

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



SMART RAIL

Understanding Human Factors - The Next Key Step

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Structure of Presentation

- Our long standing Vision and Goal.
- The Challenges – Learning the Lessons from recent incidents including Croydon.
- The Focus - for all parts of the sector going forward to continue the journey for the next ten years.

Our Vision and Goal

For 10 years we have had the same Vision and Goal for the GB Rail Sector

Vision

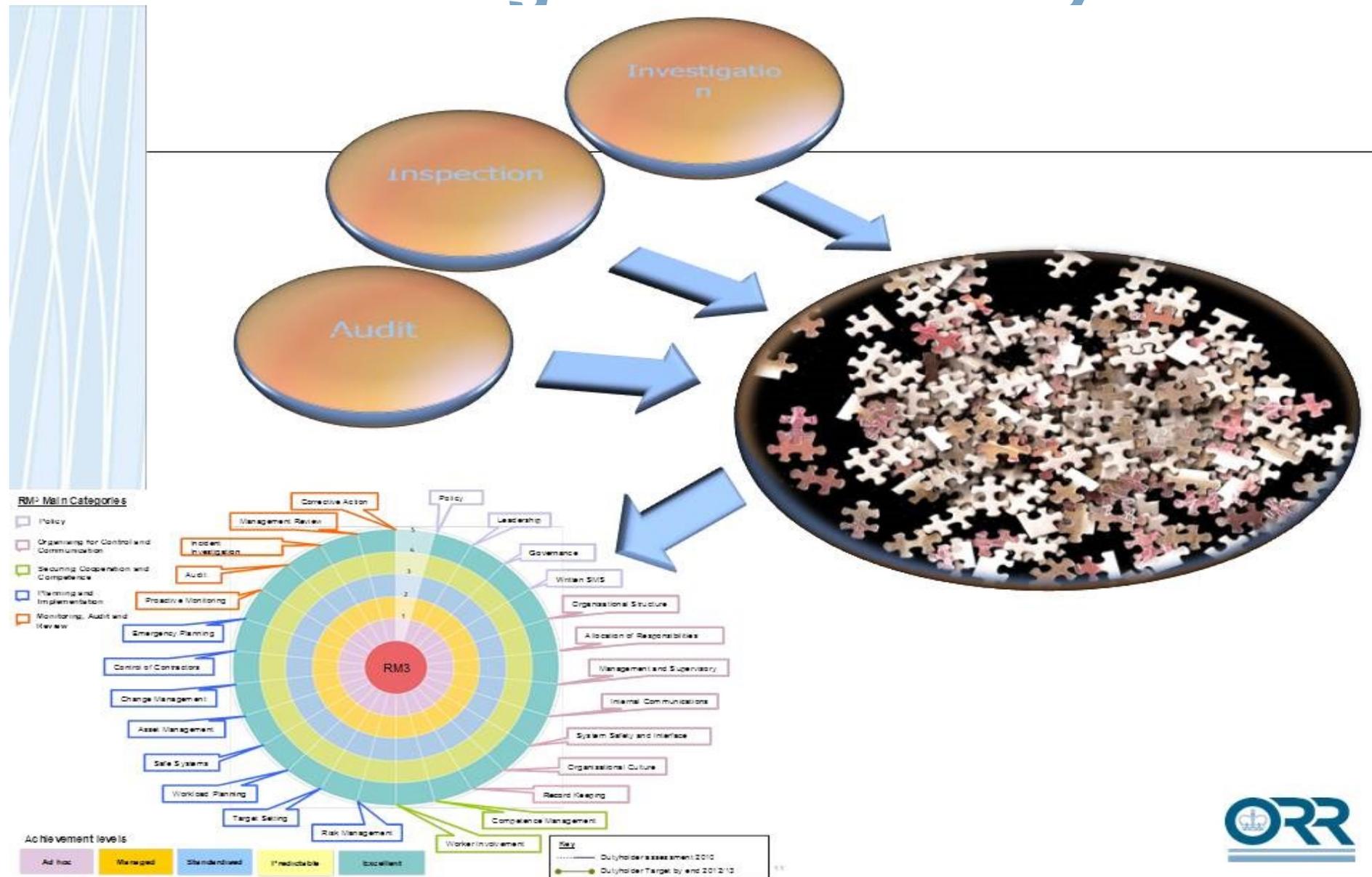
“Zero Industry caused fatalities and ever decreasing risk to passengers, the workforce and the public”.

