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Road Accident in Depth Studies

Phil Bailey - International Vehicle Standards

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Collision investigation is not new

Previous studies dating back to 1983 include:

- Cooperative Crash Injury Study
- On the Spot
- Heavy Vehicle Crash Injury Study
- Truck Crash Injury Study
- Fatals database

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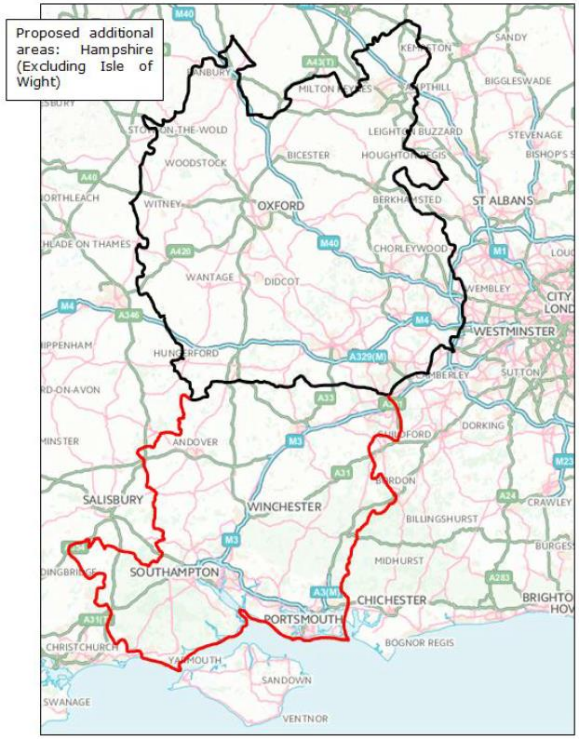
RAIDS 2012 - 2020



Over 2000 detailed collision investigations

~ 1100 on scene

~ 900 retrospective

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RAIDS is a team effort

RAIDS programme funded and managed by Department for Transport

Department of Health

NHS Health Research Authority

Home Office

Ministry of Justice

- 12+ Hospital trusts
- 2 Police forces and appointed recovery operators
- 5 Coroners

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Co-ordination by specialist contractors to:

- Investigate and collate collision information.
- Host and maintain study database for research access
- Oversee technical aspects of programme

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Evidence

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Highway factors

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Injury mechanisms

Knee contact with dashboard

Poor seatbelt loading

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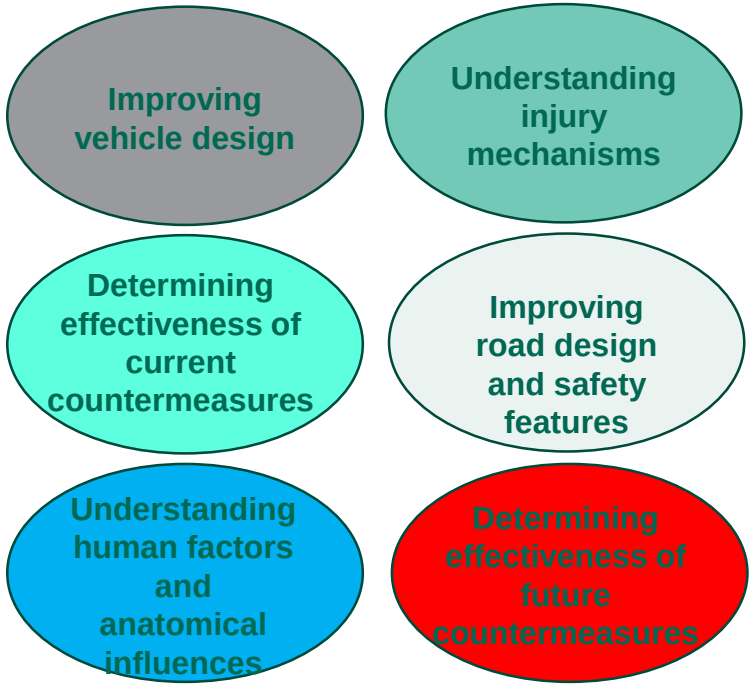
Anonymous data – What use is that?

Open approach to investigations:

- Not seeking to determine responsibility.
- 3000+ fields per case
- Comprehensive record of collision / scene parameters and consequences to allow reconstruction.
- Combining anonymous injury and vehicle information.

