Predict Your Fleet's Accident Reduction and ROI

ROI eBook

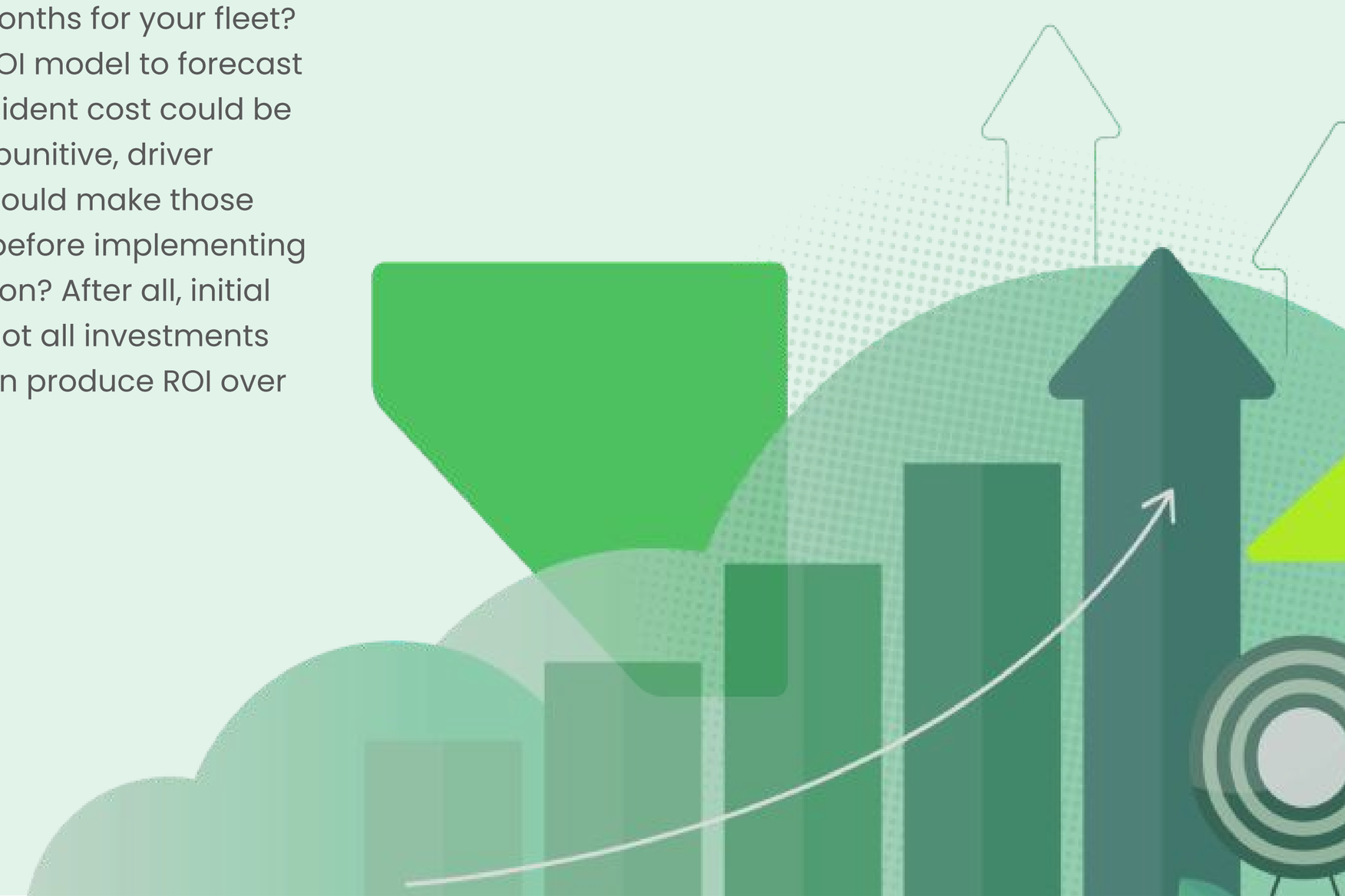
Accidents are more than just unfortunate events—for safety managers, fleet operators, and CFOs or other fleet executives, they're costly disruptions that have far-reaching implications. Every collision, fender-bender, and unexpected incident not only jeopardizes the safety of drivers and the public but also chips away at profitability.

According to Automotive Fleet, an average accident costs anywhere between $16,000 and $75,000—and skyrockets if there is an injury or fatality. Besides driving up insurance premiums, incidents can also incur other costs such as cargo claims and brand damage.

But, what if there were a way to predict accident reduction over the next 12 months for your fleet? What if you could build an ROI model to forecast how much unnecessary accident cost could be saved through positive, not punitive, driver coaching? And what if you could make those kinds of ROI forecasts even before implementing an accident reduction solution? After all, initial costs are often deceiving—not all investments with attractive price tags can produce ROI over the long-term, while more costly options may ultimately deliver exponential savings.

