HIGHWAYS AGENCY

ITS AND SAFE NETWORK MANAGEMENT

Alan Pickett

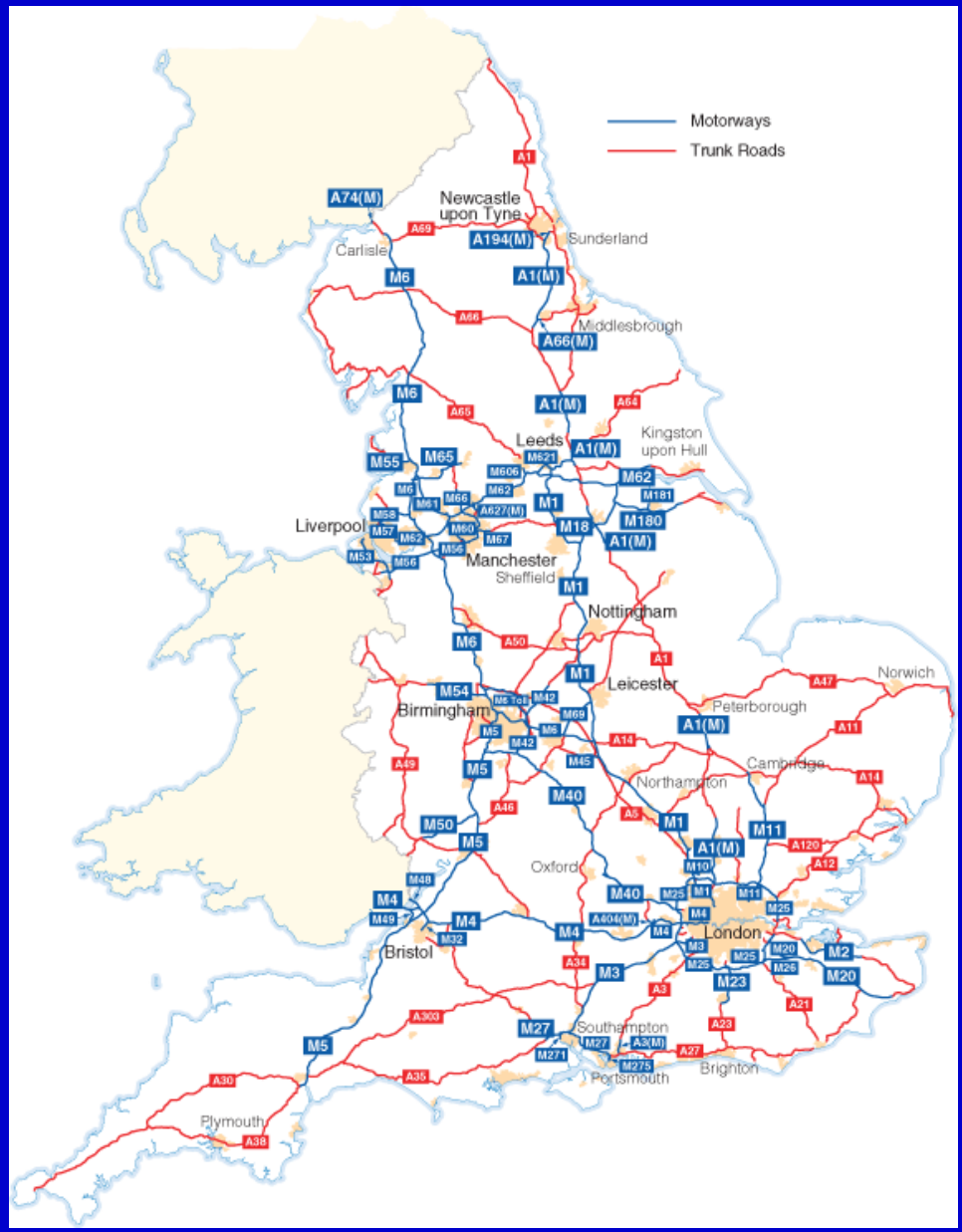
UK Highways Agency

Publications Group S050691

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Highways Agency

- Network Operator for Strategic Network
- High Speed Network, well engineered, well maintained
- Responsible for operating, managing, maintaining, improving



