OFFICE OF RAIL REGULATION

Welcome to RIHSAC 97

Dilip Sinha, Secretary, RIHSAC

14 October 2014

ORR HEALTH AND SAFETY COMMITTEE

Suicide Reduction Programme

Catherine Johnstone
Chief Executive Officer

SAMARITANS

SUICIDE NUMBERS

- UK suicide rate 2012 is 11.6 per 100,000; 18.2 for males, 5.2 for females (5,981 deaths registered)
- Highest rate in 2012 is men aged 40-44 (25.9 per 100,000)
- This group is at risk of suicide on the railway
- Increase in services and passengers = increased risk
- Since 2003 proportion of suicides on railway relatively stable (within 1.5% fluctuation)

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THE JOURNEY TO TAKE YOUR OWN LIFE

- Wider societal problems are not rail specific
- Suicide is complex; there is rarely one issue that triggers a suicide
- Impulsivity and access to means are key factors
- Effect on individuals encourages mobilisation
- Continuing our railway programme is vital
- We are not alone…

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WHAT HAVE WE BEEN DOING SO FAR?

- Mitigations so far have focussed on priority locations
- Staff empowerment and interventions
- Industry-wide suicide prevention and support guidance

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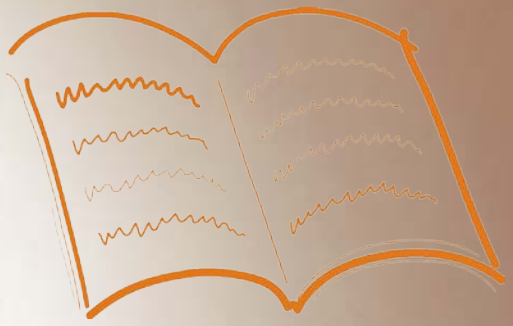
WHAT ARE OUR FUTURE PLANS?

We are now shifting focus beyond station environment

Programme is evolving to encourage earlier intervention

Community outreach locations

Upskilling the rail industry



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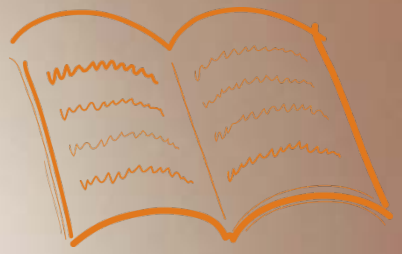
FUTURE PLANS Continued



- Government call to action
- Piloting and evaluating new activities/technology
- Progressing the health and social care outreach work stream
- Developing our communications strategy
- Commissioning new research to shape future activities
- Bringing together learning from Europe and worldwide

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WHAT ELSE CAN WE DO?

Driving our national strategy

- Tri-partner strategic leadership
- NSPSG endorsed national strategy
- Increasing industry NSPSG presence and buy-in
- Encouraging TOC input and collaboration
- Influencing suicide prevention inclusion in franchise agreements
- Developing TOC-focussed Joint Suicide Prevention Plans

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WHAT ELSE CAN WE DO?

Communities and media

- The way we communicate is changing
- Awareness of a railway suicide is far-reaching
- Media can magnify public awareness
- Dangers of social contagion
- Cross-industry media activity and messaging must be responsible
- Samaritans' wider work in the online environment

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WHAT ELSE CAN WE DO?

Cross-industry learning

- Sharing learning from other industry initiatives
- Working more closely with other areas of the business
- Keeping suicide prevention as a priority

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THANK YOU

- Reflecting on the first five years
- Building on our successes
- Fresh ideas and innovation
- Integrating suicide prevention practices
- Meaningful progress beyond 2015
- There is still more we can do

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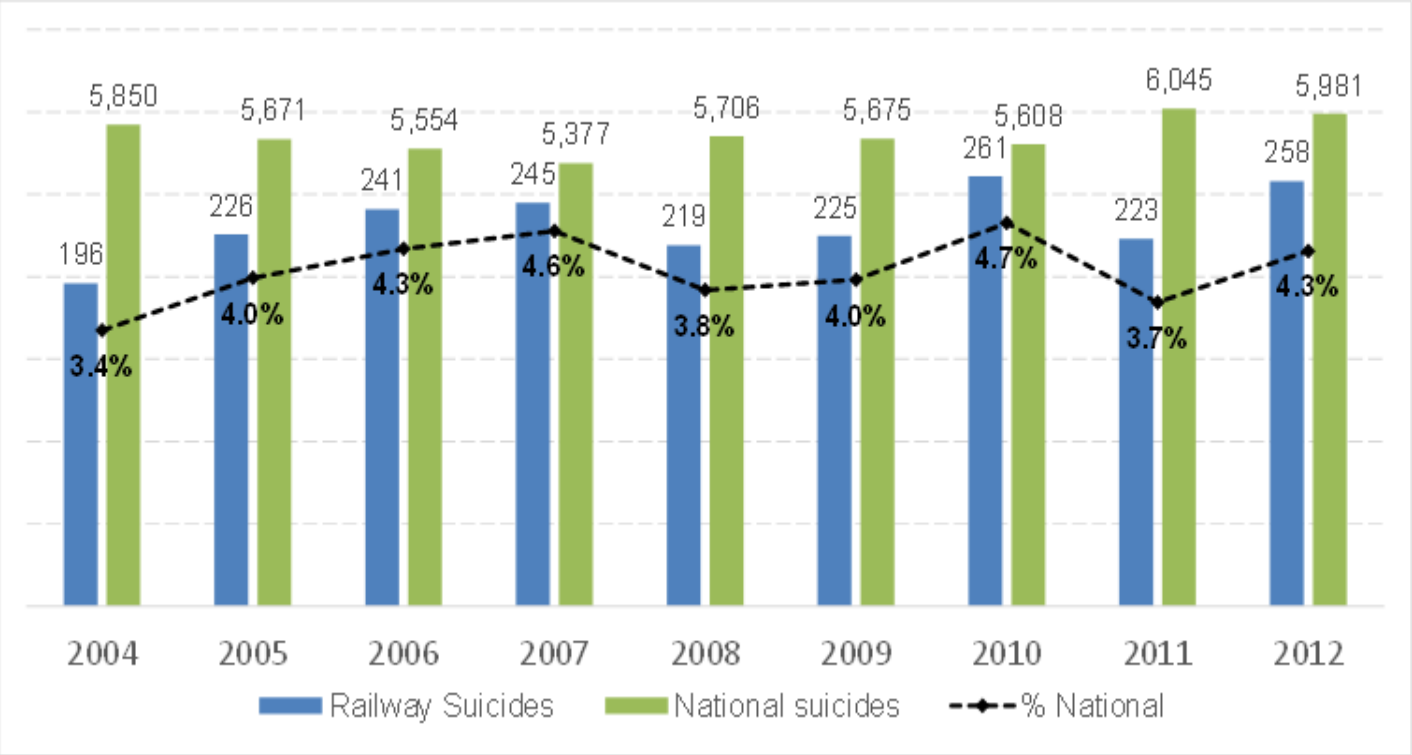
Taking ownership of suicide on our railway

Ian Stevens
Programme Manager (Suicide Prevention)