Through the Goal of:

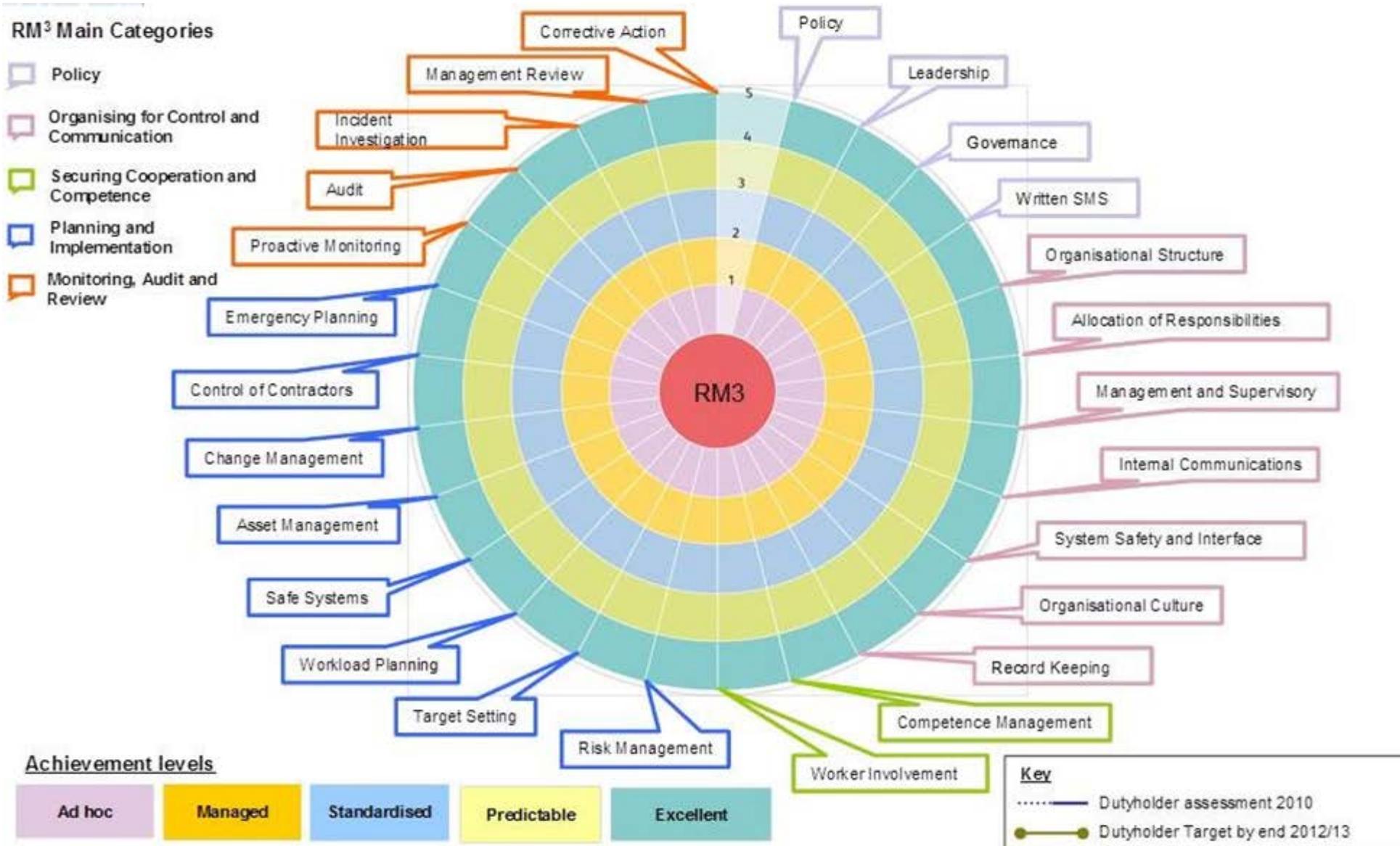
“Excellence in Health and Safety Management and Risk Control, measured through our RM3 Model”.

