Case Study

Floating Car Data in the City of Amsterdam

Customer

City of Amsterdam

Location

The Netherlands

Product/Service

Traffic Stats

The Overview

Like many other large cities, the city of Amsterdam is facing a serious challenge. The pressure on all traffic modes within the city is constantly increasing, including an ever-growing need for space for cyclists and pedestrians. The municipality of Amsterdam has therefore decided to opt for a strategy to attract fewer cars downtown in the next few years. In this context, several traffic measures have been taken.

The Challenge

To evaluate these measures, it is most common to use data collected from license plate cameras and induction loops. These data are extremely accurate yet are costly and limited by the number of locations and the time period for which they can be installed. As a test, City of Amsterdam Traffic Management has used floating car data (FCD) from TomTom to investigate if this could be a good complement to the analyses. To make this possible, TomTom provided their historical FCD TomTom Traffic Stats covering the entire Amsterdam road network.

The Solution

An example of a case under investigation is the road block in front of the Amsterdam Central Railway Station. Since June 2018 the road block has been installed obstructing through-traffic. TomTom FCD data is collected 24 hours a day, year in year out on the entire road network; snapshots on date and time can be taken on levels as detailed as 15 minutes time-sets. Through the selection of a date and time period prior to the installation of the roadblock, traffic behavior throughout the city could be compared to a period with the roadblock in place. It provided a good picture of the changes in traffic behavior following the measure.

The Results

During the test, the various cases showed that FCD are a suitable means for analyzing traffic behavior when conducting road works and putting traffic measures into effect: it is clearly visible where traffic flow increases/decreases, and which alternative routes have been selected by drivers. It also becomes clear where traffic is detouring through neighborhoods or using undesirable routes.

When analyzing, it is important to take the following variations into account – degree of penetration rates / sample size and the composition of the fleet of vehicles (cars/trucks) in the FCD. This could lead to intensity changes that didn't actually occur. A solution to get a better grip on the intensity changes is the application of location- and time-dependent calibration by using absolute data from induction loops or license plate camera collected data. FCD are easily accessible and flexible in use, with the main advantage: without excessive investment one can include a much wider target area and select periods with date ranges and time-sets fully configurable to the user's needs.

In summary, it can be concluded that the use of the FCD data insights in TomTom Traffic Stats together with the regularly collected traffic data (induction loops and license plate cameras) is a powerful tool for analyzing traffic; the different methods complement each other well.

City of Amsterdam

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