

Transferring work-related road safety 'good' practice

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Source for much of material:

www.virtualriskmanager.net/research

Theory

- Theoretical understanding underpins good practice
- Good practice can also add much to theory
- Provides:
 - Framework
 - Structure
 - Starting point
 - Something to contribute to, prove or disprove and evaluate against
- Many existing theories for road safety, and increasingly for occupational road safety
- Very limited published outcomes evaluation data
- Following discussion reviews emerging theories on what is *'Best', 'Good' or 'Preferred'*

ATSB Study: Models of safety

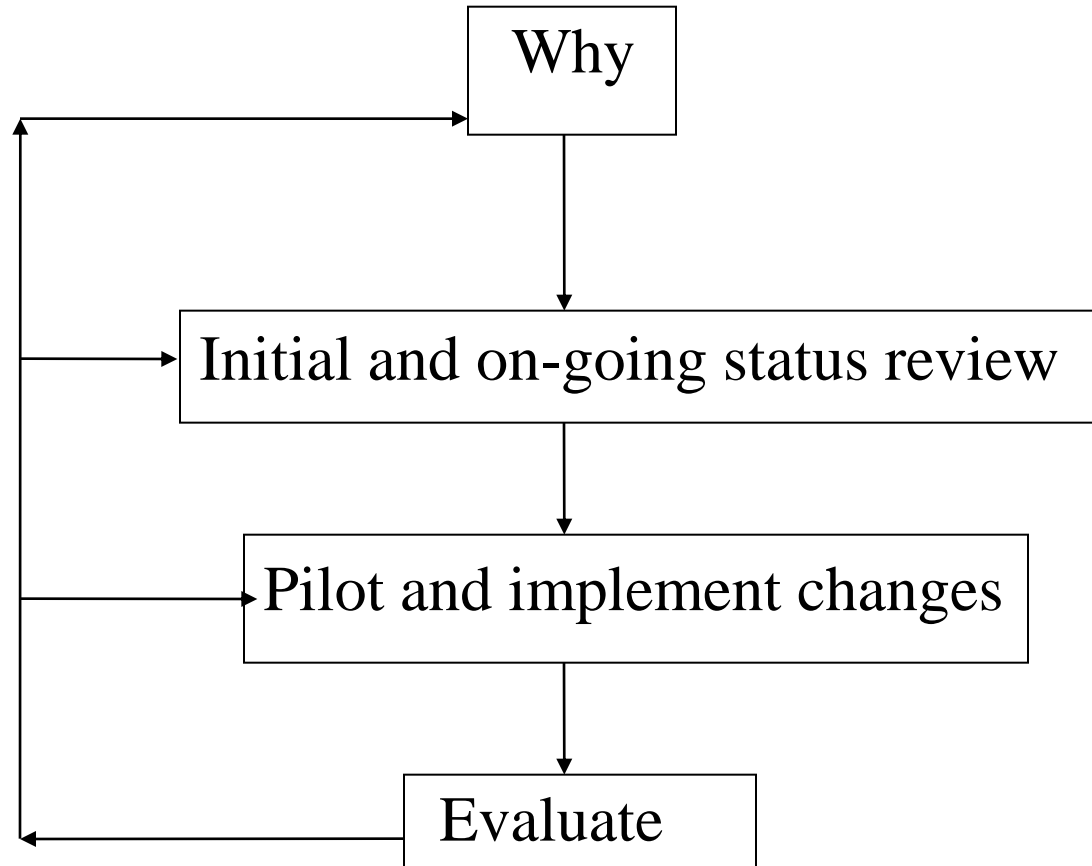
- Heinrich's Domino
- Haddon Matrix
- Surveillance
- Surrey's Systems approach
- Wilde's risk homeostasis
- Risk analysis
- Organisational culture
- Prevention

Source:

