RM3 Governance Board Update

Presented by:
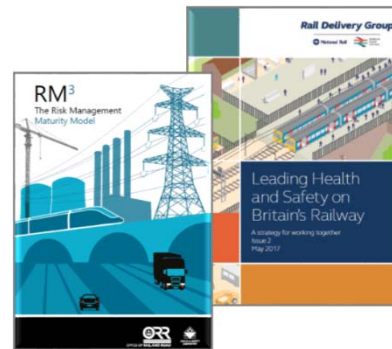
Tavid Dobson

Lead SMS Specialist - RSSB

29th May 2018

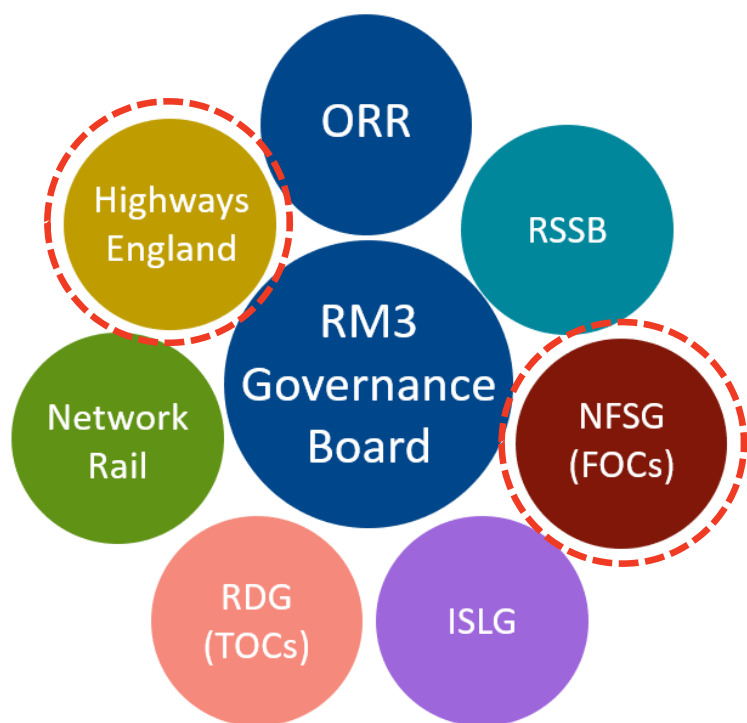# RM3 Governance Board Update
Content

RM3
Governance
Board
membership

RM3 Model
Review of
criteria

RM3 &
LHSBR

RM3 & RSSB

RM3 Governance Board membership

- ORR Partnership with HSL came to an end in Sep 2017
- RM3 Governance Board membership
  - ✓ Reflects and represents a wider selection of railway stakeholders
  - ✓ Beginning to work as a collaboration group
- Invitations to NFSG (FOC) and Highways England in progress

RM3 Model review of criteria

- SharePoint for group established
- RM3 Model criteria - programme in place
- RM3 topic sets – programme in development
  - ✓ No1- Occupational Health issued
  - ✓ Describes from actual findings what the various maturity levels look like
  - ✓ Assists with making judgements

RM3 Model review of criteria

- Proposals to:
  - ✓ Remove the Safety Culture element segment, as is reflected throughout model
  - ✓ Re-scope Control of Contractors to encompass supply chain management

- Include impact assessments for both:
  - ✓ ISO44001- Collaborative Business Relationship Management
  - ✓ ISO45001 – Occupational Health & Safety Management Systems

RM3 Model and LHSBR

Leading Health & Safety on Britain's Railway

The rail industry's collaborative approach to improving the health & safety:

- Health & Safety Leadership commitment
- 12 Risk Themes
- 9 Capability improvement areas
- National and rail sector collaborative health & safety leadership arrangements
- Adoption of the *'RSSB Taking Safe Decisions'* approach
- Supported by RSSB with sponsored research, publication and promotion of good practice and the provision of tools

RM3 Model and LHSBR

LHSBR - Health & Safety Leadership

'We recognise that, as industry leaders, we are responsible for the safe operation of our individual company undertakings, and for those affected by our undertakings. We have developed this strategy to identify specific areas in which targeted initiatives can deliver further benefits.'
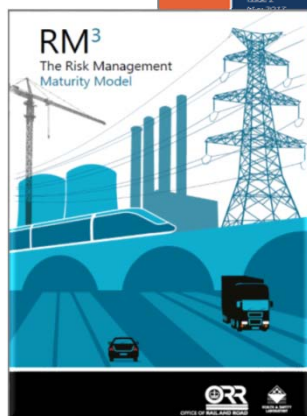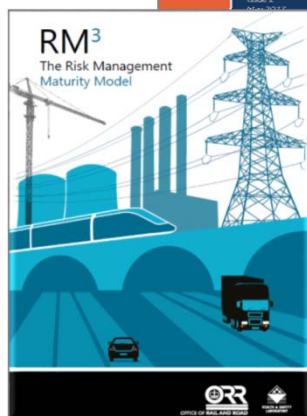
RM3 Model and LHSBR

RM3 Model

RM3 defines what excellent management looks like, including:

- Leaders inspiring confidence and commitment, safely taking their teams through periods of change.
- Making full use of employees' potential and actively involving them to develop shared values and a culture of trust, openness and empowerment.
- H&S strategies being used to challenge the organisation to achieve business performance which is in line with the best-performing organisations.
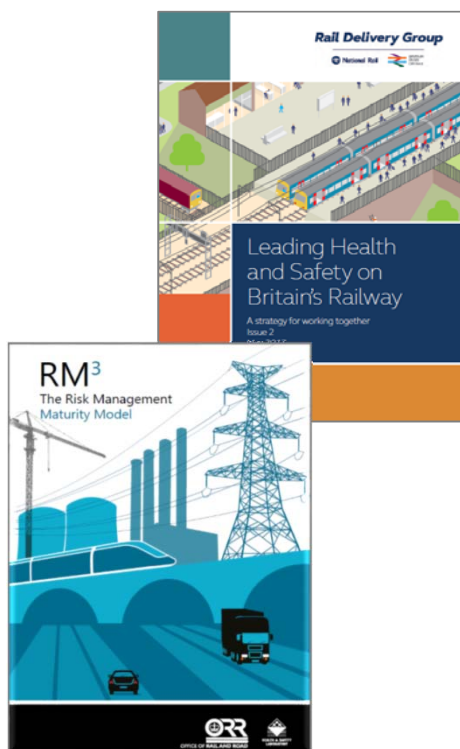
RM3 Model and LHSBR

RM3 Model

ORR developed RM3, in collaboration with the rail industry as a tool for assessing an organisation's ability to successfully manage health and safety risks, to help identify areas for improvement and provide a benchmark for year on year comparison.

ORR also input RM3 report data into the development process of Strategic Risk Chapters

RM3 Model and LHSBR

Strategic Risk Chapters

Chapter 1 – health & safety management systems

Chapter 2 – industry staff competence & human failure

Chapter 3 – management of change

Chapter 4 – level crossings

Chapter 5 – interface system safety

Chapter 6a – track

Chapter 6b – civil engineering assets

RM3 Model and LHSBR

Strategic Risk Chapters

Chapter 7 – rolling stock asset management

Chapter 8 – workforce safety programme

Chapter 9 – occupational health

Chapter 10 – Europe (withdrawn)

Chapter 11 – Management of train movement & signalling

Chapter12 – Health & Safety by Design

Chapter 13 – Leadership & culture

RM3 Model and LHSBR

RSSB

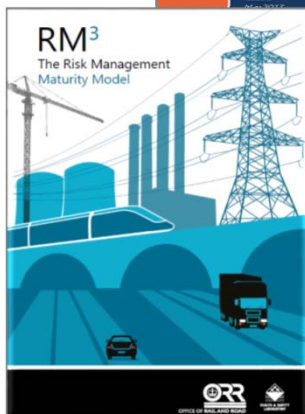## The 12 Risk Themes

1 Workforce health and wellbeing
2 Public behaviour
3 Station operations
4 Road risk
5 Level crossings
6 Fatigue

7 Workforce safety
8 Infrastructure asset integrity
9 Workforce assaults and trauma
10 Train operations
11 Freight
12 Rolling stock asset integrity

RM3 Model and LHSBR

The 9 Capability improvement areas

RM3 Model and LHSBR

The 9 Capability improvement areas

1. Next generation reporting systems and models
2. Design for health and safety and change management
3. Exploit new technology
4. Develop our people
5. Smart supplier capability assessment and information
6. Improved approach to health and safety co-operation
7. Next generation rules and controls
8. Improve learning sharing and horizon scanning
9. More effective assurance

RM3 Model and LHSBR
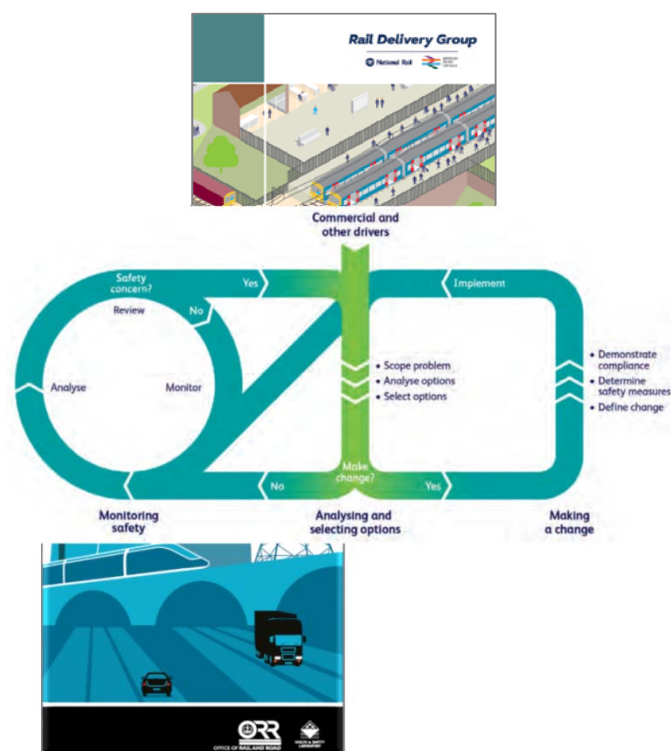
RSSB *'Taking Safe Decisions'* (TSD)

- TSD based on:
  - ✓ CSM – Monitoring
  - ✓ CSM – Risk Evaluation & Assessment
- RM3 tool used by ORR:
  - ✓ CSM – Supervision

RM3 Model and LHSBR

RSSB 'Taking Safe Decisions' (TSD)

TSD offers national and sector health & safety leadership groups a collaborative process to prioritise risk and drive improvements in health & safety management maturity and capability
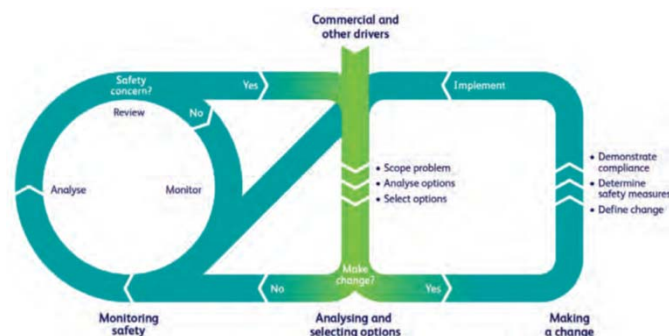
RM3 offers a model to monitor and measure the effectiveness of collaborative engagement in delivering the improvements

RM3 Model and RSSB

Enhance use of the Risk Management Maturity Model (RM3)

RSSB is an active member of ORR's RM3 Governance Board.

