

Management of distraction risk from mobile phones in the GB rail industry

Toni Luke

Jay Heavisides

Dan Basacik (TRL)



- Key products:
 - Rule Book
 - Standards
 - Risk management tools
 - Research and development programme

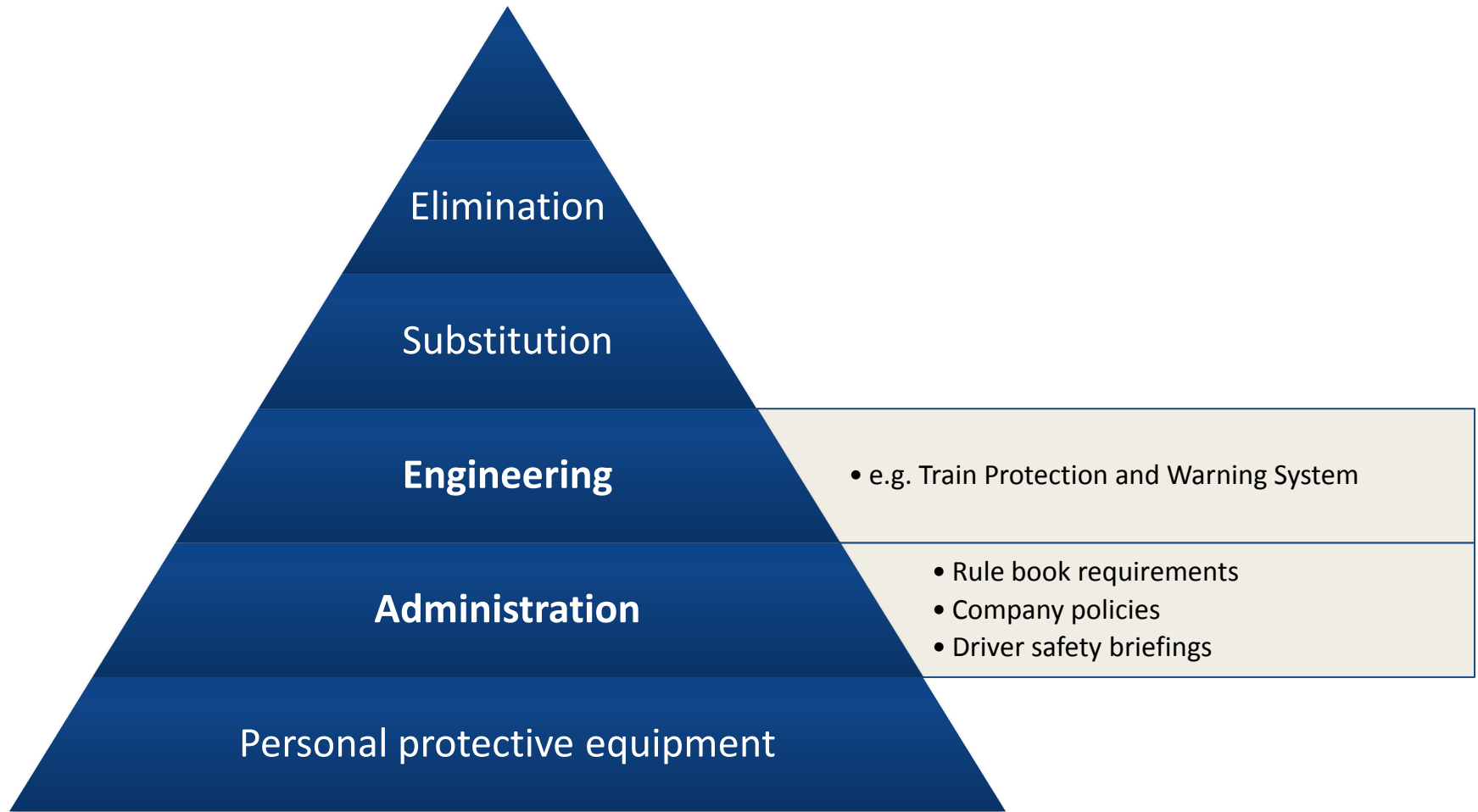
The Chatsworth Accident



How does mobile phone use affect train driving?



