



2nd Annual ASECAP Marketing Workshop

Mobility Pricing in Road Transport Paradigm Shift to improve congestion, environment, road safety, and financing.

Josef A. Czako, Kapsch TrafficCom

Paris, 6th February 2015

AGENDA

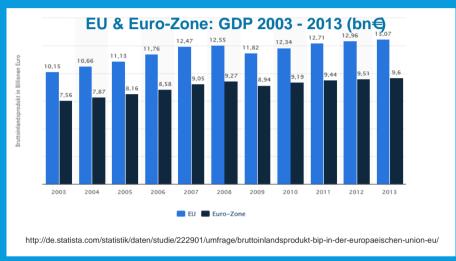
- Sustainable Mobility Areas of Action
- ■What is Mobility Pricing?
- Benefits, Roadmap and Recommendations
- Discussion

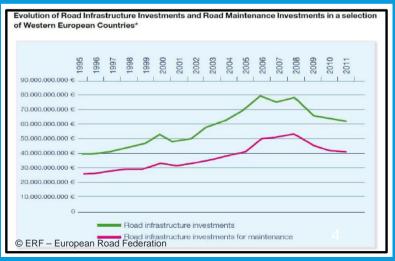
AREAS OF ACTION TO SECURE SUSTAINABLE MOBILITY.



AREA OF ACTION: FINANCING

- Passengers and Freight are increasing constantly since 1990, on both, inter-urban and urban roads:
 - Goods inland transport: 75%
 - Passenger inland transport: 80%
- Infrastructure is aging.
- GDP is constantly climbing, <u>but</u>:
- Budgets for Road Infrastructure (investment and maintenance) are constantly decreasing.





AREA OF ACTION: CONGESTION

Social Economic Cost of Congestion are continuously CLIMBING.

- Europe:
 Annual cost of congestion € 110 Billion (EC, 2012)
- United States of America:
 Congestion cost the economy about <u>€ 95 Billion</u> in lost output (Texas A&M University, 2011)







AREA OF ACTION: ROAD SAFETY

NUMBER OF PEOPLE THAT DIED IN ROAD CRASHES IN 2013:

- Europe: 5.5 people per 100.000 inhabitants are dying on roads.
- U.S.: 11.4 people per 100.000 inhabitants are dying on roads.
- Note: The "best" Country worldwide is Sweden: 3 road deaths per 100.000 inhabitants per year.

 Source: The Economist, 2014
- → HUGE external cost (to the society)





AREA OF ACTION: **HEALTH & ENVIRONMENT**

Environmental Research Letters, 2013:

- More than two million deaths occur globally each year as a direct result of human-caused outdoor air pollution.
- The study also shows that changing climate has a minimal effect and only accounts for a small proportion of current deaths related to air pollution.

Austria: 22,8% of CO_2 is resulting from Transport, with an increase of 83% since 1990.

Source: Umweltbundesamt

→ HUGE external cost (to the health system and society).



AREAS OF ACTION: SUMMARY

- 1. For increase of sustainability and efficiency, appropriate financing of road transport infrastructure is needed.
- 2. Road capacity is limited, for both, within Cities and Interurban traffic. Therefore, demand and capacity needs to be managed.
- 3. Accident and fatality rates are unacceptable high.
- 4. External costs of traffic are only partly considered (CO₂, pollution, noise, accidents).
- → Huge losses in GDP!



MOBILITY PRICING IS AN INNOVATIVE TOOL FOR A PARADIGM SHIFT OF ROAD USE



MOBILITY PRICING FOCUSES TO IMPROVE SUSTAINABLE MOBILITY





WHAT IS MOBILITY PRICING (1)



Mobility Pricing is the application of an innovative and sustainable pricing model for Tolling or Charging, based on real internal and external cost (noise, pollution, congestion, safety), with the goal to increase the sustainability of road usage.

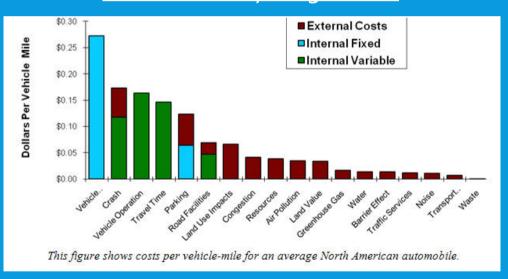
WHAT IS MOBILITY PRICING (2)



