

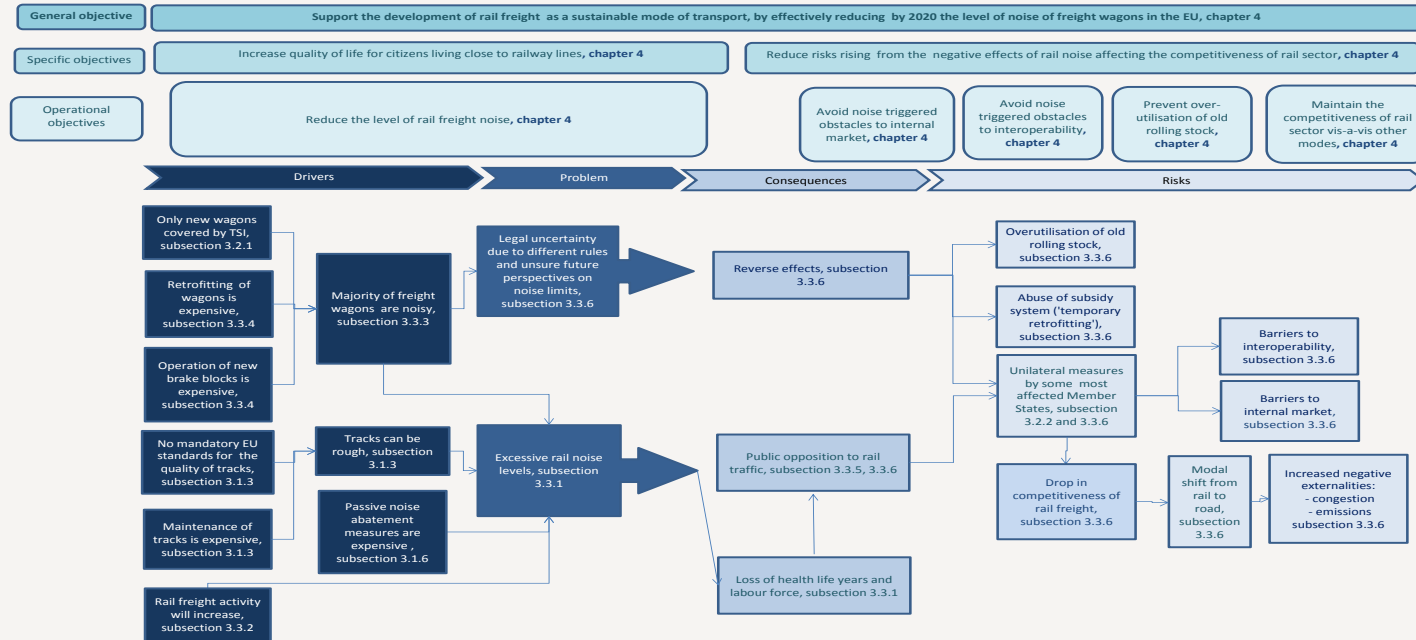
# Rail noise reduction – Impact Assessment support study

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# Headings

- > The problem of rail noise
- > Some possible solutions
- > Analysis
  - > Methods
  - > Data
- > Next steps

# The problem of rail noise



# How big is the problem?

## External costs of freight transport, Euro per 1,000 tkm, EU28

	Road freight	Rail freight
Accidents	18.0	0.2
Noise	2.7	1.1
Climate costs	2.8	0.2
Pollutants	8.9	1.2

# Some possible solutions – technical solutions

Measure	Avoided source of noise	Impact (local, network wide)	Effect
<b>K-blocks</b>	Rolling noise	Network wide	Up to 8 dB(A) – 10 dB(A)
<b>LL-blocks</b>	Rolling noise	Network wide	7 dB(A) – 10 dB(A)
<b>General grinding of bad track</b>	Rolling noise	Local	10 – 12 dB(A) (up to 20 dB(A) at very bad tracks)
<b>Special acoustic grinding</b>	Rolling noise	Local	1 – 4 dB(A) (depending on local rail roughness conditions), mostly around 2 dB(A) attended
<b>Disk brakes</b>	Rolling noise	Network wide	10 dB(A)
<b>Wheel-tuned absorbers</b>	Wheel noise	Network wide	Uncertain
<b>Bogie Shrouds together with low height barriers</b>	Wheel noise	Local	8 – 10 dB(A)
<b>Rail dampers</b>	Rail noise	Local	Uncertain
<b>Slab tracks</b>	Rail noise	Local	5 dB(A)
<b>Rail pads</b>	Rail noise	Local	3 – 4 dB(A)
<b>Different measures to lower squeal noise</b>	Squeal noise	Local	Up to 20 dB(A) depending on local conditions
<b>Barriers 2 meters high</b>	All sources	Local	5-10 dB(A)
<b>Barriers 3 – 4 meters high</b>	All sources	Local	10-15 dB(A)
<b>Housing insulation</b>	All sources	In house only	10 – 30 dB(A)

# Policy measures

- > Analysed solution paths
  - > Legal measures
    - > TSI requirements
    - > Noise ceilings
    - > Mandatory track maintenance
    - > Environmental health approach
  - > Market measures
    - > Subsidies
    - > Noise differentiated track access charges (NDTAC)

# Analysis

## > Impacts

### > Effectiveness

- > Reducing noise (quantitative analysis)
- > Guarding internal market
- > Guarding interoperability of the rail network
- > Preventing over-utilization of old wagon stock
- > Guarding competitiveness of rail freight transport (quantitative)

### > Administrative feasibility and cost

### > Coherence with other EU policies

# Methods and data

- > Literature review
  - > Costs of measures
  - > Effects of measures
  
- > Data
  - > Wagon fleet data
  - > Cross price elasticities
  - > Effect data
  - > Cost data



# Next steps

- > Early summer, final report delivered to DG MOVE
- > Currently, DG MOVE is completing its impact assessment paper
- > Expected Commission communication on rail noise 2015

# The end

Thank you