking in yard (13%) or on truck decks (27%)
- 17% S&Ts linked to unsafe exit from cars, non-compliant with the ECG Guidelines -Safe Loading Process
- 12% S&Ts caused by drivers jumping off decks/ladders non-compliant with the ECG Guidelines - Safe Loading Process

Most S&Ts result in some form of injury: only 2 of 60 reported STFOs (3%) resulted in no injury. Having stated that, S&Ts are also unlikely to cause very serious injuries: 82% of S&Ts in 2020 caused Less than Serious injuries whilst the remaining 15% led to Recoverable but Serious injuries.

S&Ts are particularly common because they can occur anywhere on the truck, and even while working or walking in the yard as shown below. A large proportion of these incidents occur on the truck itself due the uneven surfaces, gaps, holes and loading material stored at walking level, but prevalent environment conditions can also lead to such events occurring in the yard.



Fig. 3 – The areas where S&Ts occurred. 1 S&T occurred in an unknown area.

## 2.1.1 What causes S&Ts?

The 2020 incident data identifies the following processes during which S&Ts occur:



Fig. 4 – The causal factors leading to S&Ts

A large number of the S&Ts occur when drivers are walking. 13% of the walking-related incidents occur in the yard due to uneven or slippery surfaces. The remaining 27% occur on trucks – resulting from drivers tripping in holes and walking over gaps whilst not concentrating.

Not concentrating whilst exiting/entering cars and not applying 3-point contacts contributed to another 17% of S&Ts in 2020.

Unsafe lashing/chocking (e.g. stepping backwards whilst getting up/not applying 3 points to contact) caused 10% of S&Ts. Climbing on/off the trailer unsafely led to 12% of S&Ts and exiting the cabin unsafely (w/o 3 points of contact, w/o checking environment) caused 7% of S&T incidents.

#### 2.1.2 Why are S&Ts caused?

Broadly speaking, two reasons can be attributed to S&T incidents:

1. Yard/Truck Environment 'Not OK' (NOK)

In the first case, the contributory factor is inadequate awareness about the truck/trailer design. For instance, if drivers are not aware of how to correctly adjust deck elements, or which areas of trucks to safely walk on, this creates an increased risk of injury while working.

The other contributory factor in Case 1 is NOK environment in compounds (e.g. slippery surfaces, potholes, uneven roads, potholes near driver cabins, etc.). Yard operators should ensure that the environment in compounds is as safe as possible for drivers to walk/drive on.

2. Lack of concentration/distraction

The latter case may influence even highly trained drivers who are well aware of the risks. If, for example, drivers are under time pressure or otherwise distracted, they may resort to moving unsafely around the truck – e.g. jumping from decks, not raising decks fully. Over time, if not corrected, this may also become a habit, eventually leading to serious consequences.

Both the above points should be studied further to get a better understanding of why they occur.

As with 2019 incidents, nearly all the S&T incidents can be linked to non-compliance with the ECG Guidelines - Safe Loading Process. It is therefore crucial to highlight that risk of S&Ts may be mitigated by encouraging LSPs to train, audit and supervise drivers in accordance with these Safe Loading Guidelines.

Additionally, as also recommended in the 2019 report, LSPs should also consider the role of truck/trailer manufacturers in the training process: manufacturers may be able to provide drivers with a better insight on how to use the truck and trailer in safer and more efficient way.

# 2.2 Roll-offs

A roll-off incident is one where a car without a driver rolls off an inclined plane e.g. from an angled truck deck, or from parking on a slope, due to improper parking or securing (chocking/lashing).

## Key Highlights

- 23 roll-offs reported: 1 Less than Serious & 2 Recoverable but Serious incidents
- 26% roll-offs involved electronic/automatic parking brake
- 100% roll-offs caused by Lack of 4 Step Parking & Confirmation non-compliant with the ECG Guidelines - Safe Loading Process
- 69% of roll-offs also had "No lashing before deck manipulation" as a factor noncompliant with the ECG Guidelines - Safe Loading Process

23 roll-off cases were reported in 2020, of which 20 were classified as near misses. Every roll-off incident presents a high-risk potential for car-man collision as well. This is because, as cars roll backwards off the truck, they move through an area where drivers may be working or driving, and often end up colliding with parked cars that are ready to be picked up. Therefore, despite the fact that roll-offs reported in 2019 and 2020 have so far not resulted in serious injuries, the industry needs to take proactive action to prevent this type of incident becoming commonplace over the coming years.

serious injuries, the industry needs to take proactive action to prevent this type of incident becoming commonplace over the coming years.