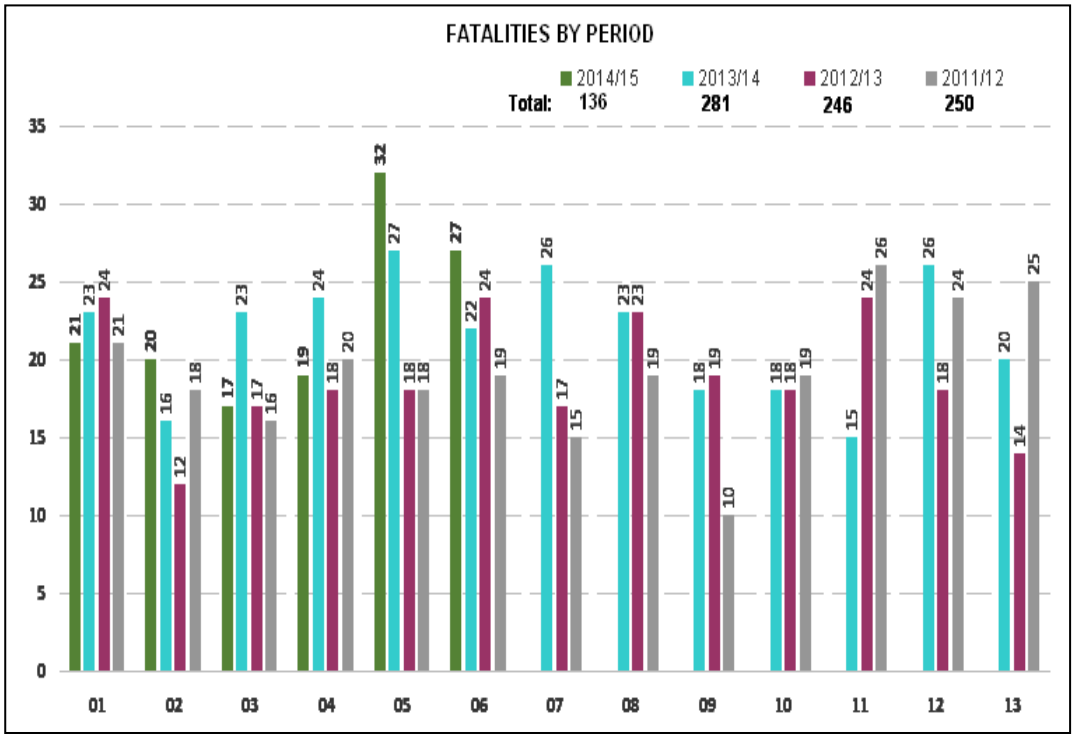
The scale of the problem in the UK

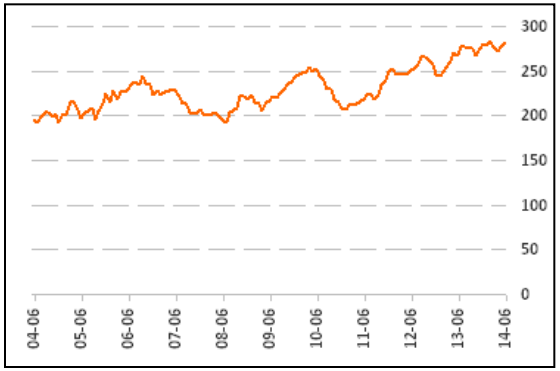
UK rail suicides as a percentage of the national total



