Transportonderzoek en -opleiding
Transport research and training

BESTUFS II – Improving attractiveness of cities with city freight solutions

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Translating facts into vision

Contents

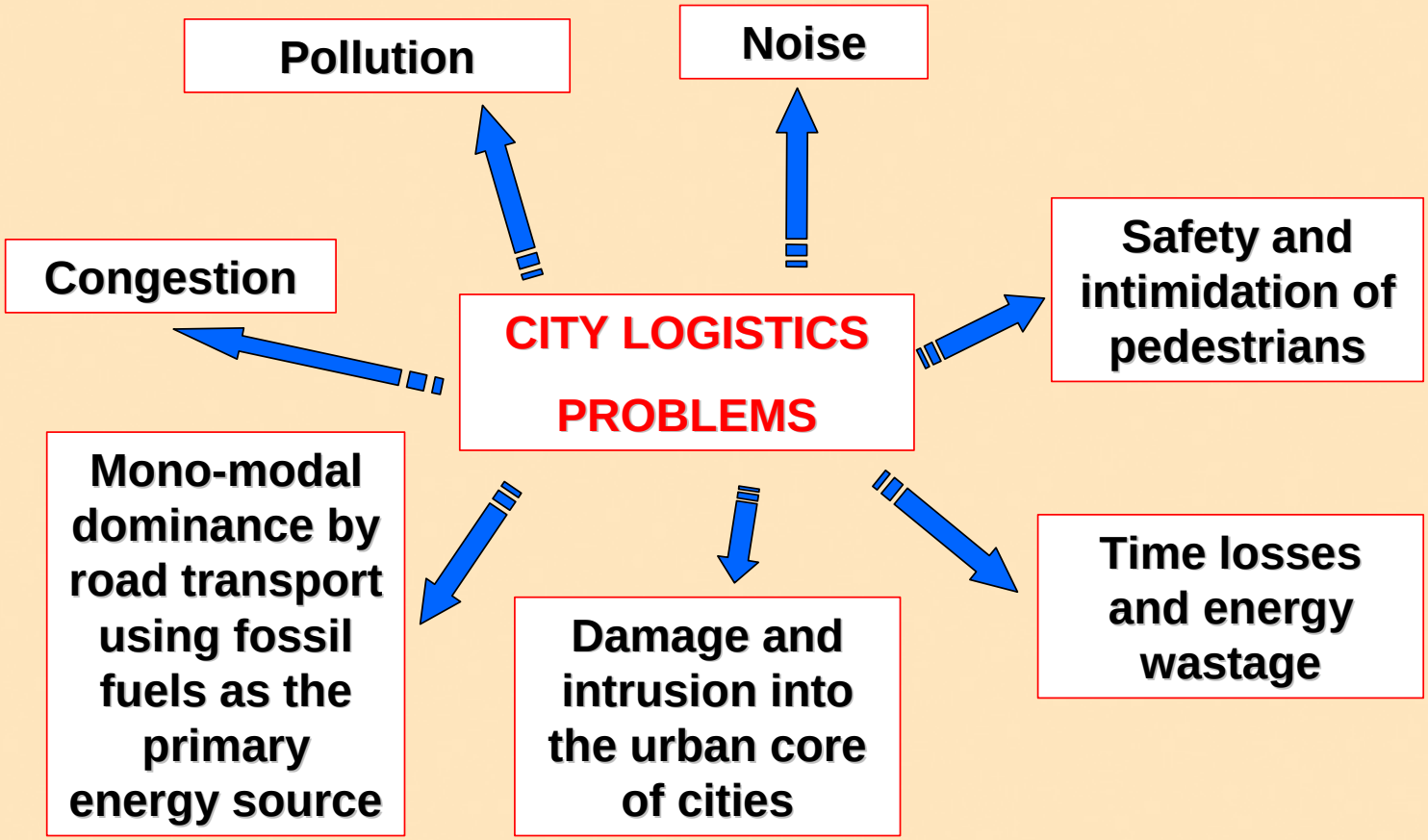
1. BESTUFS background: problems in cities caused by urban freight transport
2. Objectives and structure of BESTUFS
3. Examples from the project how to improve attractiveness of cities
4. Conclusions and recommentations

Urban commercial transport – a problem in EU cities and regions ?