Laflamme et al (1999) Safety promotion research

Reviewed by Murray et al (2003) and summarised into WIPE model

WIPE approach



NIOSH research white paper

- ERSO framework
- Euro OSH Factsheet 18 models
- Stuckey & Mooren models
- Global standards – oil industry, pharma, logistics sector
- UN, Fleet Forum * & GRSP etc 5-pillars approach
- Risk assessment-led approaches in response to UK Government guidance
- Standards-based eg ANSI Z15.1 or ISO39001
- NETS model process
- RoSPA MORR *
- Driving for Better Business B to B approach
- Gap analysis & benchmarking based on Haddon Matrix*

Fleet Safety Forum: Fleet Safety Management Model

Management systems

1. A senior manager must assume specific responsibility
2. Implement driving for work policy
3. Record and act on the findings of risk assessments
4. Ensure all incident involving any vehicle is recorded & that collective information is regularly analysed

Driver safety

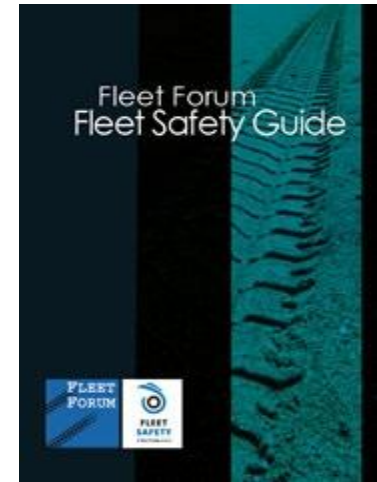
5. Driver's handbook
6. Ensure all employees driving for work are initially vetted, inducted and regularly assessed

Vehicle safety

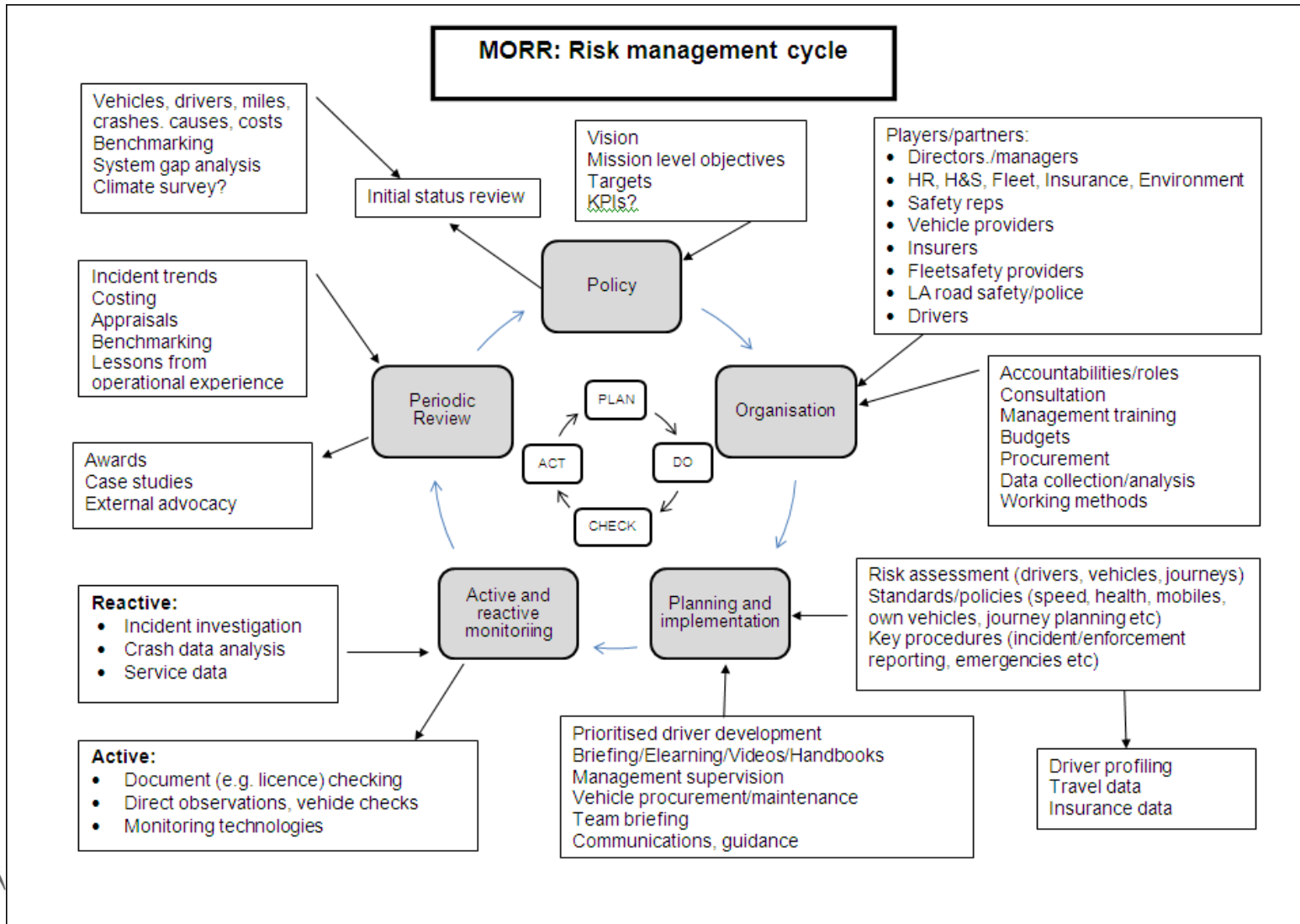
7. Ensure that vehicles are fit for purpose and fitted with all appropriate safety and security features
8. All vehicles are regularly inspected and maintained