The impact of suicides

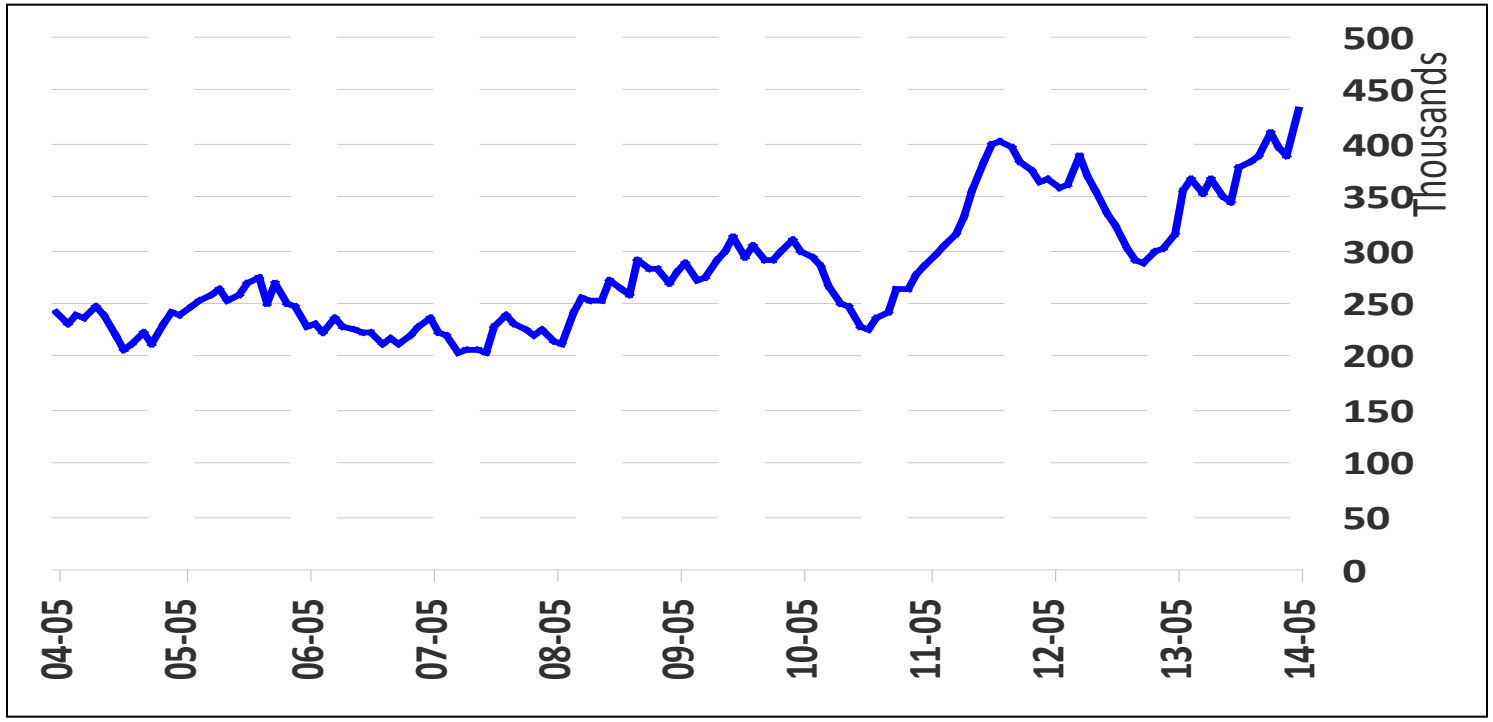
The number of events





The impact of suicides

Minutes delay



Our partnerships

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BRITISH TRANSPORT POLICE

The cornerstones of the programme

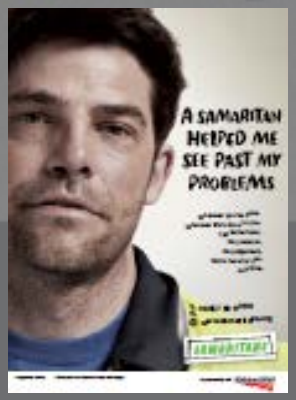
BRITISH TRANSPORT POLICE

Mental Health and suicide Prevention Unit

Operation Avert

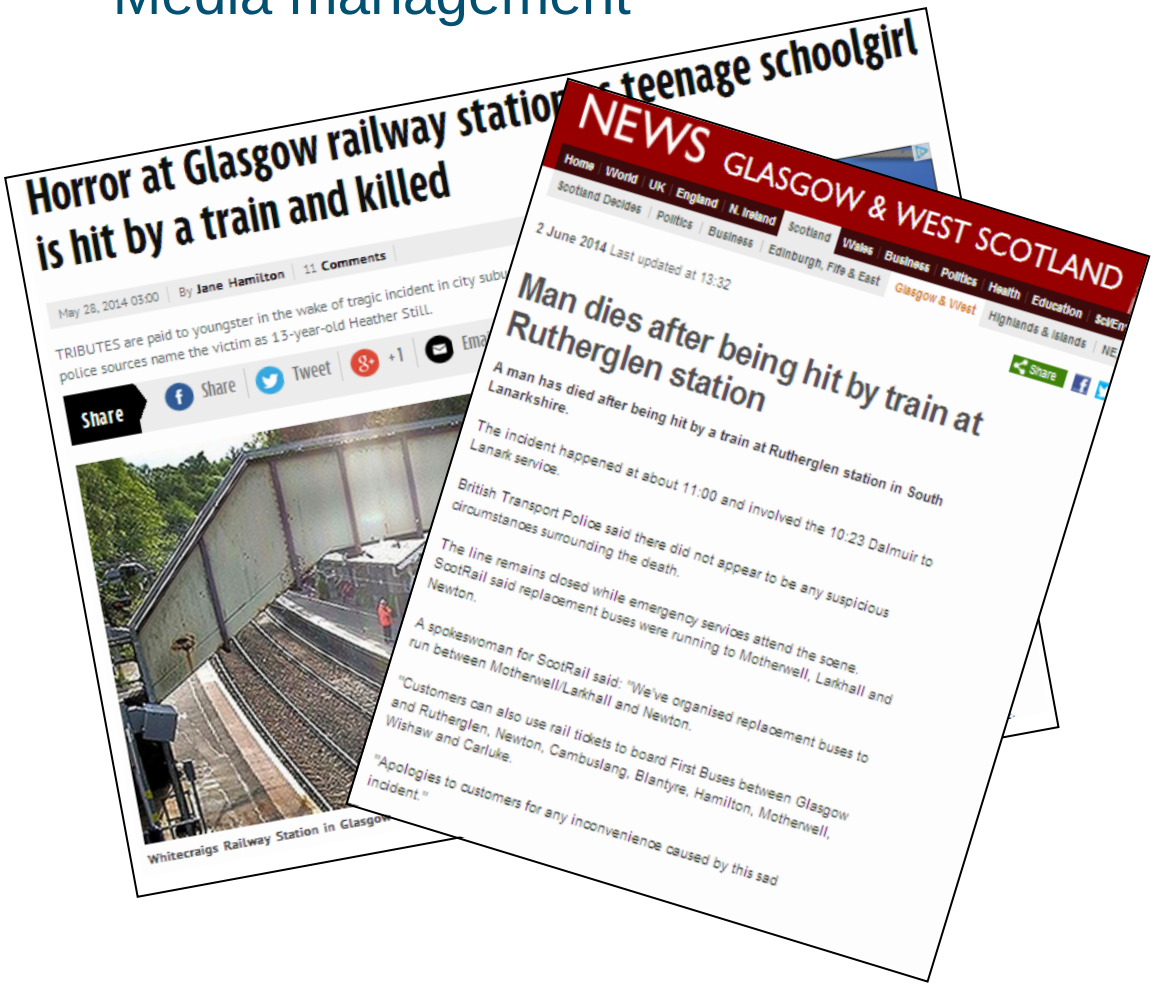
The cornerstones of the programme

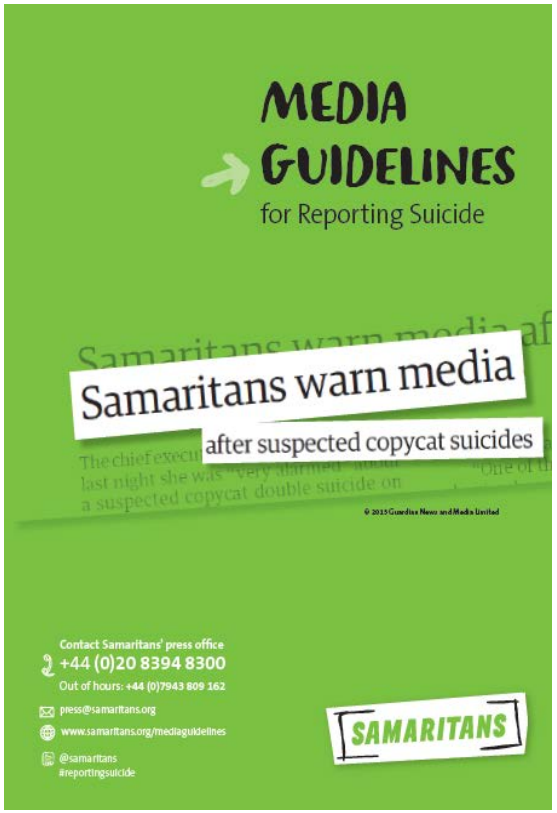
Campaign communications material



The cornerstones of the programme

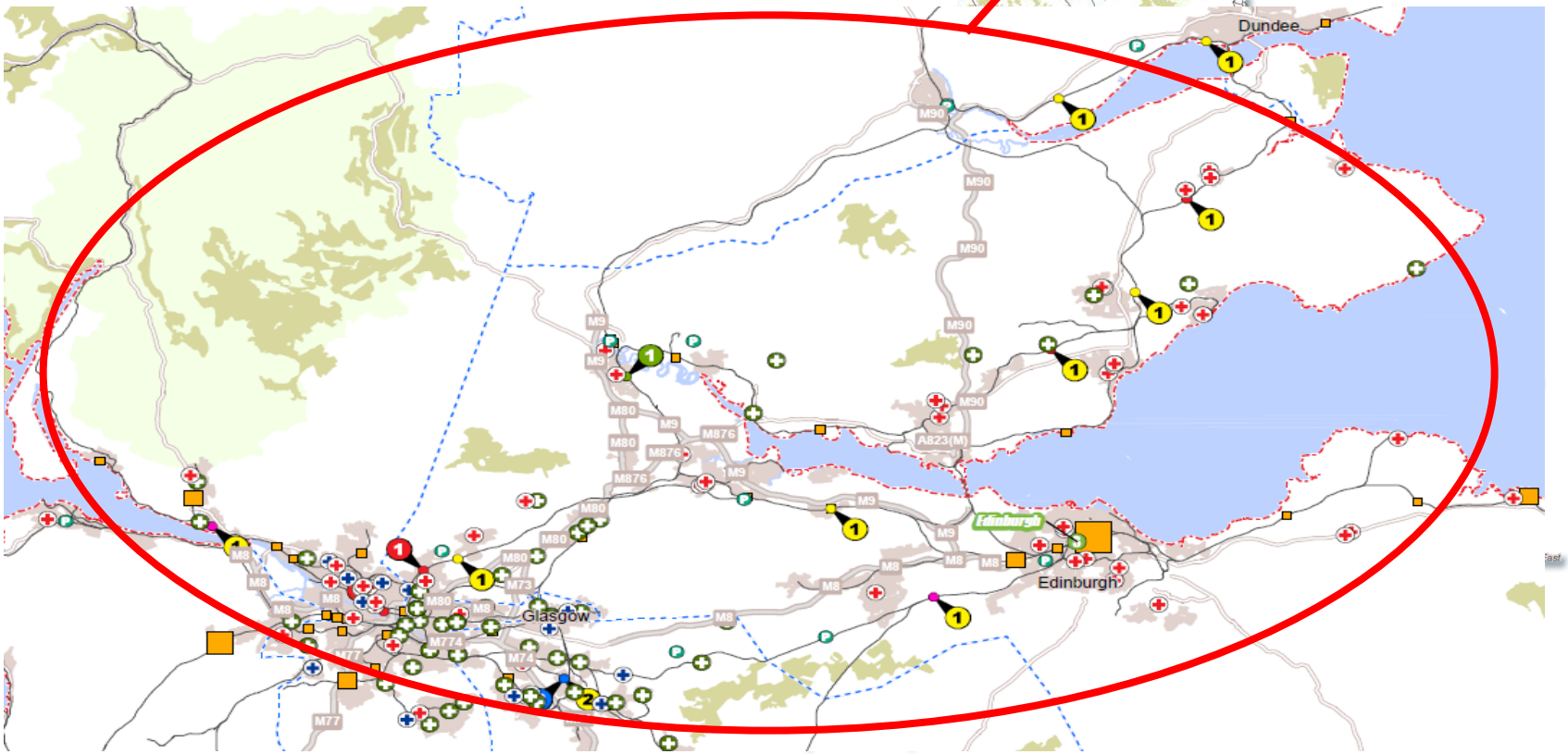
Media management





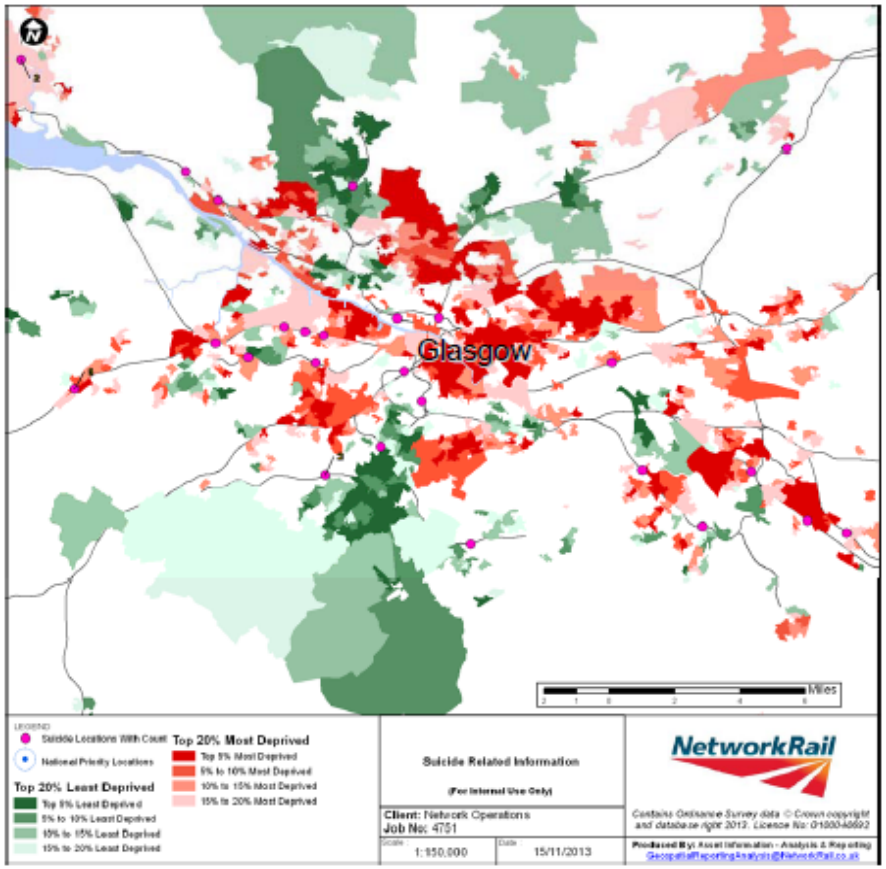
The cornerstones of the programme

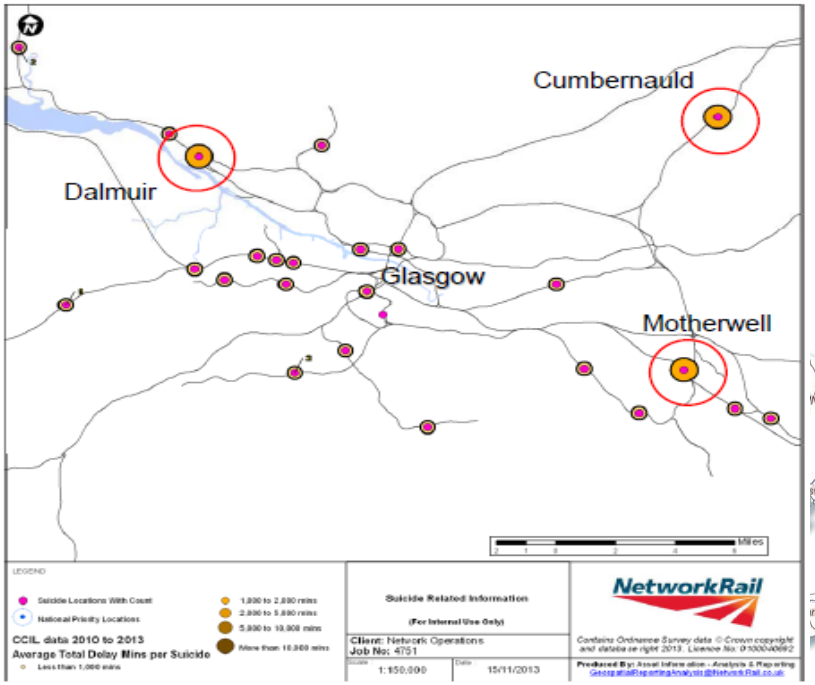
Hotspot identification

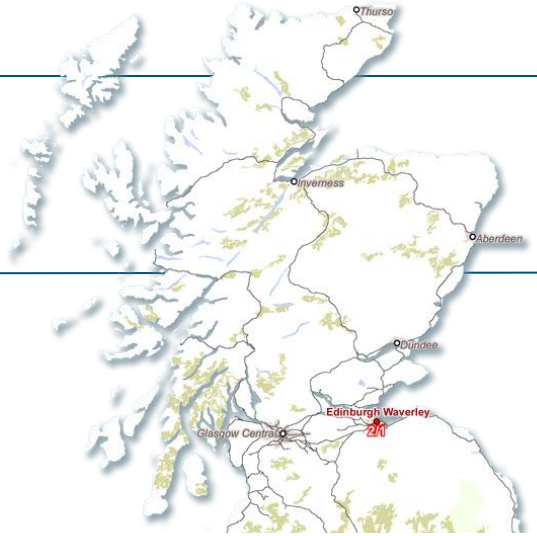


The cornerstones of the programme

Social deprivation mapping







Taking ownership of suicide on our railway

The cornerstones of the programme

Deploying engineering solutions