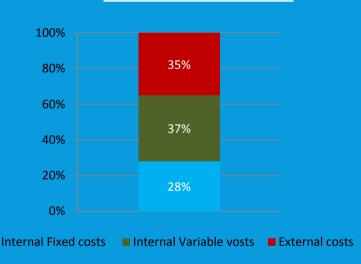
- Manages mobility demand and the road capacity.
- Strengthens the "user pay principle" to relief tax financing of road infrastructure, and to replace declining gas tax incomes.
- Based on incentives rather than on prescriptions.
- Fosters change to more **sustainable mobility behavior**.
- Applicable for all roads, for all modes of transport, also in Cities.
- Revenues are dedicated to improve the sustainability.
- Fair

INTERNAL AND EXTERNAL COST

Cost ranked by magnitude:



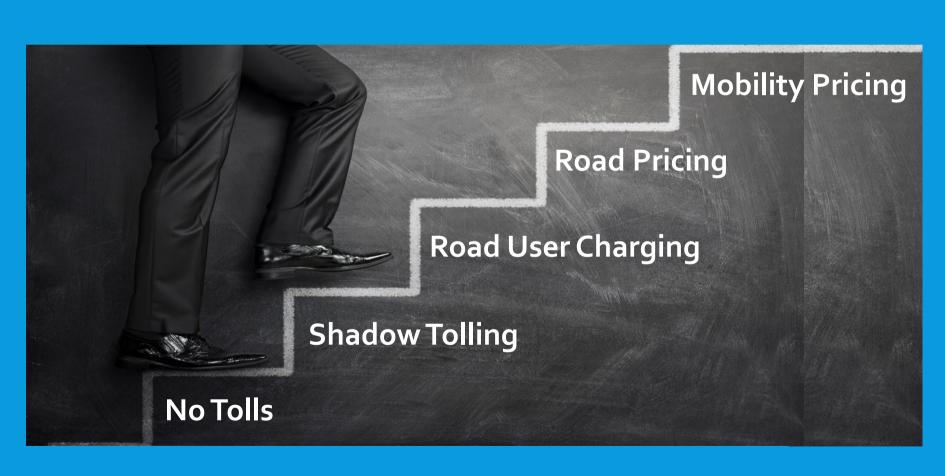
Cost distribution:



Source: Transportation Cost Analysis, Litman 2011

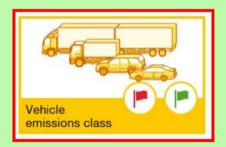
External cost, if not internalized with Mobility Pricing, are <u>not</u> taken into account when it comes to mobility decisions!