WHAT IS RM3?

The Risk Management Maturity Model (RM3)



The Risk Management Model (RM3)



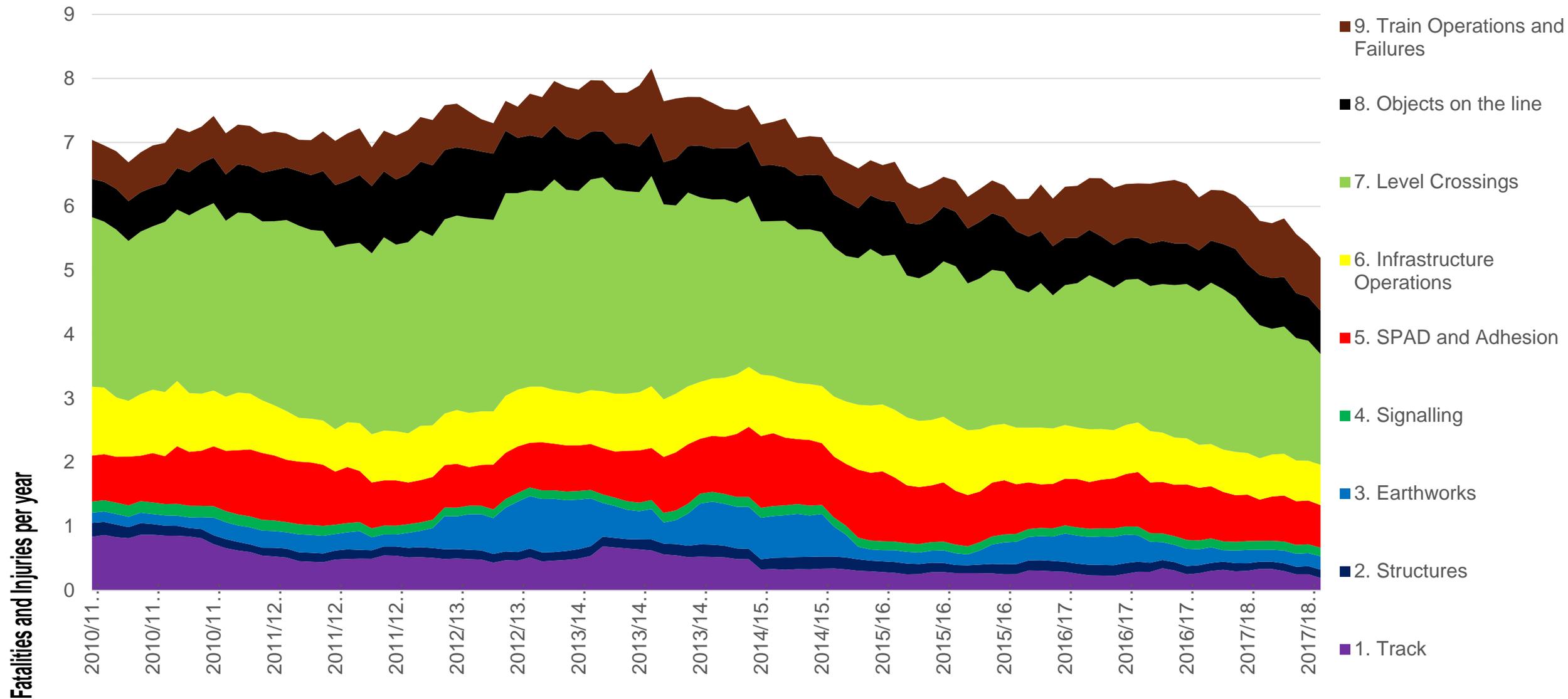
About a Conversation....



