



Telematics in Transportation

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Insurance | Risk Management | Consulting

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Agenda

Tuesday, December 3, 2019

- I. Introduction to telematics
- II. Regulations in the transportation industry
- III. Rising insurance premiums
- IV. Netradyne presentation
- V. Reducing costs and improving safety

Introduction to Telematics

Introduction to telematics

What can telematics offer?

- A. Improved safety & risk management
 - 1. Opportunities for real-time driver coaching
 - 2. Improved culture of safety
- B. Lower fuel expenses
- C. Efficient fleet management
- D. Regulatory compliance
- E. Total Cost of Risk Improvements
 - 1. Variable and fixed cost reductions

Regulations in the Transportation Industry

What are the industry regulations?

- I. Electronic logging devices are mandatory for recording
 - A. Engine use
 - B. Miles driven
 - C. Dates & times
- II. Facts
 - A. About 1/3 of commercial fleets in U.S. still use paper records
 - B. National Highway Traffic Safety Administration withdrew proposed regulation to require these in all new cars & trucks because automakers were voluntarily installing these devices in nearly all vehicles
 - C. Onboard video systems may be required in all commercial vehicles in the future

Rising Insurance Premiums

What does that mean for insurance costs?

- I. Q2 of 2019, premiums for commercial auto increased by 8.4% (Compared to an average of 4.6% for all other lines of coverage)
- II. Claims have become more expensive due to:
 - A. Increased road congestion
 - B. Distracted driving
 - C. Decline in road quality
 - D. Higher value of modern vehicles (Sensors and accident avoidance technology)
- III. Implementing telematics presents a more appealing risk portfolio to insurance carriers and can improve claims through automatic notification

What does that mean for insurance costs?

Evolving Insurance Concerns

- I. Insurance companies are experiencing a higher frequency of “Nuclear” verdicts.
 - A. 100% increase in the median nuclear verdict within the past 18 months from \$23Mil to \$48Mil
- II. Excess liability capacity is decreasing and insurance premium is increasing
 - A. Insurance companies still have capacity, however they are choosing much more carefully where they deploy that capacity
 - B. Telematics may be **required** in the near future in order to qualify for excess capacity
- III. Autonomous vehicle infrastructure
 - A. Some companies evolving to provide roadside infrastructure for rural locations
 - 1. Larger cities will be able to use rapidly improving cell technology (5G) and better bandwidth, but the infrastructure is still many years away from viability

Netradyne Presentation

Dash Camera Basics - Brief History



Early 2000's



- SD Card "Loop"
- **Manual video retrieval**
- Basic GPS
- Crude "g-force" triggers
- Crash evidence

Mid 2000's



- Dual cameras (inward/outward)
- **"Connected" with 2G/3G cellular**
- Inertially triggered events
- Manual review (client or service)
- Crash evidence and "first gen" coaching (based on small sample)

Today



- 4 cameras + extendibility
- 4G/LTE connectivity + BT/Wi-Fi
- **A.I. event detection – Always On**
 - Positive and risky events
- Automated /mobile coaching
- Crash prevention (ADAS)
 - **In-cab real time alerts**

driver*i*

How does work?



Every minute
analyzed
and recorded

Review and analysis
performed at the device.
Analyzed data, alerts and
videos are available in near-
real time

Reasoning
and
causality
identified by
device

Supercomputer
with a camera
lens. Millions of
calculations
analyzed every
second using AI


Insights
available
for fleet
manager


Customizable
dashboard for
deep insights
at a glance in
near real time




Driver coaching
& recognition
(+Real Time
Feedback!)

