

CRP's Lunchtime Launch: Making Monitoring Meaningful



Thursday 25th February 2021

1:15pm – 2pm

Today's Speakers



Mariana Barrios Cabrera
Vivacity Labs

Speaker



Susannah Wilks
Director
Cross River Partnership

Chair



Abby McDougall
Technical Project Officer
Cross River Partnership

Speaker



Fiona Coull
Project Manager
Cross River Partnership

Speaker



Stav Friedman
Project Officer
Cross River Partnership

Chat Moderator



Joshua West
Communications & Business
Development Manager
Cross River Partnership

Technical Lead



Today's Agenda

1.
Introduction
to CRP

2. Making
Monitoring
Meaningful

3. Vivacity
Labs

4. CRP and
Data Analysis

Have your say:
Q/A session at the end of all the
presentations



Introduction and Context

Susannah Wilks, CRP



Delivering London's Future Together

Our Vision

People

Work with engaged people, connecting stakeholders to successfully collaborate and deliver

Places

Deliver great places, sharing best practice whilst ensuring all businesses are supported to grow sustainably

Projects

Deliver innovative projects for partners encouraging businesses to shift from incremental to permanent change, whilst inspiring others to do more at pace

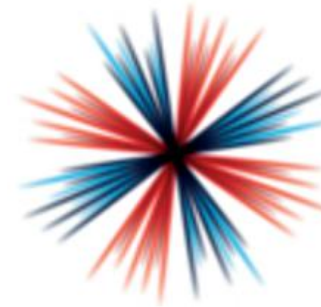


Working towards sustainable businesses and improving air quality.

CRP's Major Funders



Department
for Environment
Food & Rural Affairs



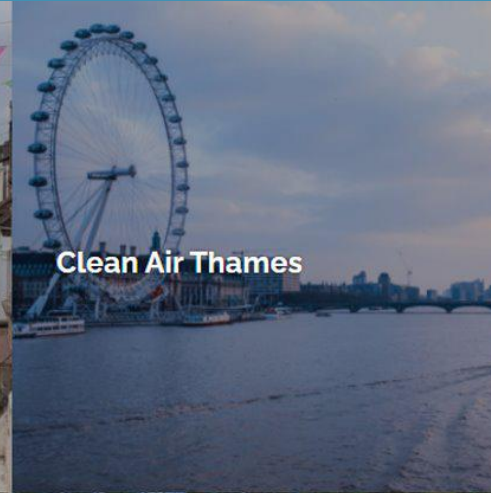
**INDUSTRIAL
STRATEGY**

MAYOR OF LONDON



**Transport
for London**

CRP Projects



Making Monitoring Meaningful

Abby McDougall, CRP



How has transport planning changed?



Accelerated

Ambitious



Experimental



Except buses



ROAD OPEN TO
骑自行车



ROAD OPEN TO
骑自行车



Low traffic zones 'force cars into streets where poorer people live'



Evering Road has recently become part of the Hackney Downs LTN and has had bollards put in the middle to prevent through traffic

RICK FINDLER FOR THE TIMES

Despite a loud opposing minority, low-traffic neighbourhoods are increasingly popular

Peter Walker

YouGov poll found positive views on LTNs are three times higher than negative ones



▲ The Oval Triangle low traffic neighbourhood in Lambeth, London. Photograph: Tom Wall/The Observer

Controversial

Why is monitoring important?

Why is monitoring important?



Proof of concept



Identify problems or concerns

Why is monitoring important?



Proof of concept



Create an open conversation



Identify problems or concerns



Build trust and confidence



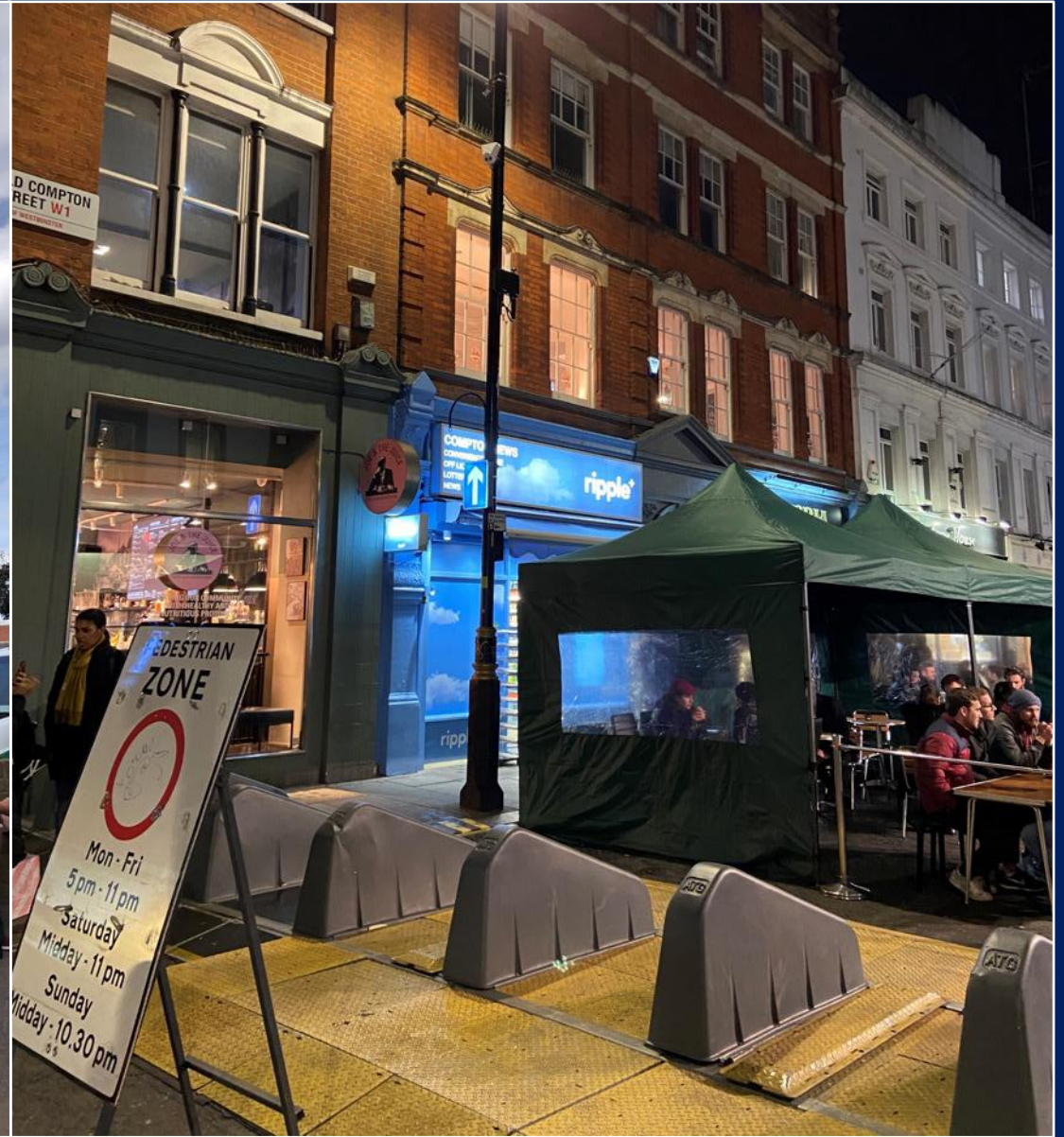
Support the transition to becoming permanent



