

# Network Resilience Live Lab

## Connected and integrated transport – for people

Act TravelWise Annual Conference  
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Transport for West Midlands



- 1. Strategic context**
- 2. Key traffic challenges facing the West Midlands**
- 3. Network Resilience Live Lab**

**Meeting the challenge is about understanding transport + technology + our PEOPLE**

## Strategic context in the West Midlands, UK

*“Building a healthier, happier, better connected and more prosperous West Midlands”*

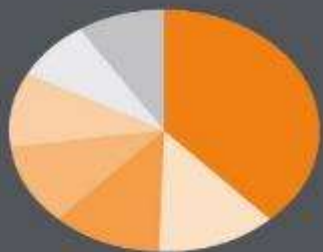




Record

# 8.4 billion miles

driven on the region's roads in 2016



- Birmingham
- Coventry
- Dudley
- Sandwell
- Solihull
- Walsall
- Wolverhampton

## Public transport use (2016/2017)



## Key Route Network key statistics

# 50%

Of road traffic is carried on

# 7%

Of the road network



# 17.7mph

Average weekday peak speed



Over

# 800,000

Daily bus trips

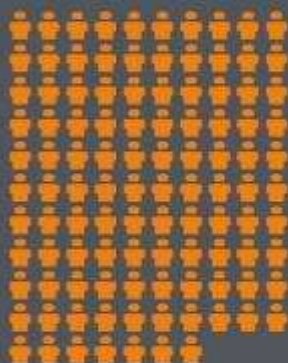


## A growing region

Between now and 2035, our region will grow every day, by:

# 100 people

Which is the equivalent of filling an extra...



# 1.5 buses



# 84 cars



# 0.5 trams

or

or



# Regional Transport Coordination Centre (RTCC)

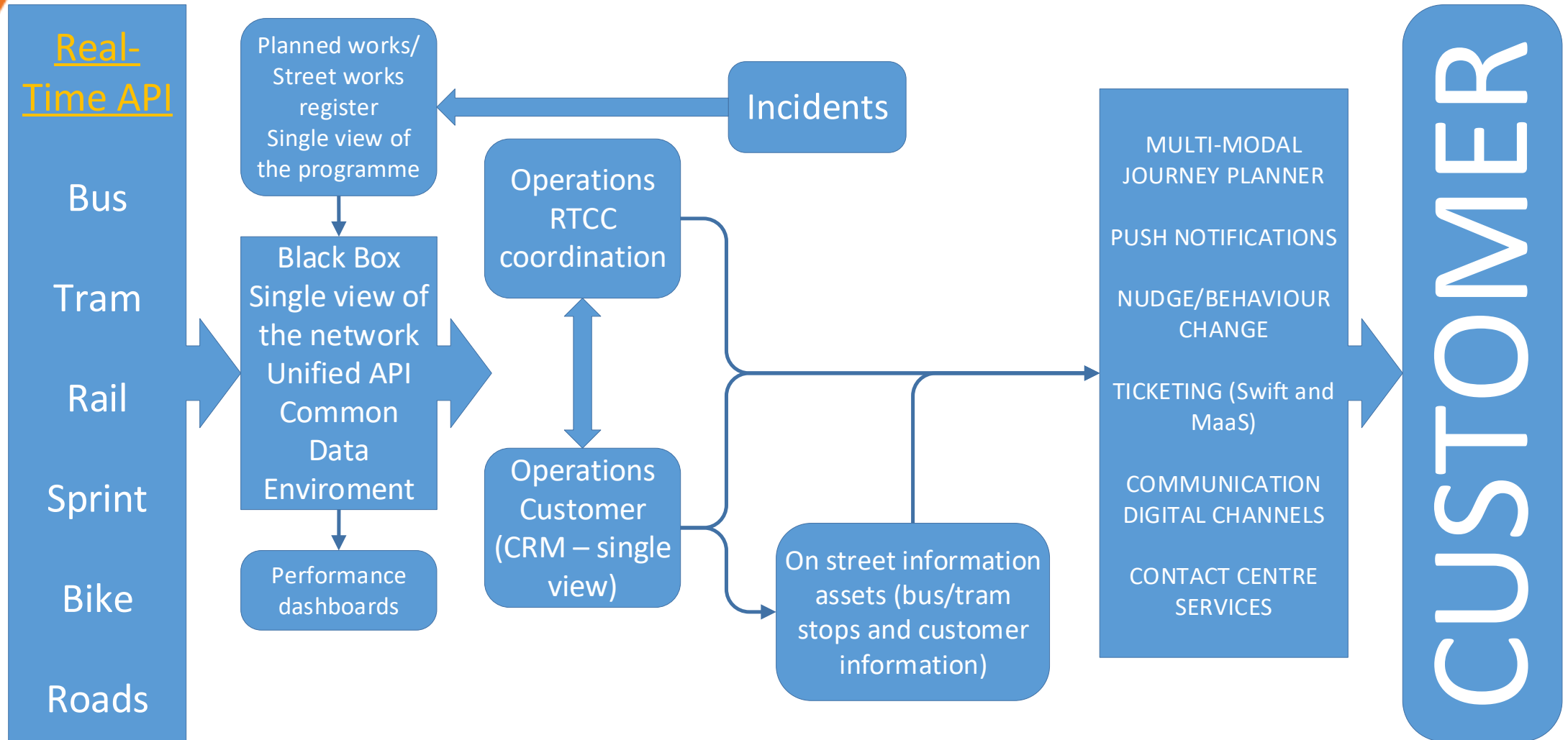
A multi-modal centre for monitoring the transport network and planning for impacts



