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Internalisation of external Costs - The Example of the Swiss Heavy Goods Vehicle Fee

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Driver for Introduction: Transit Traffic





1994 Two Decisive Votes

- Alpine Initiative accepted
 - Protection of the Alps
 - Goods Transit Traffic mandatorily by Rail
 - No extension of Road Network
- Constitutional Bases for HVF accepted
 - Heavy Goods Vehicles (>3.5 tonnes)
 - Polluter Pays principle

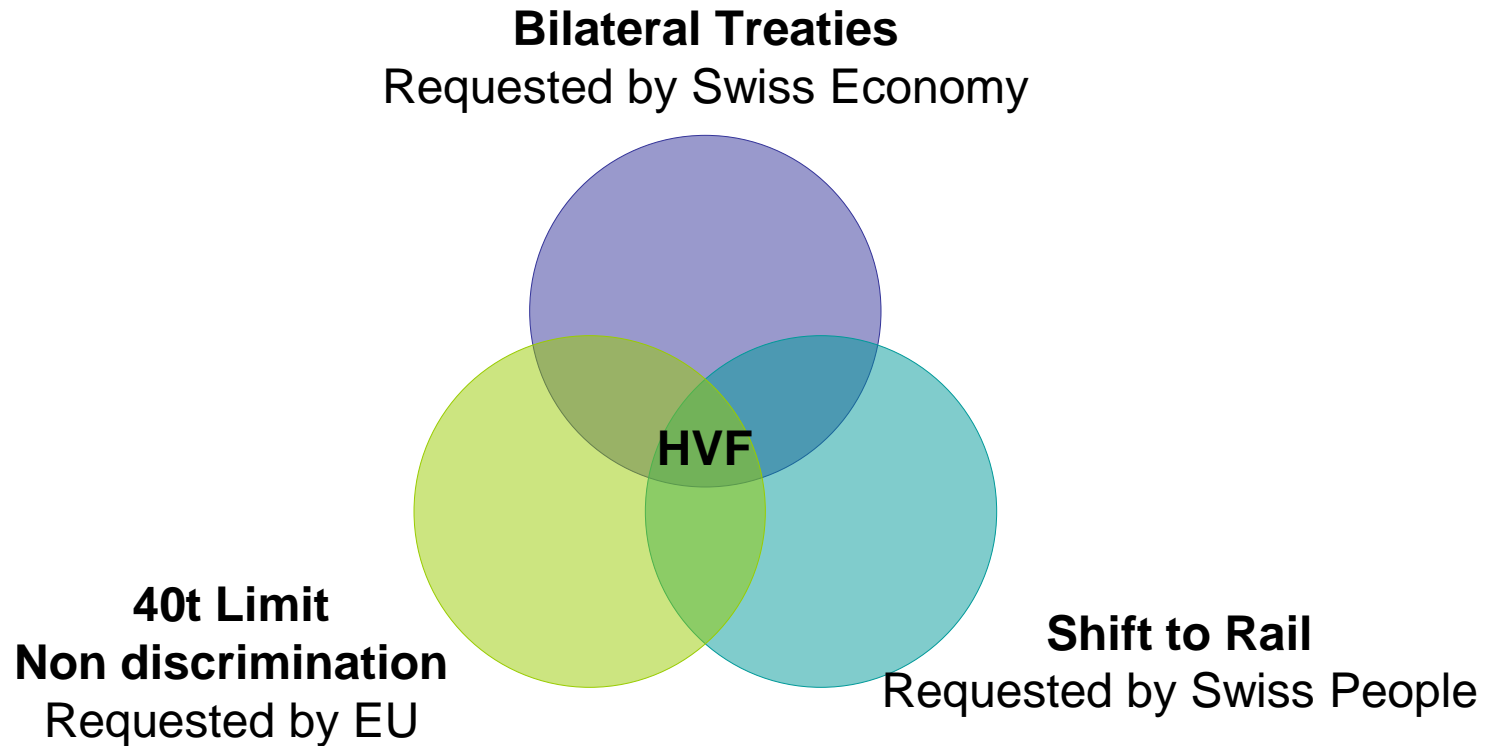


International Implications

- Position EU
 - Mandatory Shift is discriminating
 - Requests admission of 40 tonne-lorries
- Swiss Economy
 - Claims to be handicapped
 - Non member of European Space (refused 1992)
 - Non member of EU
 - Demands better access to European Market