#### 2.2.1 What causes roll-offs?

The first point of analysis is to understand what errors actually cause roll-offs. To do so, we must first consider the recommended safe loading process of ECG Guidelines - Safe Loading Process and shown in Fig. 5:

CORRECT PROCESS FOR LOADING ON TRUCKS							
Deck	Deck	Ground	Deck	Ground	Deck	Ground	
<b>1</b> Drive car on to deck	2 Apply 4-Step Parking Process (parking brake + gear/engine)	<b>3</b> Chock & lash fixed Axle	4 Release brake and gear	<b>5</b> Manipulate deck	<b>k</b> Reapply 4-Step Parking Process	<b>7</b> Final chock & Lashes	

Fig. 5 – The steps to safely loading & securing a car on deck

Roll-offs primarily occur due to errors at three different stages as also discussed in the 2019 report:

- 1. At Step 2: Loading car and exiting without applying parking brake and/or engaging gear in "Park" mode: this error leads to a car immediately rolling off upon exiting with a high risk of car-man collision on angled decks; this error also led to a fall from height incident in 2018, whereby a rolling car caused a driver to squeeze against, and fall-over safety rails on the trailer upper deck.
- 2. At Step 3: Forgetting to chock AND lash a fixed axle before releasing the car for deck manipulation: this error leads to cars rolling-off during deck manipulation as the wheels pop-out of drop-holes, or even go over chocks.
- 3. At Step 6: Forgetting to get back in the car to re-apply the parking brake and/or engage gear in "Park" mode: this error can lead to roll-offs during unloading.

The incidents reported in 2020 indicate that in 21 of 23 cases, the drivers made an error at Step 2– the application of the so-called **4-Step Parking Process (4SP: Gear – Brake – Confirm – Engine)**.

Of these 21 cases, 12 incidents were during deck manipulation. In each of these 12 incidents, the drivers also made an error by not following Step 3 (chocking & lashing a fixed axle) before starting to adjust/manipulate the deck.

4 of the 21 roll-off cases where the drivers failed to follow the 4SP process occurred in the yard (after drivers parked their cars post-unloading). In these cases, the drivers did not pay attention and exited the car without 4SP, causing it to roll-off once they stepped away from it.

The remaining 2 roll-offs occurred during unloading. In these 2 cases, the driver removed the chocks and lashes to unload the car, and the car rolled off whilst narrowly missing the drivers on deck. These roll-offs occurred before the drivers had manipulated the decks correctly during loading (i.e. after applying a lash) but forgot to get in the car and re-apply 4SP after the manipulation – i.e. they made an error by not following step 6. As a result, once the lashes and chocks were removed, the car was free to move.

Our conclusion, therefore, reinforces the findings from the 2019 report: there is a strong need to ensure that drivers properly secure cars using the parking brake, gear, chocks, and lashes – particularly if they intend to manipulate the deck. It is also important to confirm that cars are secured before, during and after deck manipulation.

## 2.2.2 Why do roll-offs occur?

In 2019, two possible suggestions were provided for why roll-offs occur:

1. In 2019, 10 of the 13 (77%) cars involved in roll-offs were Electronic Parking Brake (EPB) type cars. This suggested that the complexity of EPBs (and drivers being unaware/complacent with such systems) could be a contributory factor towards roll-offs.

However, in 2020, only 26% of roll-off cases involved EBP cars. That being said, it should be noted that no information about the transmission/brake system was provided for 43% of the cases in 2020. It is therefore not possible to conclude whether the hypothesis offered in 2019 regarding EPBs contributing to roll-offs was valid or not.

 In 2019, it was also reported that 10 of the 13 cars rolled-off from the trailer upper deck (77%). Thus, the report last year indicated that the complexity of loading in this position might be another contributory factor towards roll-off incidents. The incident data for 2020 appears to confirm this suggestion: 65% of roll-offs in 2020 occurred from the trailer upper deck.