After performing a series of in-depth studies, Netradyne has created a groundbreaking mathematical model that accurately shows the correlation between improving GreenZone® driver scores and accident reduction, proving what many safety managers already intuitively know based on experience: proactive accident reduction is both more effective and cost-effective than reactive driver corrections.

Learn more about this revolutionary science-based model below and how it can transform your fleet management strategy.



A new way to estimate fleet exposure

There is no shortage of “ROI models” in the telematics industry, but often these are assumptive and built backward: companies start with the result they want to market—for example, “We believe our product can save your fleet 20%”—and then design a model to validate that made-up number.

Alternatively, many of these numbers are simply pulled from customer story examples of what other fleets and businesses have achieved—lagging indicators that don’t provide any reassurance that those results are replicable for other fleets.

Netradyne’s new research-backed ROI model is based on analysis of 1.3 billion miles of driving data—more than any driver will cover in a lifetime—and offers the only way to correlate with a certain level of accuracy how safer driving, measured with higher GreenZone Scores, leads to fewer accidents.

Before we get into the ROI model, let’s talk about what the GreenZone Score is and why it plays such a pivotal part in the ROI model.

What is the GreenZone score?

GreenZone scoring is the industry’s first and only driver-focused score built on both positive and negative driving events. The rolling score reflects a driver’s entire work day, mitigating any guesswork during the evaluation of performance. Because the Netradyne cameras record and analyze every second of drive time AND understand the cause of events, this driver score is comprehensive and fair, with clear explanations on what the driver is doing well and how the driver can improve their score.

The GreenZone scoring mechanism is built on a proprietary algorithm, which is unique in that it doesn’t just assume good driving in the absence of accidents. Take stop signs as an example. Whereas other scoring models might only flag when a driver fails to stop at an individual stop sign, the GreenZone Score processes the total number of stop signs encountered during the driving day, and calculates a compliance score based on the percentage of stop signs handled correctly. GreenZone scoring even takes into account the severity of a behavior, assessing whether the driver rolled gently through a stop sign or blasted past it.

For example, if a driver stops at a stop sign 99 out of 100 times but misses it once, many tools will only capture the failed behavior—without taking into context the fact that the driver had a 99% compliance rate, which is excellent overall. It’s more impactful to be able to identify high-risk mistakes, such as running a stop sign while texting. We call these “compound risk behaviors” as they capture the entire context and cause of the event.

These compound risk behaviors lead to very large claims for commercial vehicles. For example, running a stop sign while distracted can lead to a pedestrian strike. Or following too close while texting can lead to rear-end collisions. The risk and the consequences increase significantly with situations like this and Driver•i’s ability to recognize and correct the behavior in real-time is unparalleled. Because these are also measured in the GreenZone Score, it also helps fleet managers—as the fleet’s performance improves, they can stay attuned to the reasons why and which behaviors are

are affecting results. This ultimately not only presents a more comprehensive view of driving performance, but also provides more opportunities to reward drivers for driving safely.

This means that GreenZone driver scoring has a higher level of accuracy, and a higher correlation to accident reduction than simplistic scoring systems that just deduct points for an infraction, and that fail to assess the relative severity of behaviors. The sophisticated algorithm allows for the continuous capture of the reality of a driver's entire day, including both positive and negative behaviors.

Now, let's take a closer look at the ROI model.

Breaking down the ROI model: The correlation between GreenZone Scores and accident reduction

As mentioned in the above section, the GreenZone Score is designed to actually measure and mirror what a safe driving day looks like. Because it analyzes 100% of the driving day, recognizes a more comprehensive list of driving risks including compound risk behaviors, and scores and rewards both positive and negative driving, it accurately reflects true driving behavior.

Taking those key elements and the 1.3 billion miles of driving data, we've confirmed a direct correlation between higher GreenZone Scores and a reduction in serious incidents on the road.

Using Driver•i's robust options for driver coaching, including in-cab alerts, fleet managers can identify and coach drivers on the behaviors that have the biggest impact to their GreenZone Score. Many of these behaviors are not recognized by legacy systems, but for fleets using Netradyne, there have been significant improvements.

In particular, there are two key observations:

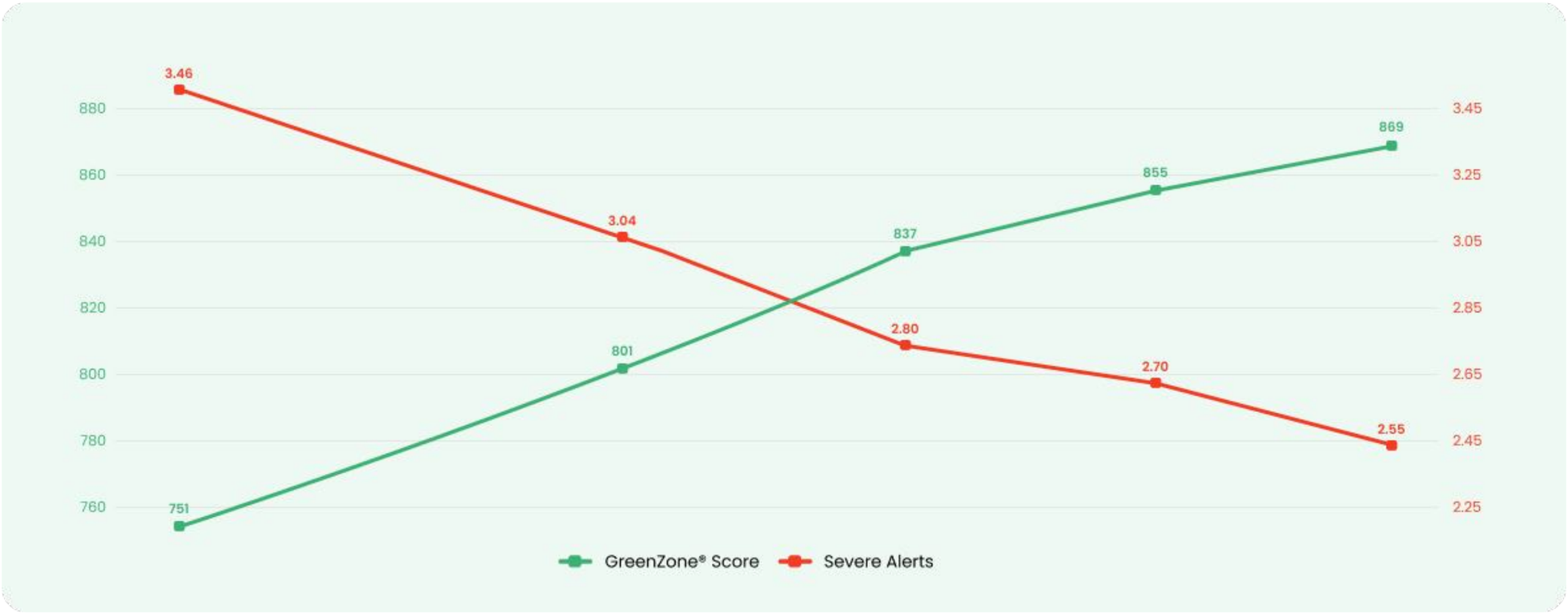
- Every 50-point improvement in a fleet's GreenZone Score correlates to approximately a 13–15% reduction in APMM (accidents per million miles).

- Based on a study of two different groups of fleets (one group of 100 fleets, and another group of 50 fleets) we see that on average, Netradyne customers improved their GreenZone Scores by 150 points in the first year.

In other words, a fleet using the Driver•i platform is likely to experience a 30%+ reduction in accidents per million miles (APMM) —in its first year alone. While customers see great results with even a basic level of deployment, success metrics improve with each addition of a tool within the Driver•i platform, including in-cab alerts, driver-facing views, virtual coach, and the driver mobile app, as well as manager actions enabled by those tools, including positive recognition, managed coaching and the use of incentives. Fleets that experience the 150-score improvement over 12 months are using some or all of the additional tools beyond the basic deployment.

GreenZone Improvement

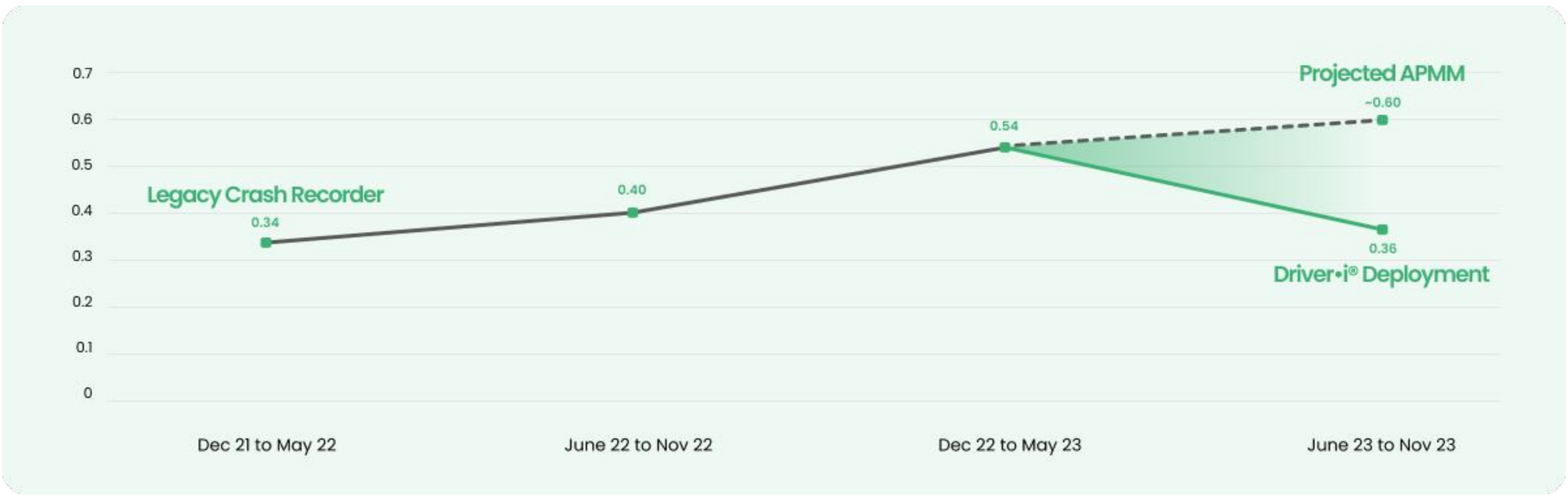
Decrease in severe risk directly correlates to increase in fleet GreenZone Score



