



The InnOvaTe Project

UKAuthority

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Introductions:

Andrew Parsons

Innovate Program Manager
Digital and IT Service for
Innovate Project

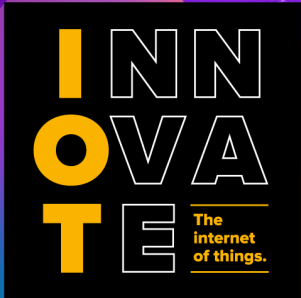
andrew.parsons@kingston.gov.uk



Bradley Coupar

Social Worker
Smart Place Project
Manager Innovate Project

bradley.coupar@sutton.gov.uk



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About Our Project

£4 million awarded over 3.5 years and across 5 council boundaries to **“pilot and research”** ways to generate economic growth, support local businesses and help people live better, healthier lives....

innovateproject.org

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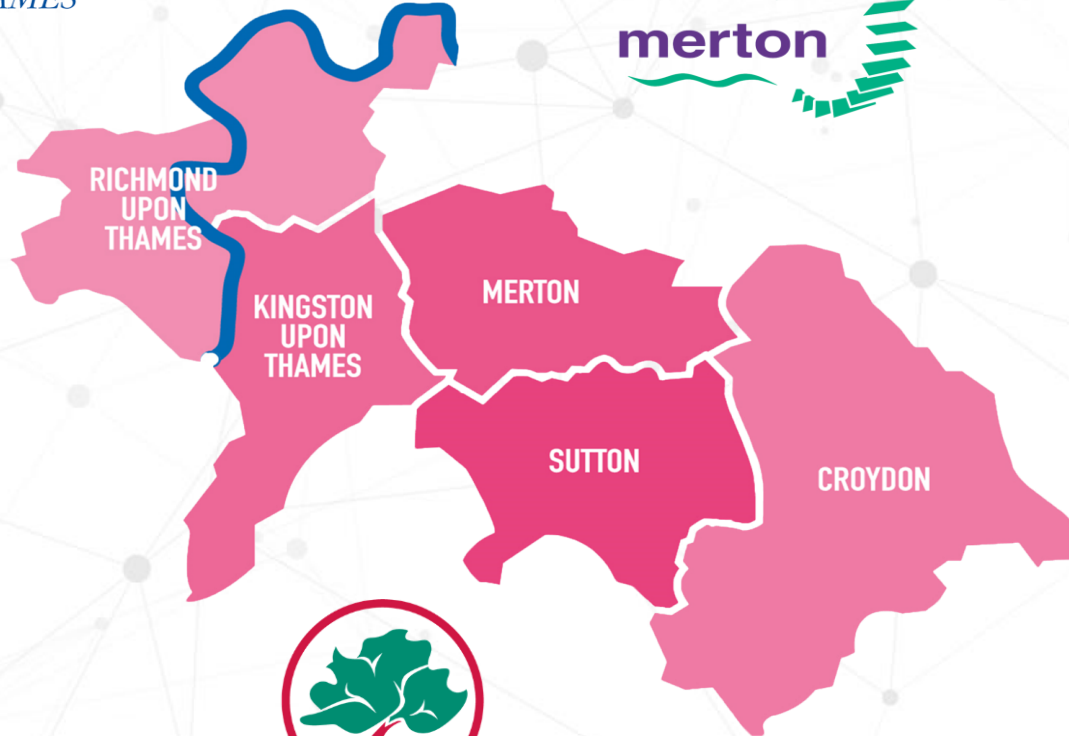
Who is involved?



THE ROYAL BOROUGH OF
KINGSTON
UPON THAMES

**Kingston
University**
London

[academic partner]



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CATAPULT
Digital

[technical assurance partner]

Use Cases....



IoT01 Covid 19 Early Response

IoT02 Social Distancing & Traffic Insights

IoT03 Digital Town Hub

IoT04 Fly Tipping

IoT05 Air Quality

IoT06 Gullies and Culvert Monitoring

IoT07 Gullies and Culvert Monitoring

IoT14 Cycle Route & Riverside Footfall Monitoring

IoT15 Cycle Route Monitoring

IoT18 Lamp Columns

IoT19 Covid 19 Early Response

IoT21 Cycle Infrastructure Monitoring

IoT23 Phase 3 Thames Street

IoT32 Beddington Park Parking

IoT33 Car Park Control Barriers

IoT34 Park Footfall Sensors

IoT45 Air Quality / Traffic Monitoring

IoT49 Landlord Services Resident and Building Safety

IoT54 School Air Quality Monitoring

IoT58 No Left Turn / Right Turn & One Way Streets

IoT62 Disabled Parking Bay Utilisation

IoT85 Monitoring of CRE Phase 1 Void Properties

IoT92 Air Quality School Streets Phase2

IoT88 AQ Monitoring linked to Traffic insights

Covid-19 Early Response

Challenge:

Easy to deploy, remote, unobtrusive behaviour monitoring to provide carers with an early warning of vulnerable residents becoming unwell

Dependencies:

- **Battery Powered** (no need to plugin)
- **Long Battery Life** more than 12 months
- **No Contact Install** (reduce transmission risk)

Approach:

- **Deploy** a post and place sensor that can be placed in the kitchens of vulnerable residents homes.
- **Learn** and identify typical routines of behaviour.
- **Alert** carers when activity deviates significantly.



[Click here here to view the use case:](#)

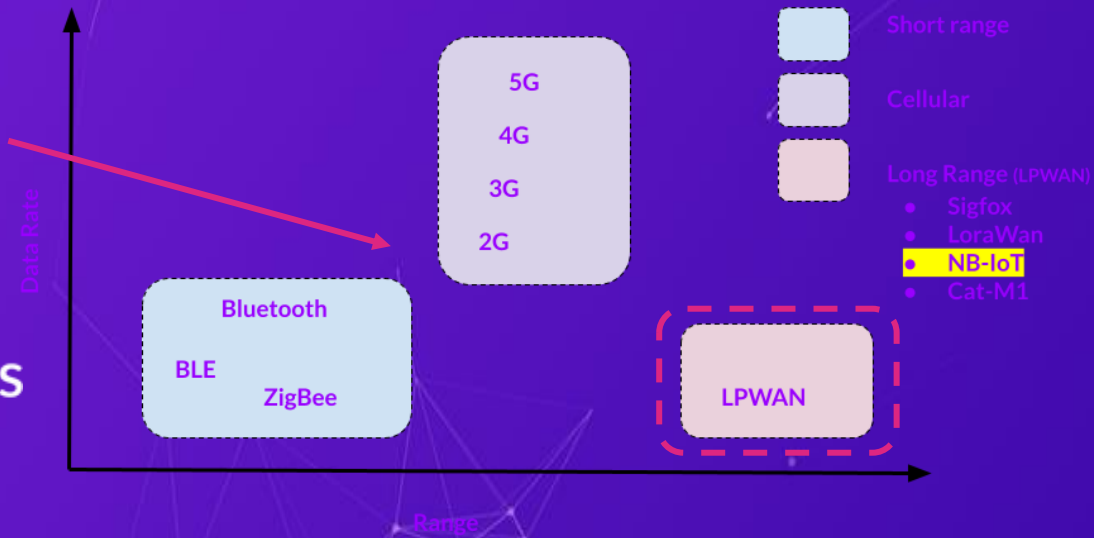


Covid-19 Early Response



LPWAN

- NB-IOT
- Sigfox



Data Visualisation - Dashboards



Borough Scheme View

Borough	
Independent Living Officer ↑	Resident ↑
Ian Roberts	
Mark Oldfield	
Neal Forse	

User record view

Resident | Resident: last 30 days

Resident: Bradley Coupar | Serial Number: iotsg-100000-00000002

Yesterday GREEN | Today GREEN

Map: Aldenham Country Park, Bushey, Epsom, Stanmore, Edgware, Harrow, Wembley Stadium

Resident: Bradley Coupar, 10 Downing Street, SW1A 2AA

AT home?

ICD: Neal Forse, neal.forse@tstg.co.uk, 07568 194935

Events: Realtime - last day

Notes: 2021-04-19 13:48:21 | Called Brad today, he is doing fine | Turalal Borough

Case Manager View

Resident ↑	Status	Address Line 1	Postcode
Bradley Coupar	GREEN	10 Downing Street	SW1A 2AA
Emma Mahy	RED	15 Mulberry Close	WD17 4UJ
Long Timeout test	RED	15 Mulberry Close	WD17 4UJ

Organisation View

Assisted Living		
Device	Year Status	Today Status
e07dea1b861f	GREEN	GREEN
e07dea1b8648	GREEN	AMBER
0081f98af888	GREEN	GREEN
e07dea1b8c0b	AMBER	AMBER
e07dea1b8a5b	GREEN	AMBER
e07dea1b89d2	GREEN	GREEN
e07dea1b88f1	GREEN	GREEN
e07dea1b8c4b	GREEN	GREEN
e07dea1b8962	GREEN	AMBER
0081f98af726	GREEN	GREEN
0081f98af902	GREEN	GREEN
0081f98af980	GREEN	GREEN
e07dea1b86d4	GREEN	AMBER
e07dea1b8a43	GREEN	AMBER
e07dea1b859f	GREEN	GREEN