The window of opportunity





1998: Law for HVF accepted

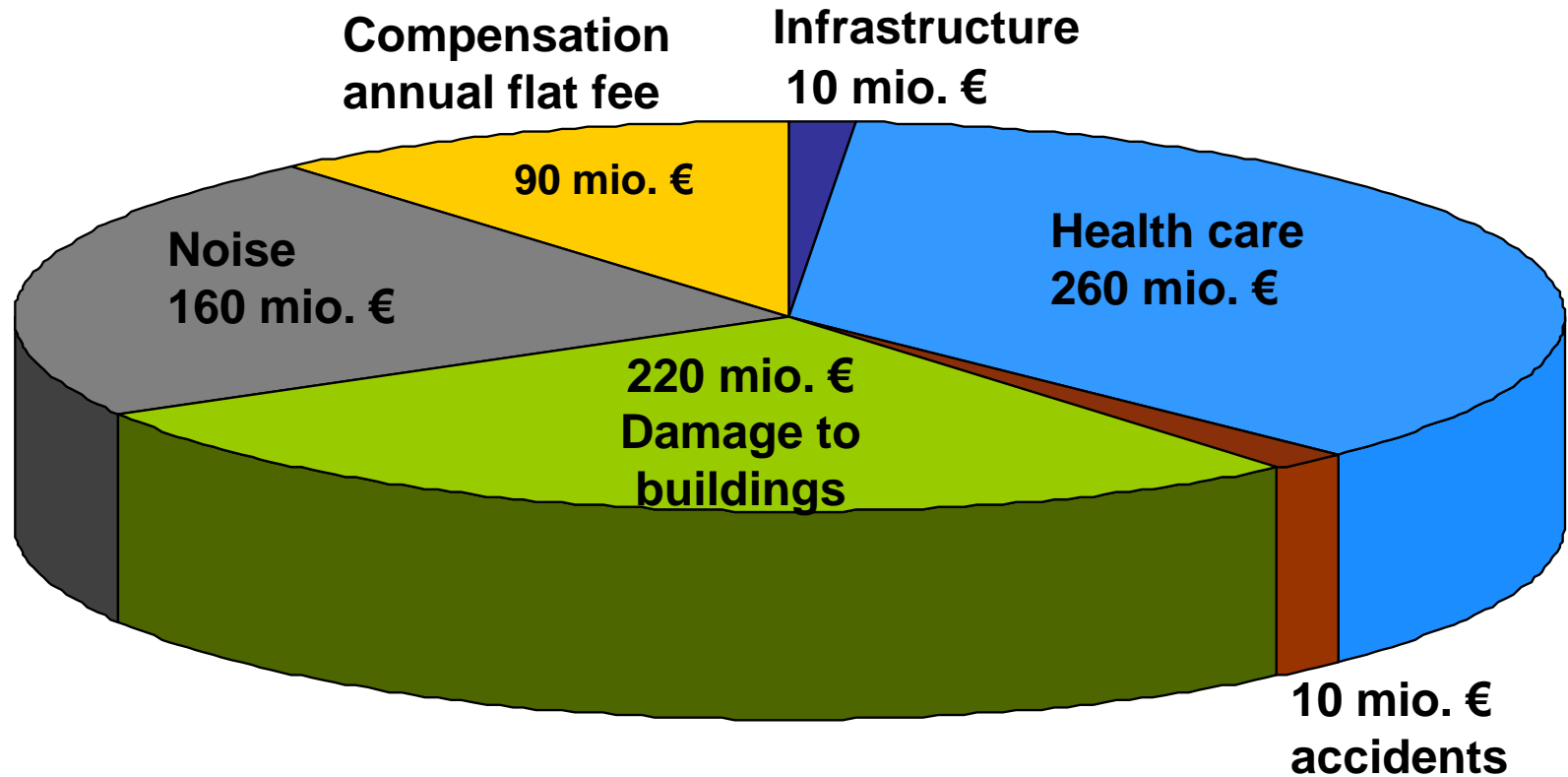
Objectives:

- 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: 2,4 €Cts/tkm
 - Euro 3: 2,1 €Cts/tkm
 - Euro 4+: 1.8 €Cts/tkm (add. Rebate for Euro 6)