Journey management

9. Check whether a road journey is really necessary – and encourage alternative modes of communication and transport
10. Ensure journeys are scheduled to realistic timetable, planned to take into account adequate rest periods and use the safest available routes



Bibbings/RoSPA MORR model



Haddon Matrix Framework

	Management Culture (30%)	Journey (10%)	Road/ Site Environment (10%)	People - Drivers and Managers (20%)	Vehicle (10%)	External/ Societal/ Community/ Brand (20%)
Pre-Crash or Pre-Drive	Leadership Business case* Legal compliance Safety audit* Benchmarking* Pilot studies Goals & policies Safety culture* Committee Pledge Communications Contractors	Travel policy Mode choice Journey planning Routing Risk assessment Emergency preparation Shifts/ working time	Risk assess Observation Guidelines Site layouts Work permits C&D rules Road design Black-spot mapping Engage local road agencies	Recruit Contract Induct Check qualified Handbook Risk assess Train Equip Communicate Engage Monitor Correct	Risk assess Select Specification Safety features Service Maintain Check Use policy Mobile comms Wear & tear Grey fleet	Regulator/policy engagement CSR Benchmarking Communications Family members Community Road safety weeks/ days Awards
At Scene	Emergency support to driver	Engage local investigators	Manage scene	Process to manage scene	Crashworthy 'ITS' data capture	Escalation process
Post-Crash	Report, record & investigate Change process Data linkages, evaluation & KPIs*	Debrief & review journeys	Investigate and improve Review site/road elements of collision data	Reporting and investigation Driver debrief Counselling, trauma support Reassess/train	Strong openable doors Investigate 'ITS' data Inspection & repair	Manage reputation and community learning process

Haddon/Systems approach outcomes:

The screenshot shows the Virtual Risk Manager website interface. At the top, there is a navigation menu with links: Home, News, About US, Products, Case Studies, Support, PRIVACY, Media, and Contact. Below the navigation is a red banner with the word "News" and the text "Keep upto date with Interactive Driving Systems®".

The main content area features a news article titled "BT halves collision rate and cuts costs by £12 million" dated 2nd August 2010. The article text states: "BT, which operates one of the largest motor fleets in Europe, has recently implemented a new policy and programs - in part to allow for improved privacy management and data protection - and a new Index and risk data warehouse." Below the text is a large blue graphic with the BT logo and the text "Cuts costs by £10+ million".