- *We will raise awareness of how the RM3 model supports effective safety management*
- *Publicise how RSSB products can be deployed to improve safety management maturity*
- *Develop appropriate training support*

RM3 Model and RSSB

SMIS

Duty of Cooperation guidance Update

Safety Performance Reports

SPAD Risk Ranking Tool

ASPR

Workshop facilitation

Train Interface Tool

Control of Contractors

SRM Risk

Rail Investigation Summary

Analysis Tool

PIM
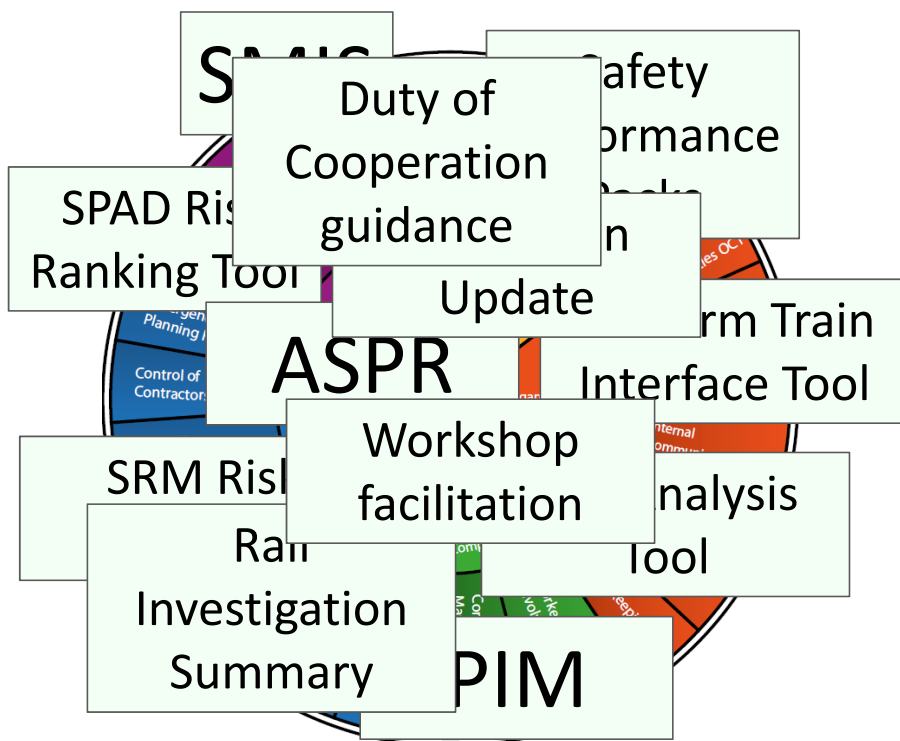
- RSSB already provides a wide range of guidance, products and services to support effective health & safety management
- Recognition these offerings need to be better focused and aligned to RM3 model

RM3 Model and RSSB

IHSM

RIHSAC

RDG Leadership Groups

SSRG/HWPG + Risk Groups

Industry Sector H&S Groups

Railway Companies
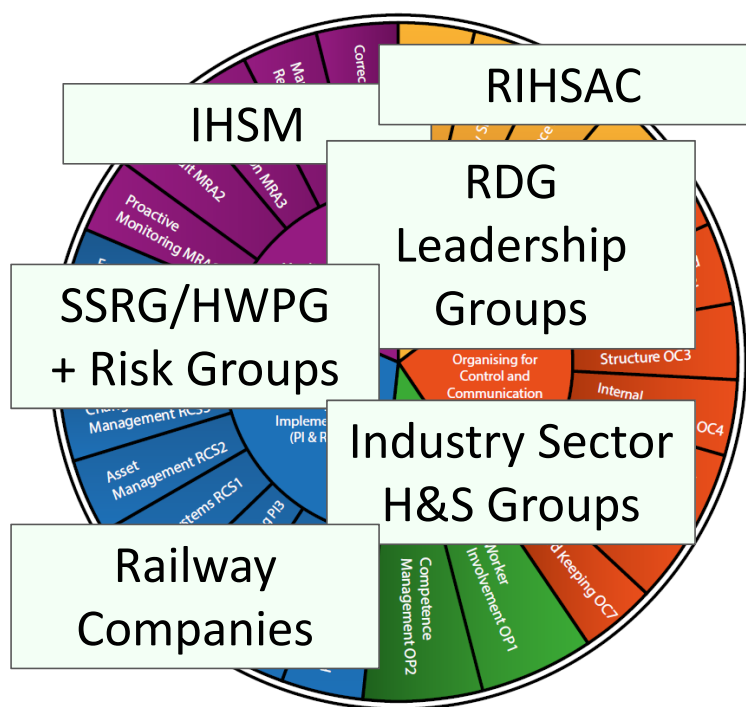
Consider building RM3 into LHSBR collaboration management arrangements:

- ✓ health & safety leadership
- ✓ LHSBR risk prioritisation
- ✓ National and sector based monitoring strategies
- ✓ LHSBR decision making processes
- ✓ Cross-industry improvement programmes
- ✓ RM3 evidence based matrices

RM3 Model and RSSB

RSSB

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┌─────────────┐         ┌─────────────┐         ┌──────────────┐
│ RM3/RSSB    │────────▶│ RM3         │────────▶│ RM3          │──────▶
│ Alignment   │         │ industry    │         │ Industry     │
│             │         │ Review      │         │ Collaboration│
└─────────────┘         └─────────────┘         └──────────────┘
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1. Map existing RSSB guidance, tools and services to RM3 model criterion

2. Conduct RM3 surveys & interviews with RSSB members, in collaboration with RM3 Governance Board representatives

3. Presentations & workshops with national and sector safety leadership groups

4. Evaluate and develop recommendations & proposals for industry leadership groups:
- ✓ *Sponsored research*
- ✓ *H&SMS management guidance*
- ✓ *H&SMS assurance tools*
- ✓ *RM3 training modules*
- ✓ *H&SMS consultancy support*

Thank you..

Tram safety - Sandilands update

RIHSAC 29 May 2018

Ian A Skinner;
Head of Heritage, Trams & Light Rail

ORR's objectives for trams

- Review the regulatory framework & ORR's long term supervision strategy

- To ensure the tram industry takes the right actions in response to Sandilands RAIB recs, in the right order & with suitable pace.

- In particular:

  - Reasonably practicable safety improvements are made, with a focus on improving control of risk and preventing (rather than simply mitigating) further accidents;

  - Decisions are made based on sound evidence of the level of risk and the costs of intervention;

  - Collaboration occurs to support consistent adoption of good practice and consensual decision-making around safety data, risk profiling and standards;

  - Tram duty holders take collective ownership of the recommendations, but we hold them to account to demonstrate satisfactory progress.

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Progress overview – ORR internally

- Completed PRI – three recs around recording ORR supervision activity (2 recs) and gathering and analysis of industry incident data & near miss data (1 rec);

- Completed initial review of regulatory framework, operational policy, tramway technical & operational issues – to inform RAIB rec 9;

- Initiated well attended tram sector conference setting future direction

- Strengthened ORR's oversight at strategic & tactical levels

  - New appointments

  - Proactive inspection programme linking to RM3.

  - Sandilands Project Board – Oversight or RAIB Recs

  - Commenced review of our supervisory approach (next slide)
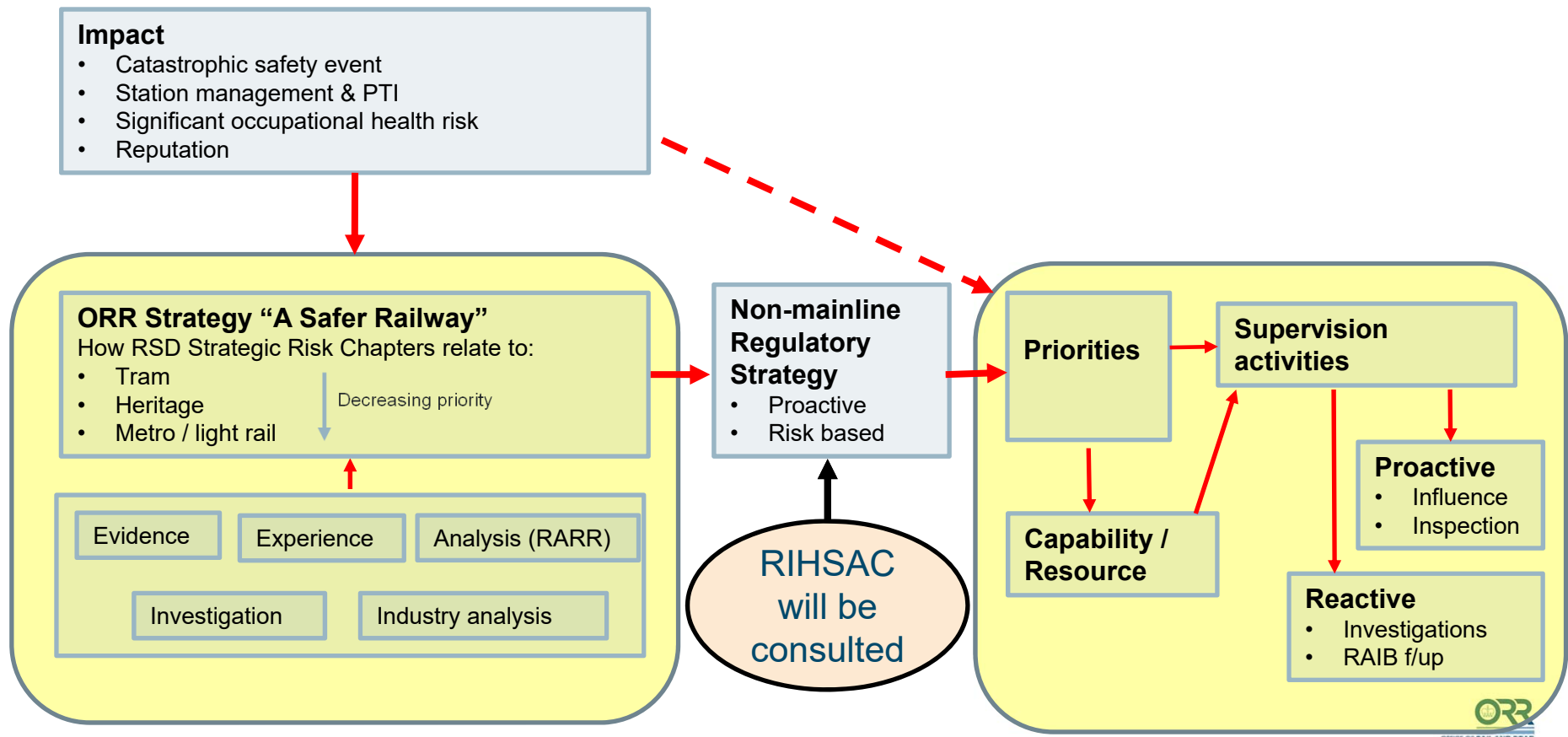
Progress overview – ORR external