Learning the Lessons

- However, even as we see continuing improvement and fewer major events, we still learn, in particular around, how to eliminate the very low frequency but high consequence event.
- We now have our Precursor Indicator Model at its lowest ever level and in one year 2015/16 achieved the Vision.

Precursor Indicator Model by Group



However....

- Croydon

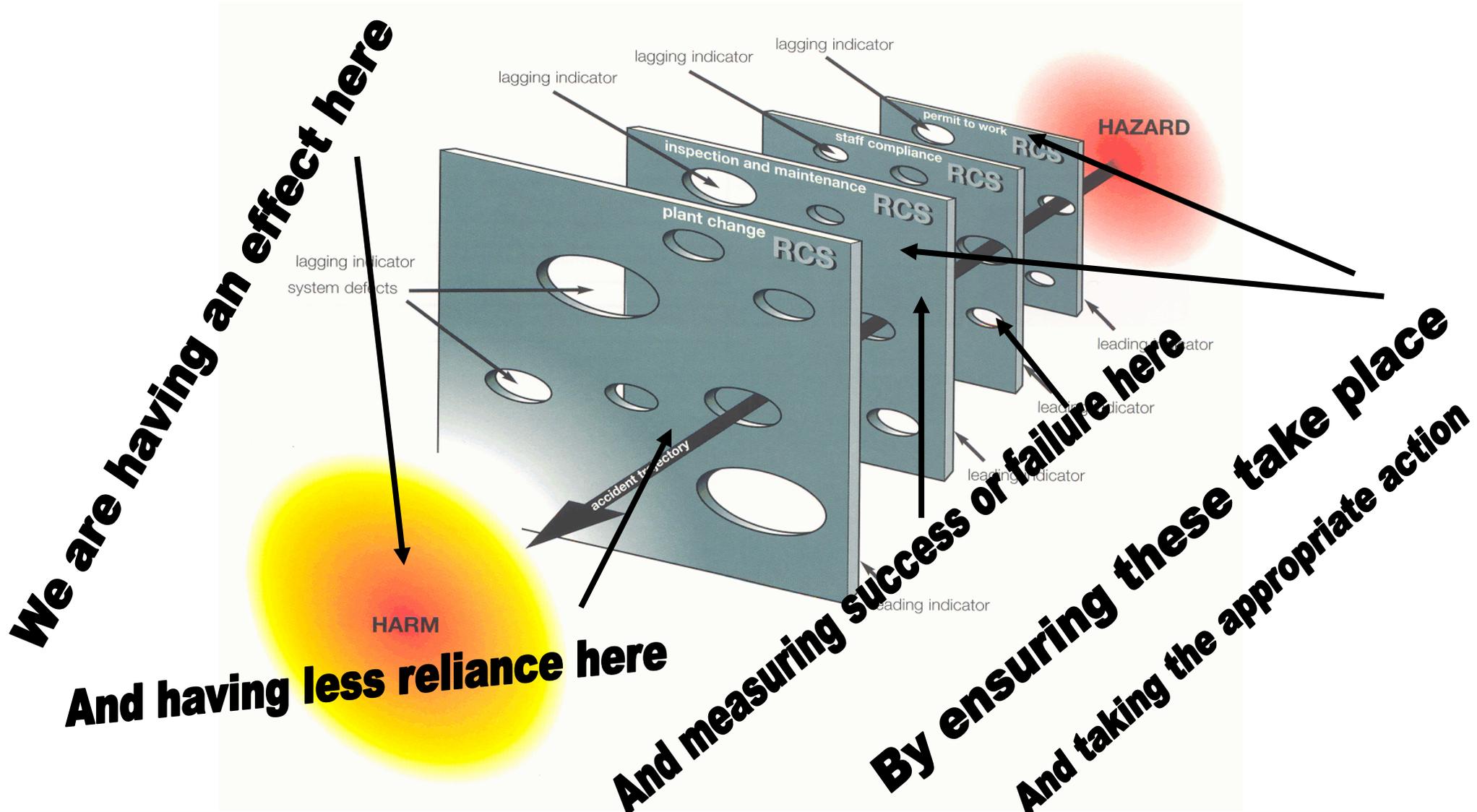


- Were there enough controls?

