BLACK BOX TECHNOLOGY

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SCOTLAND'S ROAD SAFETY FRAMEWORK

Young Drivers

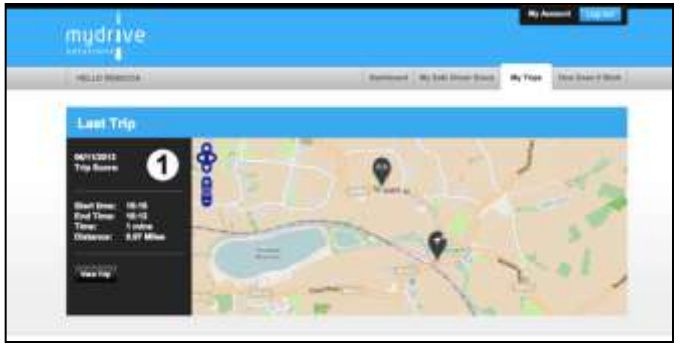
- Innovative ways to increase young drivers' awareness
- Help parents and carers to set good example
- Encourage young drivers to take post-test training
- Promote qualifications, safer attitudes & behaviour
- Public debate on young driver issues, including graduated driver licensing

People who Drive for Work

- Support RoSPA & ScORSA to raise employs' awareness of MORR
- Embed SAFED in freight industry & introduce SAFED for van drivers
- Raise awareness of Scottish Government staff
- Ensure contractors develop their MORR
- More rest areas in Scotland

YOUNG DRIVERS & TELEMATICS

The development of telematics is one of the ways that many of these commitments can be addressed



TELEMATICS

- Telematics (black boxes, Apps or OBD) captures real driving behaviour over a long period and substantial mileages
- Enables personalised risk rating to be calculated for every driver, and highlights aspects of driving to be improved
- Enables accurate analysis of driving behaviour
- Can incentivise safer driving
- Enables personalised feedback and advice to be given to drivers, and/or to third parties, such as employers or parents

RESEARCH FINDINGS*

Young Drivers

- Can significantly reduce risky driving behaviours, especially among higher risk young drivers
- Effect on young driver crash rates not yet quantified

At-work Drivers

- Crash rates reduced and cost savings

But there are knowledge gaps on how to best use telematics & issues, such as data portability, to be resolved

*"Road Safety and In-Vehicle (Black Box) Monitoring Technology", www.rospa.com/roadsafety/info/black-box-technology.pdf

IMPORTANCE OF FEEDBACK

- Research emphasises the importance of feedback - driving improves more when feedback is viewed
- Recent Israeli research:
  - drivers who receive feedback improved much more than drivers who did not
  - drivers whose parents given guidance on using feedback achieved the best safety scores
- But, little detail of practical issues employers face, nor how they use it to reduce risk and costs

YOUNG DRIVERS AT WORK (SCOTLAND) BLACK BOX PILOT PROJECT

- Therefore, Scottish Government is funding a pilot project by RoSPA to assess how employers can use telematics to improve the safety of young at-work drivers

- First research of its kind in Scotland. The aim is to identify:
  - practical issues that employers face when seeking to use telematics
  - how best employers in Scotland can make use of this type of technology, especially for young at-work drivers

YOUNG DRIVERS AT WORK (SCOTLAND) BLACK BOX PILOT PROJECT

MyDrive Solutions Ltd supplied the ‘black boxes’

- Records snapshot of driving every second, mapped onto the road network (eg, motorway or A-road, junctions, time, etc)
- Installed under dashboard of cars or small vans driven for work by young drivers - took 20 mins and no drilling
- Web portal provided on which drivers and employers could view data and feedback
- Free to employers

www.mydrivesolutions.com

YOUNG DRIVERS AT WORK (SCOTLAND) BLACK BOX PILOT PROJECT

Despite extensive promotion to companies already active in MORR or H&S, the number who expressed interest was relatively small

- 46 organisations expressed interest
- 32 organisations entered into detailed discussions
- 21 dropped out because they were unable to secure internal agreement
- 11 organisations eventually signed up, ranging from micro and small businesses to Local Authorities
- 69 drivers participated in the project

