optix

SAFELY HOME

Annual Fleet Safety Report 2024

Introduction

Welcome to the fourth edition of the Optix Annual Fleet Safety Report – our opportunity to share our insights with the transport industry and broader community.

Optix accumulates an exorbitant volume of data points within a single year, and when they're distilled and analysed some pretty interesting trends become apparent.

Our purpose with this report is simple: to provide an insight into the behaviours and trends that our advanced technology captures on Australian roads each day. Our hope is to have a positive impact by challenging our readers' own perceptions and understanding of safe driving.

It's through a greater awareness and understanding of the risks that all road users are exposed to that each person can begin to make changes to their own driving habits, whilst actively promoting a safer approach to road travel.

Director’s Foreword

As we reflect on 2024, it is widely evident that the conversation around road safety in Australia has grown louder and more urgent. At Optix, we have seen industry awareness of fatigue, distraction, and high-risk driver behaviour continue to build, which is encouraging and something that we continue to foster. The statistics however, remind us that while progress has been made, there is still much work to do and further education required.

This year, our data revealed a 49.6% increase in the overall volume of high-risk behaviours recorded, yet a simultaneous 11.1% decrease in unsafe behaviours. This shift tells us that drivers are becoming more conscious of their actions and increasingly responsive to the coaching and tools available to them. Awareness is rising, but awareness alone is not enough - sustainable change requires consistent monitoring, intervention, and support.

‘Distraction’ continues to be the most prevalent behaviour category, accounting for 71% of all observed incidents. Concerningly, Mobile Phone Handheld more than doubled compared to last year, Inattention rose by 1.5 times, and Food or Drink behaviours increased by almost 6 times that of 2023. High-Risk Following Distance also remains as the most prevalent collision-leading behaviour, with instances recorded at nearly double the rate of 2023. Whilst these figures remind us that human decisions are still at the heart of safety outcomes, we’re also fortunate enough that advanced technology can offer us insights that drive proactivity within our partner fleets.

More recently, Optix expanded our complete safety management solution with the launch of DriveAlert SE, strengthening our ability to detect, understand, and reduce fatigue-related risks. Combined with our patented driver behaviour monitoring technology, advanced data analytics, fleet tracking, and our internationally recognised coaching services, we continue to set the standard in helping organisations protect their drivers and the wider community.

For Optix, safety has never been limited to commercial drivers - it’s about mums and dads on their daily commutes, children travelling to school, and every family who deserves to arrive safely home. Road safety is not negotiable, and complacency can never be accepted.

As we look forward, our mission remains unapologetically clear - to pioneer driver safety solutions that do more than manage risk, but actively shape safer roads for everyone. By driving awareness, delivering innovation, and embedding sustainable behavioural change, we are proud to partner with fleets across Australia in creating a safer future.

Thank you for reading this year’s Fleet Safety Report. We’re committed to a journey to get all Australians safely home and excited to have you along with us.

Craig Forbes
Director

Key Takeaways

1. Despite only a 4.5% increase in total devices operating in the field from 2023 to 2024, total event capture increased 31.3%. A key contributing factor to this heightened volume in event capture was the Telstra 3G ‘sunset’, which meant that many older devices operating in the field had to be upgraded to the newer and more capable SF-series DriveCam device.

2. Whilst the overall volume of High-Risk behaviours increased by 49.6% year-on-year, Unsafe behaviours decreased by 11.1%.

3. The most notable year-on-year changes across key behaviour categories were Distractions, which increased by 304%, and Driver Conduct, which increased 141%.

4. Distractions remain the most prevalent behaviour category overall, comprising 71% of all observable risky behaviours. Year-on-year Handheld Mobile Phone Use has increased 2.3x, Inattention has increased 1.5x, and Food & Drink - Distraction has increased almost 4x.

5. High-Risk Following Distance (<2sec) remains the most prevalent ‘collision-leading’ behaviour, with 1.8x as many instances as 2023.

Overview

Throughout 2023 each vehicle operating in the field captured on average:

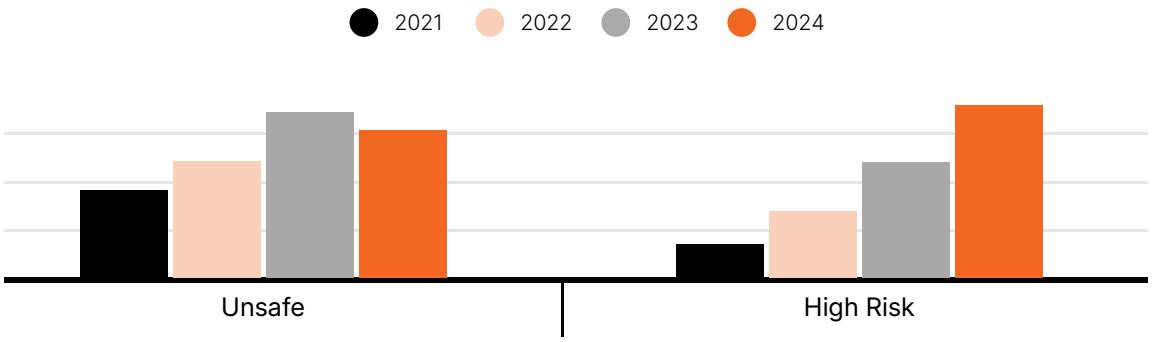
- A video event every 1.2 days
- An event featuring an Unsafe behaviour every 15 days
- And an event featuring a High-Risk behaviour every 21 days

Throughout 2024 each vehicle operating in the field captured on average:

- A video event every 0.9 days
- An event featuring an Unsafe behaviour every 18 days
- And an event featuring a High-Risk behaviour every 15 days

Year-on-year we observed a total increase in the overall volume of captured events of 31.3% - as the frequency of events per vehicle increased, the 'average days' between the types of event capture was reduced.

Interestingly enough, whilst High-Risk behaviour capture has continued to increase as expected (due in part to the 3G shutdown), Unsafe behaviours demonstrated a year-on-year decrease from 2023 to 2024.



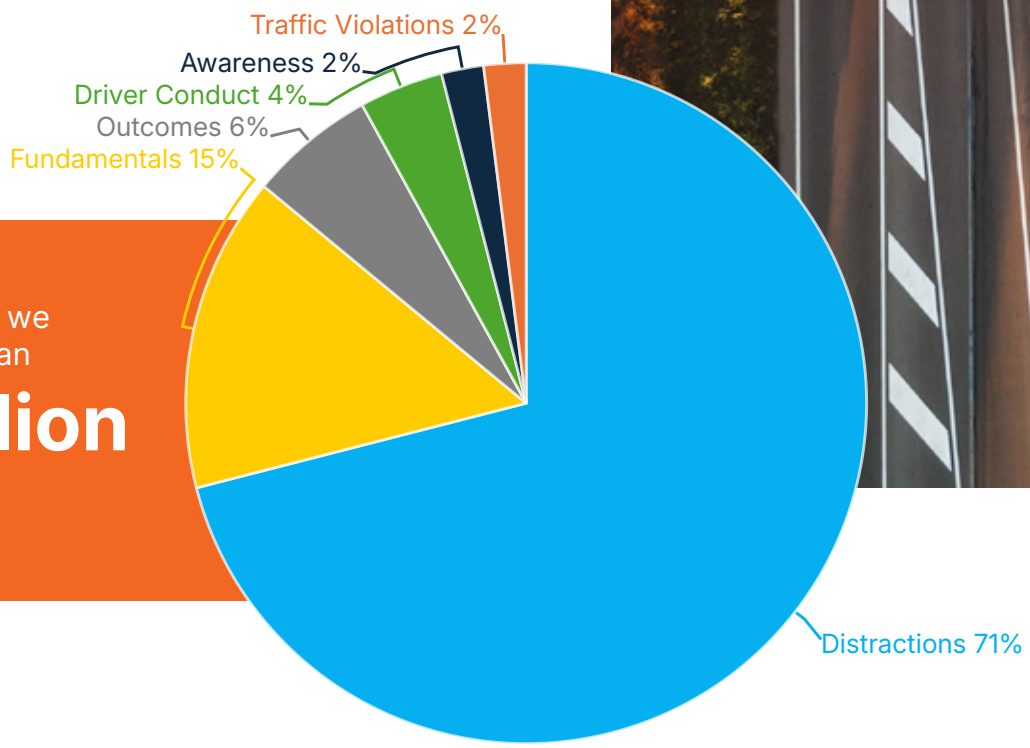
Key Behaviour Groups and YoY Trends

Throughout 2024 we captured more than 3.2 million events, with almost 1/3 depicting an identifiable behaviour.