Also seen

- Near misses for track workers in amongst trains and serious construction injuries.
- Major Infrastructure failures for Civils – Age/Poor Weather.
- Public fatalities at the interface with the Railway (Level Crossings and Trespass).
- Issues in managing change and its impact on people.

Let's talk about cheese...



So what are some of the key challenges

The Human Factors

- They being the last line of defence
- Handling the modern world - pace of life etc.
- Culture and behaviours

So what are some of the key challenges (2)

Technology

- Using technology developments to create the extra barrier, increased defence
- The need to take the human interaction into account, lots of developments ongoing
- Changing working practices
- Ensure the Human interface is right

So what are some of the key challenges (3)

Pressure on the System

- Lots of change with plenty of new equipment
- Increased traffic aging infrastructure
- Financial strains

The Focus going forward

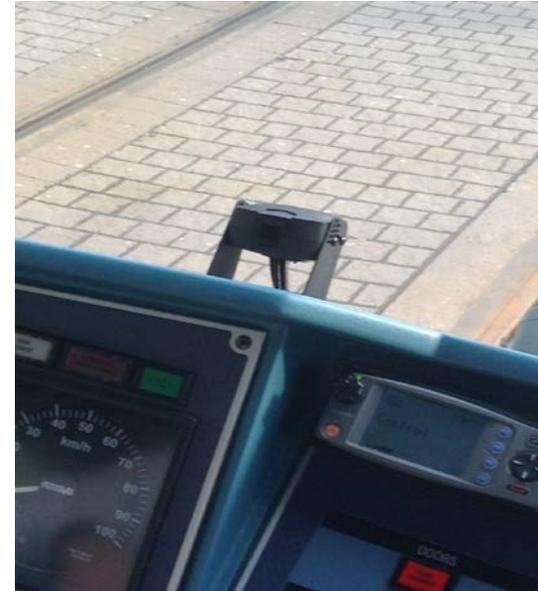
1. Human Factors

- Competency
- Workload and environment (managing stress)
- Fatigue management (inside and outside work)
- The strengths and weaknesses of Human Intervention

The Focus going forward (2)

2. Technology

- Creating the extra barrier



- Tools to help make the job safer and more efficient (eg IT tools, remote condition monitoring)
- Remove people away from harm, eg working in amongst trains!
- Improve performance reliability and predictability.

The Focus going forward (3)

3. Health and Culture

- Communication from top to bottom “show you care”
- Mental Health
- Trust and a “Just” Culture
- A healthy workforce saves money.

Conclusion

- It is all about managing risk of the complete system, designing the human interaction and safety into all we do.
- Measure how we are doing with RM3, as it is about driving for excellence in the key enablers in what we do.

Keeping Britain's railways safe

Keeping Britain's railways safe

The Office of Rail and Road is the independent safety and economic regulator for Britain's railways and monitor of Highways England

