On The Road To The Mass Market

THE FLOOW

Aldo Monteforte

Founder and CEO

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Who are we

Proprietary and Confidential

- Independent, UK-based technology company
- Founded and majority owned by management team
- SaaS Revenue model, Actual CAGR +100%, organically self-sufficient
- ca 50 professionals (>70% technical, PhDs in CS, Math, Physics, Psychology)
- 100% Telematic device neutral

- Selected by industry leaders to provide telematics services

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What we do

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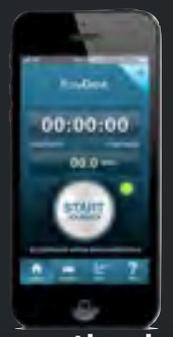
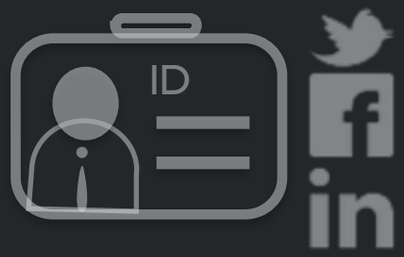
Making sense of telematics data



Telematic data originated from Smartphones and any device (FtV, SI etc)

- **1 Hz GPS position, speed & acceleration data**
- **10 Hz + Accelerometer data**
- **Call State (phone only)**
- **CANBUS data (OBD only)**



Personal, Insurance, Social data, any format

Environmental, contextual, any format

Advanced signal processing, Information integration and contextual enrichment

World-scale geo storage and indexing

Un-interpreted, enriched Data at journey summary level

Interpreted, enriched Data (e.g. Scored Data)

Floow Analytics & Services

Delivery Formats

Tabular data
Document based
Web based
Web services
SQL

Target Users

Researchers
Scientists
Actuaries
Modellers

Underwriters
Claim Handlers
Product Managers
CXOs

Insurance Professionals

All Summary Journey Data — C

Chosen Journey Scores — B

Portfolio Statistics — A

Policy holders & Family members

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Why is this important?

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Huge Societal Problem

Over 30,000 people die on the roads of the European Union in one year…equivalent to 82 people every day*

For every death:

- **4 permanently disabling injuries**
- **8 serious injuries**
- **50 minor injuries**

* 2011 data from EU Commission website: http://ec.europa.eu/transport/road_safety/index_en.htm

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The key question

How to bring telematics to the mass market profitably?

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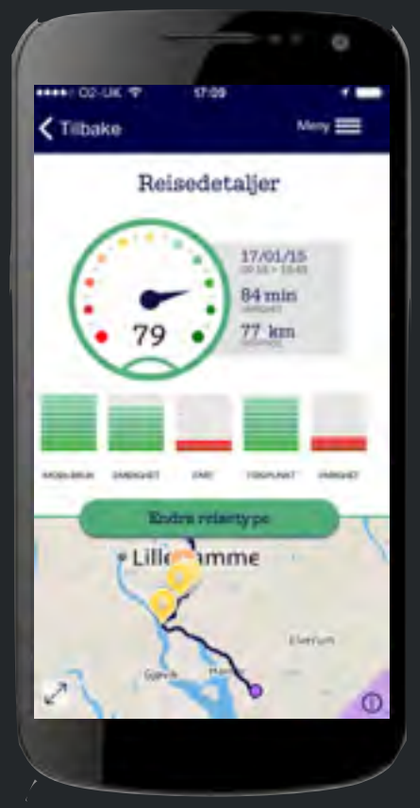
Our Answer

1. Cost effective
2. Insightful and predictive
3. Engaging customers



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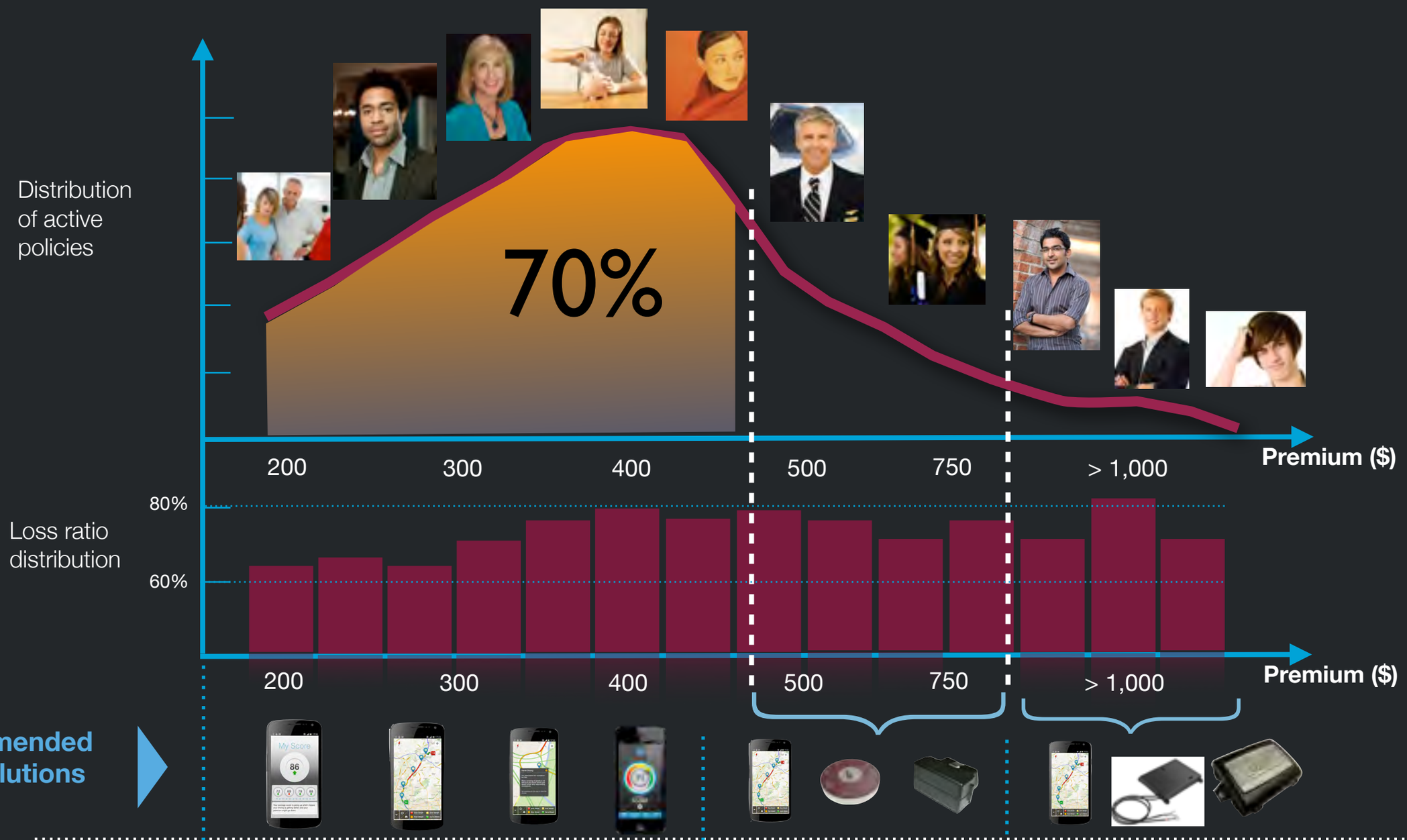
Devices: a logical selection framework