Platform end barriers

Deploying engineering solutions
Mid platform fencing

Furthering the programme

Smart camera technology

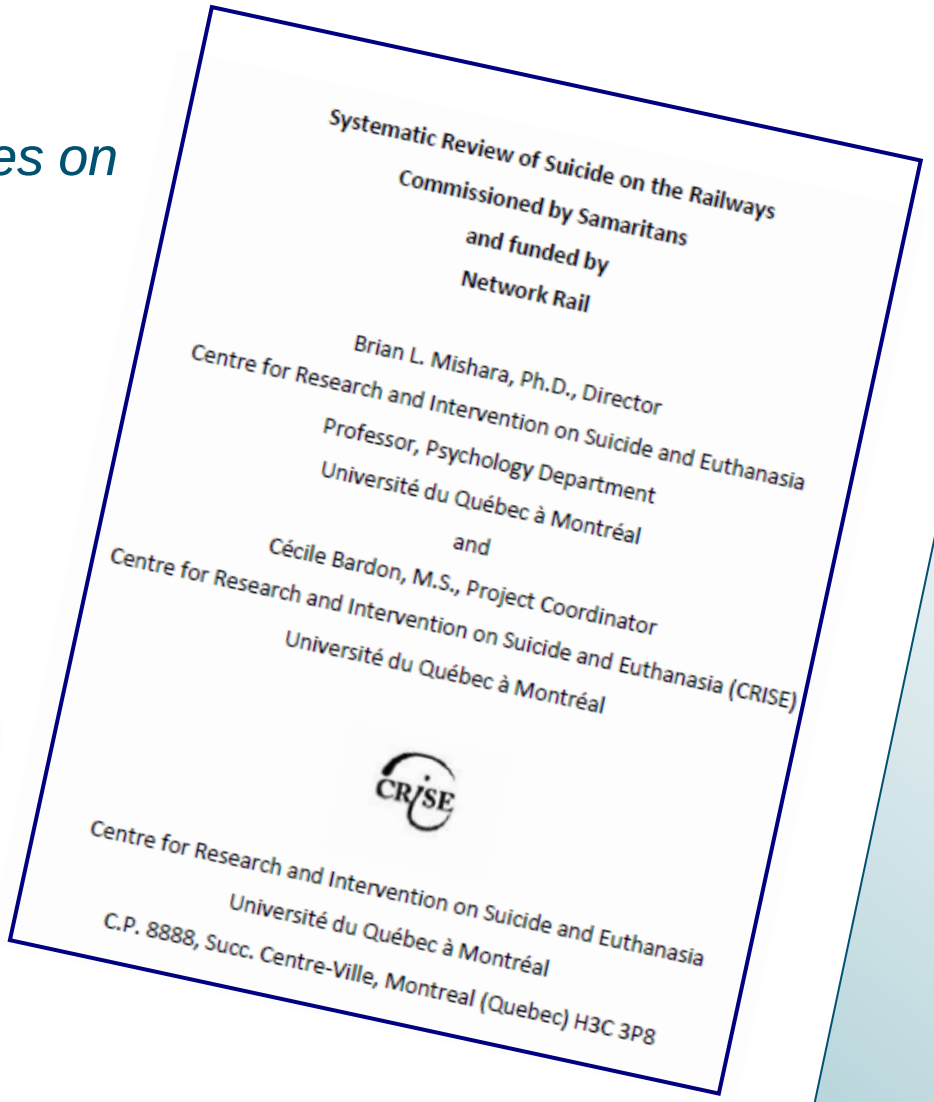
Emerging initiatives

Research

"Why do people take their lives on the railway?"

MANCHESTER 1824
The University of Manchester

UNIVERSITY OF STIRLING



Systematic Review of Suicide on the Railways
Commissioned by Samaritans
and funded by
Network Rail

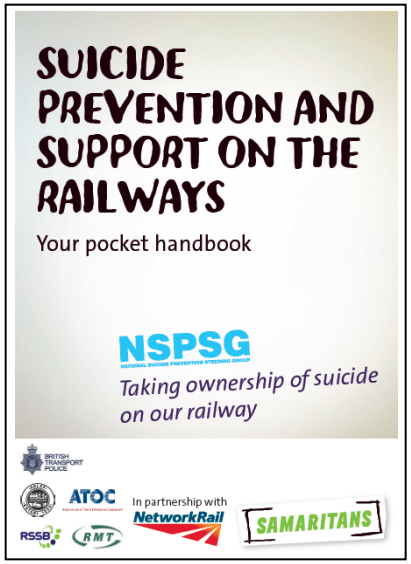
Brian L. Mishara, Ph.D., Director
Centre for Research and Intervention on Suicide and Euthanasia
Professor, Psychology Department
Université du Québec à Montréal
and
Cécile Bardon, M.S., Project Coordinator
Centre for Research and Intervention on Suicide and Euthanasia (CRISE)
Université du Québec à Montréal

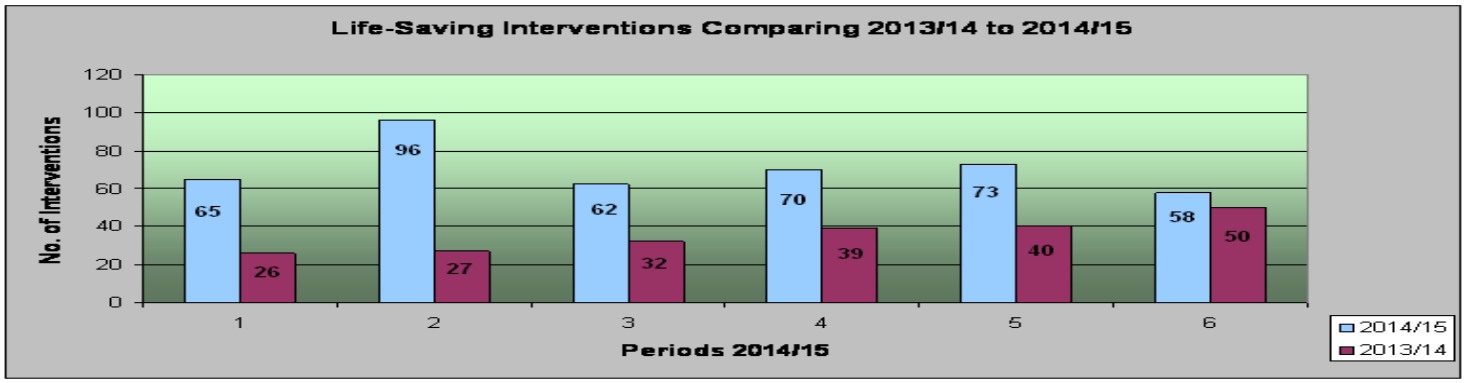
CRISE

Centre for Research and Intervention on Suicide and Euthanasia
Université du Québec à Montréal
C.P. 8888, Succ. Centre-Ville, Montreal (Quebec) H3C 3P8

