



Does a multiteam system improve management of rail network calamities? Evidence from an intervention analysis

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MTS – research program

- › Boundary spanning processes; breadth of functional experience, integrated understanding, MTS identification
 - › International, interagency peace-support coalitions (2010-2014)
 - › Local government administration (2011) (De Vries, et al, R&R AMJ)
 - › National military staff organization (2011-2012)
 - › Operational Control Center Rail (OCCR) (2010-)

- › Development of OCCR-as-MTS: Descriptive study of attributes
 - › (Goodwin, Essens, Smith, 2012)
- › Antecedents of inter-team cooperation; survey/interviews (2011-)
- › Inter-team cooperation success/failure; critical incidents analysis (2011-)

- › Does the OCCR improve rail network performance?: an intervention analysis (2012-)



Rail network management

Yearly, 60.000 disturbances from timetable with about 3500 lasting longer >30'



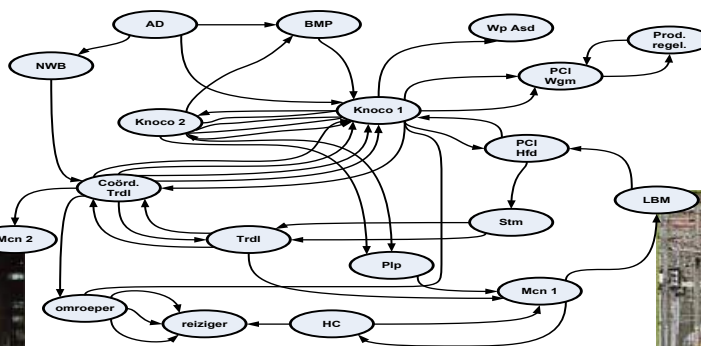
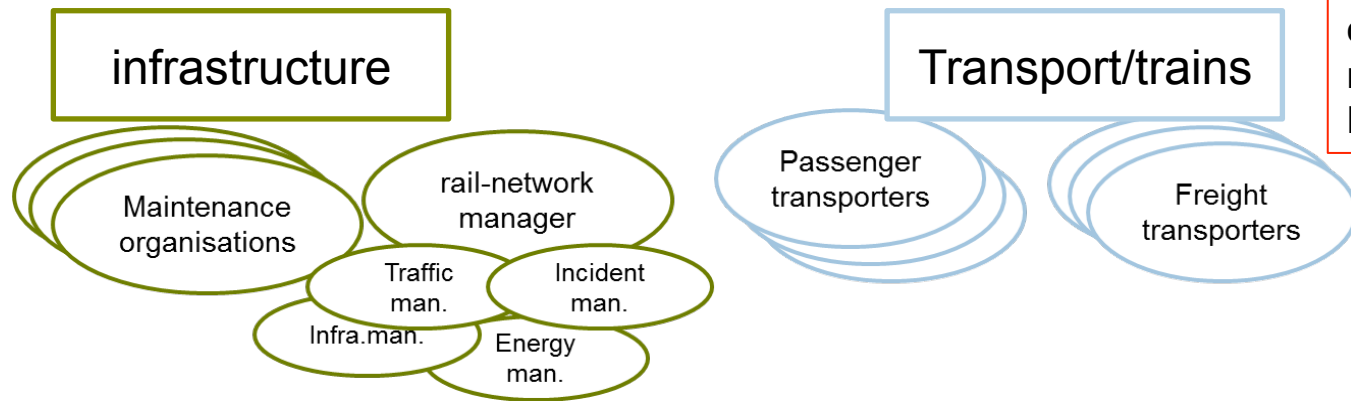
Hollandse Hoogte





