SUPPLY CHAIN

Measuring Improved Driving Behavior Results with GreenRoad





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Phil Renaud Introduction



- Vice President, Operational Risk, Head Global Health, Safety
 & Environment: DHL/Exel Supply Chain
- 25 years safety, health, insurance and risk management leadership experience
- Numerous safety, risk, & supply chain associations
- Board: National Kidney Foundation & Make a Wish Foundation



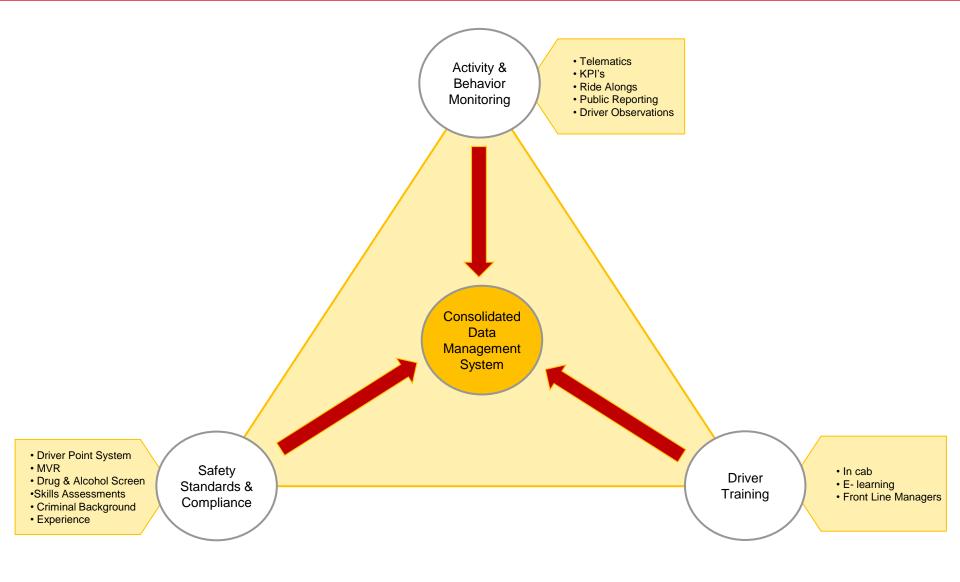
Global Transportation Safety Program



"World Class Safety and Health" is achieved when an organization treats safety as a business value. Not a priority. Not a process. Not a program. A value.



Global Transportation Vision



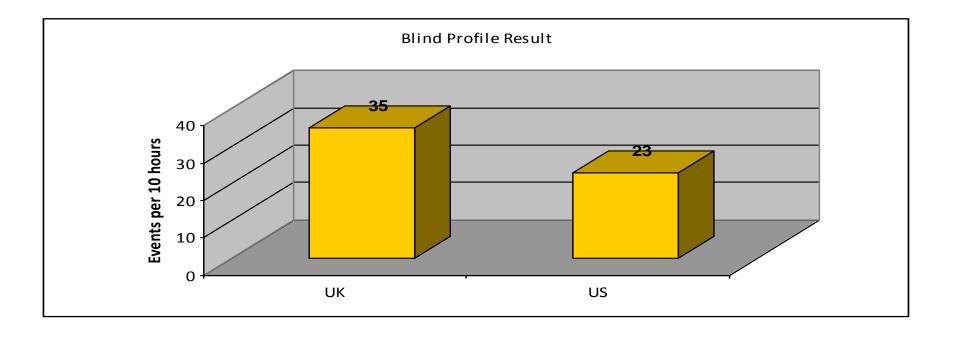


DHL – US & UK Pilot Summary Results

- UK pilot involved 5 vehicles and 14 drivers at DHL Cowley contract with vehicles delivering into the BMW factory in Oxford
- US trial involved 8 vehicles and 8 drivers in Los Angles delivering to BMW dealerships
- Objective of both trials was to see if drivers reacted to in-vehicle and web-based feedback to improve their safety. This was measured by a reduction in the number of unsafe events each driver performed.
- Both the UK and US pilots had a period of Blind Profile as part of the trial where the system was installed but in vehicle LEDs were not activated and no one had access to the web profiles.
- Blind Profile safety scores were used as a benchmark against which improvements could be measured.
- Following Blind Profile and before Go live on site training for managers and drivers was conducted.