Emerging initiatives

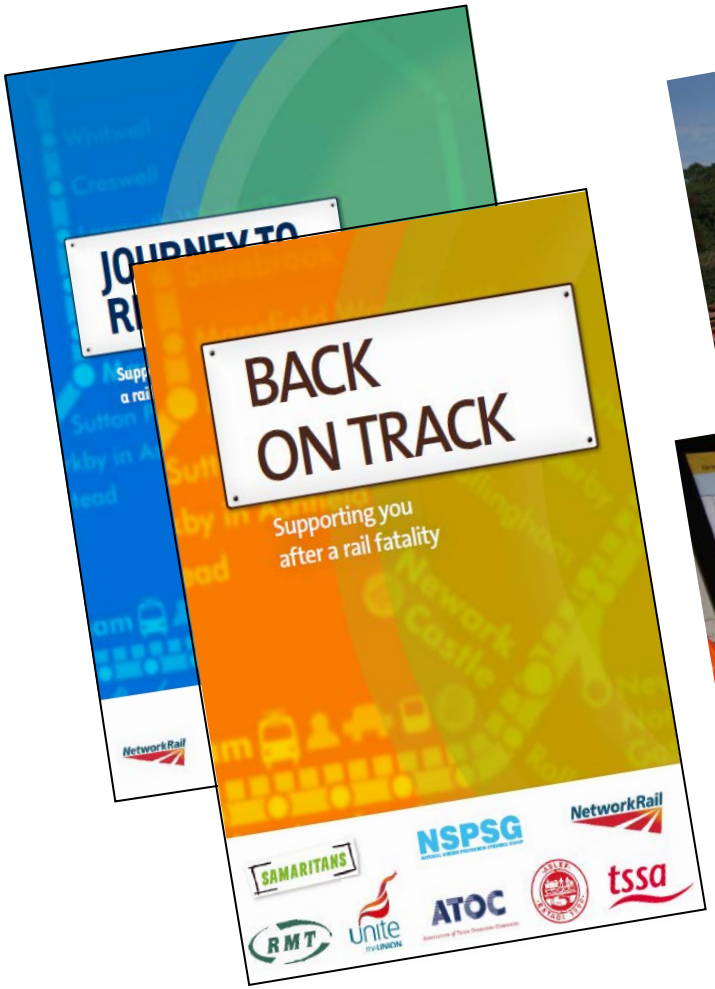
Interventions





Emerging initiatives

Working with rail colleagues



Emerging initiatives

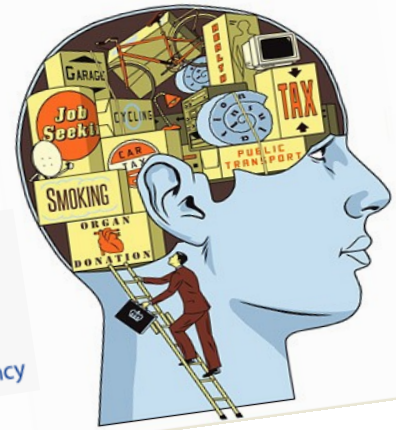
Working with health agencies

Public Health England

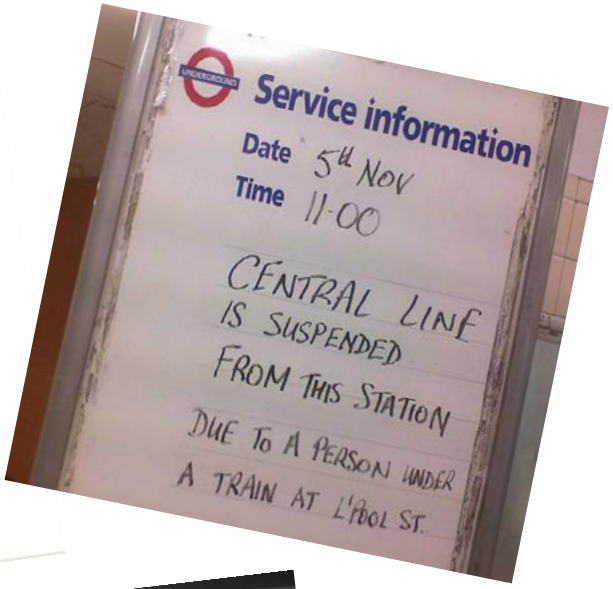
New approaches

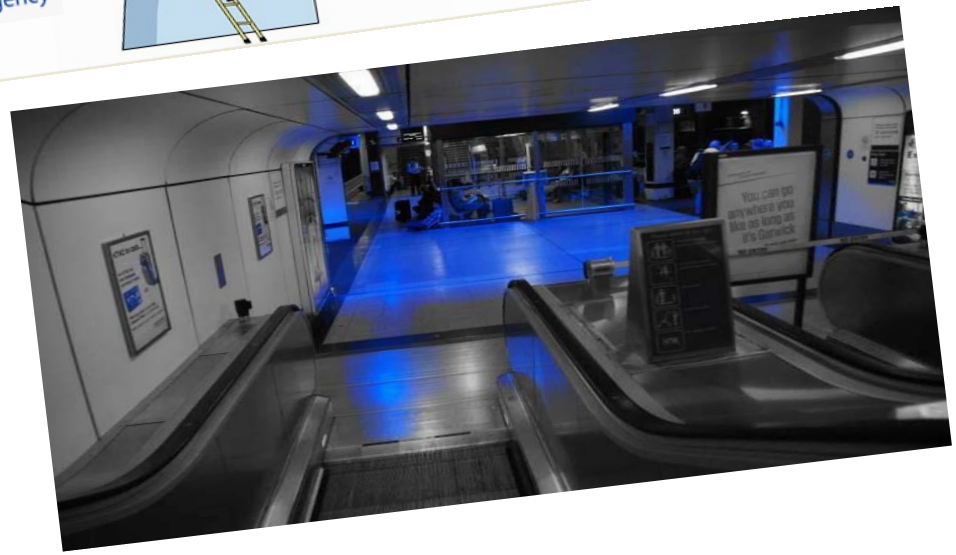
Inside the Coalition's controversial 'Nudge Unit'

Deep inside Whitehall, psychologists are finding ways to make you insulate your loft, pay your taxes, and even quit smoking. Is the Coalition's controversial 'Nudge Unit' finally paying off?



European Railway Agency





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Level Crossings: Update to RIHSAC

John Gillespie

13 October 2014

Purpose…update on

- Policy framework developments since October 2013
  - Transport Select Committee
  - ORR strategy
    - Chapter 4
    - Guide on “no new crossings except in exceptional circumstances”
  - Law Commission proposals
- Activities to support our strategy.

Our message to RIHSAC in Oct 2013 remains…

The reality is that people need to cross the railway….

….with….

- More trains running faster
- More road traffic
- Bigger farm machinery crossing more often
- More pedestrians with modern behaviour living with a faster pace of life.

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Our evidence to the Transport Select Committee…

- Network Rail's performance
- They're getting better and there's room for more improvement.
- Welcome that:
  - they've got more LX managers
  - They've closed crossings (we spurred that change in their approach)
- Need to improve on:
  - Risk assessment;
  - Involve all parties, TOCs, users etc & **really** consider closure and alternative ways of getting people across the railway.

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Summary

- We expect the rail industry to achieve:
  - Effective, collaborative risk assessments
  - Focus first on closure possibilities
  - Innovation in controls
- …leading to reduced risk, and reduced harm…
- …and a better performing network, with fewer delays caused by level crossing collisions or near hits.

Transport Select Committee Report (March 14) and the Government Response (May 14)….

- On House of Commons website
  - http://www.publications.parliament.uk/pa/cm201314/cmselect/cmtran/680/68003.htm
- Summary:
  - **Explicit target of zero**: May conflict with HSW Act/ sfairp
  - **NR to be more transparent**: Publication of LXs & annual programme of risk reduction
  - **Greater ORR oversight**: More focus, dedicated team.

