



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Confederation

Federal Department of the Environment,  
Transport, Energy and Communications DETEC

**Federal Office for the Environment FOEN**  
Air Pollution Control and Chemicals Division

# Transalpine freight traffic in Switzerland

R. Ballaman

WGSR – special session on transport and air pollution

July 2, 2014



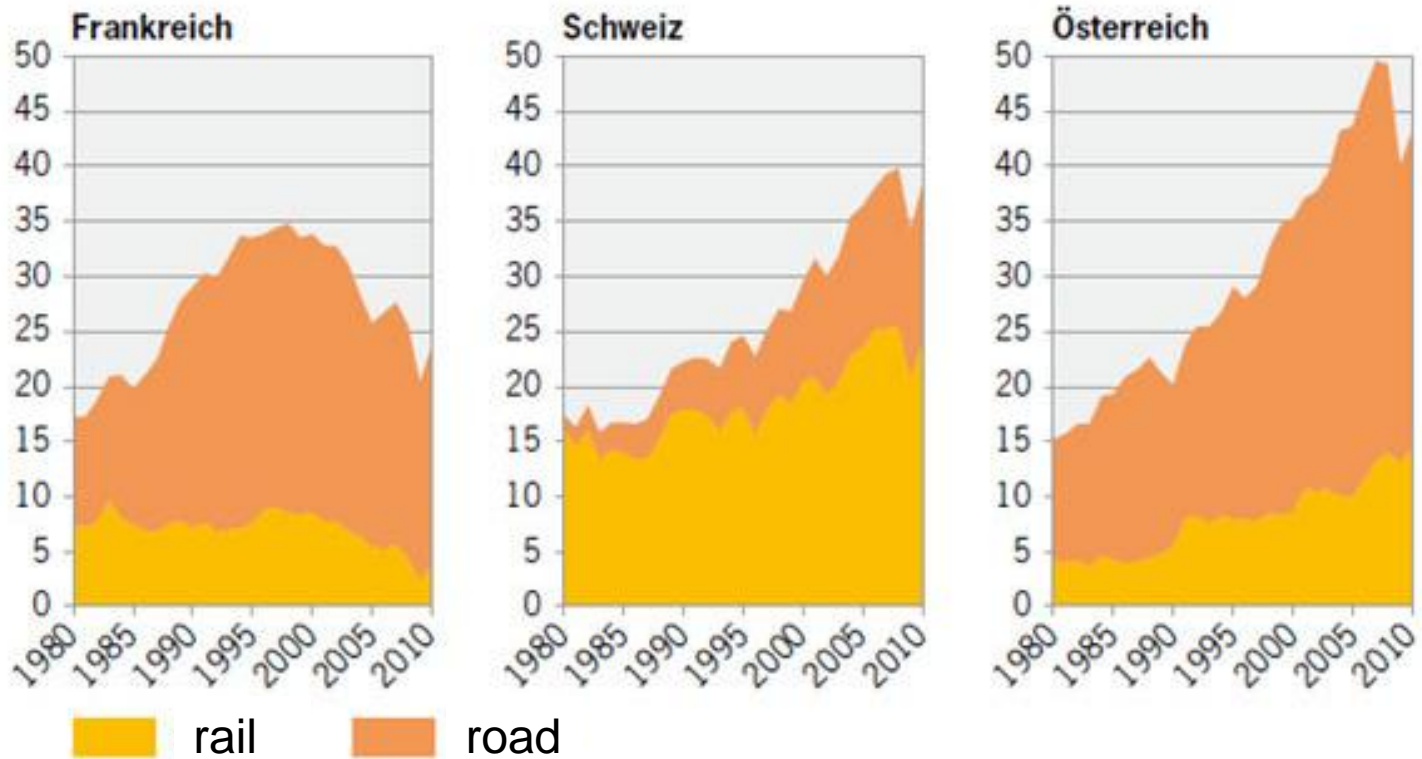
# Outline

- Which transport system for goods through the Alps ?
- From the road to the rail: a fair and efficient distance-related heavy vehicle fee (HVF)
  - One system with several goals
  - Clean lorries drive cheaper
  - How to check the outcome?