To the right of the news article is a vertical list of client logos, including: ACC, Arriva, Canon, Connexion, Department for Transport, Eskom Enterprises, Fleetsafe New Zealand, HBL, Lex Autolease, Nestlé Logistics USA, NIOSH, NYK Logistics, PHH Arval, RoSPA, TNT, Vauxhall, and Wyeth. Another column of logos includes: Aplant, BT, Centrica, Cummins, Eagle, Fleet Logistics, FLTA, IAM Drive & Survive, McCain, Nestlé Waters Direct, Northcliffe Newspapers, Orange, Roche, Royal Mail, United Utilities, and Wolseley UK.

Below the client logos are several promotional boxes: "Global Technical Support" with a "Click here" link; "NIOSH Conference" with a "Click here" link; "Fleet Safety Gap Analysis" with a "Click here" link; and "Awards" with a "Read more" link. There is also a "News" section with a "Read more" link.

At the bottom of the page, there is a "Contact Us" button and a logo for "TIVE ITEMS" with the text "sk Reduction US Patent: 6,714,884".

To date the company has cut its collision rate from over 60 per thousand vehicles in 2001 to 30 in 2009, reducing costs by approximately £12 million per annum in the process.

This has been achieved through a range of initiatives including:

- Policy and communications based on the latest research from around the globe.



Other models & theories

- Safety E's *
- Insurance/driver risk-based models *
- Surveillance-based models:
 - Bird's accident triangle
 - Broken windows theory
- Behaviour-based models:
 - Stages of change
 - Theory of planned behaviour
 - Multiple intervention level and behaviour change taxonomy
 - Group decision theory
- Business based models:
 - PESTEL, SWOT, GAP, Pareto model/6 Sigma
- Devon KTP model *

• **TRL research**
VIRTUAL RISK
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Safety E's

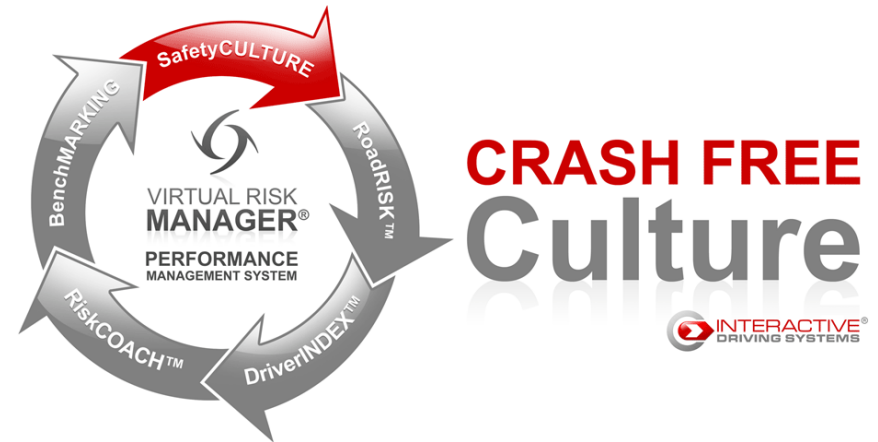
- Education
- Engineering
- Enforcement
- Engagement
- Enactment
- Enthusiasm
- Empowerment
- Elation
- Ethics
- Evaluation