Much like previous years' observations, the Distraction category occupies the proportionate majority of risk-related behaviours. Since the inception of this report, the top 3 behaviour categories and their respective order based on prevalence remains unchanged: Distractions, followed by Fundamentals, and thirdly Outcomes.

Throughout 2024 we captured more than

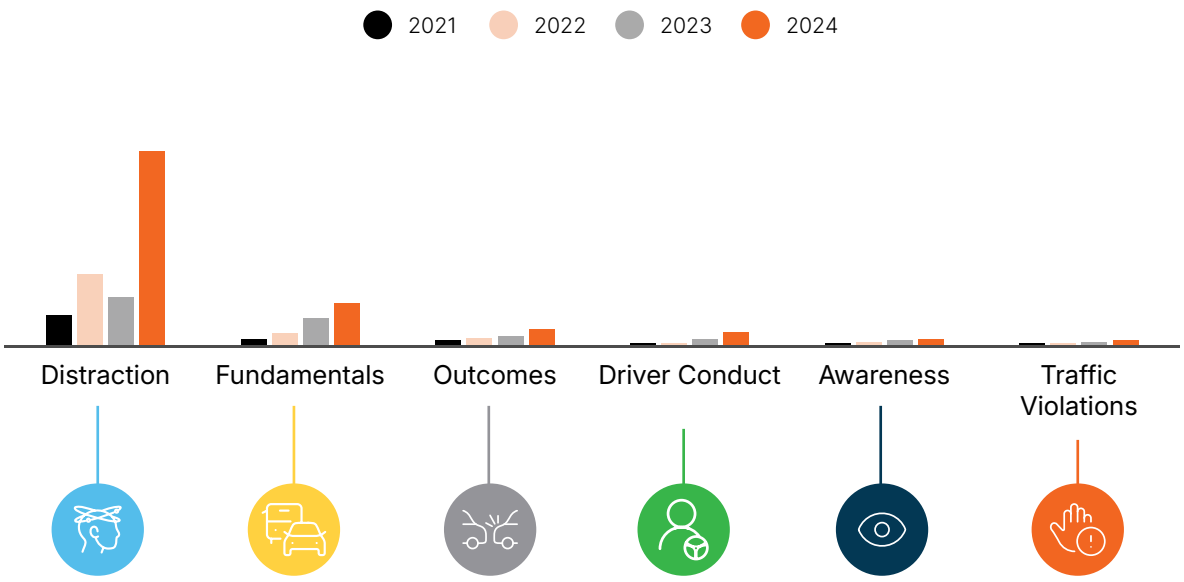
3.2 million events



Proportion of risk-related behaviours by category

	2021	2022	2023	2024
Distractions	67%	75%	50%	71%
Fundamentals	13%	12%	28%	15%
Outcomes	10%	7%	9%	6%

High Risk Behaviour Groups YoY



As we delve deeper into the observed data throughout this report we'll explore some of the factors for the apparent consistencies, as well as some of the changes - integrated technologies, such as our DriveAlert+ with Early Warning, coupled with a necessary hardware upgrade across all fleets resulting in more widespread utilisation of Machine Vision + Artificial Intelligence (herein referred to as MV+AI) capabilities, were amongst key factors.

Given the sheer volume of Distraction behaviours captured throughout 2024 and how comparatively it eclipses the other categories, each of the dedicated focus topics within this report feature respective year-on-year comparisons in isolation.

Across all categories we've observed varied levels of increased behaviour capture, however those that stand out between 2023 and 2024 include Distractions, having increased by 304%; Driver Conduct, which increased by 141%, and; Collision-related Outcomes, which increased 81%.

3G Shutdown & MV+AI

As previously highlighted, we observed some dramatic changes from 2022 to 2023 citing the adoption of Lytx's proprietary MV+AI capability as a driving factor - the same can be said for some of the massive shifts identified between 2023 and 2024.

2024 was a monumental year for many suppliers in the Australian technology space, as Telstra had announced in the years prior that the shutdown of the 3G cellular network was scheduled for June 30. This meant that any existing in-field devices that were only compatible with a 3G connection would be unusable after this date, and subsequently needed to be upgraded to newer 4G and/or later-compatible devices.

Across the Optix landscape several of our accounts had 'mixed fleets', whereby some vehicles were fitted with devices that were perfectly operational, but were several years old, alongside vehicles fitted with newer devices that were equipped with updated features and capabilities.

To put this into perspective, some devices were 10+ years old, which is a true testament to the long-lasting build quality of the Lytx DriveCam. Despite an upgrade project which proved to be varying degrees of demanding, Optix was successful in both maintaining our clients' visibility of risk within their fleets, along with the added benefit of providing further insight into key behaviours by leveraging the MV+AI features.

To recap, the Lytx 'MV+AI' capability utilises Machine Vision plus Artificial Intelligence to effectively identify and alert on specific behaviour types, and without the need for a correlated G-force activation to initiate video capture (i.e. heavy braking, rough surfaces, etc.)

Fuelled by more than

420 billion kilometres

of curated driving data.

This extremely advanced, autonomous detection method is fuelled by more than 420 billion kilometres of curated driving data to ensure a level of accuracy that could be expected from a world-leading, 'best-of-breed' product.

MV+AI detectable behaviours

In-cab behaviours

- Handheld Device
- Food or Drink
- No Seat Belt
- Driver Smoking
- Inattentive
- Lens Obstruction

Road view behaviours

- Following Distance
- Critical Distance
- Lane Departure

High Risk

As expected, the MV+AI availability across all fleets heavily influenced the overall volume of relevant risky behaviours, in particular Distractions, which subsequently demonstrated significant increases year-on-year:

+392%

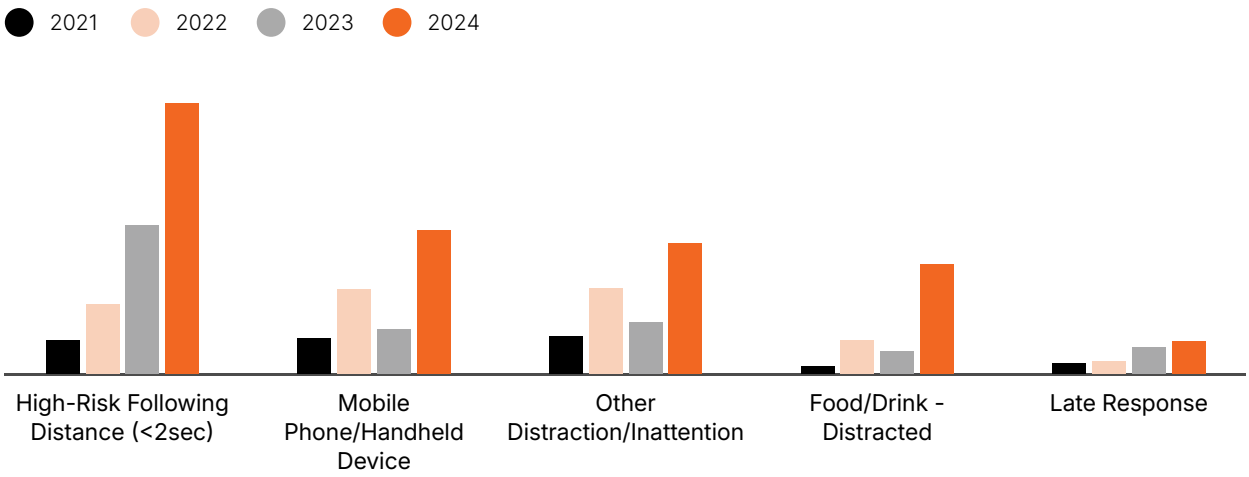
Food/Drink Distraction

+225%

Mobile Phone/ Handheld Device

+151%

Inattention



As highlighted in previous years, Following Dist. (<2sec) was once again the most prevalent High-Risk behaviour, demonstrating an increase of 82% from 2023 to 2024.

