

Preventable? or Not?



Vehicle Based Safety ***Video Event Recorder***

Tommy Pollard CDS, CDT

Welcome

Goal = Give you some knowledge tools on an emerging science technologies into the transportation industry.

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Vehicle Based Safety Systems should not be considered as replacement of management practices. Instead, they should support your safety processes.

Your strategy should include ;

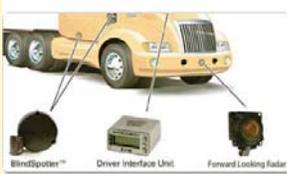
- Solid hiring practices.
- Sound driver policies and operational processes.
- Technologies that support your operational needs.

**A well balanced venue of all three, (Hiring, Safety Processes and Technologies),
is needed to control and maintain driving risk.**

This presentation is not meant to promote any particular manufacturer or product.

It is to help educate you on available technologies and help you determine what may be best for your operation.

It includes material from my own experience and is not meant for the promotion of any particular manufacturer or product.



What is out there !!



Lets review a few: (Acronyms may vary with different mfgs.)



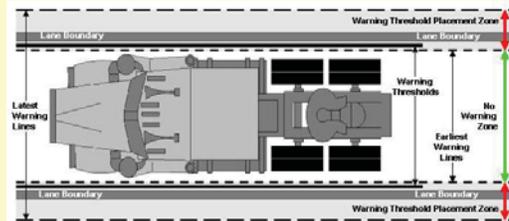
LDWS, Lane Departure Warning Systems
Eye Alert, senses eye movement and alerts driver



Crash Avoidance Systems,
VORAD, Vehicle On Board Radar detection System
Safety Vision, using radar, GPS & video
BSWS, Blind Side Warning Systems



OER, Onboard Event recorders (data only), speed, quick stop, etc.
GPS, Quail COM, Network Car, etc.
OBVER, On Board Video Event recorder
EOBR, Electronic logs
EVIR, Electronic vehicle inspection systems



Considerations

- **Target** / Type of behaviors, accidents (what do you want to change?)



- **ROI** / Cost vs. Risk Reduction (Generally it begins with a poor history of shock loss.)
- **\$\$ Cost** / Number of units considered for implementation. (Will also depend on vehicle application, OTR / Short Haul, Local, etc.)



- Rollover
- Speed
- Deliveries
- Stop report
- Fuel MPG
- Routing
- Risky Actions
- Remedial Training

- **Staffing Support** / The process needs management. (It doesn't work all by itself.)



Perception can lead to success or work against you.

Things that could work against you “If not managed correctly”:

- **Driver Perception** (management credibility) Driver resistance to technology is inevitable. Management commitment, fairness & consistency of application are the keys.
- **Mishandling of information** (confidentiality) Involve your legal staff. You can't hide from discovery. Your safety processes will be more defensible than if you did nothing.
- **Risk of having discoverable information** (during litigation)
- **Due Diligence** (having knowledge or should have knowledge of driving behaviors and not taking corrective action) Now that you employ technology, how are you using it? Technology by itself does not change behavior. It requires management involvement.

Things that will work for you:

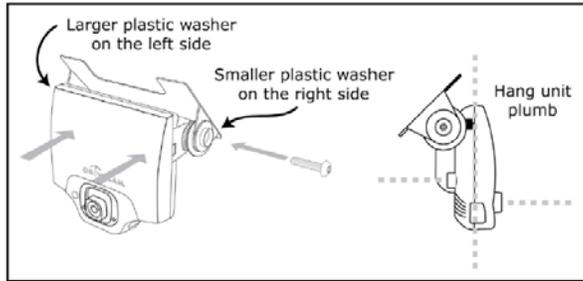
- **Driver / Management Bridging**, The camera brings facts that clear up any speculation and gets you coaching to preventability versus debating what happened. The system develops two way accountability for managers and drivers alike. It includes monitoring of assets, camera issues, timeliness of coaching and coaching effectiveness. Consistency of application will promote good behavior, (defensive driving).
- **Conscious driving decisions**, Drivers become more conscious with the technology and remain more focused on the task of driving. When an event happens, “Active Coaching” is underway.
- **Knowledge**, No matter the reason for coaching you will be engaging your drivers with education like never before. What you see are “Leading Indicators” and when understood and properly addressed, frequency will be reduced.
- **In house Statistics**, (provides event notification and escalation and reports for user up to senior management).
- **Image** Your company is perceived as promoting public safety, “Creating the Visual Standard”).