Personal air quality monitoring



Citizen science study at King's College Hospital



Traffic monitoring in Soho using Vivacity sensors

Clean Air Routes

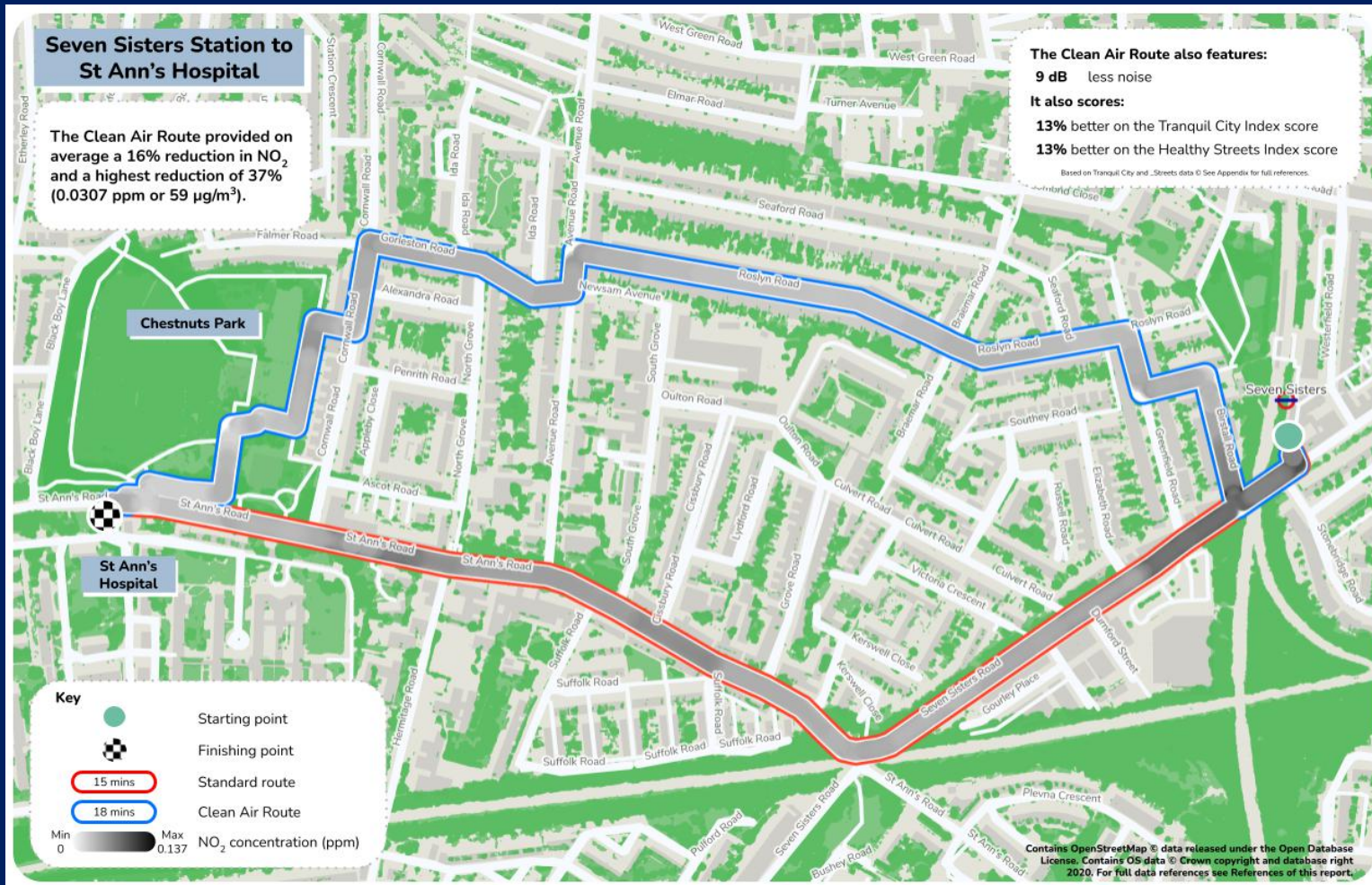
Direct route



Clean route



Average exposure to nitrogen dioxide was between 6% and 23% lower on the Clean Air Routes, with a maximum reduction of up to 41%



The final report is now available to view online:

crossriverpartnership.org/wp-content/uploads/2020/03/Clean-Air-Routes-Monitoring-Report-FINAL-2021-min.pdf

1. Introduction

1.1 Cross River Partnership

Cross River Partnership (CRP) is a public-private partnership working with 10 London boroughs, 17 private sector partners and 6 strategic agencies to deliver innovative projects that contribute to the social, environmental and economic health of London.

1.2 Clean Air Villages

The Clean Air Villages 3 (CAV3) project is being delivered on behalf of 16 partners, including 12 Local Authorities and 4 Business Improvement Districts (BIDs) across London. Fig. 1.1 shows the 16 focus areas as part of this one-year project funded by the Defra Air Quality Grant. CRP is engaging with businesses, hospitals and wider communities to encourage behaviour change and support activities to reduce air pollution and congestion.

1.3 Clean Air Routes

In 2017, as part of the Clean Air Better Business (CABB) programme, CRP and partners identified and developed London's first on-street clean air walking routes. The purpose of a Clean Air Route is to encourage pedestrians to take quieter backstreets, thereby reducing their exposure to harmful air pollution. In August 2020, CRP commissioned Tranquil City to monitor pollution concentrations along 15 new routes as part of the CAV3 project. Initial routes were identified by CRP, with support from the CAV3 Local Authority and BID partners, shown beneath Fig. 1.1. It was agreed that an additional Clean Air Route would not be developed for Northbank BID to avoid duplicating existing and extensive work that has been carried out within the BID footprint.

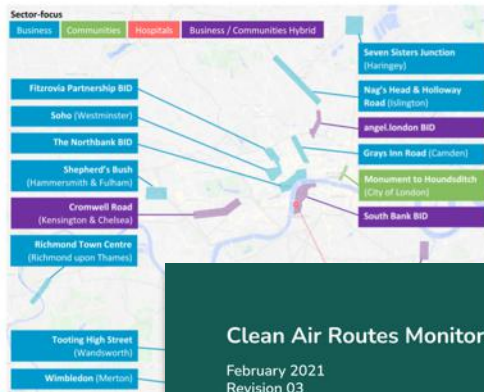


Figure 1.1. Map of focus areas



Tranquil City 2020 ©



2. Methodology

Table 2.1. Summary of monitoring conditions for each route survey conducted.

No.	CAV3 Partner	Date	Location (short title)	Time	Temperature (°C)	Cloud level	Wind (kph, direction)	Adjustment Factor
1	AngelLondon	14/10/20	Angel	Morning	9	Partly	14, NE	NA
2	London Borough of Lambeth	6/10/20	Camberwell	Evening	15	Cloudy	25, W	NA
3	City of London Corporation	20/10/20	City of London	Morning	13	Cloudy	19, S	0.88
4	Royal Borough of Kensington & Chelsea	15/10/20	Cromwell Road	Evening	13	Cloudy	16, NNE	NA
5	London Borough of Lewisham	13/10/20	Deptford	Morning	8	Partly	11, NW	NA
6	The Fitzrovia Partnership	21/10/20	Fitzrovia	Evening	15	Cloudy	24, W	0.54
7	Great Ormond Street Hospital		Great Ormond Street Hospital	Morning	11	Partly	20, WSW	NA
8	Holloway Road		Holloway Road	Evening	18	Cloudy	22, SSW	0.85
9	Richmond		Richmond	Morning	10	Partly	9, W	NA
10	Seven Sisters		Seven Sisters	Evening	12	Cloudy	19, NE	NA
11	Shepherd's Bush		Shepherd's Bush	Morning	13	Partly	17, SW	0.69
12	Soho		Soho	Morning	8	Partly	14, NNE	1.09
13	South Bank		South Bank	Evening	13	Clear	10, WNW	1.32
14	Tooting		Tooting	Morning	9	Partly	16, W	NA
15	Wimbledon		Wimbledon	Evening	15	Partly	18, W	NA

Tranquil City 2020 ©

January 2021

Clean Air Routes Monitoring Report

February 2021
Revision 03





Delivered as part of the Clean Air Villages 3 (CAV3) project, funded by the Defra Air Quality Grant.




