
Layers
Navigate
Options
Virtual Site Meetings (Operations LIVE): Phase I
TfL Lane Rental Industry Publication
TRANSPORT FOR LONDON

# Introduction

The Transport for London Road Network (TLRN), more commonly known as ‘red routes’ make up five percent of London’s roads, however they transport thirty percent of all London traffic.

With around half a million highway interventions (e.g. road works, crane licences etc.) taking place each year in London ensuring disruption to the travelling public is minimised is essential. To do this multiple data sets are assessed within in multiple applications to determine the best course of action.

Coordinating and allocating road space for such high volumes of vastly different work types is exceptionally difficult. To engage key stakeholders, site, office and online meetings are required, to discuss proposals in detail. On the TLRN alone, TfL attends approximately 500 site meetings per year for the more impactful works.

If there is the potential for the proposed works to be highly impactful, it is common practice for a site meeting to be held with several attendees which include, the utility company, TfL assessor, utility contractor, TfL buses contact, police and local borough.

Coordinating these large groups to attend site together, often near busy roadsides is challenging and has the potential of blocking narrow sections of footways and places unnecessary risk on attendees.

The pandemic changed the way TfL works and operates, with staff now encouraged to avoid unnecessary travel and meeting in groups, to help minimise the spread of disease. This has resulted in site visits becoming much less frequent.

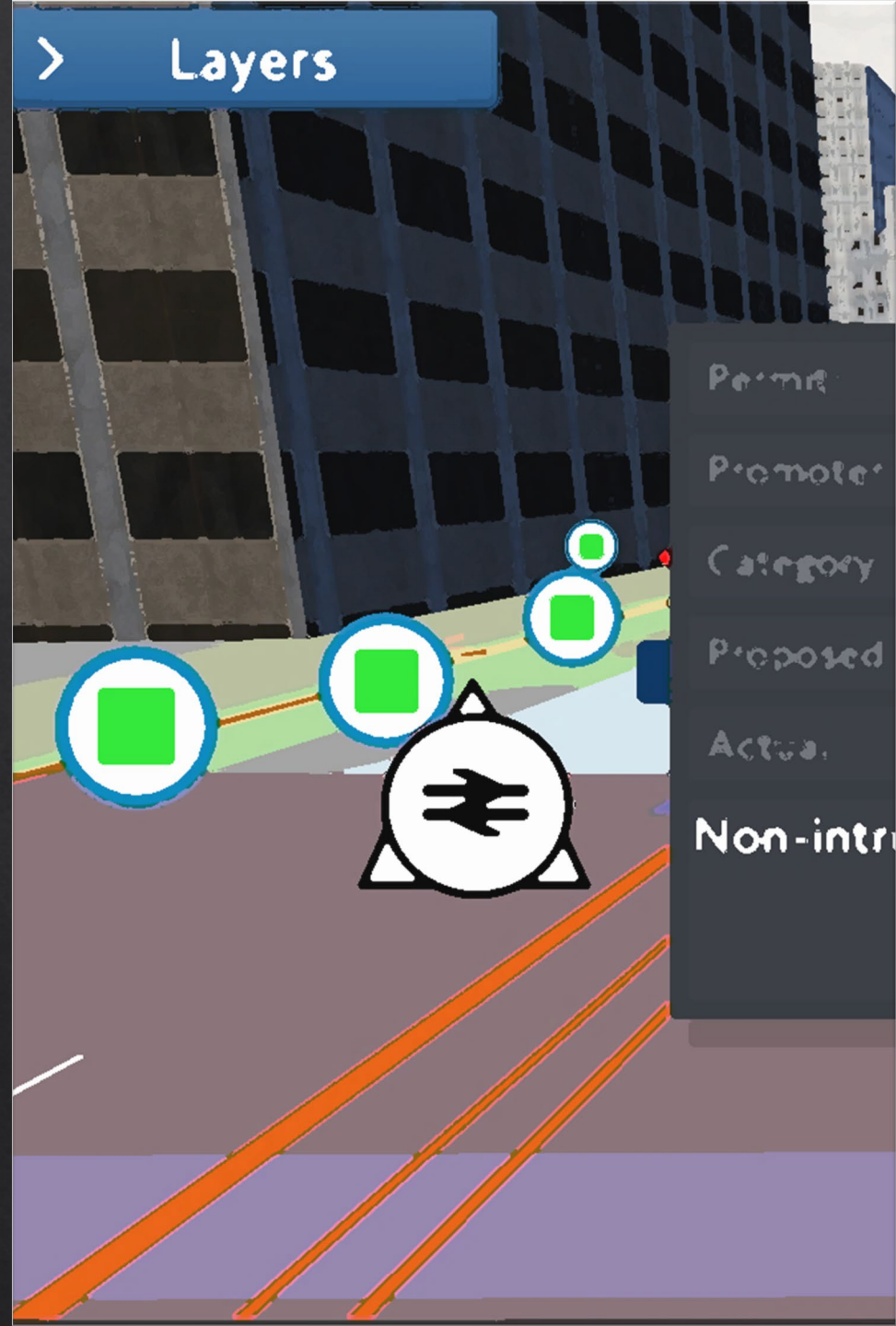
This project proposed to create a digital 3D representation of London which could display the relevant data and bring together all stakeholders, while removing the risks associated to site meetings

# The Project

First known as Surface LIVE (London's Interactive Visualisation Environment), the project investigated the feasibility of developing a platform that would allow for a digital twin of London to be created and accommodate the visualisation and interaction with all the relevant data sets used to review and mitigate disruption from proposed road works.