Technology that works for you!!!

Consider these points:

- **Very little “IT” footprint** (Web based, cellular downloads)
- **Real Time “Proactive” intervention**,
 - Instant Driver feedback (Driver checks the camera after an event, “Real Time Coaching” is underway.)
- **Real Time Driver Behavior Management**
 - Drivers improve because they know coaching will happen.
- **Timely coaching / discipline**
 - With naturalistic Data !
- **Minimal intrusion to driver**
- **Event Reporting**
 - Management Oversight (Top to Bottom Accountability, Dashboard, Escalation)
 - Supervisor alerts for monitoring driver behaviors. (Email notifications to management)
 - Group & Driver reports can identify training opportunities drivers & company.(Behavior Analysis)
 - Statistical Data / Trends (Reports using “Leading Indicators”)
- **Crash Data**
 - Concise Causation

The Camera “Capture & Event Review Process”



- Camera captures event.
 - Recognizes erratic motion (fore, aft, lateral & shock)
 - We cannot view in real time. The camera records only (8) seconds before & (4) seconds after.
- Cellular download to “Drive Cam” for review.
- Managed Services (“Drive Cam”)
 - Reviews events for notification, (Face to Face Coaching, FYI Notify, Resolve)
- Coach (Manager)
 - Retrieves & reviews the event with driver

What do the lights mean?

	Solid green	No event files are stored in memory. The event recorder is ready to record an event. This is the desired state.
	Solid red	Event files are stored in memory and ready to download. The event recorder is ready to record an event.
	Alternating green & red	An event was triggered and is being recorded. The light will turn to solid red within 10-15 seconds. Additional recordings may be triggered during this process.
	Flashing red	Data transfer is in progress. Event files are being downloaded. This may take several minutes or longer, depending on the connection speed and number of files that are being downloaded.

Truck Mounted Event Recorder Pilot Project Report



Tommy Pollard, CDS, CDT

Last Updated: January 25, 2013

ROI

Implementation of 37 on-board driver camera systems (Windshield Mounted Cameras) within the Farms Division (roughly 10%) of the division and has been in place since August 2007.

Our goal was to leverage the Vehicle Mounted Camera Technology and Defensive Driving Strategies (DDC), together in order to reduce risky driving behaviors while developing a culture of safe driving habits through effective coaching.

Fewer accidents occurred because driving behaviors were addressed. Our frequency was reduced by 60%.

- ✓ Frequency reduction = (3) years prior average 15.3 incidents / year, (vs.) (3) year post implementation 6.3 incidents / year.

A Return on Investment (ROI) of 406% for (post installation) two fiscal years.

- ✓ The pilot site had been averaging \$420,716 in accident costs for the three prior fiscal years. Since implementation, vehicle accident costs have been reduced to an average of \$59,671 per year.

