

Automated Incident Management

Worcestershire County Council - C-ITS Project 2017/18



Bringing together a range of partner
way condition information shared between

data into a consolidated system with live high-

- WCC Teams - Highways Control, Maintenance, Street Works and Intelligent Transport Systems and Traffic Control
- West Mercia Police & Hereford & Worcester Fire Service – Control room and Traffic Management officers
- Highways England – National/regional traffic control centre and Innovation Team
- The travelling public through VMS and media feeds initially and in the future direct to connected vehicles

The corner stone of this project is investment in system design for time and location stamped critical issues feeds between partner control centres and on highway incident management staff. The system will have multi partner access to allow highway incidents to be dealt with in a co-ordinated and seamless way. On highway staff will be able to directly update the system from site. The system will be able to be viewed through interactive large screen displays with additional applications covering data feeds from traffic flow monitors, cameras, street works, road closures, highways maintenance, environmental conditions, intelligent traffic signal control, VMS (mobile and static) local and national traffic and travel updates.

AIM—Project Overview

Project Resources

- *DfT & WCC capital funding*
- *WCC dedicated ITS and Digital Transformation staff resource*
- *Streetworks Permit Scheme revenue income stream*

Partnership Protocols

- *WM Police & H&W Fire Service*
- *Highways England*

Data Sharing

- *Direct feeds from new WM Police Control system SaabSAFE and H&W Fire Service control system*
- *Worcestershire Office of Data Analytics (WODA) – a jointly funded public sector organisation (NHS, Police, County, Districts, Fire, LEP)*
- *HE joint journey time management system, direct camera feed and VMS message setting agreement*

Live data

- *Connected staff & vehicles*
- *Citi Logik—Mobile Network Data*
- *Camera feeds*
- *Journey time and traffic flow data with emissions estimates*
- *Intelligent traffic signal control*

Information

- *Intuitive and interactive front end ITS Control room display*
- *Public information—VMS, social media, local radio and connected vehicles*

AIM—Overarching Objectives

OBJECTIVE 1: IMPROVE RATIO OF AVERAGE JOURNEY TIME: TRAFFIC FLOW (SECS/VEH)

METHOD

Intelligent Traffic Signal Control Strategies to Optimise Capacity and Flow

Public Information Feed—Live and Forecast Traffic Conditions for Journey Planning and Optimum Routing

DATA

Comprehensive historic traffic flow data from on highway detectors for forecasting traffic conditions during planned events for purpose of advising on optimum routing profiles, journey time prediction and signals configuration

Live traffic flow detection and on highway camera feeds for generating alerts

OBJECTIVE 2 : IMPROVE JOURNEY TIME RELIABILITY

METHOD

Reactive Traffic Signal Control Strategies to Manage Diverted Traffic and Manage flow

Fast, accurate and continually updated information feeds between emergency services, emergency maintenance teams and the public to minimise 'trapped traffic'

DATA

Live unplanned incident information data feed with continuous updates from WM Police Operational Control Centre and H&W Fire Service with details on location; time and date; incident type; estimated traffic impact; estimated time period of traffic impact; incident cleared status with time stamp

Live traffic flow detection and on highway camera feeds for generating alerts and monitoring highway network conditions

Partnership



ITS Control Room including Street Works and Highways Control and Maintenance

- Live traffic flow and journey times on interactive display
- Camera coverage — live traffic conditions
- Automated link to live and forecast weather and environmental conditions
- Planned street works and diversions
- Intelligent Traffic Signal Control
- Automated link to incident data feeds from emergency services
- Traffic monitoring database analysis and forecasting
- Public information feeds



- Enable automated data feed from Control Room systems - SaabSAFE and HWFR
- Incorporate live observation updates from on highway connected staff



- Shared Journey Time Management System for Worcestershire Area - WCC local network and M5/M42
- Direct camera feed link to WCC GIS highways management system
- VMS setting and message cancel agreement between WCC and HE



Worcester test area for assessing the potential for mobile network data to provide:-

- Live traffic flow alerts (variation from normal)
- Traffic patterns during incidents (O-D variation from normal)