A more detailed discussion on the two points above is included in the 2019 report.



Fig. 5 – The areas where roll-offs occurred from

It is important to reiterate that the industry should investigate the true impact of both EPBs and loading positions on roll-off accidents. This, however, is only possible through concise incident reporting. We therefore ask all ECG Members to include these (and all other relevant) details when they upload incident reports on the ECG database.

# 2.3 Falls from height

Falls from height are typically considered to be one of the most serious incidents in the FVL industry. Truck drivers regularly work at height<sup>3</sup> without external protection such as safety harnesses and rely on truck safety rails as their primary barrier to prevent such incidents (which, as seen from incidents in 2019, have sometimes proven to be tragically inadequate).

#### **Key Highlights**

- 12 falls-from-height reported: 6 Less than Serious & 6 Recoverable but Serious
- 33% falls during lashing/chocking + 25% when exiting car on upper deck
- 8% (1 case) linked to safety rail failure
- 33% falls from truck upper deck, 25% from trailer upper deck, 17% from ladders, 8% from driver cabin (1 case is unknown)

<sup>&</sup>lt;sup>3</sup> The legal limit for defining the "height" for "fall from height" incidents differs by country.

Given the nature of the incident, falls-from-height occur primarily from the upper deck or from side ladders. Of the 12 reported fall incidents in 2020, 4 occurred from the Truck Upper Deck, 3 from the Trailer Upper Deck and 2 from the side ladders. 1 fall-from-height occurred from the driver cabin, where the driver fainted and fell out, resulting in Less than Serious injuries.



Fig. 6 – The areas where falls from height occurred from

Falls-from-height can often be fatal or lead to permanent disability and other Unrecoverable injuries. Fortunately, none of the falls-from-height reported for 2020 (or 2019) led to Unrecoverable or 'Fatal' injuries.

Nevertheless, they are – and will remain – a significant safety concern until substantial breakthroughs are made to eliminate the height risks in both compounds and at retailers.

## 2.3.1 What causes falls from height?

The 2019 and 2020 data indicate 3 factors which can contribute to falls-from-height:

- 1. Unsafe driver movement (lack of 3 Point contact while walking, or when entering/exiting cars) was identified as a factor in 63% of cases in 2019. In 2020, the same factor lack of 3-point contact can be linked to at least 58% cases (unsafe lashing/chocking and unsafe exit from cars).
- 2. The same 58% incidents (unsafe lashing/chocking and unsafe car exit) may also be alternatively attributed to truck design factors such as missing safety rails, or gaps between safety rails.

Without further details, it is unfortunately not possible to conclude whether factor 1 or 2 (or both) led to the incidents reported in 2020.

3. Structural failure (of safety rail wires or poles) was another factor in 18% cases in 2019. By comparison, only 1 case (8%) linked to safety rail failures has been reported in 2020.

Four points merit further investigation:

- The position of the driver in relation to the safety rails and truck edge when the incident occurred – as well as the training of the drivers with regards to safe positions and standing – as stipulated in the ECG Guidelines vs actual behaviour in practice. Is it possible to mitigate the risk of fall-off by training, auditing and supervising drivers in accordance with the Safe Loading Guidelines until breakthroughs in truck design or loading/unloading process become a reality?
- 2. **The design of trucks, poles and cables** with a particular focus on the weight and load restrictions of safety rails and the design of loading platforms.
- 3. There should be a clear exploration of whether drivers have something safe to grab in every position if they stumble or trip. And if there are already safe areas to hold, can they be indicated better?
- 4. The unevenness of the decks and the presence of loading material (e.g. chocks, lashes) underfoot create a risk of fall from height incidents. Furthermore, the risk of stumbling or losing footing is becoming an increasing concern as cars are getting larger, but the truck widths are still restricted by EU regulations; this means that truck drivers often have to squeeze in or out of cars, with little to no visibility of where their feet are. It also makes it easy to step-off the edge as there is such little room on the platform to stand without damaging the car.

## 2.4 Drive-offs

Drive-off incidents are those where a driver loading a car drives-off from the truck. This can be caused by either improper control of the acceleration/braking of the car, or by mis-steering the car off the deck.

