

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



OFFICE OF RAIL AND ROAD



**Evidence-based activity
planning – why we do
things, don't do other
things and explain it all
to the public**

**Governance and Regulation
Chair**

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Introduction

- Rail Health and Safety Regulator for Britain's railways
- Regulation that is;
 - Independent from industry
 - Risk based
 - Targeted, proportionate, accountable, transparent and consistent
- 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?
Are we missing anything?
- Do the public understand what we do, and how much do they need to?

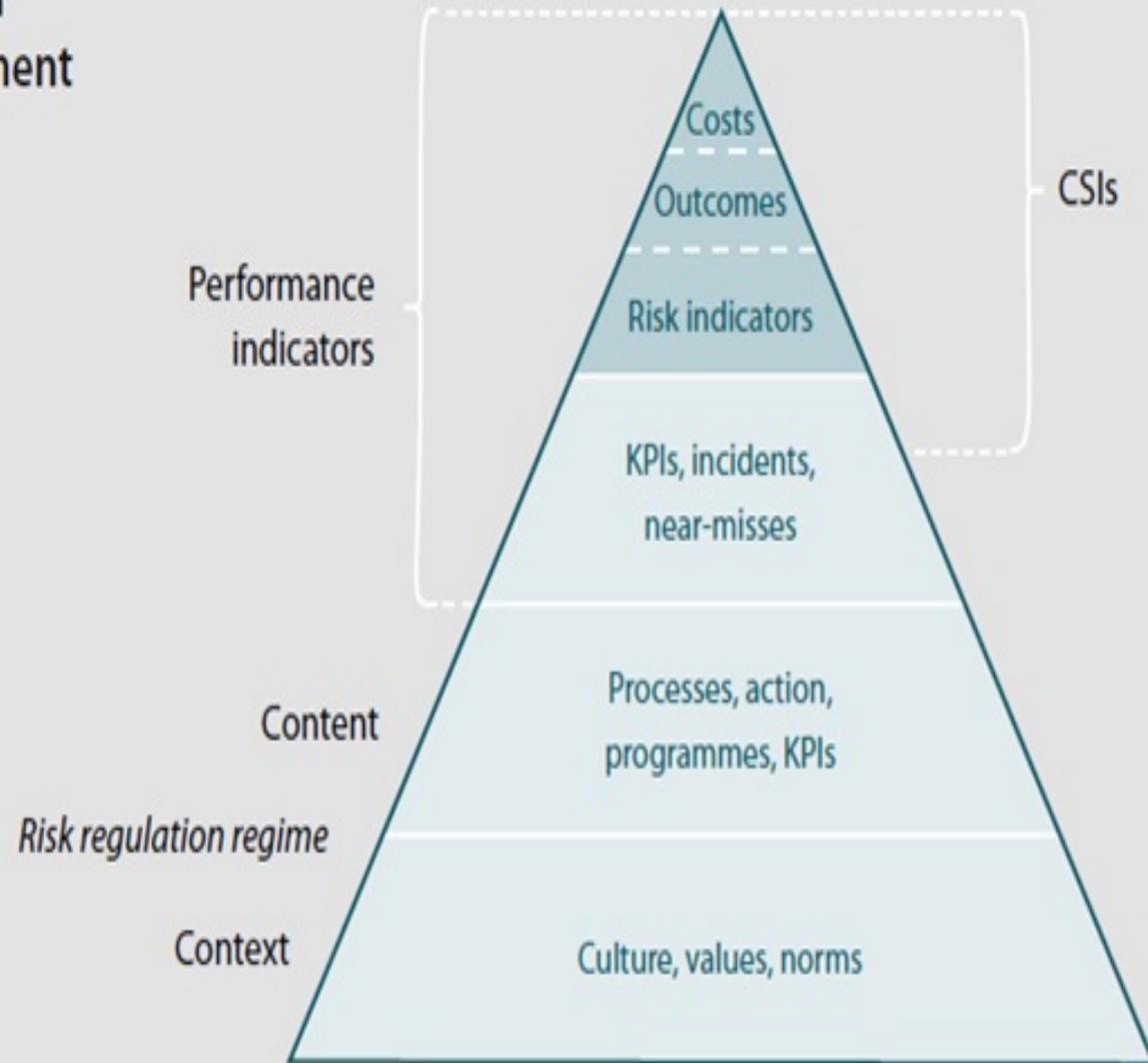
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Risk-based activity planning



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

Key factors for Risk Assessment and Risk Ranking

process

■ Initial risk estimation:

- Likelihood + Consequence.
- What is the worst, credible outcome, considering the current control measures and their level of effectiveness.

■ Is the risk individual/multiple?

■ Control Vulnerability:

- How well is the risk currently being managed currently (how effective are the current controls)?
- How will control effectiveness change in future (+ = improve, - = decrease and 0 = no change)?