The below graph shows data from an actual Netradyne customer. They were using a legacy dash cam system and despite working with the safety system and their drivers, their APMM continued to rise, indicating that just having any dash cam does not improve safety. However, after deploying Netradyne's Driver•i, the fleet saw immediate improvements to safety and continues to see their APMM reduce still today.

Reversing the rise in reportables

FMCSA reportable APMM

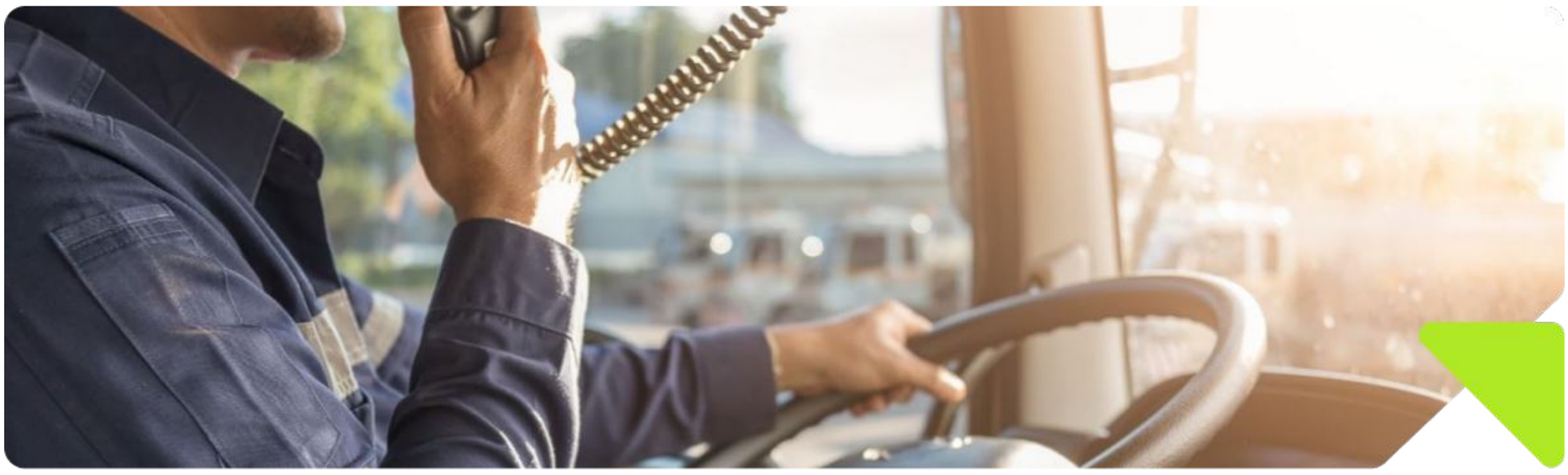


Note: *The lightly shaded green area shows the potential range of variability based on different possible configurations (for example, how many in-cab telematics devices or cameras a fleet has, and what kind of fleet it is).*

Beyond initial costs: How investing a few more dollars per device can lead to millions in savings

In addition to the model above and the reverse in reportables experienced by Netradyne customers, what is also interesting to note is the difference in ROI when considering subscription prices. Margins are generally quite thin for most fleets, which makes services that are less expensive initially more attractive. However, the multi-year impact can vary drastically.