#### **Key Highlights**

- 3 drive-offs reported in 2020: 2 'Near misses' and 1 Less than Serious accident
- 1 of the drive-offs led to Recoverable but Serious injuries with 'Admittance to hospital for more than 24 hours'; 2 led to Less than Serious with potentially high risk since the driver fell on the ground
- 2 of 3 incidents from upper-deck, 1 from lower deck

3 drive-off incidents were reported in 2020. 2 of the 3 involved a passenger car and occurred on the upper deck. The last one involved a plant-machine and occurred on the lower deck. In this latter case, the driver did not properly steer the machine onto the deck, and ended up driving off the side, resulting in Less than Serious injuries.

In the 2 cases that occurred from the top-deck, both cars had electronic transmission systems, but no information is available regarding the powertrain. This point should be investigated further, as the power profile of cars may be a contributory factor towards drive-offs and the ease/difficulty of handling.

In 1 of the cases where the driver drove-off the upper deck, a contributory factor mentioned is "blinding sunlight". Due to this, the driver was unable to judge the edge of the truck and failed to stop in time.

Aside from the statements above, the information provided for the drive-off cases is quite sparse. Given the seriousness of the type of incident, it is recommended that for future incidents, further details such as visibility, power-train information of car, truck structure, and use-of-chocks be included in reports.

## 2.5 Collisions

Collision incidents involve one or more moving vehicles colliding with other vehicles, or with individuals or fixed objects. Depending on the vehicle and speed involved, the consequences of collisions can vary from near misses to much more serious and even fatal incidents.

#### **Key Highlights**

- 10 collisions reported: 9 near misses and 1 Less than Serious
- 50% car-car collisions during movements in yards
- 30% car-man collisions, also during yard movements
- 1 truck-truck collision & 1 truck-man collision case also reported
- 10 collision cases were reported for 2020, all of which occurred in a yard or compound.

Fortunately, 90% of the cases reported were near misses and, in 1 case, led to a Less than Serious injury.

50% of the collisions reported were car-car collisions. All cases of car-car collisions can be attributed to careless or unsafe driving by at least one of the involved drivers. Whilst the reports do not provide details as to what led to these accidents, there are mentions of not being able to stop in time, or not being able to turn in time – both of which may indicate either a high speed, or distracted driving or both.

30% of the collisions reported involved a car and a pedestrian. All cases of car-man collisions reported were near misses – i.e. – the car did not actually hit the individual but came close to doing so. Interestingly, 2 of the 3 reported cases of car-man collisions occurred at designated pedestrian crossing areas. However, the environmental and lighting conditions are not detailed – nor is it mentioned whether the pedestrians had priority, or whether they were wearing the appropriate PPE (high-visibility vest). These points merit further investigation and should be included in incidents reported in the future.

1 truck-truck collision was also reported in 2020. It occurred as one truck was reversing into a bay, and a second truck was driving out from another bay. This, too, was a near miss incident. Points that require further investigation are whether or not there was sufficient space

in the truck loading area (i.e. – was it designed to the recommendations provided by the <u>ECG</u> <u>Guidelines - Safe Yard Design</u>), and what the rule are in the area (i.e. – whether trucks arriving or departing are given priority).

The last type of collision incident reported in 2020 was a truck-man collision near miss. A driver was walking back to their truck from the loading office when another truck started to drive forward out of its bay. The truck driving out saw the driver just in time and managed to stop. This incident also raises the question whether the truck area was in-line with the recommendations provided in the <u>ECG Guidelines - Safe Yard Design</u>, whether the visibility conditions were restricted (and why), and whether the driver was wearing the right PPE to be visible.

# 3. Summary points for the industry

In this section, we provide a set of recommendations for the different stakeholders in the FVL industry (based on the 2019 and 2020 incidents reported), as well as some brief concluding remarks.

# 3.1 Key recommendations

#### 3.1.1 Method/man

A key finding of the 2019 report was that non-compliance with the *ECG Guidelines* - Safe *Loading Process* contributed to the key the accidents reported – S&Ts, Roll-offs and Falls from Height. This is also valid for the 2020 results.

It is therefore vital to ensure that all LSPs adopt the Guidelines to train and audit their drivers against some key-points (some of which are listed below as examples).

