Samdesk

(London RoadLab 1.0)

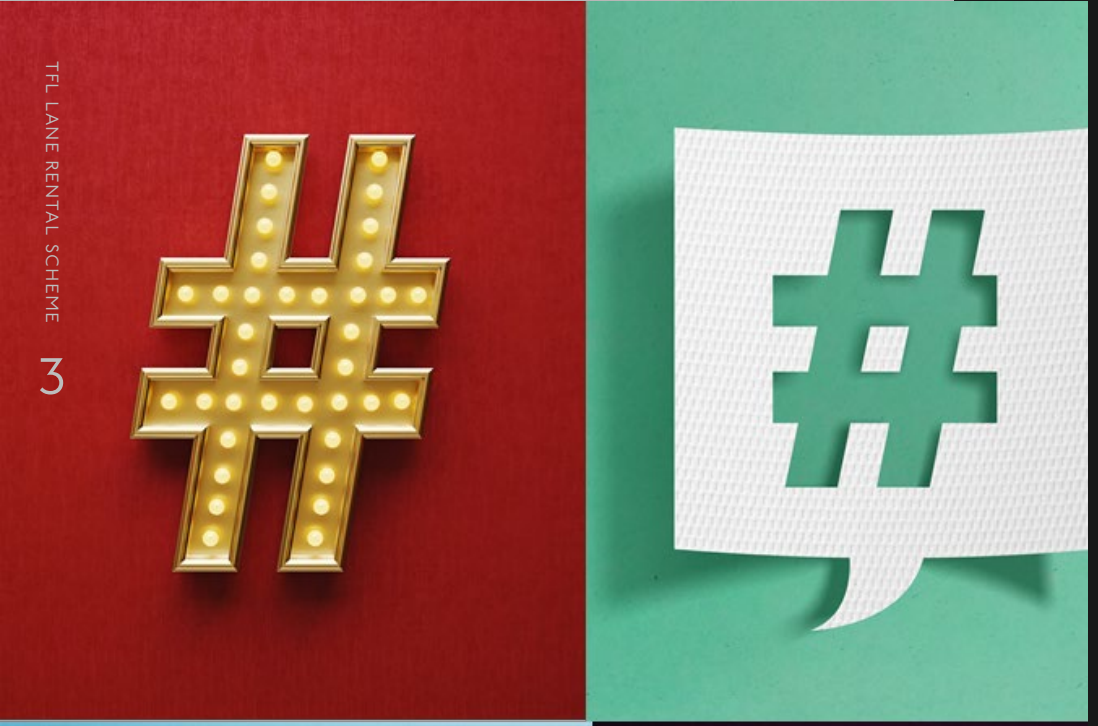
TfL Lane Rental Industry Publication

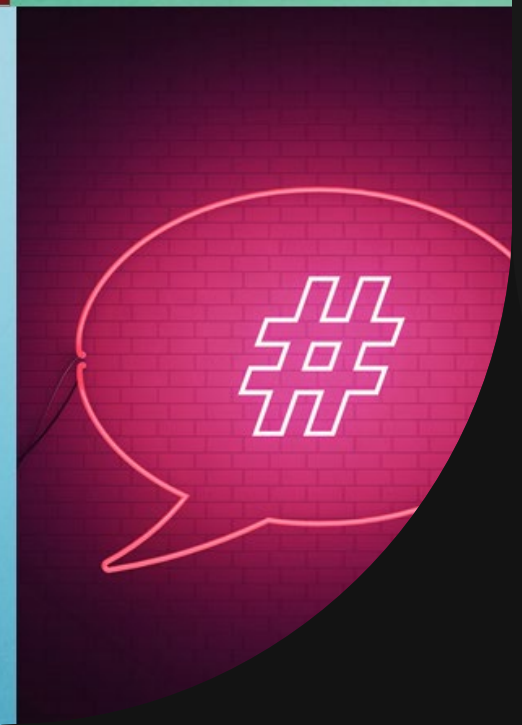
Introduction

Keeping London moving is a 24 hours a day, 7 days a week, 365 days a year operation. Each day, around 10 million journeys take place by car, half a million by bike and 6 million by bus. Ensuring the road network runs smoothly, while enabling works to install, maintain and replace the essential services that support daily life, is vital for the people that live, work and visit the Capital.

To help improve London's roads during works, Transport for London (TfL) launched the London RoadLab, an innovation challenge aimed at developing technology to make road works safer, smarter and more inclusive. Innovators were invited to pitch ideas for tackling problems caused by road works, with nine shortlisted. A ten-week programme followed, with ideas developed into minimal viable products (MVPs), concluding with a demo day to showcase them. From this Samdesk was selected as one of the successful MVPs.

The concept was to scan social media transactions and identify road works/related events, providing real-time information to stakeholders. Powered by artificial intelligence, the disruption detection engine would proactively spot and identify issues/crisis events, by sifting through the billions of social media (Twitter, Snapchat, Facebook) posts. The project set out to prove the technology for use on London's roads over a 12-month trial period.





The Project

The aim was to develop the MVP into a fully deployable solution, enabling a range of new features to the street and roadworks sector including:

- Increased awareness of issues that might have been missed
- Quicker response times when assessing and responding with appropriate safety measures
- Enhanced situational awareness in the form of on-the-ground visuals
- Automation for the entire detection and collection process
- Inclusion of up to 15 new event types

Split into two phases, delivery and trial, key stakeholders included TfL's Network Management Control Centre (NMCC) and the Coordination, Assessment and Permitting (CaP) team, who were involved in generating the new event types.

The process was carried out by the Operational Control team, through a dedicated Project Coordinator, with Samdesk liaising with the wider Network Management and Resilience directorate to customise the tool.