- Situation of a hypothetical Motor Insurer
- 70%+ of book in “smartphone-only” territory



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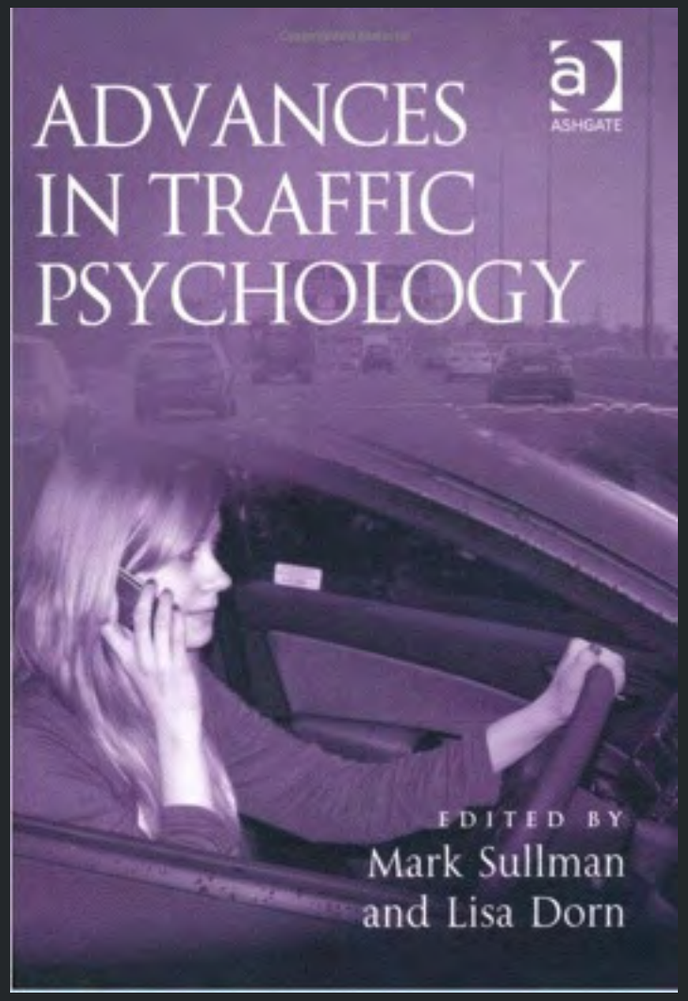
Basis of Scoring

Initially grounded in pure science and academic evidence



Cranfield UNIVERSITY

A Brief Review of Celeration:
A Measure of Driver Behaviour and Crash Risk

Dr. Lisa Dorn
Driving Research Group
Department of Integrated Systems
School of Engineering

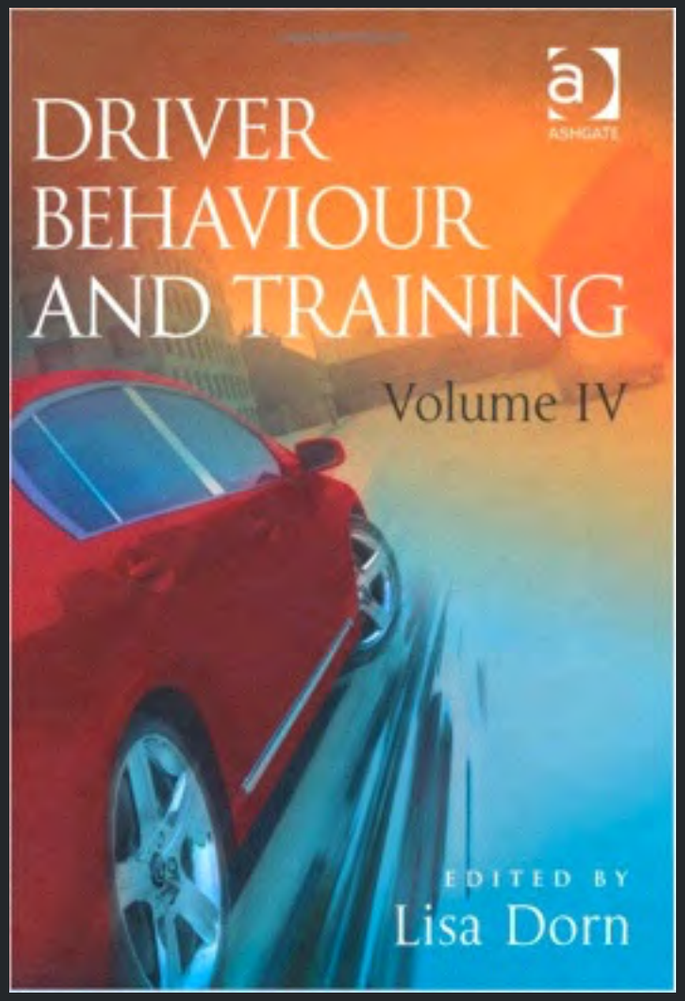
June 2012

Background

There have been a number of methods to measure driver behaviour to infer an individuals' crash risk. For example, speed as a measure has been shown to be a poor predictor of crash involvement. The search for the psychological predictors of crash involvement has been an ongoing quest for many decades, without much success (af Wåhlberg, 2004). There is a plethora of parameters available and some very complicated measures have evolved. None have shown to be predictive of actual accident involvement, although they may measure certain aspects of driver behaviour. Early work showing promise as a crash predictor was reported by Gilly, Whitney and Vanosdall (1995). They showed that observable driver behaviour such as lane change, abruptness and sharp decelerations were correlated with accident frequency. G-force is a measure of acceleration force and captures these variables.

