How Transport for West Midlands works with geospatial data

Covid-19 showed why greater data granularity is key, with Transport for West Midlands turning to geospatial data to understand demand for services

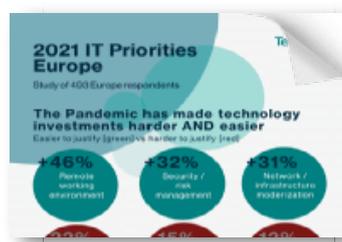By **Cliff Saran,** Managing Editor   Published: **05 Jul 2021 15:15**

Transport for West Midlands has used the Esri geographical information system (GIS) to help it manage public transport capacity during the pandemic.

CONTENT CONTINUES BELOW

DOWNLOAD THIS FREE GUIDE

IT Priority Budgets 2021 Infographic

After surveying near 500 European IT sector

out what the results showed.

Download now

In the West Midlands, the coronavirus outbreak led to an immediate 90% drop in passenger numbers. The transport authority worked with Esri to enable it to keep vital services running for healthcare staff and other key workers during the pandemic, while continuing to operate in an efficient way.

Working with consultants from Esri, Transport for West Midlands deployed location intelligence and mapping technology, which provided a way to gain insights into areas of high density in which key workers were more dependent on public transport to get to work.

The data Esri UK provided has allowed Transport for West Midlands to look at the effectiveness of emergency policies, improve public safety on roads and ensure vital links were established to the NHS Nightingale Hospital.

The software provides interactive dashboards, which makes information easy to access and easy to share with the mayor's office, more than 260 local authority employees, the police and other key partners, including Network Rail, Highways England and the Department for Transport.

Transport for West Midlands previously outsourced data analytics to external consultants, but has now developed in-house expertise with intelligence and research teams, supporting seven West Midlands local authorities. Sharing the experts across the different local authorities has helped to make the most of the allocated funding.

There are a number of different approaches organisations can take when combining mapping data with other information sources. Some work as services accessible via application programming interfaces (APIs), while others use a content model to provide geospatial datasets.

When asked about the reasons behind selecting Esri, Stuart Lester, data innovation lead for Transport for West Midlands, says: "I have a team of data analysts rather than web developers." According to Lester, since Esri works rather like a content management system, it is a good fit with the existing skill sets and capabilities across the teams.

Previously, Transport for West Midlands did not have a corporate GIS platform, but thanks to Esri it can now combine datasets to help decision-making across multiple areas including transport, demographics, economics, land use planning and environmental.

For example, Lester points out that during the pandemic, Transport for West Midlands "had to ensure we had the right data on key workers, [so we could] look at how we get people to work".

Working with Esri consultants, Transport for West Midlands began developing new ways to show information. For instance, combining census data, survey data with public transport, as well as car use data, all overlayed with mapping, provides a way to understand how people travel from their home to their place of work. Such insights enabled Transport for West Midlands to repurpose its Ring and Ride service during the lockdown.

In Lester's experience, there used to be a lot of commercial sensitivity in public transport, but during the pandemic such barriers broke down, enabling the team at Transport for West

Midlands to work with other organisations to [unlock datasets](#).

"In April 2020, we engaged with West Midlands Police to gain access to ANPR [automatic number plate recognition] cameras," says Lester, as an example.

The data shared was purely text data, but this enabled Transport for West Midlands to see what was happening on the highways to identify the types of vehicles on the road, such as heavy goods vehicles, light goods vehicles or private cars.

Other datasets have enabled Transport for West Midlands to understand more about the density of people moving from one place to another, such as by looking at how many people congregate at bus stations.

Coventry is the UK's city of culture this year, and the Ricoh Arena in Coventry is set to host three sports events during the 2022 Commonwealth Games – both of these require good transport management.

Transport for West Midlands has also gone live with a regional transport coordination centre and has worked with Esri on a proof of concept incident management suite. This provides a virtual dashboard, collating incidents across Network Rail, the bus operators and the rail network.

Lester says that the datasets offer Transport for West Midlands rudimentary demand estimation, which helps when forecasting yearly demand using GIS data. He says this aids in determining the likely demand for transport services. The data can also help Western Power plan major infrastructure projects. Electric vehicle charging points are also mapped out to support the move to electric vehicles.

Read more about geospatial data

- Harnessing the power of [geospatial data](#) in IoT enables businesses to unlock a wealth of insights to inform decisions that put them ahead of the curve.

- Shareable [geospatial mapping data](#) will be key to the

predicted roll-out of self-driving vehicles in 2030, and the UK is in the fast lane to lead development of these regulations.

↘ Read more on Business intelligence software

Trial of UK's first mobile vehicle-to-everything road safety system goes live

By: **Joe O'Halloran**

UK's first 5G-connected tram on track across West Midlands

By: **Joe O'Halloran**

5G to fore as Vodafone, Immense join Midlands Future Mobility

By: **Joe O'Halloran**

5PRING launches Green Innovation Challenge

By: **Joe O'Halloran**

Latest TechTarget resources

CIO

SECURITY

NETWORKING

DATA CENTER

DATA MANAGEMENT

Search**CIO**

▶ 📄 **The mirrored world: What are the benefits of digital twins?**

Building digital twins is the first step on the path to the mirrored world for businesses. Leaders are bringing together data and...

📄 **FTC broadens antitrust enforcement powers**

The Federal Trade Commission took steps Thursday to broaden its powers by increasing the scope of antitrust inquiry, ...

About Us	Contributors	Opinions	
Meet The Editors	Reprints	Quizzes	
Contact Us	Answers	Photo Stories	
Our Use of Cookies	E-Products	Tips	
Advertisers	Events	Tutorials	
Business Partners	In Depth	Videos	
Media Kit	Guides	Computer Weekly Topics	
Corporate Site			