# Freight traffic crossing the Alps

## Mio tons/year



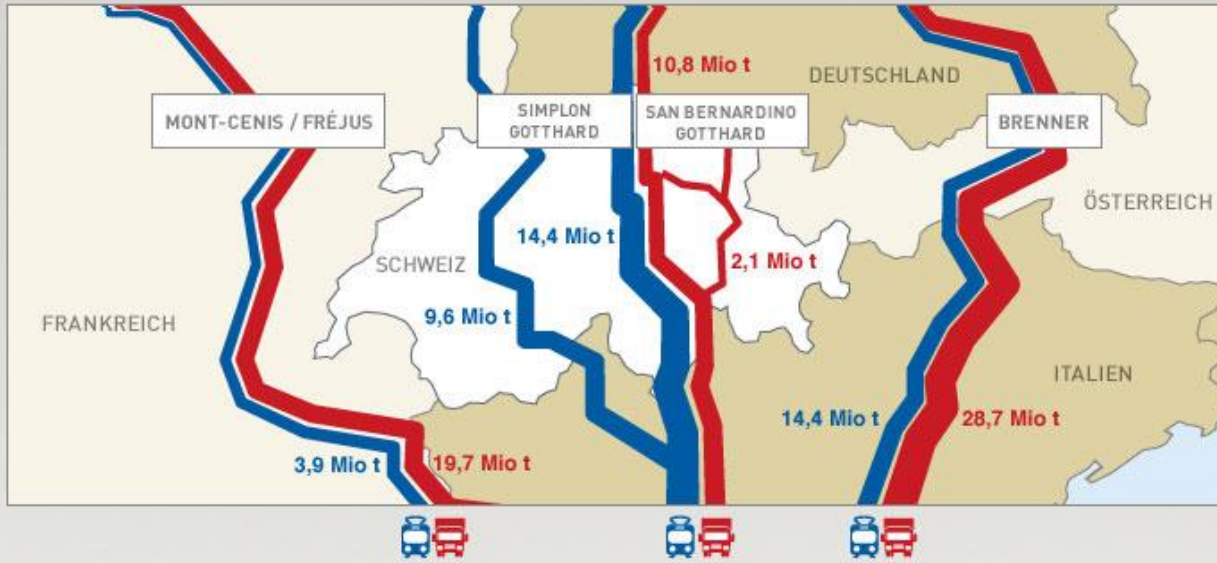
Quelle: Bundesamt für Verkehr

© BFS



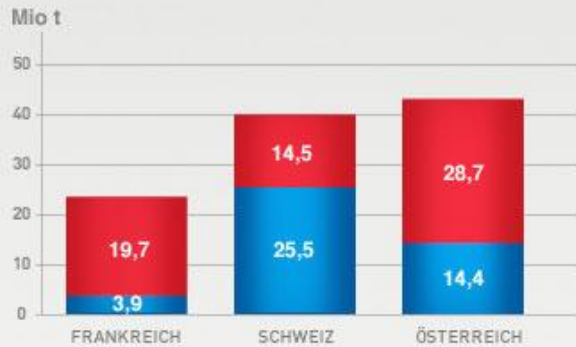
■ rail ■ road

2010



### Freight transport

Güterverkehr Strasse/Schiene in Prozent



Quelle: Bundesamt für Verkehr

Presented by swissinfo.ch



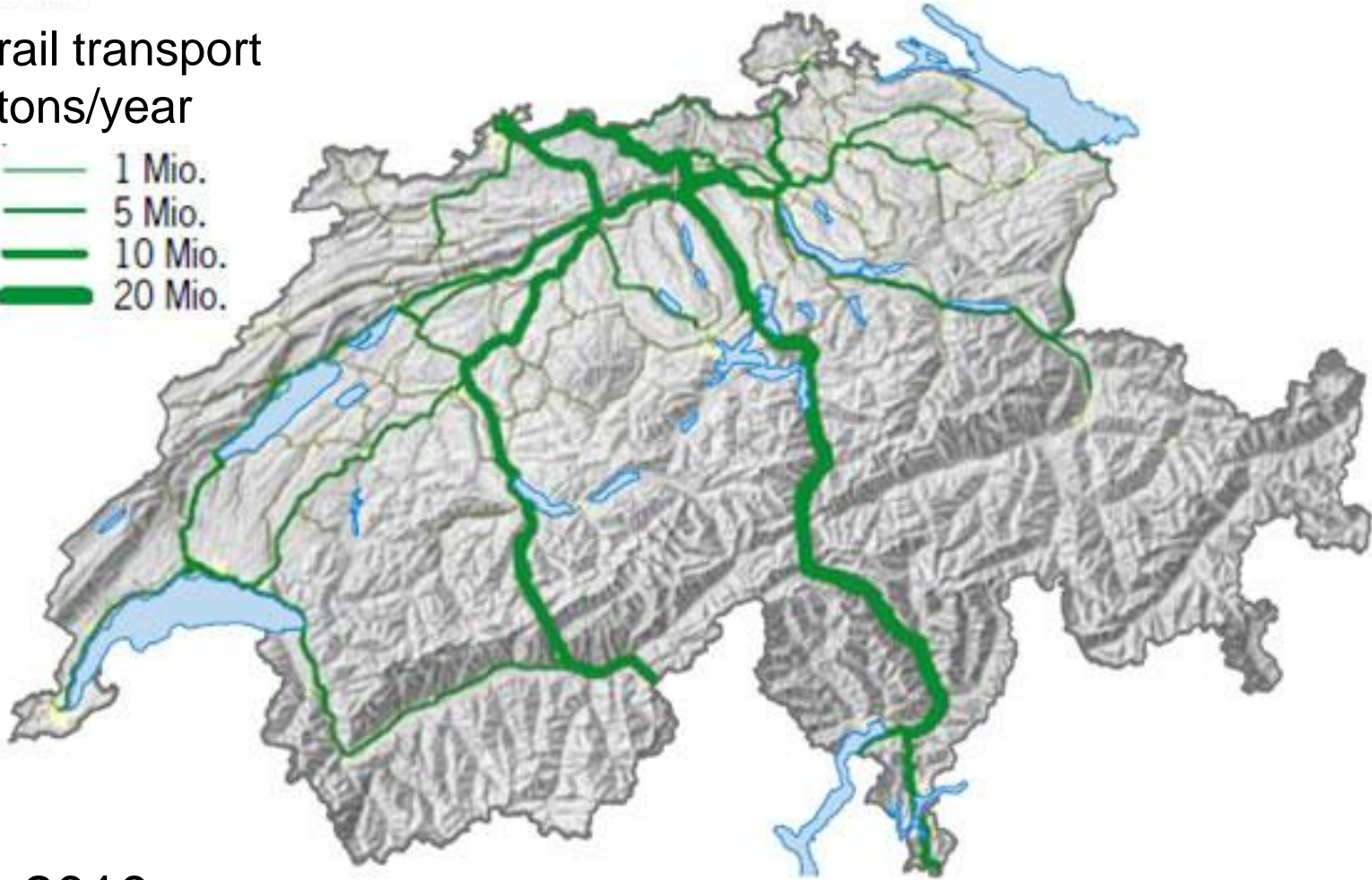
## Most important accompanying measures of Swiss transit transport policy

