

Railway Engineering, CiTG, TU Delft

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Section Railway Systems

Railway Engineering Group

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Railways today

Ambition of the sector is high:

- Safer
- More trains 24/7 operations
- Less disturbances; less maintenance time
- Durability & innovation
- Etc.

All this with **less** budget....

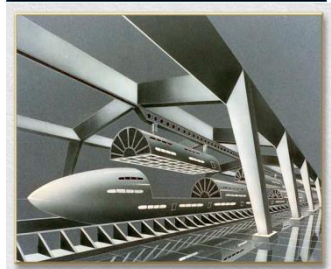
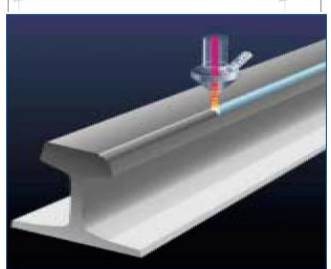
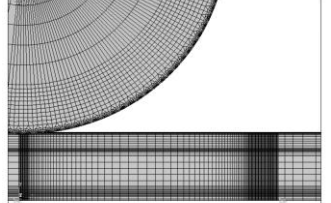
How?



System jump Railways

1. Education & system knowledge centre

2. Innovation research



1. Education

Railway Engineering
Knowledge-centre

Regular:

- BSc
- National (TU' s / HBO)
- European / worldwide
- **PDEng**
- PhD

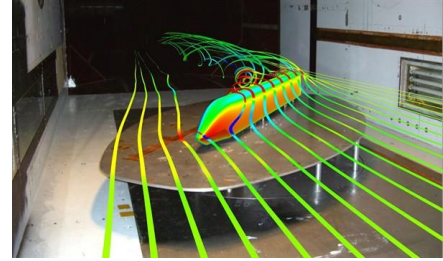
“MSc annotation Rail”

Adult courses and training:

- **ProFed** Professional Education Rail Engineering (2016),
- **MOOC**, Post Academic Studies, SMM-office

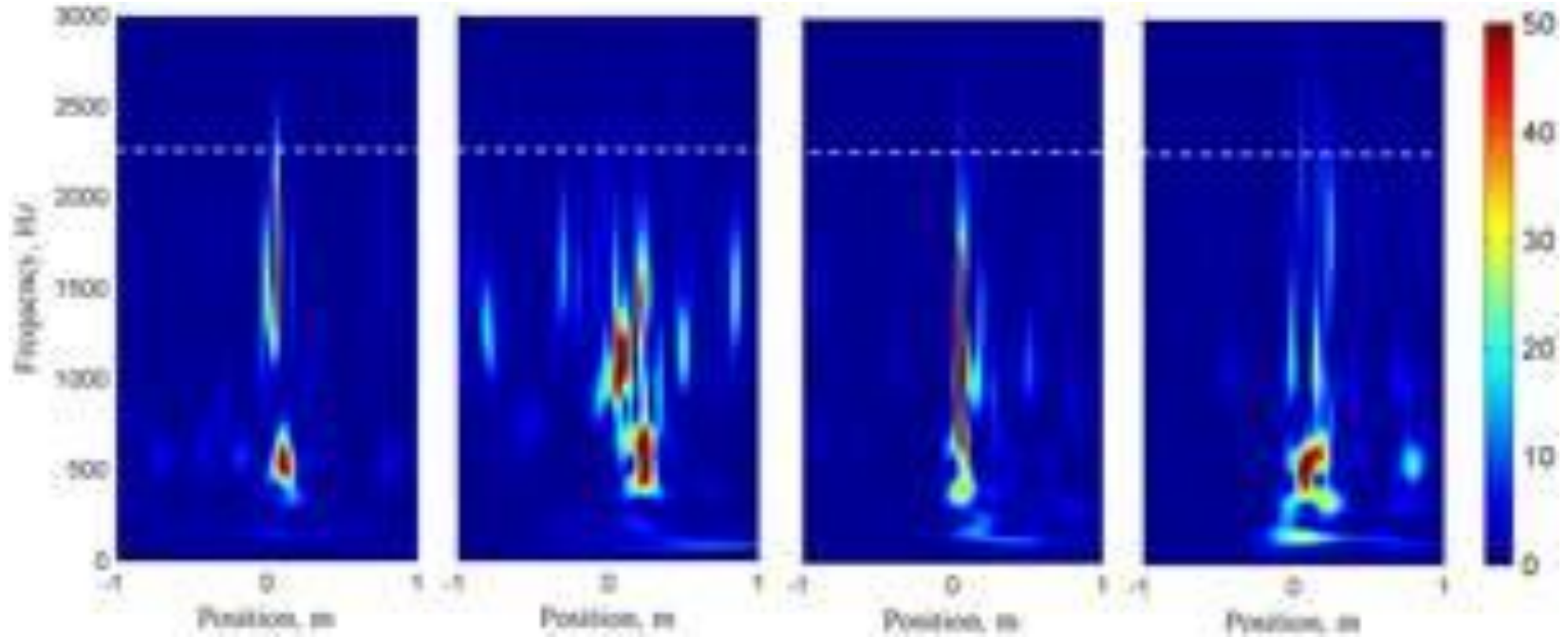
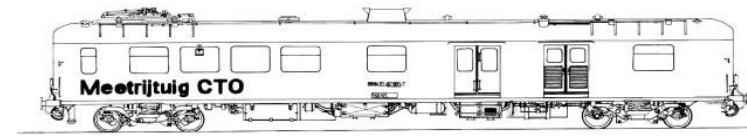


