

SF 25: Modal shift of traffic flows towards foot, bike and public transport through regulations

Fr	B	C	NY	S	T	Total
8	?	?	1	8	9	26

Example:

In **Freiburg**'s Vauban district, appropriate regulatory measures (obligation for car-owning residents to buy a parking space in the outlying car park, play streets, cycle tracks) have achieved an exemplary shift from cars to walking or cycling: 57% of residents forego having their own car.

Even on a city-wide level, Freiburg succeeds in achieving a modal shift by measures such as an above-average number of 30 km/h zones, bans on driving at night, the restriction of parking spaces in conjunction with expensive parking fees and the expansion of pedestrian zones in the city centre. According to a study commissioned by the city of Vienna (Moser #27), therefore, Freiburg is completely on trend, since in European metropolitan and urban areas about 40% of households do not have a car.

In **Singapore**, motorised traffic is regulated by means of the so-called „Certificate of Entitlement COE“. A COE for 5 or 10 years must be purchased for every newly registered vehicle, entitling the owner to use a vehicle on the roads.

In **Tokyo**, there are restrictions in the form of an inner-city parking ban for delivery vehicles. It is, therefore, not uncommon for goods to be transported on hand carts, cargo bikes or e-bikes over the so-called „last mile“.

1. Differentiated description of the key field

Traffic relocation – also known as the „modal shift“ – means reducing the share of individual motorised transport towards more environmentally friendly modes of transport, such as (in decreasing order of relevance) walking and cycling, local public transport, but also car-sharing. This convenient, clean and healthy alternative also relieves road traffic.

When creating and funding modal concepts, the inclusion of existing mobility patterns is important. Berlin, for example, has a high proportion of local public transport and pedestrian traffic, but fewer people own a bicycle by comparison with the rest of Germany; in Münster, however, the percentage of bicycles is above average. The ideal of a car-free city can only be implemented with the support of regulations, which can be categorized into the areas of parking management, traffic restrictions, and charges and taxes.

As regards freight transportation, there are also efforts to shift more traffic from the road to rail (e.g. Pro-Rail Alliance #28).

2. Reference to sustainability:

Ecological

The urban climate and quality of life are improved and climate objectives can be met by avoiding (cycling and walking) and reducing (local public transport, electric car-sharing) the emissions of harmful substances and noise. By means of renaturation or no further expansion of the road space, the amount of sealed surfaces can be decreased, resulting in an additional improvement of the urban climate.

Economic

The infrastructure costs are much higher for private motorized transport than for sustainable modes of transport (cycling and walking, local public transport). A modal shift is, therefore, associated with significant cost savings for cities.

Social

Sustainable means of transport are not only cheaper (compared to total operating, maintenance and servicing costs of running one's own car) and healthier (cycling and walking). An increased proportion of alternative transportation (and therefore lower emissions, less congestion, etc.) also enhances the quality of life in and visits to the cities. In addition, from experience, it is known that car-free areas are accompanied by above-average neighbourhood engagement and social stabilisation.

Risk if ignored:

In big cities, traffic jams, the time spent looking for parking spaces, exposure to construction sites, pollution and noise, etc. will continue to increase. Urban flight will become increasingly likely due to the resultant decline in the quality of life. Poorer sections of the population will be disadvantaged by the rising crude oil prices and the lack of alternative mobility infrastructure.

3. Relevance to industrial sectors?

Mobility:	High
Energy:	High
Production & logistics:	Medium
Security:	Low
ICT:	Low
Water infrastructure:	None
Buildings:	Low
Governance:	Medium

Brief description of the high level of importance:

A modal shift affects the **mobility** sector most. The modal choice and travel behaviour change dramatically and thus so do the demands on the urban transport infrastructure and mobility concepts.

A modal shift also exerts a very large influence on the **ener-**

gy sector. The consumption of fossil fuels is drastically reduced, thus reducing dependency on crude oil. Public rail transport and an increasing proportion of electric vehicles (e-bikes, e-vehicles in car sharing schemes, hybrid buses, etc.) will increase the demand for sustainably produced electricity.

Appropriate restrictions can also enable a modal shift in delivery vehicles. In the field of **production and logistics**, loads transported by lorries, for example, can be shifted to rail or inner-city delivery vehicles can be converted to electric ones. Completely new supply and delivery chains are conceivable, such transporting goods on underground lines, etc.

4. *Impact:*

Positive

- Preventing or reducing emissions of harmful substances and noise
- Reduction in soil sealing
- Increase in the quality of urban life
- Avoidance of congestion, getting from A to B faster
- Reduction in costs for the public sector

But

- Great change in mobility behaviour required

Negative

- No adverse effects

5. *Implementation measures:*

- Awareness raising and informing the city administration and citizens
- Campaigns, e.g. the nationwide campaign „Kopf an, Motor aus. Für Null CO2 auf Kurzstrecken“ („Head on, engine off. For zero CO2 emissions on short routes“) to promote cycling and walking
- Creative campaigns
- The fostering of mobility alternatives, e.g. expansion of bike paths, expansion of local public transport, offer of tickets for workers, creation of attractive footpaths that are well lit at night
- Restrictions on motorised transport, such as high parking fees, congestion charges, 30 km/h zones, night driving restrictions, etc.
- Higher taxation of cars

Measures that are specific to each city must be developed, depending on which branch of mobility is the most suitable on the grounds of the general geographic, cultural and social conditions

6. *Actors: Who can shape things? With whom?*

Cities: The best mix of urban mobility alternatives for the city in question must be identified and the funding or regulatory measures must be aimed towards them. Citizens, construction companies, enterprises and public transport providers should be involved in this.

Citizens/road users: They can induce bottom-up change in the mobility system of a city by means of their deliberate behaviour. They can assist the city with its mobility strategy by contributing ideas and suggestions.

Building companies, developers: They can align the infrastructure of buildings towards sustainable transport (bicycle parking, making parking spaces for car-sharing schemes available), thus saving costs for parking spaces (the construction of a car park costs about €18,000). In Germany, the number of parking spaces prescribed for new buildings (regulated by the so-called parking space rule [Stellplatzschlüssel]) can be reduced by the availability of alternatives.

Enterprises: They can cooperate with the city and public transport providers as regards tickets for workers. Employees can offer showers and initiate health programmes.

Public transport providers: The operators of public transport companies and their expertise can be intensively integrated into the planning of the funding and regulatory measures.

7. *Prerequisites:*

No specific prerequisites necessary.

8. *Obstacles/barriers:*

- Lobbying of automobile manufacturers
- Lack of support among the general public
- Difficult starting position as regards infrastructure (densely populated Manhattan in New York allows less flexibility than, for example, flat Berlin)

9. *Indicators:*

- What is the modal split like?
- How many cars are there per 1000 residents?
- How many bicycles are there per 1000 residents?
- How well developed is the cycling network?
- How well developed is the local public transport system?

10. *Special features/remarks:*