Transport Select Committee Report and the Government response….

- **Agreed by NR:**
  - NR to continue to use level crossing managers
  - NR to consider disabled when installing footbridges or underpasses
  - NR to publish full narrative risk assessments
  - To treat bereaved families respectfully & apologise for past behaviour
  - Support whistle-blowing systems (“Speakout” and CIRAS)
- **To be examined as part of Law Commission’s proposals:**
  - Improve closure processes
  - Cooperation between railway and road authorities and others.
  - Impact on heritage railways

Transport Select Committee Report and the Government Response…

- **ORR oversight**:
  - Insufficient challenge at time of upgrade to Moreton-on-Lugg?
  - Are there enough appropriately qualified and experienced staff, especially signalling engineers?
  - Are Human factors issues reflected in guidance and research?
- **Road users**:
  - Highway Code & signs regulations
  - Hazard perception test for motorists to include LX.
  - Pedestrian education (schools).

Transport Select Committee Report and the Government Response…

- **Other issues**:
  - Senior accountability in Network Rail
  - Coroner's procedures being too adversarial
  - RAIB to publish its rationale when it decides not to conduct an accident investigation
  - "McKenzie Friend" for bereaved at Coroner's inquests?
  - Common language…avoid the term "misuse".

Purpose…update on

- Policy framework developments since October 2013
  - Transport Select Committee
  - ORR strategy
    - Chapter 4
    - Guide on “no new crossings except in exceptional circumstances”
  - Law Commission proposals
- Activities to support our strategy.

Understanding level crossings….

- Visit arranged to level crossings in Merseyside by ORR attended by:
  - Chief Inspector Ian Prosser
  - Louise Elman MP (Transport Select Committee Chair)
  - Tina Hughes (Level Crossing advisor to Network Rail's Chief Executive).

  30 June 2014

  Discussion of Select Committee issues and ORR strategy

As the National Safety Authority our strategy for level crossings is to:

- **ensure better, effective risk assessment by crossing operators by:**
  - competent people undertaking risk assessments;
  - parties effectively collaborating to consider risks and controls;
  - risk management plans are produced for each crossing;
  - the risks and controls associated with crossings are fully understood;
  - behaviour of users and their perception of risk is influenced to reduce the occurrences of incidents and near misses;

As the National Safety Authority our strategy for level crossings is to:

- support the closure and removal of crossings, with all risk assessments considering closure first
- only consider the creation of new level crossings in very exceptional circumstances
  - New guidance to Inspectors about to be published
- encourage innovation and new technologies in
  - bridging and underpasses;
  - level crossing design and fitment;
  - specific controls at each crossing – moving away from one-size-fits-all “types” of crossing

As the National Safety Authority our strategy for level crossings is to:

- oversee Network Rail's ring-fenced spend to reduce level crossing risk in the next 5 years by 25%; and
- implement the Law Commission improvements to the law on level crossings.
  - Discussions with DfT have been ongoing
  - Ministerial Statement in House of Lords today.

Example of activities to support our strategy

- Encouraging **joint risk assessments** through education of other employers who use crossings
- Cannock Chase: Full Sized, working level crossing. Available for use.

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User Worked Crossings

- Looks innocuous
- Minimal safety equipment gives a message it can't be that dangerous

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User Worked Crossings – the true risk profile

However….

- 19% of all fatalities at all level crossings over a 10 year period were at User Worked Crossings
- 34% of all collisions between trains and vehicles over a 10 year period were at User Worked Crossings
- 53% of all near misses at all level crossings over a 10 year period were at User Worked Crossings

<u>These crossings have a fraction of the use of all the others but look at the relative incident rates</u>

Common User Errors – Telephone UWCs

What's the first step?

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Common User Errors –Miniature Stop Lights UWCs

Fatal Error 2. Treating Miniature Stop Lights as Advisory

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Common User Issue – Inadequate Sighting for Your Purposes

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Keeping Yourself Safe

- On the approach, Mental Ping – recognise this is an activity that requires your full attention
- Focus "Situational Awareness"
- Identify "What Type of Crossing is This?"
- Telephone
- Miniature Stop Lights
- Sighting

Keeping Yourself Safe

- Don’t assume you know what is required
- Consciously read all the words of the sign until you are sure you understand what is required of you. Don’t rush this part
- Be aware of any clues that something isn’t right – if in doubt don’t proceed, consult your employer
- At Telephone or Miniature Stop Light crossings beware of the temptation to cross just by looking for trains – you don’t have enough warning time by sight

Don’t Let This Happen to You

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Summary …update given on…

- Policy framework developments since October 2013
  - Transport Select Committee
  - ORR strategy
    - Chapter 4
    - Guide on “no new crossings except in exceptional circumstances”
  - Law Commission proposals
- Example activity to support our strategy.
  - Cannock Chase facility available & messages to other employers

Platform Train Interface: Developing the National Strategy

Helen Costello, Programme Manager

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Emma Pickard, Senior Sponsor

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Why?

High profile PTI incidents such as James Street, Oct 2011 and the recommendation from the RAIB investigation that a cross-industry response should be co-ordinated and ensuring a **risk based approach** to proposed controls

Pressures on increasing **capacity**, **performance** and **accessibility** across the network

48% of passenger fatality risk occurs at the PTI and **21% of overall passenger FWI risk**

There has been an **increase** in amount of harm while boarding or alighting since 2007/08, even when accounting for the generally increasing trend in passenger journeys

In the last decade Britain has been **Europe's fastest growing railway** with passenger numbers up by 50% and this is expected to grow, meaning even more journeys across the PTI

PTI Strategy objectives & industry engagement

- Reflect the wide range of safety, performance and engineering issues surrounding the PTI
- Maintain network capacity for mixed traffic operation
- Account for both the immediate (1 yr), short (CP5), medium (CP6 & CP7), and long term (CP8 and beyond) needs of the industry
- Define the research, where appropriate, needed to develop and deliver the strategy
- Obtain industry buy-in for the implementation of the strategy. To date we have taken the following approach:

Engaged front line station teams including safety champions through a series of trials and workshops

Engaged senior representatives from across industry including TOC and FOC colleagues

Currently engaging with regulators and policy makers

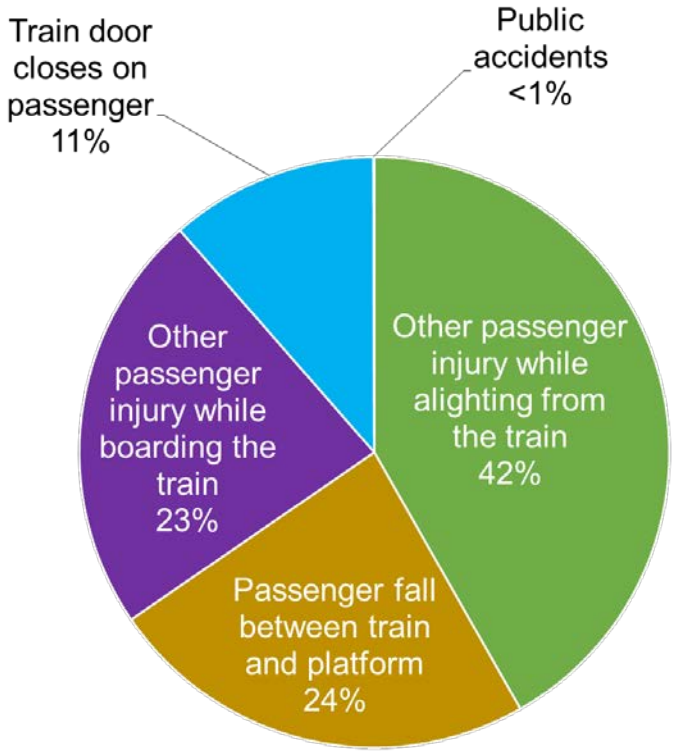
Key Risk Area – The Platform-Train Interface

