

# *Accident investigations: developments and roles*

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OFFICE OF RAIL REGULATION

# *Overview*

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- Role of safety authorities (“National Safety Authorities”) in the European Union (EU)
- Role of independent investigation bodies (“National Investigation Bodies”) in the EU
- Co-operation and liaison
- Some practicalities
- Issues and ideas
- Conclusions

## *Role of safety authorities (NSAs)*

- Authorising bringing into service of interoperable sub-system
- Supervising that interoperable constituents meet certain essential requirements
- Issuing safety certificates and authorisations, and checking that railway undertakings “are operating under the requirements of Community or national law”
- Monitoring, promoting and, where appropriate, enforcing and developing the safety regulatory framework
- Supervising that rolling stock is registered and that safety related information is up to date  
(EU Directive 2004/49/EC, Article 16)

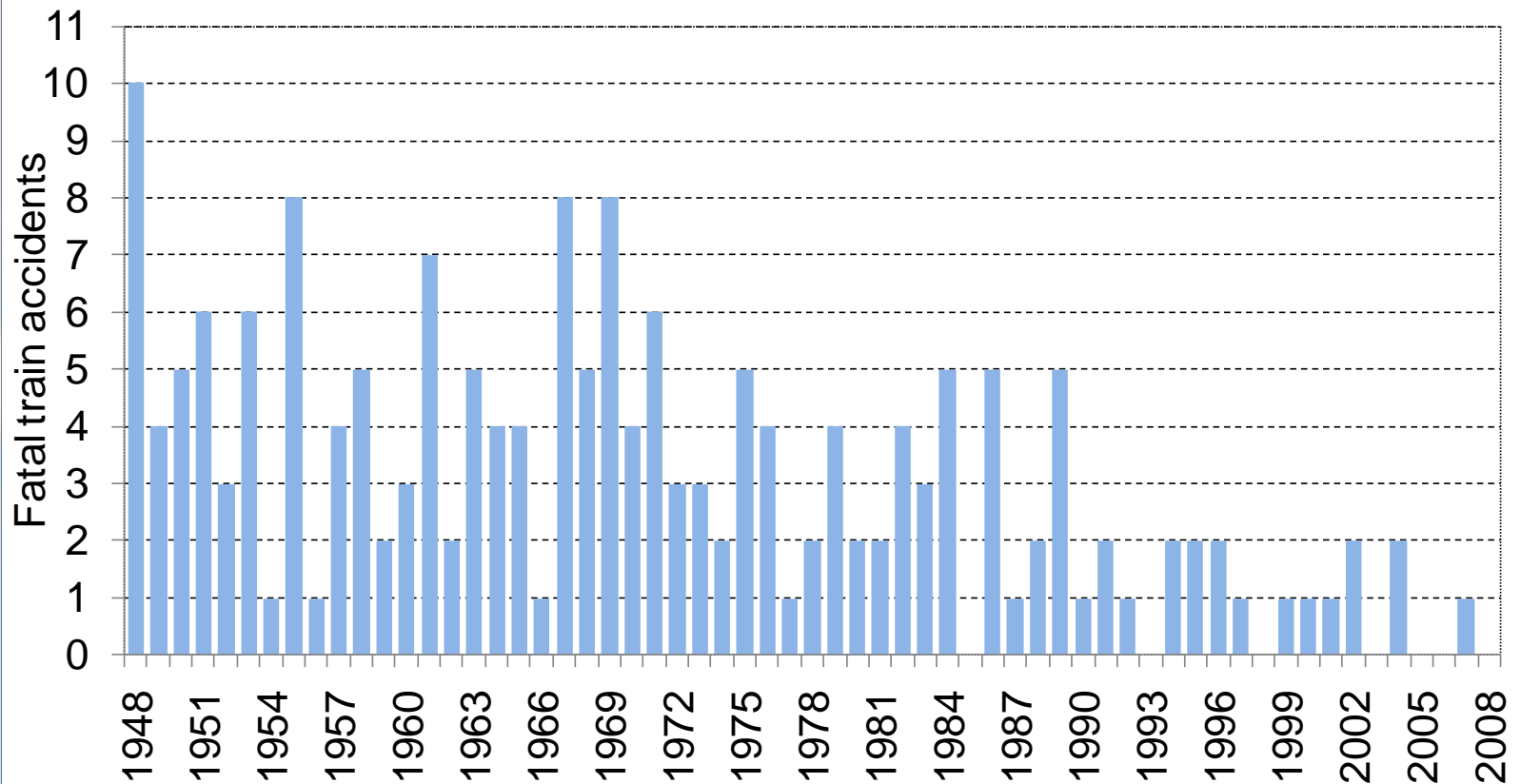
## *Role of investigation bodies (NIBs)*