Working in collaboration with works assessment teams, the project team developed a standard workflow of the processes, required data and engagement used for traffic management proposal assessments which was built into the virtual environment.

The prototype was then tested to establish if different stakeholders could ‘dial in’ to the meeting, view the virtual ‘London’ environment, communicate with the host and record the meeting for wider distribution.

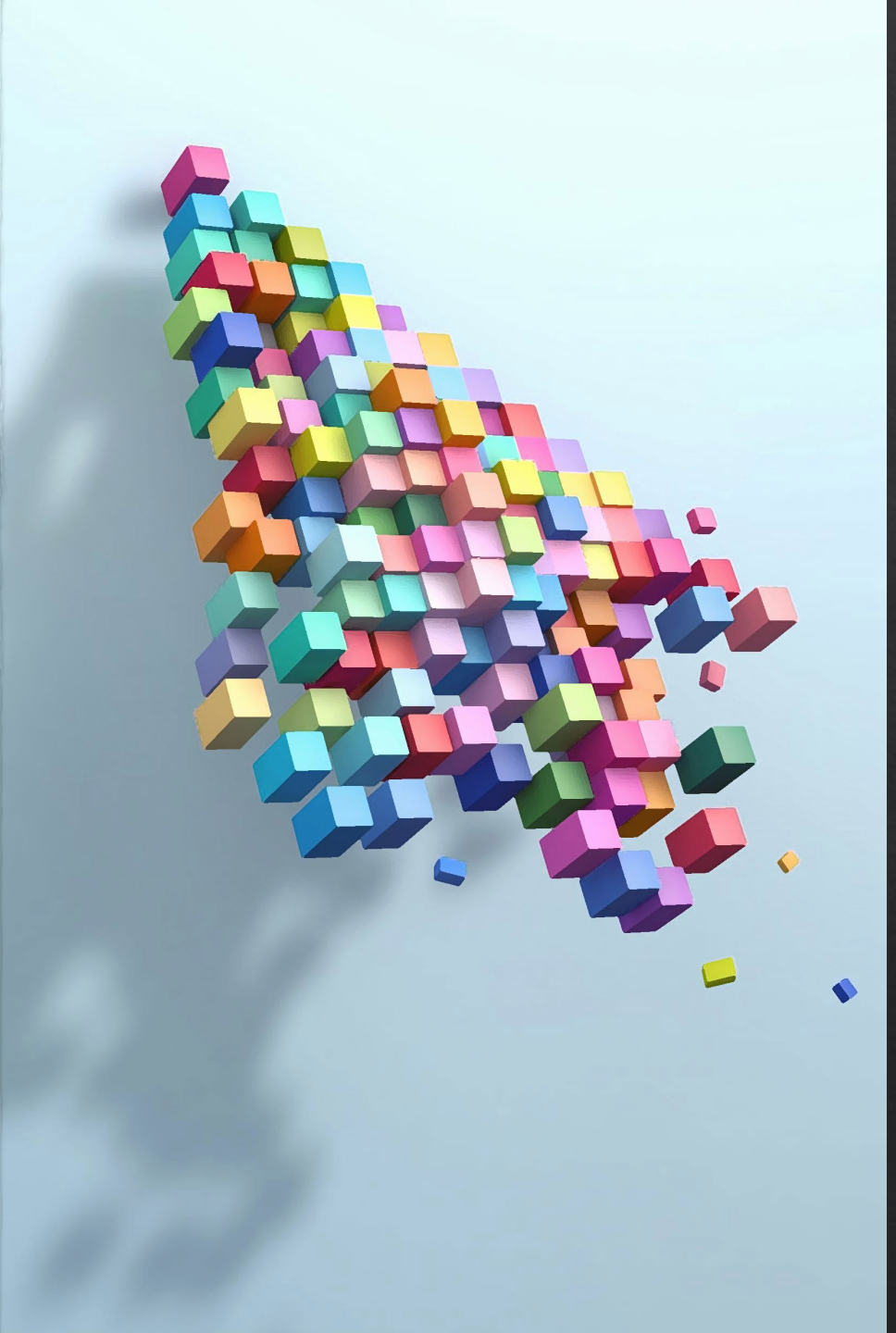



# Outcomes

The Surface LIVE prototype has successfully tested the feasibility of creating a single environment for works assessment, generating a 3D model of London, incorporating buildings and road/footway features.

The data work flows have been proven from several different sources and convert into 3D representation, including the associated metadata, with the capacity to interactively engage with the technology to draw out additional data developed.

360-degree movement was developed in the application to enable users to view the data in a spatial context and within its surroundings. The ability to navigate and view data in this virtual yet 'real-world' environment will reduce the need for meetings on site.