In contrast, celeration has been linked to accident involvement and this driver behaviour measure is engaging in its simplicity. Celeration, measured using in-vehicle recording equipment, is the averaging of the absolute accelerations performed by a driver during each journey. The rationale for the measure of 'celeration' then is that drivers that vary more in a measure of g-force are more likely to have accidents compared to those that vary less. The subsequent value can be used to rank celeration in comparison with the celeration behaviour of other drivers undertaking similar journeys. The research shows that those with a higher ranking show a greater risk of being involved in a crash.

In the year 2000, Anders af Wåhlberg began research into g-force as a measure that could possibly correlate with driver's accident rate. He has since published a series of papers supporting the validity of celeration* as a measure of driver behaviour that is associated with accident risk. Those papers are briefly reviewed here.



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Multiple Driving Style Scores available

Choice of a measure of risk based on 'events' or the academic measure of smooth driving measuring the average level of g-force acceleration and deceleration exerted on a vehicle during its entire journey

Smooth Driving

Speed

Choice of a measure of risk based on absolute speed, difference to speed limits or difference to speed of other road users

This is composed of two elements:
Physical Interaction (how much the phone is moved about and 'used' during the journey); and
Call State (how much of the journey the phone is used to make or receive calls for)

Distraction

Time

Choice of measures of risk based on Time-of-Day (reflecting the risk of an accident from Road Traffic Statistics for the time the journey took place); and
Time-on-Task (reflecting the increasing risk of fatigue on longer journeys)

All combined into a unique score for each client based on detailed discussions with them on their needs and customer base.

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The Environment is key to Contextual Scores

Geocoded data is used to understand location risk

Low	Junction Density	Extreme
Medium	Road Complexity	Extreme
Low	Pedestrianisation	High
Low	Public Transport stops	High
Very Low	General Road Speed	High
0	Stats19 crashes	10

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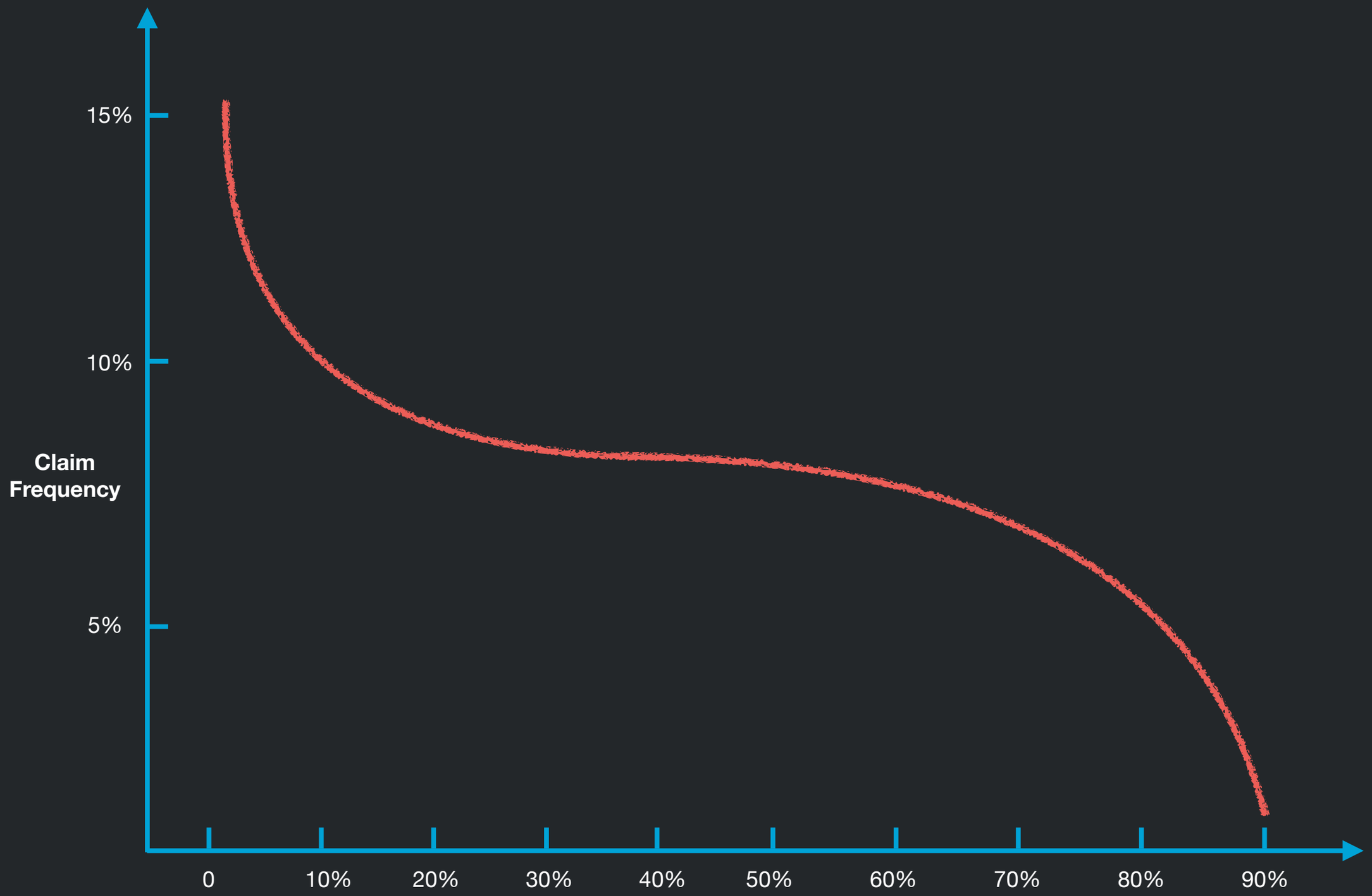
Regressing against claims: The Floow Curve



