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Eidgenössisches Departement für  
Umwelt, Verkehr, Energie und Kommunikation UVEK  
**Bundesamt für Raumentwicklung**

# The Swiss Heavy Goods Vehicle Fee

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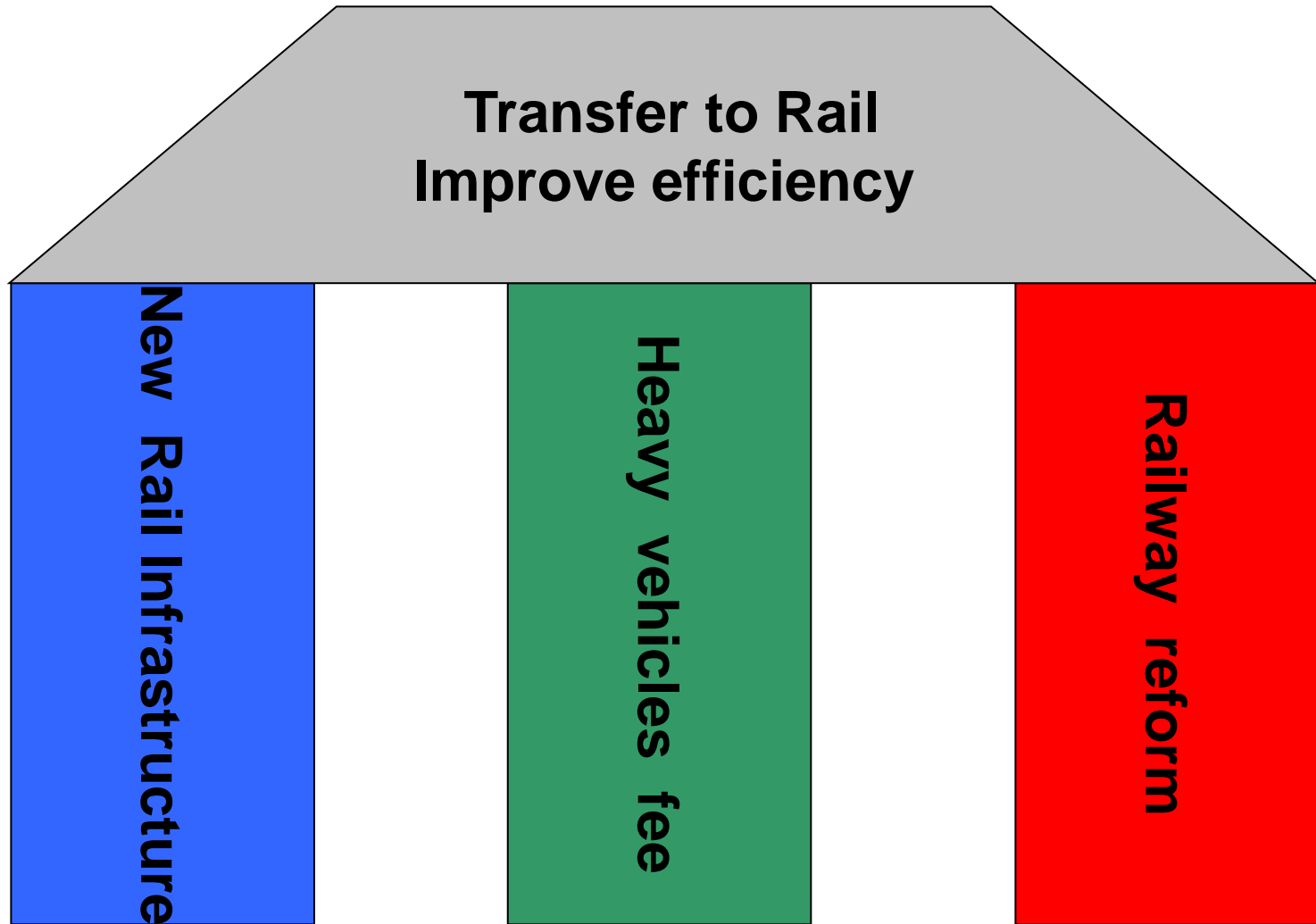