Regional Transport  
Coordination Centre



# A revolution in citizen engagement



# Communications and engagement strategy

- Nudge tactics
- More sustainable travel
- Reduced congestion
- Healthier citizens

Create positive change



- Collaboration and partnership
- Technological solutions
- Real time
- Targeted activity

Minimise impacts

- One version of the truth
- Reliable / accurate



# A456

## Five Ways Underpass closed until 2021

Stuck in delays today?

Plan ahead for a better  
journey tomorrow



In partnership with



**Plan ahead:**  
[networkwm.com/FiveWays](http://networkwm.com/FiveWays)



# COVID-19 restarts: Business and education

New techniques developed during COVID-19 restarts: exploring connectivity between modes and interrelationships between businesses and education travel causing congestion in localities



Stay Safe Stay Apart

## Back to School Travel

- Travelling back to school or college this September will be different
- Buses, trains and trams are running but capacity has been reduced to support social distancing
- Services may be busier so plan ahead and allow more time for your journey
- Face coverings must be worn by anyone over 11 years old, except those who are exempt
- Consider cycling or walking to allow more space for those who have no other option or are travelling further

When travelling, be kind, be patient and stay safe.  
We are doing everything we can to keep you moving.

For updates and more information on Back to School Travel, visit our dedicated web page: [wmnetwork.co.uk/schooltravel](http://wmnetwork.co.uk/schooltravel)

COVID-19: Return to School De... x

maps.tfwm.org.uk/portal/apps/sites/?fromEdit=true#/covid19/pages/pinchpoints-analysis-for-back-to-school

Transport for West Midlands | Home | Metrics | Travel Analysis | Timeline | Datasets | RTCC Live View | Transport Cell | Corridors

### Education hotspots

The number of secondary and post 16 pupils.

To see the schools identified below please click on the school

- Sandwell Academy
- St George Salter
- Sandwell College
- Wolverhampton College
- Jewellery Quarter Academy
- Central Academy

wkt_geom	Point (406394 287322)
id	660
um	138,200
la code	330
lane name	Birmingham
establish	Central Academy
establis_1	Free schools
statutor_1	16
nursery_pr	No Nursery Classes
official_s	Does not have a sixth form
gender	Mixed
religiou_1	None