| Measure         | Content   | Period  |
|-----------------|---|---|
| AlpTransit/NEAT | New transalpine rail tunnels through the Gotthard and Lötschberg  | Lötschberg: opened in 2007<br>Gotthard: Scheduled to open in 2016 |
| Transfer Law    | Foundations for accompanying measures such as promoting combined transport. Makes the necessary funding available (1,830 million Swiss francs). Contains the basis for introducing an Alpine Crossing Exchange. | Payment structure for 2011–2018                                   |
| Rail reform     | The rail reform introduces intra-modal competition into rail transport. There is free access to the European network for goods transport. The SBB is refinanced.  | In force since the beginning of 1999                              |



# New transalpine rail tunnels

rail transport  
tons/year



2010



## The external costs of heavy goods traffic in 2007

In million Swiss francs, Total 1746

Further domains 202

Congestion costs 269

Nature and landscape 64

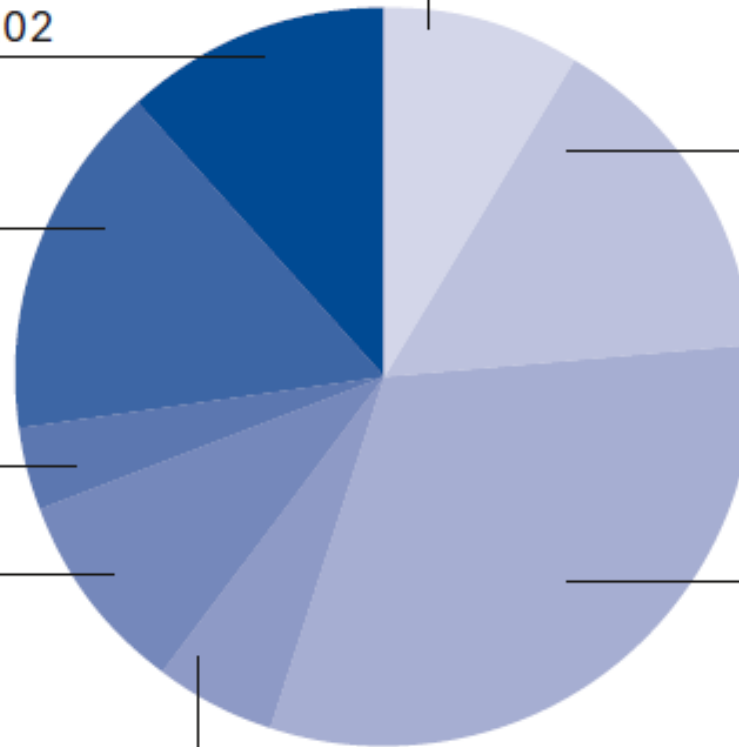
Climate costs 158

Damage to buildings due to air pollution 92

Accidents 155

Noise 261

Health care costs due to air pollution 546

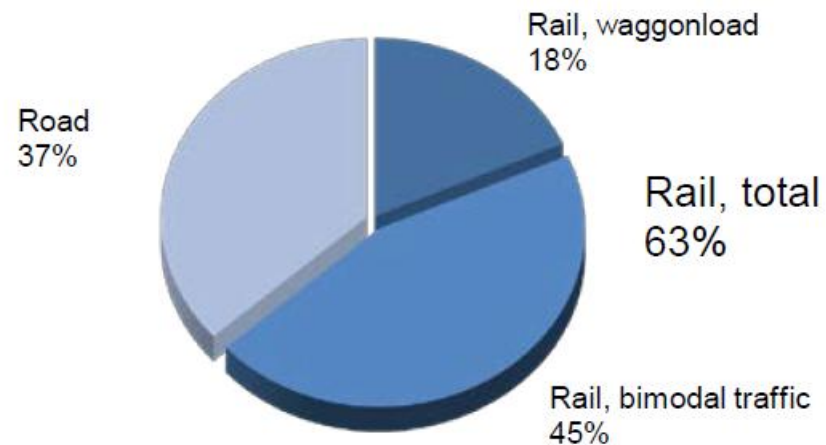


# The distance-related heavy vehicle fee: one system with several goals



The HVF has many goals. For the first time in Europe, the external costs of freight transport are being internalised. It will also help to finance large-scale railway projects. At the same time it is an important instrument for encouraging the transfer of goods to rail.

Modal Split 2012







# Heavy vehicle fee: rates

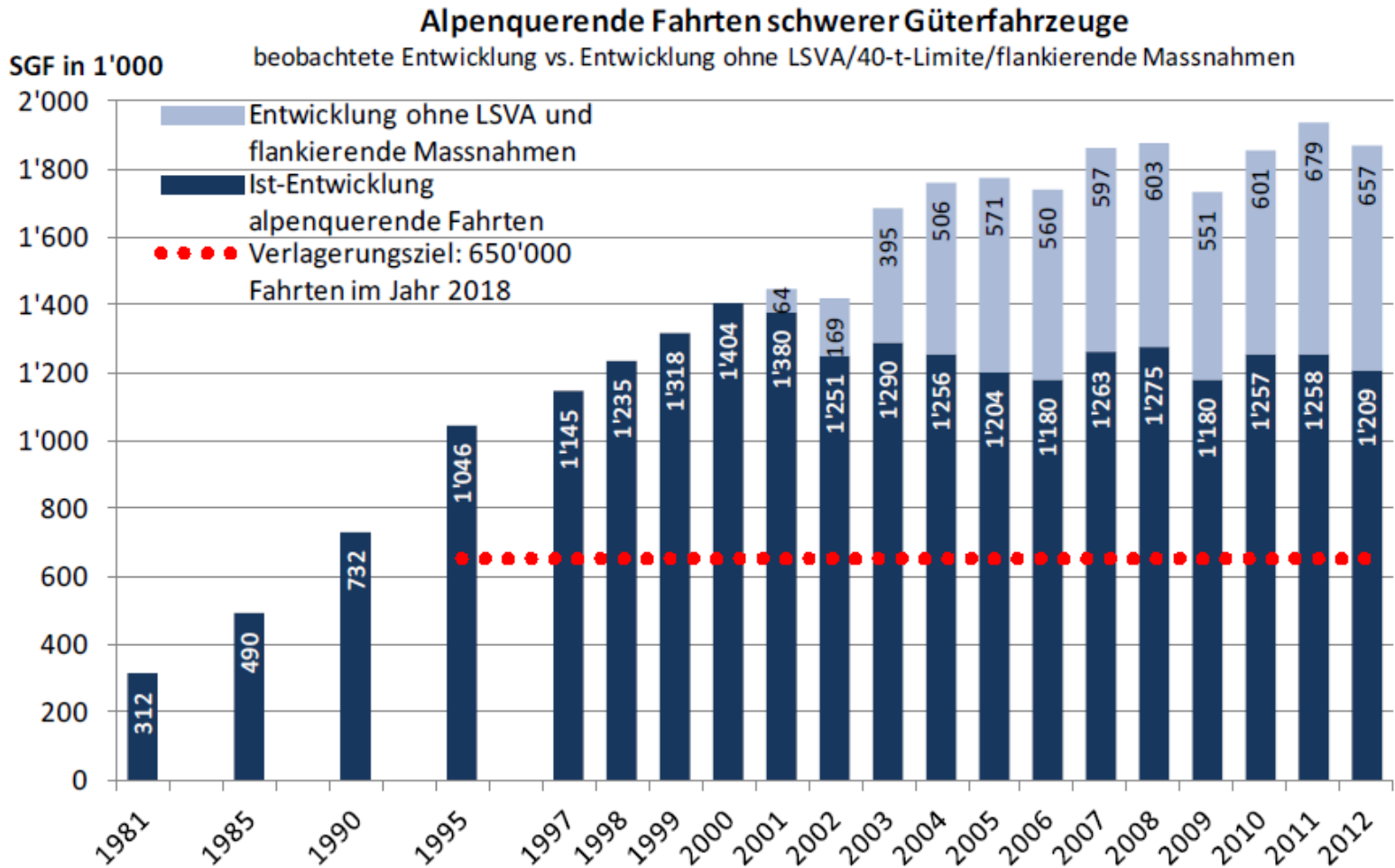
| Euro category | rate (ct./tkm) |
|---------------|----------------|
| Euro 0, I, II | 3.10           |
| Euro III      | 2.69           |
| Euro IV, V    | 2.28           |