Implementation

- 1.1.2001
 - Introduction HVF (Rate 1.3 Ct/tkm)
 - Replacement of flat Fee (similar Eurovignette)
 - Increase Weight Limit from 28 to 34t
- 1.1.2005
 - Raise HVF Rate to 1.9 Ct/tkm
 - Increase Weight Limit to 40t
- 1.1.2008
 - Raise HVF to 2.1 Ct/tkm



Effects of the Fee

- Road Transport Business
- Costs
- Vehicle Kilometres
- Transalpine Trips
- Rail
- Rail Infrastructure
- 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)

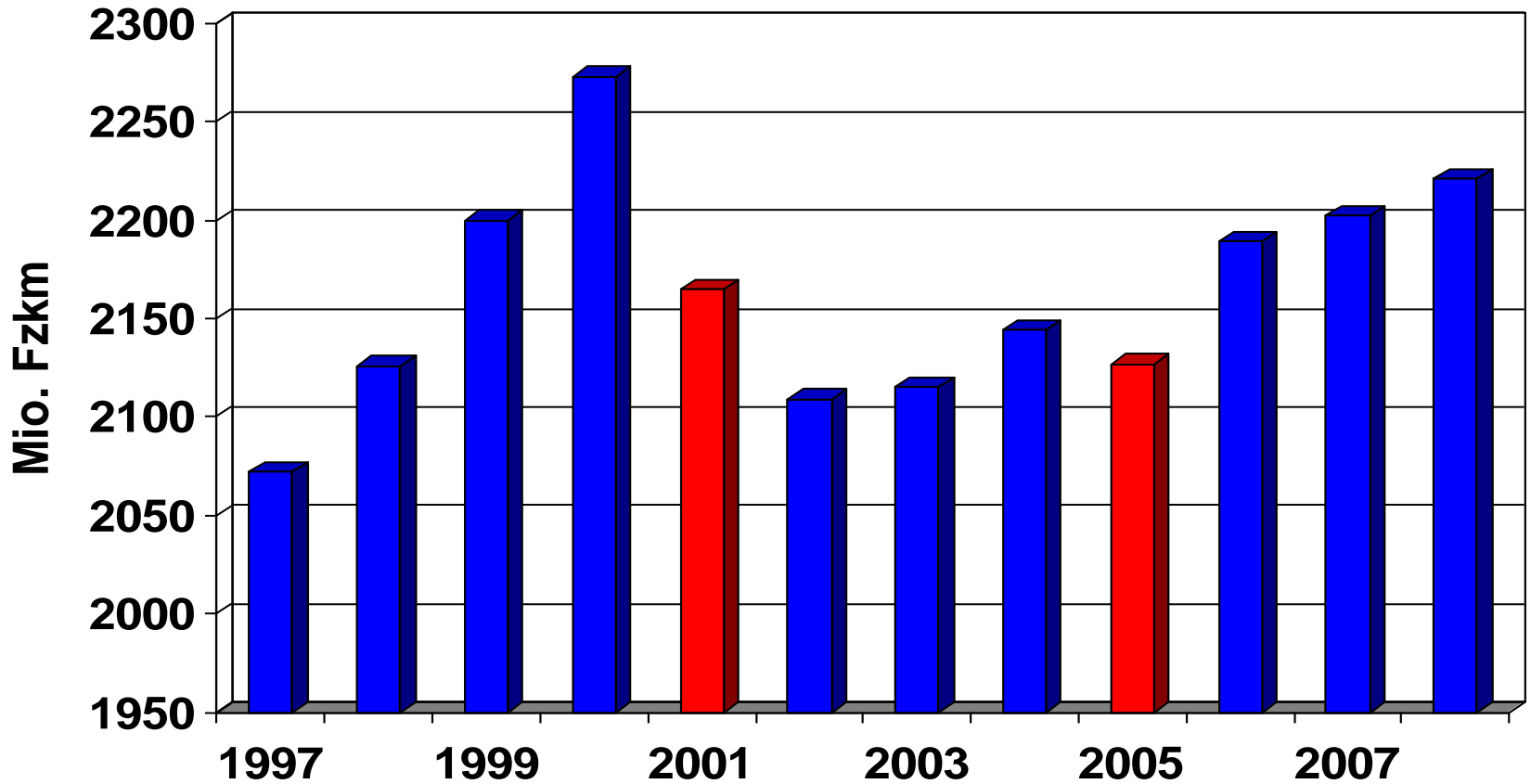


Impact on Costs

- 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)

