



Company / Organisation Name:	West Midlands Combined Authority
Team / Department:	Policy, Strategy and Innovation - Transport for West Midlands
Address:	16 Summer Lane, Birmingham, B19 3SD

Provisional title for project:

The impact of events on traffic demand and performance in the West Midlands and what factors influence the time taken to return to normal traffic demand and performance levels

Short description of the problem that would be addressed by the project:

Every year thousands of events occur on the transport network in the West Midlands. This includes both our road network, rail network and cycle network. Events can be either planned, expected events such as infrastructure and maintenance works or cultural and social events, or unplanned events such as emergency facilities work, signalling failures, driver availability, road traffic collisions or obstructions on the road.

At Transport for West Midlands, we are interested in these events as they disrupt the network by either reducing capacity, for example through the temporary closure of roads or cancelling of a train service, inducing demand, for example through a particularly large music event that draws a surplus of visitors to the region compared to the everyday normal as well as reducing speeds and increasing journey times. We have done some existing work predicting demand to be able to plan service provision better during these events however through this project we are seeking to understand the lasting impact events such as these have on network demand, speeds, and journey times. Crucially, we want to understand:

How long does it take for demand, speeds, and journey times to return to normal? Is this dependent on the event type, road link type, by the mode/network type, time of year, time of day, duration of activity, geographical extent of activity or location of activity?

The insight derived from this project will enable us to understand the factors relating to the return to normal and what measures will be required following an event to ensure demand and performance can be resumed quicker.

Short description of the data sources that would be used in the project, and how they would be used

Traffic flows, speeds and journey times, unplanned incidents/collisions and planned cultural/social events/street works

Would any work by the student need to be carried out on site at the Company with the exception of supervisory meetings?

No

Any issues of data confidentiality and IPR that would need to be resolved

No

Essential skills

Data science, data analysis

Desirable skills

Network analysis, GIS

Preferred degree programmes (if any)

Data Science, Economics, Mathematics, Geography, or other similar discipline

Preferred selection method

Online interview (Microsoft Teams)

Support and training offered by the company

The successful student will have support from a Senior Research Analyst who is familiar with the data conducting impact analysis

Financial assistance offered by the company

The organisation will pay the honorarium (£500)

Any other comments

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