History

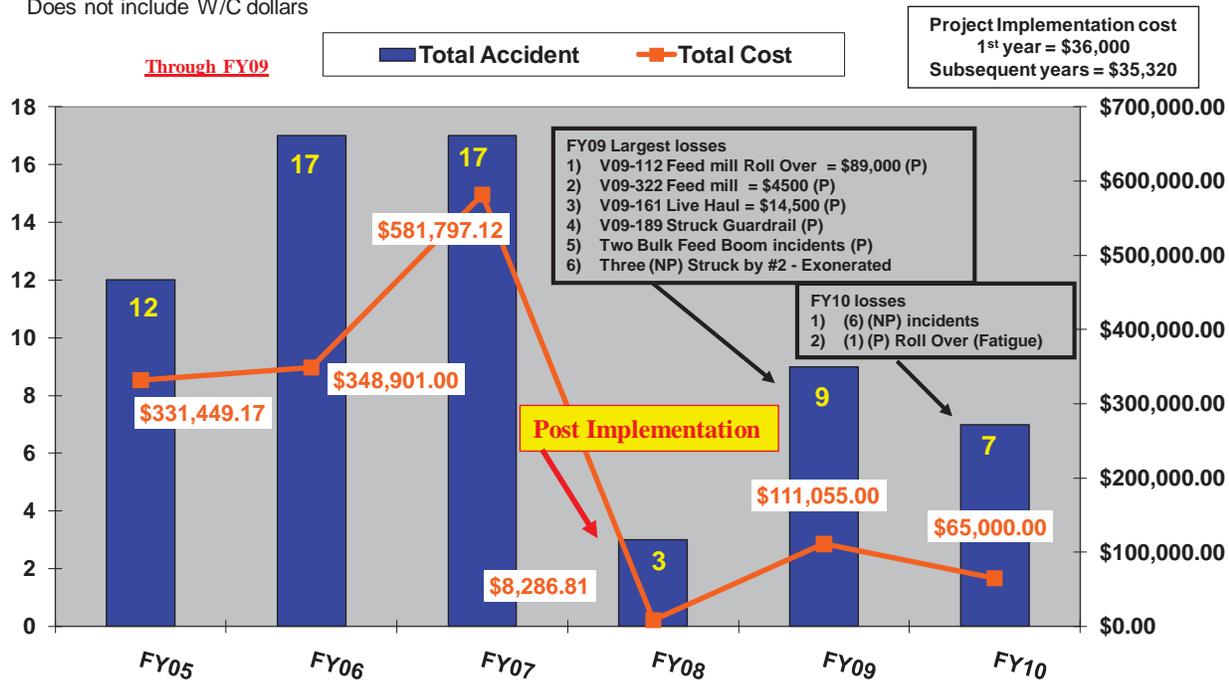
Truck Mounted Camera Pilot Project

Total Accident & Total Cost Before / After Implementation

For (37) cameras covering Short Haul Operations, (Feed & Livestock tractor trailer.)

Includes all commercial vehicle accidents for periods measured (excluding animal strikes & Off Hwy non-serious incidents)
Cost are estimated, based on available maintenance records & Insurance data sources (paid & accrued)