# Lessons Learnt

Data is held in various formats and utilised in a variety of different applications. Identifying how to extract and maintain the accuracy of the data/metadata, while optimising the transfer to only extract the necessary information will be vital to any future development. This will ensure loading times are minimised and the application retains an acceptable installation size.

As the app is reliant on various data streams all held in different departments. It is therefore essential to have commitment from data owners to allow direct access to the databases so processes can be developed to extract, optimise and convert data into the application.

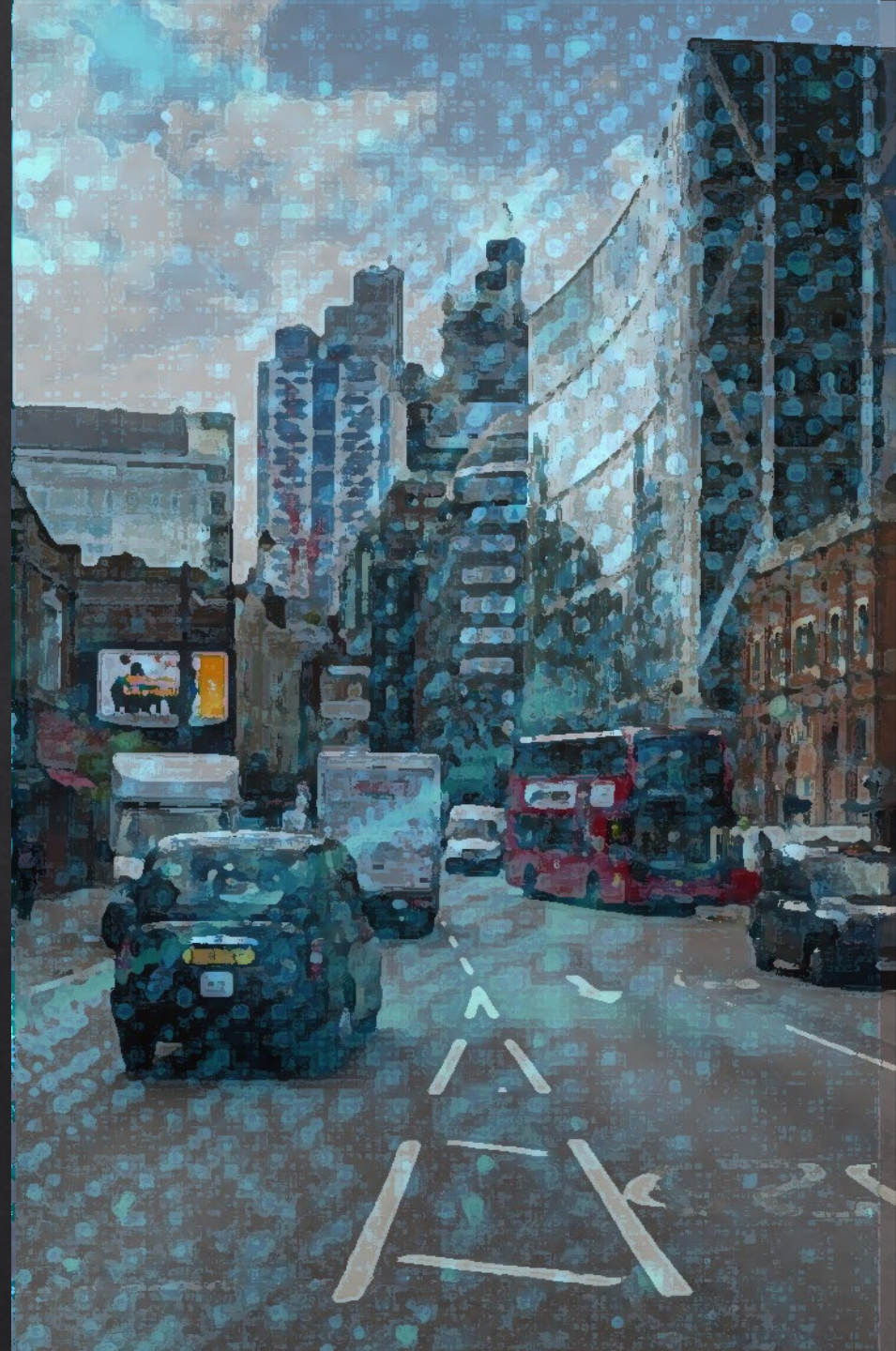
With home working now common place, internal staff access the TfL network through Citrix, however, the application requires graphics processing capability, which Citrix doesn't have and presents a potential risk to widespread software adoption. Discussions are now being held to establish if virtual machines with graphics capability could be rolled out to mitigate this.

# Conclusion/ Recommendations

The Feasibility of creating a single environment for works assessment, in a digital twin of London has been proven.

A scaled up version of the software is now proposed to allow for more data sets to be included which would enable more informed design decisions to be made as users would be able to view, interact and analyse the accurately displayed data in a single geospatial environment.

Based on project findings, it is now believed that developing a fully functional app is achievable and the project team will be seeking additional funding through Lane Rental.



# TfL Lane Rental Scheme

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

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