

# **WHAT YOU SHOULD KNOW ABOUT THE SAFETY RISK MODEL (SRM)**

## 1. What is safety risk model

Provides an overall picture of safety risk against which opportunities for safety improvement could be evaluated.

It's a model consisting of a series of fault tree and event tree models representing a set number hazardous events that collectively define the overall level of risk on the railway. The SRM provides a structured representation of the causes and consequences of potential accidents arising from railway operations and maintenance

## 2. SRM Objectives

- To provide an estimate of the extent of the current risk on the railway
  - To provide risk information and risk profiles relating to the railway
  - Identify mitigation measures
  - Risk-based improvement planning
  - Evaluate proposed changes/ALARP
  - Understand key risk contributors
  - Identify & prioritise issues for audit
- Customers

## 3. SRM Scope

Safety risk arising from the operation and maintenance of railways. This includes:

- Train accidents
- Accidents at stations
- Accidents on the track
- Accidents in yards, depots and sidings
- Trespassers and suicide

## 4. What does the SRM take into account

### High frequency, low consequence events

e.g slips, trips and falls

This is usually based on an analysis of incident data

### Low frequency, high consequence events

e.g train collisions and derailment

This is based on fault and event tree modelling informed by incident data, other data and structured judgement from technical specialist

## 5. Why is the SRM used

The model can be used extensively in:

- a. Safety improvement planning - primary means to identify risks most amenable to improvement
- b. Evaluating proposed changes to the railway system or its operation (e.g. introduction of new assets, major projects and upgrades, new standards); and
- c. Communicating widely among colleagues an informed picture of risks and the main contributors