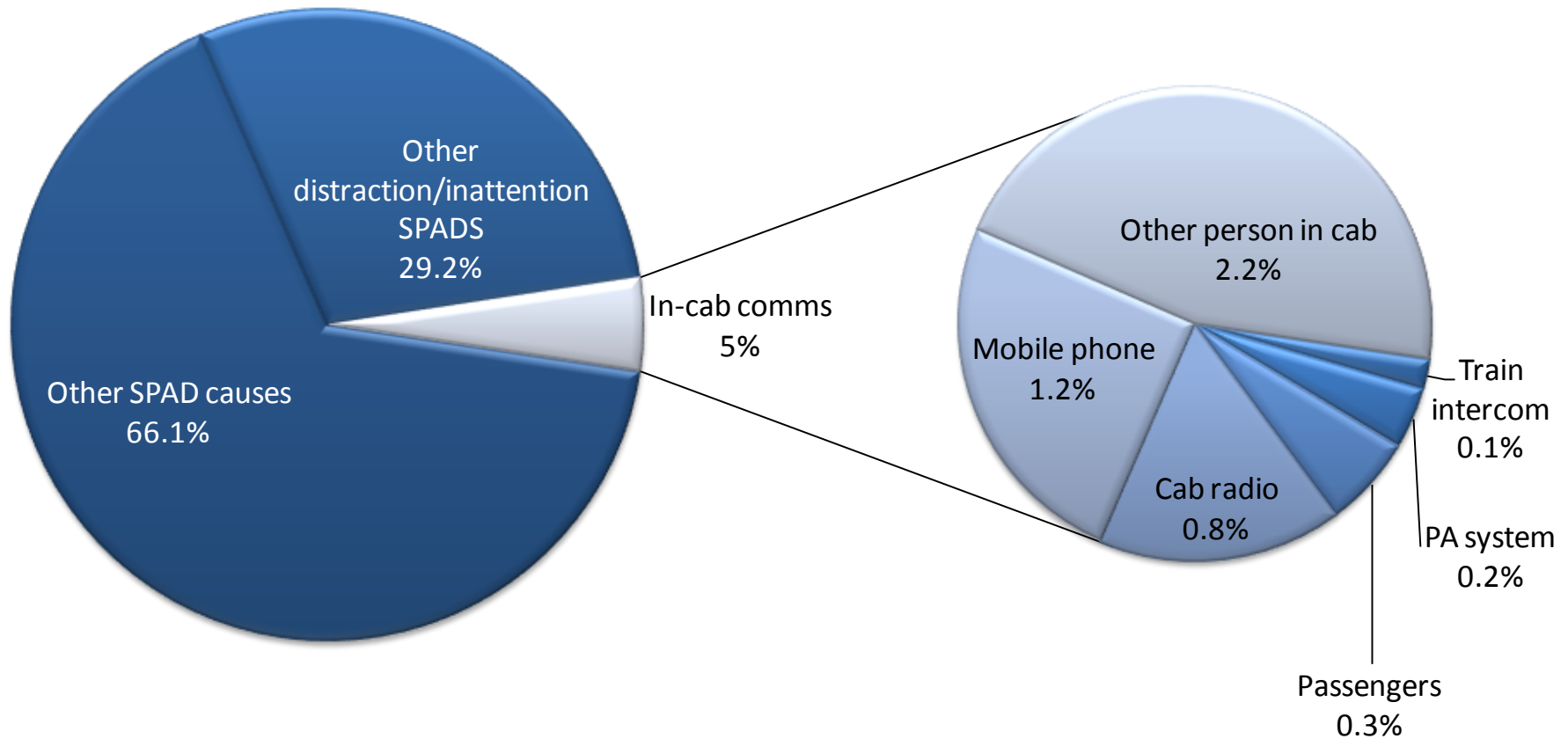
Current management of mobile phone risk



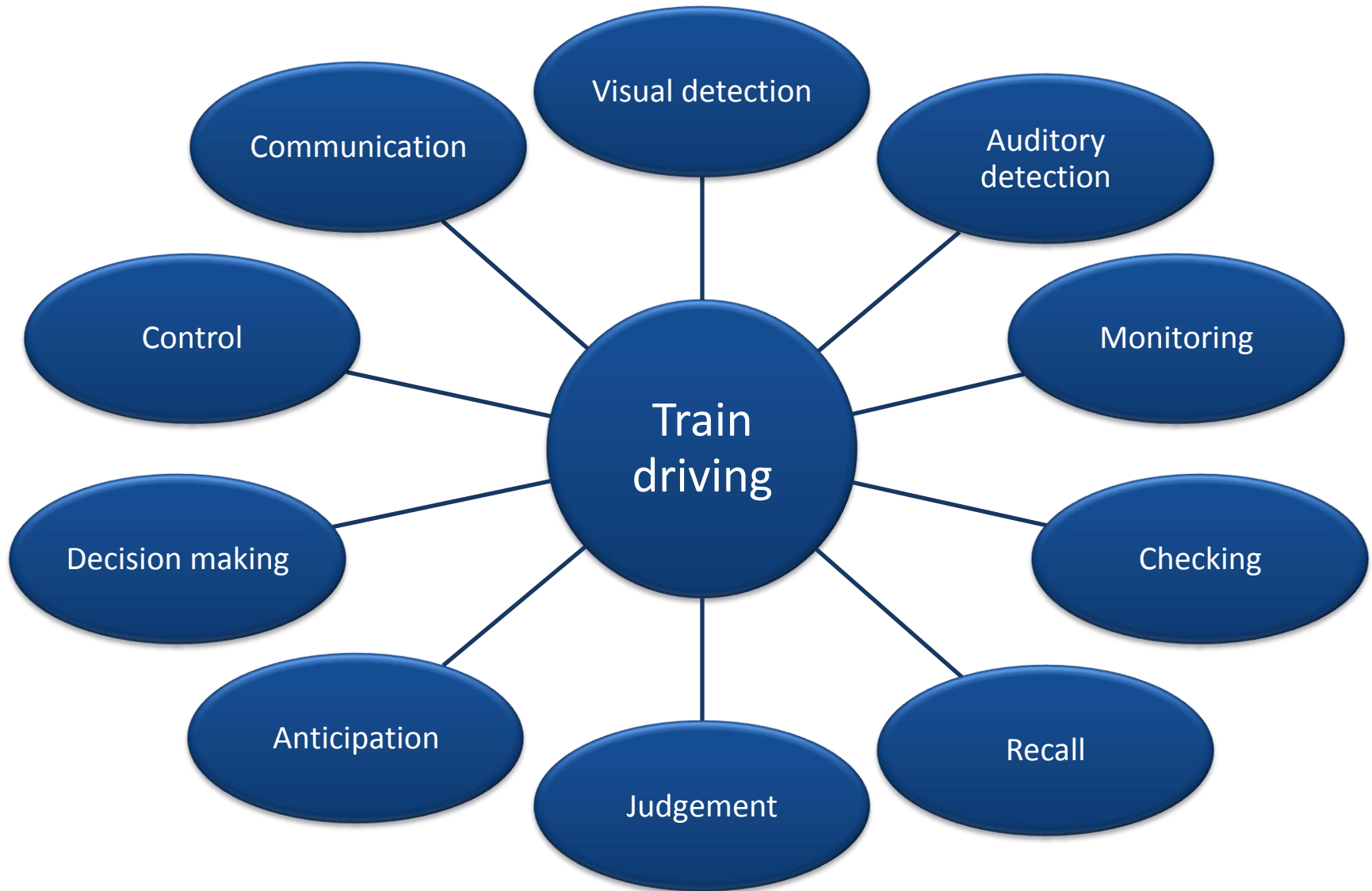
- Risk analysis using the 'Safety Management Information System' (SMIS)
- Review of published literature from car driving
- Task analysis of train driving tasks
- Input from Subject Matter Experts

- Only relevant information for Signals Passed at Danger (SPADs)
- 1/3 SPADs involve distraction or inattention
- 1.2% involved mobile phone distraction
- Most of risk from SPADs already mitigated by TPWS

Other in-cab communication distractions



How do train driving and car driving differ?