Relationship between bus watch spots and pupil density

Type here to search

14:34 30/09/2020

# FUTURE TRANSPORT ZONE PROGRAMME

CUSTOMER  
insight



MOBILITY CREDITS

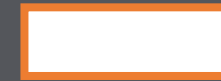


LEGACY  
for FTZ

**UNDERSTANDING** behaviour around transport

**TARGETED** transport interventions become possible

**DATA** architecture capable of managing a network of increased diversity and complexity



DATA  
capability



Digital twin



Digital TRO's

MODE  
expansion



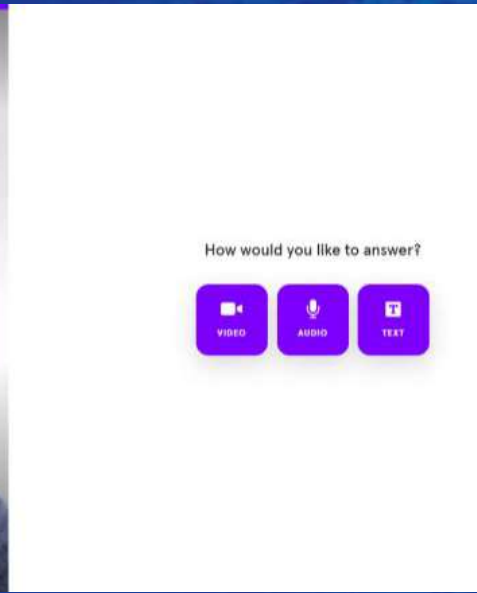
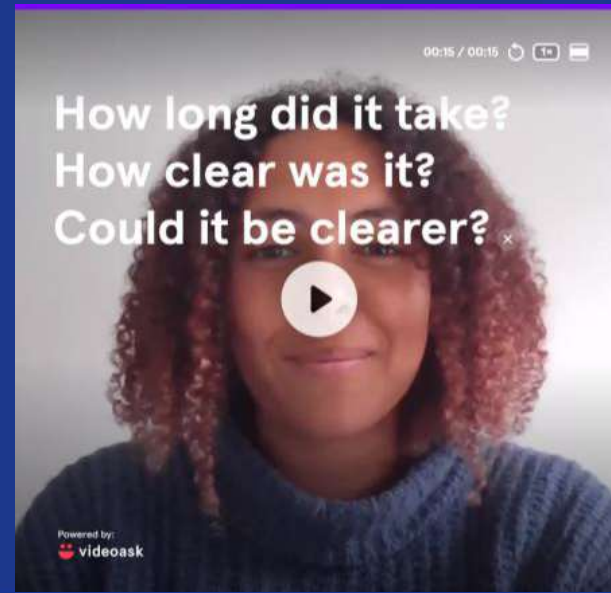
MaaS

The FTZ seeks to understand the local population, developing new transport services to further modal shift and transport decarbonisation. Promoting a clean and green recovery this activity is underpinned by an developing data capability and deployment of the mobility as a service (MaaS) model.