- Received, considered and passed on the 15 RAIB Recs

- Reviewed tactical recs 10 to 15 responses from TOL, LT, TfL

  - Good quality responses; 1 implemented; remaining progressing

  - We have plan for engage to agree gaps, actions to address; and validate

- Recs 1 to 8 (strategic) responses due end May 2018

- Engaging & supporting Industry Steering Group tasked with:

  - setting up Safety & Standards Body

  - Developing risk model and accident & incident reporting database

- Active engagement with DfT regarding funding & support

Industry activity – strategic

- ■ Industry steering group established and started work

  - Engagement at, and between meetings by UK tram sector positive, and steady progress being made:

  - Explored options, proposed structure and operating model for LRTSSB

  - Beginning to explore constitution, governance, funding options for LRTSSB.

  - Initial risk assessment review work complete with recommended next steps

- ■ Next steps for steering group:

  - Begin search to fill senior leadership roles in the safety & standards body.

  - Develop remit for risk model activity.

  - Engagement of consultant to develop model, and implement in tram sector

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Risks & challenges

- **Funding of safety & standards body**

  - **DfT** gave a verbal commitment to matched funding in January; but have not turned up at any steering group meetings to date. We have escalated & met with appropriate DfT SCS; expect greater clarity in June.

  - Membership/support not mandatory, so need tram owner support. UKTram leading this conversation; we have offered to support.

- **Capability to deliver:**

  - UK Tram are taking responsibility for project management, but small organisation with mixed history on delivery. We need to continue monitoring closely through steering group and wider supervision work.

- **Risk modelling:**

  - funding key to initiate work; and willingness of industry to actively support implementation. Level of RSSB engagement yet to be tested.

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Cyber Security

James Walker
HM Inspector of Railways

Contents

- The Threats

- Notable Incidents

- NIS Directive

- Safety Impacts of Cyber Security

- What next

The Current Threat

- Cyber identified as a Tier One risk in the 2015 National Security Strategy

- The cyber threat is real and the type of threats we face are evolving

- At risk from

  - States and state sponsored activists – *Most technically advanced*

  - Cyber criminals – *Primary focus is financial gain*

  - Terrorists

  - Hacktivist groups – *Protests and reputational damage*

  - 'Insider' threat – *Legitimate access to system*

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Why should it concern us?

■ Notable incidents

– **Sony Pictures (2014) –** Accessed personal information of Sony employees, obtained copies of then-unreleased Sony films, and also erased Sony's computer infrastructure.

– **TalkTalk (2015) -** Accessed the personal information of more than 150,000 customers, including sensitive financial data for more than 15,000 people. Failure to implement the most basic cyber security measures

– **WannaCry ransomware attack (May 2017)** –

Global attack affecting a significant number of networks in UK, most significantly the NHS. Led to the first Ministerial COBR meeting following a cyber attack

– **DDOS Attack (Oct 2017)** – Targeted against Swedish Transport Agencies ISPs leading to disruption to train services.

■ The NIS Directive is the first piece of EU-wide legislation on cyber security

NIS Directive

- EU Network and Information Systems Directive (NIS) adopted by the European Parliament in July 2016

- Member States given until May 2018 to transpose into domestic legislation and came into force 10th May

- Doesn't just cover cyber risks to network security – also physical. E.g. flooded server rooms, power outages, etc.

- Introduces the following roles and responsibilities

  – Competent Authority (CA)

  – Operator of Essential Services (OES)

  – Computer Security Incident Response Team (CSIRT) and Single Point of Contact (SPOC) – National Cyber Security Centre (NCSC) will fulfil these roles

Competent Authority

■ The Department for Transport (DfT) has been designated the CA for transport sector, with the following responsibilities:

- Publishes guidance on risk management

- Sets incident thresholds, reporting and assessment frameworks

- Inspects OES and audits compliance

- Takes enforcement action where appropriate

- Incremental up to a maximum financial penalty of £17m, which will cover all contraventions, e.g.:

  - failure to cooperate with the competent authority,

  - failure to report a reportable incident,

  - failure to comply with an instruction from the competent authority,

  - failure to implement appropriate and proportionate security measures.

Operator of Essential Services (OES)

- Identified by Government

- Provide services essential for maintenance of critical societal or economic activities

- For Rail includes:

  – Network Rail (Infrastructure)

  – Mainline operators

  – Underground

  – Some Metros

- OES must notify the relevant CA of incidents having a significant impact on the continuity of the essential service within 72 hours of first becoming aware

- 'Impact on continuity' denotes where there is a loss, reduction or impairment of an essential service

National Cyber Security Centre (NCSC)

■ National Cyber Security Centre (NCSC) will fulfil these roles

- Computer Security Incident Response Team (CSIRT)

- Single Point of Contact (SPOC)

- Technical Authority on Cyber Security

■ Providing technical support and guidance to other government departments, Devolved Administrations, CAs and OES through:

- A set of cyber security principles for securing essential services

- Cyber Assessment Framework (CAF) incorporating indicators of good practice

■ NCSC has developed, and is maintaining, an information-sharing database for industries. This allows real-time, user-generated updates on specific threats and remedies

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Safety and Cyber Security

- The rail sector is increasingly reliant on networked technology, e.g. centralised signalling centres

- Digital Railway: moving forward Cyber security needs to be considered from the outset

- Safety and security can no longer be considered in isolation

- ORR are not the NIS enforcing authority, that rests with DfT

- ORR could seek assurance that Duty Holders Safety Management System (mandated by the Railways and Other Guided Transport Systems Regulations 2006) is suitable and sufficient to mitigate the safety effects of a potential cyber security incident

- Could a cyber security measure be deemed as 'reasonably practicable' should it lead to a safety related event?