Deployment



A screenshot of a web-based dashboard for a resident named Bradley Coupar. The dashboard includes a header with the resident's name and serial number (iotsg-100000-0000002). Below this, there are two green boxes indicating 'Yesterday GREEN' and 'Today GREEN'. To the right is a map showing the resident's location. The dashboard also features a 'New Note' section, an 'Events' section with a bar chart, and a 'Messages' section with a list of messages. The interface is clean and modern, with a dark header and light background.

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Learning to date:



22 Triggered fuel poverty concerns

2 Critical Alerts

1 Hydration and Nutrition concern

Current Areas of Interest

IoT use cases being delivered...



**Social Distancing and
Traffic Insights**

championed by...



Covid-19 Early Response

championed by...



**Real-time Digital Town
Hub Engagement
Platform**

championed by...

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Social Distancing Monitoring



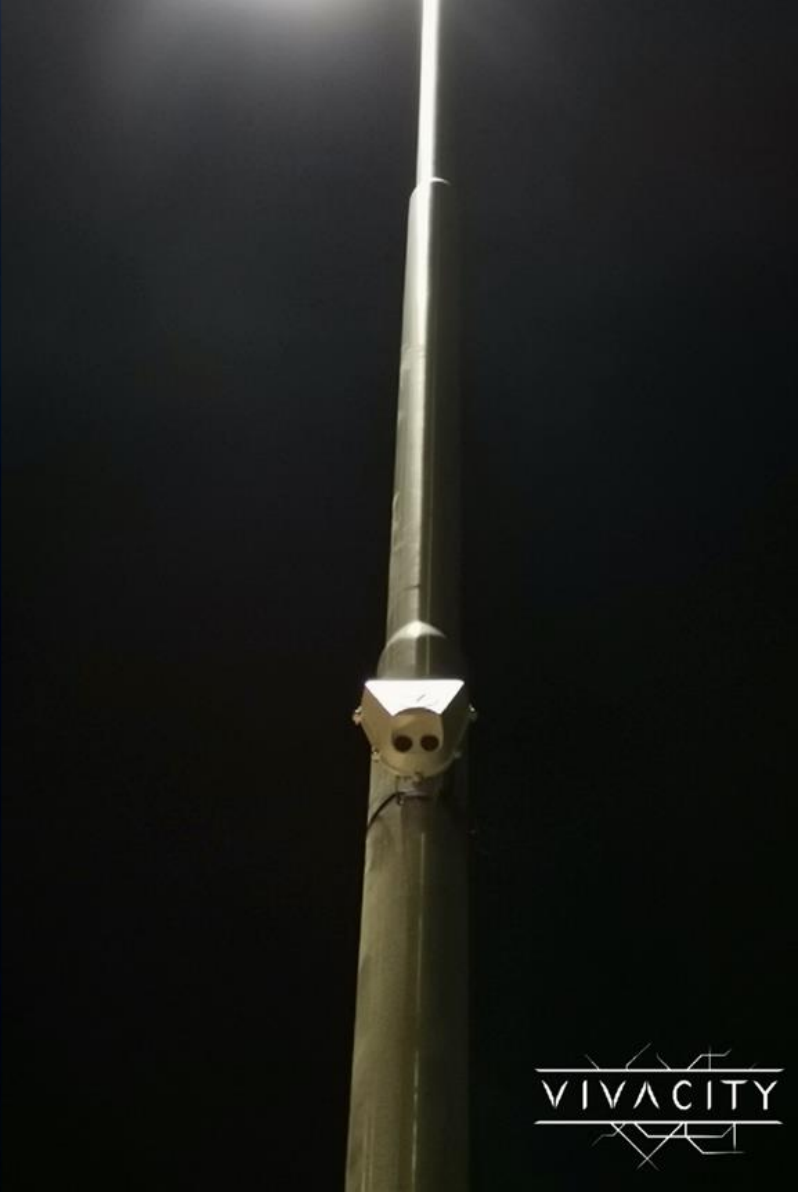
Challenge:

The provision of accurate and up-to-date data needed to support council decision-making for social distancing measures in high footfall areas.

