

CASE STUDY

Urban Traffic Control given green light by Stoke Council

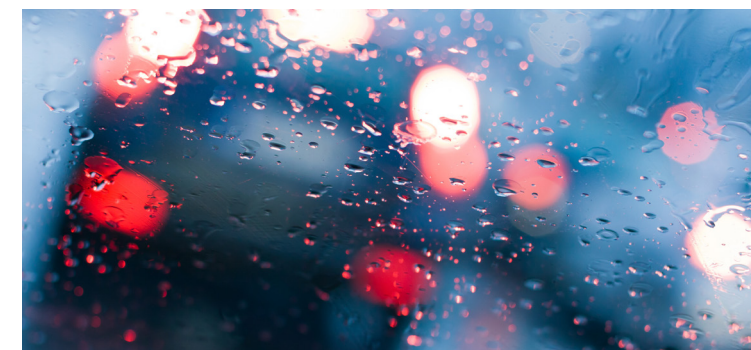
TRL Software's ground-breaking Urban Traffic Control (UTC) system was successfully deployed in Stoke-on-Trent during 2021 – and is now set to be expanded further across the bustling West Midlands city.

Congested roads are more than just a nuisance for drivers. As well as wasting valuable time, heavy traffic leads to greater fuel usage, long-term engine damage, an increase in global CO2 emissions as well as more air pollution at the local level. And without proper traffic management, problems at one junction can quickly back up and lead to major gridlock across the network as a whole.

Faced with increasing numbers of vehicles on their roads and the pressures of meeting stringent air quality regulations, local authorities are generally aware of the benefits that can be realised by keeping their roads running smoothly and efficiently. All too often, however, they find themselves relying on technology that is cumbersome, inflexible or just plain out of date.

That was the situation faced by Will Willis. As Urban Traffic Control Engineer for Stoke-on-Trent City Council, he is single-handedly responsible for managing the traffic signals and transport telematics for his entire city.

“The previous system we were using was about twenty years old and the data it provided was displayed as just a screen full of ones and zeros,” Willis recalls. “On top of that it was hosted on a server somewhere in the depths of the council building basement which meant having to go through our IT network support team whenever there was a technical issue to resolve.”



"Great Visuals"

“As soon as we started working with TRL Software, the difference was striking. The UTC system is cloud based and has been built with mobile use in mind, so I can have it on my tablet and access all the information I need while I'm on site. As a one-man operation, that makes my job so much easier. The clarity of the UTC visuals also means that you can easily demonstrate how the traffic is flowing through the junctions – which makes it a great tool for explaining the traffic flow to councillors or anyone else who wants to see how we're improving the movement of people and vehicles through the city.”

While UTC provides users with a brand-new, easy-to-use interface, the technology underpinning the system is based on **SCOOT® 7** – the latest version of TRL Software's world-leading traffic signal control system. Currently used in over 350 towns and cities globally, **SCOOT® 7** is a proven and popular technology, now enhanced and made even more accessible by the addition of the UTC interface. Together, UTC and **SCOOT® 7** take care of the complex coordination of traffic signals across a network, using algorithms that help the system automatically learn and improve, and even predict future patterns. The end results are minimised stops and delays, reduced emissions and better journey-time reliability for all road users.

“We're now getting ready to expand the use of UTC across a larger area of the city,” Willis says, “and there's so much extra stuff the software can do – from improving pedestrian and cyclist flow to providing open data for external solution providers. It feels like I'm just starting to scratch the surface of what it can offer.”



Future roll-out

TRL Software's ground-breaking Urban Traffic Control (UTC) system was successfully deployed in Stoke-on-Trent during 2021 – and is now set to be expanded further across the bustling West Midlands city.



“We've already seen improvements in the areas where we've been running UTC so far, and I think the coming months will be very exciting,” says Willis.

Customer needs

TRL Software's ground-breaking Urban Traffic Control (UTC) system was successfully deployed in Stoke-on-Trent during 2021 – and is now set to be expanded further across the bustling West Midlands city.

“We identified four top customer needs and focused on these as we built the software,” explains TRL Software Head of Product Management Subu Kamal.

“First and foremost, there was obviously the need for improved traffic management, but there was also a desire for a truly open system that other users can connect to. Cost is always important, of course, and our customers told us they were looking to reduce the total cost of ownership. Many also want to avoid being locked into a particular hardware vendor, which makes it hard for them to move away to a different supplier if they are not happy with the product or service they are getting.”

To address the last two requirements in particular, TRL Software have developed UTC to be totally hardware-agnostic. TRL can provide the necessary hardware if it is not already in place, or plug UTC into any legacy hardware that a local authority is already using. As well as being easy to set up, either from scratch or in conjunction with existing hardware, **UTC and SCOOT® 7** are provided on a monthly per-junction subscription basis, meaning that the customer always knows their exact costs – and is not tied into any long-term obligations. Supported by the fact that TRL is a not-for-profit organisation, with all net revenues going back into product development and improvement, customers can save up to 60% on the total cost of ownership compared to other solutions on the market.

The per-junction business model also means that the system can be tailored to accommodate anything from small projects involving just a few



“As part of the initial set-up, the TRL team were able to iron out a number of glitches and mistakes in the previous software we were using, and that's the kind of thing I wouldn't have had the time to do myself.”

“As we expand UTC to cover more of the city, I think the system is really going to come into its own with its inbuilt automated strategies helping us deal with complex city-wide issues such as the major congestion that can build up after a road traffic collision if mitigation measures aren't in place.”

“I'm also looking forward to what the team at TRL come up with next, because I don't think I've ever met a more supportive contractor. With some of the other contractors, it seems like they are sometimes too big to care, but TRL really show a passion and a love for the product they're providing, and they are always keen to show me the latest thing that the software can do.”

SCOOT – The engine beneath the bonnet

The per-junction business model also means that the system can be tailored to accommodate anything from small projects involving just a few junctions in one part of a city to major rollouts in global cities such as Beijing, Delhi, São Paulo or London – all of which are already using **SCOOT®** based systems to successfully manage their traffic flow.

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