Rail network management NLD before October 2010

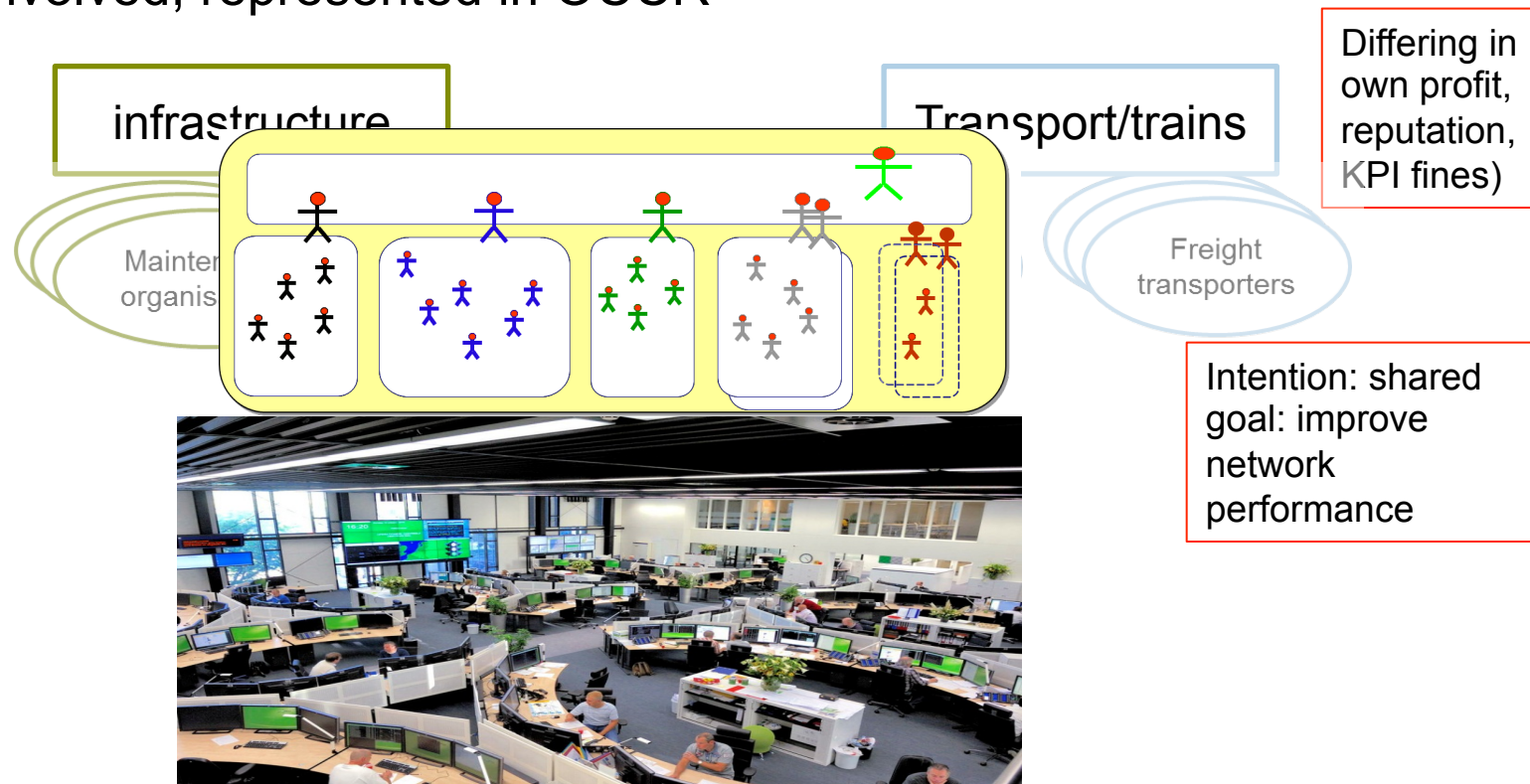
- › Parties and specialists of diverse organisations (elements) involved in network management





Rail network management NLD after October 2010

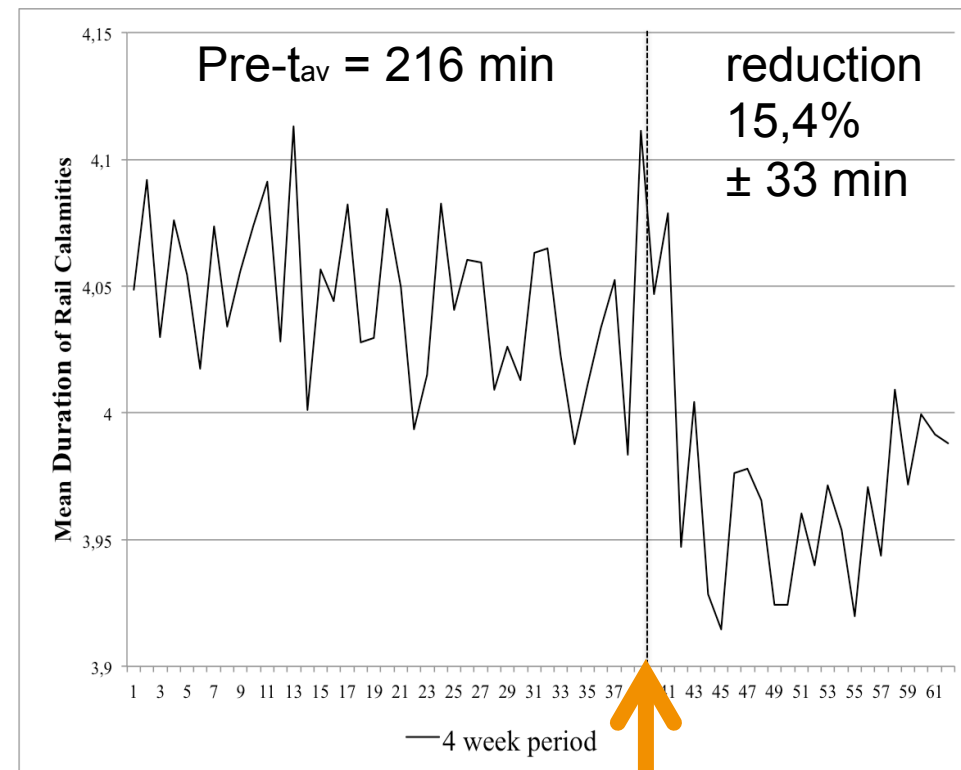
- ▶ Parties and specialists of diverse organisations (elements) involved, represented in OCCR





MTS effectiveness: Is there an OCCR effect ?

- › Interrupted time series analyses (ARIMA) on rail calamities data, period Dec 2007 – Aug 2012, 1718 days, 19,431 calamities (from Rail Database)
- › Criterion value: for each day: mean duration of all calamities that started that day (duration= begin time - complete resolution)
- › 1042 criterion values before OCCR and 676 criterion values after





Conclusion & Outlook

- › Implementation of MTS OCCR resulted in significant improvement of calamity management
- › Direct intensive reciprocal interactions with all parties
- › Immediate balancing of positions and interests in relation to distal goal – reduction of delays
- › Achieved supra-regional coordination ownership
- › Next steps:
 - › Detailed pre-post analysis of underlying driving factors
 - › Detailed analysis of coming calamities and measured interactions (a.o. sociometric sensors)
 - › Life cycle / longitudinal analysis