Introduction to Vivacity Labs

Mariana Barrios Cabrera, Vivacity Labs



VIVACITY



Introduction to Vivacity Labs

www.vivacitylabs.com



WSJ

THE TIMES

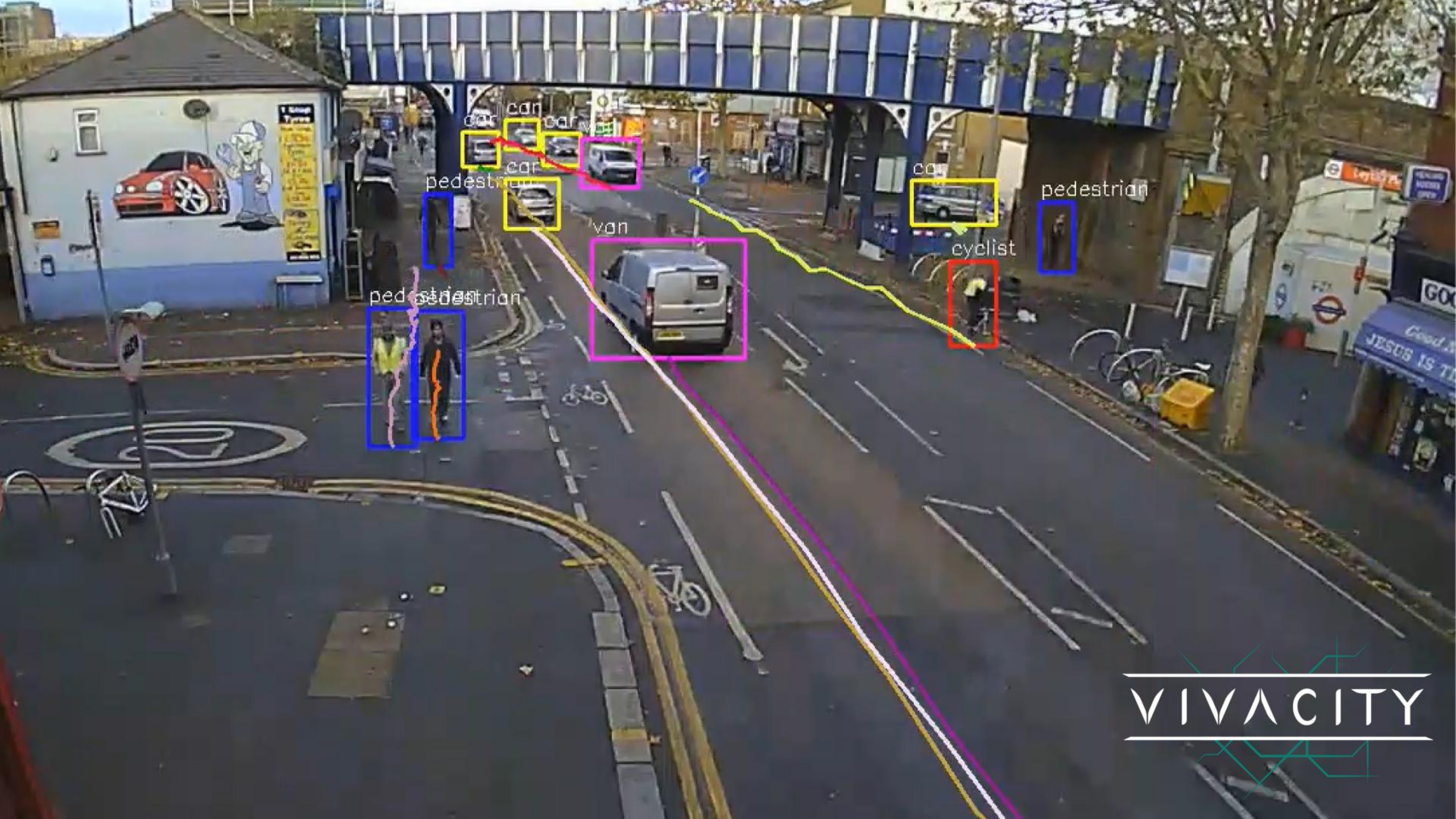
BBC RADIO 4

BBC RADIO 5 live

The Telegraph

THE Sun

London Evening Standard

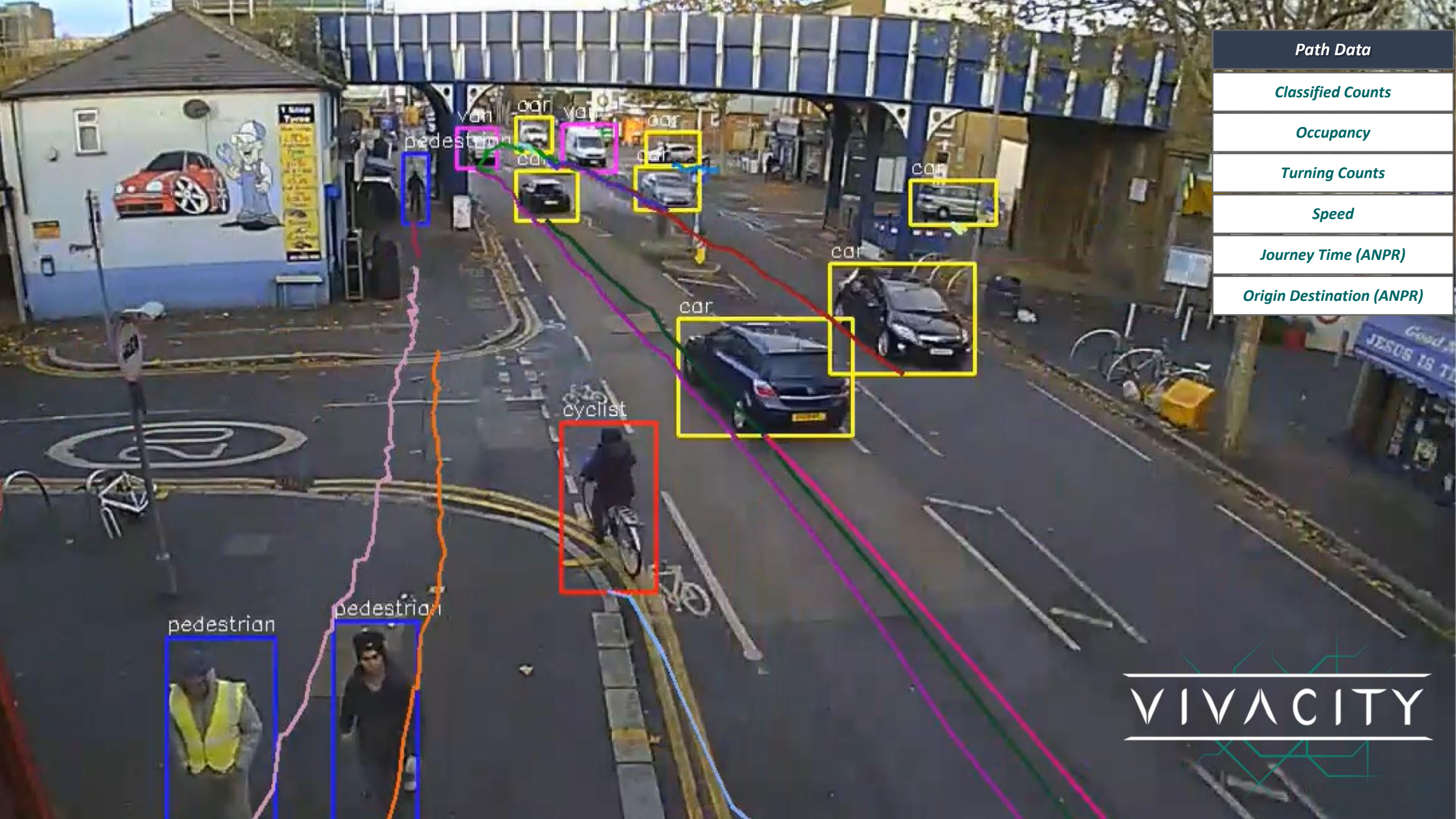


car
car
car
car
pedestrian
pedestrian
van

car
pedestrian
cyclist

pedestrian
pedestrian

VIVACITY



Path Data

Classified Counts

Occupancy

Turning Counts

Speed

Journey Time (ANPR)

Origin Destination (ANPR)

pedestrian

pedestrian

cyclist

car

car

car

car

car

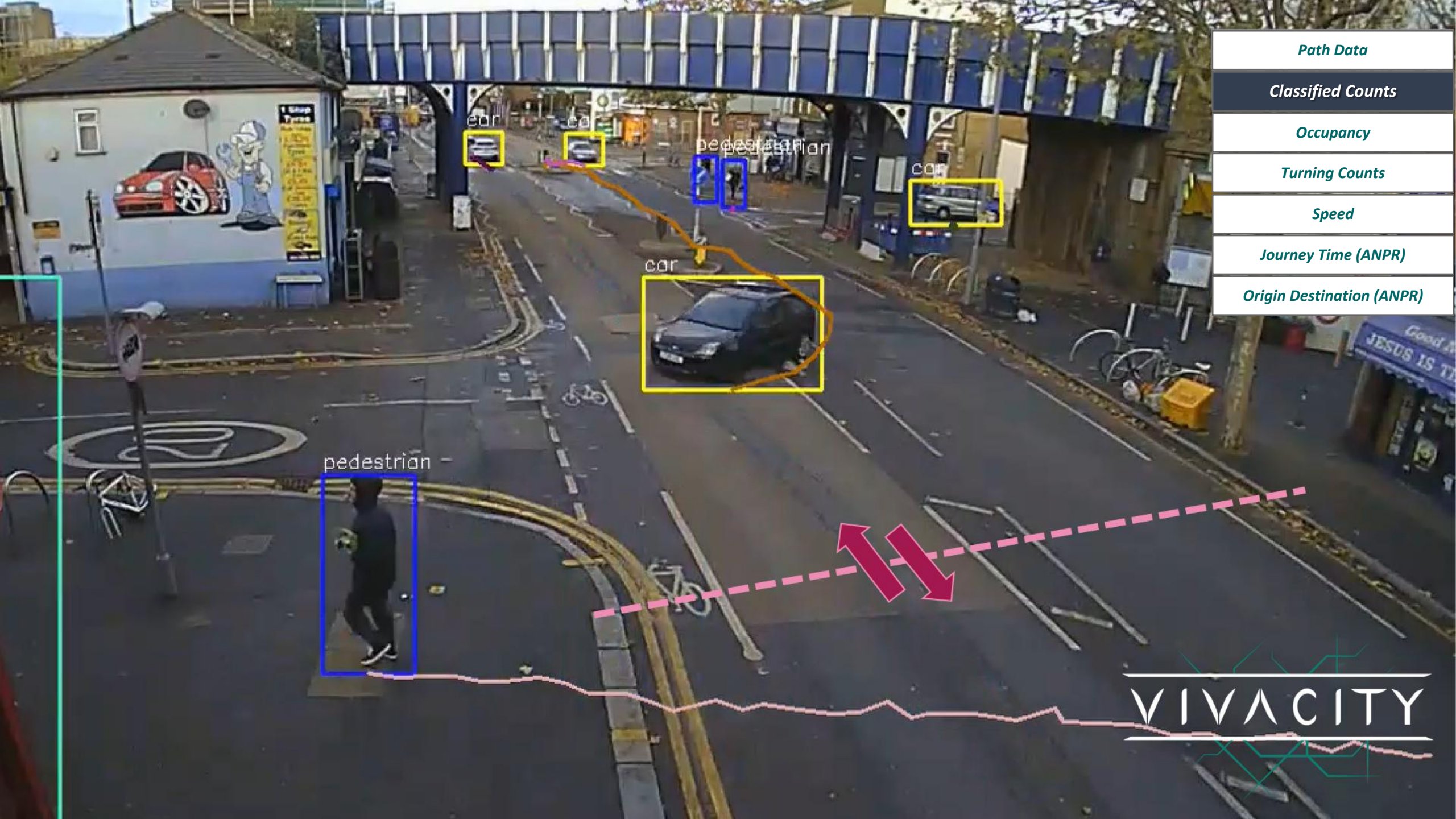
car

van

van

van

VIVACITY



<i>Path Data</i>
<i>Classified Counts</i>
<i>Occupancy</i>
<i>Turning Counts</i>
<i>Speed</i>
<i>Journey Time (ANPR)</i>
<i>Origin Destination (ANPR)</i>

