

Precise real-time information for Paris metropolitan area with PTV Optima



About DiRIF



Direction des Routes d'Île-de-France (DiRIF) is the highway authority for the 1,300 km long road network of the Paris metropolitan area. DiRIF counts 4 million motorists passing through on an average working day.

Goals

PTV supplemented the detector-based approach with FCD that covers the entire road network to provide real-time speed data for the traffic information website sytdin.fr. A four-step assessment process ensures the accuracy of the data before it is published online to inform motorists.

Approach

While the previous solution only provided data for the 2,500 road sections where detectors had been installed, the PTV Optima solution is based on FCD. The real-time speed data is more accurate and less cost-intensive with regard to maintenance.

The French highway authority, DiRIF is in charge of the highway network in the Paris metropolitan area, a road infrastructure consisting of 1,300 km. In five different traffic management centres, more than 20 traffic engineers are in charge of the safe and efficient movement of people and goods on roadways. On average, the operational team in the field deals with an event, such as accidents, construction work and maintenance or breakdown services, every 15 minutes. This number comes as no surprise, given the network has around 4 million users on a standard working day. The high traffic volume regularly causes 200 km long tailbacks in the morning and evening during the three to four hour-lasting peak times. Due to such a high number of vehicles travelling through the network on a daily basis, DiRIF counts 17,000 traffic incidents per year and one route section blockage per day.

COVERING THE ENTIRE NETWORK

To keep the traffic flowing and prevent accidents despite the system's various bottlenecks, DiRIF uses the online platform sytdin.fr to provide drivers with traffic information about the region. The website is very popular and has more than 100,000 unique visitors per day. But before the real-time traffic information can be made available online to calculate travel times and identify congestion, DiRIF needs accurate speed data of the vehicles travelling the network. Until 2013, DiRIF has relied on loop-based detectors to assess the network's traffic state. However, the detector data did not cover the entire network, but only the 2,500 road sections where detectors were installed. For more comprehensive traffic information that covers the entire network, DiRIF had to always extrapolate the data. Another disadvantage were the high maintenance costs caused by numerous material damages of the detectors and the wiring.

INTEGRATING REAL-TIME FCD FOR INCREASED ACCURACY

To improve the quality of the traffic information, DiRIF now relies on real-time data analytics powered by PTV Optima. The software surveys and assesses floating car data (FCD) provided by the transportation analytics company, Inrix. This more reliable and less cost-intensive solution delivers highly accurate data that is fed into the traffic platform.

Result

Thanks to the real-time data analytics powered by PTV Optima, DiRIF benefits from precise traffic information that cover the entire network. The highway authority can now provide motorists with more reliable updates.

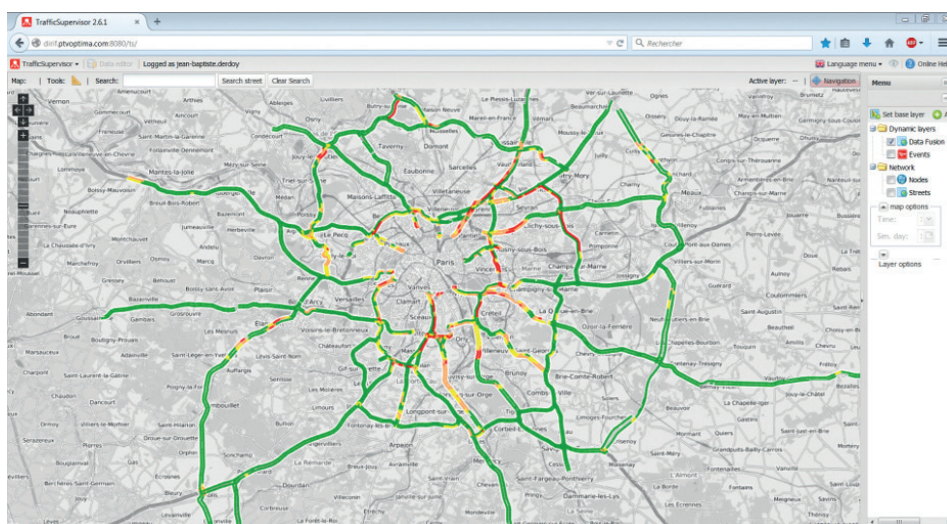
While, previously, the data collected via road detectors only covered 2,500 road sections within the network, the FCD expands on the entire network. In a four-step process, PTV Optima assesses and processes the incoming speed data in real-time. An algorithm developed by PTV makes sure that DiRIF's network model correlates with Inrix's model and FCD. Road users benefit from more reliable live traffic news and updates on sytaadin.fr. They can check and plan their route based on real-time traffic conditions and stay informed about road closures, accidents and traffic jams.

INCREASING RELIABILITY WITH FIRST LEVEL TECHNICAL SUPPORT

PTV Optima's user interface, Traffic Supervisor, has a clear and structured design that maximises usability and the traffic speed visualisation was customised to fit the requirements of DiRIF. Data for every segment is available by just a view clicks and can be retrieved individually in a separate window. For a maximum accuracy and reliability PTV Group also provides the French highway authority with first level technical support on a 24/7 basis. During working days between 6 a.m. and 10 p.m., PTV's customer service offers issue management within an hour or less.

PROVIDING MOTORISTS WITH DETAILED REAL-TIME TRAFFIC INFORMATION

Giving motorists the right information at the right time improves mobility and safety. Since the implementation of PTV Optima, DiRIF has been able to publish more precise and up-to-date information on sytaadin.fr which has helped roader users utilise the network more efficiently and plan journeys better. The accuracy of the real-time data assessed by PTV Optima has led the French highway authority to extend their collaboration with PTV for another two years. Detailed real-time data is the key to smooth traffic flow and helps road users get to their destinations faster and safer.



Traffic Supervisor is PTV Optima's web-based graphical user interface.