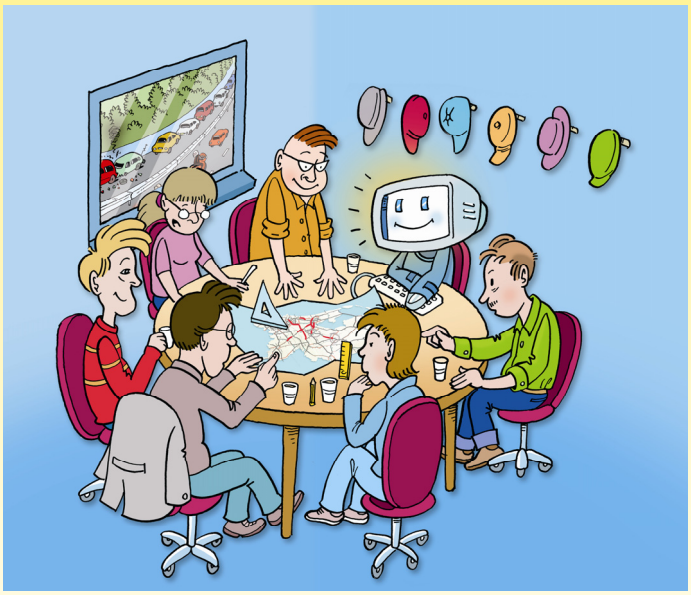
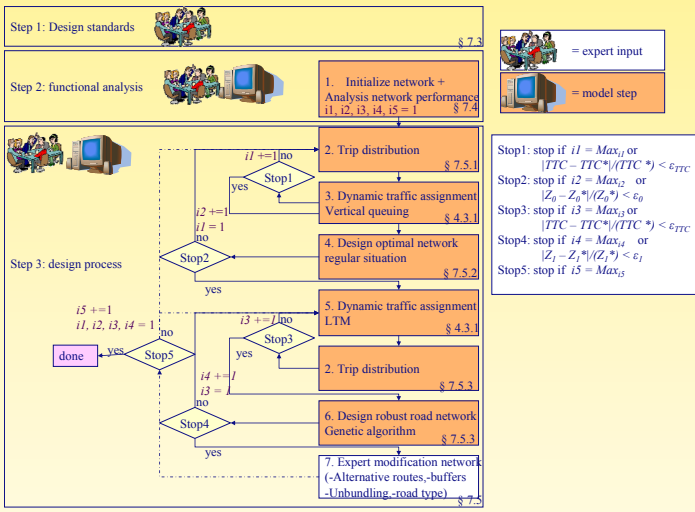
The Netherlands Research School for Transport, Infrastructure and Logistics

TRAIL

Algorithm for designing robust road networks

There is a growing awareness that road networks, especially in major urban areas, are becoming more and more vulnerable to unforeseen disturbances like incidents because of the fact that the level of congestion keeps growing. Therefore, robustness measures have to be taken. A solution algorithm is presented that combines expert knowledge with advanced modeling techniques. The method can be applied to large scale networks.





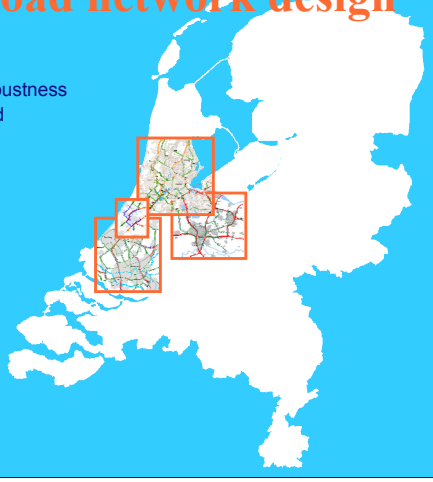
Robustness evaluation

Macroscopic dynamic traffic assignment in combination with marginal incident computation

➡ effects of several hundreds of incidents within minutes

Robust road network design

- Framework for robustness
- Evaluation method
- Measures
- Design method



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