

# Tackling rail freight noise

Noise is a side effect of **all major modes** of transport and is one of the key concerns for people living near transport infrastructure.

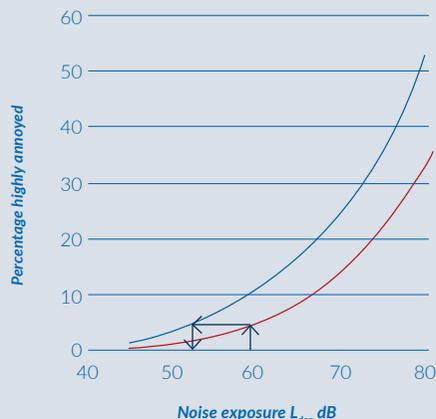
CER recognises rail freight noise as an important issue. Its members are putting the highest efforts into addressing the problem and **implementing measures to reduce it at reasonable cost**, within the existing legal framework.

On 22 December 2015, the European Commission adopted a **Staff Working Document**, which reviewed existing measures aimed at effective reduction of rail noise from freight wagons and provided insight into additional possible solutions that might be considered by **policymakers** in the years to come.

## Road noise felt more annoying than rail noise



Noise exposure from transport sources can lead to annoyance, sleep disturbance, and related increases in the risk of hypertension and cardiovascular disease. The relationship between noise exposure and its effects is called dose response relationship. The dose response relation for annoyance, the most common effect of noise, indicates that **for equal levels of noise exposure the level of annoyance is much higher for road than for rail noise.**



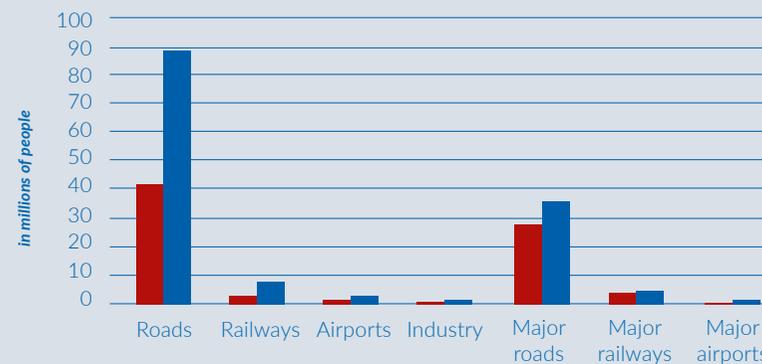
Source: EU Position Paper, 2002

■ Rail ■ Road

## 3% of Europeans are exposed to rail noise



The European Environment Agency estimated that **road traffic noise, both inside and outside urban areas, is the most dominant source of environmental noise, affecting 125 million European citizens** with a human exposure above the action levels defined by the Environmental Noise Directive. Railways are the **second most dominant source of environmental noise**, with around 13 million people affected.



Source: European Environment Agency, 2014

■ Reported ■ Estimated

# The economics of noise reduction measures

Two types of measures are in place to reduce rail noise:

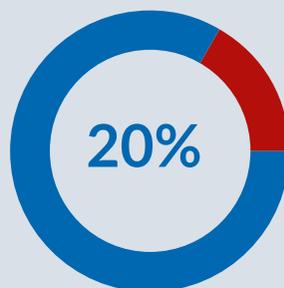
- Rolling stock
- Infrastructure

In this regard two types of action can be taken:

- Network-wide actions
- Local actions

The economic analysis of railway noise mitigation based on life-cycle cost assessment has proven that **noise barriers**, especially high ones have a poor cost-benefit ratio, while **retrofitting brake blocks** has the best cost-benefit ratio.

The EU support for encouraging the retrofitting of wagons is **limited** as it covers only up to 20% of eligible costs.

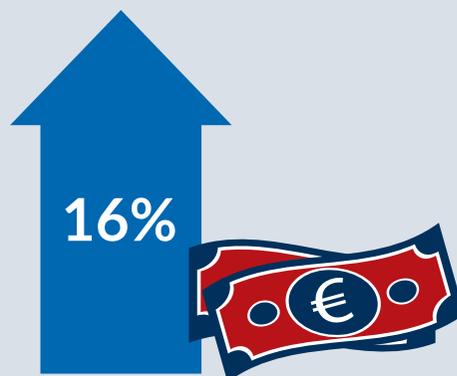


Financial incentives at the national level could complement the EU funding.

Germany, the Netherlands and Switzerland opted for noise-differentiated track access charges (NDTAC) to set **mandatory bonuses** for retrofitted wagons. Currently only one Member State has state aid in place.



Besides the retrofitting costs, the current experience concerning **life-cycle costs** for composite break blocks shows cost increases of up to 16%.



**Retrofitting of wagons leads to huge additional costs for the sector.** The more railway undertakings and wagon keepers are required to use their own resources to cover additional costs, the more competitiveness in the sector will be jeopardised. Any measures to reduce railway noise emissions should therefore be accompanied by financial support measures that substantially contribute to covering the costs of such measures.



## Existing practice

### Vehicle-related measures

#### SWITZERLAND

The Federal budget provided for the retrofitting of the Swiss fleet in 2015; according to the legislation freight vehicles that do not meet the TSI NOI **limits will be banned from entering Switzerland by 2020.**

### Infrastructure measures

#### BELGIUM

**Corrective grinding** is used to bring and keep the noise levels below reasonable limit values.

### Noise barriers

#### AUSTRIA

850 km of **noise barriers** were built.

### Noise abatement at the national level

#### GERMANY

Federal noise abatement programme aims to **reduce the perceived noise levels by half** by 2020 compared to 2000.

#### ITALY

Law earmarks **7% of the annual track maintenance budget** for noise abatement measures.

#### THE NETHERLANDS

**Noise ceilings** were introduced.

## CER rail freight noise strategy

CER is committed to pursuing noise reduction efforts based on the following strategic framework:

- The railway sector promotes **retrofitting of the cast iron brake blocks of existing freight wagons with composite brake blocks**. However, remaining financial, technical and administrative concerns must be addressed. In particular the competitiveness of railways must not be endangered.
- The railways construct **noise barriers** where the impact on noise of retrofitting existing wagons with composite brake blocks is insufficient. This complementary measure must meet **cost-benefit criteria** however.
- In certain **hot spots** further measures on the **infrastructure** (e.g. damping of the track) can be tested if they fulfil satisfactory **cost-benefit criteria**.

## Message for the policymakers

- The best way to deal with transport noise in general would be to have a global view on all **external costs of all transport modes** and deal with them in a similar way, based on the **polluter-pays principle**.
- CER advocates a **European solution** in dealing with rail freight noise. Measures at the European level should take into account the specific situation of rail freight.
- CER **opposes all operational restrictions**, such as night bans, speed restrictions or rerouting, that reduce the competitiveness of railways.
- CER requests that the **availability of financial sources** be consistent with the policy goals set by decision makers.