ADEPT LIVELABS

Department for Transport

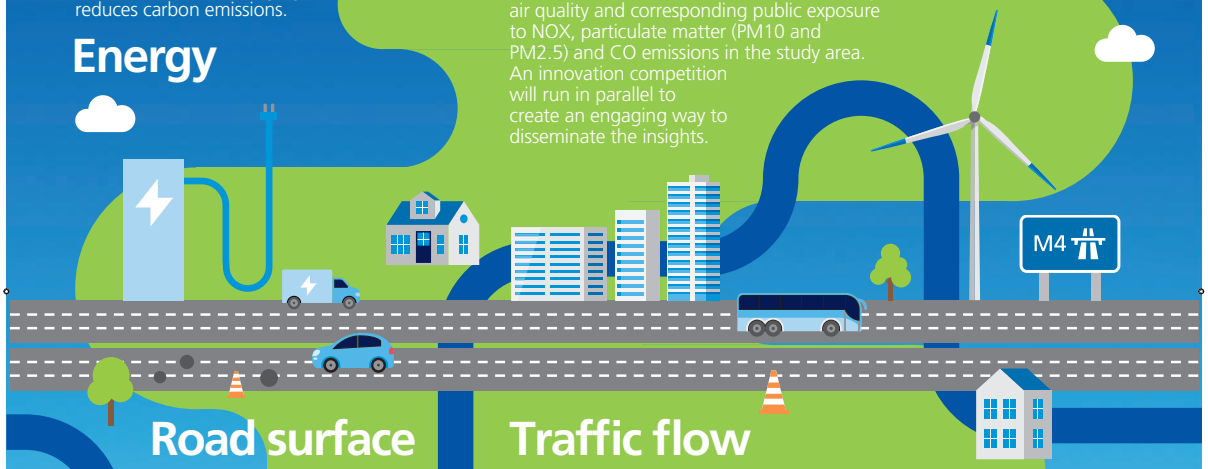
# The Thames Valley Berkshire Live Lab

## Energy

Create a dynamic energy management platform that integrates building energy and EV charging points. Maximises use of onsite renewables, reduces cost of EV charging, reduces carbon emissions.

## Air quality

Develop an innovate approach for measuring air quality and corresponding public exposure to NOX, particulate matter (PM10 and PM2.5) and CO emissions in the study area. An innovation competition will run in parallel to create an engaging way to disseminate the insights.




## Road surface

Fuse mobile phone data, Siemens UTC data, GeoTab telematics data and existing traffic sensor data. The insights will inform local authorities of the most heavily used routes with the poorest road surface quality to help the local authorities take a planned, preventative approach to road maintenance.

## Traffic flow

Create a real time view of network activity, providing previously unavailable information about trip types, origins and destinations and how incidents affect he network. Use these insights in Siemens Stratos Traffic Control to dynamically manage traffic to alleviate congestion.

## Health

Integrating mobility data from the project, open data and local authority data, insights will be created that measure public health risks. By mapping public health risk authorities will then be able to see where current problems are and where future public and primary health costs will emerge from.

Royal Borough of Windsor & Maidenhead · Slough Borough Council · Wokingham Borough Council · shoothill · SIEMENS · Stantec · SGS · West Berkshire Council · Bracknell Forest Council · University of Reading · Reading Borough Council Working better with you · O2 business