- 10% discount for Euro II and III vehicles retrofitted with DPF
- 10% discount for Euro VI (i.e 2.05 ct./km)



# Freight traffic crossing the Alps

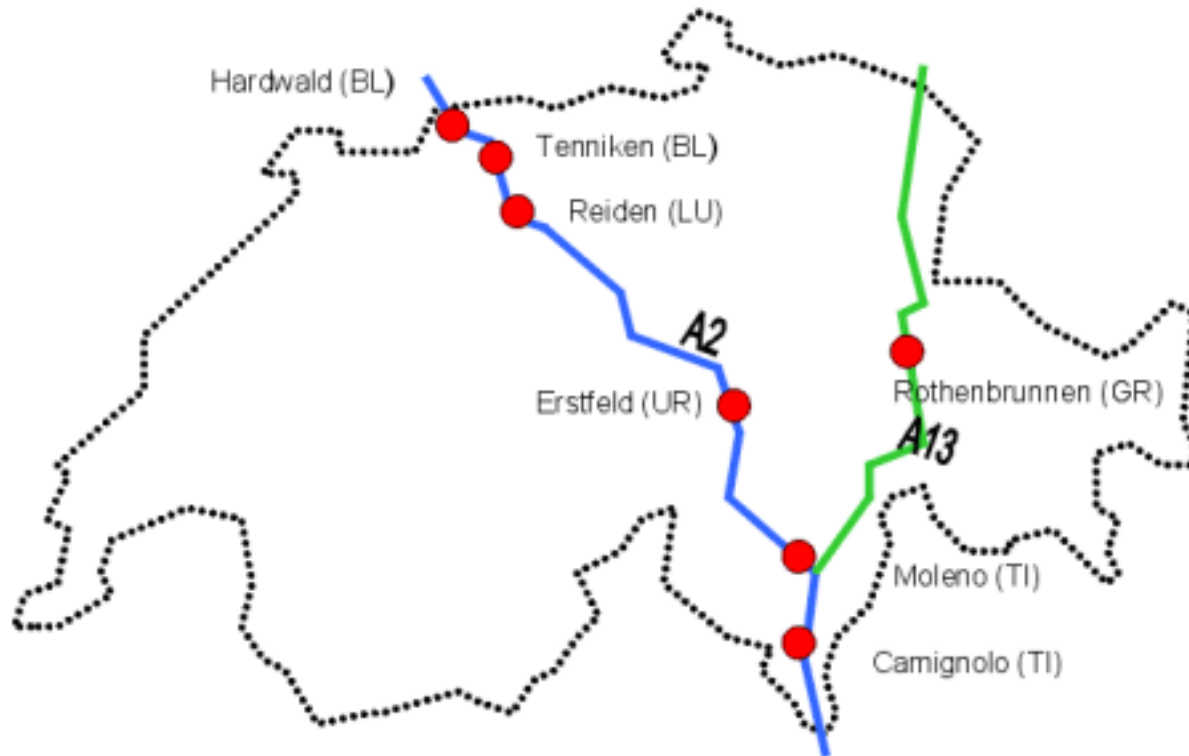
(unit in 1000 heavy duty vehicles / year)





