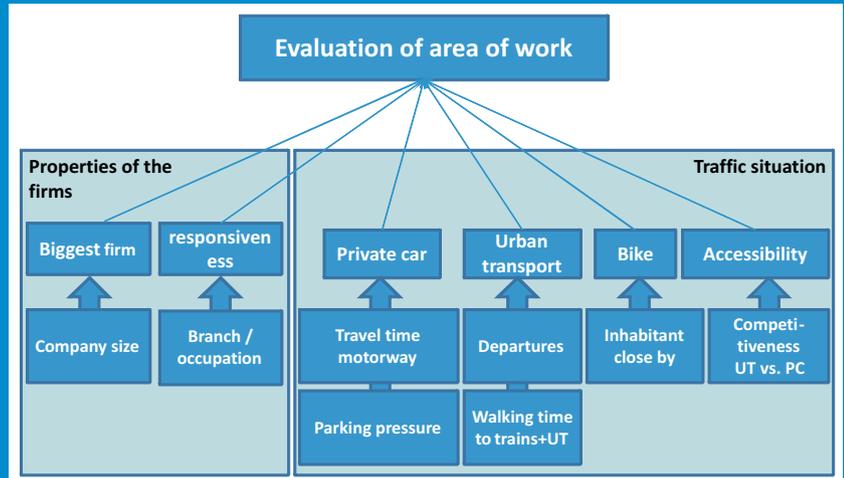


Effect of transportation demand management on traffic and environment - implementation phase -

Aim of the project

The aim of the project was to develop and validate a method to estimate the outcome of transportation demand management (TDM) on the mobility of people using a transport model. The approach should offer a quick overview of the existing job sites by using easy accessible data and evaluate the preconditions for implementing TDM strategies.

Criteria and indicators for evaluating areas of work



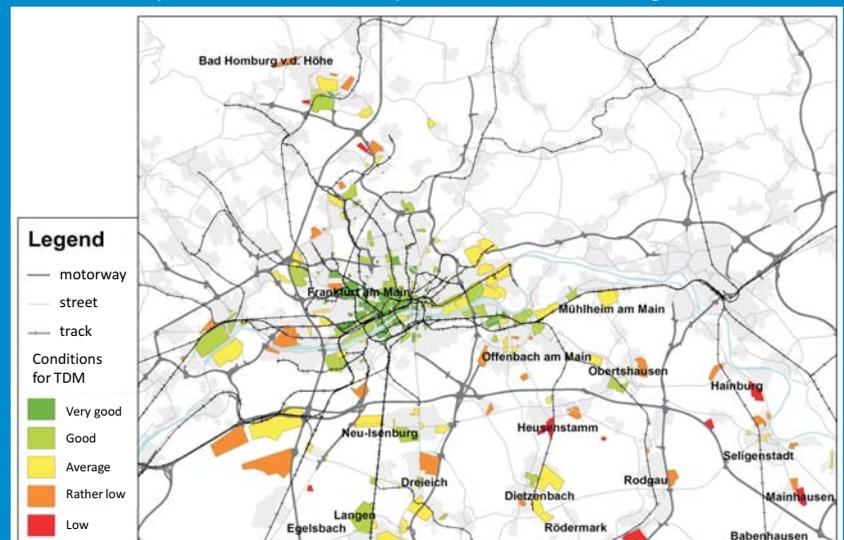
The evaluation of the areas of work is based on a rating of the traffic situation for all modes of transport at the areas of work, and on characterizing the particular influences from the type of firms. This analytical tool can be applied to show which areas should be prioritized for the implementation of TDM strategies and at which areas potentials can be mobilized by extending the transport offer.