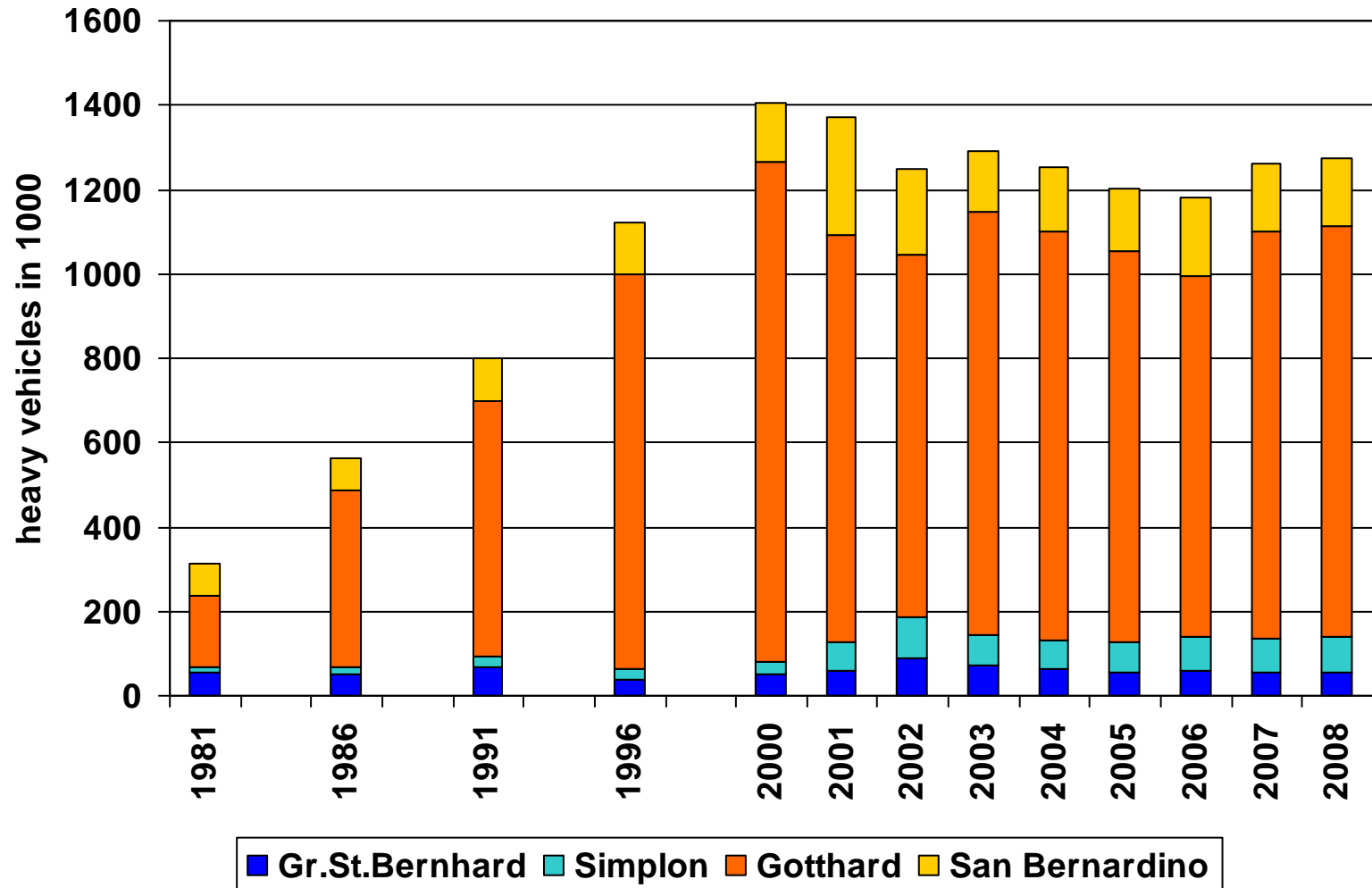


Effects on Vehicle Kilometers





Effects on Alpine Trips



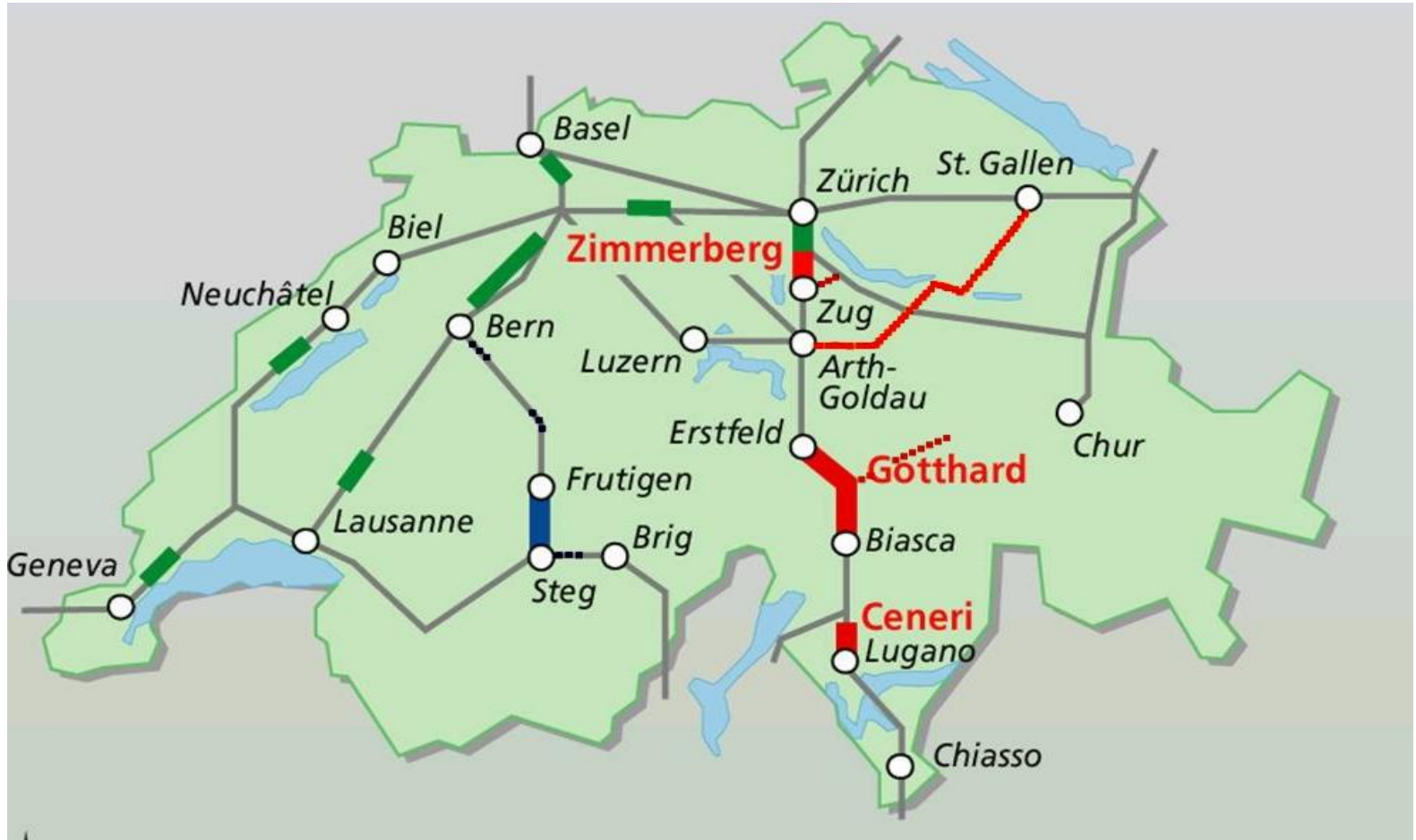


Impact on Rail

- 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

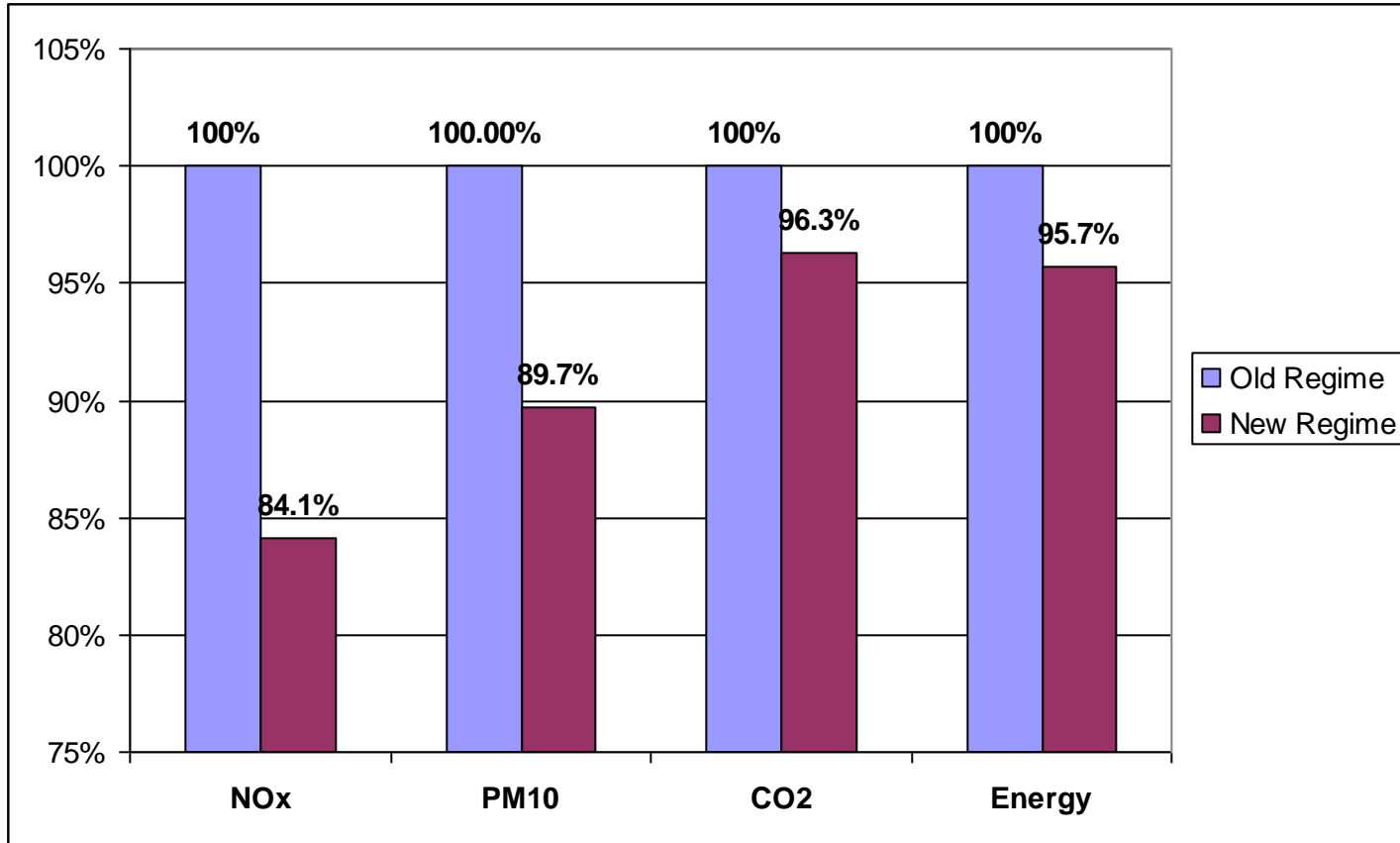


Use of Income: 2/3 For new Rail Infrastructure





Impacts on Environment (Aggregation effects Road/Rail)





Outlook

- Adaptation of External Costs
 - Tool for adaptation of already calculated costs
 - Revision of the whole scheme
- Additional measures to support Transfer to Rail
 - New Infrastructure (Gotthard Base Tunnel)
 - Measures on Feeder Lines (Corridor for semi trailers with 4-metre corner height)
 - Co Financing of new Terminals abroad
- Alpine Crossing Exchange
 - Aim: limit the number of transitting trucks to 650'000/a
 - Number converted into Crossing Rights
 - Price determined by supply and demand
 - Concerted Approach throughout Alpine region necessary



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