# Driver for Introduction: Transit Traffic





# The Swiss Policy





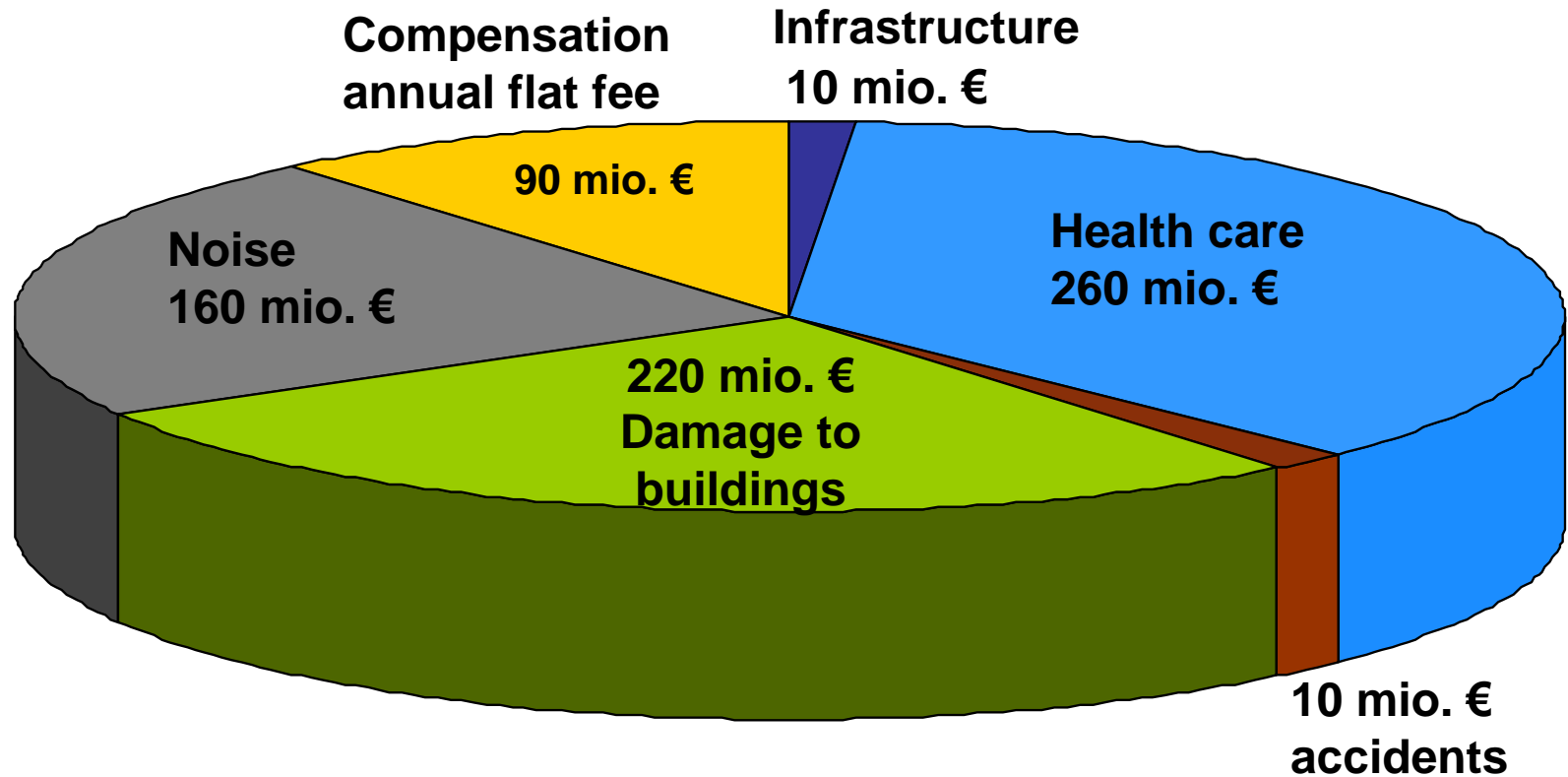
# Objectives of HVF

- Polluter pays Principle
- Environmental Protection
- Transfer to Rail





# Uncovered Costs



**Total 750 Mio € (in 1993)**



# Calculation of the Rate

Total uncovered Costs (750 Mio €)

Total Transport Performance 47 (Bio tkm)

$$\text{Rate} = \frac{750 \text{ Mio €}}{47 \text{ Bio tkm}} = \mathbf{1.6 \text{ Ct/tkm}}$$



# Design of the Fee

- Vehicles with admissible Weight > 3.5t
- For Use of all Roads
- Performance-related
  - Distance
  - Weight (Vehicle and Trailer)
  - Emissions (Situation since 2009)
    - Euro 0/1/2: 2,0 €Cts/tkm
    - Euro 3: 1,8 €Cts/tkm
    - Euro 4-6: 1.5 €Cts/tkm



