Crossing the Chasm

Hazard Perception Testing

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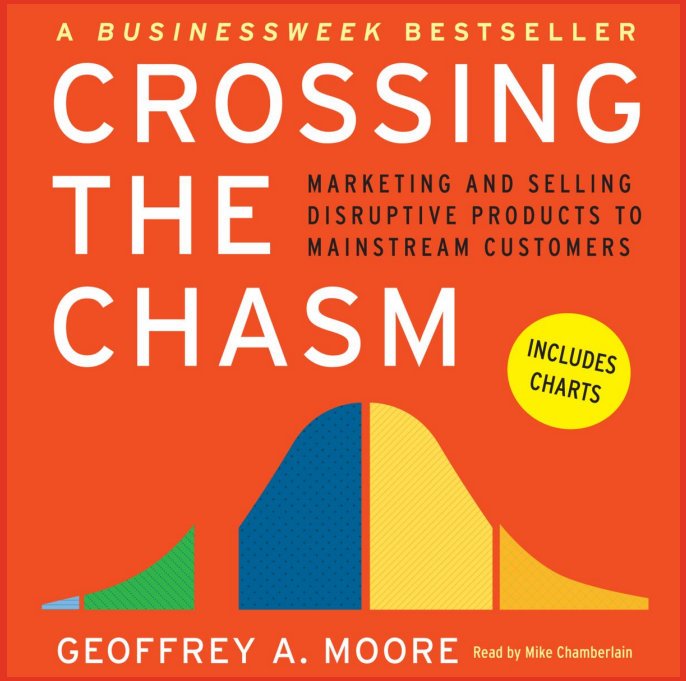
JELLY LEARN



- Argues there is a chasm between 'early adopters' (the visionaries) and the early majority (the pragmatists)
- If this chasm can be crossed you then have the opportunity for the product/service to become the de facto standard.

Innovators – early adopters (visionaries) – early majority (pragmatists) – late majority laggards

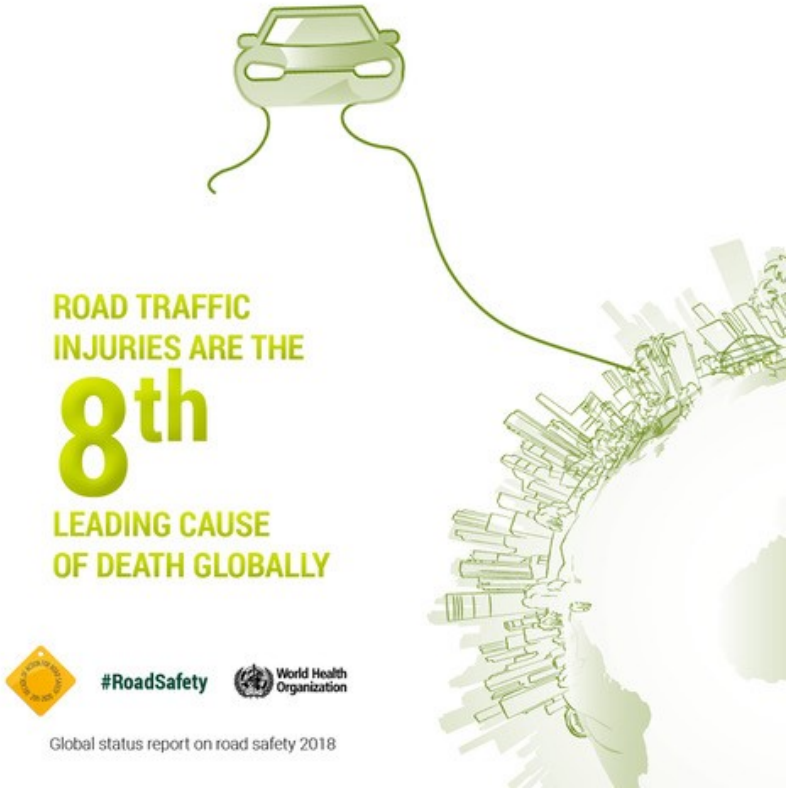
Why hasn't Hazard Perception crossed that chasm?