Does not include W/C dollars

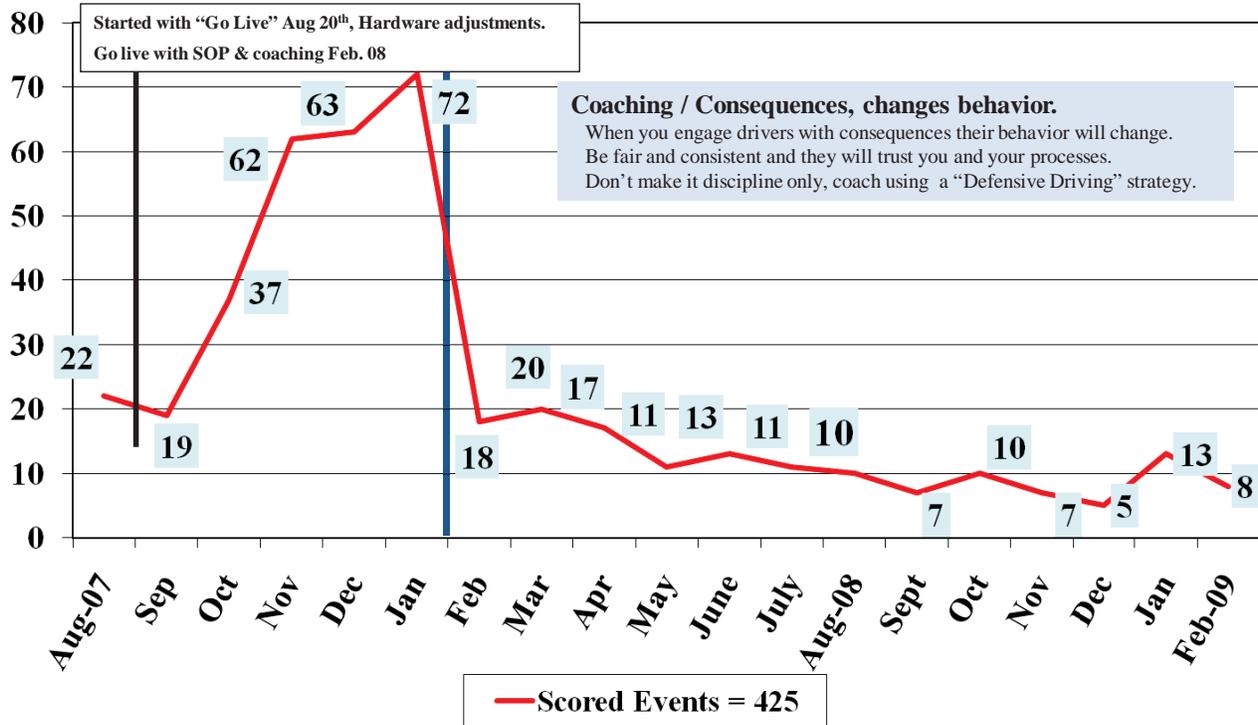


Adding Value

- **In the past;**
 - We spent over 80% of our energy trying to reach agreement on what happened, and less than 20% on preventing re-occurrence.
 - The camera inverts this equation. We now see what happened very quickly and spend most all of our time on preventing re-occurrence.
- **Now;**
 - By paralleling the "Truck Camera " process with Defensive Driving education, we eliminate the barrier between the Transportation Supervisor and driver.
 - Coaching, using defensive driving strategies, now levels the playing field.
 - Coaches and drivers now use the common language of DDC. This keeps the manager and driver on equal footing during coaching and discipline and the DDC strategies are developed professionally thus keeping the personal beliefs at bay.
- **Managed Services;**
 - Provide a professional analysis of the video clip so we don't have to. This means that managers do not have to determine what happened, they just need buy into the process and coach according to the written assessment. Again, this reduces the friction when coaching for effectiveness.

Pilot Results, Scored Events Trend

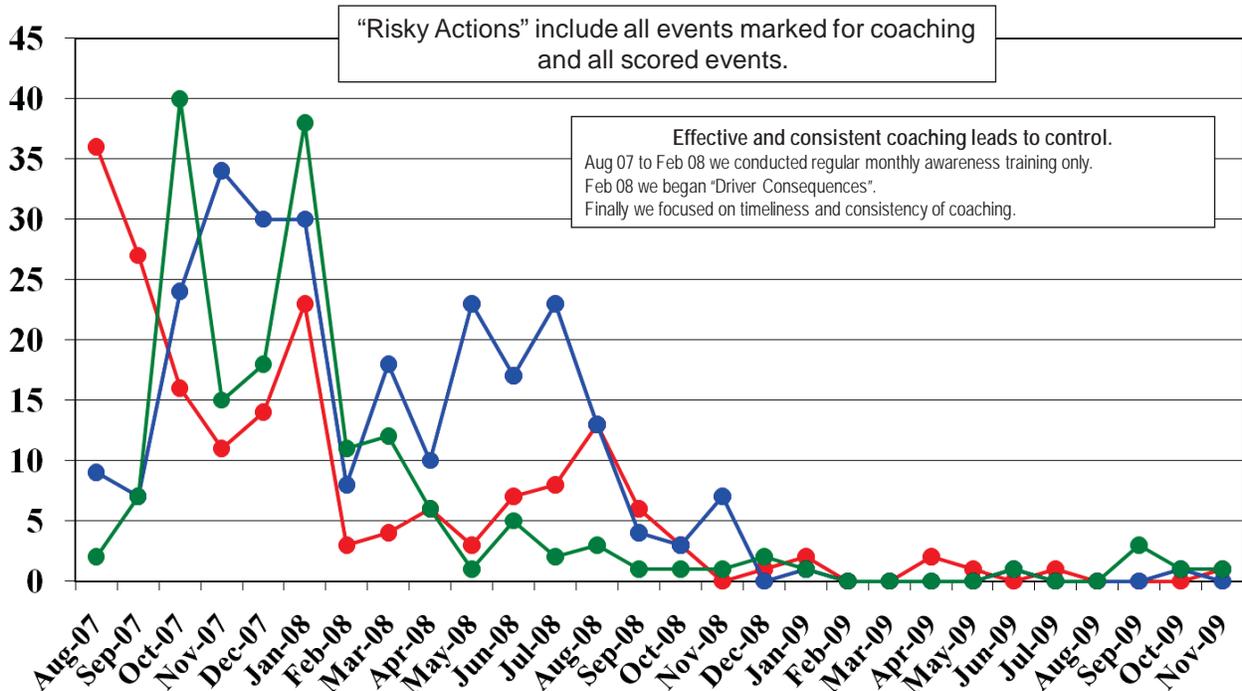
Each scored event equals an inappropriate behavior by the driver and in turn the driver is coached / disciplined based on severity and or frequency