Urban commercial transport

- Causes accidents
- Aggravates congestion
- Occupies urban space
- Causes noise and air pollution

City logistics problems



Contribution of urban freight to environmental problems

Urban commercial transport is one important source of emissions:

- 1/2 of the particles at highly occupied inner-urban roads are transport related (study in Germany)
- 2/3 of the citizens feel disturbed by the noise from road transport (study in Germany)
- 1/3 of the whole transport is due to urban commercial transport (study in Stuttgart city + region)

- Legislation is in force and/or on the way
- Besides the technical solutions especially organisational solutions are needed
- BESTUFS focuses on themes and measures which help to improve urban freight transport.

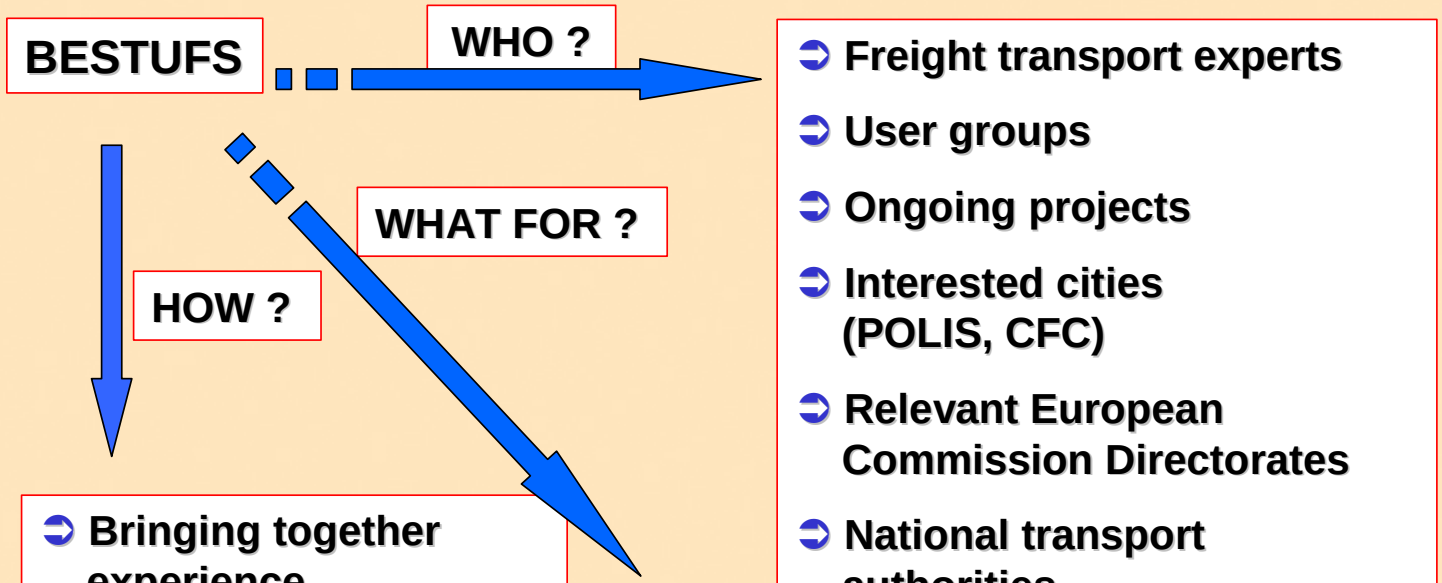
Urban commercial transport – a necessity for EU cities and regions

Urban commercial transport

- Is part and expression of our commercial life
- Guarantees goods supply of citizens and enterprises
  (compare with water and energy supply)
- Represents very often the *"Last Mile"* of transport chains
- Is essential for the cities

How to maintain this function and to reduce the negative external effects at the same time ?