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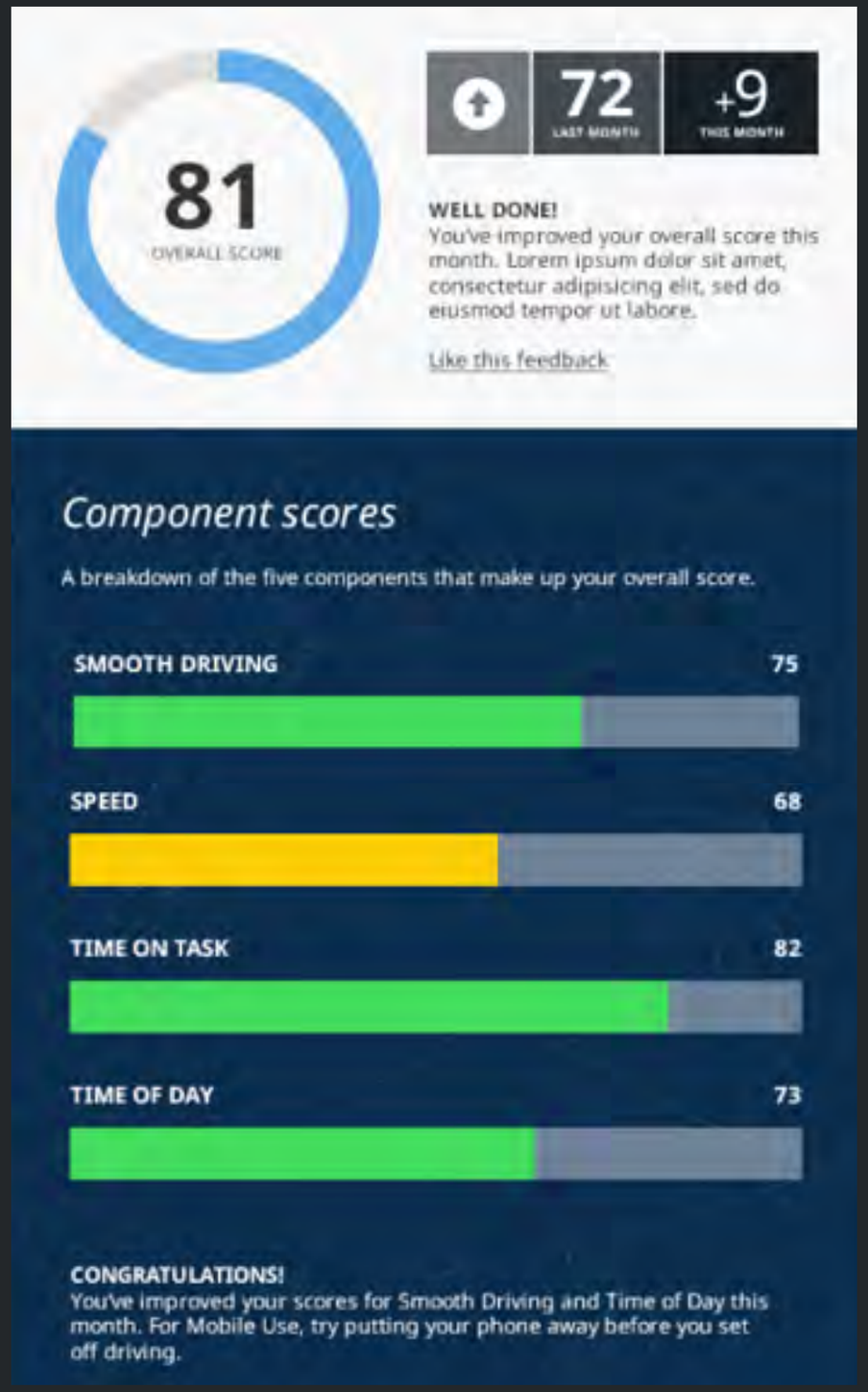
Tailored Educational Feedback

- Feedback can be given in
  - immediately after the journey has been completed
  - via a periodic e-mail
- Contextual scores enables more understandable, accurate and tailored feedback both overall and against peers



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FLOOW DRIVE

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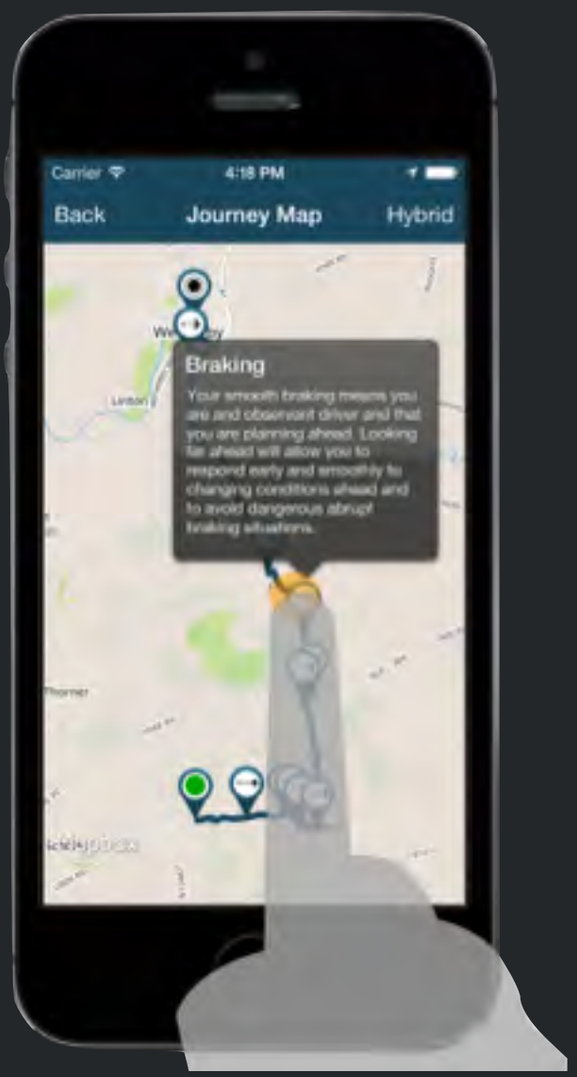
Value Add 1 : Driver Education