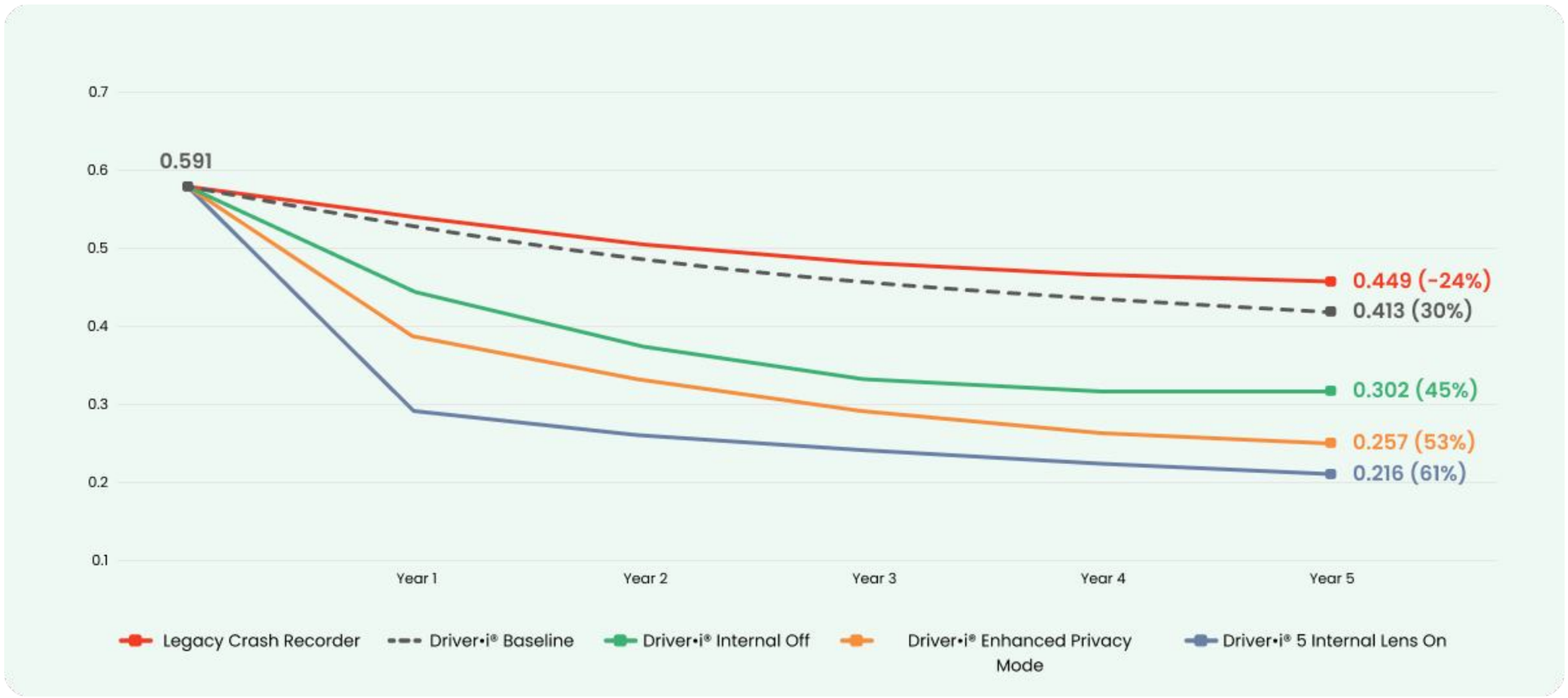
To explore the long-term impact of these two approaches, we did a study of Netradyne customers who switched from a large legacy camera provider that offered cheaper services.



On average, the reduction in APMM was 30%+, and the reduction in accident costs resulting from using Netradyne was tens of millions of dollars, which the legacy provider fell well short of. This was for just the first five years, even with Netradyne's services being slightly more expensive—in most cases, three or four dollars more per vehicle per month, the return on their investment with Netradyne was notably higher.

Netradyne Commitment - 30% reduction in APMM

Projected reduction in APMM based on customer results and different driver configurations