car



car



pedestrian



car



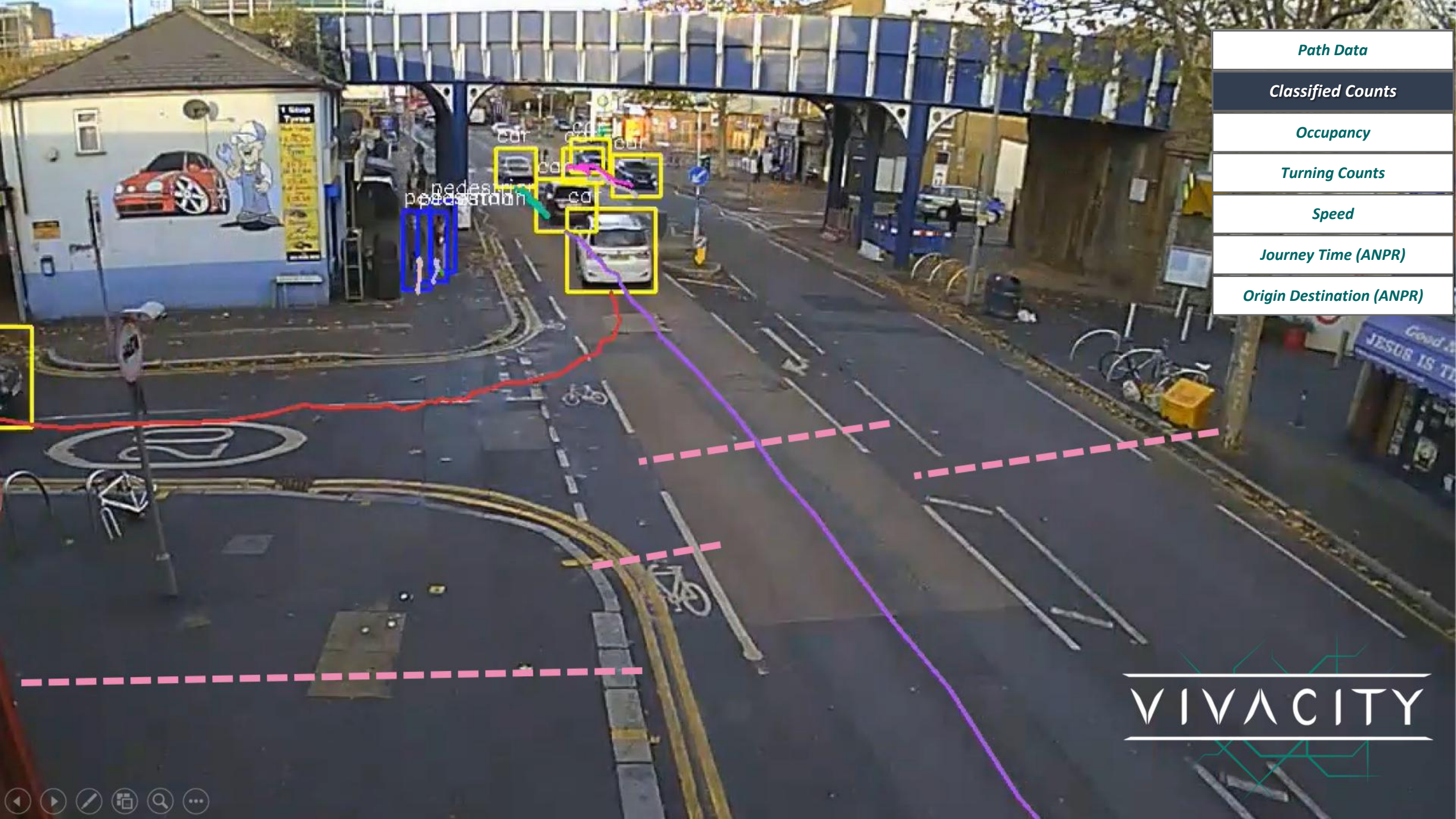
car



pedestrian



VIVACITY



Path Data

Classified Counts

Occupancy

Turning Counts

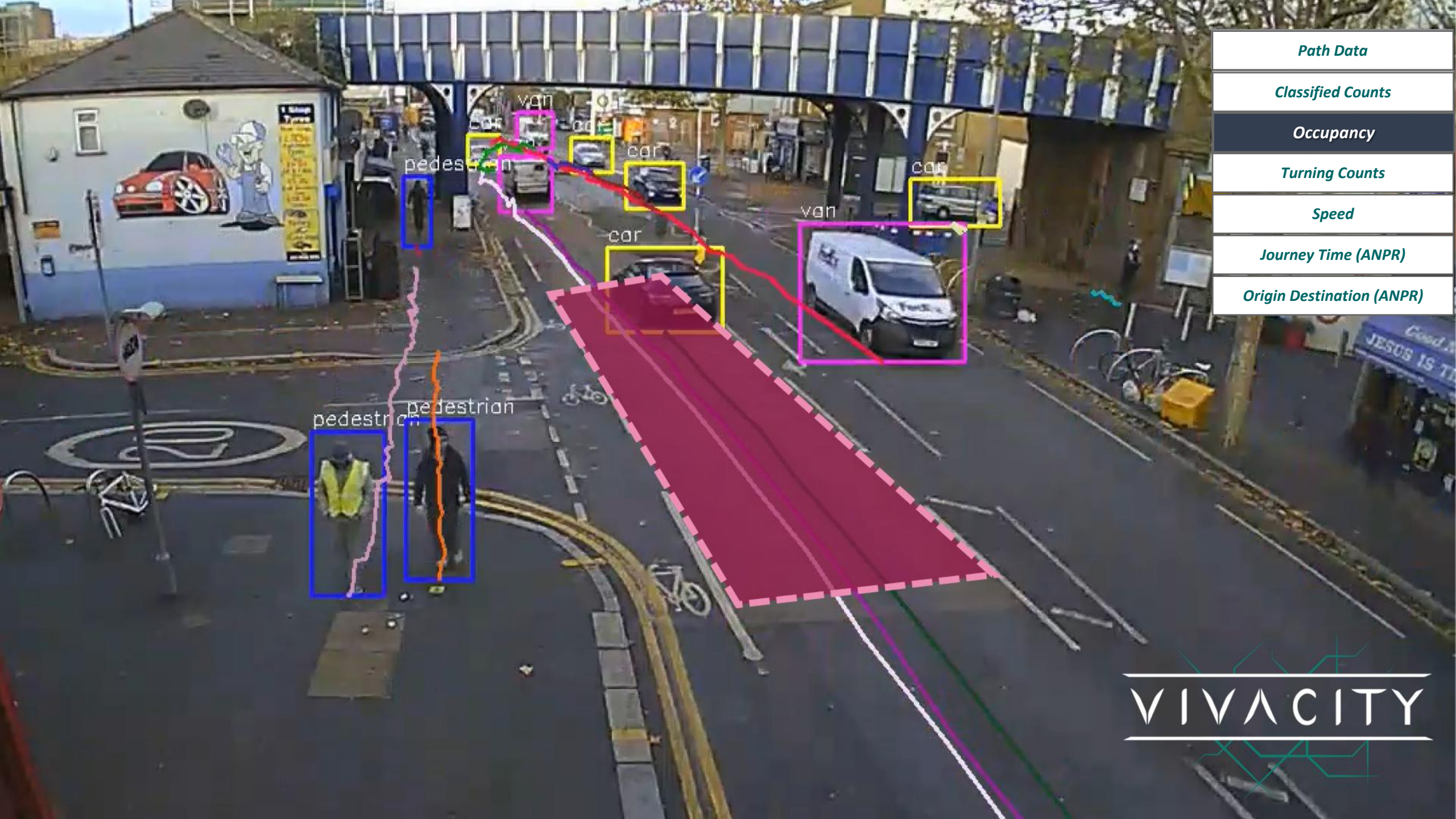
Speed

Journey Time (ANPR)

Origin Destination (ANPR)

VIVACITY





Path Data

Classified Counts

Occupancy

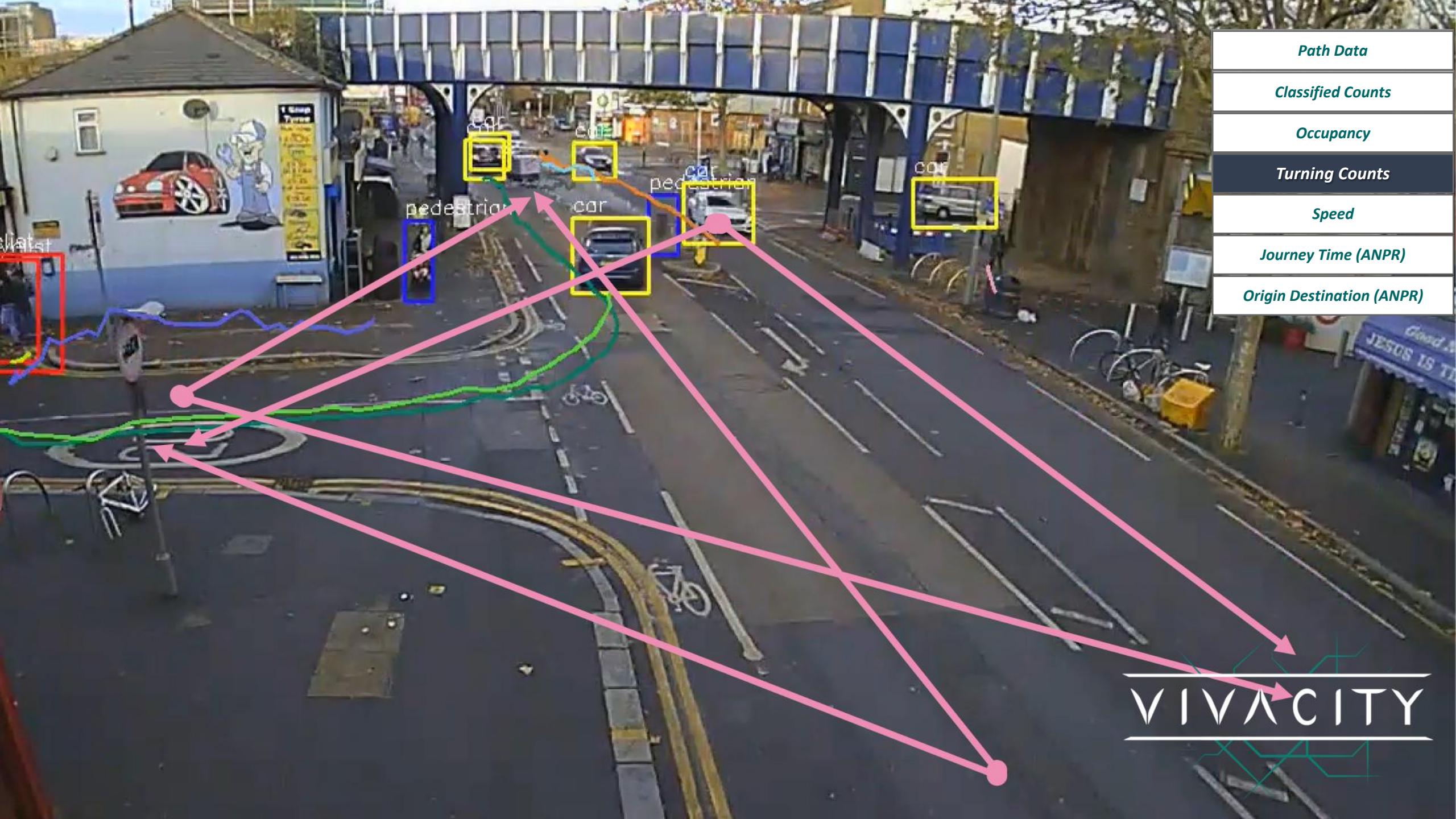
Turning Counts

Speed

Journey Time (ANPR)