- To investigate serious accidents\* on the railway system, “the objective of which is the improvement of railway safety and the prevention of accidents”
- To investigate, at its discretion, those accidents and incidents which may under slightly different conditions might have led to serious accidents

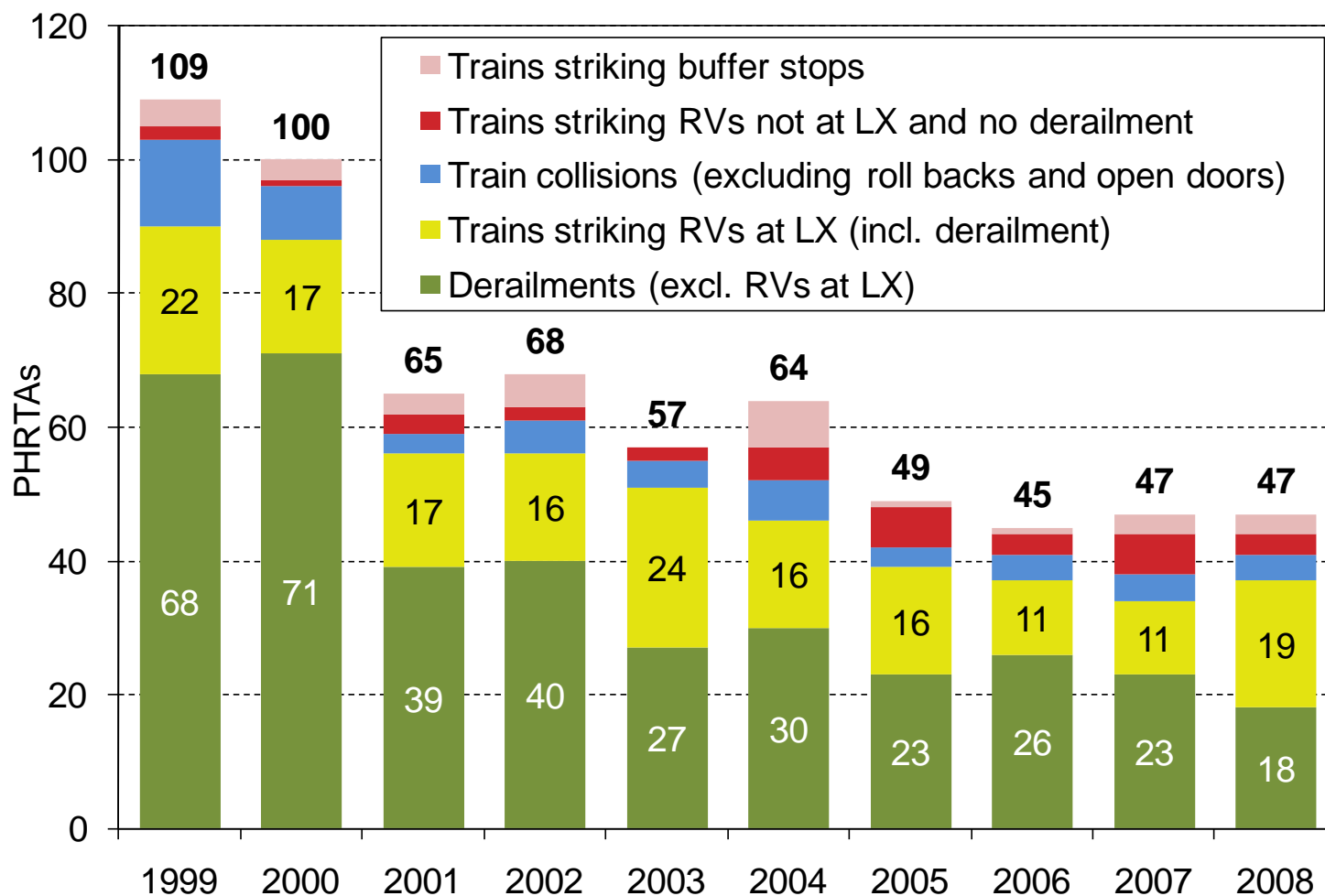
\* “Serious accident” means any train collision or derailment of trains resulting in the death of at least one person or serious injuries to 5 or more persons or extensive damage (more than €2 million) to rolling stock, the infrastructure or the environment