Unsafe

The impact to Unsafe behaviour types was similarly significant - whilst the change from 2022 to 2023 demonstrated reductions across all of the top Unsafe behaviours, 2023 to 2024 facilitated noteworthy increases:

+901%

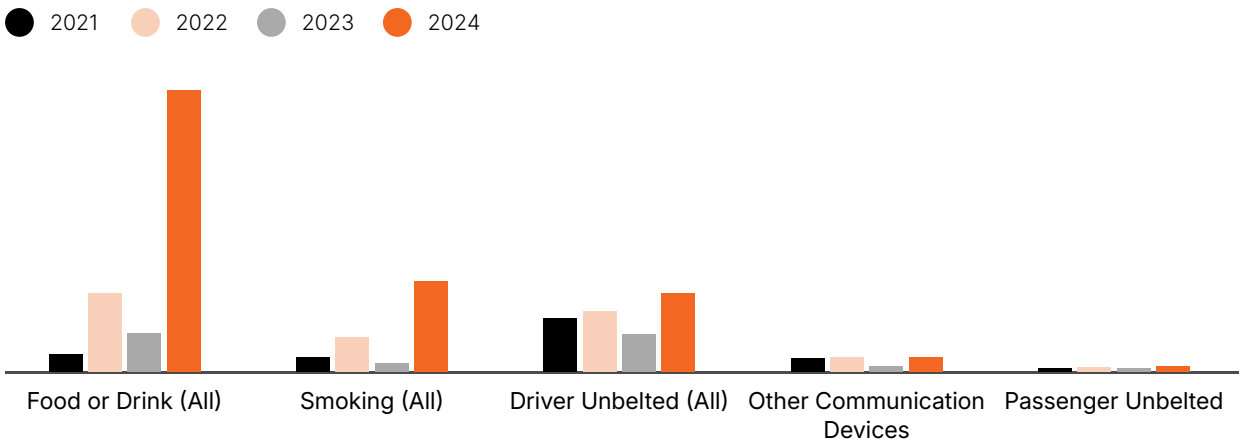
Smoking

+570%

Food or Drink (All)

+143%

Other Communication Devices
(UHF radios etc)



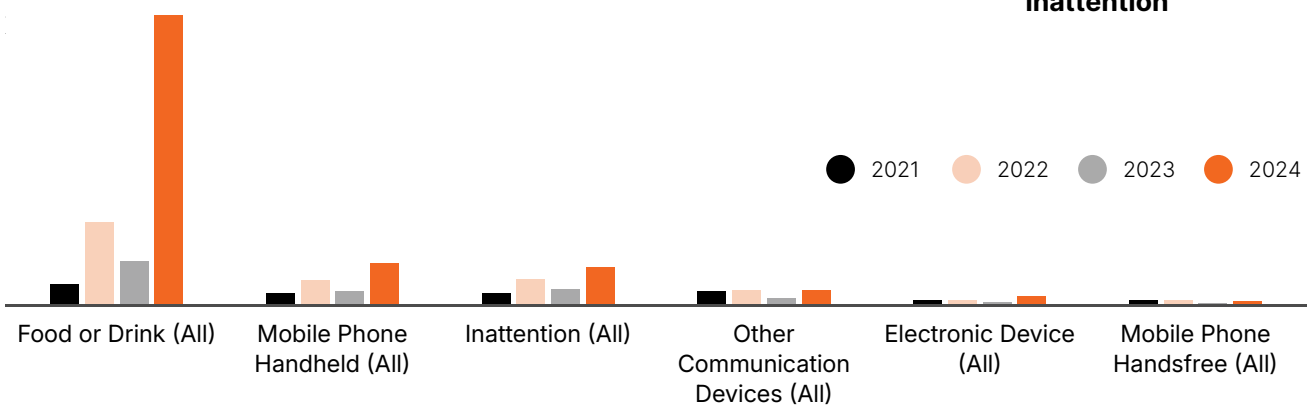
Distraction Focus

From 2022 to 2023 key Distraction behaviours such as Food or Drink, Inattention, and Mobile Phone Handheld all demonstrated notable year-on-year decreases, which served as an indicator that good coaching methodologies across the board were likely a highly influential factor. However, from 2023 to 2024 we've observed substantial increases with key behaviours in the Distraction category: Food or Drink increased 570%, Mobile Phone Handheld increased 225%, and Inattention increased 151%.

+570%
Food or Drink

+225%
Mobile Phone/ Handheld Device

+151%
Inattention



Proportionately, Food or Drink still comprised much of the Distraction category, however where we had previously observed Inattention as the second most prevalent behaviour, this has shifted to Mobile Phone Handheld in 2024. Mobile Phone Handheld and Inattention are equally prevalent in the 2024 dataset, comprising 10% and 9% respectively.

74%
Food or Drink (All)

3%
Other Communication Devices (All)

2%
Electronic Device

10%
Mobile Phone Handheld (All)

9%
Inattention

1%
Mobile Phone Handsfree (All)

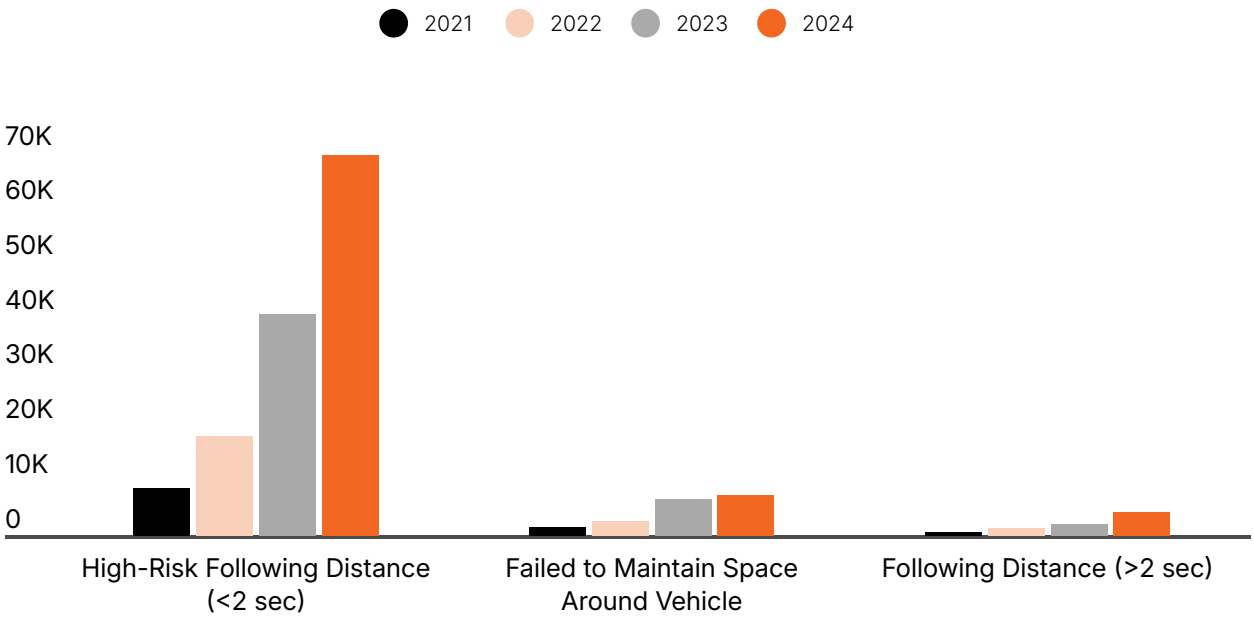
"According to the latest Major Incident Investigation Report 2024 published by NTARC2.0, Inattention/Distraction incidents are the largest incident cause in 2023, accounting for 1/5 (NTARC2.0, 2024 – pg. 17)."