Origin Destination (ANPR)

VIVACITY



<i>Path Data</i>
<i>Classified Counts</i>
<i>Occupancy</i>
<i>Turning Counts</i>
<i>Speed</i>
<i>Journey Time (ANPR)</i>
<i>Origin Destination (ANPR)</i>

Watst

car

car

car

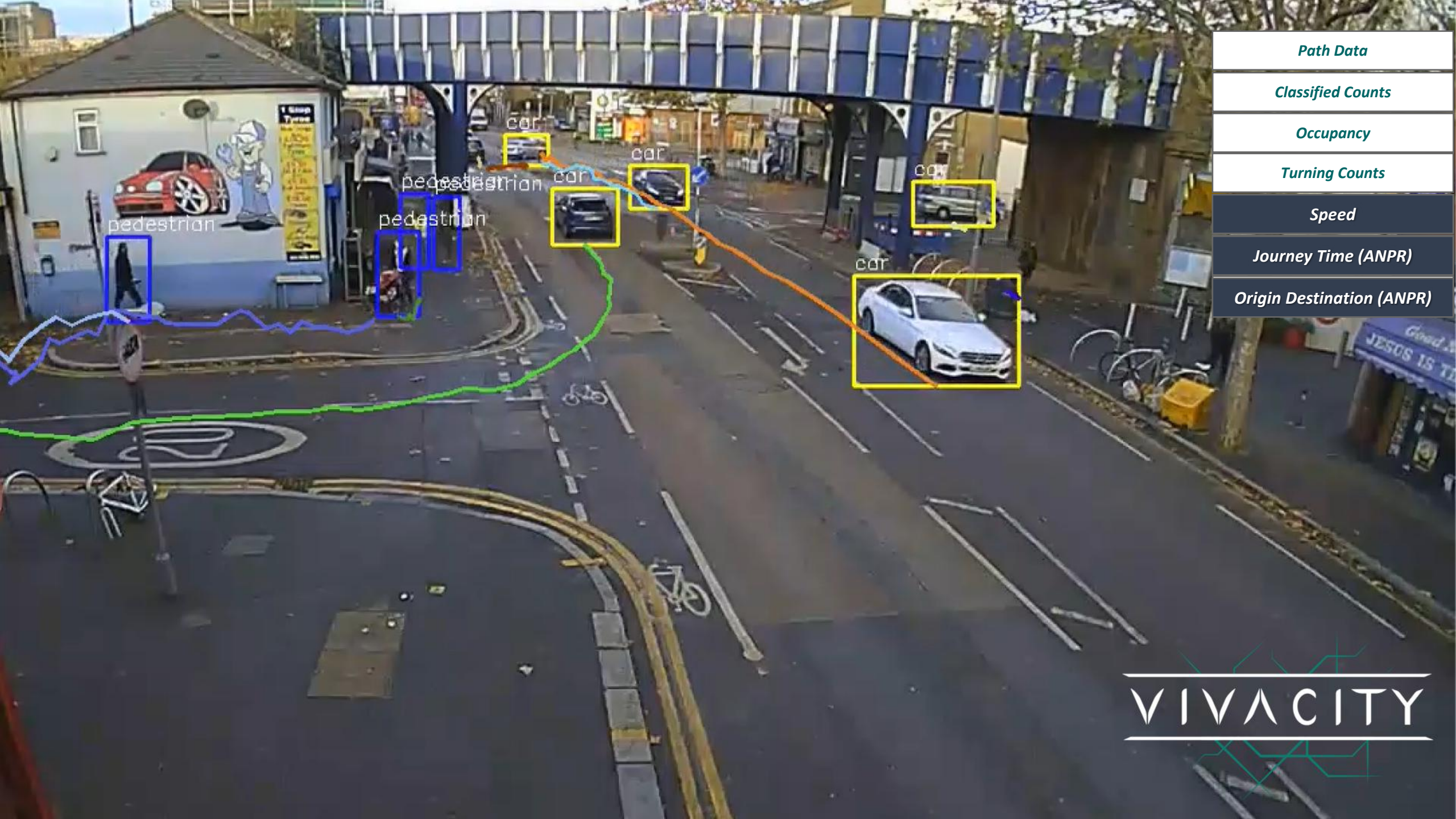
car

pedestrian

car

pedestrian

VIVACITY



Path Data

Classified Counts

Occupancy

Turning Counts

Speed

Journey Time (ANPR)

Origin Destination (ANPR)

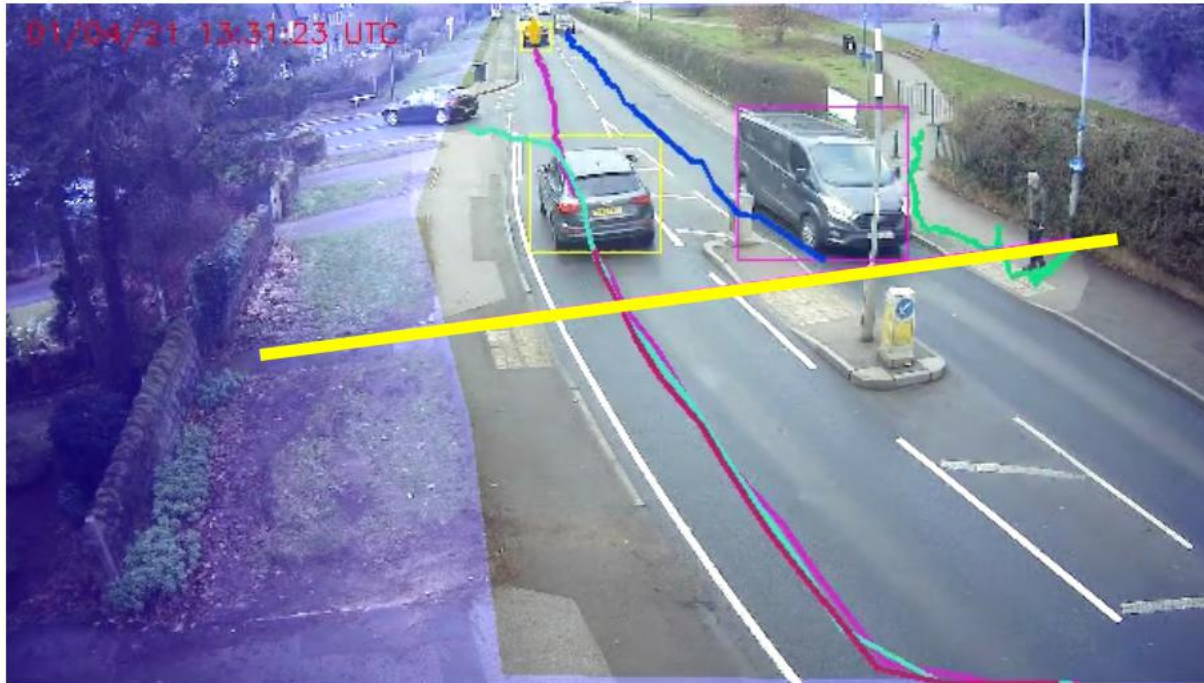
VIVACITY

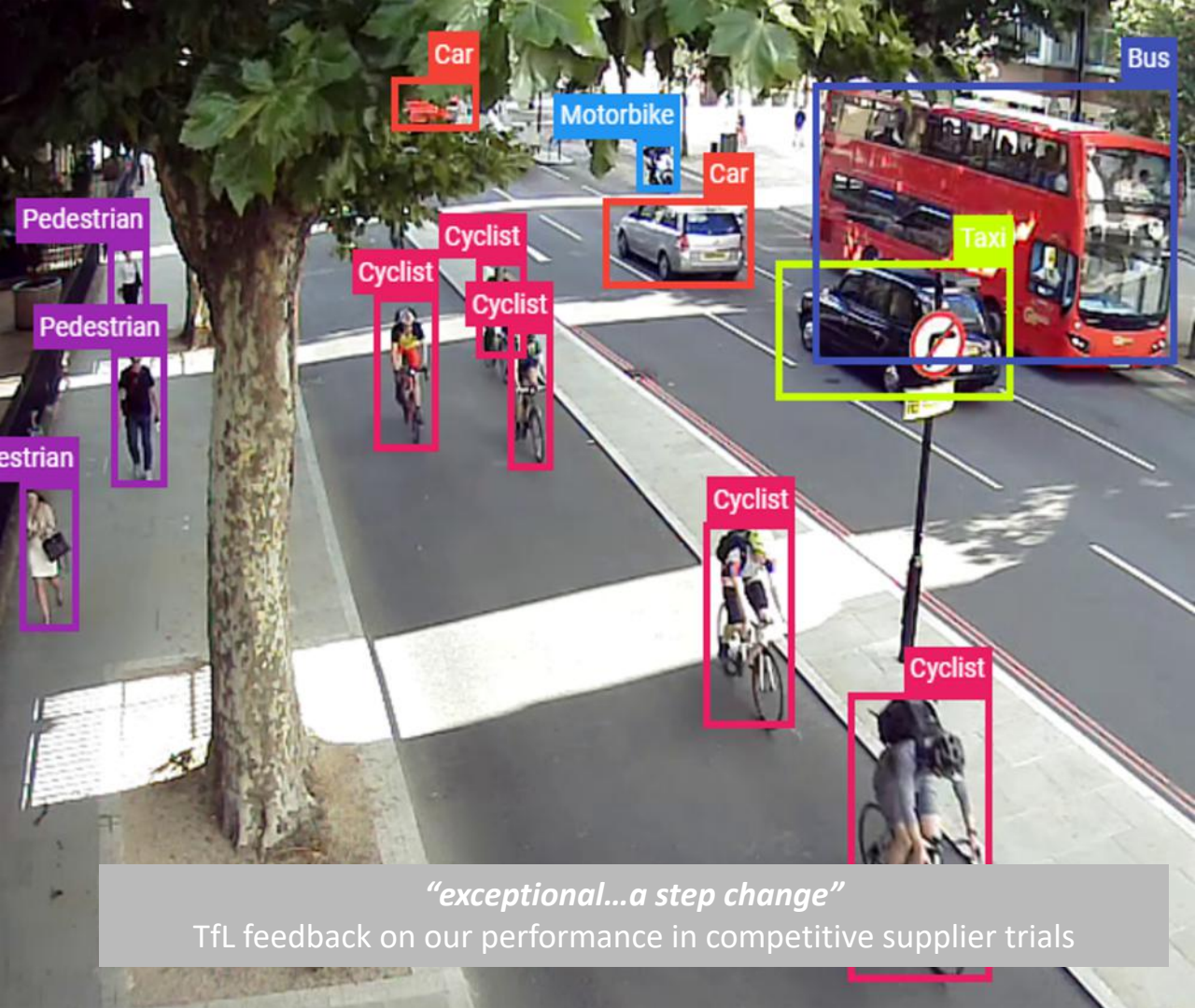
Two Lenses from one single sensor



Standard Features

Journey Time (ANPR)