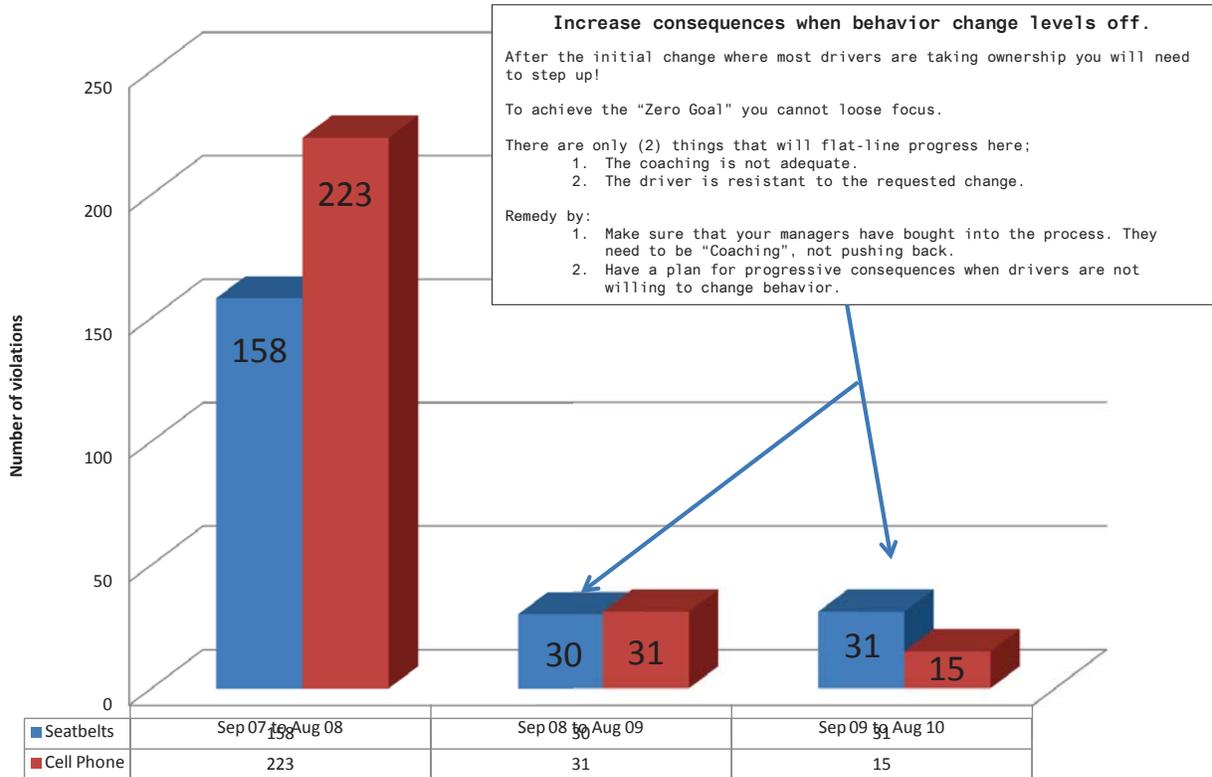
37 Cameras, about 50 Drivers

Pilot Results, Risky Actions

— Seatbelt = 188 — Cell Phone = 263 — Rolling Stops = 172



History Seatbelt & Cell Phone Compliance



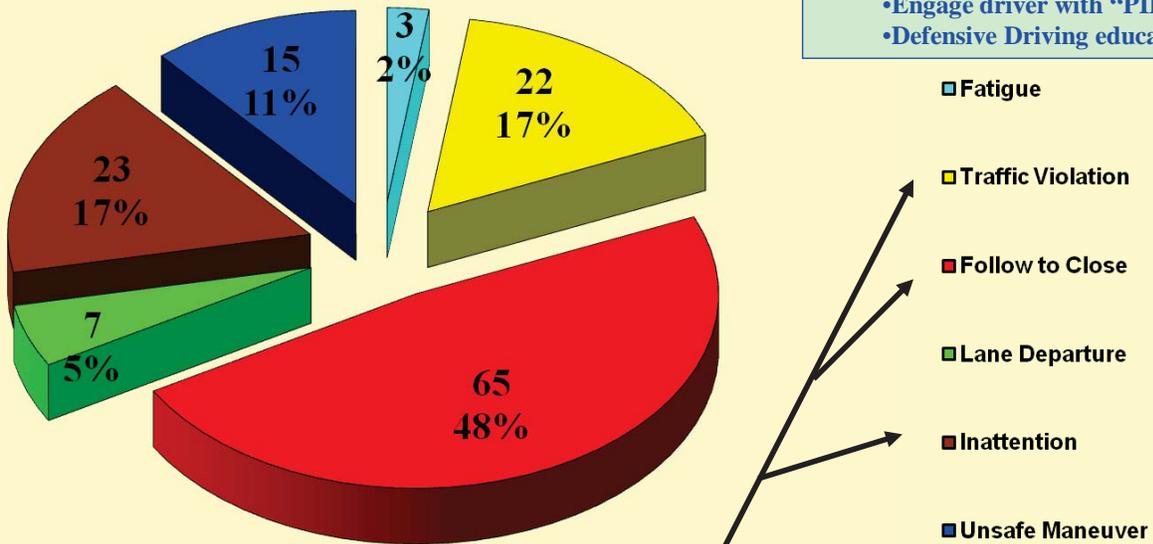
"Camera Project" Pilot Results, Driving Fundamentals Observations Aug 2007 – Feb 2009