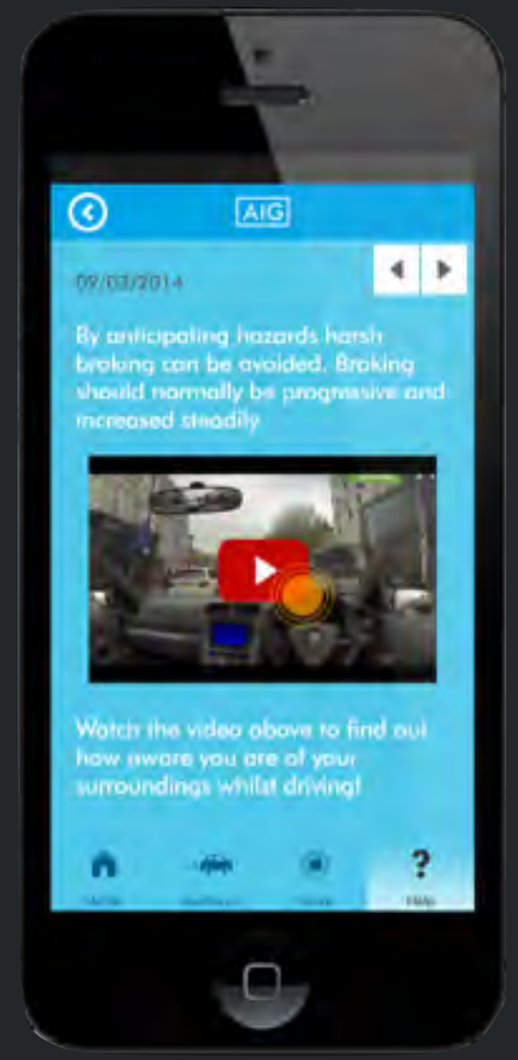
Score Feedback

- RAG status for journey elements
- Commentary on Scores



Event Feedback

- Pins in maps showing event location
- Commentary on each pin



Video Tests

- Watch video and answer questions

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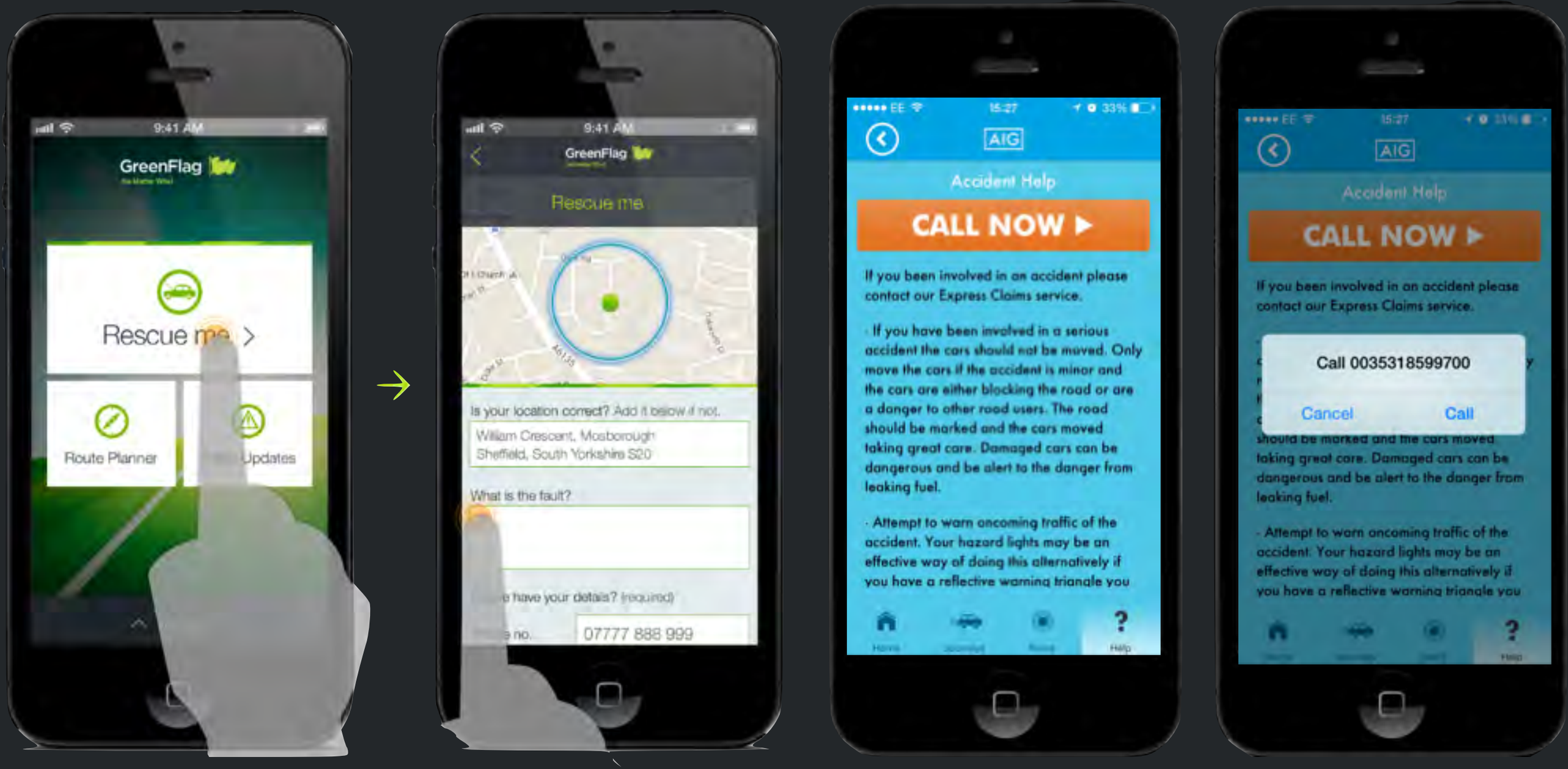
Value Add 2 : Emergency Services



Breakdown

Accident

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Value Add 3 : Safety & Security

Stolen Vehicle Recovery

- Auto theft has gone up for the first time in 20 years in the UK*
- Recovery rate for top end is 35%*
- OBD port being used to steal vehicles (key replacement) in 50% of cases
- It is very expensive to recondition vehicles after SW has been compromised
- SVR requires professionally fitted box and connection with SOC for event management