Engagement with
drivers is balanced
and fair enabling a positive
coaching environment



**dale willis**
dale

 **Following Distance**




Info **Comments** **KPI**

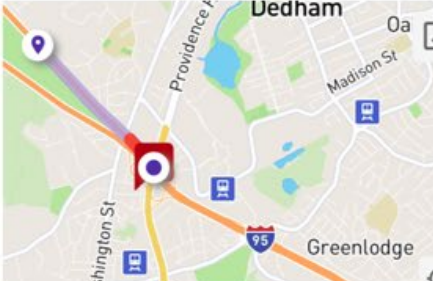
Details

Following Distance : From Front

Speed Signs

 Speed Limit Sign Boards Detected

Location



Major Red Light Crossing in 1 seconds

42MPH (Limit: 40MPH)



STRAIGHT

Detected Driver Drowsy

71MPH

+0.75G



-0.75G





+0.75G

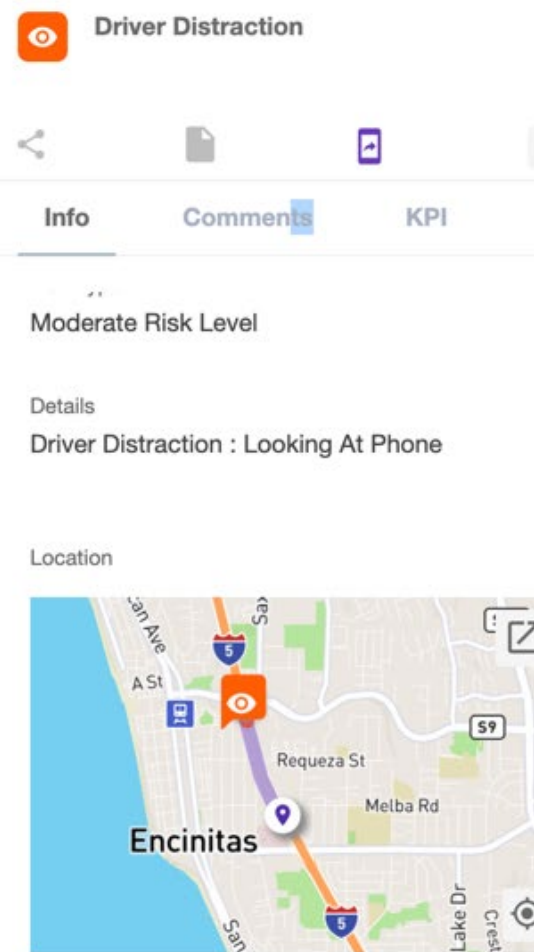
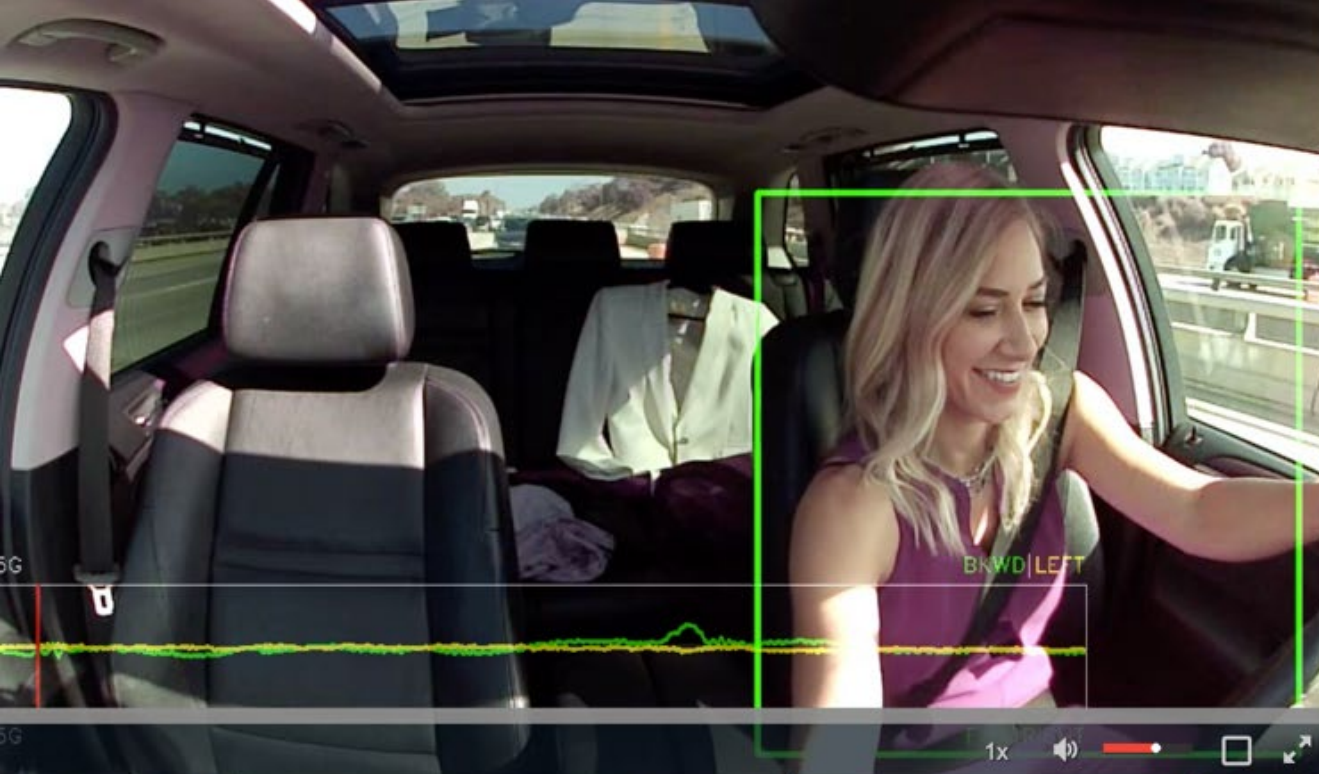
BKWD|LEFT

