

# Level Crossing Risk Management

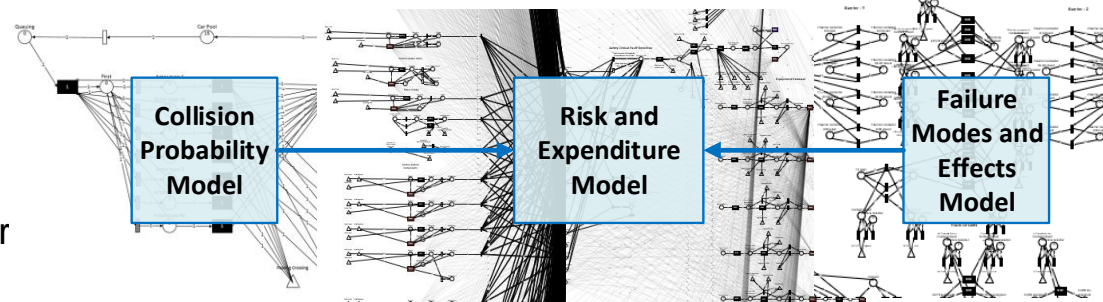
## Background

Level Crossings are a dangerous component of any railway. Britain's protected Level Crossings are maintenance intensive, due to mechanical components and relay based control systems.

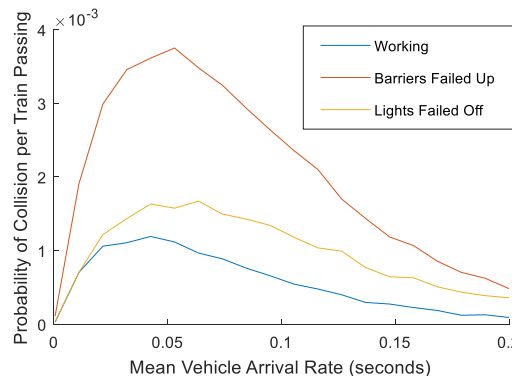
## Objective

Quantify Location effects on Train-Vehicle Collision Probability. Qualify Effects of component failures on protection system. Create component level maintenance model to determine risk and expenditure for a given group of Crossings.

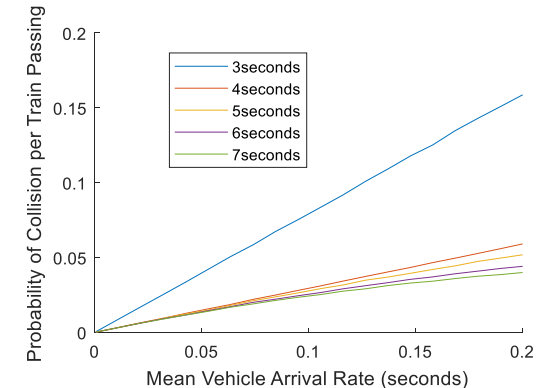
Model Parameter	Effects
Train Frequency	Increases component wear rate, collision probability.
Vehicle Crossing Frequency	Non-linear effect on Collision Probability.
Visibility of Trains to Road Users	Decreases Collision Probability.
Emergency Maintenance Response Time.	Increases cost due to delays whilst Crossing is made safe.



Automatic Half Barrier Crossings have the highest accident rate of any protected road crossing currently in use today.



Graph showing how specific protection system states affect probability of train-road vehicle collision.



Graph showing how visibility of oncoming Trains to road vehicles affects collision probability during complete protection system failure.