Source: Thatcham

Safe Parking

- Vandalism & theft information for safer parking

Low Risk

High Risk

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Value Add 4 : Gamification

Club Structure

- earn ‘tier’ points for good driving
- redeem point for goods/services

Win Badges

- for good driving
- for meeting set criteria

Share Scores

- with friends
- on Facebook

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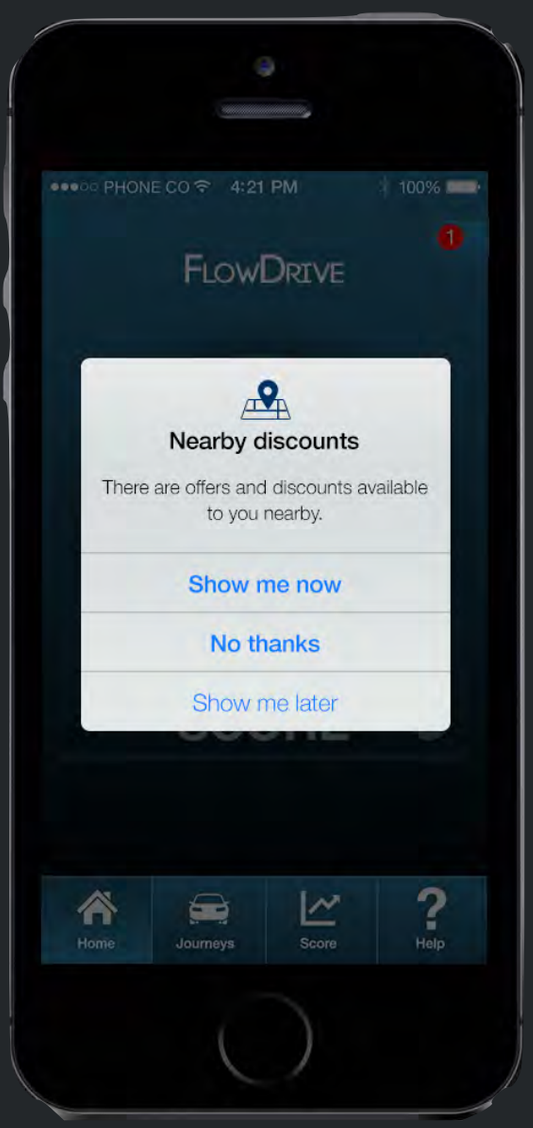
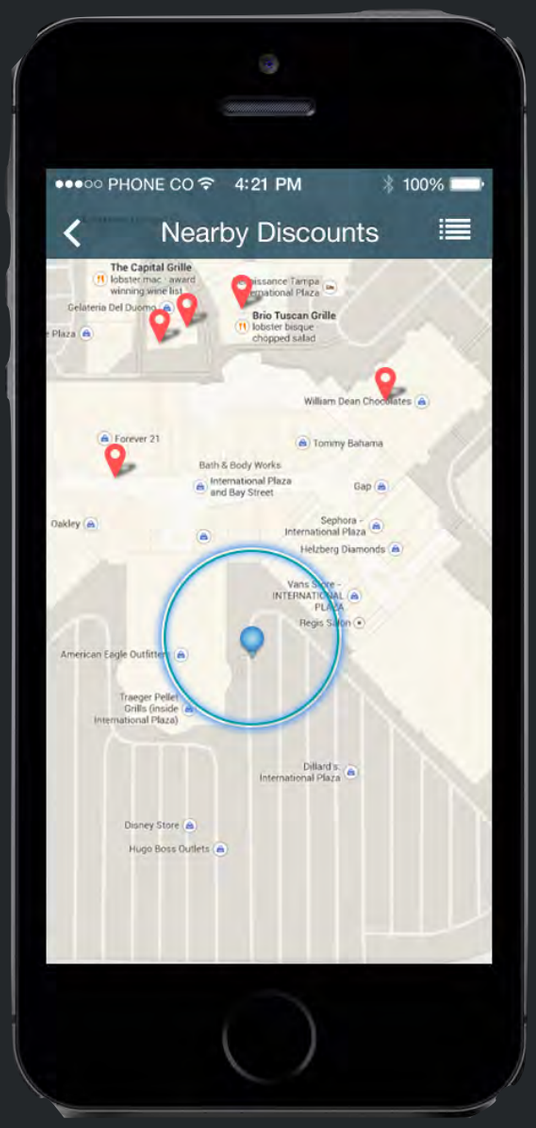
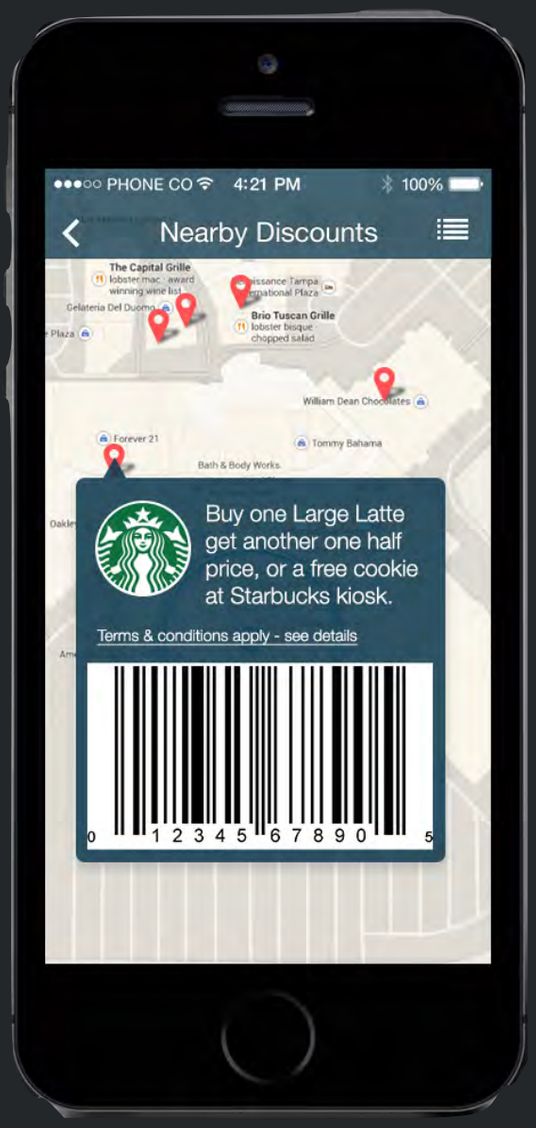
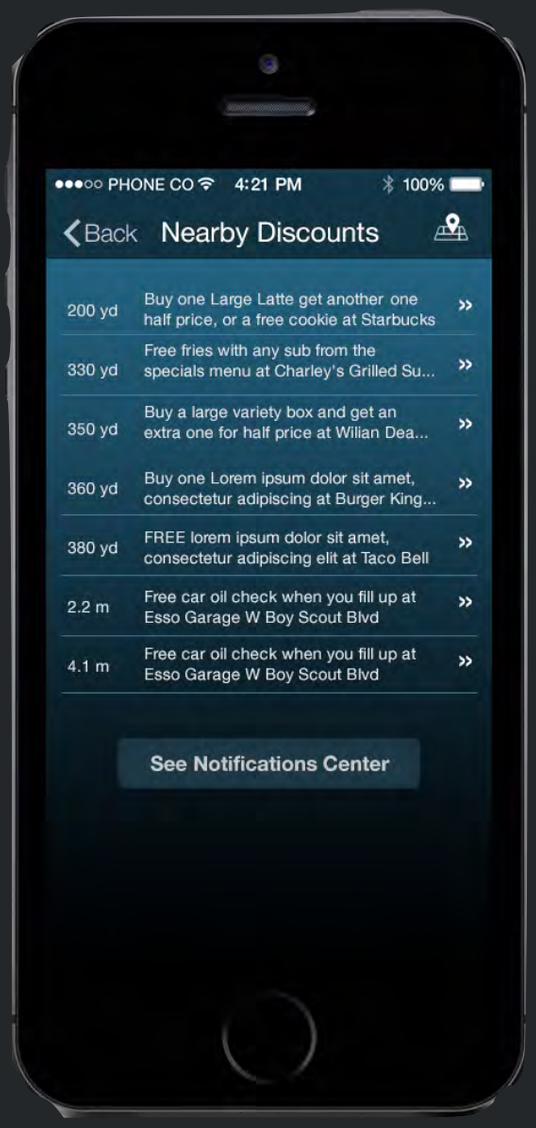
Value Add 5 : Location Based Services