As aforementioned, due to the Telstra 3G network sunset all of our fleets which were still utilising older generation devices were required to upgrade to the current model equipped with the MV+AI capability as standard. Whilst decision makers reserve the right to not enable this feature within their fleets (for a variety of reasons), most of them chose to have it enabled, which exposed the true prevalence and extent of some key behaviours.

As is expected with any new deployments or pilot fleets that partner with Optix, the initial phase often yields a spike in behaviour capture as drivers adjust to having the DriveCam device operating in their vehicle. As good coaching practices and safety protocols are applied, the frequency of these risky behaviours and unsafe driving habits diminishes. Thus, it's highly likely that some of the significant changes in volume of behaviours is a direct result of the enabling of the MV+AI feature and its infancy within certain fleets.

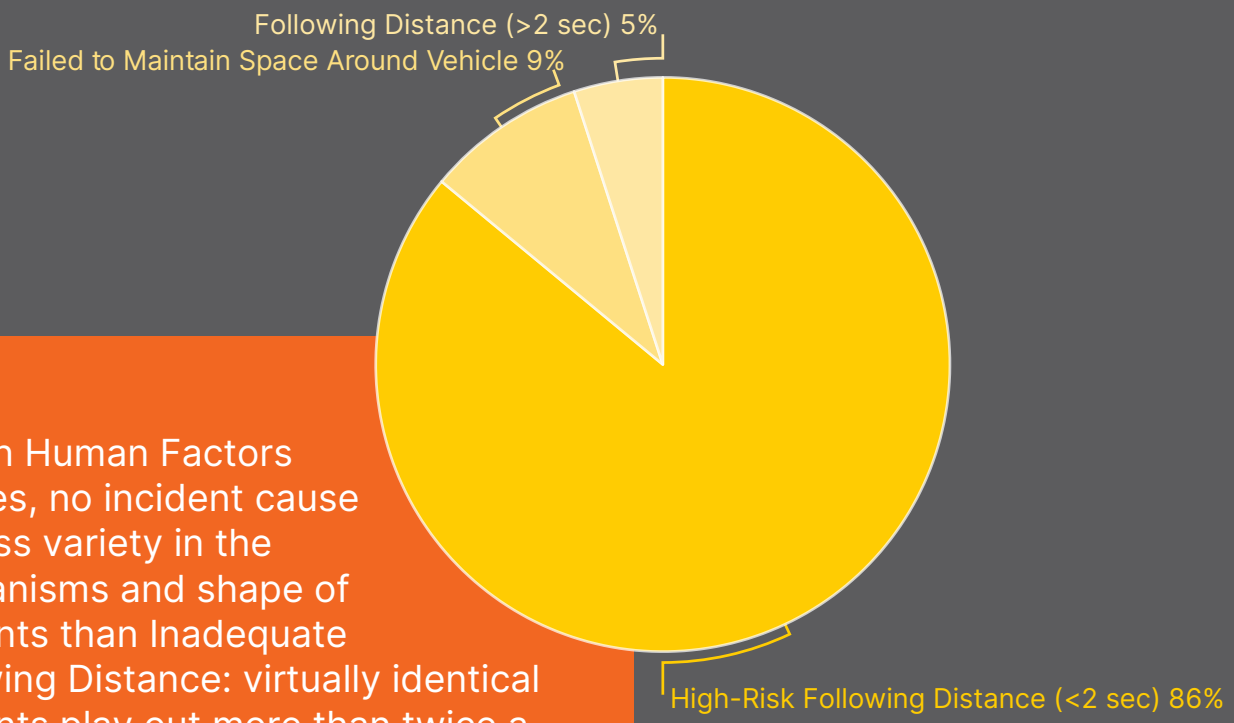
Fundamentals Focus

Year-on-year we've observed as the key behaviours within the Fundamentals category progressively increased - 2024 was no different as High-Risk Following Distance (<2sec) increased by 82%, Following Distance (>2sec) increased by 106%, and Failing to Maintain Space Around the Vehicle increased 12%.



In the past we highlighted the impact that the MV+AI capability has had on the volume of specific behaviour capture in this category, which is just as relevant within the 2024 data. This is bolstered by the fact that Failing to Maintain Space Around the Vehicle demonstrated a minimal increase from 2023 to 2024, which (unlike Following Distance) is not an MV+AI detectable behaviour.

Despite the above, the proportionate breakdown of behaviours within the Fundamentals category once again reflects that of previous years:



"Within Human Factors crashes, no incident cause has less variety in the mechanisms and shape of incidents than Inadequate Following Distance: virtually identical incidents play out more than twice a week among NTI-insured trucks." (NTARC2.0, 2024 – pg.24)

High-Risk Following Distance (<2sec) remains the top risky behaviour (defined as having collision-leading potential) by volume in 2024. Whilst many captured instances in isolation don't necessarily result in a severe or near-miss outcome, it's important to understand the poor driving habit which is highlighted through the identification of this behaviour. Maintaining an adequate following distance to the vehicle ahead at all times is the most important factor in reducing and avoiding rear-end collisions.

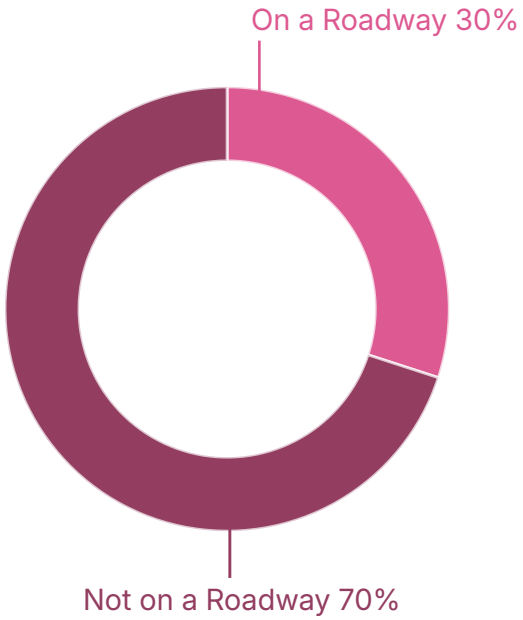
Furthermore, by 2023 NTARC2.0 reported "the five-year trend shows Inadequate Following Distance incident rates increased by more than 73%." (NTARC2.0, 2024 – pg.25)