Approach:

- **deploy** smart sensors to assess patterns and issues
- **predict** that interventions could address the problem
- **confirm** that interventions were indeed successful
- **capture** any knock-on issues

Sensors



Classifications and Counts



Classification & Counting

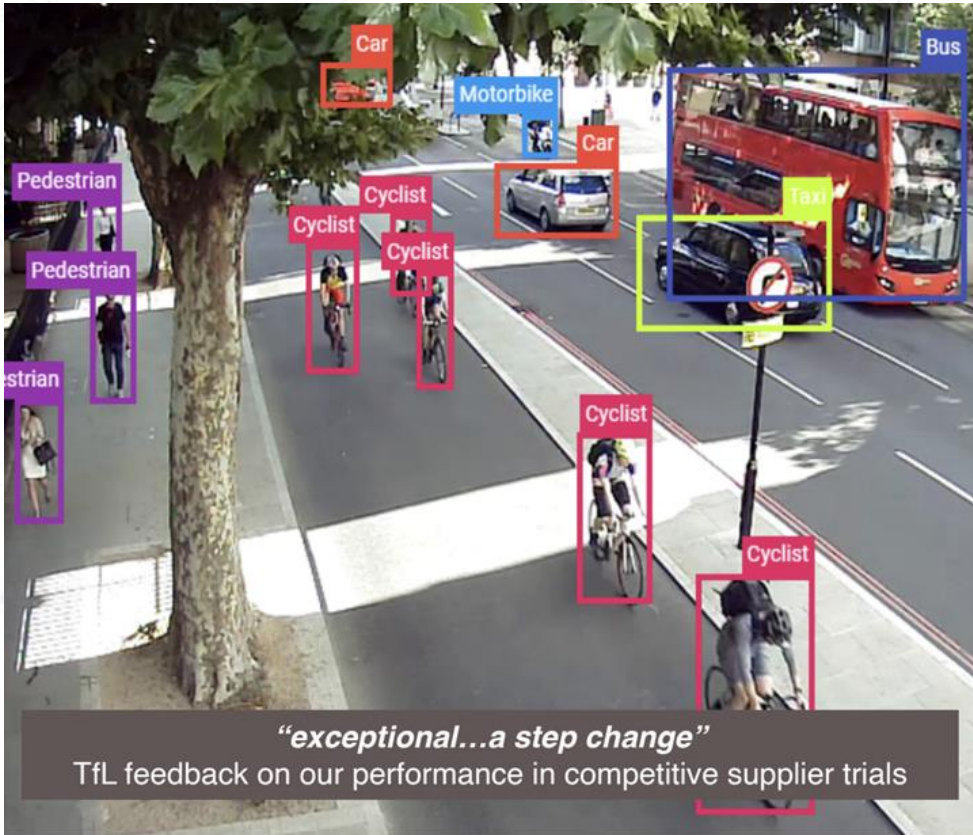
Providing real-time, on-device counting & classification, using the same algorithms as in driverless vehicles.

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)