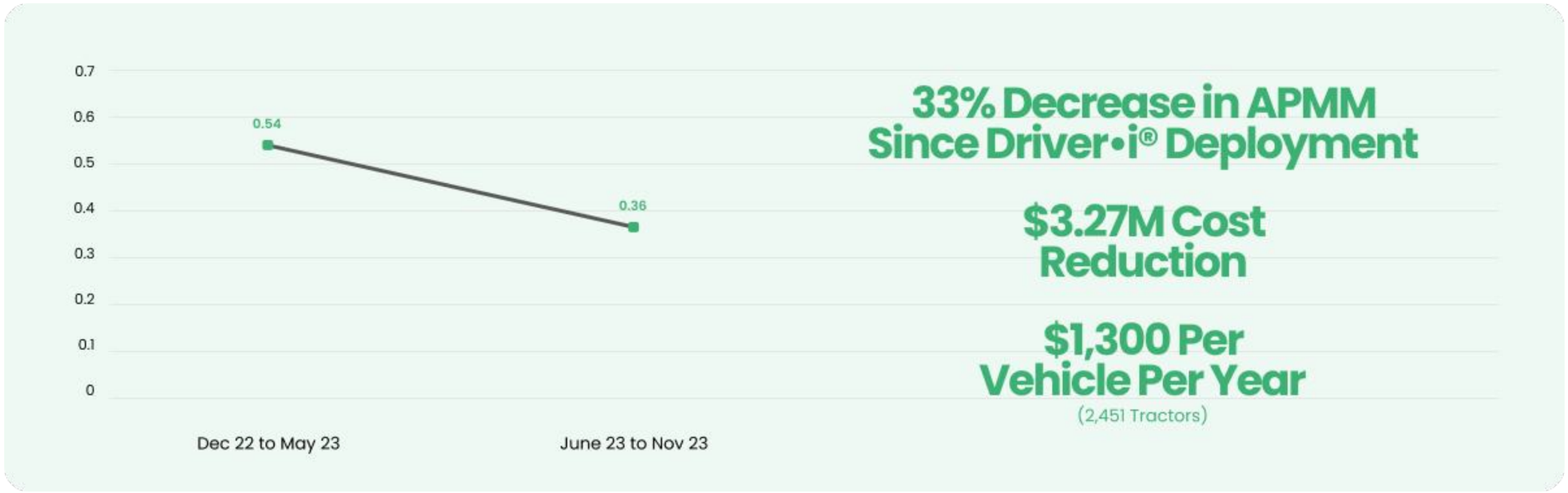


Note: *Comparing the ROI of Driver•i vs. a legacy crash recorder for a customer with 11,438 vehicles*

In other words, even though customers were paying perhaps a few dollars more per vehicle with Netradyne, they were ultimately still saving tens of millions of dollars. In fact, legacy providers used would have had to reduce the cost of their solutions by more than $20 per vehicle compared to Netradyne to achieve similar cost savings.

Return on investment

Annualized cost avoidance tops $1,300/vehicle/yr in first 3 months



Note: *Example from one Netradyne customer*

> *Netradyne paid for itself in the first year. If I have to look at ROI with safety technology, I think cameras were the fastest turnaround ROI that paid for itself of anything we've done.*

John Elliott

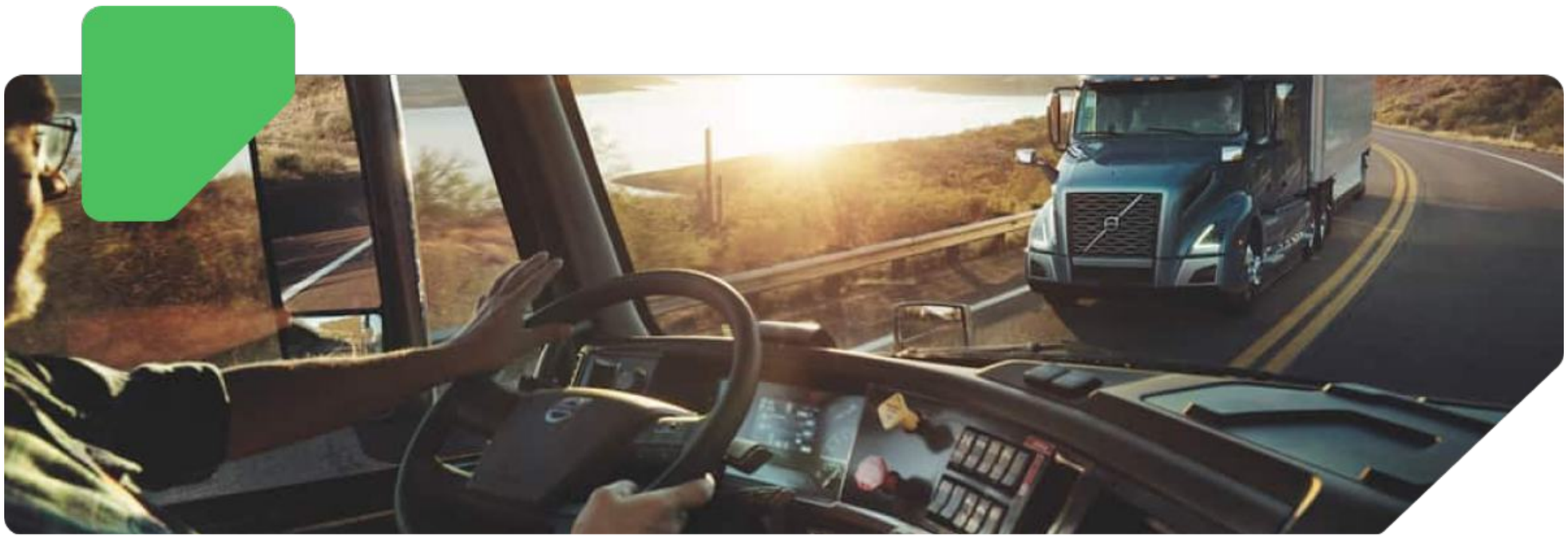
CEO at LoadOne Transportation and Logistics

Tips for proactive accident reduction

With a fleet safety foundation built upon GreenZone Scores and Netradyne's ROI model, operators are equipped to take a positive, holistic approach to fleet safety. Here are four ways to start proactively reducing accident rates:

1. First, decode risk accurately

Both traditional and modern telematics tools often fail to accurately assess risk, which impacts safety managers' understanding of where drivers need help and which behaviors need coaching.