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Strategic Network

2900KM Motorway

2700KM All purpose dual carriageway

1750KM All purpose single carriageway







Safe Roads
Reliable Journeys
Informed Travellers

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Safety

350 Killed

2250 Seriously Injured

20000 Slightly Injured



Many more damage only accidents

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Safety

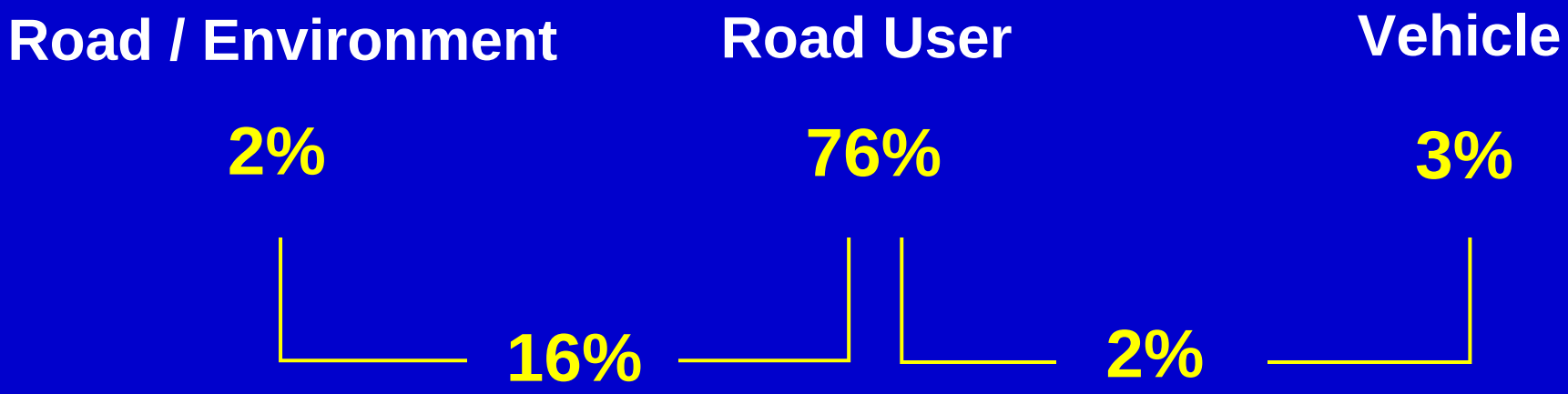
Why are accidents occuring?

- Well engineered roads
- Well maintained roads



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Contributory Factors



Multiple Factors: Less than 1%

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Driver Error

Made worse by:-

DRINK

DRUGS

TIREDNESS

SPEED

Safety Target 2010

Reduce KSI by one third



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Highways Agency Focus

Short / Medium Term

- Changing Driver Behaviour
- Speed Management
- Assisting driver cope with road environment

Longer Term

- ISA
- CVHS

(but not within current horizon)

Strongly supported by Technology application and information

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ITS – Current Applications

- Signalised Junctions etc
- Vehicle Actuated Signs
- Variable Message Signs
- MIDAS (Motorway Incident Detection Automatic Signalling)
- VSL (Variable Speed Limits)

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MIDAS

- Installed over 800KM of motorway
- AID (Automatic Incident Detection) 1988 - 5 year study
- 1993 onwards MIDAS
- 10 year study into accident benefits



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Findings

13% less injury accidents occur when MIDAS present

Over 800KM of motorway:-

- **9 less road users ‘killed’ per year**
- **47 less ‘seriously injured’**
- **363 less ‘slightly injured’**
- **over 3000 less ‘damage only’ accidents**

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Variable Speed Limits M25 Controlled Motorway

- Introduced in 1995
- Mandatory speed control
- Automatic signal setting in response to traffic (advanced MIDAS)
- Speed enforcement using automatic camera technology



M25 Controlled Motorway

- 10 years of monitoring

Benefits:-

- 10% reduction in injury accidents
- No significant change in journey times, but more reliable, better driver behaviour, smoother flows
- Reduction in vehicle emissions
- Improved fuel consumption

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Real Challenge – still to come

- 2-3% Traffic growth per year
- More roads not an option
- UK journey reliability target

Requires:-

- New traffic management systems – introduced without compromising safety
- New technology, driver information, ITS

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ATM Active Traffic Management

Combines:-



- MIDAS
- VSL
- Vehicle detections
- VMS
- CCTV
- Lane control signals
- Digital speed enforcement
- Increased capacity through hardshoulder running

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Narrower Lanes

Combines

- Speed management
- Incident detection

} Using existing technology

But

- ISA
- Automatic lane centering

} New technology

Will assist

Increases capacity by providing more lanes from existing road space

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ITS and Safe Network Management Issues and Longer Term

- Affordability
- Link between congestion and safety
- Role of road administration / network operators in shaping the future

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Thank you for listening