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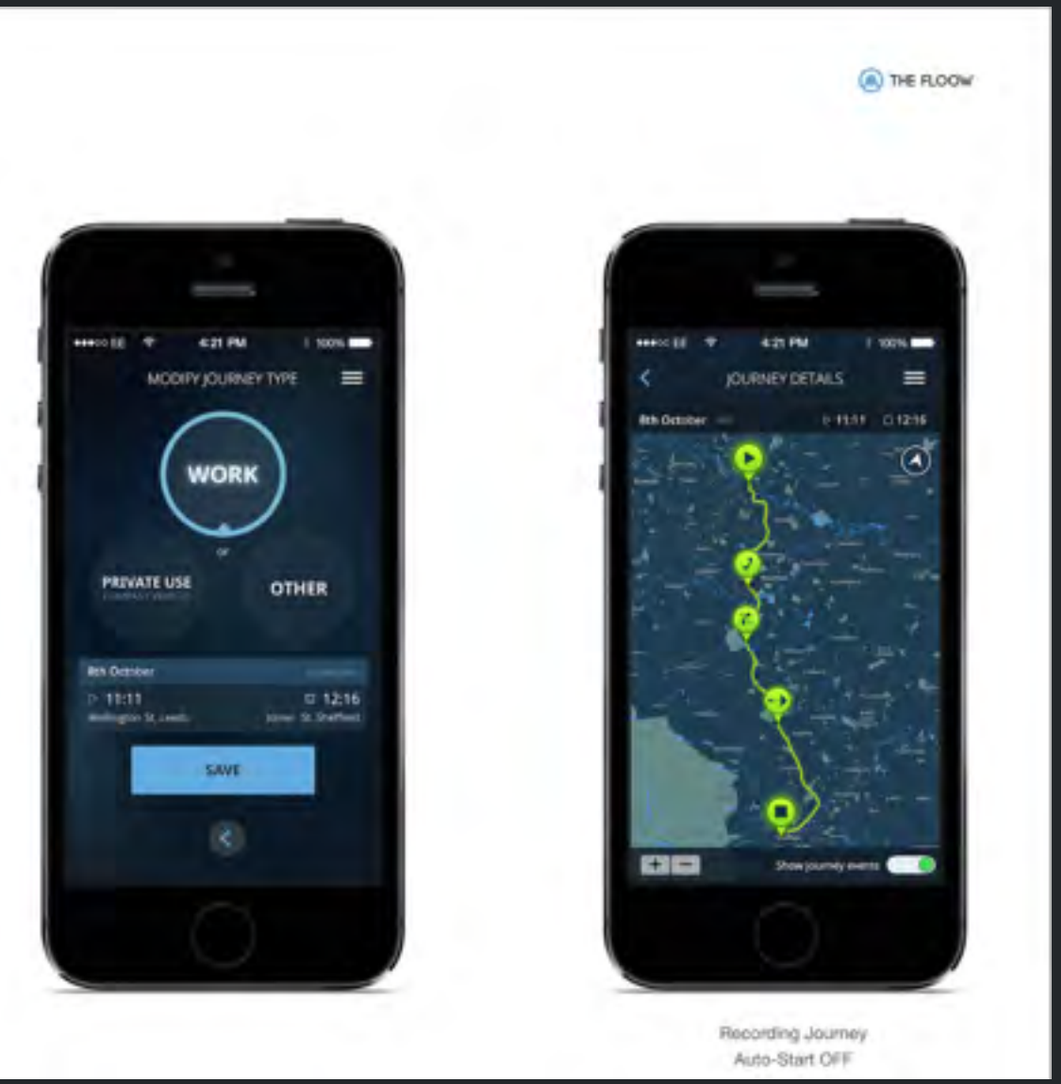
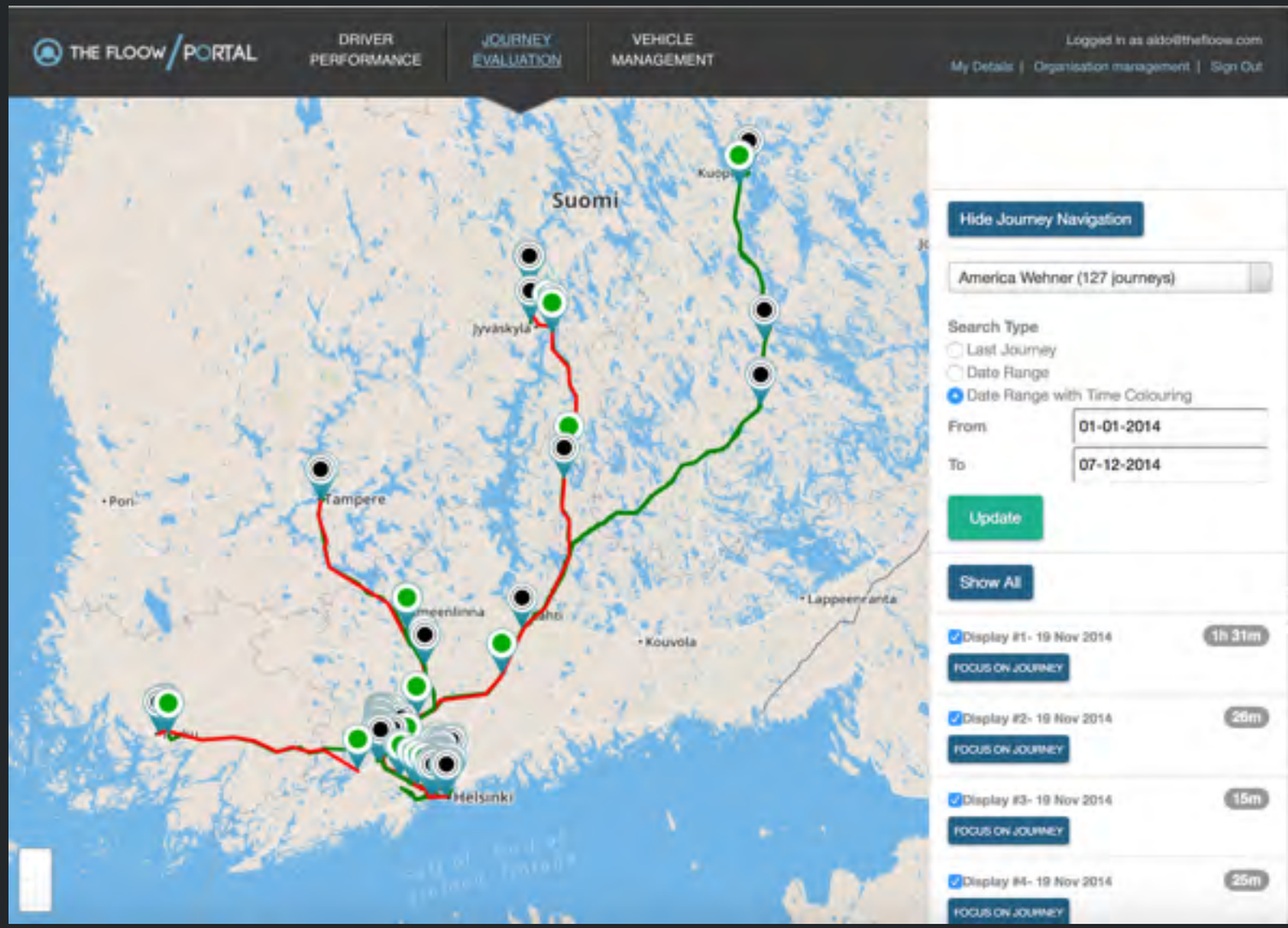
Value Add 6 : Fleet Management