DRIVER'S PORTAL

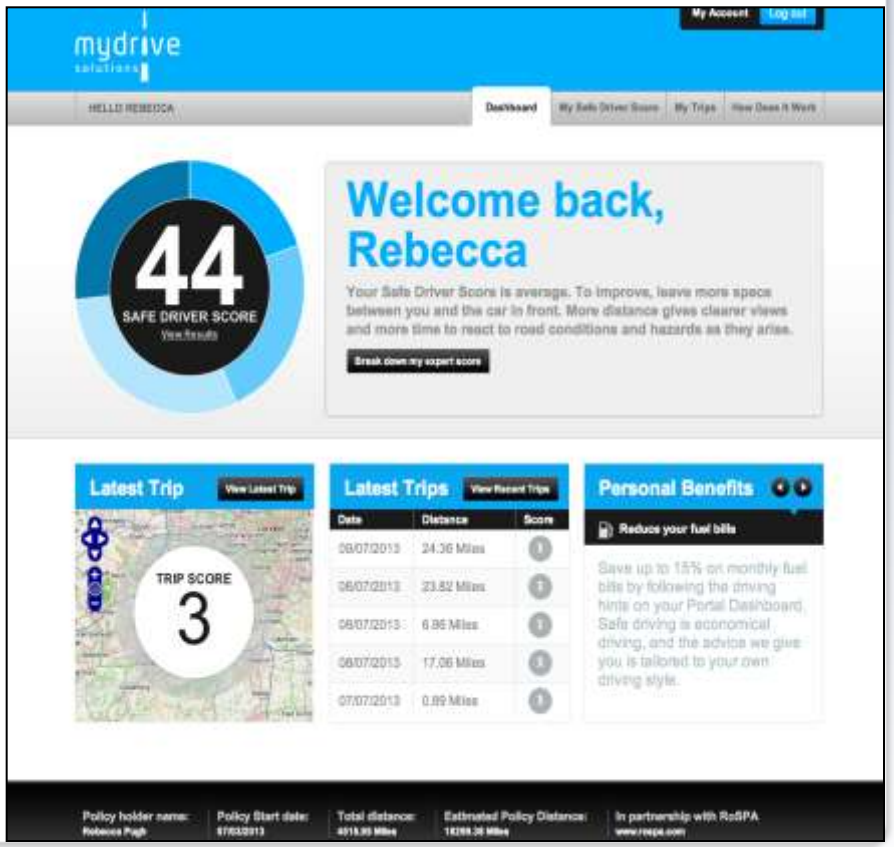
Every driver given access to their own portal to view feedback, and advice, about their driving

Safe Drive Score

A score out of 100 (higher the better) awarded once driver has completed 250 miles. Then based on a 90 day rolling period.

Trip Score

Following the completion of every journey, a driver is awarded a score of 1 – 5.