early adopters (visionaries)	CHASM	early majority (pragmatists)

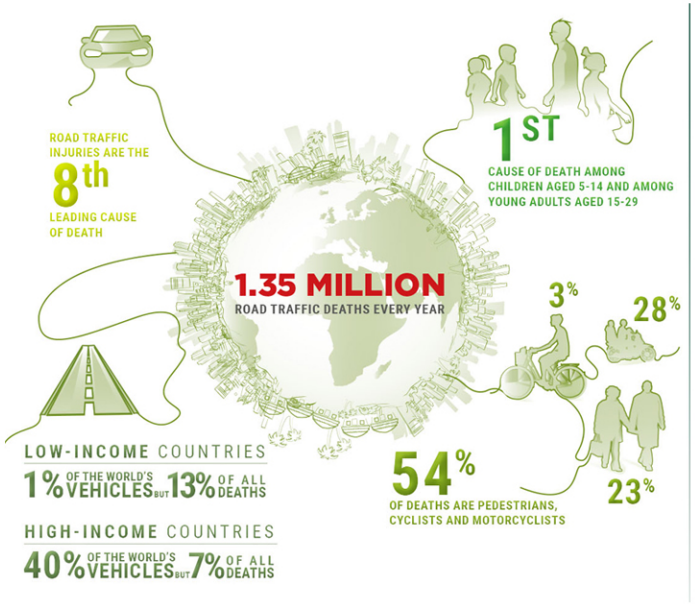
The Backdrop

UNITED NATIONS

The United Nations Decade of Action for Road Safety 2011 – 2021



ROAD TRAFFIC INJURIES: **THE FACTS**



EVERY 24 SECONDS SOMEONE DIES ON THE ROAD

#RoadSafety

World Health Organization

source: WHO Global status report on road safety 2018
www.who.int/violence_injury_prevention/road_safety_status/2018/en/

Global status report on road safety 2018

PROGRESS UPDATE: LEGISLATION

Strong road traffic laws, when adequately enforced, ensure safe behaviours and make roads safer.
In the last 3 years, **22 countries** have amended their road safety laws to align them with WHO's recommendations.
This resulted in **1 BILLION** additional people being covered by effective road traffic laws.

SEAT-BELTS

105 COUNTRIES
representing **5.3 billion** people currently have laws on seat-belt use that align with best practice.

SPEED

46 COUNTRIES
representing **3 billion** people have laws setting speed limits that align with best practice.

MOTORCYCLE HELMETS

49 COUNTRIES
representing **2.7 billion** people currently have laws on motorcycle helmet use that align with best practice.

DRINK-DRIVING

45 COUNTRIES
representing **2.3 billion** people currently have drink-driving laws that align with best practice.

CHILD RESTRAINTS

33 COUNTRIES
representing **652 million** people currently have laws on the use of child restraints that align with best practice.

DECADE OF ACTION FOR ROAD SAFETY 2011-2020

#RoadSafety

World Health Organization

source: WHO Global status report on road safety 2018
www.who.int/violence_injury_prevention/road_safety_status/2018/en/

Contents

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- The Ecosystem
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A bit about us

Example Projects in this space

Driver & Vehicle Standards Agency

Driver Licencing: DVSA clips – 260 1 x minute HD photorealistic HP and VM clips. The largest non commercial 3d project ever undertaken.

MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF LITHUANIA

Road Safety training: Online student road safety awareness content developed with the Lithuanian MoE. 24 Clips covering those road safety issues highlighted from their accident data.