Point values of each indicator for summarizing evaluation

Indicator	Good	Medium
Biggest firm	40	20
Responsiveness	40	20
Travel time motorway	10	5
Parking pressure	24	12
Walking time UT	10	5
Walking time UT (trains)	10	5
Departures rush hour	10	5
Departures outside rush hour	8	4
Competitiveness UT vs. PC	34	17
Bike potential	14	7

Scale for classification	
160 - 200	Very good
120 - 159	Good
80 - 119	Average
40 - 79	Rather low
0 - 39	Low

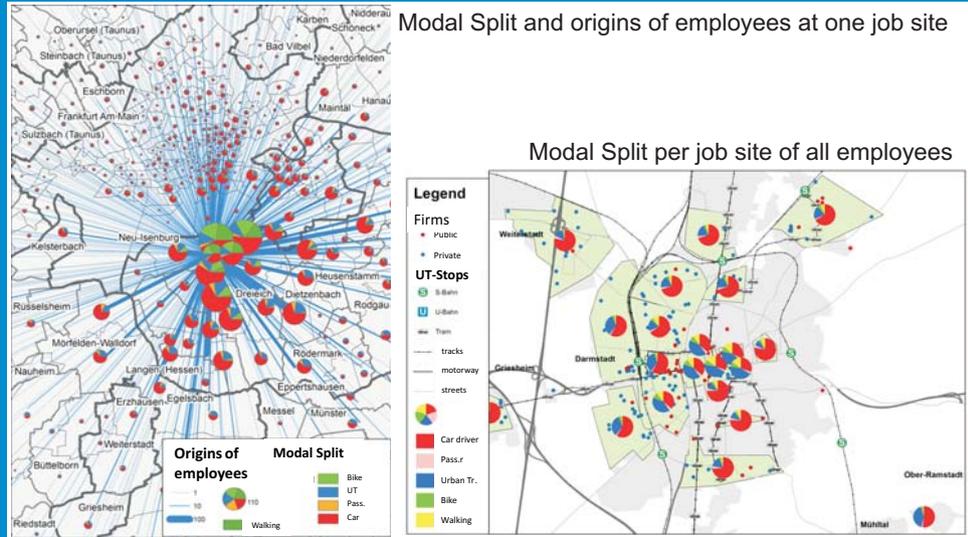
Evaluation of preconditions for transportation demand management



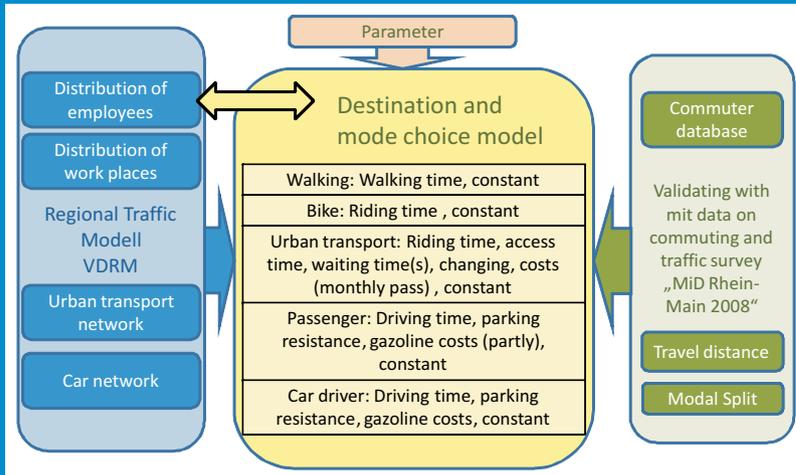
Effect of transportation demand management on traffic and environment - implementation phase -

Implementation of TDM in a transportation model

To get the output of TDM, the places of residence for all employees have been rebuild with a transportation mode choice model and a destination model.

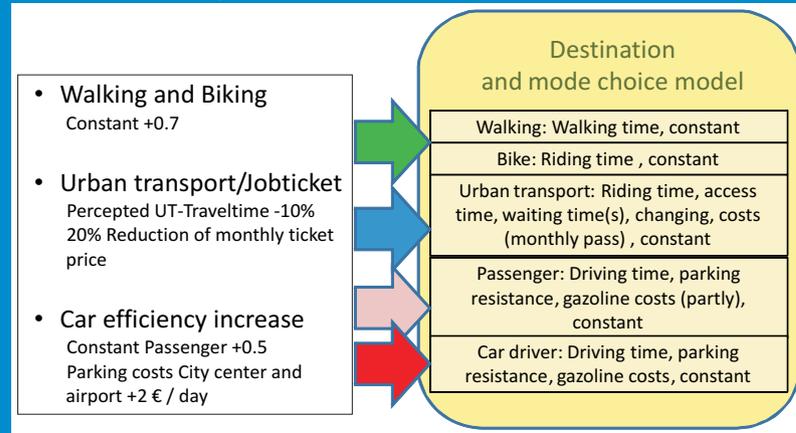


Modelling of commutes to work



Parameters influencing the mode choice are travel time, travel costs related to the use of private car, urban transport fees, number of transfers and number of jobs for each area. For calibrating and validating, data from the commuter database and the German traffic survey "Mobilität in Deutschland 2008" have been used.