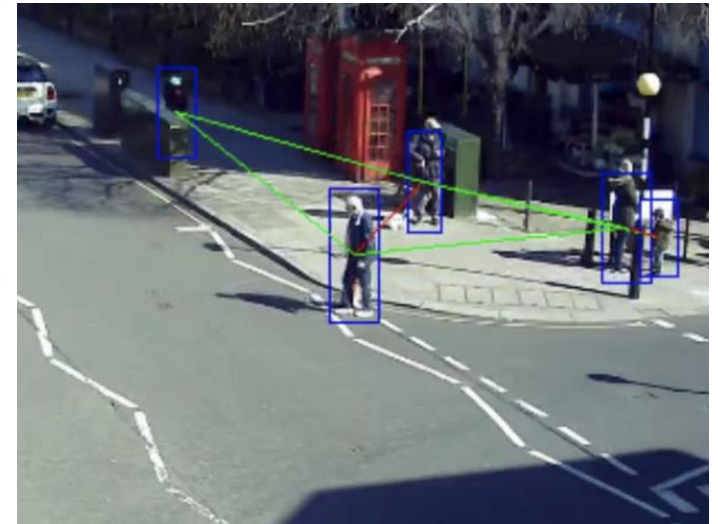
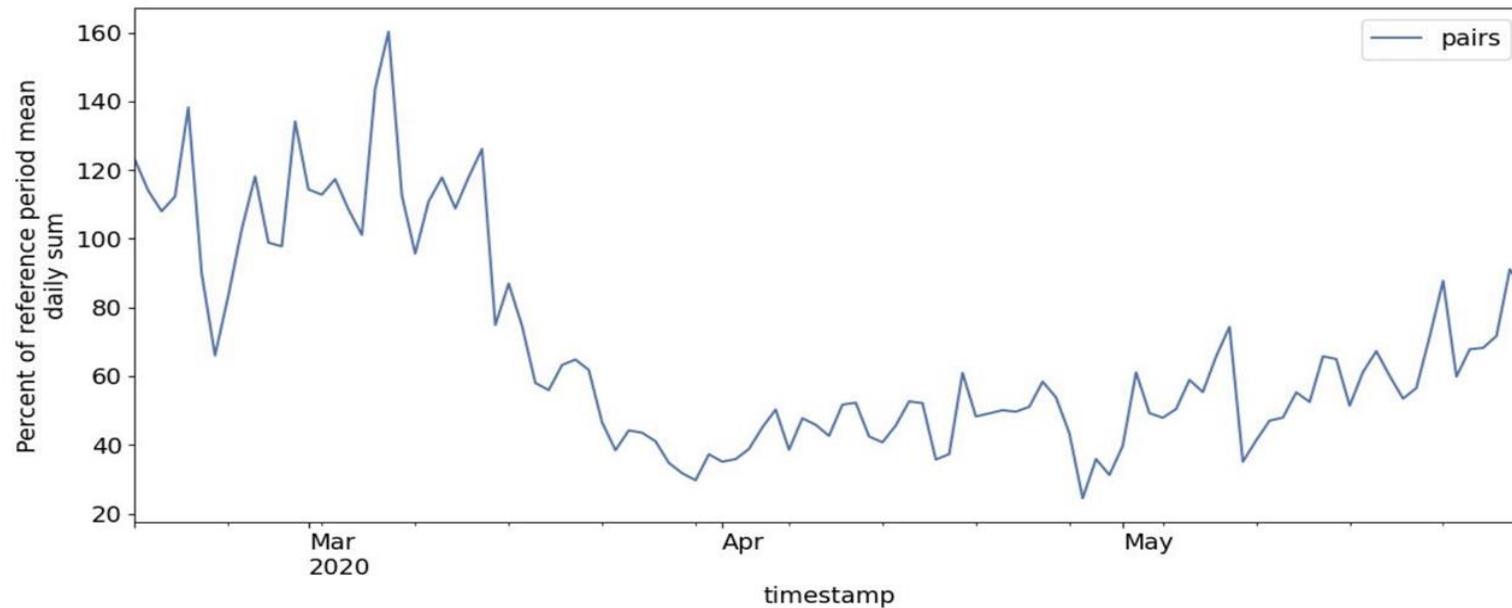


