

Factors affecting decision making for Track Safety Management

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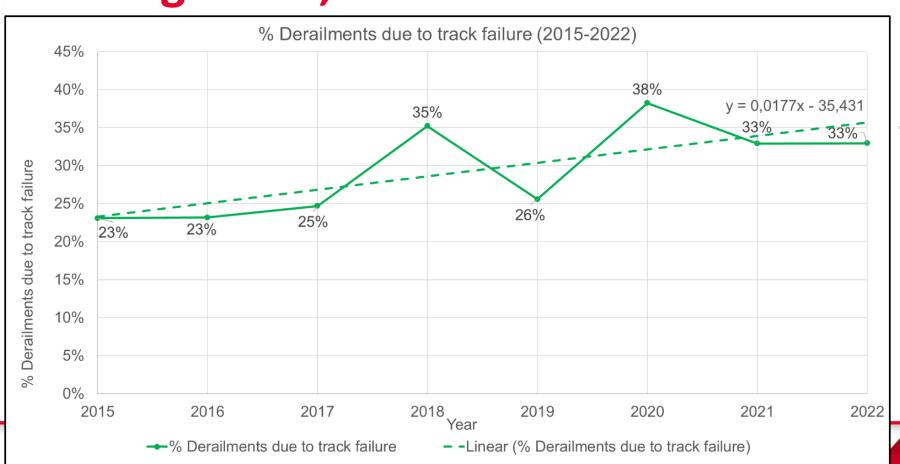


Factors affecting decision making for Track Safety Management

- Background, Context and Justification
- Data Collection and Analysis
- Key Findings
- Conclusions & Recommendations



Background, Context and Justification



Case Study

Rail Freight Operator
22000km of track

Justification for Research

• Increase in track failures causing derailments, 23% to 33%.

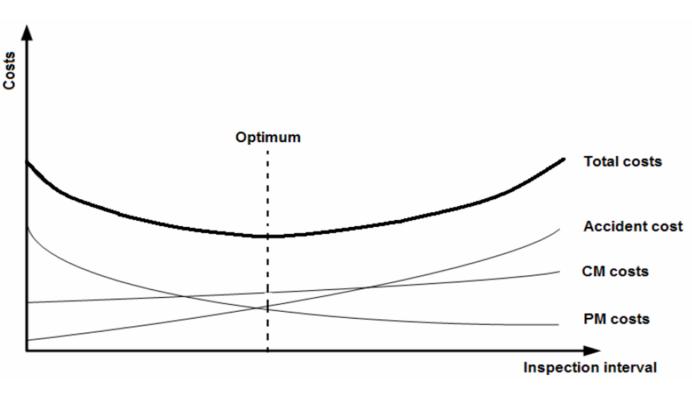
Qualitative Study

- Cross Sectional
- Track SafetyManagement



Aim

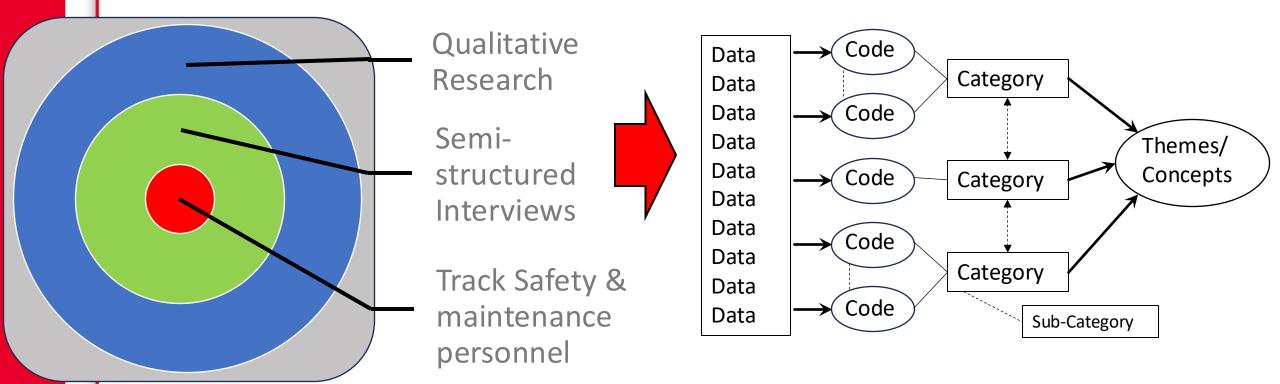
To investigate and critically evaluate the current decision-making process for track safety management with the intent to provide insights for future improvement of track safety and optimisation of track asset life performance.