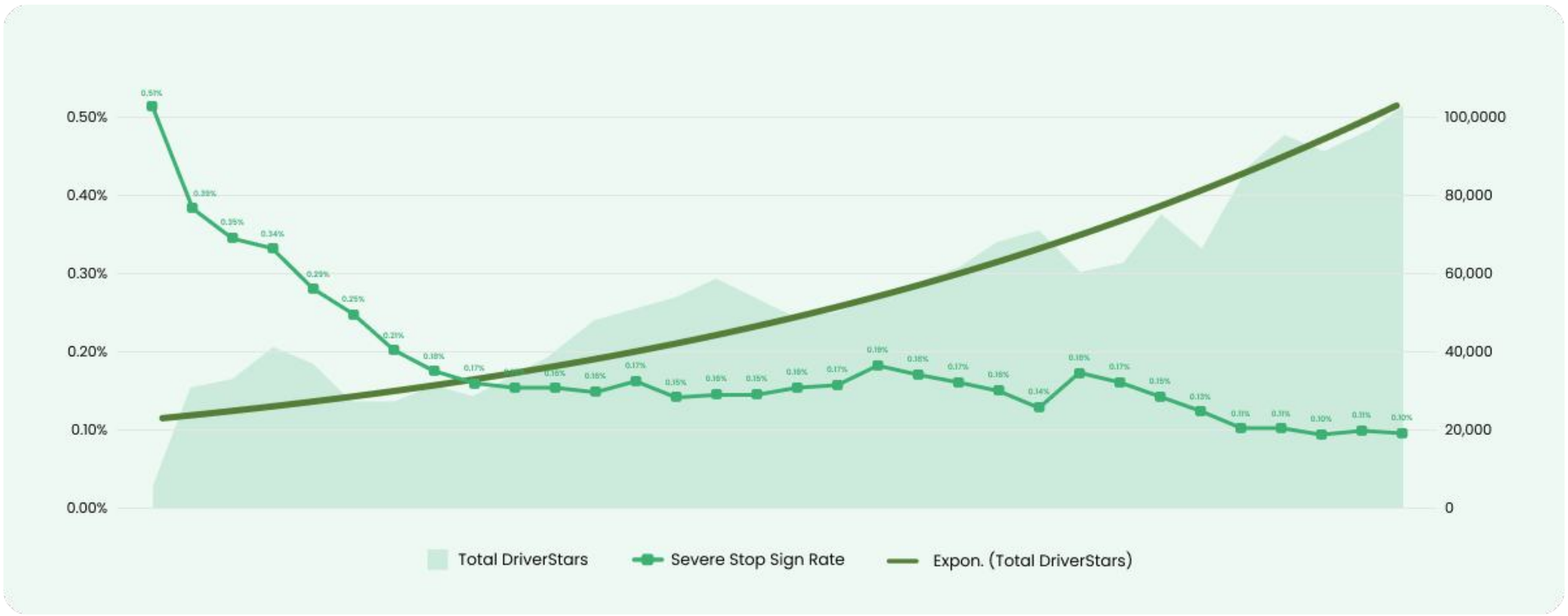
Netradyne® Driver•i's AI is designed specifically to address this gap. It provides a comprehensive view of safe and risky behaviors, and empowers coaches to tailor their approach and target the most impactful behaviors based on each driver's unique habits.

2. Coach both positive and negative behaviors

With a comprehensive understanding of risk, safety managers can celebrate and reward safe driving—and ensure that it continues—an often-overlooked component of an effective safety program.

In fact, top-performing teams give each other more than five positive comments for every criticism (Harvard Business Review), and numerous studies have shown that positive reinforcement is more effective than negative feedback. The Department of Transport (DOT) in the Netherlands found that feedback and rewards have a strong positive effect on safe driving behavior, while a study in Australia found that penalties did little to reduce crash risk.

Results: Greater with recognition
Correlation between recognition and risk reduction



Netradyne's approach to accident reduction is based on this research and incorporates gamification and positive driving reinforcement in the design of its products. For example, Driver•i tracks when drivers are proactively responding to unsafe acts and records those (outstanding) events, which earns them DriverStars® – or extra points for their GreenZone Score. Drivers who don't follow too closely or speed will earn more points, and they can check their updated scores throughout the day (when they're not behind the wheel, of course) on the mobile app.

There are also other benefits to including gamification as a key pillar in overall safety culture. Veriha Trucking's Karen Smerchek said, "Getting the data into a usable format for your drivers to see truly does wonders," Smerchek notes, "and the drivers actually started some peer competition. Even though we don't have a bonus [attached to the score], there are groups of friends challenging each other to improve their scores."