Total Events Scored = 425

Risky Fundamental Behaviors = 135 / 31%

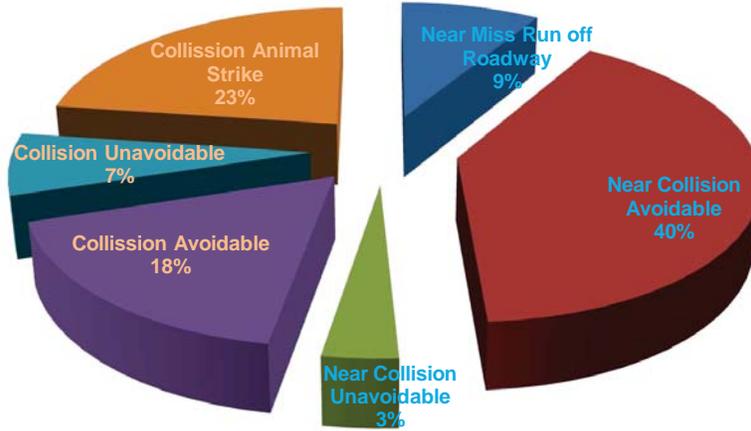
Action:

- Revised Driver Policy
- Keep "Truck Camera" process
- Engage driver with "PIP"
- Defensive Driving education



Top (3) Target Areas of Focus

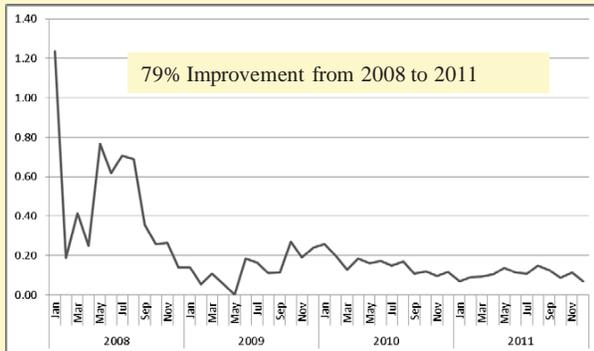
**Pilot Data, Near Collision/ Collision
(542 Scored events)
(57 / 10% resulted in a Near Miss or Collision)**