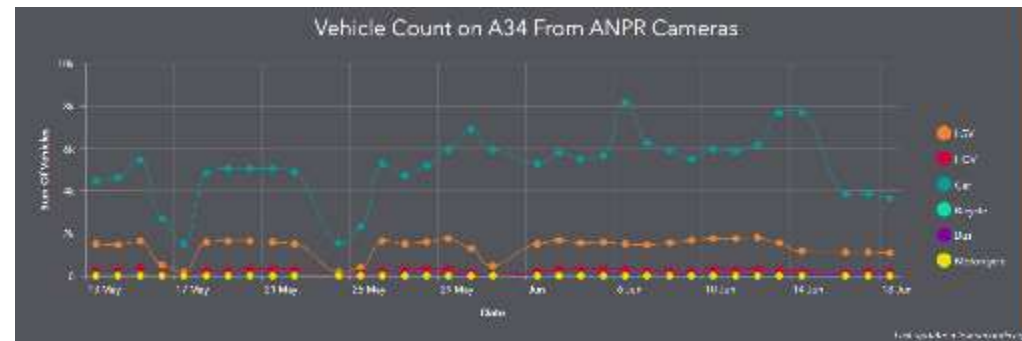
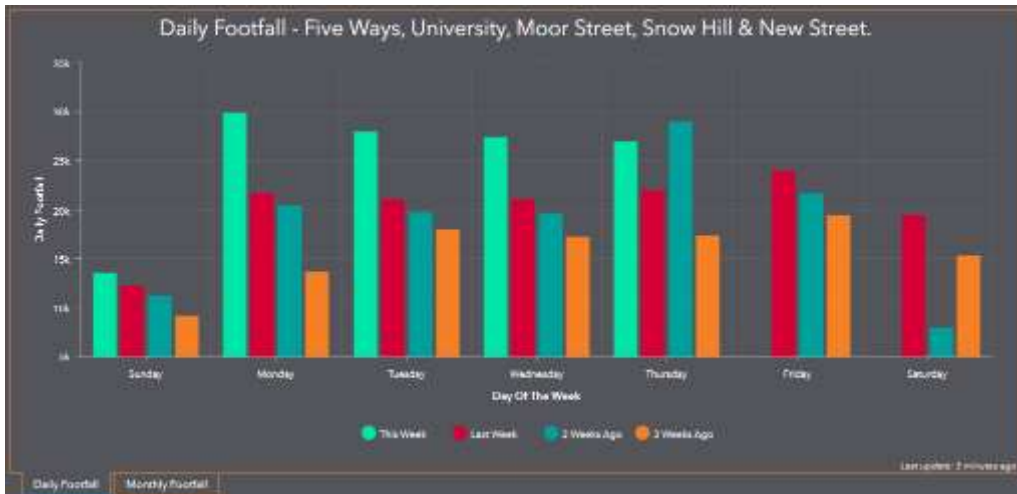
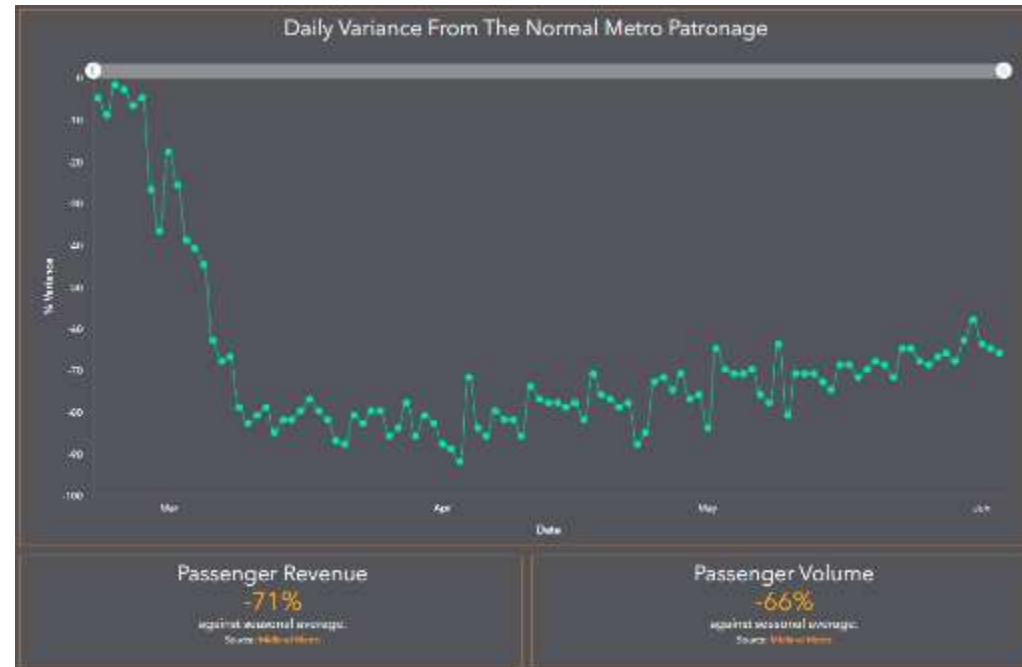
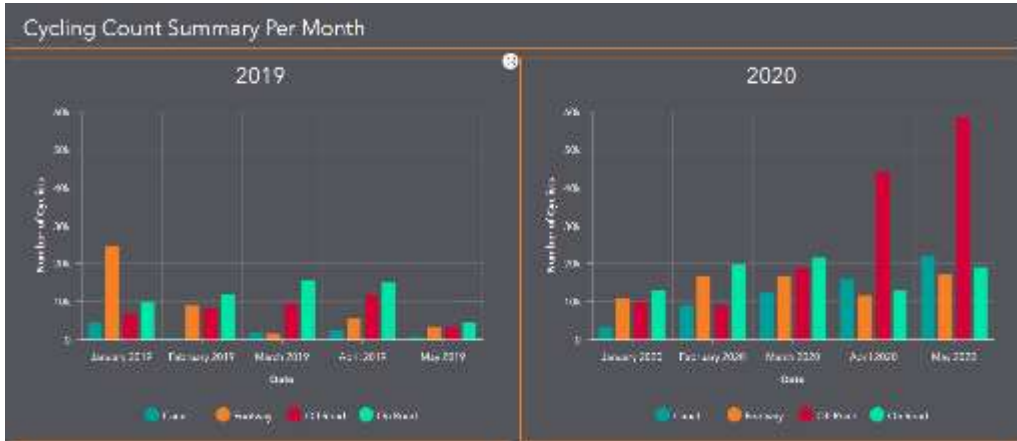