# Implementation

- 1.1.2001
  - Introduction HVF (Rate 1.1 Ct/tkm)
  - Replacement of flat Fee (similar Eurovignette)
  - Increase Weight Limit from 28 to 34t
- 1.1.2005
  - Raise HVF Rate to 1.6 Ct/tkm
  - Increase Weight Limit to 40t
- 1.1.2008
  - Raise HVF to 1.8 Ct/tkm



# Tax Relaxations

- Exemptions for specific Vehicle Categories
  - Army
  - Agriculture
  - Police, Fire Brigade etc.
  - Public Transport
  - Etc.
- Reduced rates or reimbursements for others
  - Combined Transport
  - Transport of Timber
  - Transport of Milk and Cattle



# Effects of the Fee

- Road Transport Business
- Costs
- Vehicle Kilometers
- Transalpine Trips
- Rail
- Rail Infrastructure
- Peripheral regions
- Environment



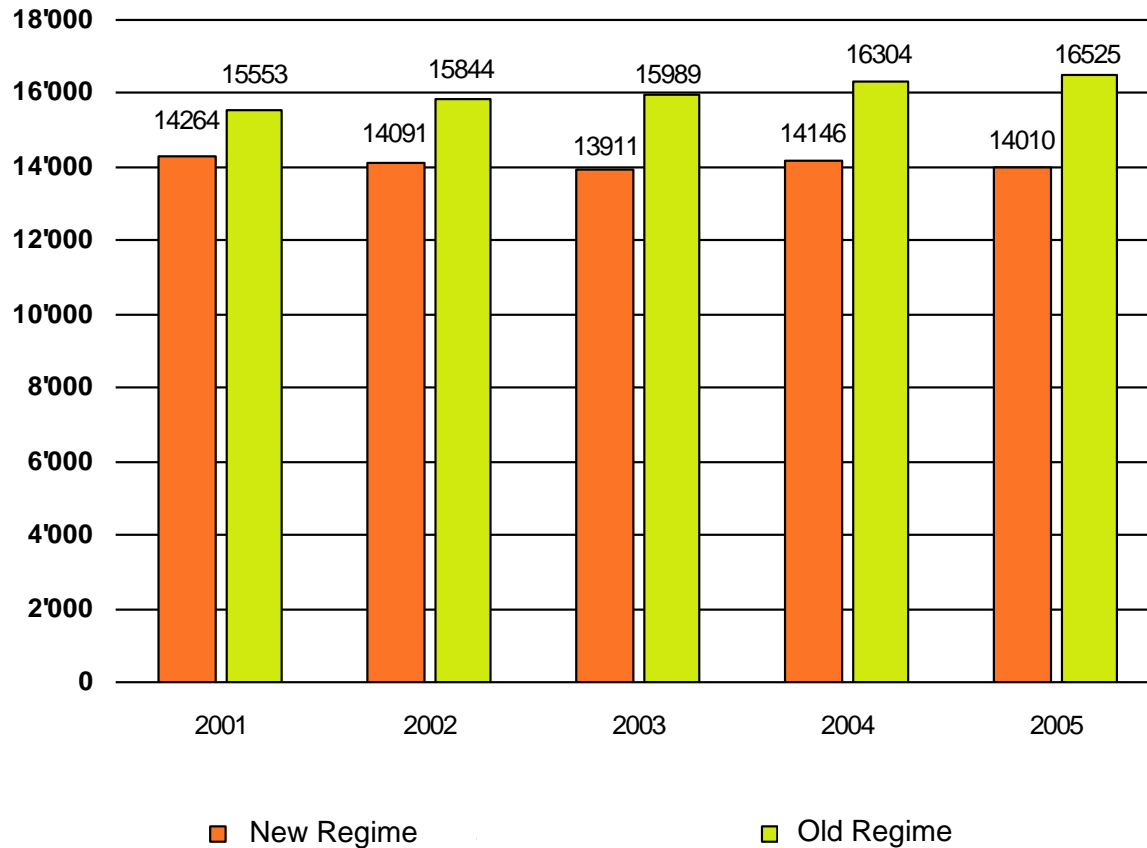
# Impact on Road Transport Business

- Adjustments of the Fleet Composition
  - Cleaner = cheaper
  - Lower Weight = Lower Fee
- Changes in the Haulier Business
  - Concentration due to
    - Better use of Logistics (less empty Trips)
    - Fleet Adaptation can better be realised
- Employment: stable (14'000 employees)