App based feedback for drivers

Fleet Management Tools

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Conclusions

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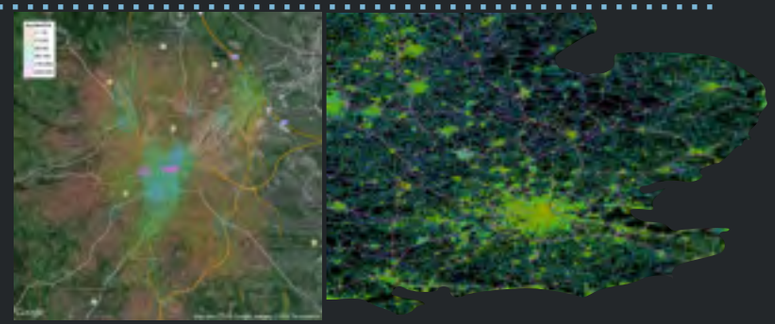
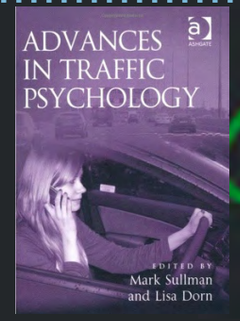
Our recipe for disruption

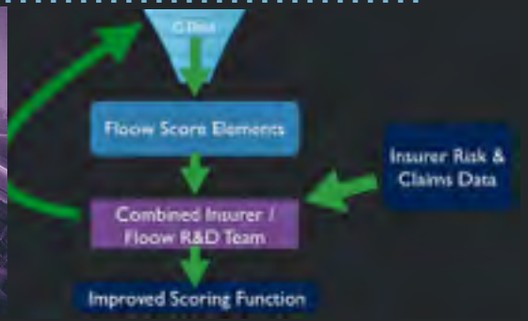
- **Device agnostic telematic platform generating consistent and predictive scores regardless of source**

- **Contextual data enrichment reflecting complexity of road infrastructure and environment**

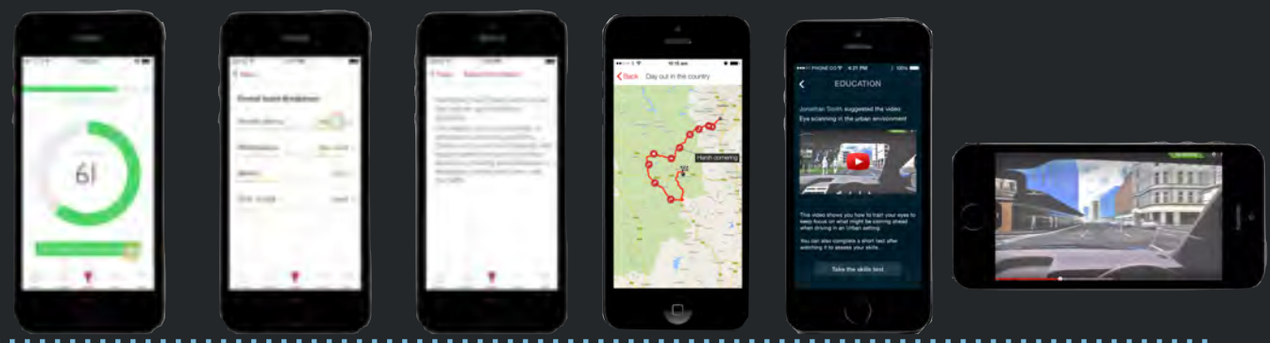


- **Scientific rigour coupled with parameterisation by client actuaries and underwriters to produce unique tailored scores**





- **Multi-level feedback to users including location based services**



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Thank you

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