# Network Resilience Live Lab

Contributing to operational capability of the RTCC through innovation: Deploying static automatic traffic counters in partnership with West Midlands Police. Learning how to use data analytics and developing travel personas



# COVID-19 applications





## Challenge

- The West Midlands has collected highways data for over 15 years for use in transport planning and modelling.
- However, the outdated technology and cost has resulted in counts being undertaken for 1 week every 2 years.
- Whilst this provides long term trend it no longer meets the needs for 24/7 data.

## Opportunity

- April 2018 TfWM first engaged with West Midlands Police.
- West Midlands Police captures Automatic Number Plate Recognition data as part of tracking criminal activity.
- However they cast aside the “normal” activity – the data that is valuable to TfWM and the local authorities/ municipalities.



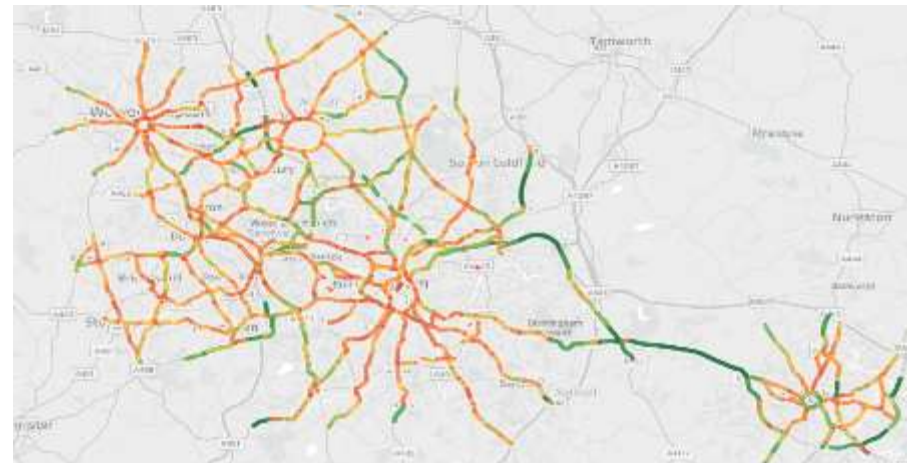
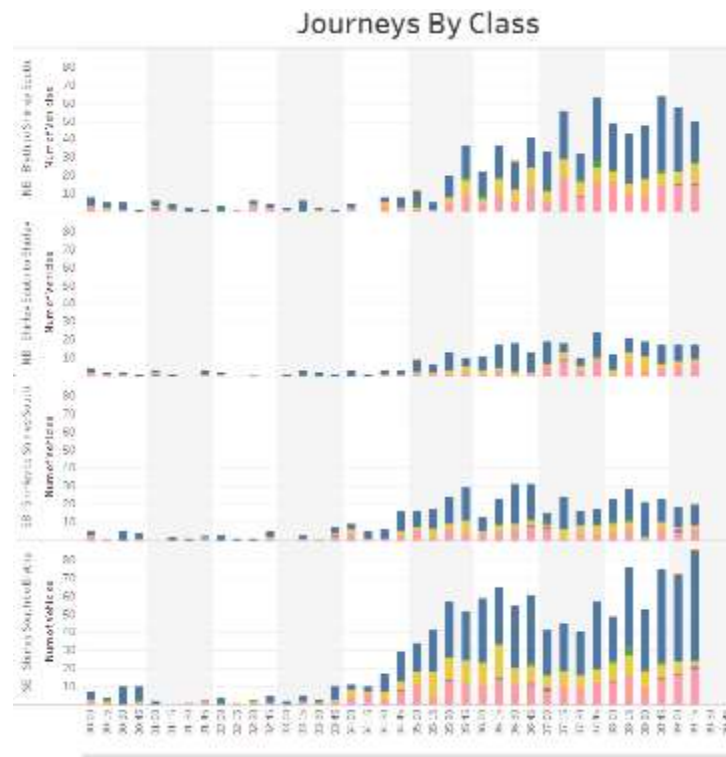
**Wolverhampton cordon count data sites – providing road trends data for over 15 years**

