

# WM5G Transport

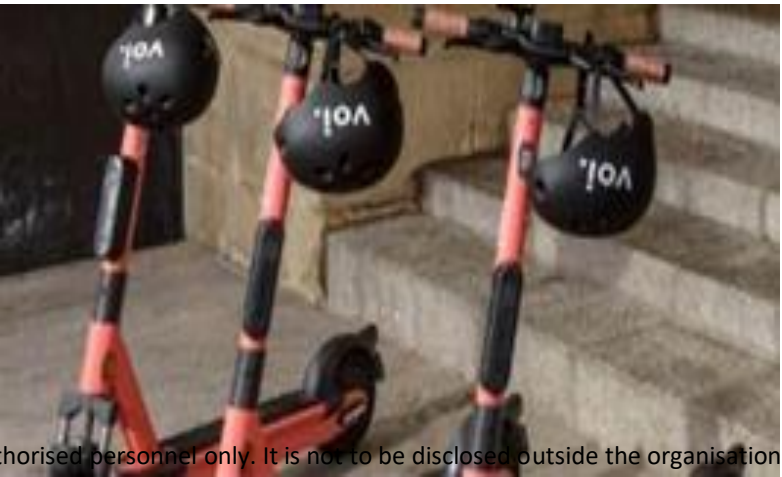


## Transport Challenges & Programme overview



*Chris Holmes*

*Transport Director*



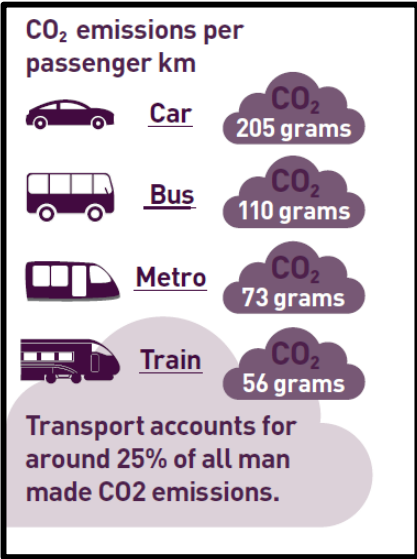


# Restarting Our Smart Mobility Journey .....

## Transport Environment – A Revolution In Progress

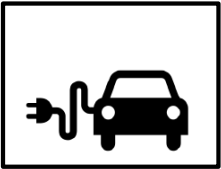


### Congestion and Emissions



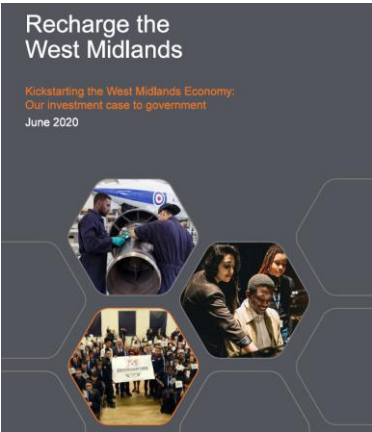
### Technology Changes:

- Autonomy, Electrification, Digital



### Recovery from COVID:

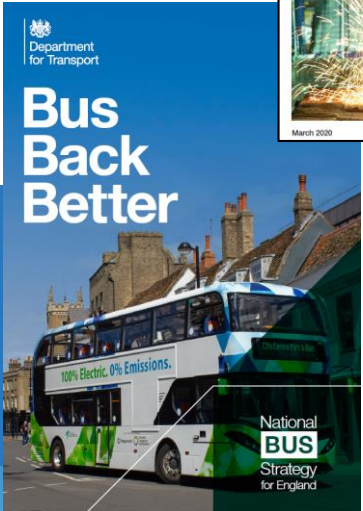
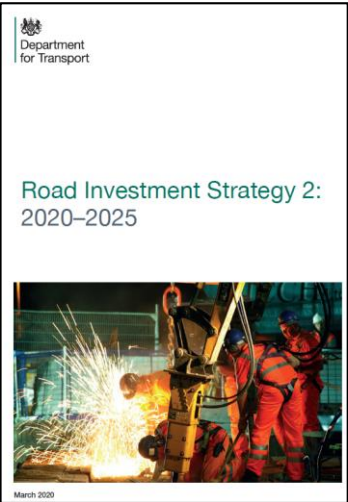
- Transport accessibility/safety