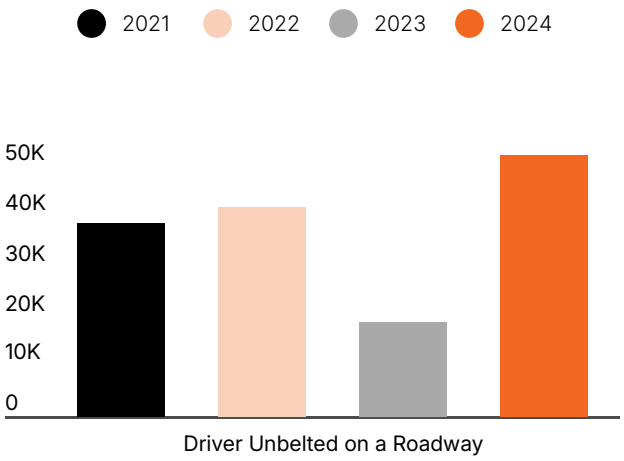
Unbelted Focus

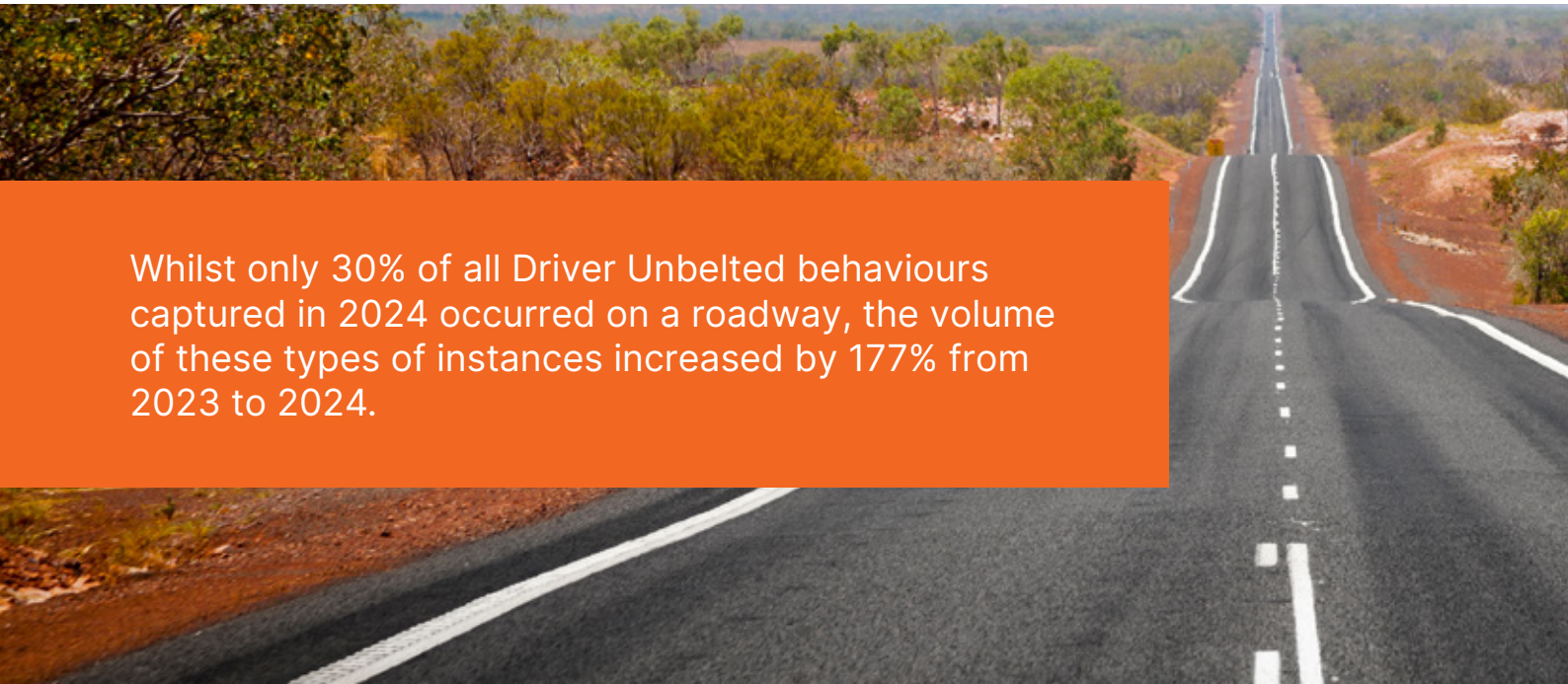
At Optix we pride ourselves on our variety of clients, the nature of their respective operations, and the subcategories of industry to which they belong - ultimately this results in quite a diverse client base. Despite the fact that many of our clients operate fleets comprised of heavy vehicles, we're also partnered with light vehicle fleets, and those which feature a combination of both heavy and light vehicles.

Whilst it has been a mandatory requirement throughout Australia for drivers of light vehicles to wear a seatbelt whilst driving since 1972 (Milne, 1985), and more specifically whilst operating a heavy vehicle in areas such as NSW since 2000 (UNSW, 2013), we continue to capture an alarming number of instances depicting drivers not wearing a seatbelt.

Almost 1/3 of all Driver Unbelted behaviours captured in 2024 occurred whilst the driver was travelling on a roadway - not only does this jeopardise the driver's personal safety, as well as that of any other occupants in the vehicle should a collision or serious incident occur, but it's also a traffic infringement. The penalty varies between states and territories, however in states such as Queensland it can carry a fine of up to $1209 along with 4 demerit points (QLD Government, 2025).







Whilst only 30% of all Driver Unbelted behaviours captured in 2024 occurred on a roadway, the volume of these types of instances increased by 177% from 2023 to 2024.

Throughout 2024, for every 10 x Drowsy Events, we captured 1 x Falling Asleep Event.

Fatigue Behaviours

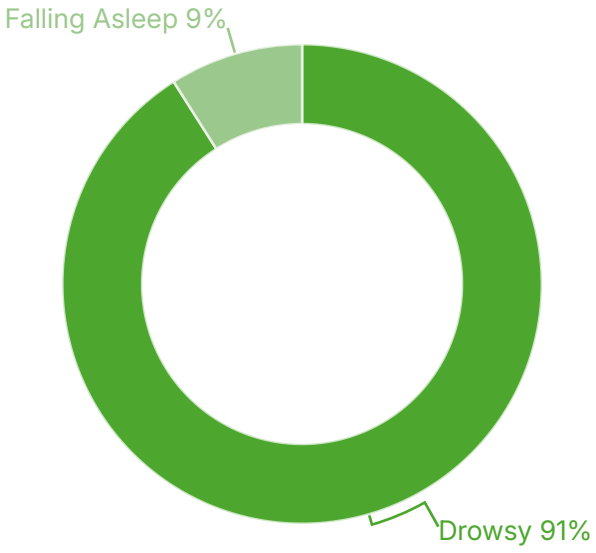
The Optix DriveAlert is a driver fatigue monitoring system that couples with our proprietary Early Warning notification service. The technology utilises a combination of Artificial Intelligence and PERCLOS to actively track eyes, facial features, and head movement to primarily detect fatigue, as well as distracted driving behaviours.

The DriveAlert device is designed to intervene at critical moments by providing real-time, in-cab alerts (audible + seat-shaking) to the driver when infractions are detected. It can also integrate with the Lytx DriveCam device as a secondary event triggering mechanism, to capture additional video for coaching and improvement.

The Early Warning service provides immediate review and 'back-to-base' notification via phone call, SMS, and email.

As previously mentioned, the Driver Conduct category increased by 141% from 2023 to 2024, which was largely comprised of the fatigue-oriented behaviours Drowsy and Falling Asleep - combined, these behaviours comprised less than 4% of all high-risk instances by overall volume. Throughout 2024, for every 10 x Drowsy Events, we captured 1 x Falling Asleep Event.

Whilst the comparative volume of Falling Asleep events to Drowsy events is relatively low, the severity and catastrophic potential of this behaviour and the subsequent outcomes if unactioned remains extremely high.



Near Collisions v. Collisions

The margin or difference between Near Collision and Collision outcomes is usually a result of pure luck. Sometimes however, the difference can be largely due to the awareness, responsiveness, and skill of the driver, which is often depicted in events where Near Collision - Unavoidable has been identified.

To summarise:

- Near Collision - Unavoidable highlights instances that could not be reasonably avoided and commonly where a 3rd party vehicle is considered 'at fault'.
- Near Collision highlights instances that could be reasonably avoided, and whilst the driver may not necessarily have been 'at fault', by applying generally accepted safe- driving practices, the incident may have been avoided.
- Collisions highlight instances where the vehicle came into contact with another vehicle, property, person, or animal, and the incident appeared to result in human death, bodily injury, or property damage.