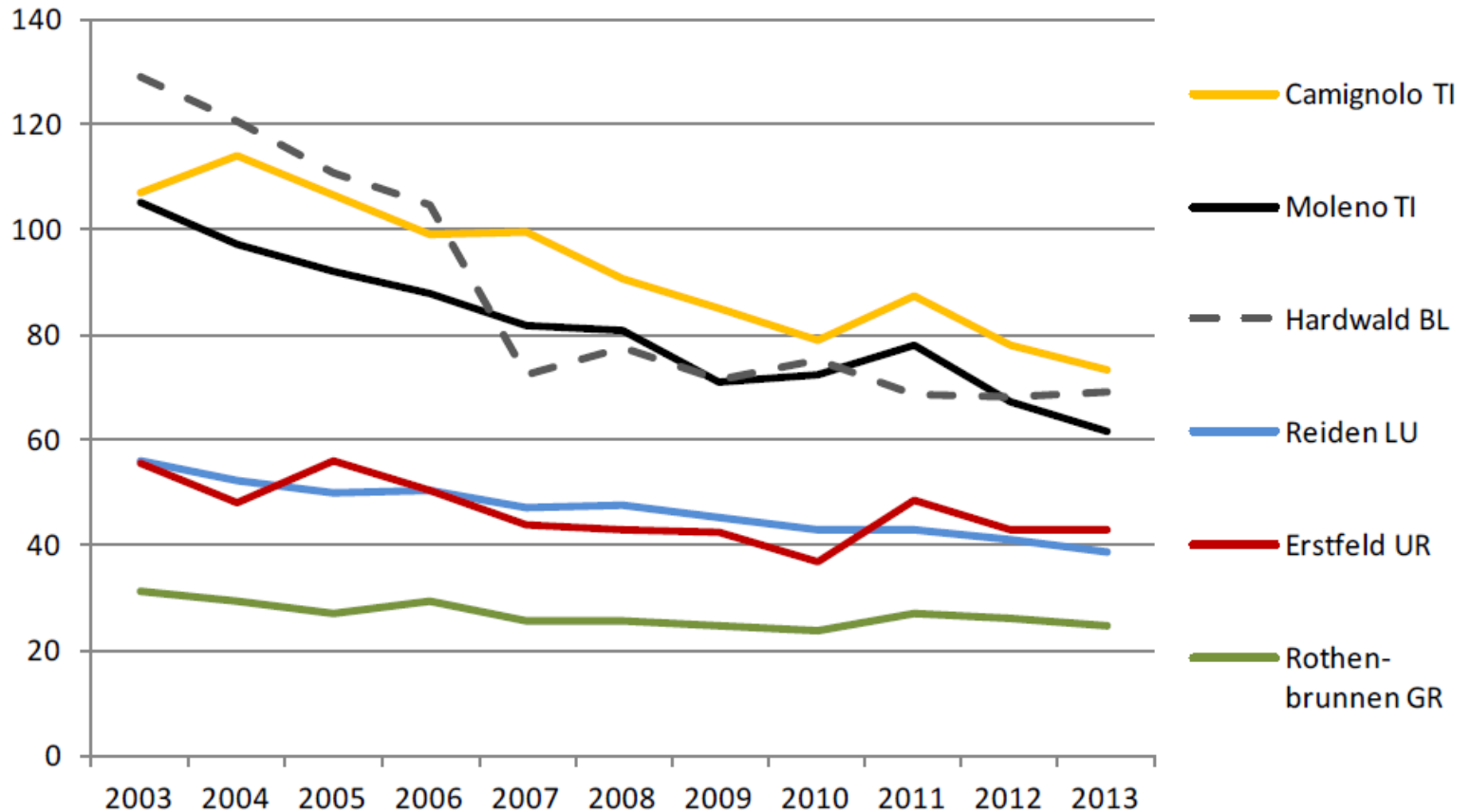
# Monitoring of Supporting Measures – Environment (MSM-E)

7 monitoring stations to measure the air and noise pollution generated by road traffic (launched in 2004)