(EU Directive 2004/49/EC, Article 17)

# Train accidents with passenger or workforce fatalities (Great Britain)



## *Potentially higher risk train accidents (Great Britain)*



## *The roles of NSAs and NIBs*

- The NIB must be independent of the industry and the NSA
- The NIB's investigation must be independent of any judicial inquiry
- The NIB's report should be made public in the shortest possible time, normally within a year
- Any recommendations by the NIB must be addressed to the NSA, and the NSA must take the necessary measures to ensure that recommendations are duly taken into consideration, and, where appropriate, acted upon
- The NIB's recommendations must not create a presumption of blame or liability for an accident or incident.

## *Co-operation and liaison*

- The UK's NIB (the Railway Accident Investigation Branch - RAIB) started operations in October 2005
- A formal agreement between all the organisations involved in railway accident investigations deals with
  - The roles of the organisations
  - Co-operation between the organisations
  - Managing the investigation
    - RAIB has the lead responsibility
    - Managing the accident site
    - Collecting and using evidence
  - Consultation between the NIB and NSA about emerging recommendations



# *ORR's approach as an NSA*

**We believe** that those who create risks are best placed to manage and control them. Railway undertakings should apply the lessons learnt from their own and the RAIB's accident investigations to better manage the risks created by their operations.

## **What we do**

- Review the RAIB's reports as we develop our strategies, plans and policies
- Consider, and where appropriate act, on recommendations directed to us by the RAIB
- Consider all the RAIB recommendations addressed to us as National Safety Authority and, where appropriate, ensure they are acted upon by railway undertakings
- Report back to the RAIB on the action taken by railway undertakings and ourselves in response to recommendations

## *Consultation*

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- When the RAIB circulates its draft reports a panel of our staff reviews the draft and responds, usually within 10 working days
- Occasionally we seek a meeting to discuss the draft
- The RAIB gives us feedback (when they have published their report) on their response to our input