EU project BESTUFS: BEST Urban Freight Solutions



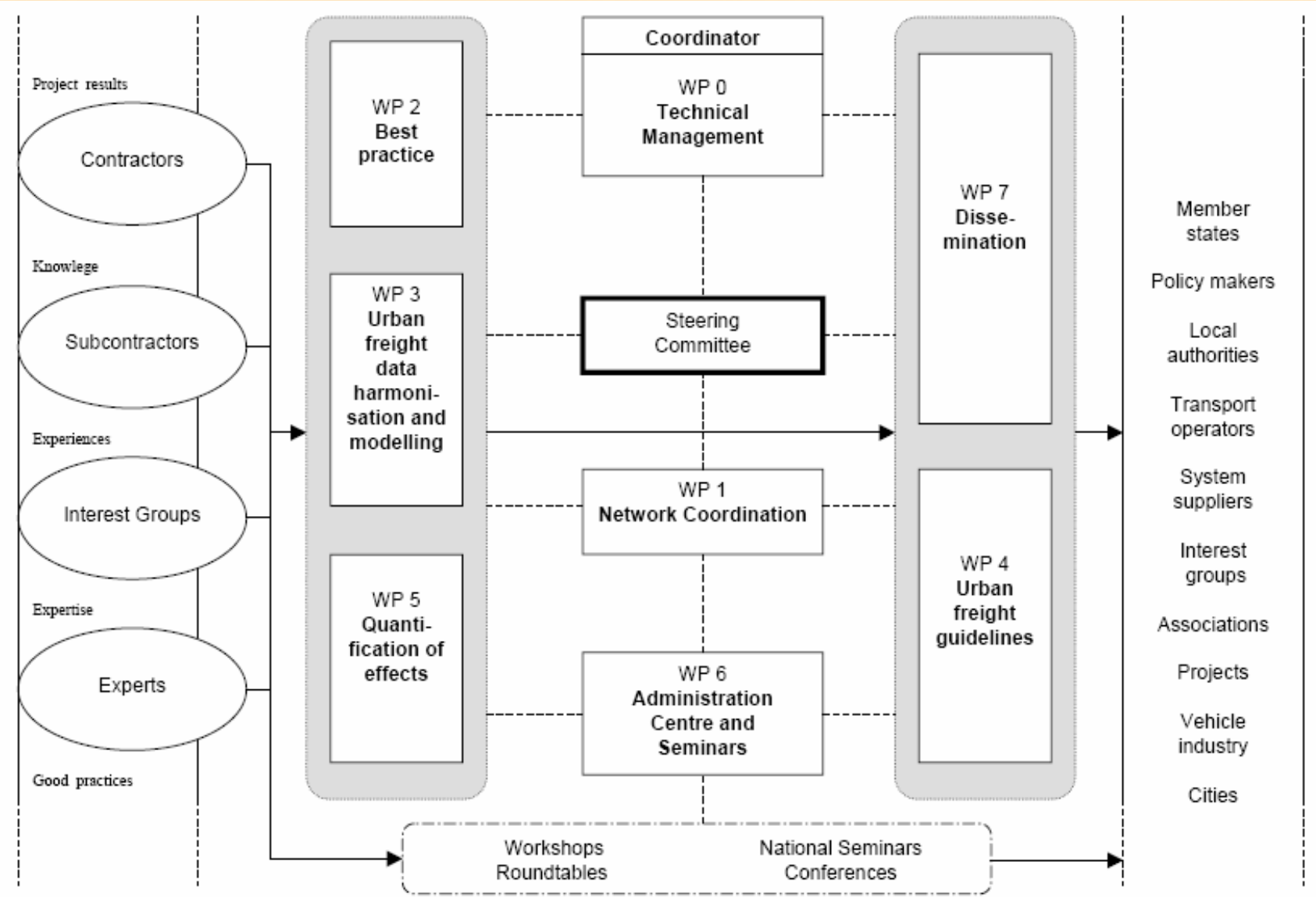
- Freight transport experts
- User groups
- Ongoing projects
- Interested cities (POLIS, CFC)
- Relevant European Commission Directorates
- National transport authorities

- Bringing together experience
- Organising workshops
- Acquiring Best practice / Bottlenecks
- Disseminating results

Identify, describe and disseminate:

- Bottlenecks
- Best practice
- Success criteria

BESTUFS II Project structure



BESTUFS working fields: Best Practices

Access restrictions, E-Commerce, Intelligent transport systems, Public private partnership, Road-pricing, Urban distribution centres, Waste, …