# Impact on Road Transport Business: Employment

Employment



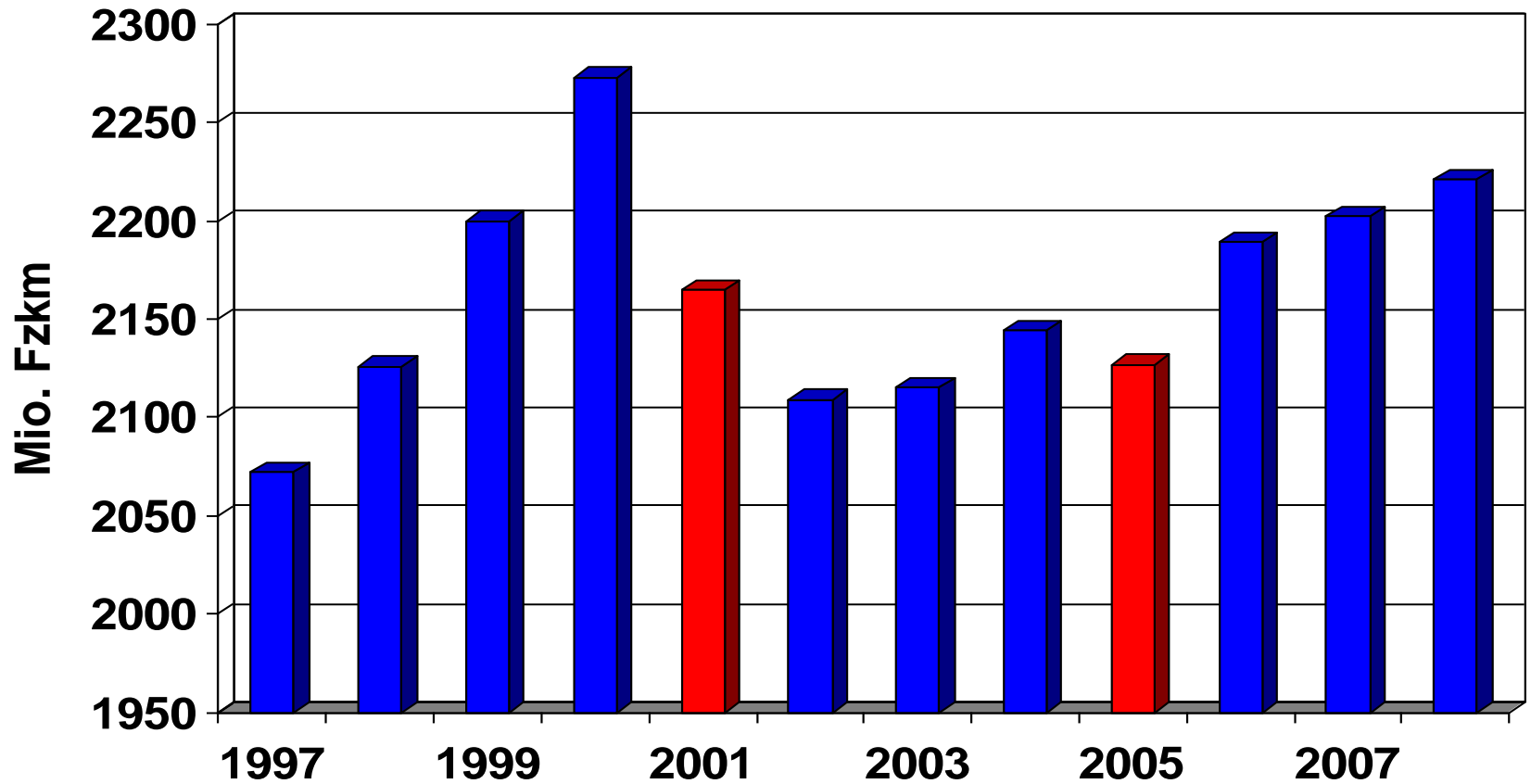


# Impact on Costs

- Impact on Road Transport Costs: small
  - Fee equal to about 20% of Costs, but
  - Outbalanced by Productivity gains
    - Higher weight limit
    - Less empty trips
- Impact on final customer price: neglectable
  - Transport Costs: on average only 1-2% of final price
  - Impact on Inflation: Only 0.11% (According to Federal Office for Statistics)