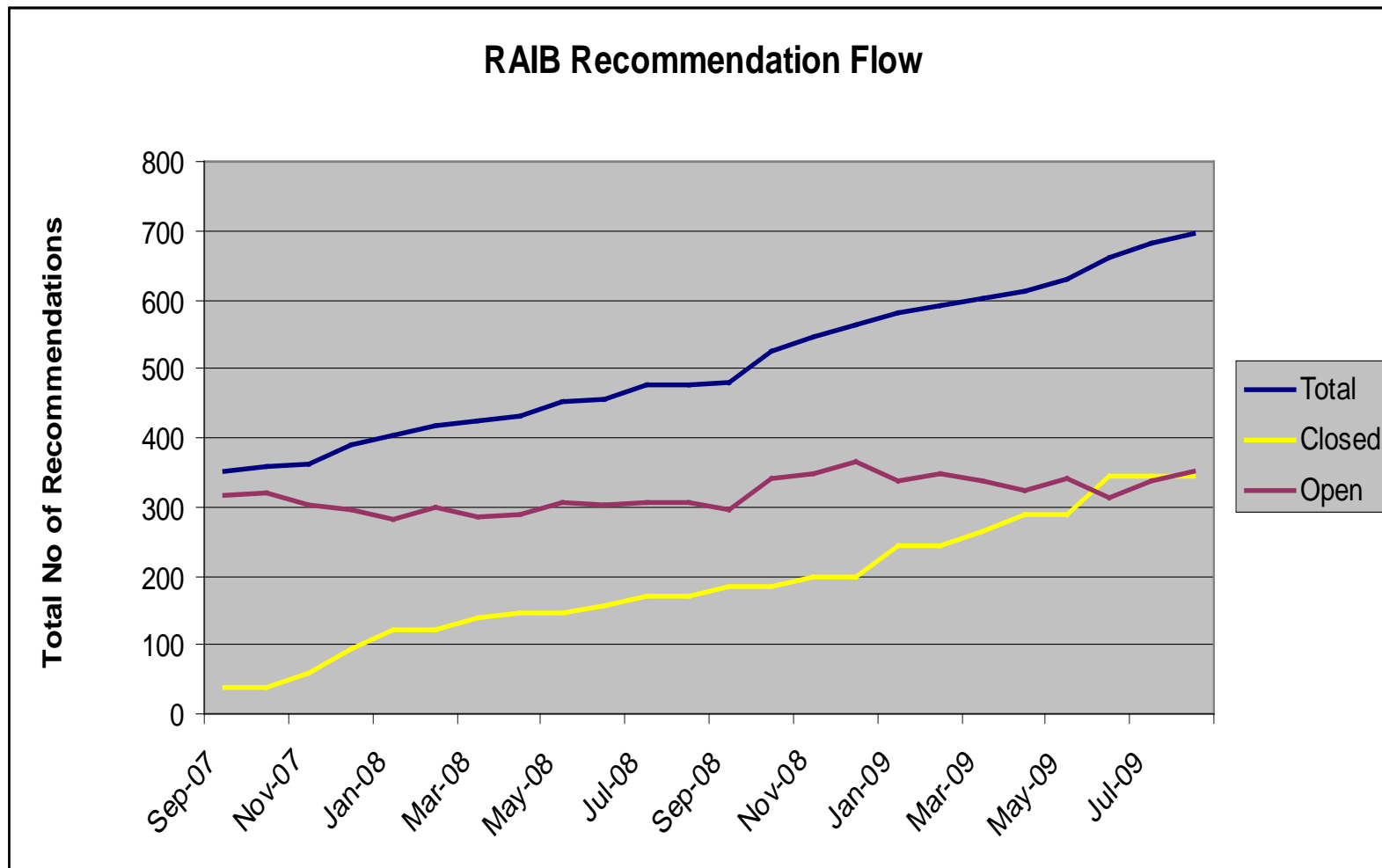
## *Recommendation handling by ORR*

- Every recommendation is assigned an “owner”
- A consultation panel considers the RAIB report and recommendations and decides:
  - whether to pass the recommendation on to railway undertakings (“duty-holders”) (we almost invariably do)
  - whether the RAIB has identified the right people/organisation(s) to act on their recommendation
- Our “recommendation handling team” (RHT) then formally asks duty-holders to consider, and where appropriate act, on the recommendations.

# *Assessing responses*

- Four possible responses from railway undertakings:
  - “We’ve done what the recommendation requires”
  - “We’re going to do what the recommendation requires”
  - “We’re not going to do what the recommendation requires, but we’re managing the identified risk in a different way”
  - “We’ve considered the recommendation but intend to take no action to implement it”
- For the first three:
  - We need to decide what, if any, validation work we will do to confirm that appropriate action has been taken
- For the fourth:
  - We consult the RAIB and then take a view on whether we are satisfied with the response