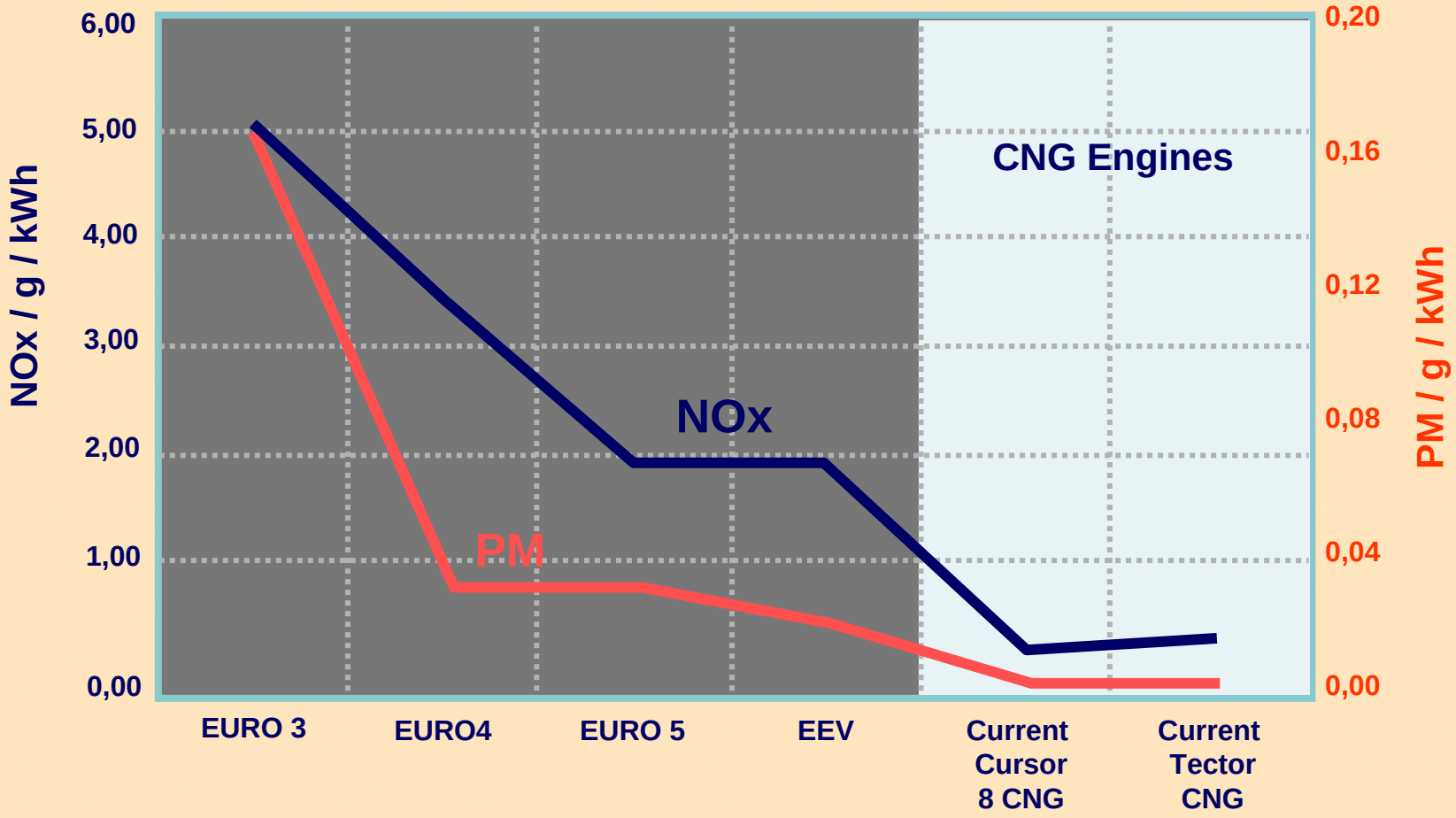
BESTUFS focuses on themes, innovations and measures which help to improve urban freight transport.

How to improve a city's attractiveness?

- Next slides present a small selection of examples from BESTUFS workshops and conferences on the following subjects:
  - Vehicle technology and alternative fuels
  - Access restrictions
  - Infrastructure, traffic management and trip planning
  - Exemption regulations
  - Last mile solutions
  - Cooperation between local stakeholders and transport operators
  - Innovative / creative solutions