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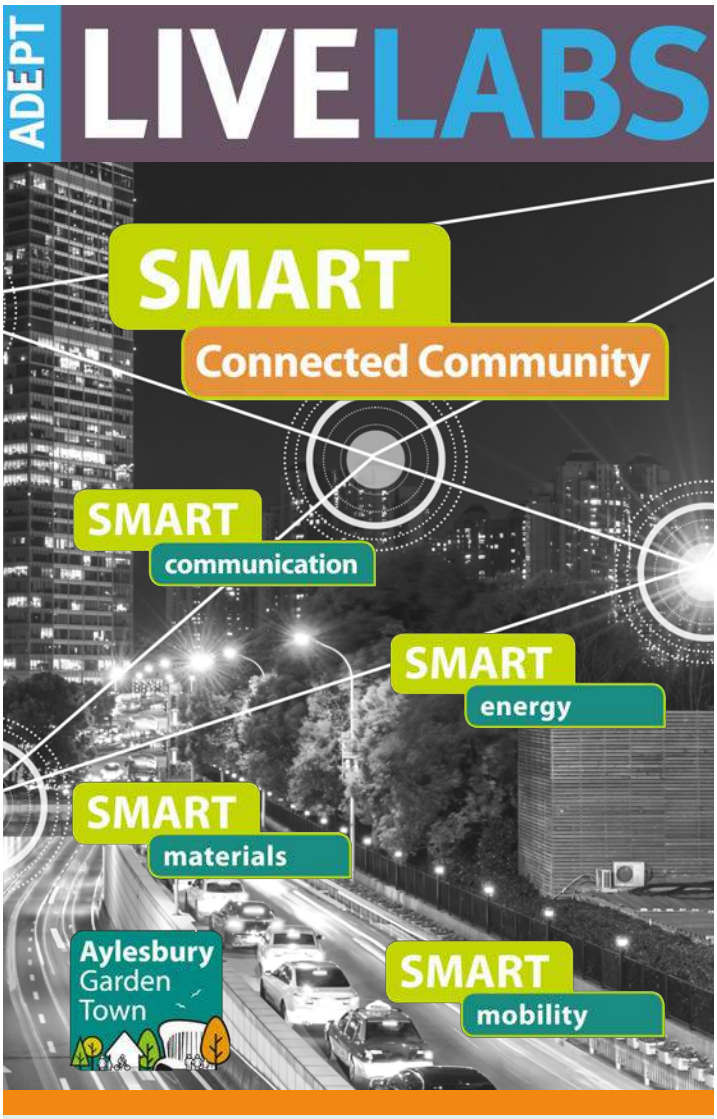


AVDC
AYLESBURY VALE DISTRICT COUNCIL

BUCKINGHAMSHIRE COUNTY COUNCIL

CATAPULT
Connected Places

CycleFleet

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COMPOSITES

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smartwater
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YOTTA
FROM DATA TO DECISIONS


Kinetic Energy
Leighton Buzzard Train Station

Thermal Energy
Thorn Turn Highways Depot

Solar Energy
Thorn Turn Highways Depot

# CENTRAL BEDFORDSHIRE COUNCIL

Central Bedfordshire

ADEPT LIVELABS

WWW.CENTRALBEDFORDSHIRE.GOV.UK

# The Smarter Suffolk 'players'

ADEPT LIVELABS

Partners/critical friends:

Suffolk Highways
your roads, our business

KIER

Suffolk County Council

HEA Highway Electrical Association

BT

ILP

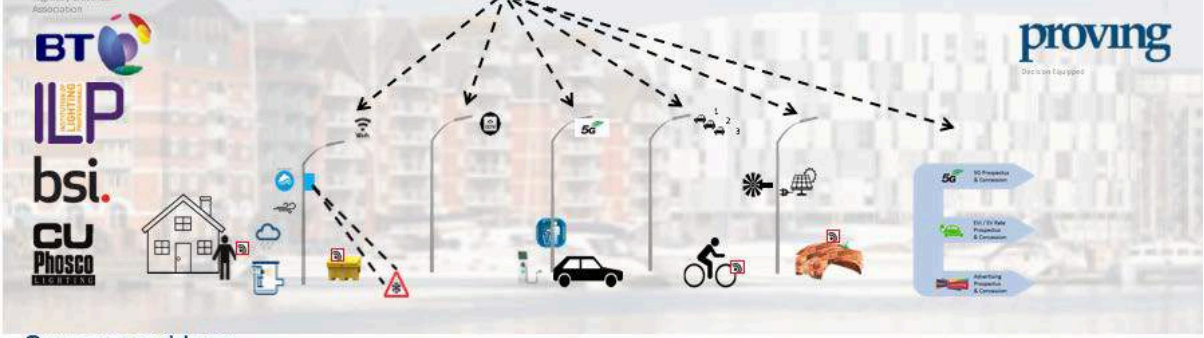
bsi.