PTI risk due to boarding/alighting

6.67 FWI per year

Public: <0.01 FWI per year

Passenger: 6.67 FWI per year

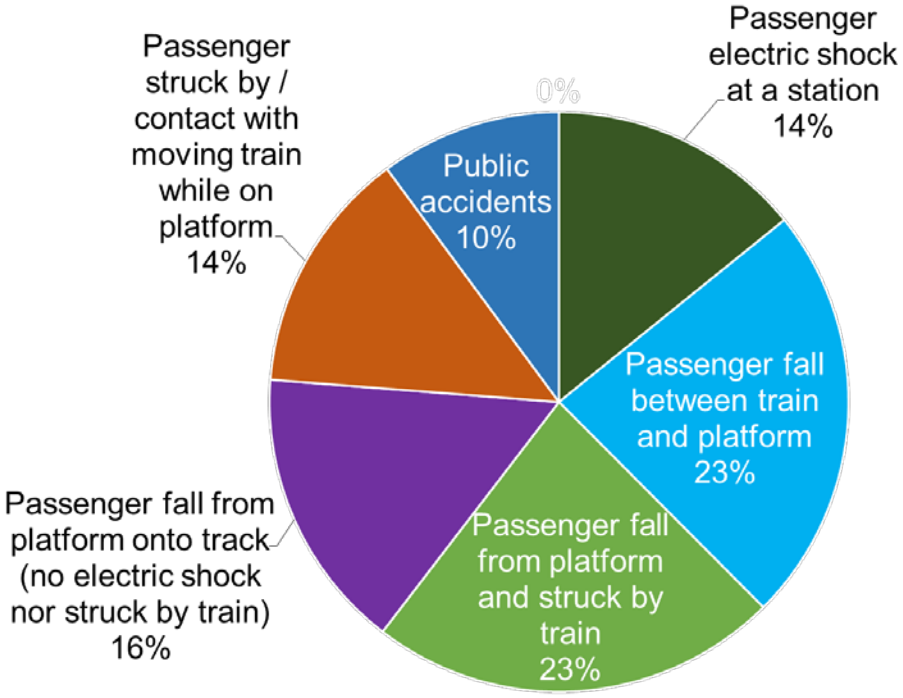


PTI risk <u>not</u> due to boarding/alighting

6.09 FWI per year

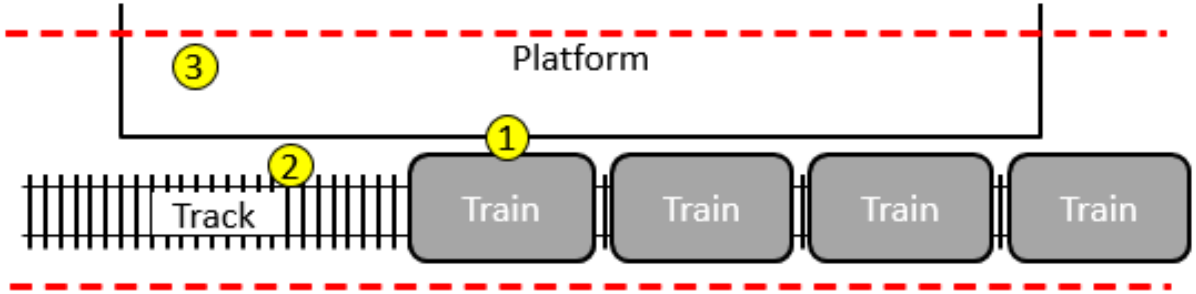
Public: 0.62 FWI per year

Passenger: 5.48 FWI per year



Source: SRM v8

Events in Scope



Area of platform-train corridor	Type of event
1	Person trapped in train doors
	Contact with train exterior while on platform
	Person falling between train and platform
	Slip, trip or fall across the platform-train interface
2	Fall from platform onto track
3	Wheeled transport rolling off platform (crossfall)

Note: influencing factors, such as rushing, that occur before a passenger reaches the platform will be considered. Also mitigations may be wider than the delineation on the platform

.

Ease of boarding and alighting for persons with reduced mobility will also be considered within the strategy.

Our Approach - How

Assumptions held about causes of PTI accidents collated

Collated assumptions were converted in hypotheses

Hypotheses were tested using a combination of qualitative and quantitative data….

A risk based approach was taken to the creation of the strategy

Our Approach - Methodology

PTI special topic report & SMIS narrative analysis	• detailed evidence on the size and scale of the problem, alongside causal issues
Operations, Engineering and Human Factors workshops, utilising industry expertise	• identifying contributing factors to PTI risk
Human Factors supplier undertook observations at the PTI, held focus groups and an online survey	• understand how passengers interact with the environment and perceive risk
Additional post-accident reporting	• build up a greater understanding of causal factors and make recommendations for changes to future SMIS PTI reporting
PTI Risk Tool	• transparency and understanding of PTI risk across the network
Investigate the implications for gauge clearance and the step-gap of different target platform heights	• recommendations on future platform height(s), train footstep positions and optimised step-gap. Propose implementation / transition plan for existing platforms and rolling stock fleets
Human Factors literature review	• evidence from published literature regarding methods to influence passenger behaviour, summarise the methods and draw conclusions

Key themes for the strategy

- Key themes emerged during the data analysis and hypotheses development work that make up the core structure of the strategy:
  - Passenger movement through the station and across the PTI
  - Train stopping positions, dispatch, monitoring the dispatch corridor and stopping once dispatched
  - Platform Train Interface Engineering
  - Accessibility

Workstream 1: Passenger movement through the station and across the PTI

- Our approach and findings
  - Identified pre-cursors that exacerbate the chance of an accident occurring
  - Undertaken detailed mitigation comparison and analysis of effectiveness against the risk
- Next steps
  - Provide recommendations for consistency across the network
  - Provide guidance to our workforce around managing vulnerable people and conclude the industry approach to manager passengers who are **intoxicated**
    - Embed the guidance already available through the RSSB
    - Develop understanding and how we embed this into future station design
    - Work closely with other agencies and policy makers to co-ordinate activities and approaches
  - Management of disruption and crowd management plans

Example of mitigations comparison against behaviours and contributing factors to PTI risk.

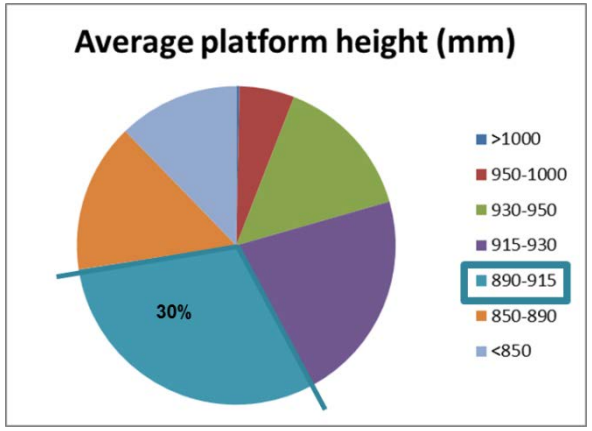
		Mitigations			
Behaviour		Info on risks	Safety announcements	Staff on platforms	Service info
	Dangerously close to platform edge	✓	✓	✓	
	Running / rushing	✓	✓	✓	✓
	Crowding on platform			✓	
	Leaning over platform edge		✓	✓	✓

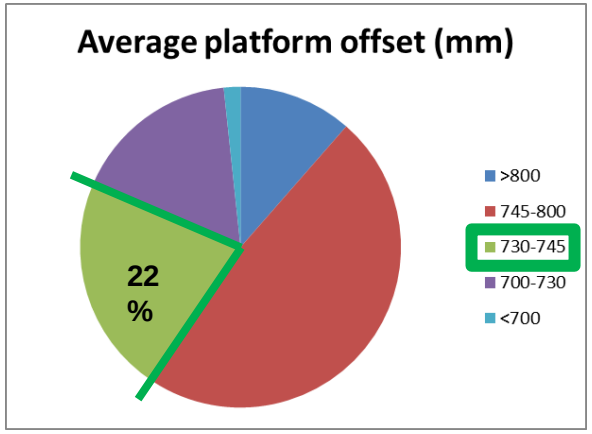
Workstream 2: Train stopping positions, dispatch, monitoring the dispatch corridor and stopping once dispatched

- Our approach and findings
  - Inconsistencies in the management of platforms
  - Identified pre-cursors that exacerbate the chance of an accident occurring
- Next steps
  - Identify technological solutions to stop trains where there is a platform train interface risk and support safe and efficient train dispatch and monitoring.
  - Optimisation of Hustle Alarms supporting safe and timely boarding and alighting.
  - Advancements and standardisation, where possible, of stop boards, train door position markings, location of waiting shelters and signage.
  - Optimisation of the use of CIS screens and train boarding displays
  - Research project underway for the use of DOO monitors
  - Develop project to rollout GSMR capability allowing us to stop a train after it has been dispatched
  - Support the development of future station design specifications

Workstream 3: PTI Engineering

- Current target platform height 915mm (730mm lateral)
  - Wide range of actual positions for historical reasons
  - Some projects seeking higher platform heights
- Go anywhere trains have high steps and large gaps
  - Small number of ‘high & tight’ platforms control step position and stepping distance
- Next steps
  - Understand the optimum stepping arrangement and impact on future station design
  - Define target platform positions(s)
  - Define target footstep / door position(s)
  - Share good practice and identify emerging technologies