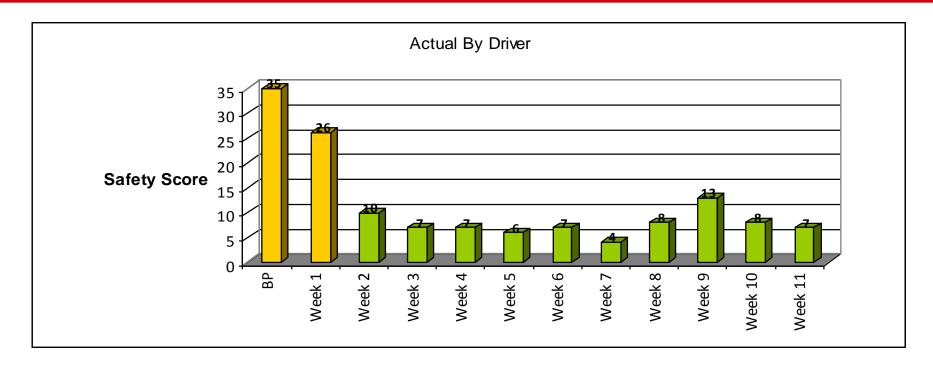




Both the UK and US vehicles in the blind profile were classified as Amber or Medium Risk during the Blind Profile period although the US pilot vehicles had a significantly lower score at 23 events per 10 hours compared to 35 events per 10 hours for the UK vehicles.

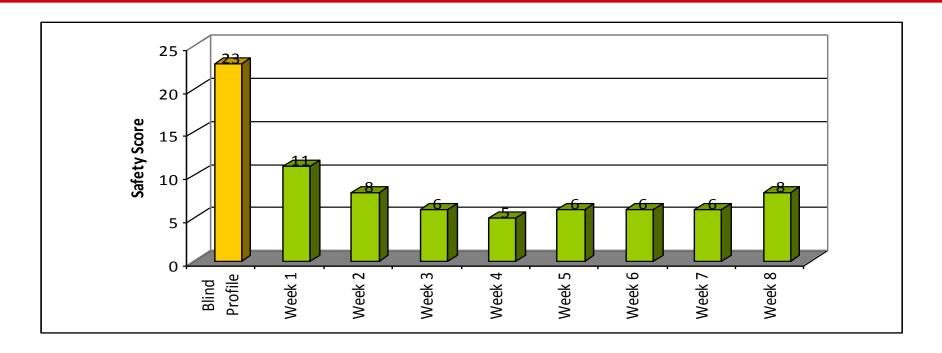


Improvement in Driver Score - UK



Following Blind Profile drivers were "associated" with trips and individual driver risk scores were computed. For the drivers involved in the trial their overall score in the first week of go live was 26 events per 10 hours of driving. By the end of the trial this had improved to 7 events per 10 hours of driving, an 80% improvement on Blind Profile. The lowest score achieved was during week 7 when the score fell to only 4 events per 10 hours, a 89% improvement on the Blind Profile result.

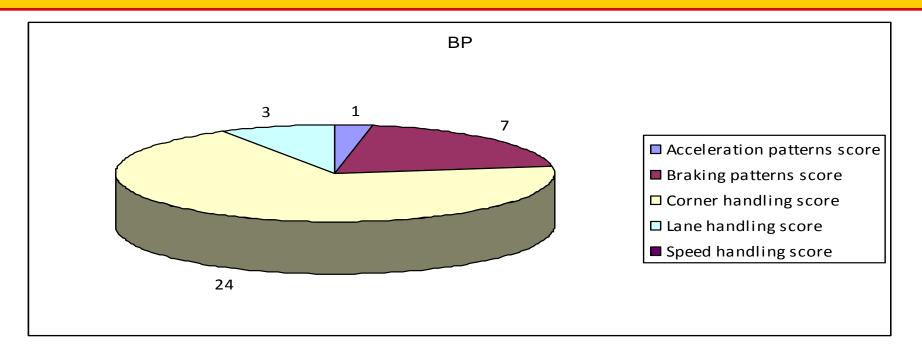
Improvement in Driver Score - US



Following Blind Profile drivers were "associated" with trips and individual driver risk scores were computed For the drivers involved in the trial their overall score in the first week of go live was 11 events per 10 hours of driving. By the end of the trial this had improved to 8 events per 10 hours of driving, a 65% improvement on Blind Profile. The lowest score achieved was during week 4 when the score fell to only 5 events per 10 hours, a 78% improvement on the Blind Profile result.



Events by Category Blind Profile - UK

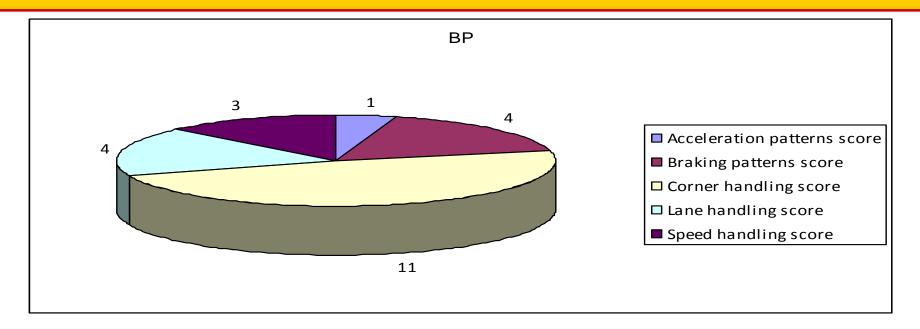


The blind profile score was made up of predominantly Corner Handling events which accounted for 69% of all risky manoeuvres. The safest areas for the fleet were Acceleration and Speed Handling (where no events were recorded).