Social Distancing Data



Daily data continues to demonstrate steady march upwards

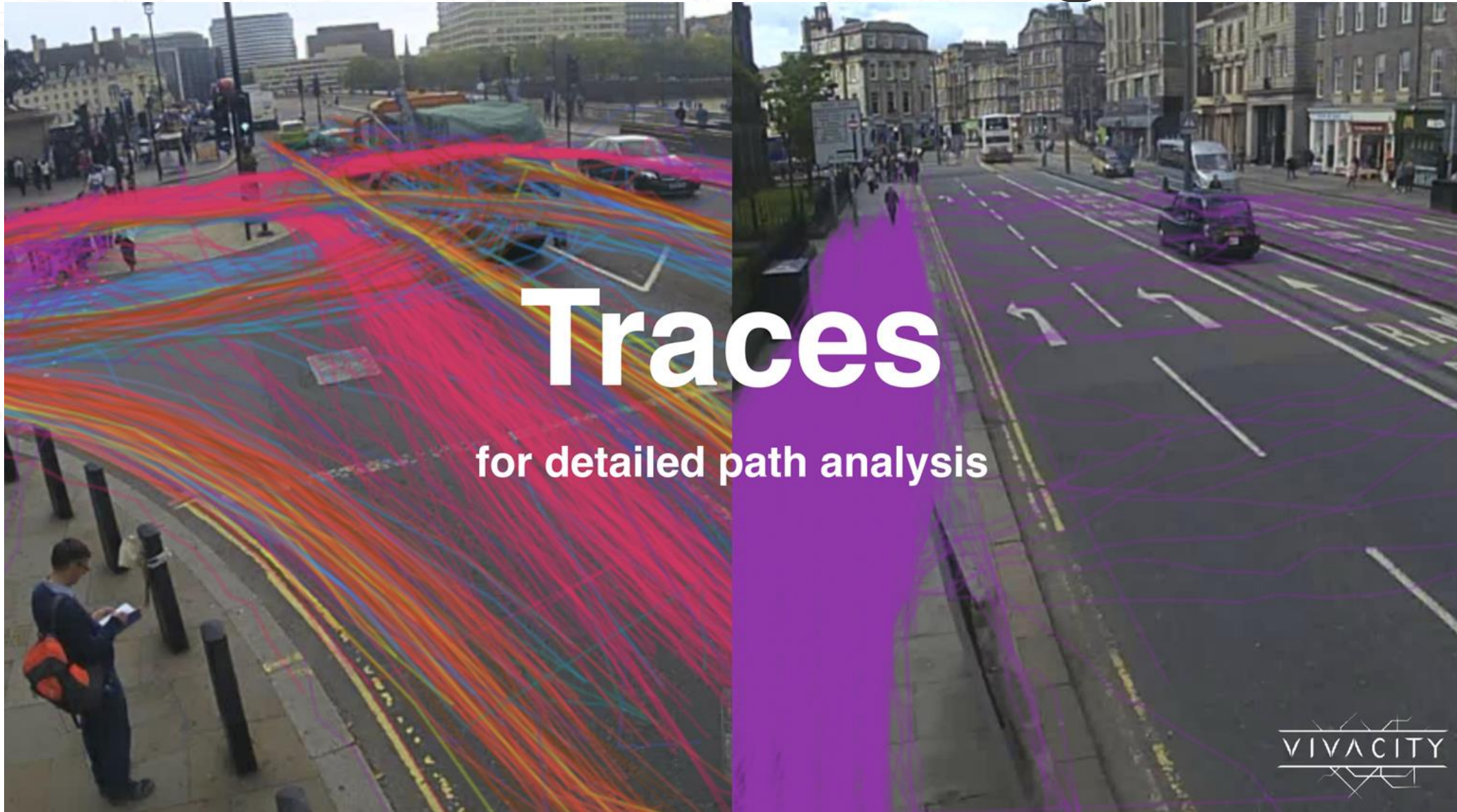
All projects: daily total <2m Interactions. 2020-02-17 - 2020-05-31
Relative to mean total daily interactions during 2020-02-15 - 2020-03-21



Path Tracking

Traces

for detailed path analysis



Whats Next?



Connected Care Platform



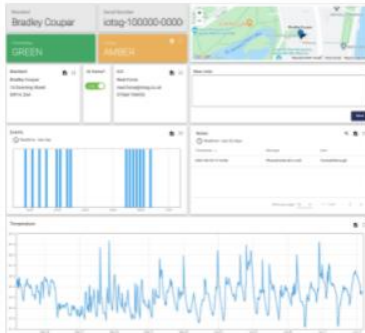
Can you view your current telecare data in one place? Have you undertaken assistive tech trials? Can you use the data to inform assessment? As new technology becomes available can you integrate this?

Through the development of a connected care platform can we join the dots between Telecare, assistive technology, activities of daily living monitoring, carers and our care sector?

What would the data tell us?



ASC/Covid 19 Housing Early Response



Early Response solution to identify declining activities of daily living:

- Post and place solution.
- No Wires,
- No need to power.
- No Internet required
- Integrated with Doro



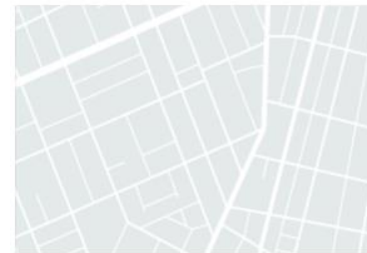
Activities of Daily Living



Telecare is changing, as we move from analogue to digital. If digital provides us with more data could we right size care packages? Could we provide better evidence to CHC meetings? Could care professionals be alerted early to declining activity?



Independent Travel



If I am lost I can be assisted to find my way; If I need help I can be found.

Independent travel is a challenge across all stages of development; however, some find travel more of a challenge. This use case explores the options for enabling the most vulnerable of residents within our borough to travel as independently as possible using gps and sensor based technology.



Hospital to Home

When a resident is discharged home there are often significant delays in staff being informed of the resident arriving home. This can be a significant risk.

If resident location could automate an alert via text and or email when they arrive home could this reduce risk and improve the service delivery model.

Visit our website and sign up for updates...

innovateproject.org

