Modellierung der Wirkung des BUGA+ Radwegerings

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Abstract

The expansion of cycling infrastructure is an important requirement for the mobility transition. The advantages and disadvantages of different projects should be considered in order to use the available resources as effectively as possible. Traffic simulations offer a good opportunity to weigh up different scenarios and assess their impact on traffic without having to intervene in the existing infrastructure.

With that said, this study therefore deals with the integration of a cycle traffic assignment into the macroscopic traffic model of the city of Wuppertal and thus with the investigation of possible route variants for the BUGA+ cycle path ring. It should be noted that a traffic model is always only a simplification of reality and possible effects always require more detailed investigation. In addition, the results must be viewed critically with regard to three factors, namely the limited data available, the processing time and the level of experience of the reviser.

In the first part of the work, possible relevant influencing factors and their effects on the route choice are examined in order to be able to take them into account in a later allocation. It was assumed that possible influences have a positive as well as a negative effect on the perceived travel time. Which is why cyclists are also prepared to take detours due to various influences.

In the second part, the network model of the city of Wuppertal is revised on the basis of this data and a traffic assignment is implemented. A rough revision of the Wuppertal network model was necessary, as it was previously designed primarily for public transport and motorized private transport.

After having calibrated the model, two possible route variants were included in the model to examine their effects and thus determine a preferred variant.

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