“exceptional...a step change”
 TfL feedback on our performance in competitive supplier trials

Classification & Counting

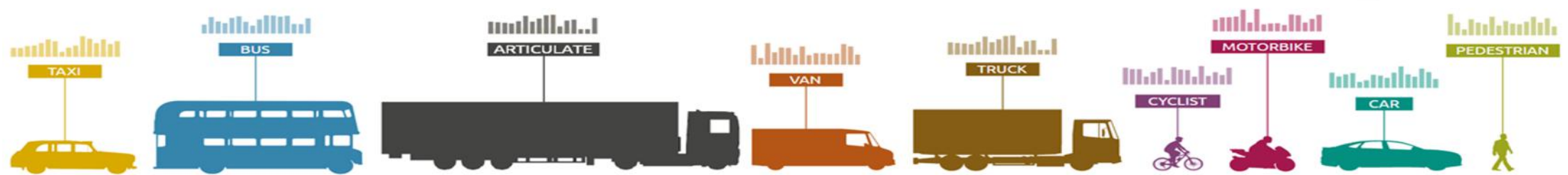
Providing real-time, on-device counting & classification, using the same algorithms as in driverless vehicles.

97%

accuracy validated by TfL vs. human counting
 TfL are now rolling out at scale, as **no other technology** can provide our level of insight.

9

classifications, including pedestrian, cyclist, motorbike, car, taxi, LGV (van), PSV (bus), OGV1 (rigid HGVs) and OGV2 (articulates)



Accessing the Data

The sensor data can be accessed in three different ways:

- Through Vivacity's Dashboard (classified counts, path data, turning counts and image space)
- Through an API (classified counts)
- Through integration with 3rd party systems (classified counts)



Site: TFL_CYCLES - 00000009011 - 00000009011

Data available from Nov 09, 2018 to Jun 07, 2019

From: 21/05/2019

To: 21/05/2019

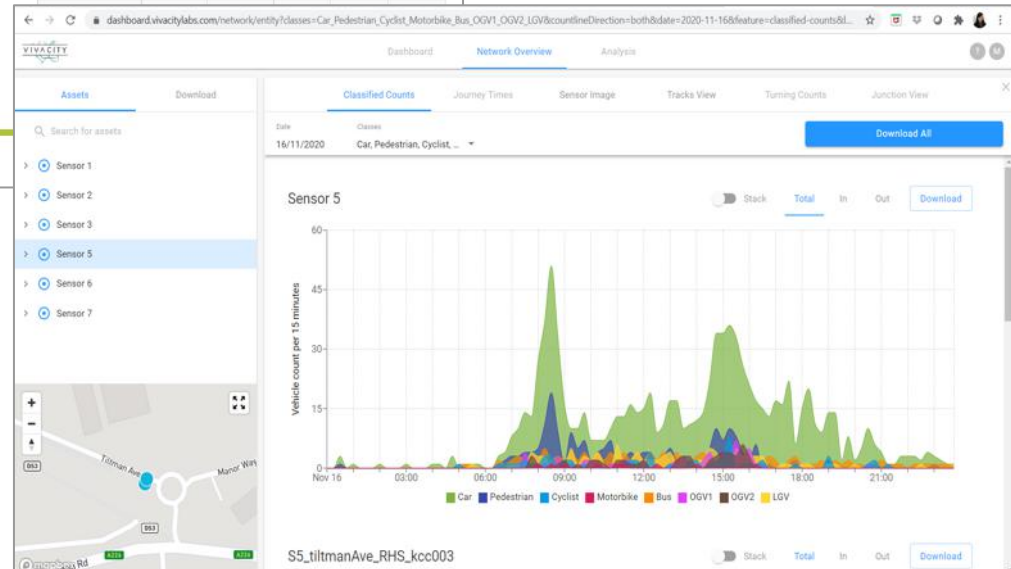
Summary: Volume Class Checking Map

	2019	2018	2017	2016	2015
AADT	15022	12869	-	-	-
Av Speed	-	-	-	-	-
Speed 85%	-	-	-	-	-
% HGV	16.3%	13.6%	-	-	-

APIs

already integrated with common interfaces, including C2, Cloud Amber, Stratos, & Dynniq
Image copyright Drakewell

Dashboard
Classified count can be downloaded



CRP and Data Analysis

Fiona Coull, CRP



**CROSS RIVER
PARTNERSHIP**

Delivering London's Future Together



CRP Vivacity Monitoring Project




- Identify strengths / weaknesses in network.
- Air quality data inferred using CRP's in house MeasureBEST tool.
- Data processed for you with in depth analysis of trends and individual reports to inform decisions and stakeholders.
- Measure impacts of Streetspace interventions.
- Ability to monitor pedestrian interactions.
- Can be tailored to your needs and provides proof of concept /robust guidance.

CRP Vivacity Monitoring - Locations

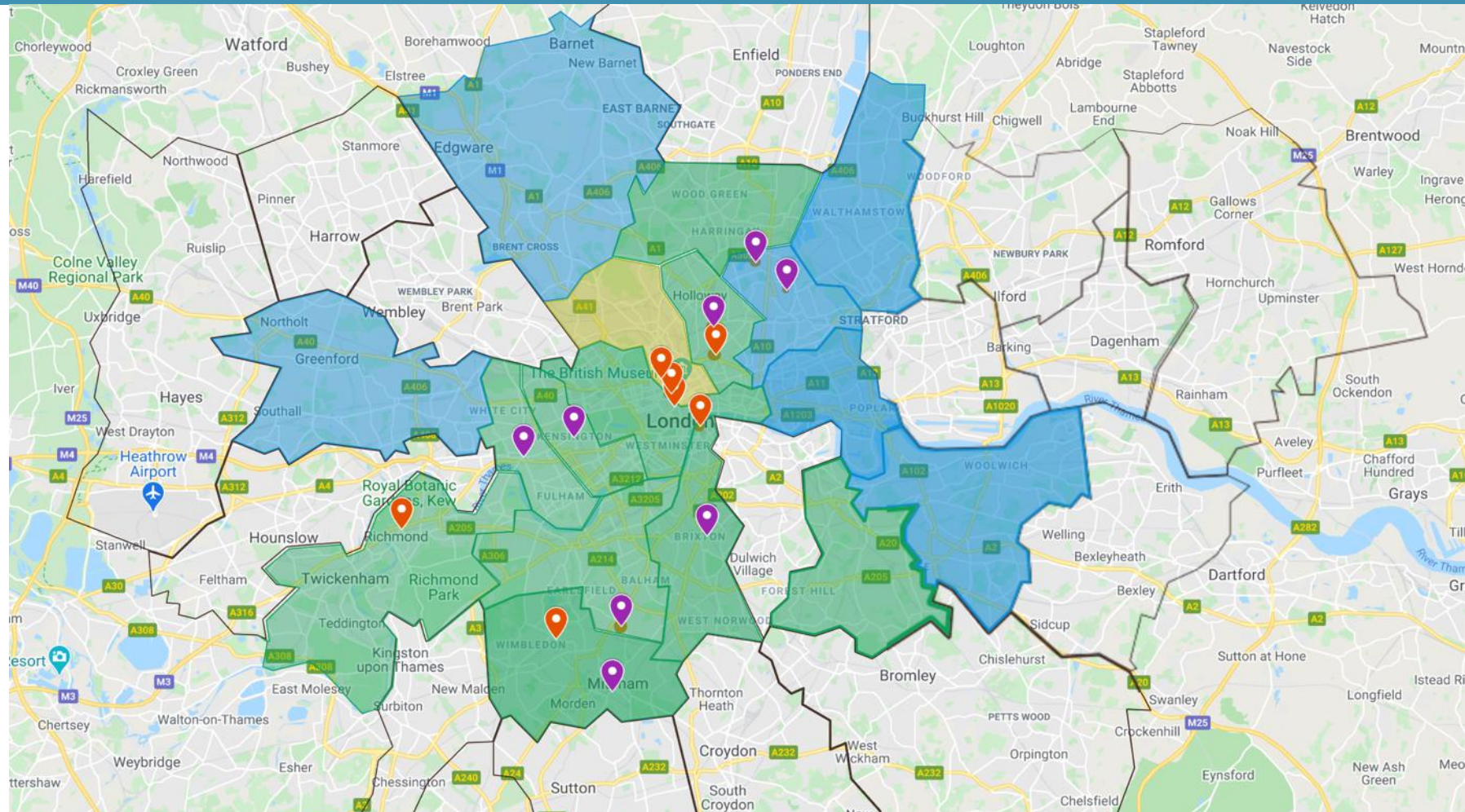
Vivacity Monitoring Locations

-  Healthy Streets Everyday
-  Clean Air Villages

Borough Partners

-  Healthy Streets Everyday
-  Clean Air Villages
-  Clean Air Villages & Healthy Streets Everyday