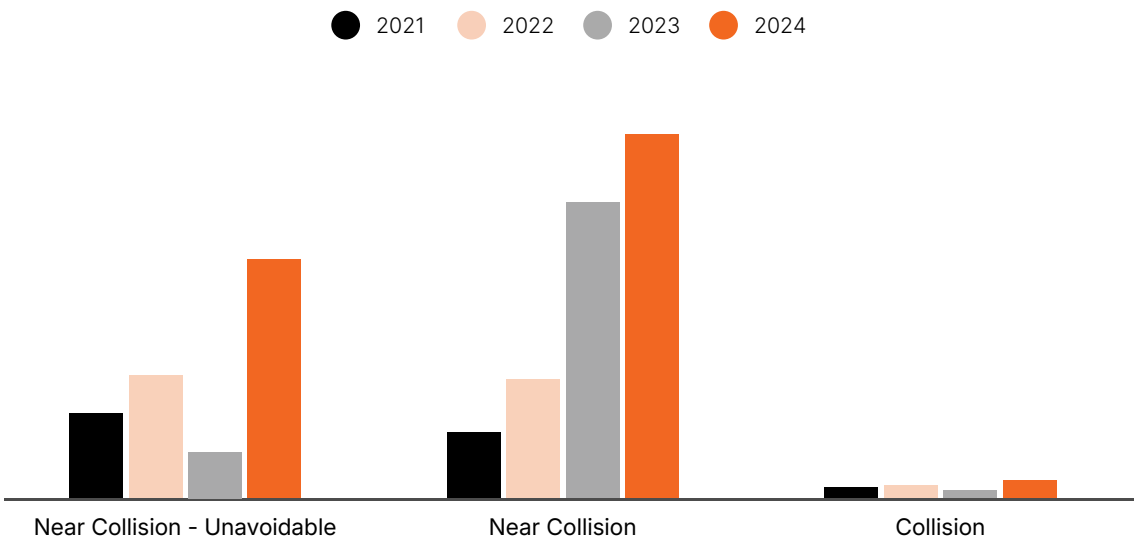
Events where Near Collision has been applied often highlight instances that serve as 'collision-leading indicators' for both the drivers responsible and the root cause behaviours.

By analysing and assessing the contributing behaviours within Near Collision events, appropriate coaching can be administered to the driver, which could prevent future collisions from occurring.

Furthermore, many of our clients utilise video events featuring Near Collision - Unavoidable as 'positive recognition' examples, whereby the drivers responsible are commended and rewarded for applying safe driving practices.

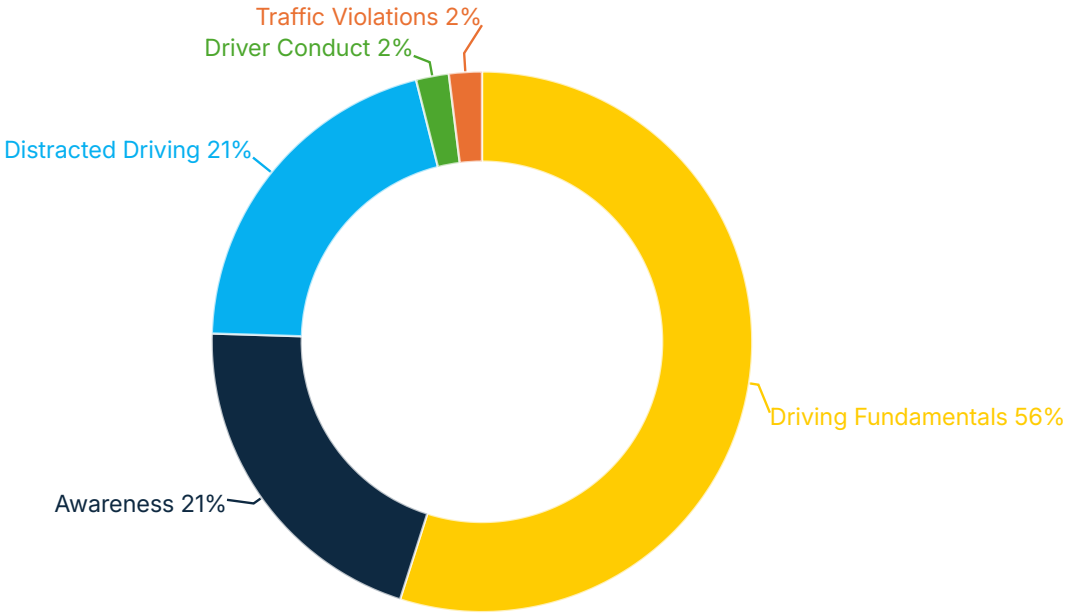
In the 2023 report we remarked on the 39% year-on-year decrease in the total Collision events captured across all fleets, however in 2024 the volume of Collisions captured increased by 137% - this doesn't necessarily indicate that drivers have regressed either, as events resulting in a Collision do not necessarily indicate that the driver was at fault.

What's interesting is the year-on-year rate of change regarding Near Collision - Unavoidable and Near Collision - the former increased by 419%, however the latter only increased by 23%, which (at a very high level) may suggest that Optix-protected drivers are more likely to avoid Collision-type outcomes, and less likely to be involved in Near Collisions resulting from the absence of safe driving practices.



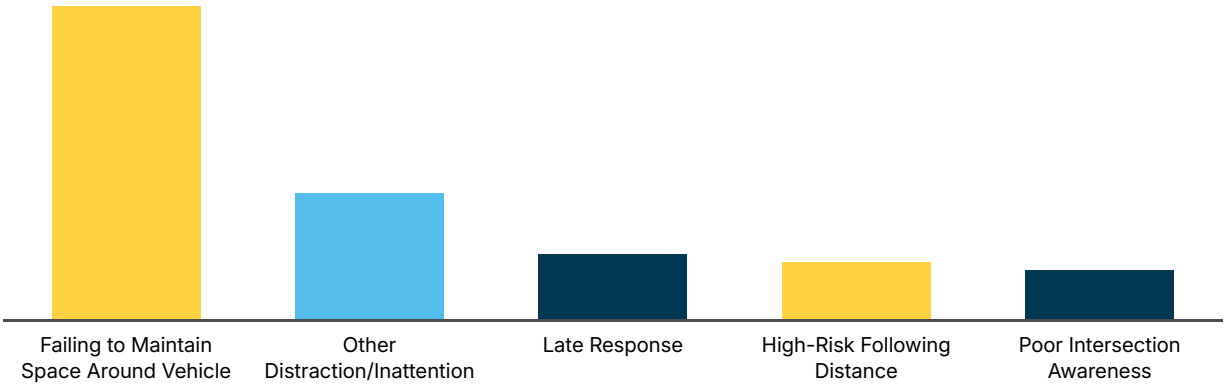
Proportionately, the behaviour categories most commonly associated with Near Collision outcomes remain very consistent with previous years, whereby Driving Fundamentals comprised more than half.

Whilst the proportion that Awareness behaviours contribute to these outcomes remains at 21%, Distractions have increased from 17% in 2023 to 21% in 2024, which suggests that the higher volumes and prevalence of Distractions overall translates to a higher frequency of Near Collision outcomes as a result.



As above, the individual behaviours identified as root causes behind avoidable Near Collision outcomes remains consistent with previous years - Failing to Maintain Space Around Vehicle is by far the most prevalent, identified in 47% of instances.

In 2024 Failing to Maintain Space Around Vehicle was associated with 2.5x more than the next most common behaviour (Other Distraction/Inattention) - this is a change from the 3.6x detailed in the 2023 report, further bolstering the correlation between Distractions and Near Collisions.