What next?

- Review the maturity level of OES once they have completed the CAF

- Continued engagement and liaison with DfT

- Undertake review of ORR safety guidance

- Continued engagement and attendance at industry events

- Increase awareness of cyber security internally and externally

Strengthening ORR's use of evidence for safety planning and monitoring RIHSAC

Jen Ablitt – Deputy Director
Safety Strategy and Planning

May 2018

Introduction

- Regulation that is;
  - Independent from industry
  - Risk based
  - Targeted, proportionate, accountable, transparent and consistent
- Our work is largely either: proactive, reactive or statutory
- Data for plan / do / check / act cycle
- Lack of visibility around how we use evidence

Questions?

- Are we getting all the data we need?
- Are we using it appropriately / adequately?
- Is there a clear enough link between the evidence and our actions?

What we already do

Strategic Risk Chapters and Risk Ranking

- 14 Chapters to help prioritise ORR and Industry's focus.

- Covering various topics across the sector, including:
    - Track.
    - Occupational Health.
    - Health and Safety by design.
    - Leadership and culture.

- Informed by Risk Assessment and Risk Ranking (RARR) process which considers:
    - Credible worst case scenarios
    - Vulnerability of controls
    - ORR's ability to influence each risk
    - External perceptions of the risks

- Outputs from the workshop are ranked and then using a pareto 80/20 principle. (Where focusing on the top 20 risks will manage 80% of the causes).

Plan

- Proactive inspection work

- Better resource planning + confidence in strategic risks

- Planning using SRCs and RARR - greater use of available data;

  - Rail Safety and Standards Board (RSSB) Annual Safety Performance Report (ASPR)

  - (SMIS) (SRM); (LUSEA) (LUQRA); (RIDDOR);

  - (RAIB) investigation findings; and

  - intelligence from EU data sources and other international developments

- Data used to;