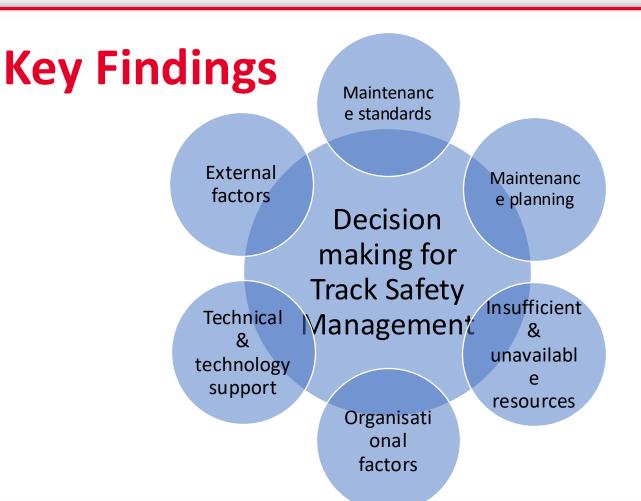
(Source: Lyngby, Hokstad and Vatn (2008,p 14))



Primary Data Collection & Analysis







Key Themes

- Maintenance Standards
- Maintenance planning
- Insufficient & unavailable resources
- Organisational factors
- Technical & Technology Support
- External Factors



Theme 1: Maintenance strategy & standards

Standards



Preventative and Corrective





Run-to-failure



Theme 2: Maintenance planning

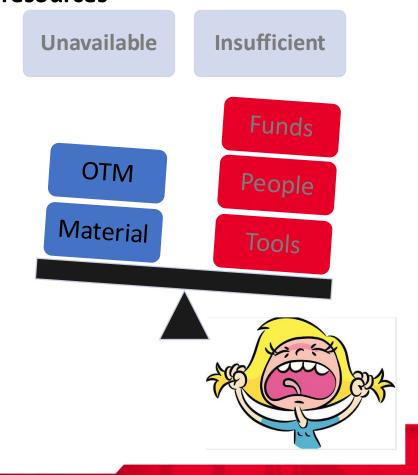
Copex vs Opex vs CAPEX





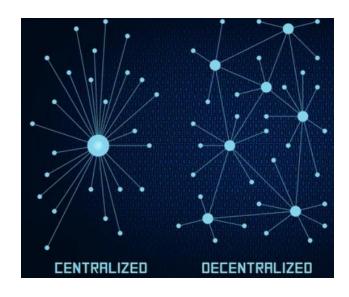
"Systematic Upgrade"

Theme 3: Insufficient & unavailable resources





Theme 4: Organisational factors



- Authority vs Accountability
- Lack of leadership support
- Inconsistent prioritisation
- Culture of mediocracy
- Central contracting blind spot

Theme 5: Technical and Technology Support



"...having a system (like WILMA), or anything that is measuring your asset in real time...you can make important decisions, critical decisions in terms of where do you need to work..."

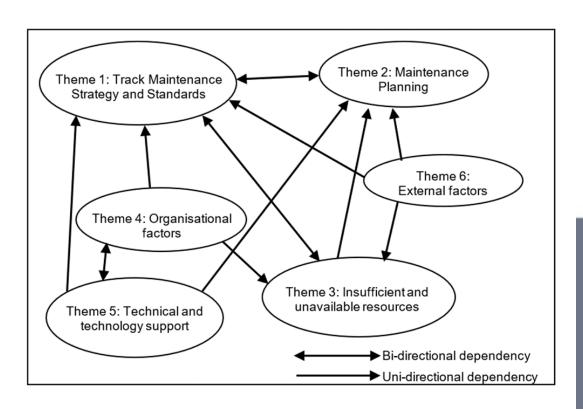
Theme 6: External Factors

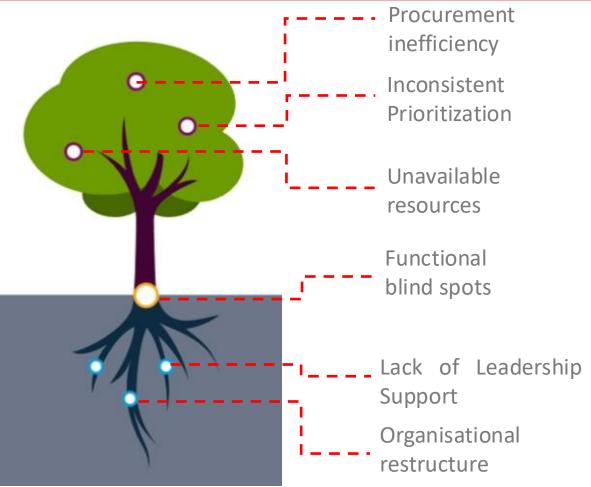


- Wasted scarce resources
- Consequential damage
- Forced prioritisation of budget



Conclusion







Conclusion

This research demonstrated the sensitivity of a complex railway system where decision making for track safety performance is influenced from far beyond just the system/human interface.

Highlights the significance of the implications of Organisational design/redesign for track safety management.

External factors beyond the Operators control still significantly contributes to Decision making for track safety whether directly or indirectly.



Recommendations

Short Term

- Resolve Delegation of Authority placement
- Replenish store items nationally
- Develop a Life Cycle Costing Framework for decision making

Long Term

- Resolve the functional blind spot by adressing a fit for purpose organisational structure
- Restore central contracting of OTM and material



Thank you for your attention!