Method of modelling TDM

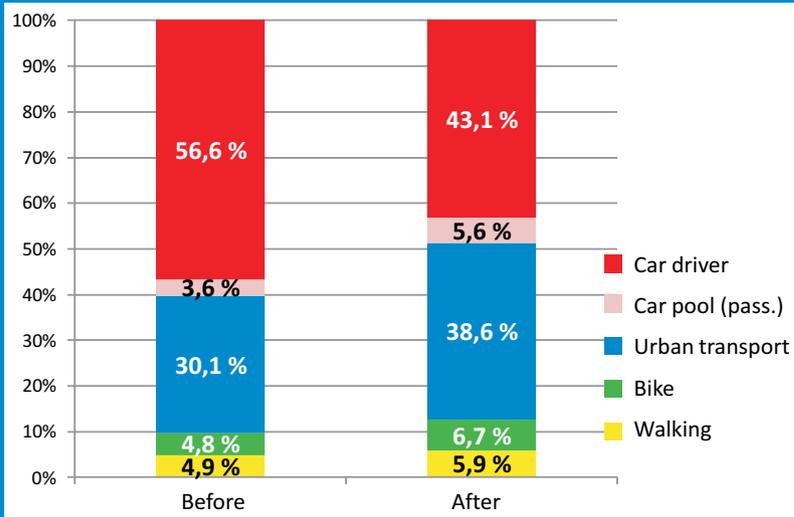


The possible measures of TDM have been summarized in bundles. Their effects on mode choice behaviour influencing parameters was estimated. These effects were used by the transportation model to estimate a scenario of mode choice after implementing TDM in all areas of work.

Effect of transportation demand management on traffic and environment - implementation phase -

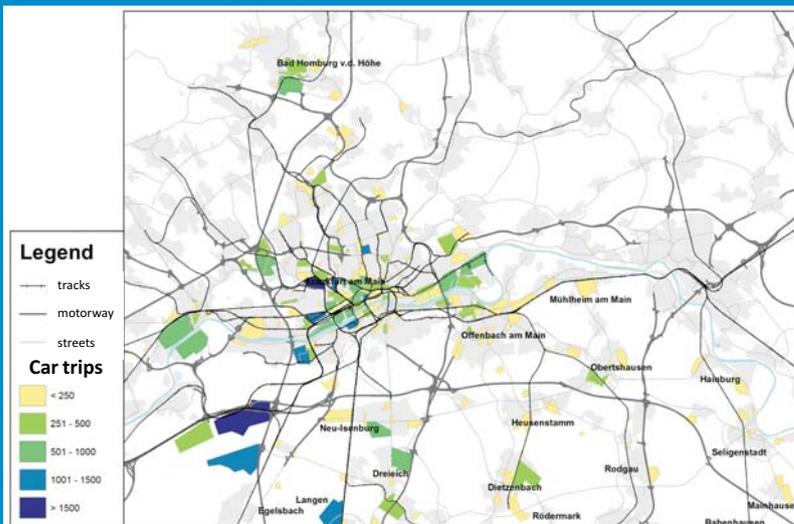
Results of evaluating job sites

Effect of all TDM-measures – Average for all job sites



It can be shown, that the consistent implementation of TDM at all employment locations leads to a significant change in the modal split for commuter trips to work. With measures from the fields of improving urban transport, increasing the efficiency of private car use as well as promoting cycling and walking, the share of single private car users can be reduced by more than 10 % and leads mostly to a rise of the share of urban transport.

Reduction of car usage per job site



The calculated decrease in car trips leads to a throw-off of car traffic on the main roads especially in the peak times. Also, further positive effects are accumulated because of the reduced traffic volumes and the positive environmental effects, e.g. reduction of CO₂ emissions, noise and fine dust. Finally, fewer car commuter mean fewer demand for company parking.

Reduction of car trips in the morning rush hour