We are aware that several ECG members, including one of our largest members, have fully adopted the Guidelines in their operations, proving that they are seen as a valid and viable instrument to improve H&S. Additionally, in 2021 ECG translated the Guidelines in 12 additional languages other than English to further promote adoption and implementation. These can be found on our <u>website</u>.

- 1. For S&Ts, the Guidelines clearly specify:
  - a. the importance of preparing decks correctly to minimize walking on decks and trip hazards on decks
  - b. the need to consult transporter manufacturers' manuals and identifying the correct walking path(s) up and down a deck to minimize slip and trip risks
  - c. the importance of not running/jumping and always maintaining 3PC
- 2. Similarly, for roll-offs, the Guidelines highlight:
  - a. the importance of getting familiar with cars that drivers may not have handled before
  - b. the significance of the 4 Step Parking Process
  - c. the absolute need to lash a fixed axle of a loaded car before manoeuvring a deck
- 3. Lastly, for falls from height, the Guidelines recommend:

- a. the importance of working as much as possible from the ground up; if lashing is not possible from the ground (only for truck upper deck units) then making sure that drivers stand in a safe position (entirely between safety rails)
- b. the need to lower the deck as much as possible to minimize fall-off height and severity
- c. the need to maintain 3PC as much as possible
- d. the significance of being aware of surroundings to avoid missteps and stumbling
- e. the audit of trucks to ensure all safety rails are installed and damage free (and prohibiting/restricting loading if that is not the case)

The Guidelines have been designed to mitigate the very risks highlighted in this report, and all truck operators are encouraged to implement these Guidelines as quickly as possible in order to minimise future loading/unloading accidents.

## 3.1.2 Machine

A second key finding linked to S&Ts and falls from height in particular, is that the **industry must work collectively towards finding breakthrough solutions**. This finding from 2019 is further reinforced by the incidents reported in 2020. Together with the trailer manufacturers, the LSPs and OEMs should investigate safer design of trailer structures including safety rails and poles.

Additionally, the industry should also explore the use of marking and visualizations on car transporters to better visualize hazards (e.g. no-step points, no-hold points) as well as safe areas for walking and working. This is directly linked to the Unrecoverable incident reported – better visualisation of where not to place hands/body parts while manipulating decks could have prevented that incident from occurring.

# 3.1.3 Environment

While this report does not contain an in-depth analysis of yard accidents, it is pertinent to remind the readers of the importance of ensuring a safe environment for drivers.

To minimize the risk of car-car/car-man collisions, hub operators should follow the recommendations of the <u>ECG Guidelines - Safe Yard Design</u> including:

- a. Ensuring that loading areas are adequately spaced and correctly marked (to give enough space around trucks for safe walking and working)
- b. Ensuring loading and walking areas are regularly cleaned (and de-iced in winter) to prevent S&Ts in the yard

# 3.2 Concluding remarks

The report highlights the fact that the FVL industry involves complex operations and significant safety risks. By combining the knowledge from different LSPs, OEMs and even trailer manufacturers, we can identify common factors in accidents, and work together as an industry to eliminate these risks.

In order to ensure that we share information adequately, it is **vital that we continue to report our incidents – both severe accidents and near misses** – with as much detail as possible. Then, and only then, can we identify breakthrough solutions, and move towards safer, more efficient operations.

In addition to incident reporting, it is also **crucial for the industry to work towards adopting the ECG Guidelines - Safe Loading Process**. These Guidelines (developed through a consensus of drivers and trainers from a number of LSPs) contain clear key-points which can directly help to mitigate the risk of loading/unloading accidents. Indeed, many of the incidents reported in 2019 and 2020 could have been avoided by following the key-points contained within the Guidelines. We therefore urge all operators to implement the Guidelines and use them to set a standard for training, auditing and supervision of drivers to ensure safety for everyone involved in our complex operations.



# Glossary

3 Points of Contact	3PC
4-Step Parking Process	4SPP
Electronic Parking Brake	EPB
Finished Vehicle Logistics	FVL
Health & Safety Working Group	H&S WG
Logistics Service Provider	LSP
Original Equipment Manufacturer	OEM
Personal Protective Equipment	PPE
Slips and Trips	S&Ts
Slips, Trips and Falls	STFs
Slips, Trips, Falls and Other personal injuries	STFOs
Sub-Group	SG