CU Phosco Lighting

Researchers:

University of Suffolk

proving



Sensor providers:

IOT SOLUTIONS

intouch smartwater

VIVACITY

WINTERSENSE

UNIETEC

Omniflow

Central management system providers and their range of sensors:

enLight

urbancontrol

Itron

Telensa
making brighter cities

mayflower SMART CONTROL

Lucy Zodion

# Network Resilience Live Lab

ADEPT LIVELABS

## What is it?

Transport for West Midlands (TfWM), together with its partners including Birmingham City Council and Solihull Metropolitan Borough Council, is running a pilot to explore how applying innovative data analytics along key roads in the West Midlands can help to reduce congestion.

Utilising TfWM's CCTV Control Centre and applying data analytics technology to video data from the highway, the project will learn from common car journeys in the West Midlands. Working with existing in-car applications, and utilising the latest advancements in video technology, TfWM will be able to track point to point car journeys 24 hours a day to enable an early warning system for congestion, based on patterns of behaviour.

**To do this, video data will be captured along some of the West Midlands' busiest roads, including:**

- Routes directly impacted by construction of HS2
- Routes directly impacted by Birmingham 2022 Commonwealth Games infrastructure
- Routes where new Sprint bus rapid transit and Metro routes will be introduced
- Major routes in and out of Birmingham city centre; and
- Connected and Autonomous Vehicle (CAV) test bed routes.

The Network Resilience Live Lab will also contribute to developing the operational capability of a Regional Transport Coordination Centre (RTCC) and its evolution through innovation.

## How will it help the West Midlands?

If the pilot is successful, the anticipated long-term benefits will be better car journeys, improved health through reduced congestion and personalised travel planning through learned patterns of travel behaviour.

**Benefits of long-term application:**

- Reduced congestion
- Improved air quality
- Support inclusive growth in the West Midlands
- Personalised travel planning
- Improved health
- Behavioural insight

**The work streams:**

- Fixed asset operations
- Data and testing
- Development of granular personas
- Learning and feedback loops

To maximise the benefits of our exciting innovation programme in the West Midlands, we have also identified cross-cutting synergies and/ or interdependencies with the following projects that are being delivered in the timescale of the Live Lab: Future Mobility Zone, Regional Transport Coordination Centre, West Midlands' Data Discovery Centre.

### Phase 1: May 2019-October 2019

- Form project board and working group
- Recruit project team
- Detailed design and commission works
- Secure permits, licences and permissions
- Capture and store analytics data

### Phase 2: November 2019-April 2020

- Continued implementation of fixed asset operations
- Continued capture and storage of analytics data
- Compare data collection methods
- Visualise and utilise
- Qualitative research and stakeholder engagement, co-creation of solutions

### Phase 3: May 2020-October 2020

- Testing and refining proof of concept
- Develop granular personas
- Early knowledge-sharing

### Phase 4: November 2020-March 2021

- Business case development
- Main knowledge-sharing phase
- Winding up and reporting

## Expected outputs

- Tools to give local authorities operational and legal confidence in using raw feed data
- Model agreements for local authorities to purchase data and gain advice from app providers
- A granular persona framework to inform marketing campaigns and better target behaviour change messaging
- Model privacy agreements

## Get in touch

To find out more please contact Deborah Fox FCILT, Project Sponsor **deborah.fox@tfwm.org.uk**

Transport for West Midlands | NTA 2019

Solihull Metropolitan Borough Council | Birmingham City Council

# STAFFS ADEPT LIVE-LAB

Smart Infrastructure and Mobility Urban Laboratory And Testing Environment (SIMULATE)

**4** CORE PARTNERS

**4** TRIAL LOCATIONS

**12** SMEs INCUBATED

**8** SMEs TRIALLED

## Incubating and Trialling cutting-edge SMEs in response to challenges around two critical industry questions:

**1** How can a future Multi-Modal Mobility Hub deliver sustainable and connected transport within Staffs?

- SUSTAINABLE AND SHARED TRANSPORT
- DEMAND RESPONSIVE TRANSPORT
- SOCIAL INCLUSION

Themes


**2** How can we create Sustainable Clean Air Zones from existing AQMAs?

- CLEAN AIR SCRUBBING AND FILTERLESS ABATEMENT
- ITS AND CONGESTION MANAGEMENT
- BEHAVIOURAL CHANGE AND MODAL SHIFT

Themes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