-0.75G

FWD|RIGHT



FWD | RIGHT



Collision Warning

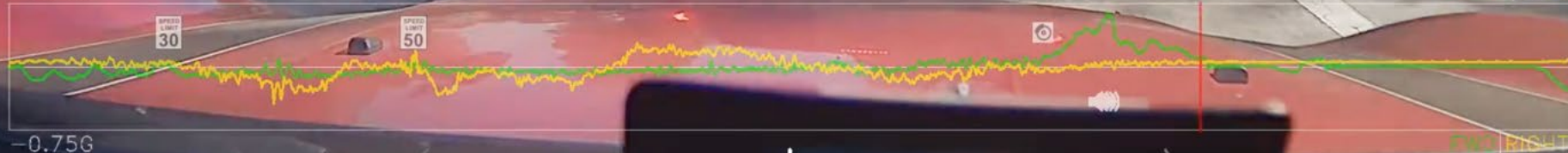
Sep 10 2018 10:09:57 AM PDT

0MPH (Limit: 50MPH)

Deer Creek
Road →



+0.75G



SAINT LEFT

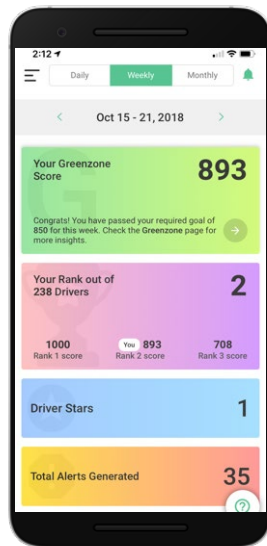
FWD RIGHT

GAMIFICATION
COMPETITION
RECOGNITION

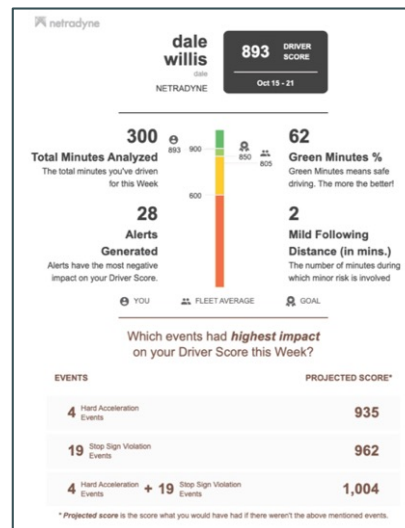
The power of vision

Humanizing the interaction transportation companies have with their drivers to enhance driving performance