What we do



ORR inspectors spend most of their time out on the rail network

Identify and monitor trends in health and safety performance

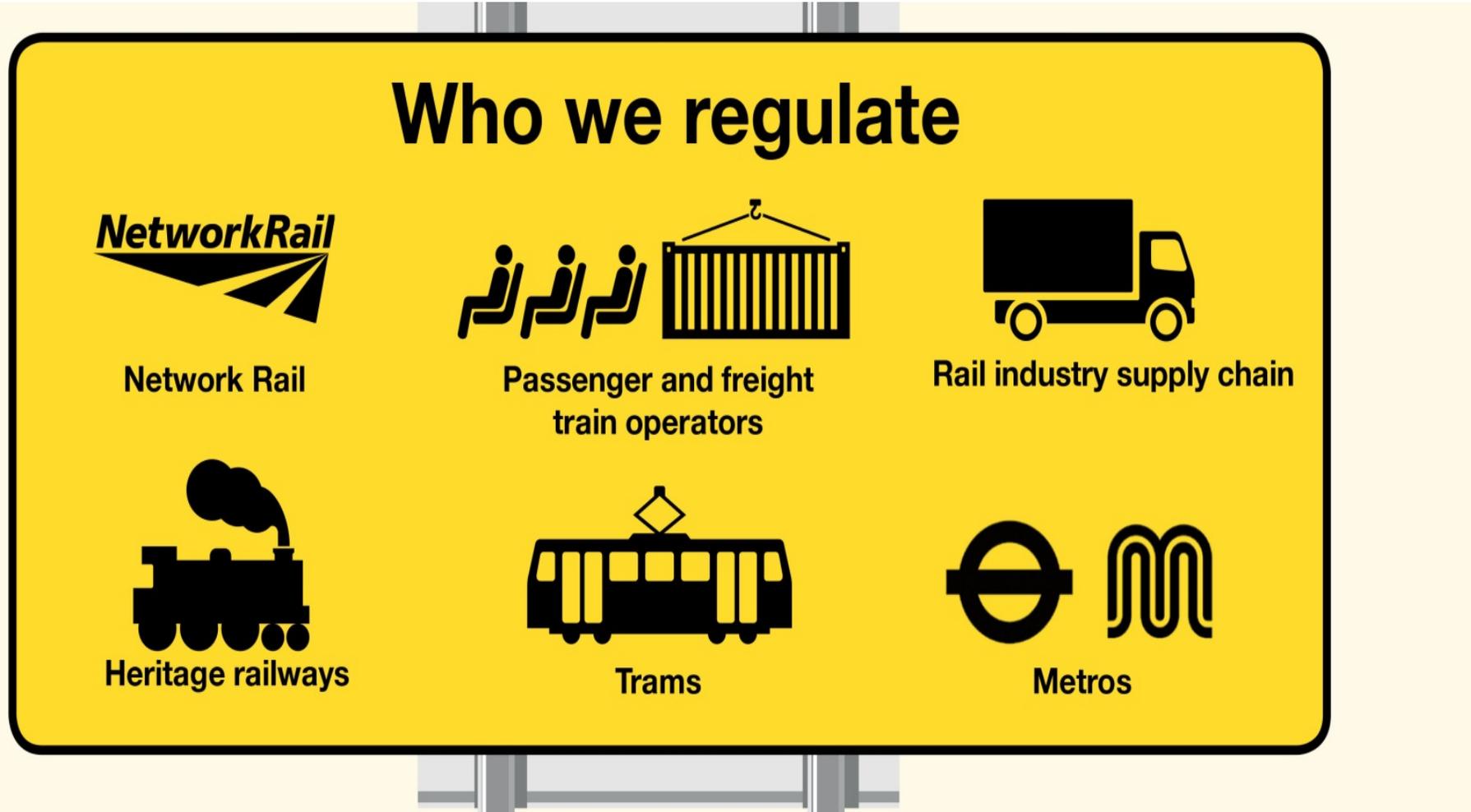


We improve health and safety practices by informing development of new laws

Check and approve safety systems and licence train drivers



Who we regulate



How we ensure a safer railway



Inspection focus is on key safety themes



Our aim is firm and fair enforcement of health and safety law and our inspectors take action in many ways

Our aim is firm and fair enforcement of health and safety law and our inspectors take action in many ways:

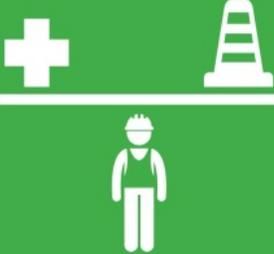
-  **Provide verbal and written advice to improve practices**
-  **Issue clear improvement notices with deadlines for change**
-  **Revoke safety certificates**
-  **Issue prohibition notices to stop work immediately until safety issues are addressed**

 **Criminal prosecutions against companies/individuals breaching the law. These can result in large fines and even prison sentences.**

Moving health and safety forward

Moving health and safety forward

To meet the challenges of growth and change, our focus for industry is:

- 
Take a proactive approach to managing health and safety
- 
Deliver a sustainable maintenance programme
- 
Use opportunities at design stage to lower risks
- 
Treat worker health on a par with safety
- 
Share innovation and best practice
- 
Improve risk management maturity and ensure succession planning