2. Innovation research

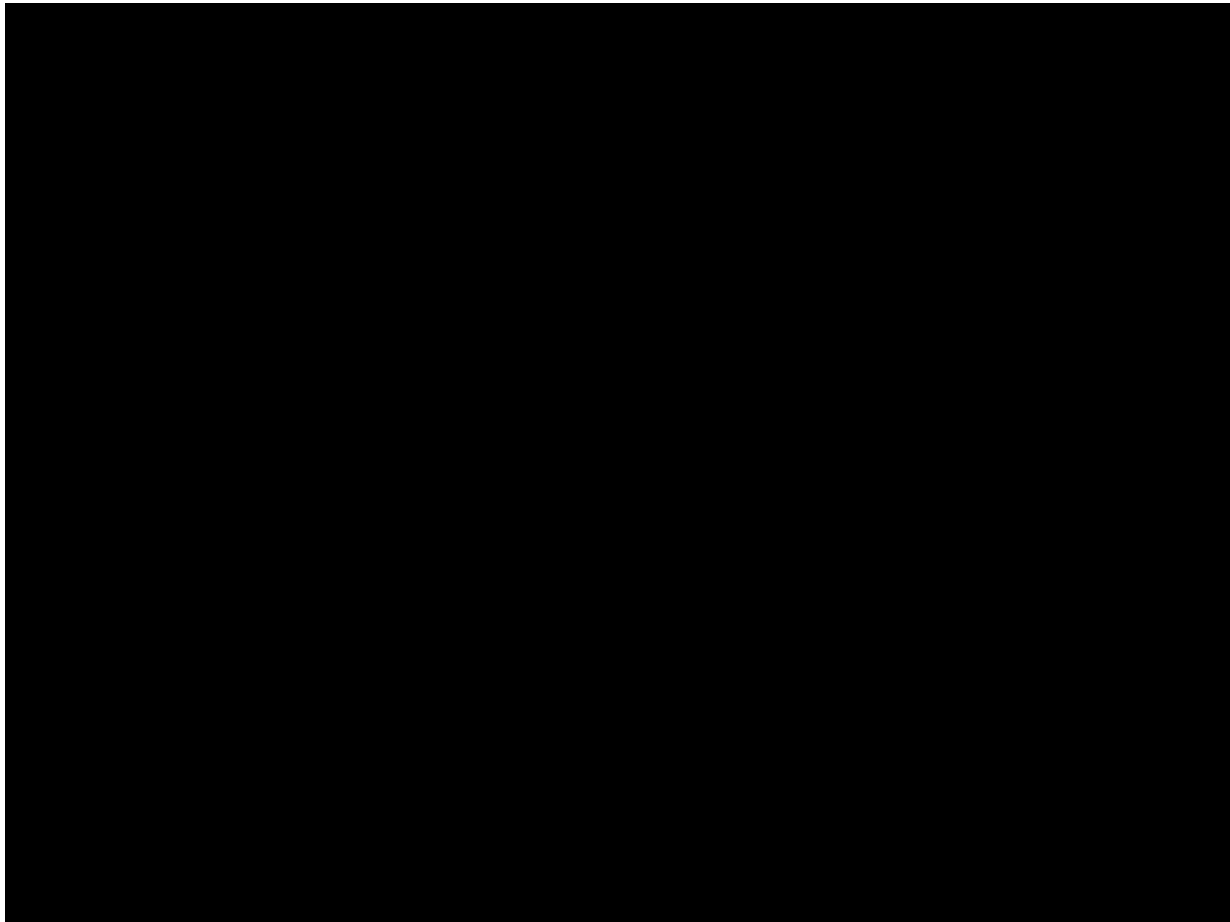


- Co-operation market worldwide and Universities
- **2 dreams:**
 - **Predictive monitoring assets on board (trains)**
 - Remote sensing (space)
 - ABA (train)
 - LDV (train)
 - **Maintenance track, out of running trains**
 - Integral system approach
 - Modular track (wear parts replacements)