Mobile App



Driver Score Card



Basis For Incentives



In-Cab Alerts / ADAS



Fundamental shift from measuring risk - to immediate risk reduction

-Removes management's day-to-day coaching burden

Available Today

- Following Distance
- Speeding Alerts
- Driver Distraction
- Drowsy Driving

Future Releases (OTA)

- Aggressive Driving
- Forward Collision Warn.
- Lane Departure

• Initial Pilot Results:

- ✓ 68% reduced tailgating
- ✓ 100% of drivers improved
- ✓ 40% fewer collisions

Reducing Costs and Improving Safety

How can this reduce your cost & improve safety?

43% of companies reduced fuel costs & 26% have seen fewer accidents

- I. Improves fuel consumption
 - A. Monitoring driver behavior, tracking most effective routes, reducing amount of vehicle idling
- II. Increases driver safety
 - A. Monitoring unsafe events (acceleration, speed, direction, braking)
- III. Keeps track of maintenance
- IV. Improves record keeping
- V. Reduces delivery times

How can this reduce your cost & improve safety?

Improves driver performance

BENEFITS OF REWARDING BETTER PERFORMANCE



Source: https://www.theseus.fy/bitstream/handle/10024/16956/carolina_mikander.pdf

Benefits to utilizing this technology

Save time, reduce cost, increase driver safety

I. Improve safety

- A. Companies that use telematics to improve safety reported that unsafe events decreased by nearly 50 percent amount day cab and sleeper cab groups.
- B. Driving a speeds of more than 65 mph fell by more than 33 percent for day cabs and 42 percent for sleeper cabs.

II. Improve unsafe driving events by incentivizing drivers

- A. Companies that use telematics to reward drivers for superior performance have seen 53 percent fewer safety violations or accidents and 52 percent improvement in driver retention.

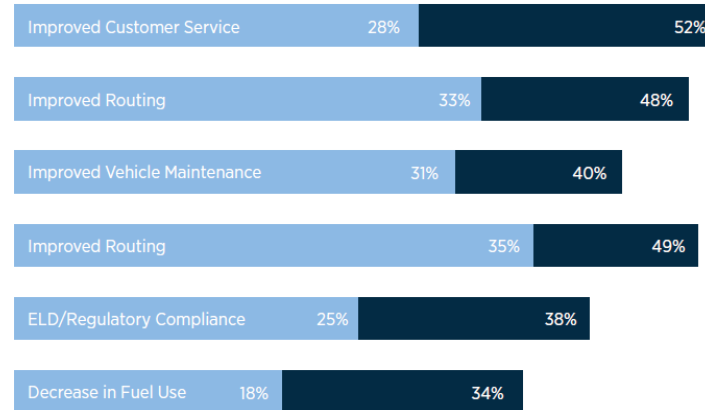
Benefits to utilizing this technology

Return on investment

The return on investment depends on the initial cost outlay and whether a company utilizes its full savings potential. Estimates for a return on investment range from six to 12 months.⁸

EXPECTATIONS
about implementing
GPS fleet tracking

GOALS
actually achieved after
implementing GPS fleet tracking



Verizon Connect (2018). Fleet Tracking Trends Report: An analysis of GPS fleet management usage and its impact on the industry. 51905-US-1218, pg. 5.