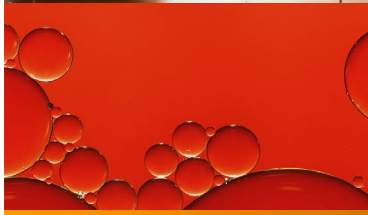
FIVE AI

Automated vehicle: FIVE.ai project using HD animated clips to explain the challenges that the developers face when designing the software

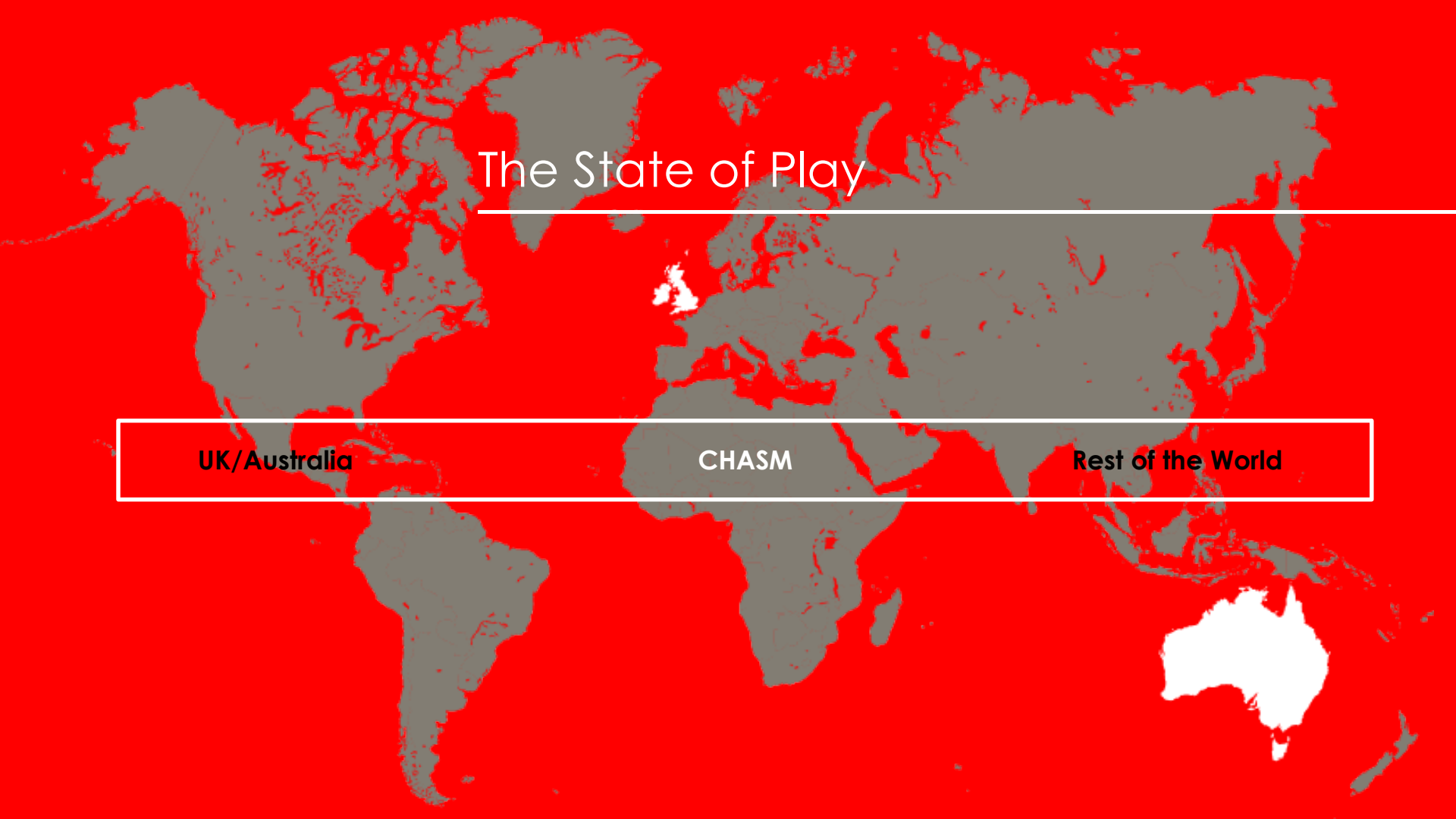
RAC Foundation

HP Research: The production of a 10 minute HD 360VR animated clip to be used within a VR headset to trial how HP could be delivered within a virtual environment

Driver training: content for a downloadable app for driver training for HP



The State of Play



Hazard Perception Testing

What is the evidence?