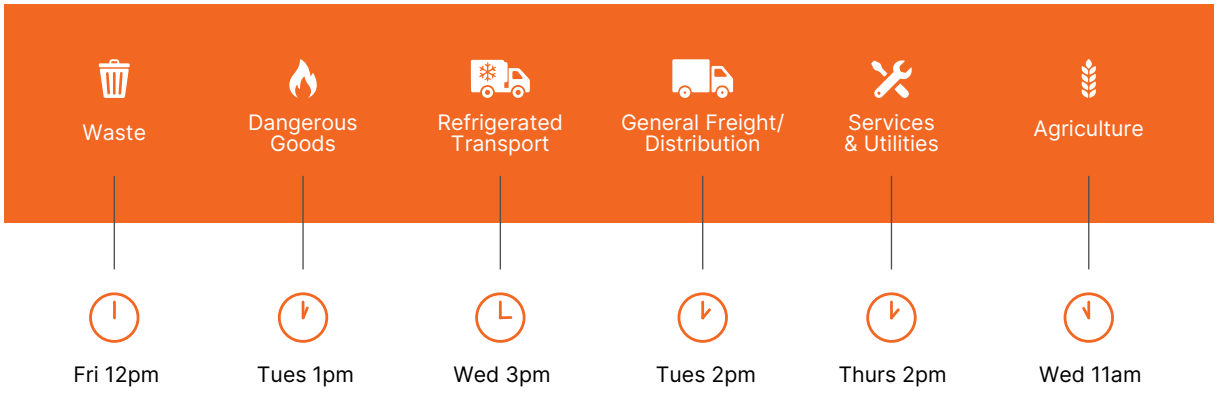


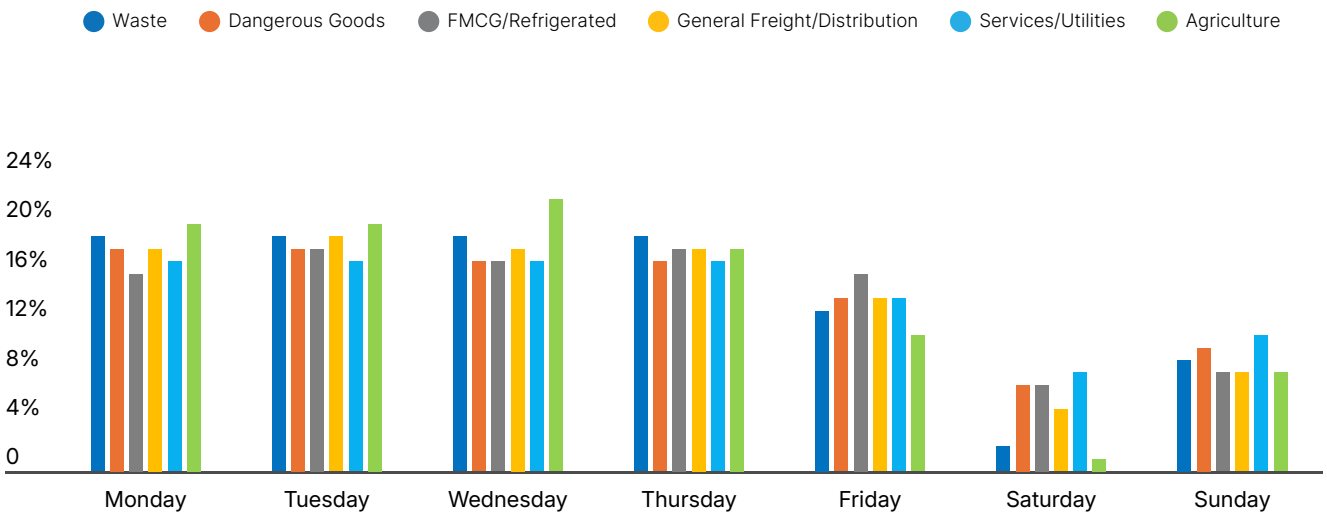
Risk by Industry

By applying our BI-based 'Heat Map' to risk scores captured throughout 2024, we've been able to determine that the highest concentration of risk was accumulated on Tuesday at 1pm. Furthermore, Tuesday was also the overall riskiest day of the week, and 12pm was the overall riskiest hour of the day.

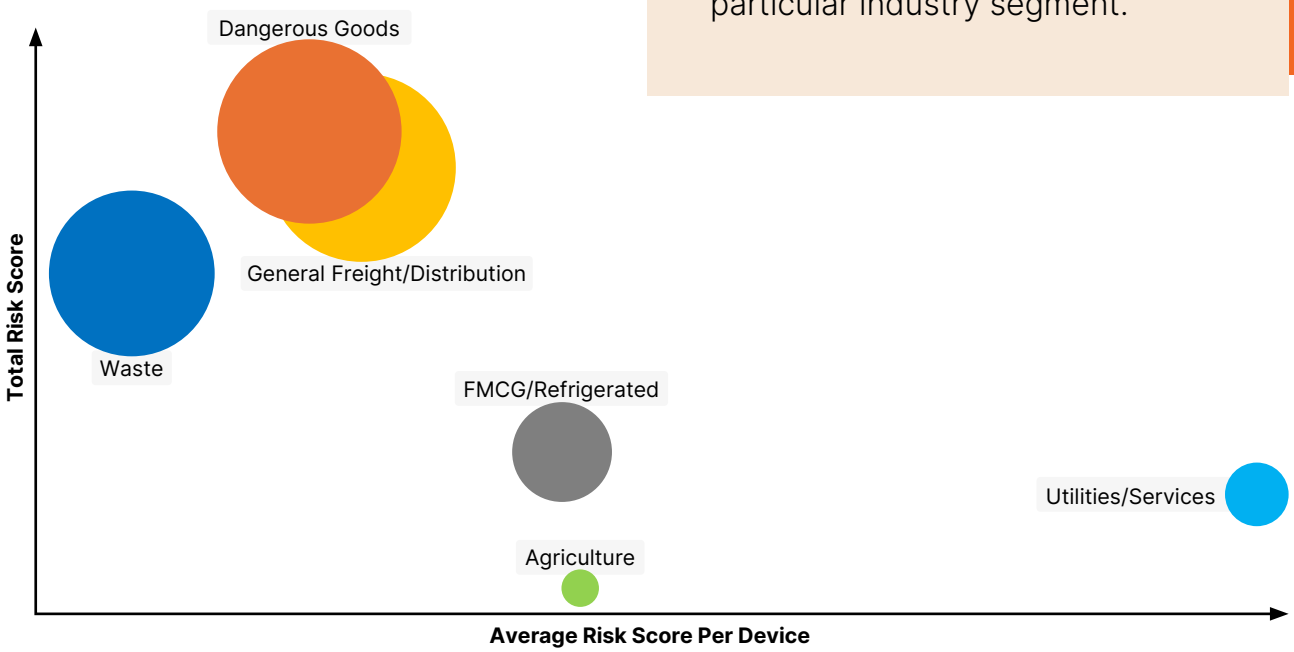
Interestingly, the highest concentration of risk by both day of the week and hour was the same in 2024 as it was in 2023 for the General Freight/Distribution and Agriculture industry segments.

Highest concentration of risk by industry





This bubble chart displays each of the respective industry segments plotted side by side, where the y-axis position represents the total risk score accumulated, the x-axis position represents the average risk score per device, and the size of the bubble indicates the number of devices which comprise that particular industry segment.



The majority of Optix protected vehicles operate within the Dangerous Goods, General Freight/Distribution, and Waste sectors, with Waste maintaining the lowest risk scores per device throughout 2024.