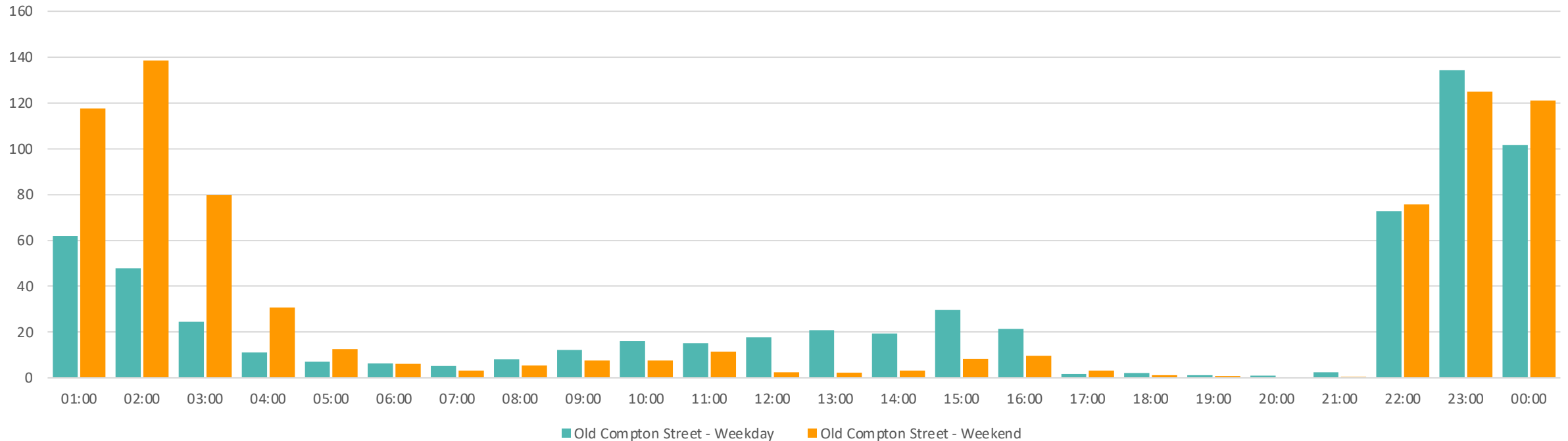
16 sensors have been installed in Boroughs across London



CRP Vivacity Monitoring – Impact of AI Fresco Dining

Old Compton Street and Dean Street, Soho Complete Monitoring Period (27/08/20 – 31/10/20)

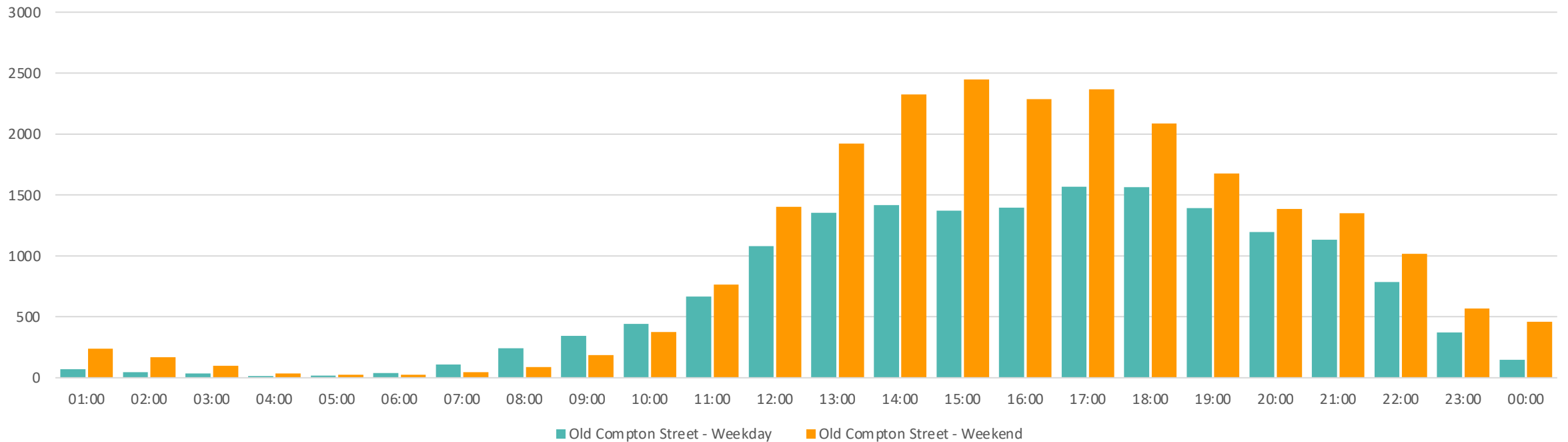
Cars (Hourly averages)



CRP Vivacity Monitoring – Impact of Al Fresco Dining

Old Compton Street and Dean Street, Soho Complete Monitoring Period (27/08/20 – 31/10/20)

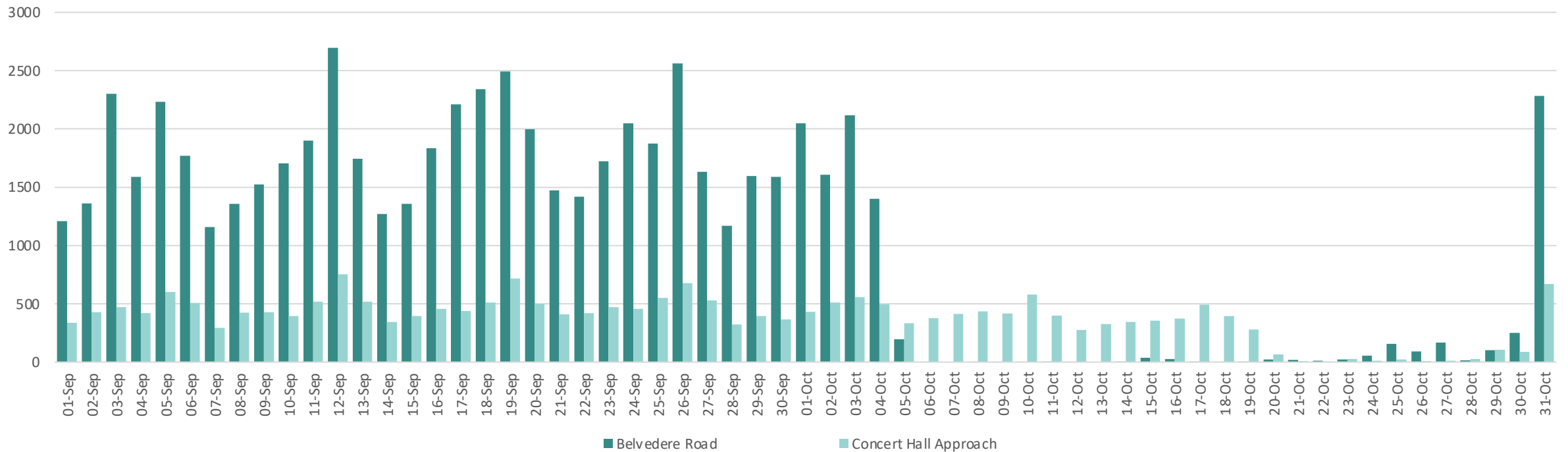
Pedestrians (Hourly averages)



CRP Vivacity Monitoring – Roadworks

Belvedere Road and Concert Hall Approach, South Bank Complete Monitoring Period (01/09/20 – 31/10/20)

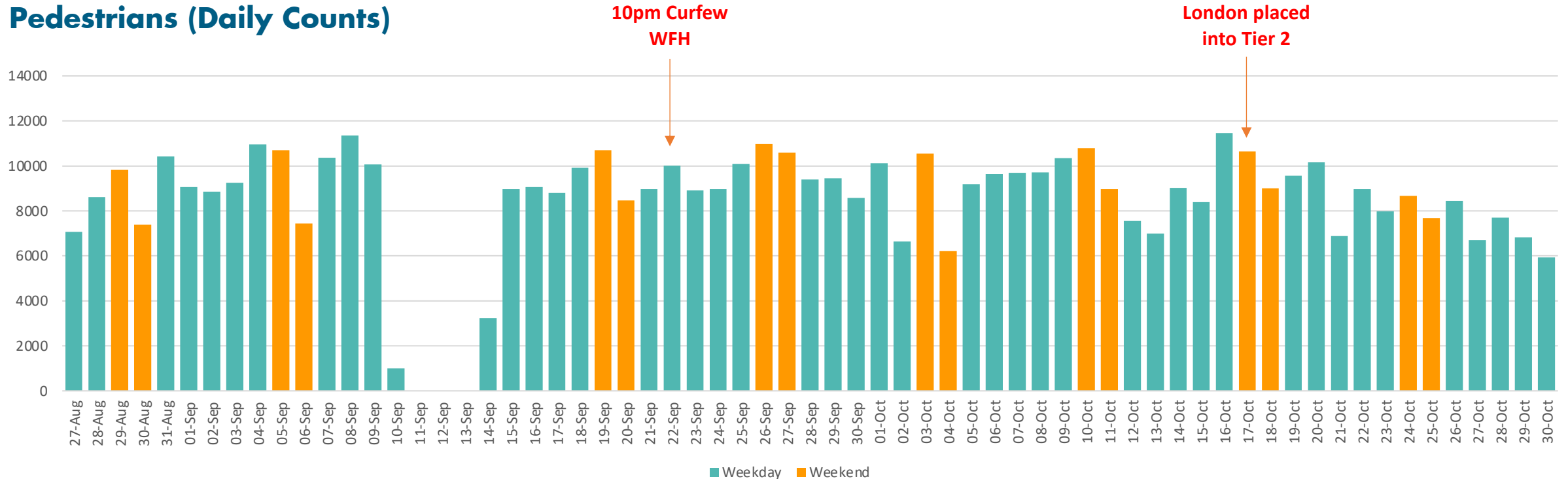
Cars (Daily Counts)