 - Identify missing risks

  - Rank risks

Check

- Set expectations → *Monitor* → Regulate
- Identifying trends – periodicity and pace of change - not much change in-year
- Regular review: reactive inspection and enforcement work
    - NR daily logs
    - SHEP
    - RIDDOR / LUSEA
    - RAIB reports
    - RSSB data, risk groups and ORR strategic risks (SMIS+ rebuild)
- Annual data request vs. on demand
    - CP6 data protocol: Specific purpose Vs. Regulatory burden
    - Specific inspection and investigation - wealth of data on demand from duty holders
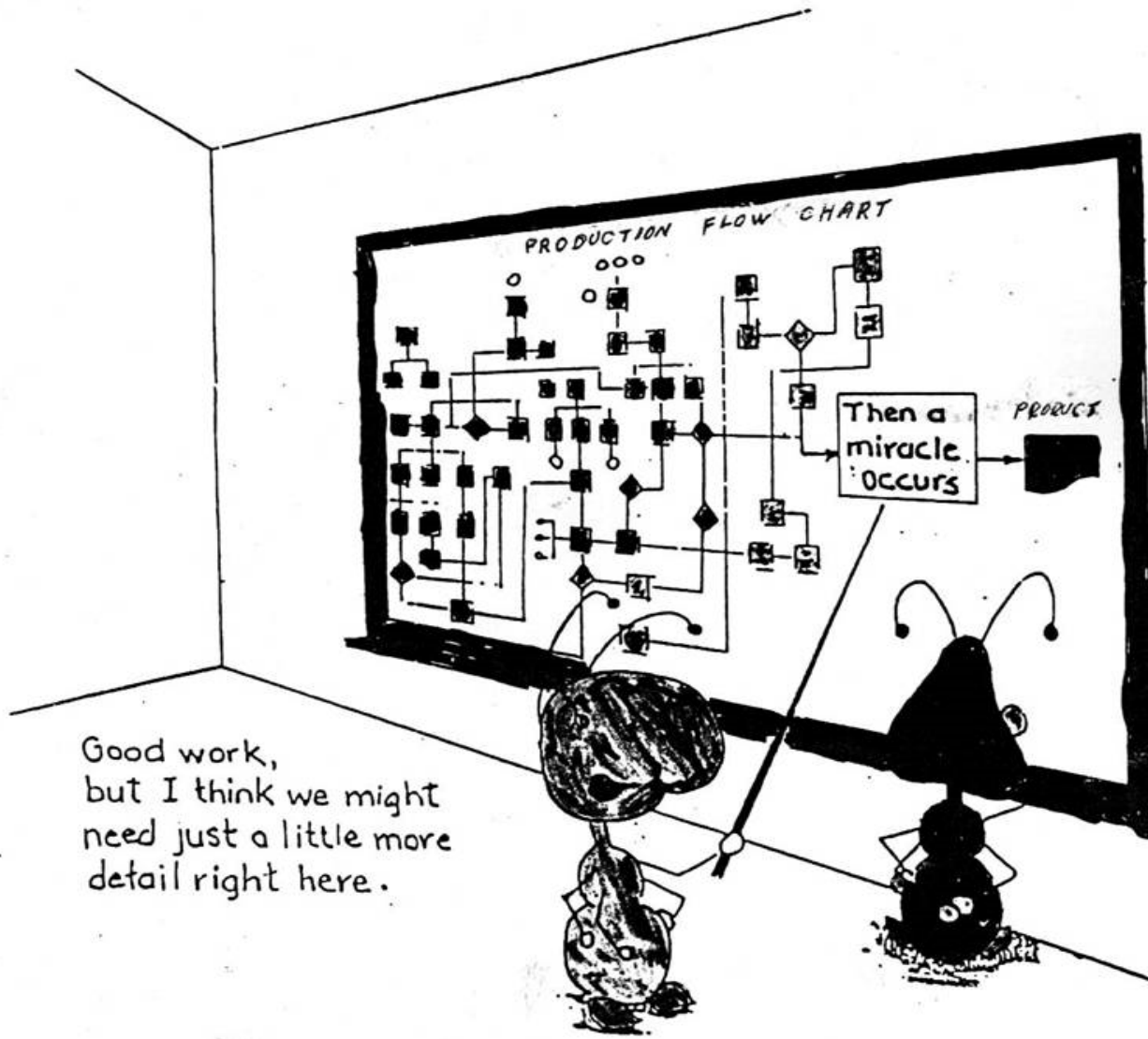
Figure 1 _ Pyramidal model for railway safety management
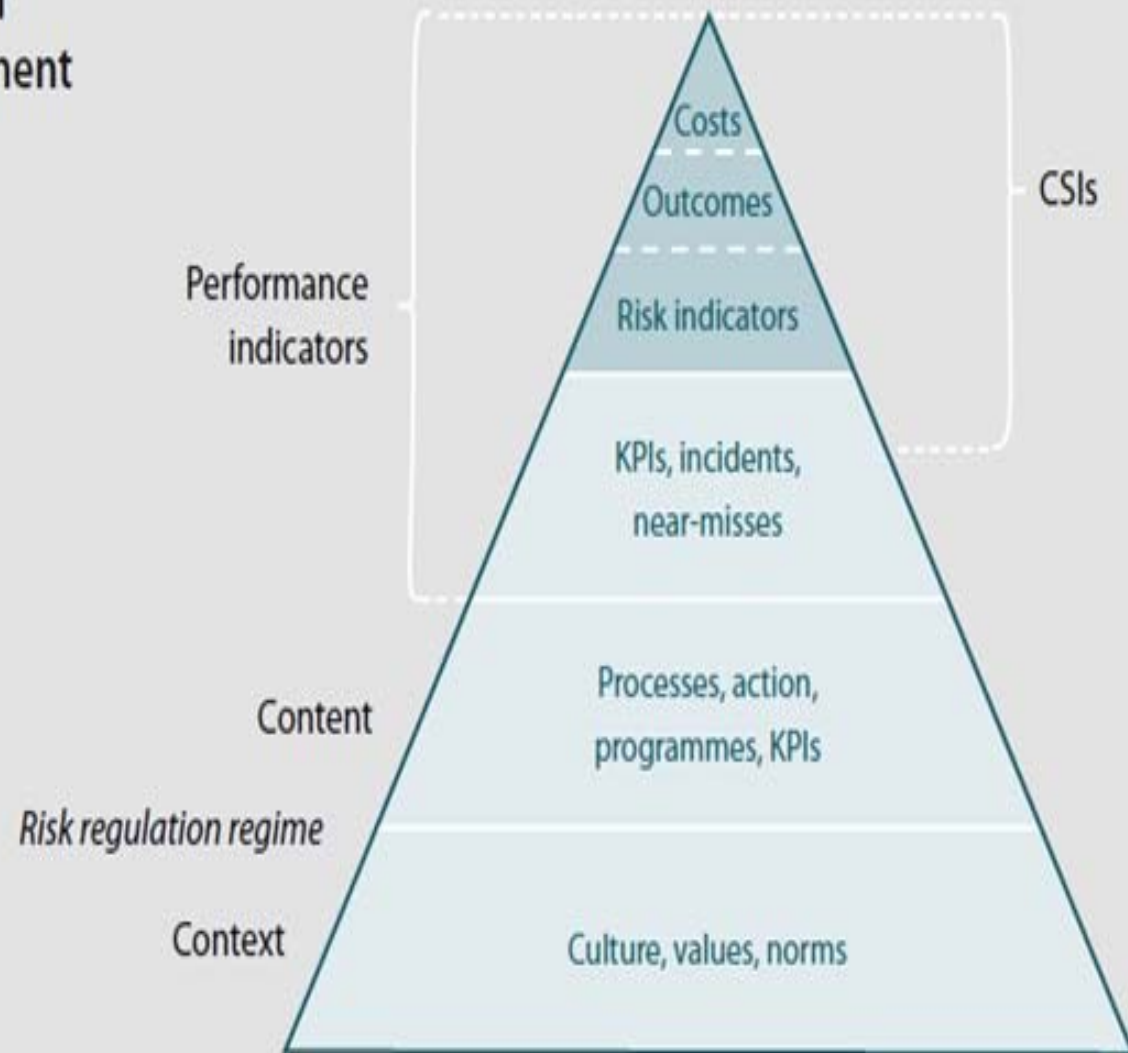
Available Data/Intelligence