Whilst all categories have seen a reduction in events during the pilot, it was still corner handling that presented the biggest risk at the end of the trial. Most corner handling events were picked up on roundabouts.



Events by Category Blind Profile US

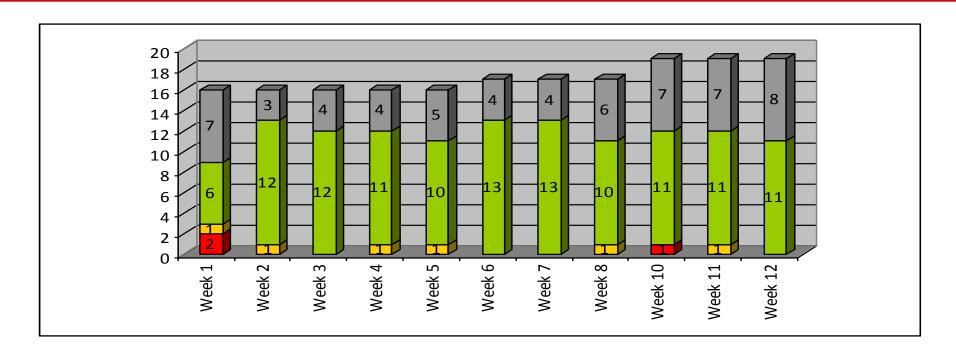


Like the UK fleet, the US fleet blind profile score was made up of predominantly Corner Handling events which accounted for 48% of all risky manoeuvres. The safest area for the fleet was Acceleration. Unlike the UK fleet, the US fleet had a score of 3 for Speed Handling.

Whilst all categories have seen a reduction in events during the pilot it is currently lane handling that presents the biggest risk. Speed handling events have been eliminated entirely.



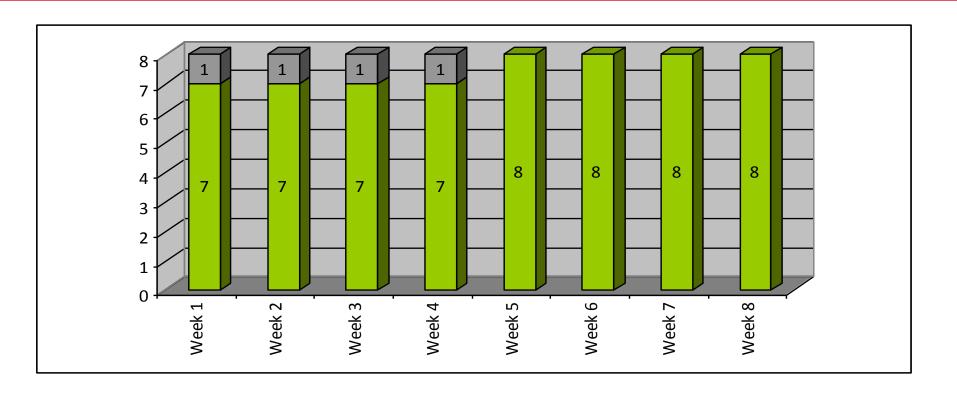
Safety Distribution of Drivers During Trial - UK



Throughout the trial most drivers have been classified as low risk with a small number in the medium or high risk category. All drivers have managed to improve, with the driver having the highest score improving to green in the 3rd week. The high risk driver during week 10 was a driver new to the pilot and once shown how the system worked managed to improve his score. The grey drivers are drivers without a score who did not drive the installed vehicles during that week



Safety Distribution of Drivers During Trial - US



After Blind profile all the drivers involved in the US trial were green (low risk) during the 8 weeks of the pilot



Summary

- The Blind Profile score for the UK pilot was 35 events per 10 hours of driving and for the US was 23 events per 10 hours of driving.
- By the end of the pilot the UK fleet had seen a 80% improvement while the US fleet had seen a 65% improvement.
- Once the LEDs were activated and the drivers had access to their personal safety profiles, all drives in both pilots managed to become Green or Low risk drivers.
- Of the 5 event categories it was Corner Handling where most unsafe events were picked up during Blind Profiling for both fleets.
- In the UK a number of events were detected within the plant, possibly indicating some issues with low speed manoeuvring or plant layout.