

Mariska van Essen

# TAKING A DETOUR

**‘When travelling by car, people usually choose the shortest route, which leads to congestion. If only a small part of the people took a detour, congestion would alleviate and many drivers could travel faster. Nobody wants to do that, though. And that is the point of my PhD research - to motivate people to take a detour,’ explains Mariska van Essen.**

In other words, Mariska van Essen, a PhD candidate from the UT’s Center for Transport Studies, is studying the potential of personalized travel information, which could lead to more efficient use of the existing road network. ‘This would, of course, be cheaper and easier than to constantly build new roads to meet the growing demand’, she says.

## SMART app

With that in mind, Mariska van Essen aims to determine what makes drivers pick a certain route and how they could be swayed to choose another, perhaps a slightly longer alternative. ‘I designed several information strategies. I will conduct a questionnaire to find out which has the most potential and then I will implement this strategy into a smartphone application to see how people react in real life’, describes Van Essen. ‘For this experiment I will use the SMART app, co-developed by the UT and intended for local travelers. This app tracks trips made by its users and that allows me to ask questions based on actual decisions. I can ask the users why they did or didn’t choose the recommended alternative route right after their trip.’

In the end, the research findings should reveal which type of information works best for which people and in which situation. This knowledge could later be implemented into navigation apps. ‘It’s important to realize

that if only a small part of people chooses the alternative route, the network efficiency will already improve’, points out Van Essen.

## Technology and psychology

Mariska van Essen is no newbie in this field. Already her Master thesis, for which she received the CTW Master Thesis Award, focused on modeling route choices, especially in cases when people don’t choose the shortest route. ‘I found that the decision doesn’t depend only on the situation, but also on the traveler’s personality’, says Van Essen. ‘I conducted an experiment in USA, in which drivers had to choose between only two routes and still 1/3 of them didn’t choose the shortest one.’ This shows that the project isn’t only about looking at data on the screen. ‘This topic combines engineering and psychology’, thinks Mariska van Essen. ‘It fits me very well. I like doing research, making sense out of data, looking for structure.’



**PhDs are the backbone of our university. But who are they? Every month, we introduce another PhD candidate to you. This month: Mariska van Essen, PhD candidate at Center for Transport Studies (CTW Faculty)**