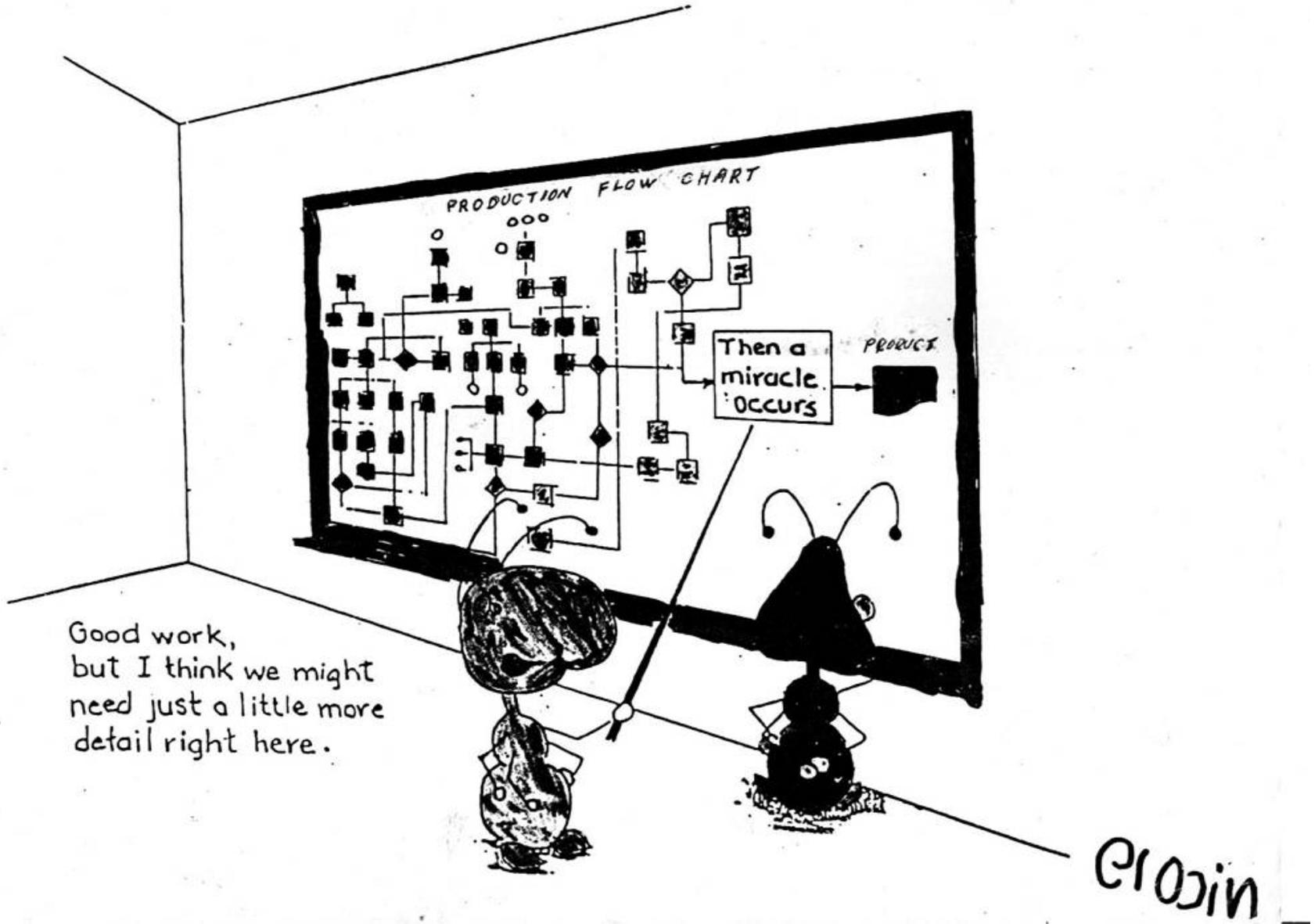
■ ORR influence. How much impact could ORR have on effecting the risk?

■ External/Public Perception

- External pressures on ORR to intervene. (Not necessarily related to actual level of risk). Not taken into account for risk prioritisation.

Strategic Risk Chapters (SRC)

- Risk Chapters cover SMS, Management of Change, Level Crossings, Track etc.
- SRCs are based on outputs of RARR
- Each SRC discusses a specific risk area:
 - is structured to give some background about the topic;
 - outlines the current status of the associated risks;
 - sets out where ORR seeks improvement and how we will promote improved management of the risk.



Future of RARR

2018 RARR=
Managed



2019 RARR=
Standardised



2020 RARR=
Predictable



2021 RARR=
Excellent



Continuous improvement to risk priority and planning process

Y1 (to Sept 19)

- “A process which ensures we use all the data we’ve got”
- Feedback from activity leads on RARR process and outputs
- Improved RARR process document including better record keeping, greater transparency
- Phase 1 of AI workstream: proof of concept study

Data improvement programme

Y2 (to Sept 20)

- “Improving the usability of the data we’ve got”
- Standardisation of data inputs to RARR: re-engineering the algorithm, common terminology, storage, templates, meta data
- Monitoring / assurance of Y1 RARR-based plans
- RARR and SRC processes enshrined in QMS and further enhanced based on monitoring lessons and quick wins from Phase 1 of AI work implementation

Analytics / AI

Y3 (to Sept 21)

- “Best in class analysis of our data”
- Development, testing and adoption of AI tools to analyse standardised data
- AI-driven RARR, aligned to SRCs, becomes BAU
- Determine regulatory impact monitoring feasibility

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Communicating risk to the public

ORR as a trustworthy public body

■ ORR should communicate with the public to:

- Understand existing perceptions and priorities around safety risk
- Establish ORR as competent, honest and reliable = trustworthy
- Evidence trustworthiness by providing useful, reliable, accessible and simple information, reflecting customer priorities
- Correct **misperceptions** about risk

■ Information:

- About service safety performance
- About ORR's competence and decisions
- The interaction between performance and our decisions

Targeting our communication

- What do customers (the public) care about? Do we know?
- We might not care about the same things (safety Vs. wellbeing, getting a seat Vs. journey time)
- Presenting information in contextualised, meaningful and accessible ways...
 - Evidence of service quality (safety risk) for customers, not the industry (the death of FWI and 5 minute delay KPIs...)
 - Our decisions and trade-offs
- Particularly difficult around risk, uncertainty and risk acceptance

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