> *Getting the data into a usable format for your drivers to see truly does wonders, and the drivers actually started some peer competition. Even though we don't have a bonus [attached to the score], there are groups of friends challenging each other to improve their scores.*

Karen Smerchek
President of Veriha Trucking

Some Netradyne customers even integrate the GreenZone Score into their payroll system, giving drivers a bonus for reaching a certain score. The result: safe drivers receive the recognition they deserve with a holistic approach, which boosts confidence, raises engagement, and increases overall driver retention. Some Netradyne customers have seen a 15% year-over-year improvement in driver retention.

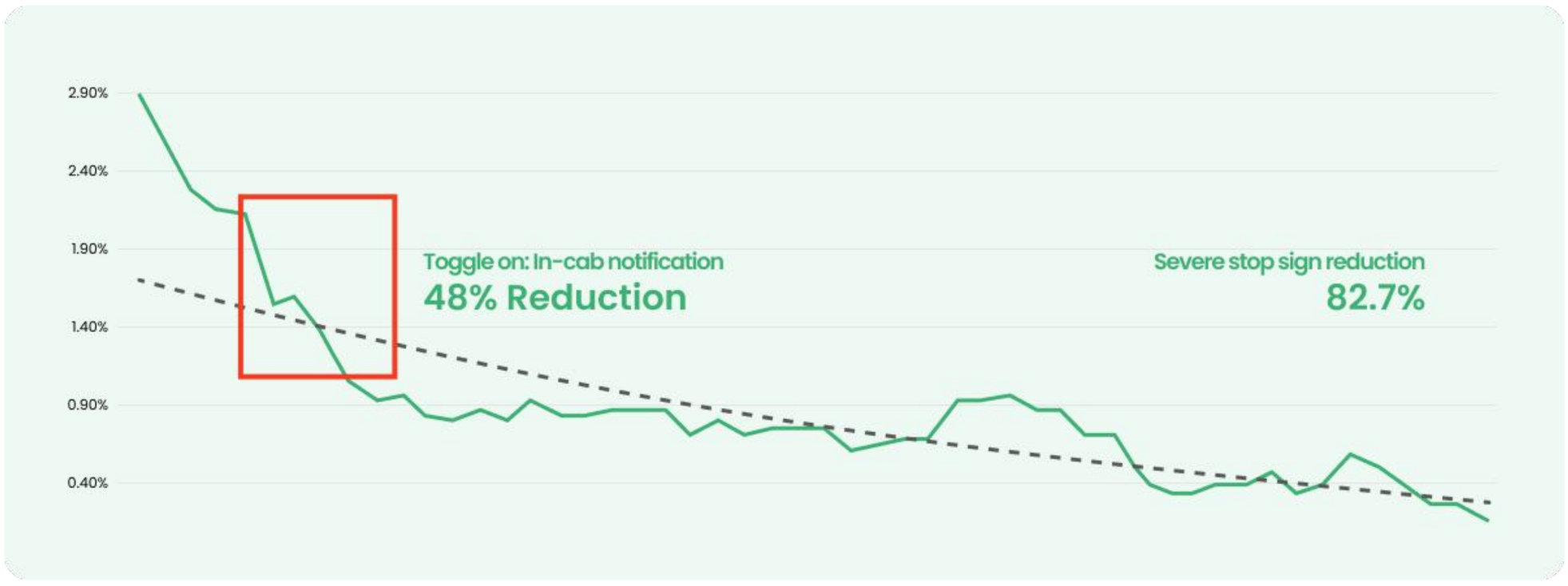
3. Leverage tools with in-cab notifications

Even the most skilled fleet managers are often under pressure to deliver effective coaching to drivers who far outnumber them.

In-cab alerts are a vital tool for reducing the coaching burden on safety managers because they help drivers self-correct and allow fleets to provide automated in-cab coaching—at scale.

Driver•i lets drivers know to slow down, create space, and perform other safe driving actions when needed. It has the immediate impact of having a safety manager ride along in every cab—at a much lower cost and time to value.

Results: Greater with in-cab audio
Stop signs: 12-month continued improvement



4. Use AI to reduce the burden of data-heavy and time-consuming tasks

When it comes to technology, the area with the biggest potential is undoubtedly AI. Already there are countless use cases for AI in fleet safety, including:

- **Collision detection:**
  Combined with edge computing, AI can detect when events and collisions occur, in real-time or near it, without the need for human intervention or review. This helps fleets manage claims more efficiently and also empowers fleet managers to provide timely aid to drivers—ultimately reducing the severity of an incident's impact on the business. Driver•i's AI can accurately detect a collision within about 30 seconds. This allows for on-scene first-notice-of-loss (FNOL) to insurers, which can reduce accident cycle time by over 7 days.

- **Lowering cognitive load for managers:**
  From a fleet operations perspective, a chatbot can act as a Safety Manager Assistant, quickly reviewing videos, pulling data and highlighting things like which drivers need the most guidance, which significantly reduces the time spent analyzing driver performance.

Did you know? *Netradyne's Recommended Coaching feature pinpoints specific driver behaviors and coachable areas that managers should focus on, which means they no longer have to sift through thousands of hours of driving data and recordings.*