The Impact of Coaching Good v. Poor

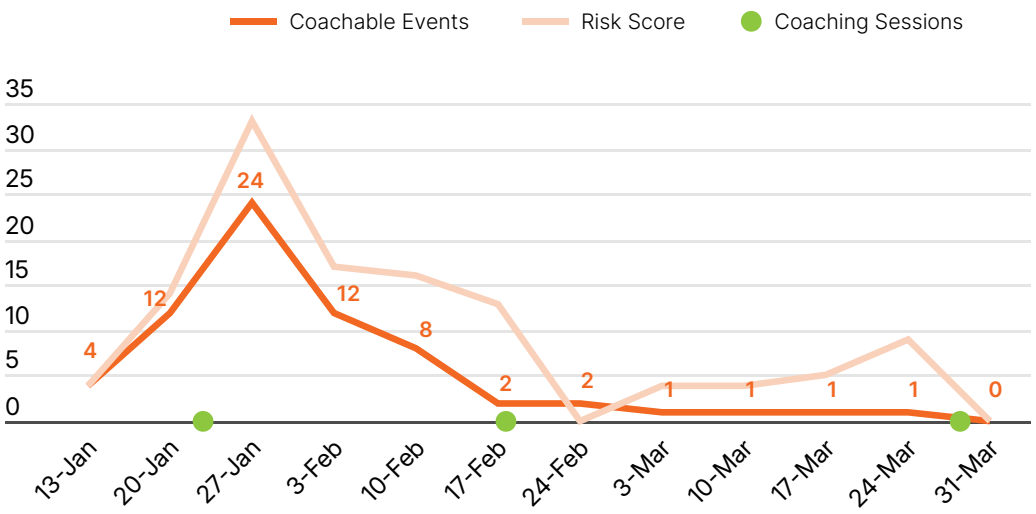
Whilst all IVMS (In-Vehicle Monitoring System) and SMS (Safety Management System) systems available in the marketplace collect a wealth of data points, their real value lies in how well the data can be interpreted by the end user, and the impact that it has on influencing the decision-making processes.

An integral component that ensures the success of the Lytx DriveCam program is the way in which driver-specific behaviour data is accumulated and presented for coaching and improvement, along with the delivery of this information by the appointed coach.

The frequency of coaching does not necessarily equate to greater improvement if the messaging is insufficient. The following examples highlight the risk trajectories of two drivers:

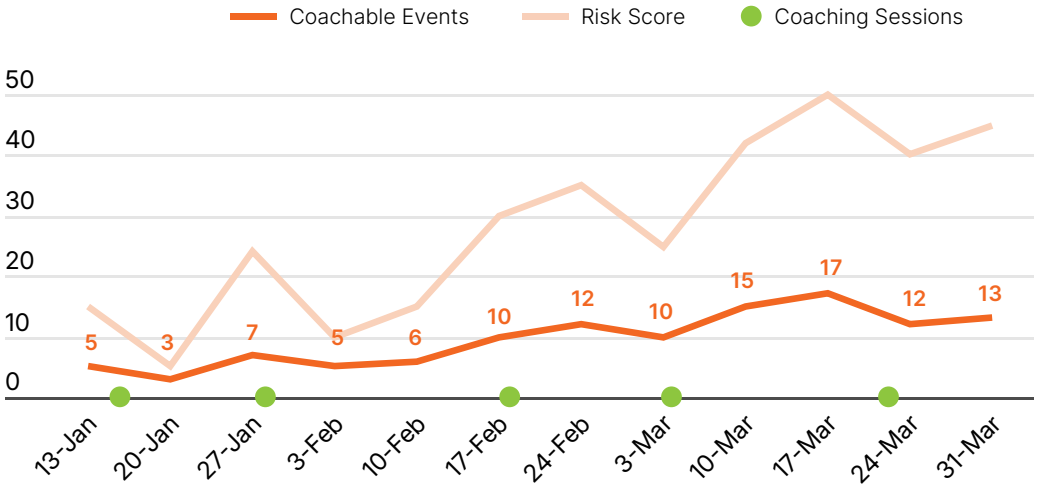
Driver A

Driver A, who was subjected to 'good coaching', where the coach had demonstrated sufficient diligence and commitment to helping the driver understand the safety risks. Subsequently the driver heeded this advice and made the necessary adjustments within their driving habits.



Driver B

Driver B, who was subjected to 'poor coaching', where it was evident that the coach demonstrated little (if any) commitment to highlighting the safety risks to the driver, or assistance with overcoming these issues.



As evidenced by the respective charts detailing a 12-week time frame, whilst Driver A was subjected to fewer high-quality coaching engagements, both their risk profile and frequency of 'coachable' events diminished drastically.

Conversely, Driver B was engaged in coaching almost twice as often as Driver A, yet due to the absence of care and investment on the coach's part, Driver B's risk profile continued to steadily increase, along with the frequency of events featuring 'coachable' behaviours.

Whilst there are several other factors that can influence the success of the coaching and improvement process, the key takeaway is that by applying effective improvement practices oriented around ensuring on-road safety, the likelihood of a driver being involved in an avoidable collision can be significantly reduced.

Client Spotlight

In previous editions of our Annual Fleet Safety Report we've used actual client outcomes as case studies to demonstrate some of the immediate and short-term benefits which are achievable within the first 12 months of deploying the DriveCam program.

However, our approach and strategy at Optix is to partner for the long-term and ensure that our clients continue to effectively manage and reduce their on-road risk footprint indefinitely. We're proud to have maintained such successful and longstanding partnerships with fleets such as Australia Post who has achieved long-term successes since partnering with Optix.

Over the last 5 years Australia Post has achieved:

74%
reduction in Driver Unbelted (Roadway)

32%
reduction in Mobile Phone Handheld

27%
reduction in Collisions

"Australia Post has been using the Lytx DriveCam program for approximately 12 years in total. Given the ever-evolving technology and the use of cameras to ensure the safety of heavy vehicle drivers and other road users, the length of this relationship is a testament that the product is successful with helping us achieving our goals.

These results showcase the positive impact that our partnership has had so far, and where the program has played a key role in maintaining on-road safety protocols. In addition to the program itself, equally important is the Optix team's professionalism and skill, which exceeds expectations."

Lindy Pascoe
Head of CoR, Compliance & Planning
Australia Post

Note: Opinions expressed here belong solely to the individual and do not necessarily reflect the views of the company they represent.

Summary

In our 4th edition of the Optix Annual Fleet Safety Report we've observed many of the same behavioural patterns and trends, which continue on similar trajectories to what we've witnessed in past years.

With the technology and services that Optix provides, one of our core functions is to uncover and highlight behavioural risks exhibited by drivers within our partner fleets. With an ever-evolving product suite, which remains at the very forefront of technological advancement, we're able to provide more data, much faster and more accurately, than ever before.

As NTARC2.0 recently reported, Distractions and Following Distance behaviours are amongst the most common factors contributing to collision outcomes involving heavy vehicles. Coupled with the parallels observed within our own dataset, this presents the greater transport community with an accurate and reliable indication of exactly what needs to be prioritised and effectively managed within their driver groups.

Whilst the obvious solution lies in educating drivers and furthering their understanding of avoidable risks on the road through coaching and improvement initiatives, the ability to collect, present, and utilise tangible, relevant data is a fundamental part of the entire process.

Without the means to affect change, one cannot reasonably expect change to occur. It's the responsibility of all transport operators to invest in programs and systems that facilitate effective change, and to equip their fleets with the tools to manage and maintain improvements on an ongoing basis.

With another year's worth of data capture on Australian roads comes the reminder that, whilst the wide variety of on-road risks are as present as ever, by harnessing the power of technology and insights there's no reason why all drivers can't return safely home.

Nicholas Casalini
Head of Client Experience

Limitations and Considerations

- The data presented within this report is based on observations derived from data collected throughout the 2024 calendar year.
- Unless otherwise specified (or where representative of a specific fleet's performance) all data presented has been anonymised.
- Year-on-year trends are not necessarily indicative of improvement or deterioration - rather they are largely influenced by (and representative of) the aggregation of event and behaviour capture within all Optix AUS fleets, as well as adoption of the technology as new accounts are deployed, and their respective risks are exposed and highlighted.
- Considering that the total values of Food or Drink (MV+AI-generated) behaviours account for both 'risky' and 'distraction' instances with no way to be effectively segregated, they have been excluded from the total 'risky' event counts.
- The values indicating highest concentration of risk by 'time of day' and 'day of the week' per industry are not normalised by active device or operational fleet, but rather raw accumulation by time of day and day of the week.
- Given that seatbelt mandates are governed by each respective state traffic authority, changes in legislation mandating their use whilst operating a heavy vehicle occurred at different points in time.

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