Insurance & driver-risk based models

Zurich model



Data warehouse model



Husband/Devon model

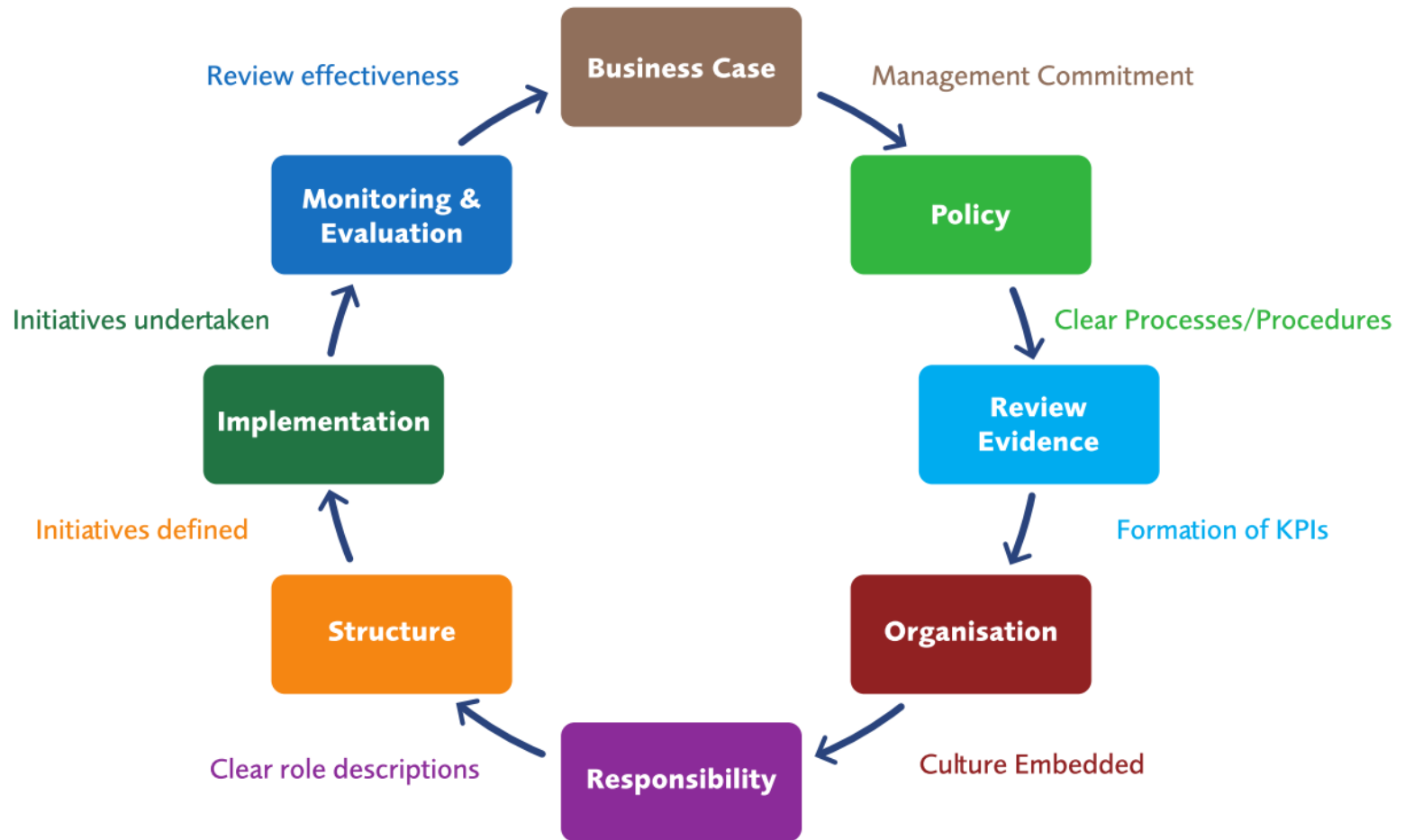


Figure 1 Proposed work-related road safety model



Summary

- Good practice is important and can be transferred
- Growing body of evidence although limited 'scientific' studies & absolutely no 'purple' bullet
- Consensus around need for:
 - Understanding of context, exposures, £\$€ & business case
 - Data, gap analysis, risk assessment, needs-based
 - Holistic systems based approach or framework eg ISO39001?
 - Leaders building safety into organisational DNA for long term rather than a one off event
 - On-going program evaluation & renewal

- Next steps:

- www.etsc.eu/PRAISE.php
- www.fleetsafetybenchmarking.net