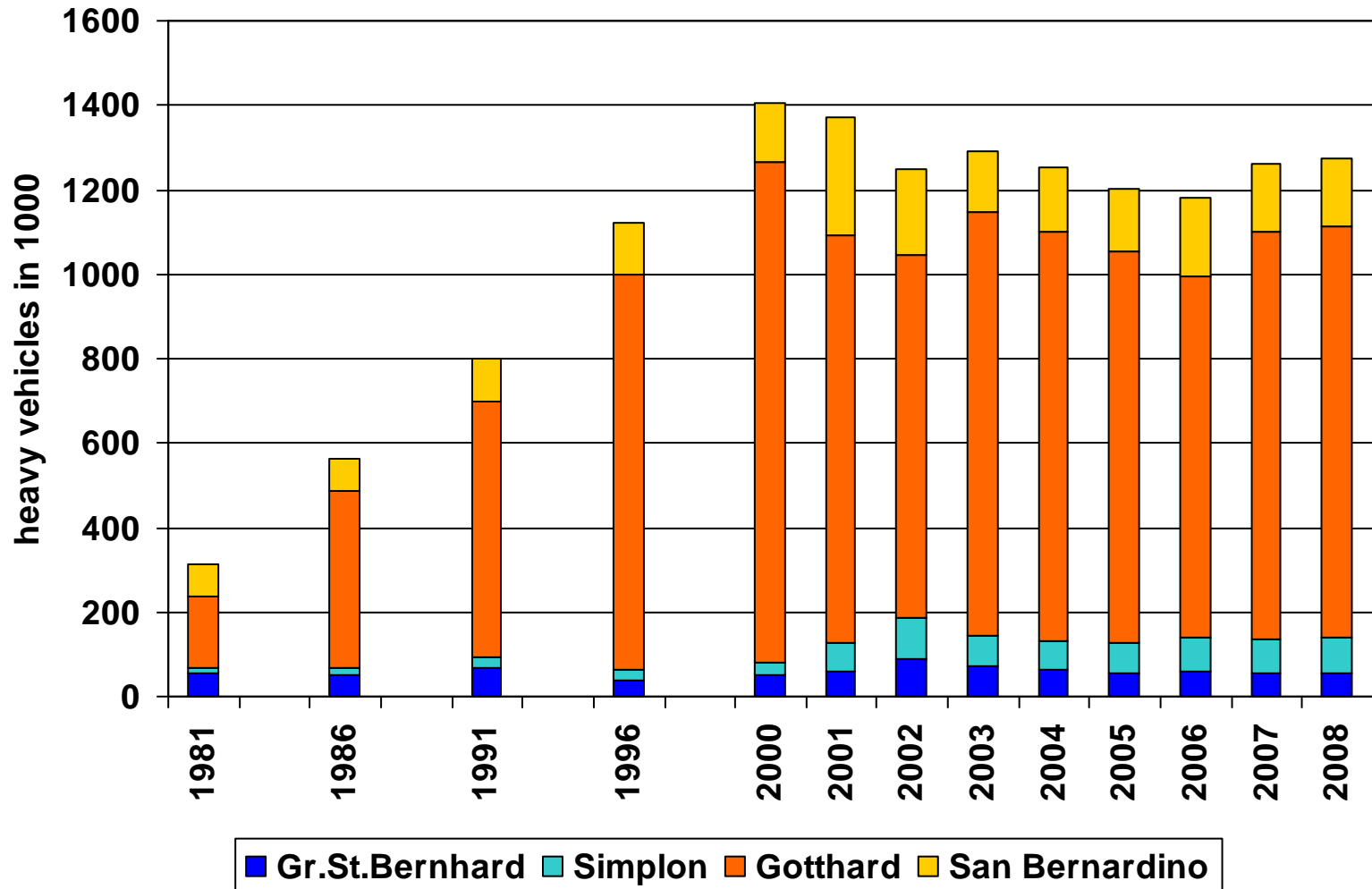


# Effects on Vehicle Kilometers





# Effects on Alpine Trips



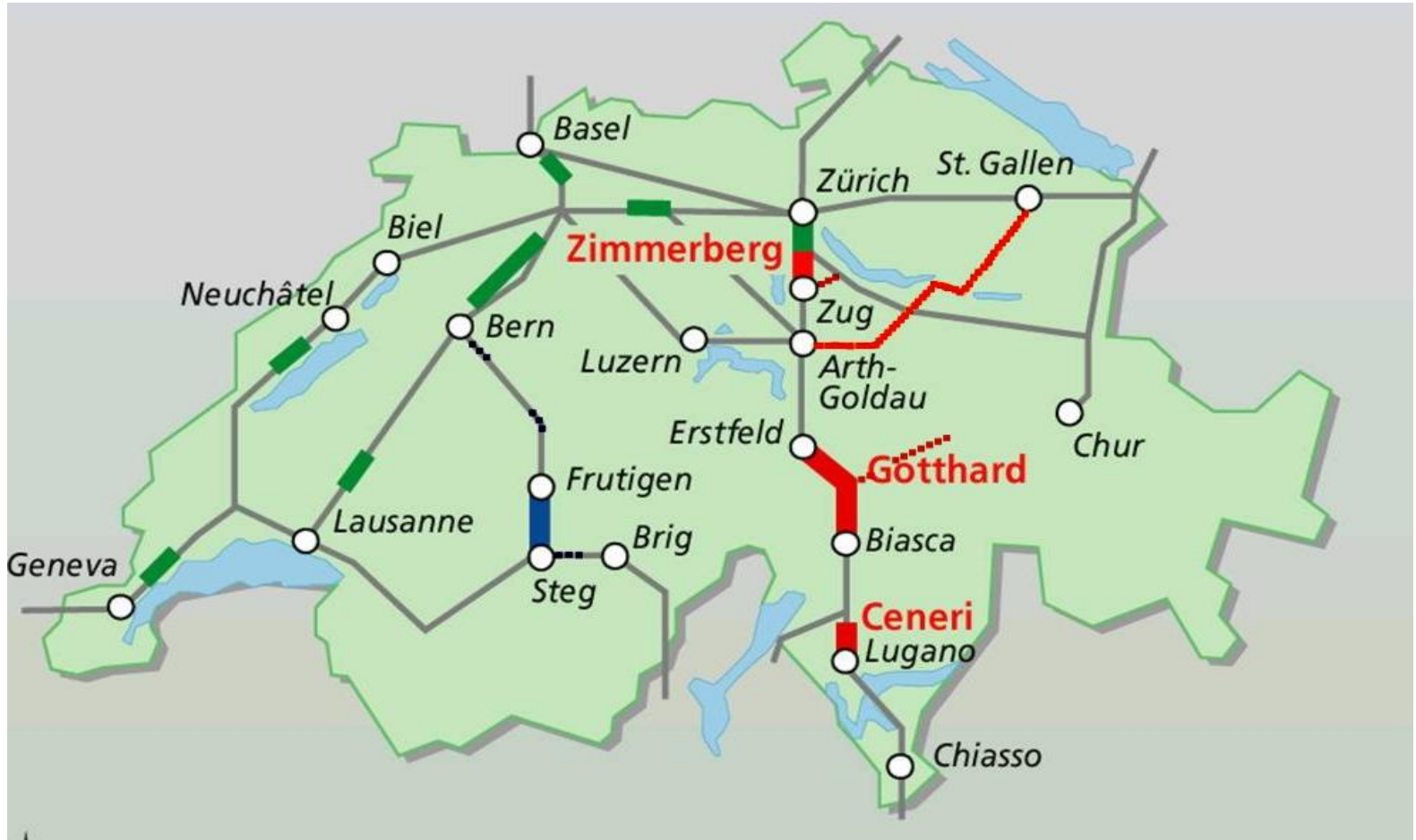


# Impact on Rail

- No significant Shift due to:
  - Rail Share traditionally high
    - Over all 40%
    - In Transalpine Transport 65%
  - Higher weight limit for trucks
- Pricing is one element among others
  - Reliability
  - Simple Procedures
  - Modern Infrastructure



