

Case Study for Monitoring Kepax Bridge

Worcestershire County Council (WCC) - Worcester

PROBLEM



For the new bridge over the River Sever in Worcester, linking Gheluvelt Park to the Kepax site, WCC wanted to install CCTV for and required a method to monitor the usage of the bridge. The timescales and cost to bring fibre to the site was prohibitive. Legacy equipment used on other bridges in Worcestershire have proven to be inaccurate, struggles to detect bicycles made from non-ferrous materials, and lack of flexibility to count emerging modes of transport, i.e. e-scooters. Additionally, placement at the user level has left it vulnerable to both flooding and vandalism. Ideally, a wireless, high-speed connection to monitoring devices was required to minimise both installation and maintenance costs. Additionally, the capability to expand the monitoring network without extending the existing communications infrastructure was considered advantageous.

SOLUTION



The River Sever Partnership's Advanced Wireless Innovation Region Programme, supported by Department for Science, Innovation & Technology, funded the installation of both CCTV and Clearview Intelligence's Insight Vision AI Sensor, and for these to be connected via the public 5G mobile network. The advanced technology collects real-time data on bridge users and transmits to a secure cloud-based data platform. To protect privacy, the Clearview Insight Vision system automatically blurs faces, individuals, and license plates in real time.

APPROACH



A collaboration between WCC's Project Team, Street Lighting, and Traffic Data resulted in a straightforward design solution: installing a lamp column in an optimal location to give the CCTV and the AI sensor the best possible vantage points. Clearview Intelligence's installation team was then able to mount the AI sensor efficiently using the easily accessible lowering lamp column, causing minimal disruption to both the project and the public, while also reducing health and safety risks.

SO WHAT?



The 5G supported CCTV camera links in well with the wider CCTV network in the City, helping keep residents safe. The Insight Vision AI Sensor monitors bridge usage through Clearview Intelligence's cloud-based platform; helping provide a return on investment for the Kepax Bridge. Insights are being gained into how the bridge is being used - whether for commuting or leisure, how usage patterns are influenced by weather, public holidays, and the ratio of cyclists to pedestrians. These insights can help guide improvements to both local and county-wide infrastructure based on real-world usage trends. As confidence in the system grows, more 'use-cases' can be added.

In the first 6 months, the AI sensor has recorded:



over
116,000



nearly
21,000