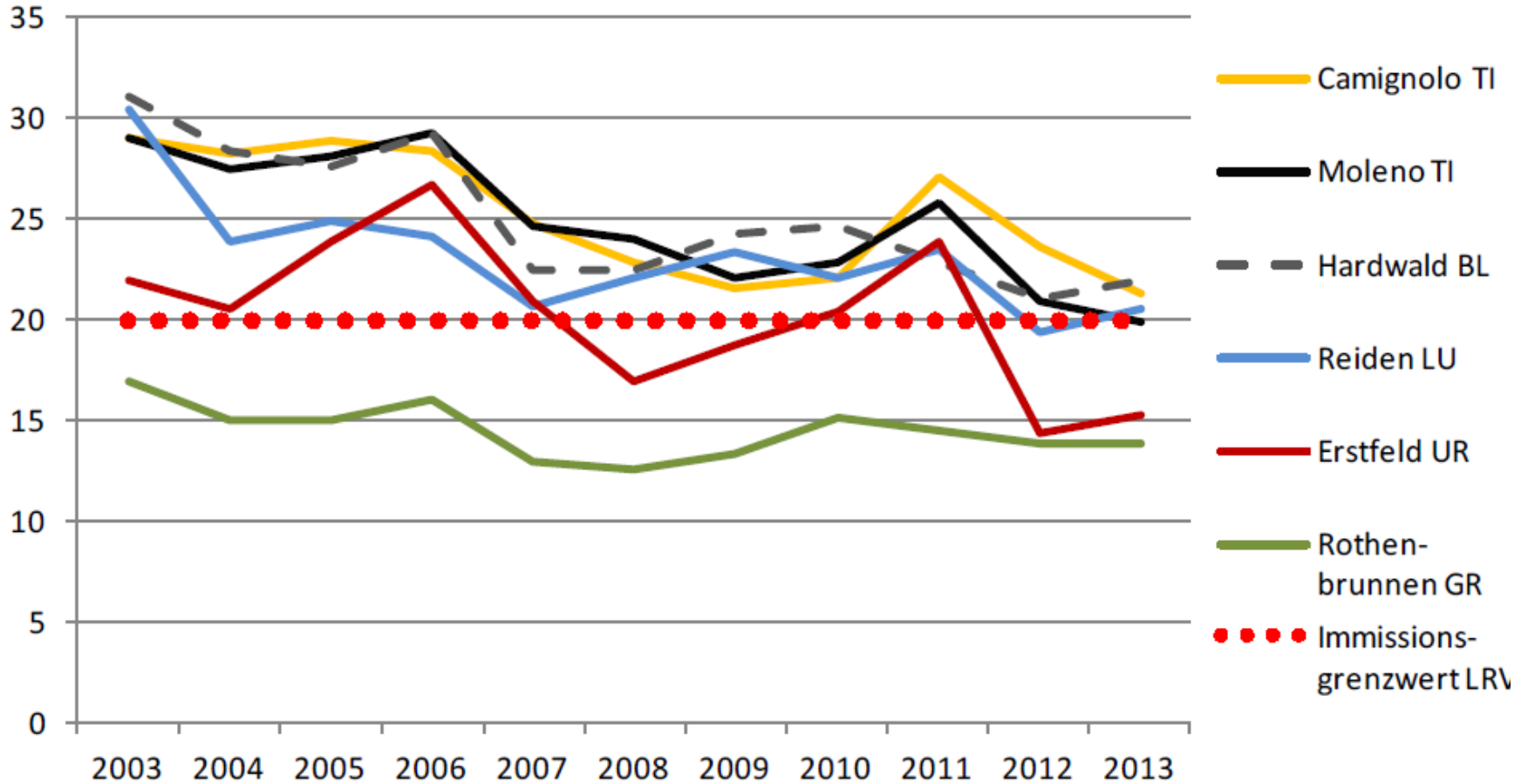
# NOx concentrations 2003-2013 (ppb)



Quelle: Bundesamt für Umwelt BAFU, MFM-U



# PM10 concentrations 2003-2013 ( $\mu\text{g}/\text{m}^3$ )



Quelle: Bundesamt für Umwelt BAFU, MFM-U



# More information

<http://www.are.admin.ch/themen/verkehr/00250/00461/index.html?lang=en>

Video on « Alptransit and Europe »:

[http://www.bav.admin.ch/dokumentation/mediathek/03729/index.html#sprungmarke10\\_30](http://www.bav.admin.ch/dokumentation/mediathek/03729/index.html#sprungmarke10_30)