Cohort 1 Study *G B Grayson and B F Sexton*

- From 650 video clips 390 selected and trialled.
- Predicted that poor hazard perception skills associated with elevated accident risk.
- Showed that with about 3 hours of training a learner driver obtained similar top scores to those of an experienced driver.
- The hope was that the improvement would reduce the accident liability in new drivers especially in first 2-3 years of driving

Cohort 2 Study *Wells et al 2008*

- First piece of research to provide robust evidence of the benefits of HPT.
- Higher proportion of first time passes who took HPT test (53%) compared to 39% who didn't take the HP test as part of their theory test.
- Reported a 17.4% reduction in non-low speed collisions (where blame could be attached) linked to the introduction of the test in 2002

Other Global Supporting Research

Research groups around the world researching HPT:

Australia, Spain, Germany, Holland, Israel, Singapore, Malaysia, Canada, Hong Kong, China, Japan and New Zealand.

Hazard Perception Testing

The hard numbers for the UK!

Average cost of prevention per reported casualty and per reported road accident:

GB 2017/18

Accident/casualty type	***Cost per casualty***	***Cost per accident***
Fatal	£1,897,128.00	£2,130,921.00
Serious	£213,184.00	£243,635.00
Slight	£16,434.00	£25,451.00
Average	£64,726.00	£90,424.00

Fatalities 2000	**3,409**
Fatalities 2017	**1,793**

Department for Transport statistics

How it Works

The UK HP Test

- Period 2017/2018 1.9m Theory tests taken at a pass rate of 48.7%
- HP Test is part of that Theory Test and has to be taken by all candidates
- 10 x 14 CGI clip test forms which are randomised and balanced so that they consist of similar hazard types
- 5 second scoring window with precursors that hint to the hazard
- Includes 1 hazard and 2 hazard clips
- Based upon actual geographical location
- Photorealistic quality – why?

- 260 x 1 minute CGI HD Photorealistic HP and VM clips

Hazard Perception Clips

The Process

Ticking the Boxes

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HP – An Evidence based solution

Cohort 1 and 2 and other global research

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Return on Investment

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Content – Fit for purpose

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Test Delivery Platform

Clips run on 3 global testing platform provider

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Proven Capability

DVSA HP Test

Crossing the Chasm!

There are a significant number of things that any country introducing HP testing, as part of a licencing programme, needs to consider.

- *A Legal Framework*
- *A delivery system*
- *Build an infrastructure*
- *Budget for project*
- *Work to be done to align current crash data to the content of the clips, that sits outside of our current hazards (we can help with that)*

All within their control.

But that is not all!

But that is not all!

The Ecosystem

Testing cannot work without training and education

- Train the Trainers
- Content for Approved Driving Schools
- Content for Candidates

We have solutions for all these categories which leads me into our Road Map for road Safety