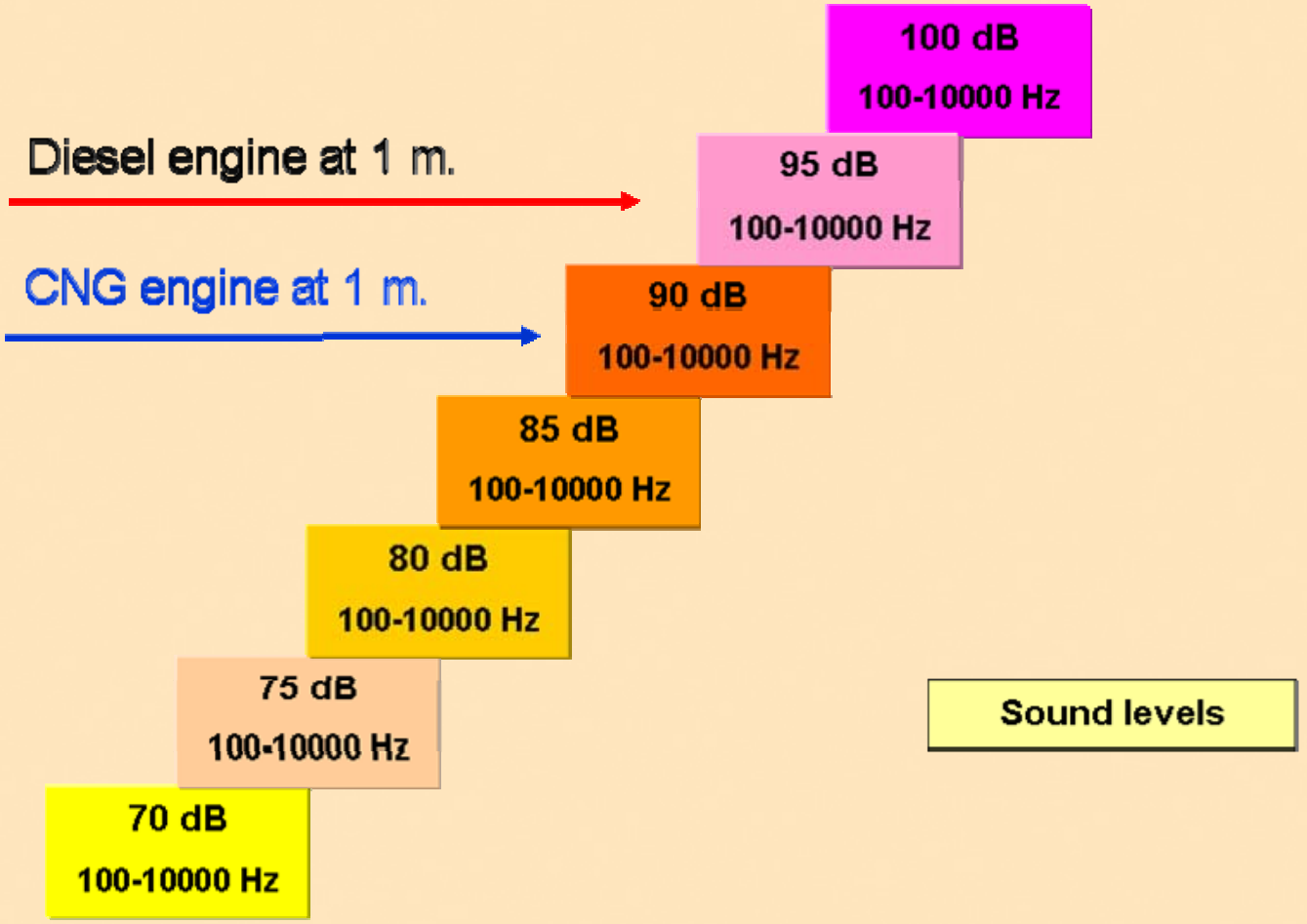
Vehicle technology and alternative fuels

Stimulating alternative fuels, for instance CNG vehicles



Source: IVECO

Alternative fuels
CNG vehicles



Examples:
Optimised city distribution vehicles

- Low emission vehicles developed and improved by automotive industry
- Political decisions and incentives play a major role

Example ELCIDIS – “Electric vehicle city distribution systems“

- No objections from managers, drivers or authorities towards hybrid and electric vehicles for urban distribution
- Price performance ratio, reliability, maintenance and servicing must be equal to current fleets
- Future use of renewable/sustainable energy sources must be leading to a far better energy/environmental balance for these vehicles than calculated in ELCIDIS

New vehicle concepts show effects in the medium to the long term.