# Use of Income: 2/3 For new Rail Infrastructure

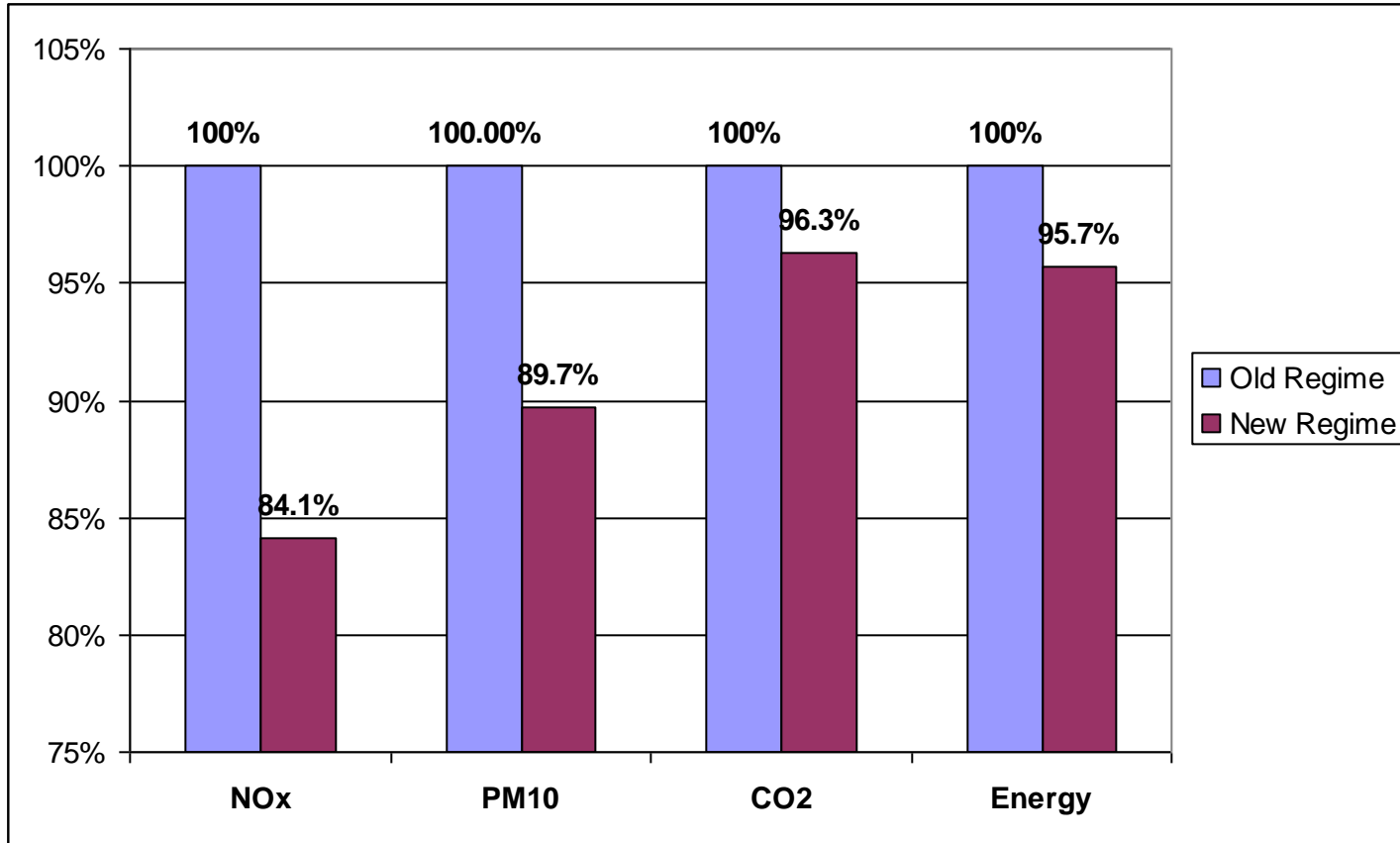








# Impacts on Environment (Aggregation effects Road/Rail)





# Conclusions

- System Works well
- Road Transport has become more efficient
- Truck traffic has been reduced
- Environment: Positive Balance
- Rail: Share maintained - Significant Shift possible only in Context with other Measures
- Impact on consumer price neglectable (0.11%)
- **Last but not least: No detour traffic!**



# Final Remarks

- For more information see:

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

Thanks for your attention

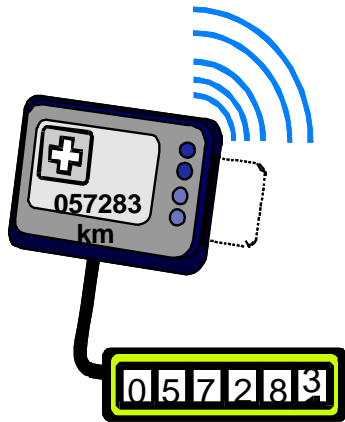


# Appendix: Fee Collection

- 2 Systems
  - Vehicles with OBU (DSRC + GPS)
    - Ca. 52'000 Swiss Vehicles (mandatorily)
    - Ca. 2'000 Foreign vehicles (voluntarily)
  - Vehicles without OBU (most foreign vehicles)
- Specific measures for Enforcement
  - Fixed control stations
  - Mobile controls