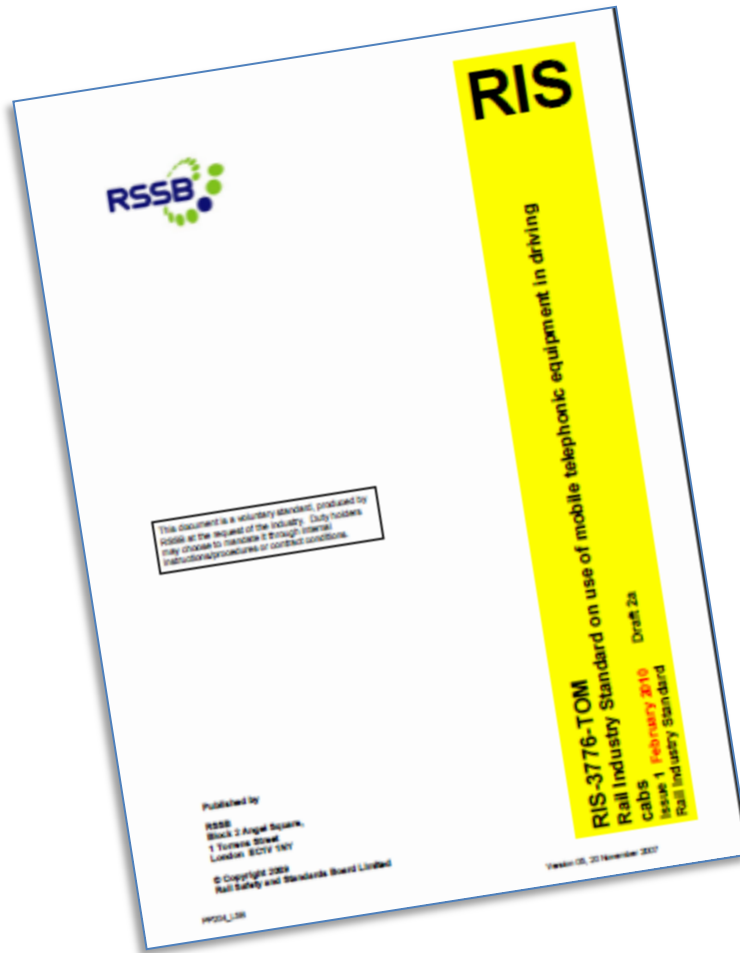
Predicted effect of mobile phone use on train driving



Effect	Impact
Impaired hazard detection	Signals not seen/responded to Poor response to unexpected hazards
High workload and impaired situation awareness	Poor decision making Increased likelihood of all errors
Altered glance behaviour	Unable to direct attention to key targets
Increased reaction time	Unlikely to be critical
Poor speed control or reduced speed	Travelling too fast or too slowly potentially cause of derailment or delay

- Limitations of current communications systems
- Operational need to contact drivers
- Company mobile phones
- Increasing numbers of devices and functions
- Difficulty with detection and enforcement

Conclusions



- Industry consensus – Voluntary standard to discourage mobile phone use
- Phones should remain available for use when stationary
- Phones should remain an acceptable back-up to cab radio



- Industry consensus – Voluntary standard to discourage mobile phone use
- Phones should remain available for use when stationary
- Phones should remain an acceptable back-up to cab radio
- **Industry-wide education programme desired to tackle underlying culture**