

Case Study

Journey Time Monitoring for the Tyne Tunnels

Background

The Tyne Tunnel runs under the River Tyne to connect the towns of Jarrow on the south bank with Howdon on the north. The original tunnel opened in 1967 with a subsequent tunnel opening in 2011. The new tunnel was opened to handle the rise in traffic and improve safety by having traffic in each tunnel travelling in only one direction.

TT2 are responsible for the design, build, part-finance and operation of the new vehicle tunnel and other developments associated with the New Tyne Crossing project. They operate all Tyne Tunnels and will do so until 2037.

Customer experience is paramount to TT2. They had therefore been seeking a solution to provide accurate journey time information to their users, either via their website, roadside Variable Message Signs (VMS) or a newly developed smartphone app.

Crucially for TT2, ANPR and Bluetooth systems can only be deployed on roads under the operator's jurisdiction. TT2 however, wanted to understand journey times not only on their routes but also the surrounding area.

Solution

Traditional journey time management systems use ANPR cameras or Bluetooth detectors installed at the roadside to detect passing traffic. Deploying roadside infrastructure such as this is costly to both install and maintain. It also requires continued power and data transfer, which increases ongoing costs further.

"The Insight Journey Time Monitoring application from Clearview has proven to be just the solution we needed to help our customers understand their journey to and through the Tyne Tunnels. The system produces very valuable and useful data for both TT2 and road users. Clearview has supported us in getting up and running with the system, which we are now using with confidence"

Kristian Fenwick, Project Manager at TT2

In contrast, Clearview's Journey Time Monitoring application uses crowdsourced data to provide accurate and reliable journey time information. As a result, it is much more cost effective and flexible than systems based on hard infrastructure. It can also be made operational far more quickly.

TT2 were impressed with the speed of deployment, flexibility and reliability of the system and following a trial period, decided to implement it. The system's comprehensive APIs made integration with other platforms (and the smart phone app) simple and straightforward and TT2 remain impressed by the inbuilt reporting and alerts system.

The unique combination of comprehensive and flexible alerts as well as robust reporting, allow TT2 operations staff to be aware of issues as they happen. They can further analyse journey times around the tunnels over time periods with integrated charts, reports and heatmaps, all of which are easily exported to Excel for distribution and further analysis.

Equipped with accurate and timely journey time information, TT2 are now able to plan maintenance activities when they know it will have the minimum impact on the road network while sharing journey time information with their users, so that they can plan the most efficient route and their journey time expectations are consistently met.

Key Benefits

- Dashboard and email alerts notify changes in traffic flow, reducing the need for 24x7 monitoring.
- The absence of hardware minimises set-up cost and allows TT2 to monitor routes beyond those they operate.
- Heatmaps, reports and graphs allow quick and easy analysis of journey time changes to aid maintenance