

Smart transportation model can save 200 million euros

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The Netherlands spend 1 billion euros a year on target group transportation. This type of transportation is meant for those people who are unable to make use of own means of transportation or regular public

transportation, such as the elderly or persons with a handicap. Given the high costs involved, it is crucial to plan this type of transportation as efficiently as possible. Mathematics student Inge Tensen of the University of Twente developed a transportation model that organizes all transportation flows for vulnerable people in a smarter way. This enables cost savings of at least 20%, without loss of quality.

The new transportation model is the result of Tensen's graduation project. She carried it out at the HHM/Timeslab bureau. The transportation model makes use of smart mathematical algorithms and uses a planning model that is more flexible, more realistic and smarter than existing models. The first applications convincingly show that efficiency gains are possible.

Unique combination of flexibility and smart optimisation

Specific preferences of both the customer, the service provider and the transportation company can be included in the planning model, so that there is no need to add these manually afterwards. The model also takes into account possible delays, for example as a result of traffic congestion. The chance that people arrive late is minimal. By including this realistic variation in travel times, the model creates a planning which is better suited to the customer's desired times of arrival and departure. Also, new journeys can be added to a planning that was already created earlier. In this way, recurrent and changing journeys can be combined in the same planning. This combination of flexibility and smart optimization is unique for transportation of target groups in the Netherlands.

Savings of 200 million

The HHM/Timeslab bureau sees many opportunities to adapt the model. It fits in well with the greater role municipalities have come to play in the transportation of specific target groups. It is encouraged that vulnerable citizens make use of regular public transportation as much as possible. However, there will always be a large group of vulnerable people who remain reliant on special transportation. HHM/Timeslab thinks that, by organizing this type of transportation in a smarter way, the Netherlands can save 200 million euros every year.

Provided by University of Twente

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