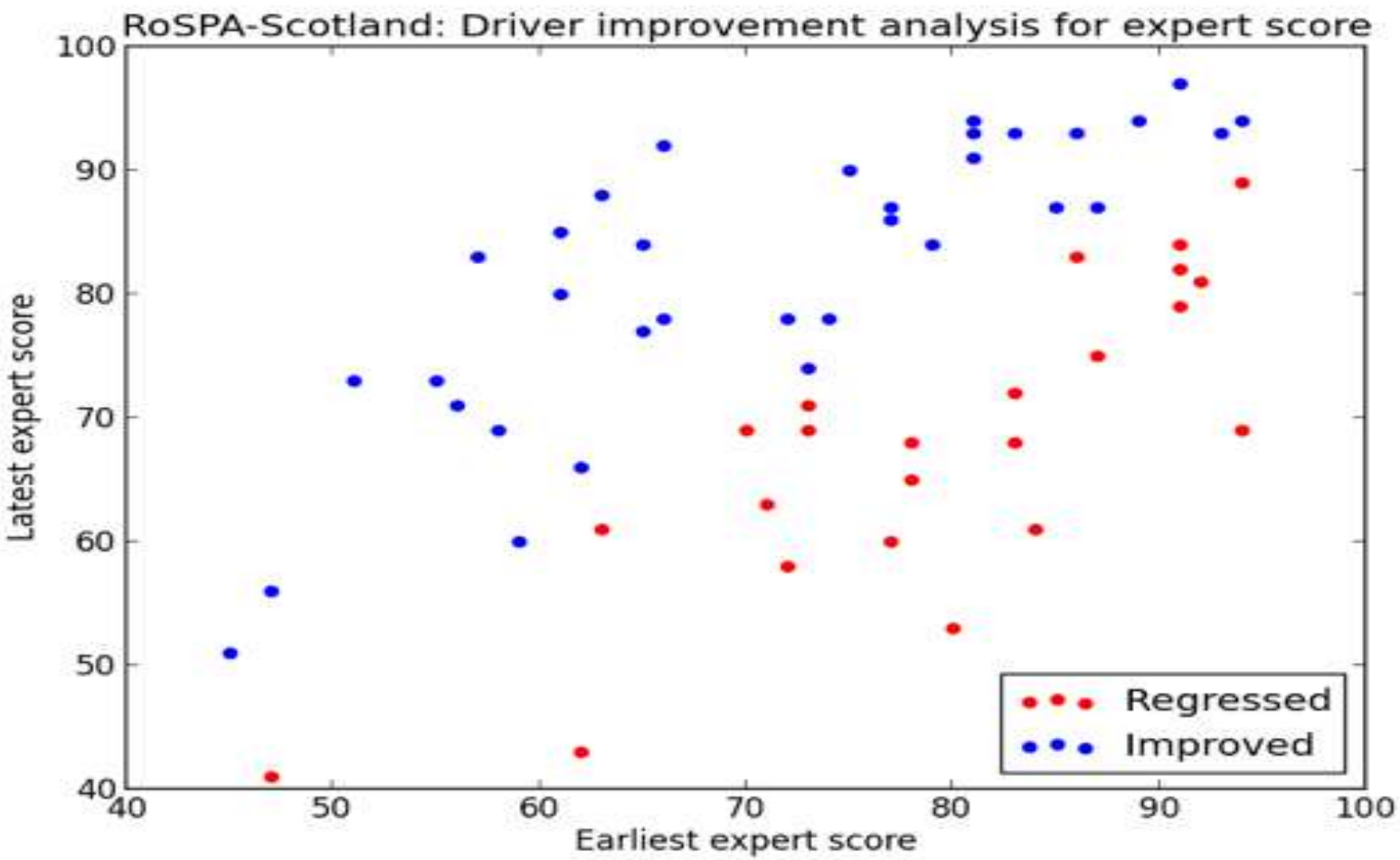
OVERALL SAFE DRIVER SCORE

Shows how closely driving matches RoSPA Advanced Driving (Gold grade)

Combination of:

- **Pace** (appropriate speed)
- **Calmness** (moderate acceleration – reverse aggression score)
- **Smoothness** (controlled acceleration & braking)
- **Anticipation** (smooth and careful changes in speed)

DRIVER IMPROVEMENT



INTERIM FINDINGS: DRIVERS

- Companies need to consult individual drivers, explain the technology and its benefits and allay concerns
- Most drivers improved their driving, but some have not sustained their improvements
- Improvements may not be sustained if drivers believe nothing will happen
- Drivers need to be encouraged to view and consider the feedback on their driving - simply making the feedback accessible is not enough

INTERIM FINDINGS: EMPLOYERS

- Need to raise awareness of employers in Scotland about this technology, even those already interested in MORR
- Challenge in gaining internal acceptance, especially from unions and safety associations
- Allays concern about using technology to track vehicle location in real-time
- Consult staff early in process
- Train managers to analyse data and use it to inform MORR activities
- Identifying individual drivers of multi-driver vehicles

FINAL REPORT

A final Report will be published in March 2014, covering:

- Analysis of the driving data
- Evaluation of Managers' experiences
- Evaluation of Drivers' Experiences
- Evaluation of MyDrive experiences
- Good Practice Guide