Outcomes

Over the course of development, 15 new events types were agreed/ created for the dashboard. This was to enable timely visibility for appropriate action to be taken. The dashboard would provide an early indication and enable additional social media chatter capture as events unfold.

Delivery of the milestone objectives during the first phase were achieved. However, during the second phase the trial identified large variances in speed of information being obtained. This was especially apparent when the emergency services were involved, given the NMCC's links and direct access to them, along with availability of CCTV imagery.

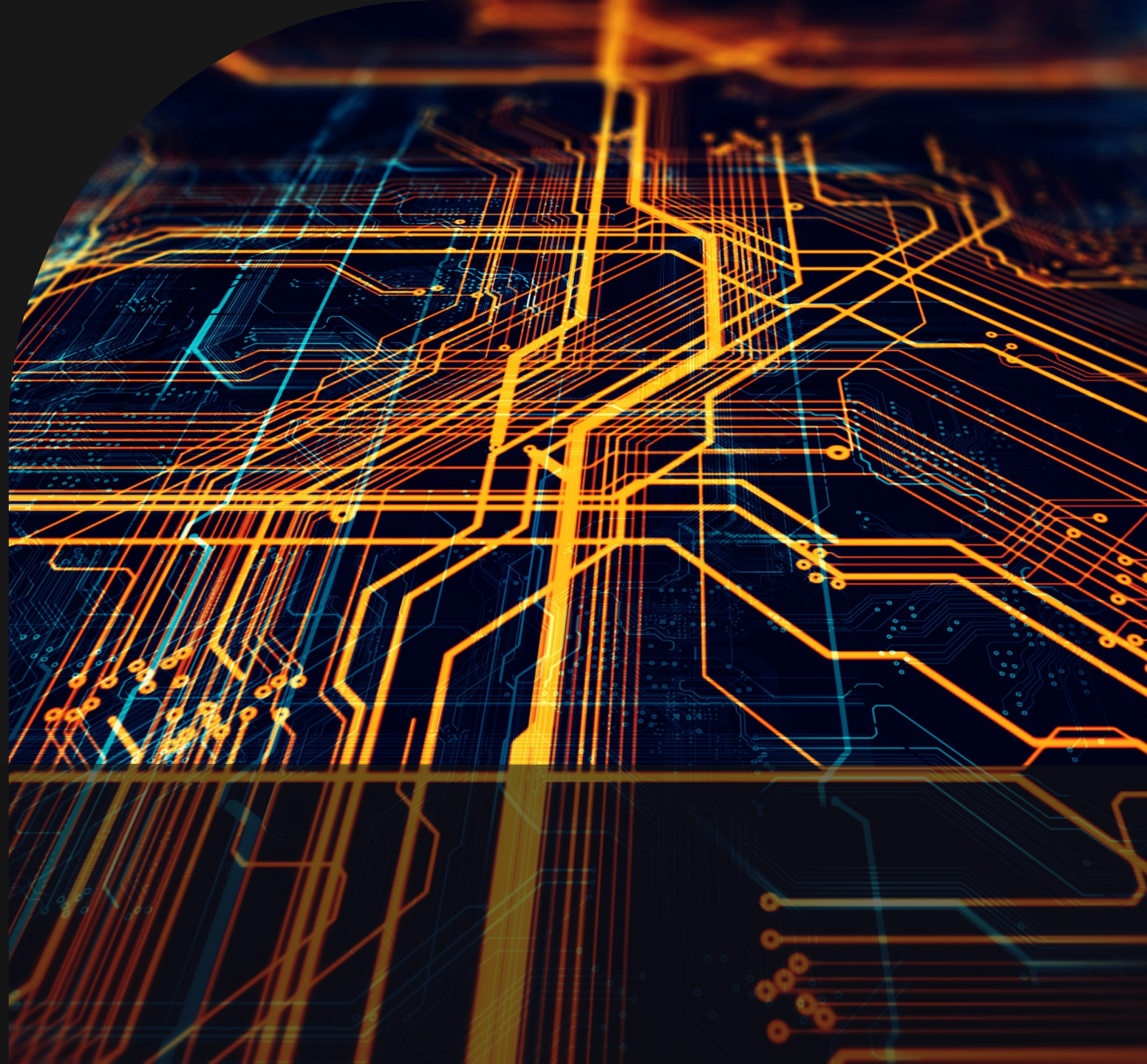
Investigations into one experienced delay found that the way in which internal system architecture is constructed prevented this instance from being obtained in the anticipated manner. In another example, data protection and internal cyber policy prevented the materialisation of valuable data.

There were instances that did provide fast response times, and on one occasion enabled a life to be saved and operations restored swiftly. The platform also allowed for the fast remediation of potholes, although these instances were not presented on the dashboard at the frequency anticipated.

Lessons Learnt

While the dashboard was able to provide some event types in a timely fashion, it was unable to compete where links between the NMCC and the emergency services were present, nor where there was the ability to access CCTV cameras within the Control Centre.

Samdesk did however, excel at obtaining a richer view/context of public perspectives via social media posts, which provided comprehensive feedback on events as they unfolded. This in turn improved TfL's ability to communicate and respond to the public.



Conclusion

While the speed of the Samdesk analytics module was slower in some instances, it does provide a richer context on public perception.

It is therefore the intention of the project team to extract historical data and trendlines of various alert activity from the dashboard for review and analysis.

Unfortunately, it was concluded that the operational cost would outweigh the expected benefits and on this basis, would not be taken any further by the business.

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TfL Lane Rental Scheme

Optimising customer journeys through the delivery of safer, innovative and sustainable roadworks