MOBILITY PRICING: BEST & SUSTAINABLE FINANCING TOOL



TARIFF EXAMPLES IN MOBILITY OF PRICING





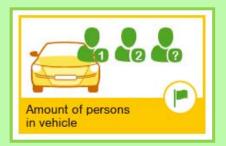




Mobility Pricing

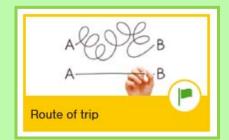




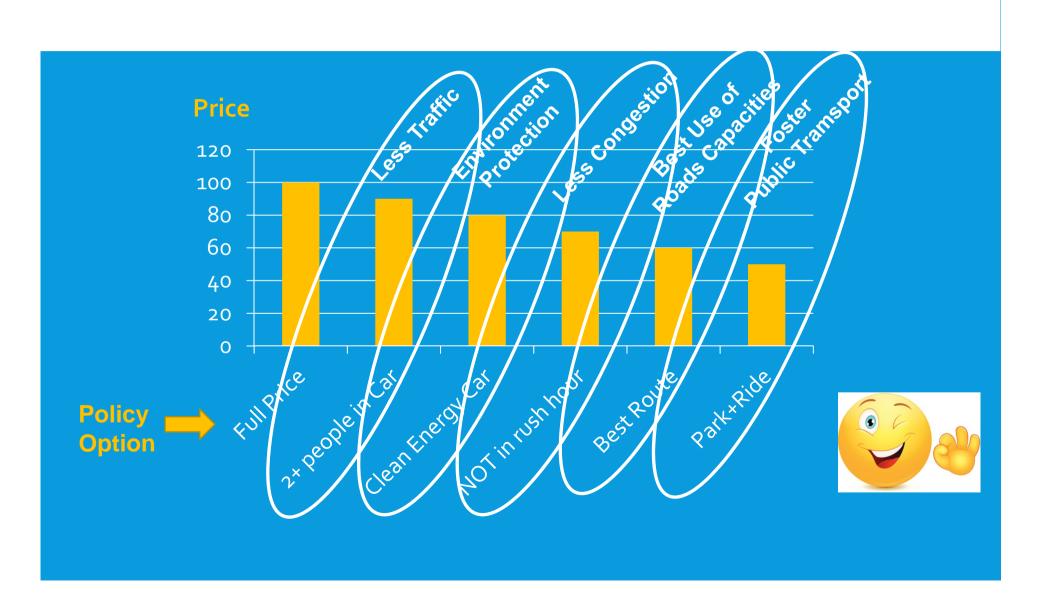




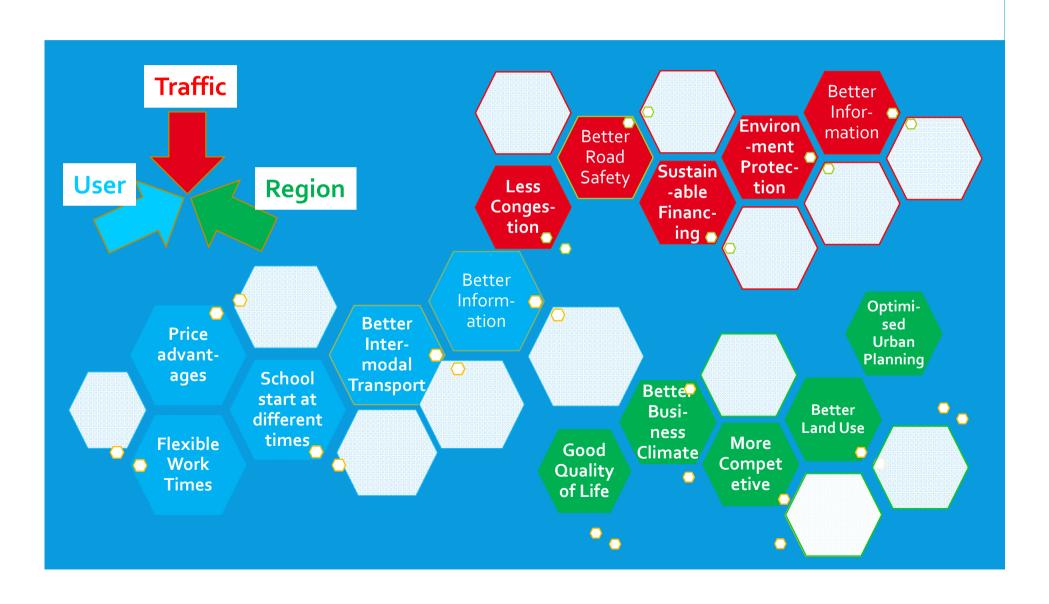




BETTER MOBILITY BEHAVIOUR BENEFITS – AND PRICE INCENTIVES



MOBILITY PRICING. INTERRELATION WITH OTHER SECTORS.



MOBILITY PRICING, INTERNATIONAL DEVELOPMENTS.



Finland's future scenario includes to introduce incentives for a change of mobility behavior with new smart devices and services based on a new "Pay as you go" Model. Discussions contain also tax and insurance payments.



Singapore was the first City in the world to manage congestion by implementing the ERP - Electronic Road Pricing - System. The next generation (ERP II) is testing the use of Smart Devices and the use of GNSS (Global Navigation Satellite System).



Switzerland is active in regard of the necessities to increase the Sustainability of Road Transport while also working on a study on Mobility Pricing, to be published by end of 2014.



The U.S. State of Oregon is currently testing in the VMT Project the model of charging according to the vehicle miles traveled (VMT), while replacing the gas tax.

BENEFITS OF MOBILITY PRICING.









The "User Inclusion of Pays" road users in Principle decision supports making trip, sustainable adds financing. "intelligence" to traffic management

Mobility
Pricing
Model
results in
reduction of
congestion,
accidents,
pollution.

Value for Money:
Better
Service

Macroeconomic Benefits of Mobility Pricing exceed by far the costs!

WIN WIN: adds

Benefits for Trip "intelligence"

& to traffic

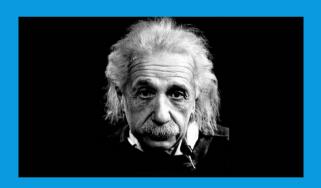
Price Benefit management

RECOMMENDATIONS



- 1. Analysis of socio-economic benefits of Mobility Pricing on a project by project base.
- 2. Fact based discussion of Mobility Pricing potentials with all relevant Stakeholders.
- 3. Development of Mobility Pricing Policy.
- 4. Implementation into existing tolling & charging schemes.
- 5. Mobility Pricing gives also good support to introduce new charging schemes, especially for private car tolling.

You can not solve problems with the same methodology which created them.



Albert Einstein (1879-1955)



Josef A. Czako
Kapsch TrafficCom AG
Vice President
International Business Development
Am Europlatz 2 | A-1120 Vienna | Austria
Mobile +43 664 628 2150
Email josef.czako@kapsch.net

Thank You For Your Attention!

QUESTIONS DISCUSSION