Access restrictions

City access, parking regulations and access time restrictions

Example Stockholm – “Environmental zones“

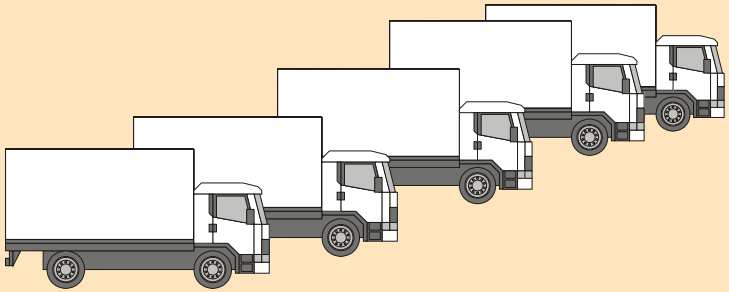
- Large part of inner city barred to certain vehicles
- Special demands are imposed on diesel powered vehicles (> 3.5 t)

Results observed:

- Decrease in particle emissions by 15 – 20 %,
- Decrease in hydrocarbon emissions by 5 – 20 %
- Decrease in nitric oxides by 1 – 8 %

Access restrictions are powerful but a careful implementation is needed (fleet investments, enforcement, etc.).

City access: large versus small vehicles

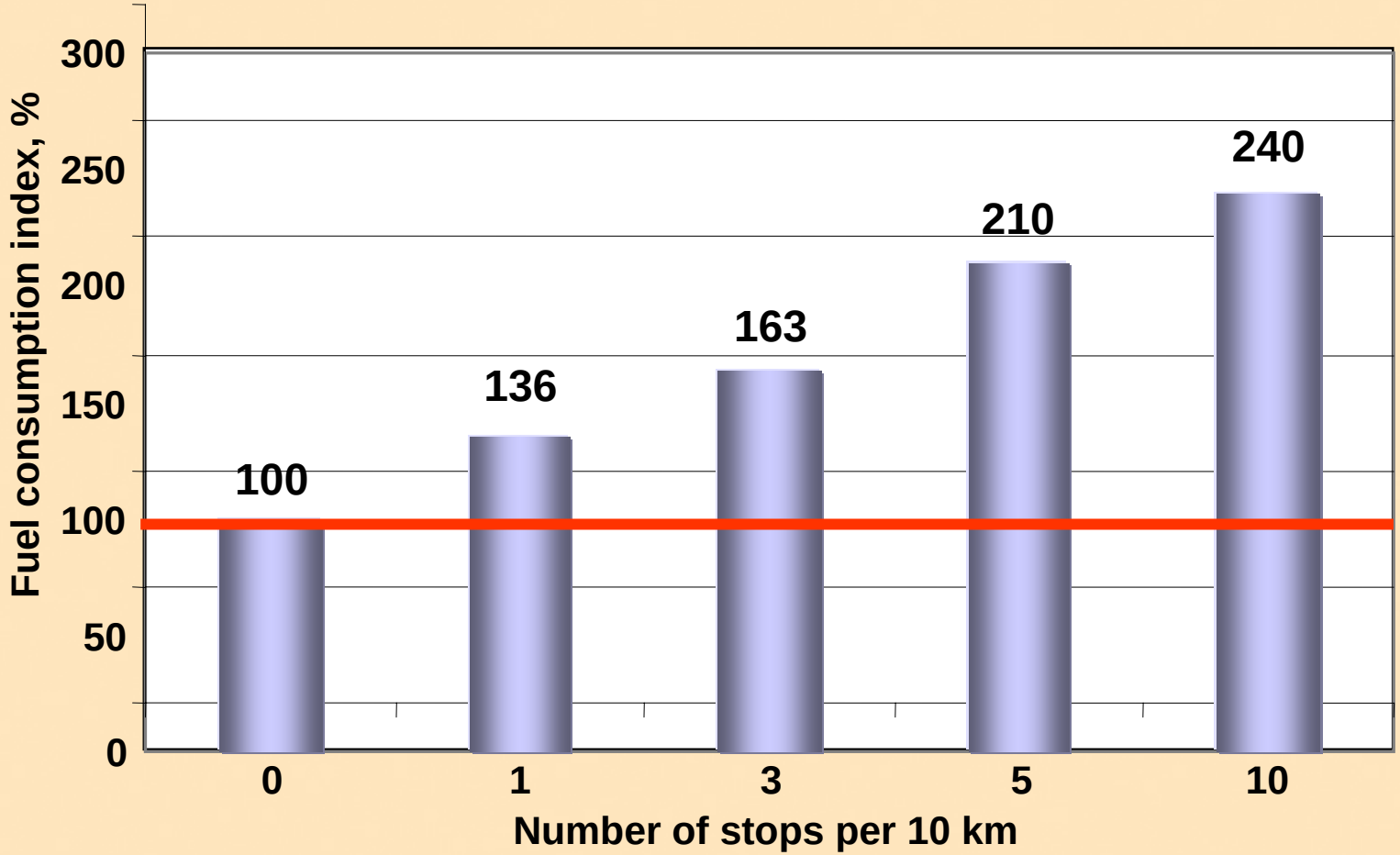


- 1 x 28t artic (80,000kmpa)
- Optg Cost £70k/yr
- Fuel used 26,000 litres
- Emissions factor 1
- Road Space used 35m2

- 5 x 7.5t rigids (40,000kmpa each)
- Optg Cost £150k/yr
- Fuel used 37,000 litres
- Emissions factor 1.4
- Road space used 75m2

Infrastructure, traffic management and trip planning

Infrastructure Impact on Fuel Consumption (impact number of stops)



Tractor / semi trailer combination, 40 tons

Source: Volvo

Exemption regulations

Groningen: co-using bus lane

Effects of co-using bus lane for freight transport:

- Less freight trips
- Decrease of vehicle kms in downtown area
- Decrease of dwelling time in centre
- No negative effects of bus operations

Examples: Night delivery

- Reduction of the congestion in peak hours
- Attractive city for both the inhabitants and the tradesmen
- Optimisation (cost reduction)
- Reduction of the noise emissions is most important task !
- Technologies for unattended deliveries
- … safety, legislation, supply chains

Shift of 10% of the daily transports leads to reductions (IVECO study):

- Fuel consumption: - 2 to 6%
- CO2: - 4 to 5%
- Travel speed: + 20%

- Night deliveries can provide lower cost, but is the shop-keeper able to accept the goods before 10 AM?

Last mile solutions

Last mile solutions / goods pick-up points

- Pick-up points for last mile deliveries
- Three solutions:
  1. Electronic safes
  2. Deliveries at existing facilities (petrol stations, stores, etc.)
  3. Dedicated centres for e-commerce operations