CRP Vivacity Monitoring – Impact of Restrictions

Mitcham Road, Tooting Complete Monitoring Period (27/08/20 – 30/10/20)

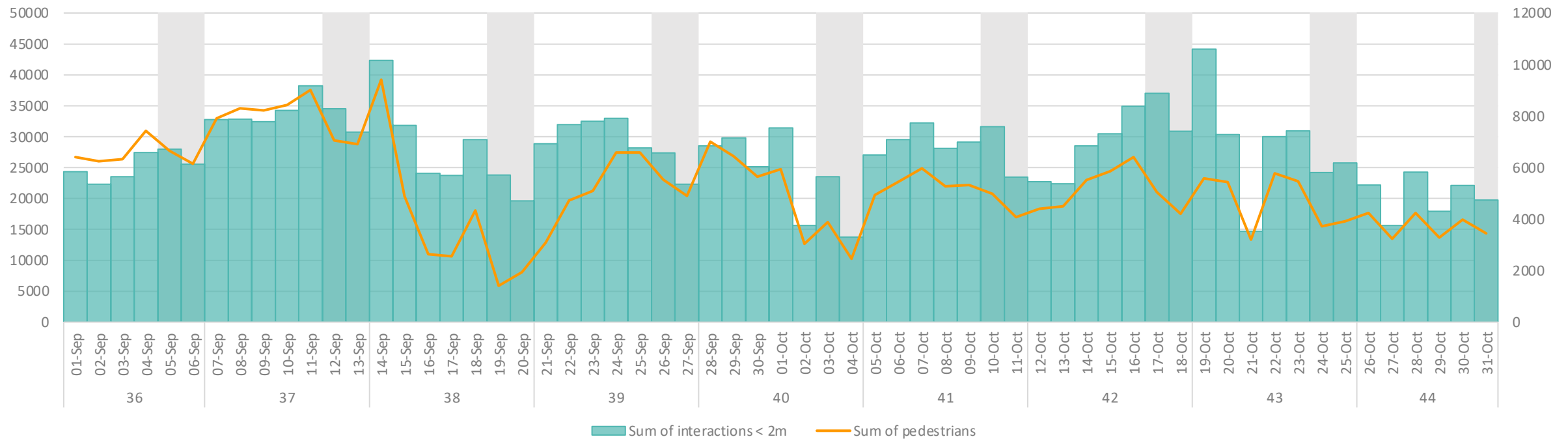
Pedestrians (Daily Counts)



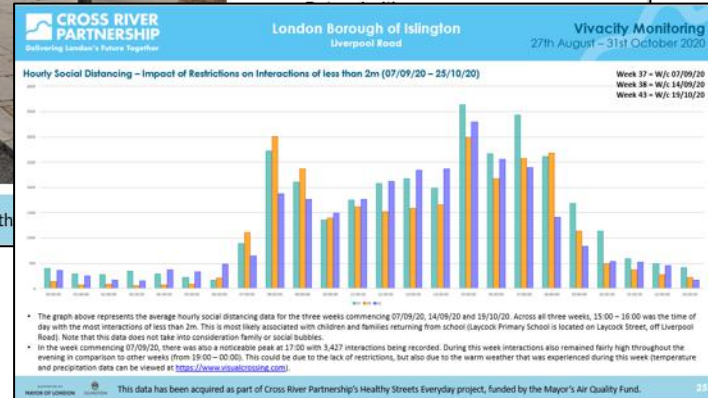
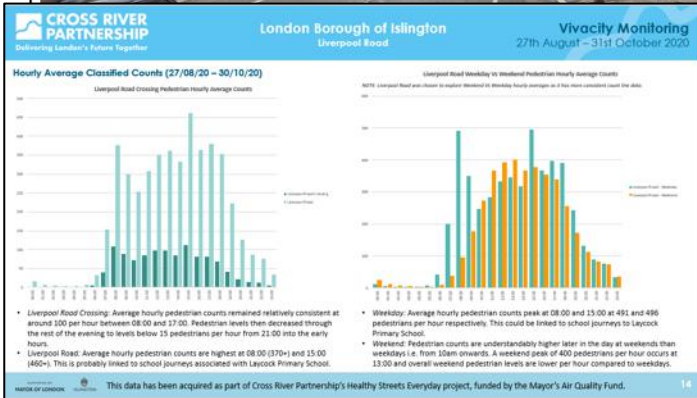
CRP Vivacity Monitoring – Pedestrian Interactions

Liverpool Road, Angel Complete Monitoring Period (01/09/20 – 31/10/20)

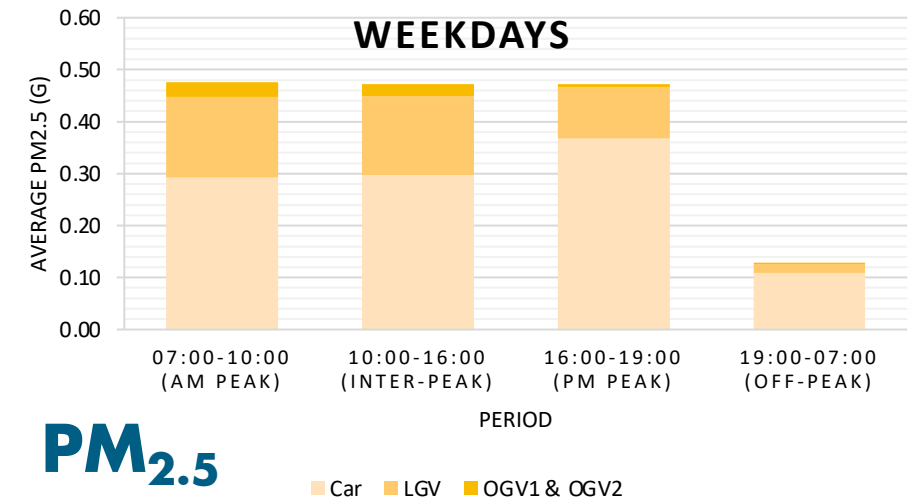
Pedestrian interactions of less than 2m (social distancing)



CRP's Data Analysis Services

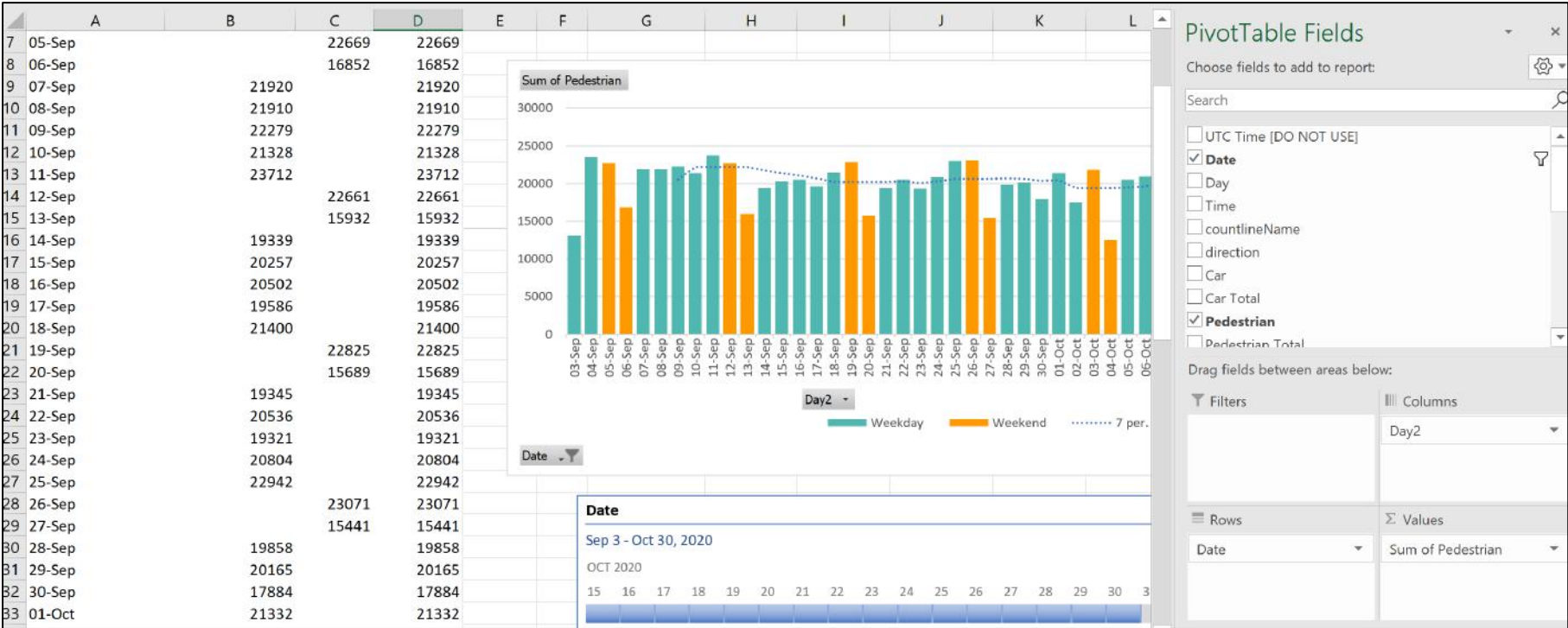


- CRP can provide data analysis services and provide individual reports tailored to your needs.
- CRP's in house tool can help understand local emissions associated with classified count data for even richer analysis.



Get in Touch!

If you would like to understand more about how CRP can help you to unlock the full potential of your data by providing detailed analysis and additional insights please get in touch!



Q&A Session





Sign up to our next event!

CRP Lunchtime Launch 3:

Town Centre Futures

Thursday 25th March

1:15pm – 2pm

Thank You!



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