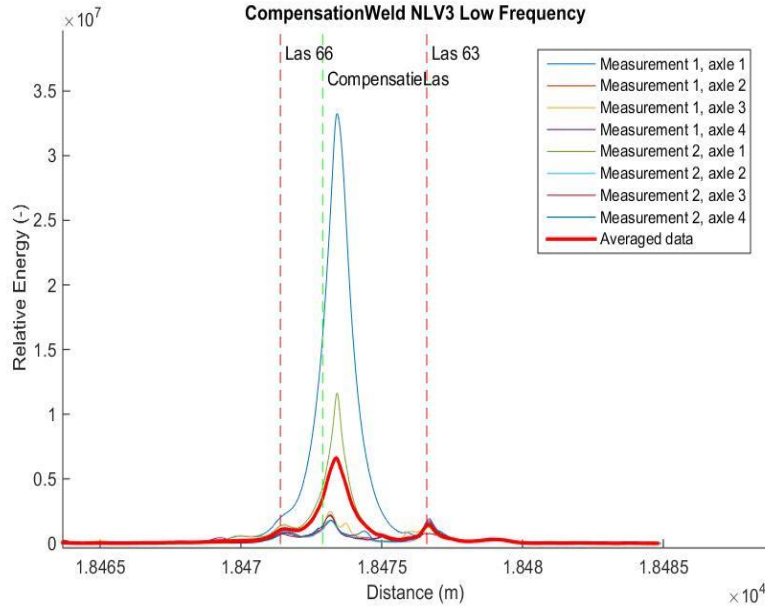
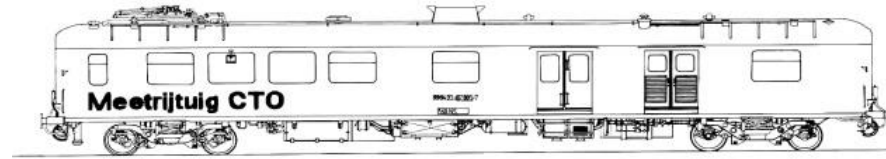
ABA technique



Animation

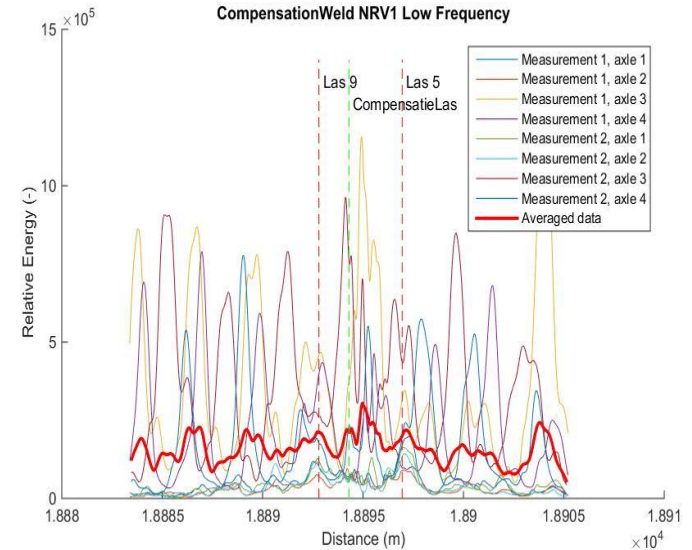


ABA Moerdijkbrug



Bad

Bad joint scale 100 times worse than normal

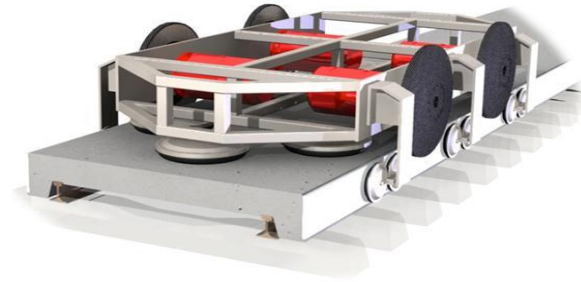


Normal

Ready to “jump”?

- Today and **future topics interfaces:**
 - Wheel/Rail (detection, WRC, slippery track)
 - Pantograph/Catenary
 - Future stations (Delft Zuid) and environment (CO2)
- **A-train**
- D2D100%EV Twizy project
- **CTO** measurement TU Delft Express
- **ERTMS TU Delft chair**
- Actual Railway Research

website: www.railahead.nl



Q/A ?



www.rail.tudelft.nl

www.railahead.nl

www.youtube.com/railahead

CTO TU Delft express