Last mile solutions / goods pick-up points

- Example of electronic safes: Packstation
  - 24h pick up of goods

Last mile solutions / goods pick-up points

- Succes factors
  - Time savings
  - Reduction of vehicle kms
  - Reliability
  - Good locations
  - Modern information systems
  - Opening hours

Cooperation between local stakeholders and transport operators

Project “The Clean City” (the Hague, NL)

- Situation: uncoordinated waste collection by different companies after privatisation
- Aim: a quick and efficient waste collection which is supported by the entrepreneurs, residents and waste collection companies.
- This should result in a cleaner city and less disturbance for the residents and visitors
- Result: common rules for waste collection agreed by shopkeepers

Innovative and creative solutions

Waste logistics – Cargo tram, Zurich

Cargo tram – environmental savings

- 5020 km covered by lorries and
- 960 hours running time while standing,

which represents 37 500 l Diesel per year

Reduction emission of harmful substances in kg (approximate figures)

CO2: 4911.3
SO2: 1.4
NOx: 80.6
PM10: 2.3
NMVOS: 4.2
CO: 14.6

Bierboot (Utrecht, NL)

Clients:

- 4 Breweries
- 1 Catering industry wholesaler (recent)

Conclusions

- Urban freight does have a significant share in urban transport problems
- The attractiveness of cities can be improved significantly with city logistics solutions and measures
- Urban freight should get a more significant role in urban transport plans
- Careful consideration is needed when implementing measures

Recommendations for cities

- Take advantage of knowledge of others (region, private parties, other cities)
- Involve private parties as much and as soon as possible: recognise their interests, trust them and dare to share responsibilities

- *Food for thought*: Urban freight transport can be used as a marketing instrument (e.g. the beerboat in Utrecht)

Final remarks

- Next events:
  - Conference: 18-19 May, Malta
  - Round table on data collection and modeling 8-9 June 2006, TFH-Wildau, close to Berlin
  - Workshop: autumn 2006, Vienna

Thank you!

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