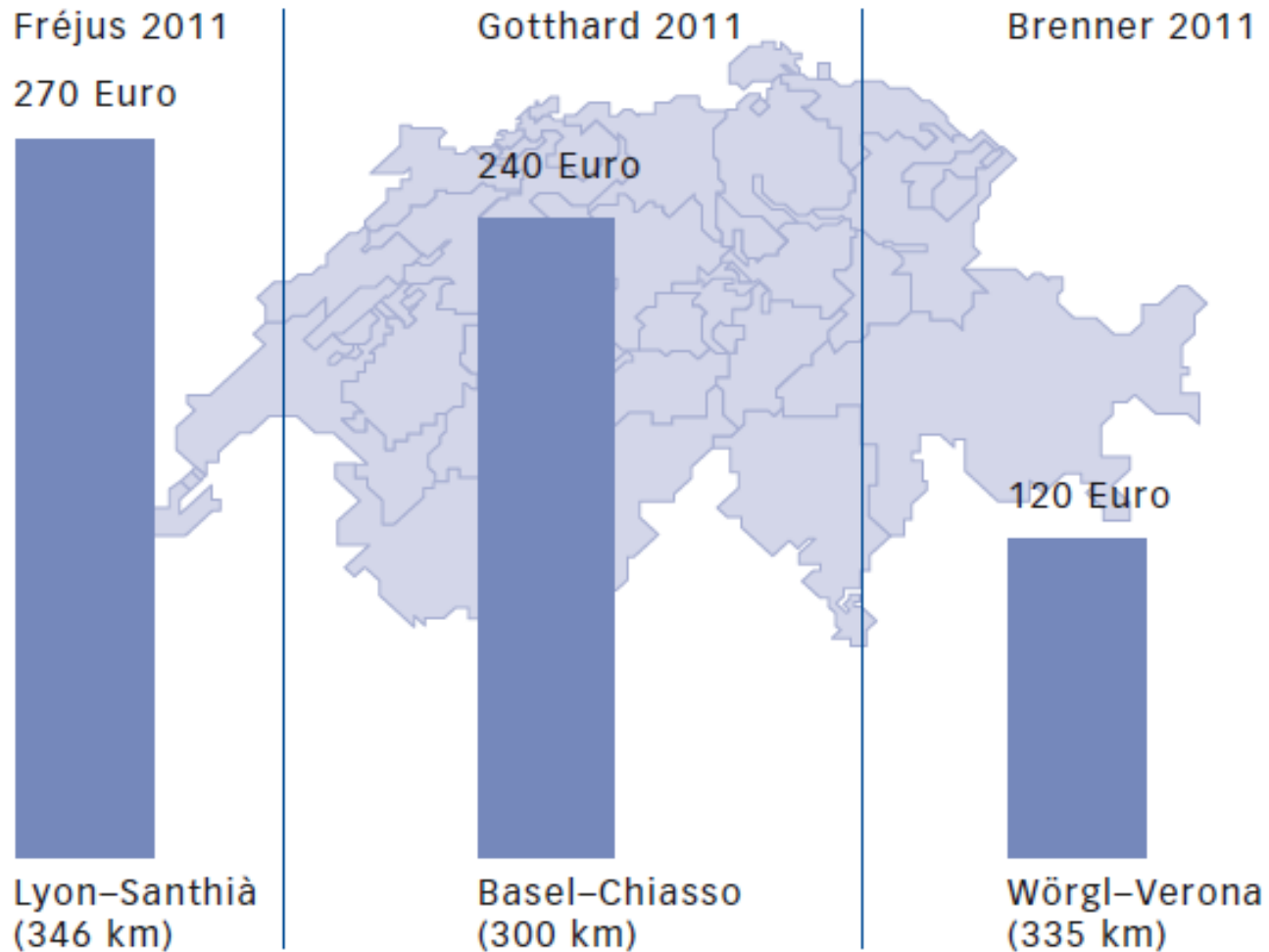




# Additional information



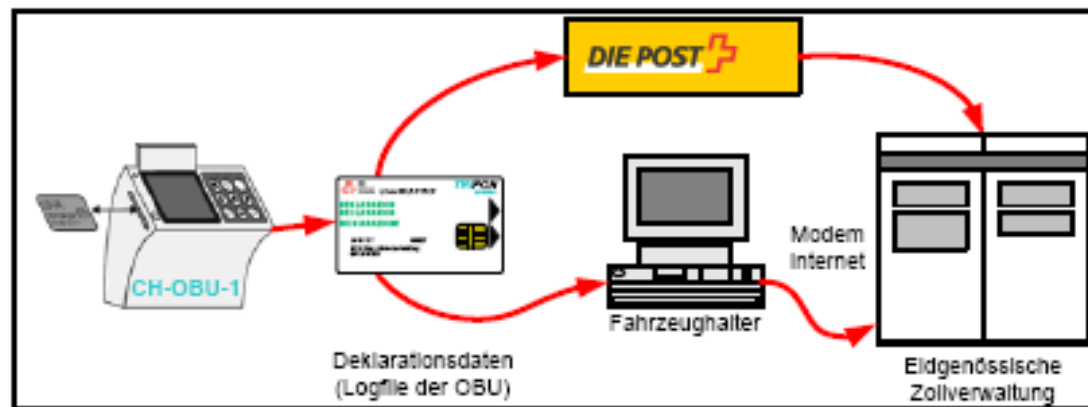
## Comparison of Transit fees on Fréjus, Gotthard and Brenner







# On-board unit to register the driven mileage and file chip card for monthly report to custom authorities for accounting





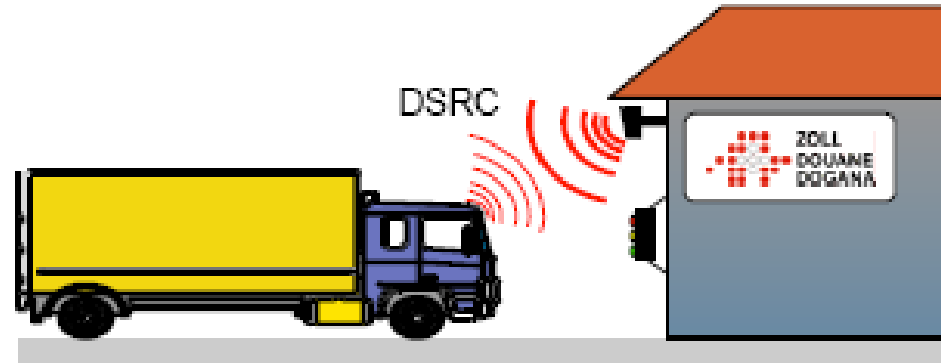
# Driving control on the major traffic axes to check the functioning systems



Kontrollanlage bei Bad Ragaz



# Turning on/off of OBU by custom or identification card for personal notification



Fahrzeug unter einer DSRC-Bake