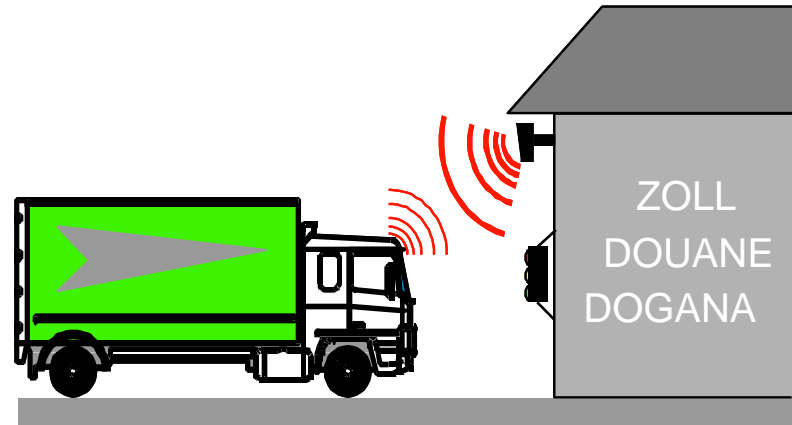


# Vehicles with OBU Data Registration



**Tachograp**

**Sensor for mileage reading  
at the tachograph**

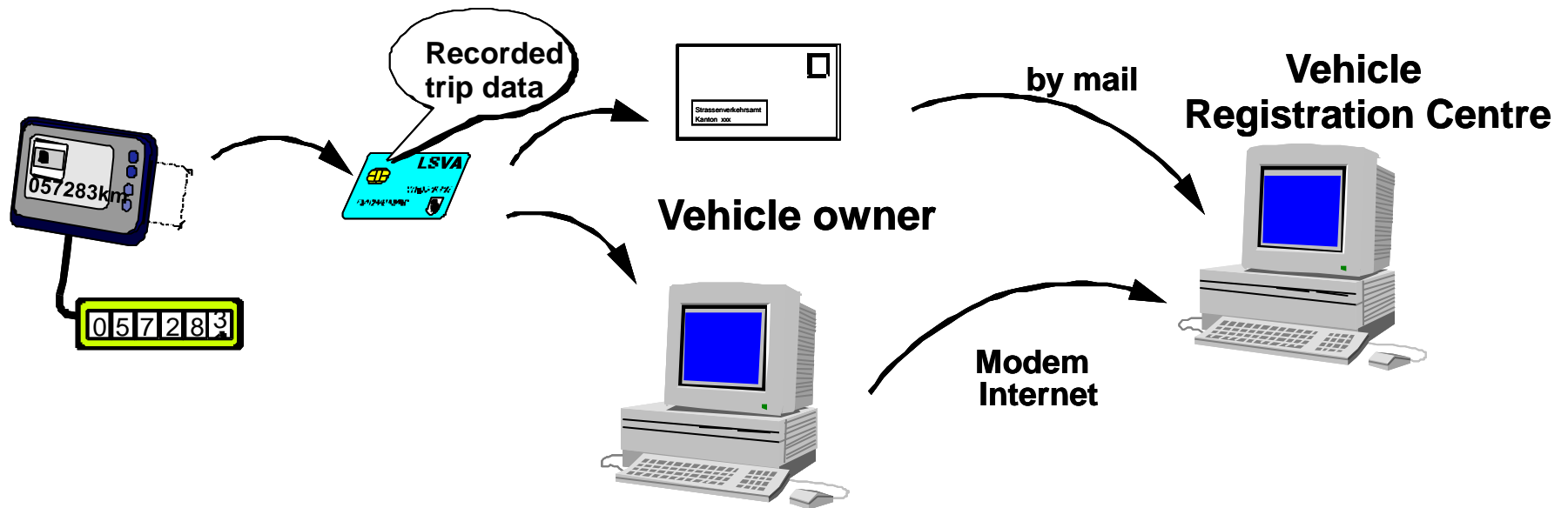


**Recording km at  
border crossing**



# Vehicles with OBU

## From Data to Billing





# Vehicles without OBU



## Declaration with ID- Card

- ◆ Mileage reading
- ◆ Trailer status
- ◆ Route
  - individually selected
  - predefined by the Customs
- ◆ Payment modes
  - Gas station credit card
  - HVF account
  - Cash
- ◆ CT receipt



# Fixed Control station

