UNRAVELLING THE IMPACT OF COVID-19 ON CYCLING DEMAND IN THE NETHERLANDS

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Abstract
In order to contain COVID-19, governments worldwide have taken extensive measures, amongst which the ‘smart lockdown’. NDW has shown that this lockdown has a huge impact on traffic and transportation demand, which declined sharply during the first weeks of the lockdown. At the same time, bicycle demand, was less impacted. This study researches the impact of COVID-19 on the cycling demand and determines what factors determine the extent of the impact at specific locations. Open data from the Dutch National Data Warehouse (NDW) is used to analyse the data from a large number of 24/7 operational counting systems across The Netherlands.

This study shows that the impact on the total cycling demand per day is highly dependent on the location of the sensor. At some locations, a sharp significant decline of the total cycling demand per day is found, while at other locations an increase of the cycling demand was recorded. When studying the data more in-depth, also a shift of the cycling demand across the day is found and per day of the week. Where people were generally more inclined to cycle between 9:00 and 19:00 hours on weekend days (Saturday and Sunday) and especially less inclined to do so during the morning and evening peak hours on weekdays (Monday to Friday). Moreover, the function of the street was also identified as one of the explanatory variables of the change total change in cycling demand. In particular, City connector streets saw a sharp decrease of bicycle demand. Last of all, the weather was found to have a minor impact on the change in cycling demand and does explain the full increase of cycling demand recorded at some sensors between January and April 30th of this year.