# The West Midlands Data Engine

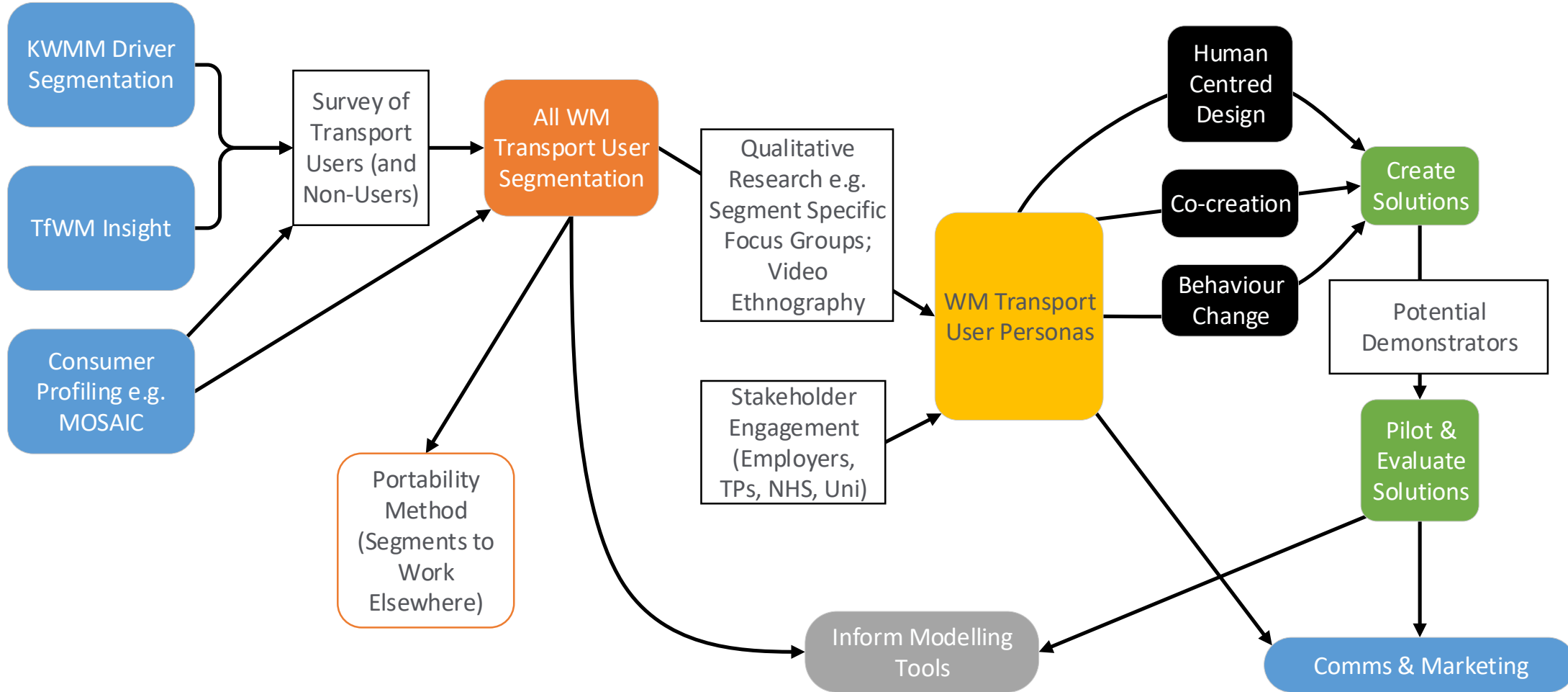


# Amazon Web Services realtime data

By gathering 24/7 data on the Key Route Network, in real time, it will be possible to have a near real time view on the main roads of the West Midlands and provide the data volume to deep learn standard travel patterns and therefore support more accurate traffic modelling.



# Travel personas







Transport for  
**West Midlands**

# Thank you

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**Network Resilience and Congestion Management Plan**

<https://www.tfwm.org.uk/strategy/network-resilience/>

**Network Resilience Live Lab** [www.tfwm.org.uk/livelab](http://www.tfwm.org.uk/livelab)

**West Midlands Active Travel Fund Programme #RollnStroll**

<https://www.networkwestmidlands.com/campaigns/roll-stroll/>

**ADEPT** **LIVELABS**