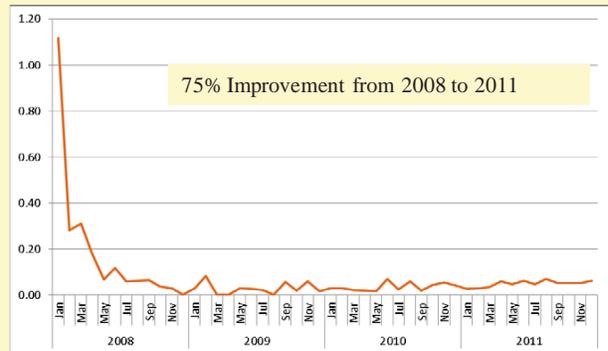
Sustainability

Behavior Leading Indicators

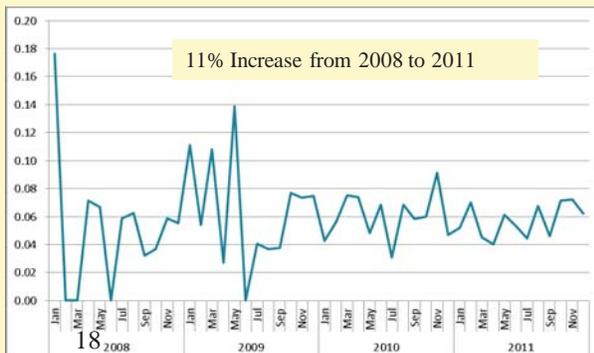
Cell phone



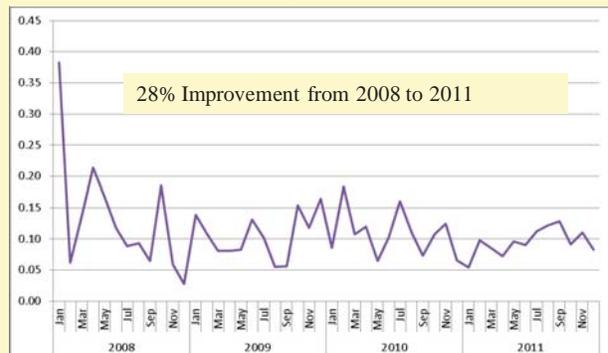
Traffic Violations



Not Looking Far Ahead



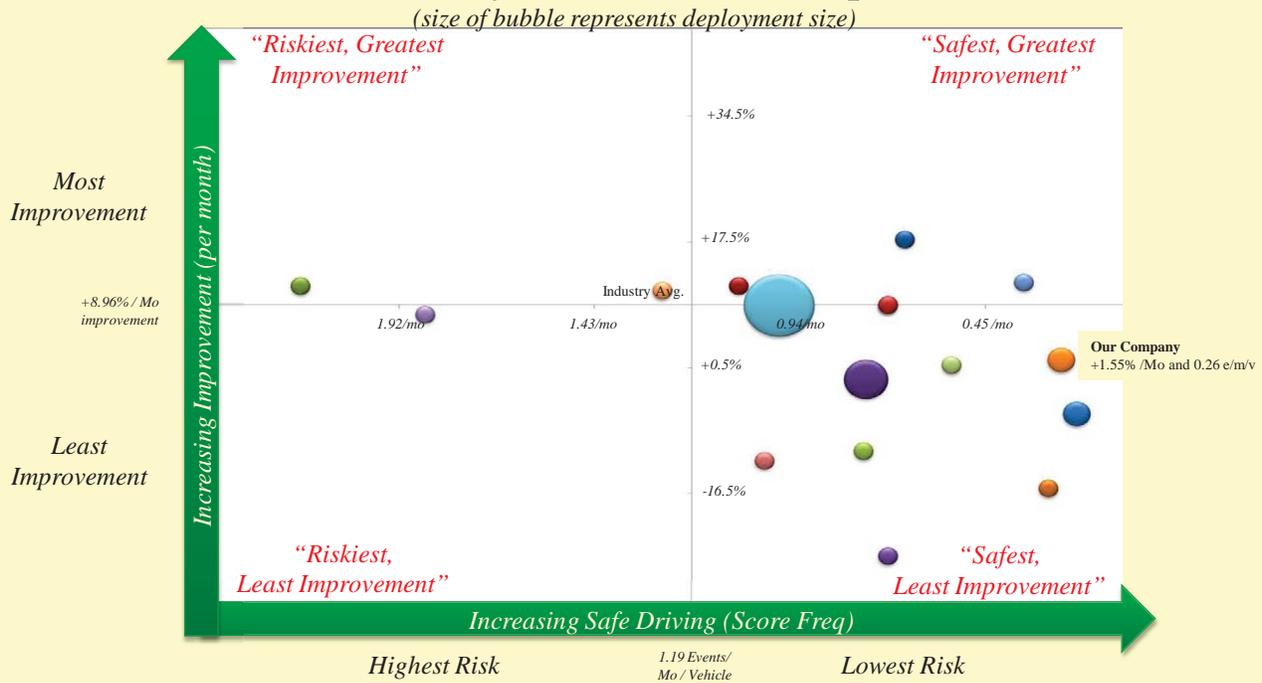
Following Too Close



Industry Performance – Improvement Benchmarks

Company-by-Company Comparison on Scored Event Frequency

Performance by Risk and 6-Mo Improvement



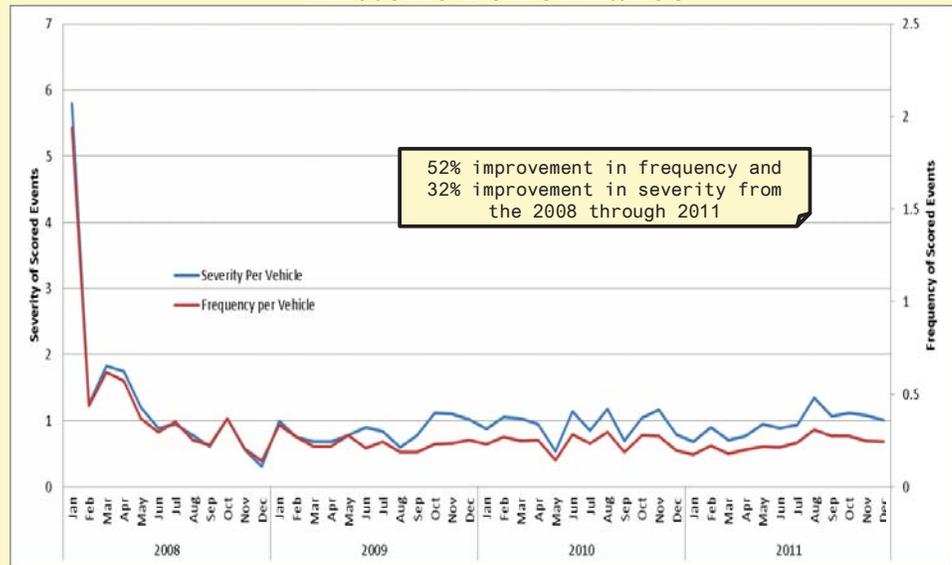
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Overview of Program Performance

Risk Reduction Results Historic Performance

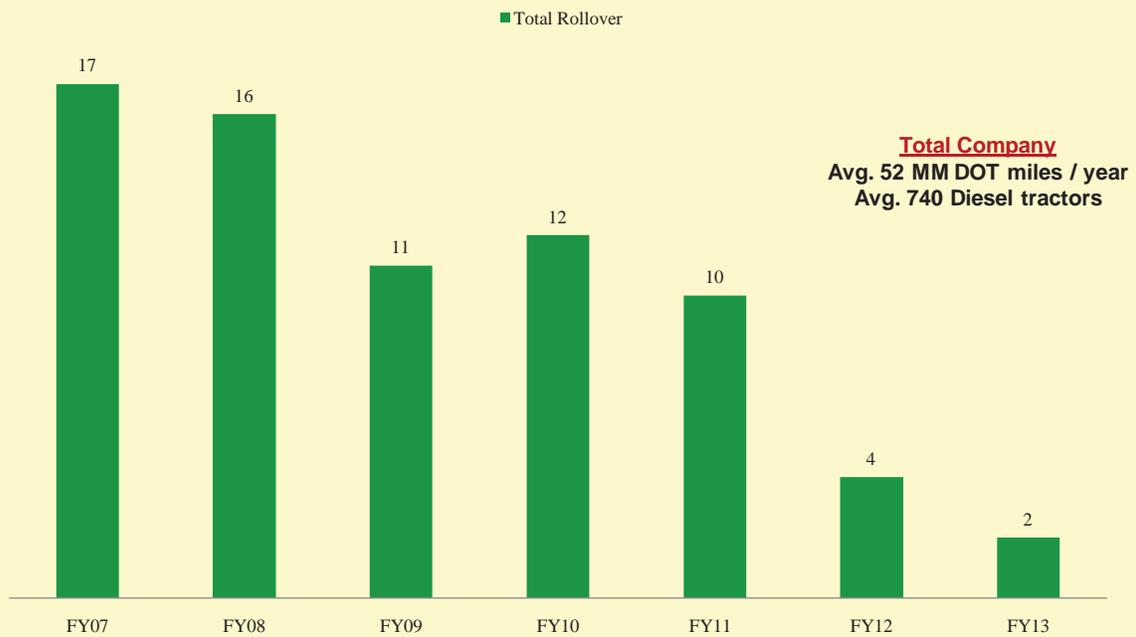
52% improvement in frequency and 32% improvement in severity from 2008 to 2011

74% improvement in frequency and 64% improvement in severity from the first and last three months of the program



Reality!!

Total Rollover 72 - (FY07 - FY13 YTD 3rd QTR)



What you don't see, can hurt you!!

- At the end of the day, you will see things that your drivers would never confess on their own.
- You will even see some things that are worthy of recognition to your drivers.
- When an accident happens, you will gain closure much quicker, reducing business interruption time.
- If you see it before the accident, it is a leading indicator,
 - do something about it and you may prevent the accident. When you do it pays dividends on all levels.
- Questions??