Source	Leading/ Lagging information	Qualitative/ Quantitative	Accessibility	Frequency	Coverage
ORR Inspections and Investigations	Both	Qualitative	ORR held data	Varies	Operator/operation specific
RIDDOR reports	Lagging	Qualitative	ORR held data	Weekly	Whole sector
RM3 Analysis	Leading	Quantitate	ORR held data	Varies	Whole sector
Operator specific Risk Models	Leading	Quantitate	On Request	Varies	Operator Specific
NR SHEP	Both	Both	On Request	Periodic	Mainline Only (NR Focussed)
Operators periodic H&S reports	Varies	Both	On Request	Varies	Operator or Owning Group only
Close Call	Leading	Qualitative	On Request	Varies	System users only (~100 companies)
NR National Operations (NOC) Log	Lagging	Qualitative	On Request	Daily	Mainline Only (NR Focussed)
RAIB Reports/Bulletins	Lagging	Qualitative	Publically available	Varies	Across whole sector
Operators Internal Investigations	Lagging	Qualitative	On Request	Varies	Across whole sector

Additional RSSB Data/Intelligence

Source	Leading/ Lagging information	Qualitative/ Quantitative	Accessibility	Frequency	Coverage
SMIS events	Lagging	Qualitative	On Request	Varies	Mainline Only
PIM	Leading	Quantitate	On Request	Periodic	Mainline Only
SRM	Lagging	Quantitate	Publically available	18-48 months	Mainline Only
RAIB Reports/Bulletins	Lagging	Qualitative	Publically available	Varies	Across whole sector
Leading H&S on Britain's Railways progress report.	Both	Both	Publically available	Quarterly	LHSBR scope only (90% mainline risk)
Quarterly risk topic data packs	Both	Both	RSSB risk topic groups	Quarterly	Mainline only

Questions for ORR

- How to unlock and use more leading indicators

  – precursors

  – root causes (data?)

  – capability / process strength (audit / RM3)

  – SMIS+

- Periodicity of data and identifying / understanding true trends – do we always understand movements in the PIM / RIDDOR data?

- *Which* decisions are we trying to influence: multi-annual planning, weekly team deployment, something in between, all of the above?!

- Accessibility of what we already have: evidence from audit, inspection, investigation and enforcement activities – but how? Better structure and storage. Innovative techniques.

- How to tell the story and better support decisions – to stakeholders, to Directors, to our operational staff

Questions for RIHSAC

- Examples of best / better practice?

- What is the right balance between;

    - Quantitative / qualitative

    - Leading / lagging

- Are we prioritising the right things? (e.g. Assets, management of change, occupational health and culture and safety by design)

- Are we predictive enough? Is there better data to support a predictive approach? Are there better indicators of capability?

- Should we do more to challenge the data available to us?

Next steps

- Supplemented by some small scale feasibility of AI techniques

- Continuous improvement as the prioritisation processes develop

- Opportunity to roll out change before October planning round

- Requires a change in how we consume data and analyse risks across operational teams – gradual implementation

ORR protects the interests of rail and road users, improving the safety, value and performance of railways and roads today and in the future

RIHSAC

Emerging key messages and themes from draft 2017/18 annual health and safety report

Tracy Phillips

ORR

Tuesday 29th May 2018

Introduction

- ORR Chief Inspector's (CI) annual health and safety report published around July every year

- What is its purpose?

  - to **provide** the CI's view of industry health and safety performance

  - to **report** against our safety regulatory and policy activities using statistics and data wherever possible;

  - to be **transparent** in demonstrating how we have targeted those activities towards the biggest risks;

  - to show how ORR and the industry have **responded** to issues raised in the previous annual h & s report and in ORR's Business Plan;

  - to **identify** the core themes of the previous work year; and

  - to **highlight** the key challenges facing the industry as we see them.

- Report previously brought to RIHSAC post publication – this year have the opportunity to comment on what would expect/like to see

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Emerging themes and key messages (1)

- **Three key challenges highlighted –**
  - **Performance of our people**
  - **Pressure on the system**
  - **Technology**

- Growth and public life style changes continue to challenge our rail system; at the heart of this is a dedicated workforce. People are the foundation of doing things safely - need to focus on supporting them with a strong emphasis on human factors and occupational health.

- Occupational Health visible at senior levels of organisations but messages and impact do not always reach where they need to.

- We have maintained a focus on HAVs and air quality and diesel emissions during the year and moving forward.

- Safety by design and new technologies – including their implementation and management - have been and remain a key area. Vital that the human interaction and interfaces with technology are taken into account and managed.

- Positive examples of industry responding to challenges set in last h & s report – for example TfL and LU's management of transformation.

Emerging themes and key messages (2)

- Precursor Indicator Model now at its lowest ever level. Need to use the near miss data and lower level precursors more.

- As we see continuing improvement and fewer major and high potential events, we still need to learn, in particularly around, how to eliminate the very low frequency but high consequence event.

- We have engaged proactively with tram operators following RAIB's report into the fatal Croydon Tram derailment and led on forming a collaborative steering group to oversee the recommendations.

- We have continued our monitoring of the largest heritage and charter operators.

- On industry safety strategies and initiatives: *Leading health and safety on Britain's railways* adopted – now seek demonstrable progress in its delivery; ORR supporting suicide awareness and prevention campaigns.

- RM3 remains a critical tool – NR embedding its use and we are seeking to be more transparent with RM3 data in this year's report. All of our Strategic Risk Chapters have now been reviewed – with RIHSAC's help.

Discussion

■ Welcome any feedback from RIHSAC members. For example:

- – Do the emerging themes and messages align with what you might expect to see?

- – Are there any gaps/omissions/opportunities missed?

- – What ideas or areas for improvement do you suggest?