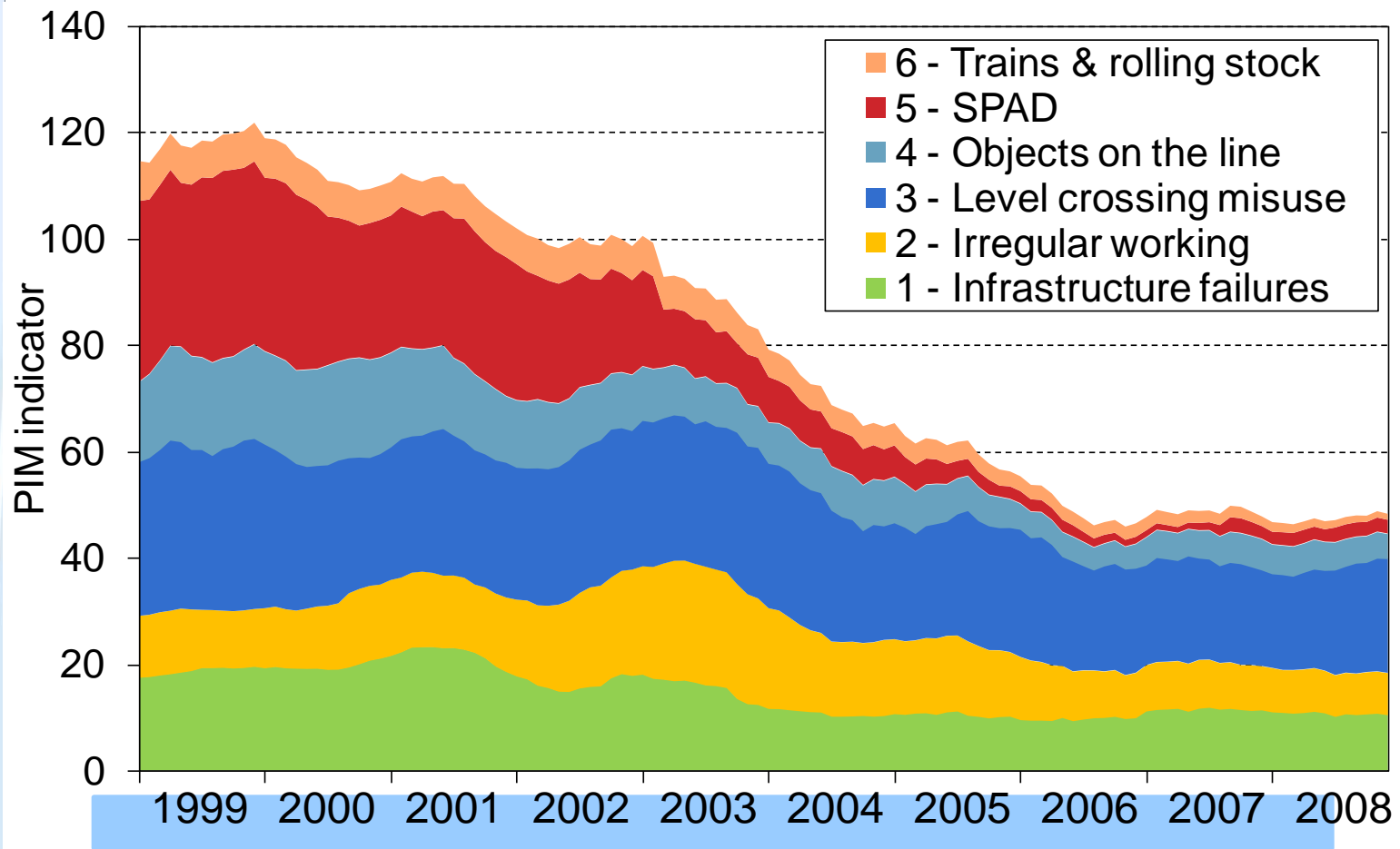
# *Progress with recommendations*



## *Issues and ideas*

- Can there be too many recommendations?
  - In GB we are dealing with 30 or more new investigation reports and over 150 new recommendations each year
  - Does the safety benefit reflect the resource cost?
- Should NSAs and NIBs share priorities?
  - Key safety issues for ORR include level crossing safety and signals passed without authority (SPADs)
  - Better understanding of the immediate and underlying causes of these incidents would help us

## *Train Accident Precursor Indicator Model (GB)*



## *Issues and ideas*

- Is “closing” recommendations appropriate?
  - Not required by the EU Directive, but is an industry tradition for recommendations arising from its own investigation, and from public inquiries
  - What does “closed” mean?
    - Recommendation implemented?
    - Risk addressed by the recommendation has been reduced/controlled sufficiently?
    - NSA not taking any further action?
  - Does “closing” recommendations give the right message?
    - Even when recommendations have been dealt with, the underlying safety issues may remain



## *Conclusions*

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- Independent rail accident investigations have the potential to help improve railway safety
- Where NIB resources allow, it would be helpful for additional investigations to focus on key risk areas
- NIBs and NSAs need to keep abreast of thinking on human factors and safety culture, and not focus entirely on technical or “rule-based” solutions
- NIBs and NSAs need to work together as they help drive further improvement in railway safety



*Thank you*

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