Wide range of uses limited only to ensure that anonymity of all participants is guaranteed

Understanding of UK collision scenarios



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Data usage

- General Safety Regulation amendments
- Organ trauma survivability
- Safer Verges
- Pedestrian collisions
- Night time KSIs
- Collisions involving child occupants
- Older drivers
- Rollover study
- Wheelchair occupant collisions
- EU serious road traffic injuries
- Frontal collisions occupant protection
- Vulnerable road users
- Cyclist AEB
- Various PhD e.g. thesis on safety of automated vehicle traffic, head trauma severity

SafetyCube

SENIORS

highways england

TRANSPORT FOR LONDON

EURO NCAP FOR SAFER CARS

UNECE

Loughborough University

Thatcham Research
Safer cars, fewer crashes

TRL

Cranfield University

Imperial College London

Coventry University

UNIVERSITY OF LEEDS

WARWICK
THE UNIVERSITY OF WARWICK

ACEA
European Automobile Manufacturers Association

FCA VOLVO VOLKSWAGEN TOYOTA DAF Ford CNH PSA GROUPE RENAULT HONDA DAIMLER HYUNDAI BMW GROUP

cybex agilysis

Good Egg Safety

DRIVEN Capri

robopilot by ARRIVAL

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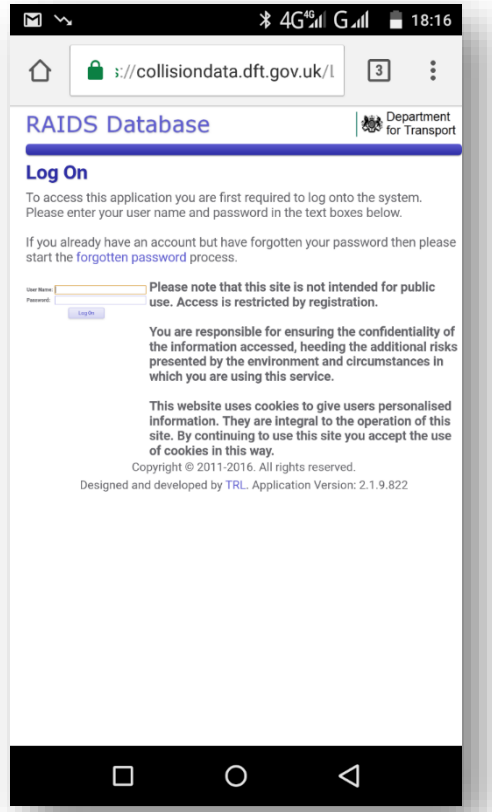
Available for research

- Available free of charge over internet
- Documented application process in recognition of confidentiality and ethical issues
- Access granted based on a research need that the data can fulfil with a defined output
- Users must sign agreements and comply with certain IT criteria before usernames and passwords are issued
- Further information please contact RAIDS@dft.gov.uk



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Phase 2

Phase 2 of RAIDS included specific focus on

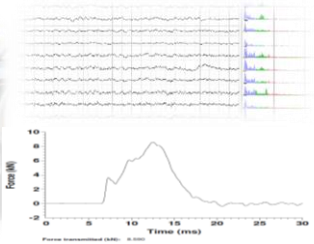
Unplanned enhancements

Nationwide support for Police investigators investigating collisions involving automated vehicles

Vulnerable road users

Advanced assistance

Electronic vehicle data



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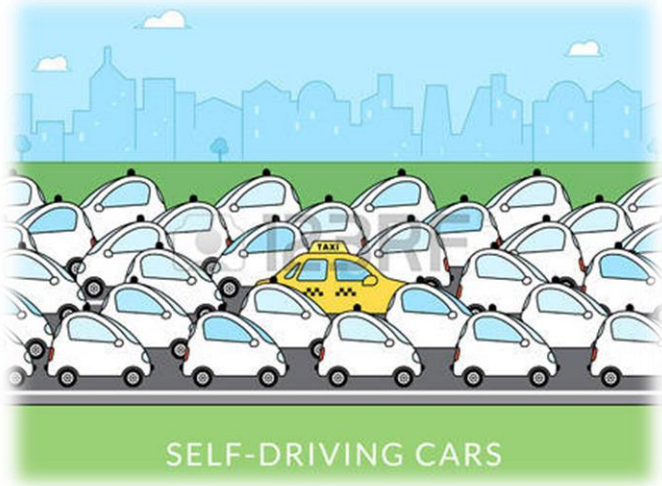
Phase 3 – April 2020 onward

- Maintain availability of database, whilst increasing research usage
- Continue investigating current vehicle technologies
- Address challenges associated with identifying vehicles with automated features
- Possibilities to innovate and use emerging technologies to improve value of in-depth collision investigation
- How to investigate potentially high profile automated vehicle collisions