Conclusion

Telematics and the future

- I. Rapidly evolving risk & technology
 - A. Acceleration of technology advancement is exponential leading to rapid improvements
 - B. Regulations may struggle to keep pace
 - 1. Ex. (Distracted driving, increased value of vehicles, increasing nuclear verdicts without proper cash reserves)
- II. Technology is the future of risk management
 - A. Data & Analytics will provide concrete evidence of safety performance
 - B. Insureds with Telematics will access better coverage and limits
- III. Litigation will revolve around technology
 - A. More clear-cut fault or exoneration

Thank You!

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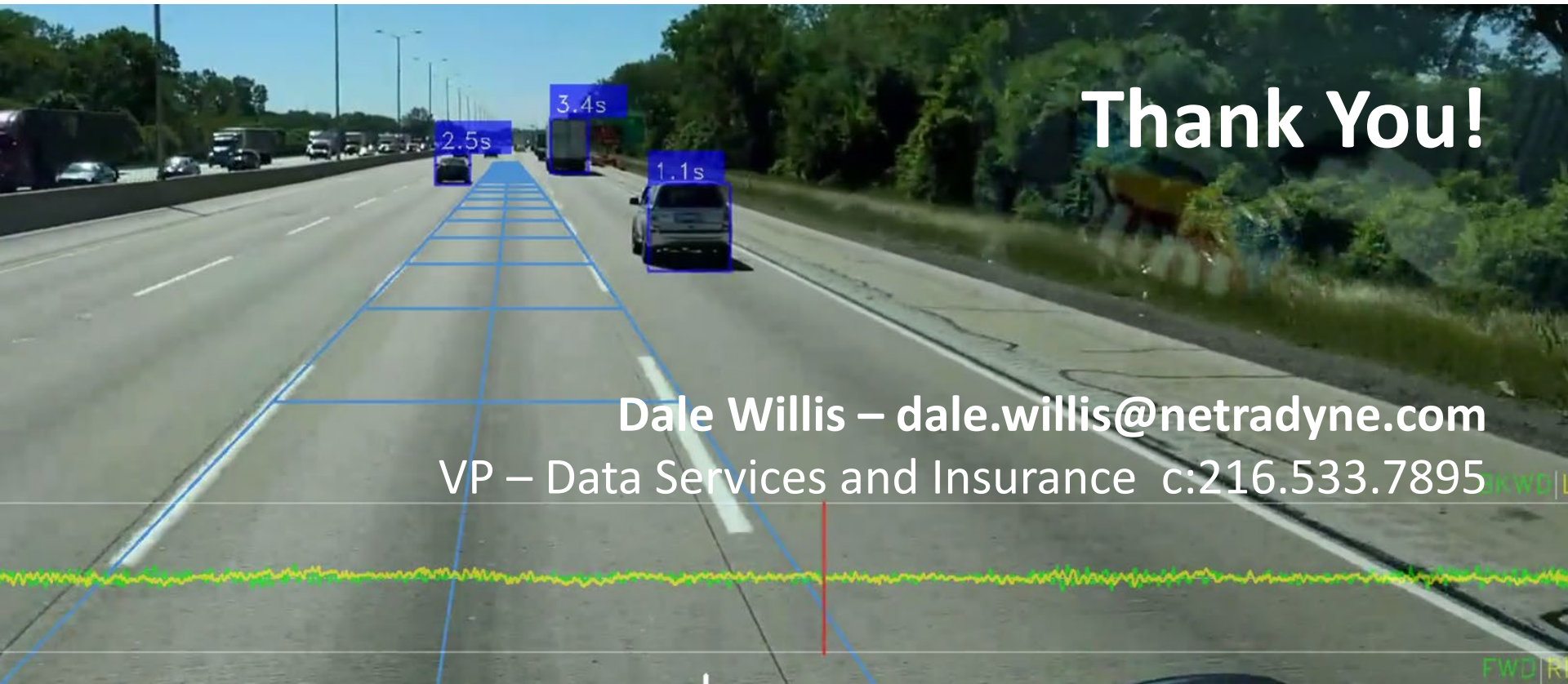
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Thank You!

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