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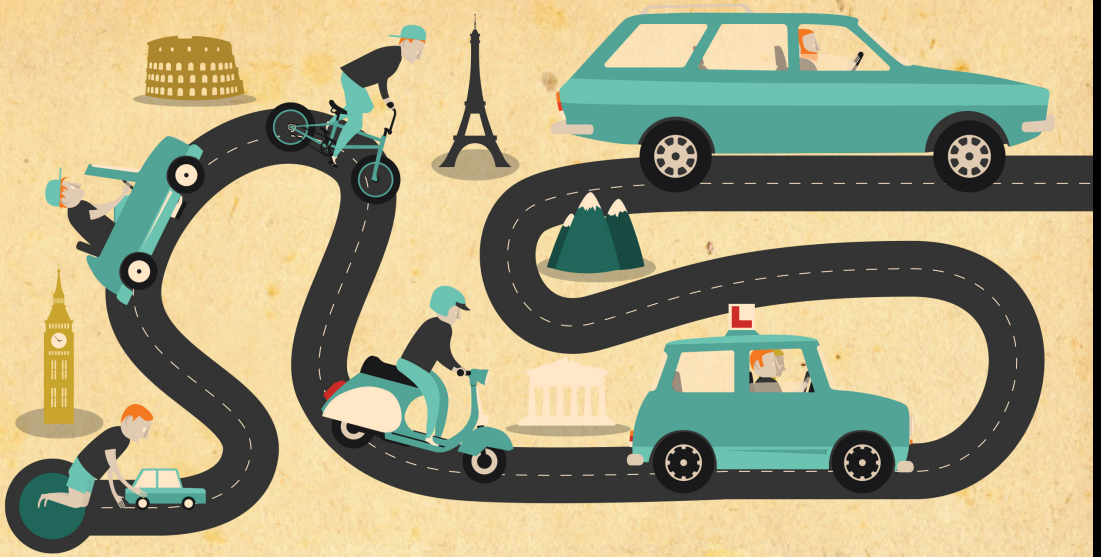
Road Map FOR ROAD SAFETY



Jellylearn present their Road Map for Road Safety, a strategy taking an innovative and creative approach to delivering animated online solutions to people of all ages, irrespective of which side of the road you drive on!

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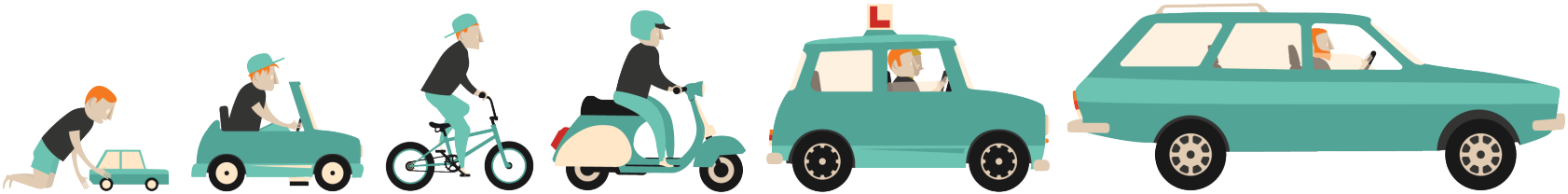

Education

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Road Safety training: Online student road safety awareness content developed with the Lithuanian MoE. 24 Clips covering those road safety issues highlighted from their accident data.

Training

Driver training: content for a downloadable app for driver training for HP

Testing

Driver & Vehicle Standards Agency

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Future Tech

RAC Foundation

HP Research: The production of a 10 minute HD 360VR animated clip to be used within a VR headset to trial how HP could be delivered within a virtual environment

Summary

- Hazard Perception Testing is an evidenced based solution
- It is proven to reduce road fatalities
- We have the content to deliver solutions to the Ecosystem

Summary

My question to you, as experts and stakeholders in this space, is why cant there be developed a generic set of Hazard Perception/Prediction clips that would compliment the database held by CIECA for theory test questions?

Summary

And is this something that you can help with?

Summary

My co-director will be making the same case at the annual EFA conference (European Driving Schools Association) later this month to gain support from their members for this idea.

Summary

This would give the ‘pragmatists’ the toolbox to **cross the chasm** and make HPP a de facto standard across Europe.

early adopters (visionaries)	**CHASM**	**early majority (pragmatists)**

Thank You

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