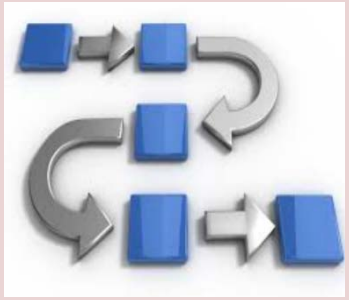
Workstream 4: Accessibility

- Our approach and findings
  - Identified hazardous events affecting accessibility and contributing to PTI risk
  - Identifying the performance and service impact of accessibility factors
- Next steps
  - Improving passenger communication about accessibility at different stations to allow passengers to make informed choices
  - Supporting station staff to assist Passengers of Reduced Mobility (in particular encumbered travellers, wheelchair passengers and visually impaired passengers)
  - Ensuring existing good practice in managing wheelchair passengers is implemented by all rail companies, as far as is reasonably practicable
  - Developing guidance for the use of tactile paving across the network
  - Longer term this is about identifying modifications to trains and stations and updating standards and guidance informed by the outputs of the ‘Step/Gap’ work
  - Provide Guidance to our workforce around managing vulnerable people

Products of the strategy

Main output: A cross-industry strategy published in January 2015 supported by:

Action plan



Technical report

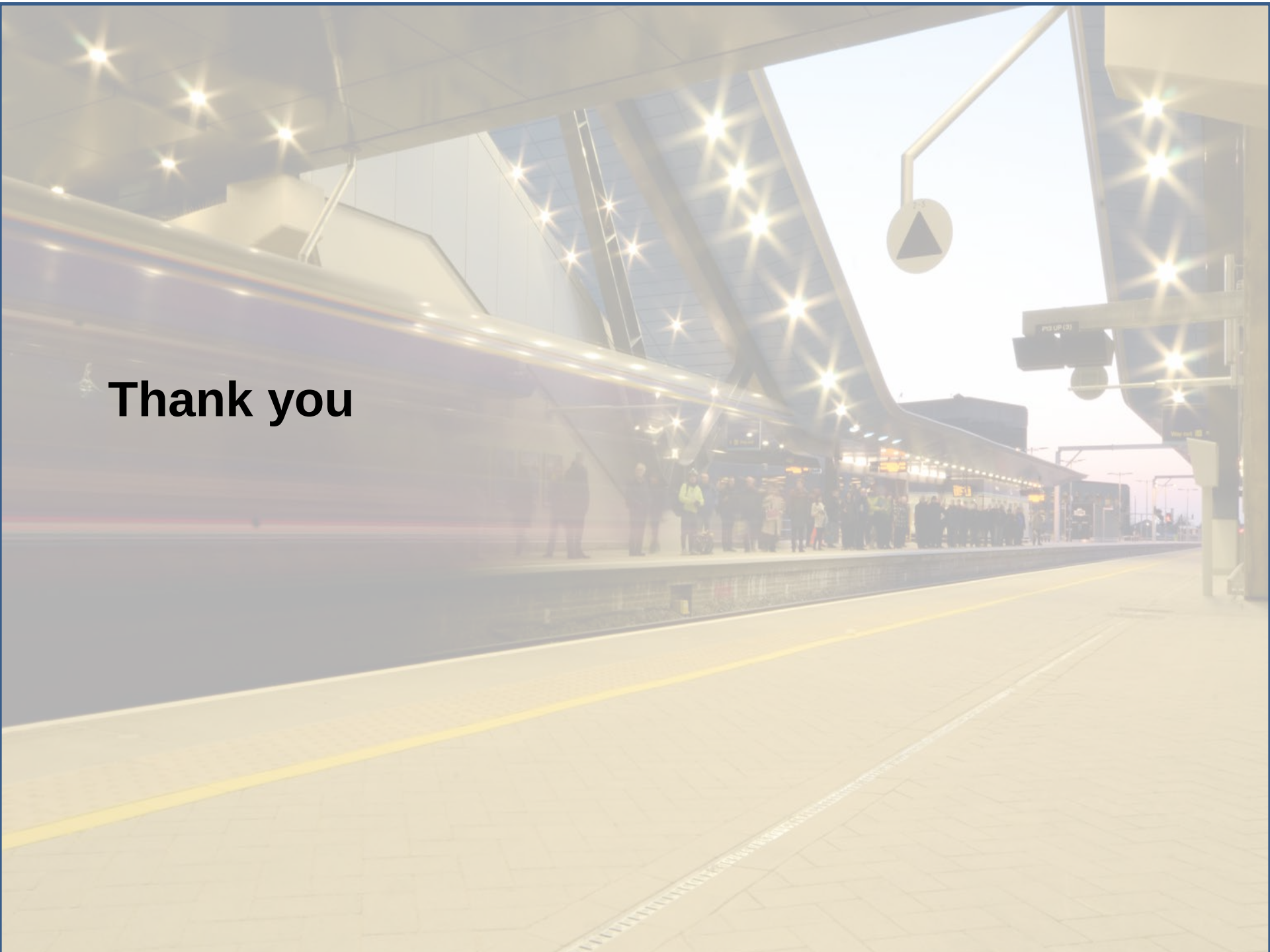
Opsweb

Area on Opsweb dedicated to sharing good practice

A media campaign aimed at passengers and public

Related operational outputs (first phase):

- Matrix of tested controls that are appropriate to managing your company's risk
- Staff awareness on PTI contributors, including spotting vulnerable passengers
- Advice on creating consistency across the network, eg yellow lines



Thank you

Feedback on ORR's train protection Regulations Consultation.

John Gillespie

RIHSAC October 2014

Cover….

- Content of the consultation
- Results of the consultation
- One decision we are minded to make as a result (others will follow)
- Next steps.

Content of the Consultation

- The proposed new Regulations retain and update three provisions that are important to the control of risk on the railway:
  - (a) use of a train protection system;
  - (b) use of Mark 1 rolling stock; and
  - (c) means of communication.

Content of the Consultation…proposed removal of

- Miscellaneous Provisions Regulation 1997 requirements:
  - the prevention of unauthorised access to the railway infrastructure (for example by means of lineside fencing);
  - the prevention of collisions and derailments (for example by means of adequate signalling systems);
  - the provision of adequate braking systems; and
  - the prevention of accidents to staff (for example trackside workers) from moving vehicles.

Some of the provisions updated earlier lessons

The **Armagh disaster**
12 June 1889 .
80 people were killed and 260 injured, about a third of them children.

Outcome – inquiry and

Legislation and the requirement for the **“continuous and automatic brake”.**

i.e. a failsafe brakes-on system – the same approach we have today

OFFICE OF RAIL REGULATION

…modern-day context…

- European interoperability
  - TSIs.
  - Safety Directive
- Train protection:
  - TPWS has been fitted…main challenge now is to maintain it.
  - The ATP already fitted in GB is ageing;
  - ERTMS fitment underway.
- More traffic
- Still farm animals that stray (1984 last fatal collision)

Results of the Consultation …

- Range of responses….
  - Make no change (as the changes are politically driven) through to ORR can go further with its proposals and remove those Regs which are not needed that rely on any requirements being incorporated into RGS or which are covered by TSI's.
  - Coordinated responses on the theme. …removing all standalone regulation for the mainline railway as these can be included in RGS and ROGS and adopting a risk-based approach. Separate regulations for the non mainline railways that fall outside the safety directive can be retained.

Results of the Consultation…

- Some concerned about potential over-reliance on the use of SMS.
  - Although now mandatory, they are still variable in quality and usage across the industry.
- Industry support (including heritage) for proposed removal of Miscellaneous Provisions Requirements
  - Concern from landowners/agricultural sector about removal of fencing requirement (prevention of unauthorised access)
  - NR wish to retain the prevention of collisions and derailments

Results of the Consultation…

- The proposal to retain a means of communication:
  - Some support and some reject
- The proposal to retain and mandate the use of a train protection system.
  - TOCs (broadly) & RSSB No
  - NR and others Yes
- Train protection management system.
  - Practical worries.
  - Metrication of speeds: why bother?

Results of the Consultation…

- Mark 1 rolling stock prohibition
  - Some accept, some reject.
  - Retention of Reg is "useful rather than essential"….
- Hinged door stock prohibition
  - Some support for this.
- Enforcement flexibility (between us and HSE)
  - Ambivalent…but avoid costs from fee for intervention.

Next steps…

- Thinking…..
  - Lots
- Decisions….
  - Proposals to Ministers via ORR Board.
- One issue so far moving toward a decision
  - Prevention of unauthorised access
  - Retain provision akin to current requirement.

Miscellaneous Provisions Regulations, Reg 3

(1) So far as is reasonably practicable, a person in control of any infrastructure of a transport system to which this regulation applies shall ensure, where and to the extent necessary for safety, that unauthorised access to that infrastructure is prevented.

(2) In paragraph (1) “access” means access by any person not at work on the transport system or by any animal.

(3) This regulation applies to any transport system except that it does not apply to any part of such a system which—

- (a)is within a harbour, harbour area, maintenance or goods depot; or
- (b)is part of a factory, mine or quarry,

where access to the harbour, harbour area, maintenance or goods depot, factory, mine or quarry is adequately controlled