### Deliver Carbon Neutral:

- Incentives and Policy

- Combustion engines ban >2030
- Hybrid vehicle ban >2035
- Rail electrification

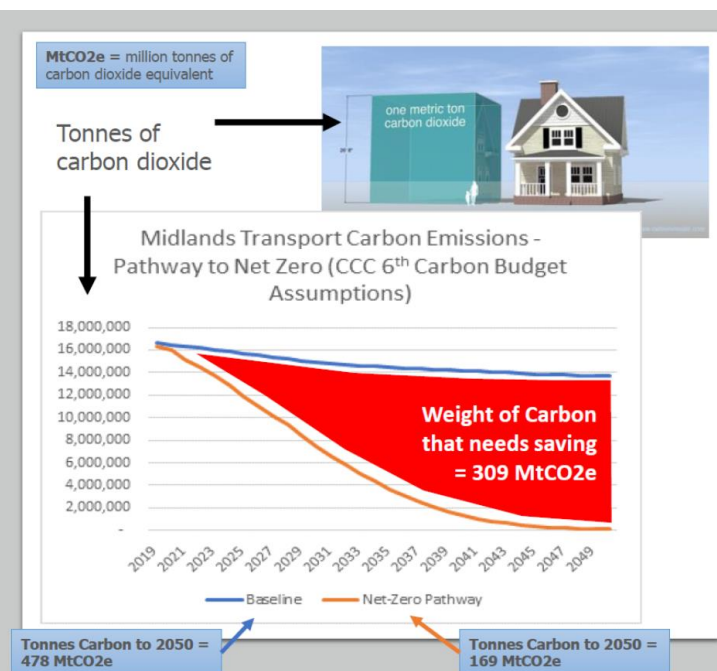
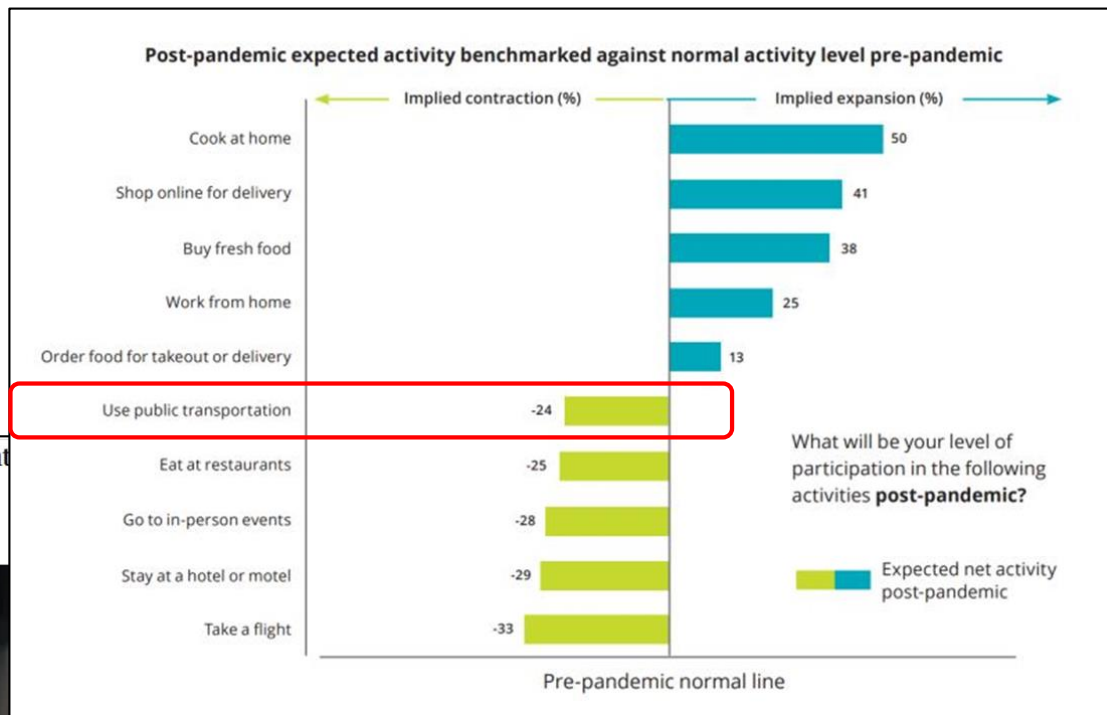


**Significant Policy Initiatives:**  
Across Infra structure and Services

# Translating The National To Local Challenges



YEAR-TO-DATE		
1	Vauxhall Corsa	12,413
2	Ford Fiesta	11,645
3	Nissan Qashqai	10,739
4	Mercedes-Benz A-Class	10,169
5	BMW 3 Series	8,092
6	Volvo XC40	8,084
7	Volkswagen Golf	7,896
8	Kia Sportage	7,837
9	Ford Puma	7,561
10	Volkswagen Tiguan	7,384



**The Observer**  
Working from home

**Government taskforce urges permanent job flexibility for all workers**

Millions could benefit from new rights to work from home once the pandemic is over

Tom Wall  
Sun 2 May 2021 09:45 BST

189

▲ More than 70% of employers told a survey that home working during the pandemic had either boosted or made no difference to productivity. Photograph: Getty Images

Millions of employees could be given the chance to switch permanently to more flexible working arrangements under forthcoming guidance designed to encourage firms to make long-term some of the emergency changes ushered in by the pandemic.

## Funding

- Cuts to funding from central government have led to a 17% fall in councils' spending on local public services since 2009–10 – equal to 23% or nearly £300 per person
- Councils' spending is increasingly focused on social care services – now 57% of all service budgets.
- TfWM core funding is a levy from Councils is flat (not even an inflation increase)



## Councils urged to bid for £15m traffic signals cash

The Department for Transport (DfT) is urging English local authorities outside London to submit expressions of interest for a share of £15m of new funding to repair and upgrade their traffic signals.

The DfT announced last week that £15m extra cash has been allocated to supplement existing local authority spending on the upgrade and maintenance of traffic signals and associated equipment.

Its deputy director, traffic and technology, Anthony Ferguson, has now written to the chief executives at 126 highway authorities and combined authorities to invite bids for the cash, which must be spent in 2021–22.

Mr Ferguson said funding in blocks of between £300,000 and £500,000 will be paid out to between 30 and 50 local authorities, 'based on their ability to demonstrate the operation of specific policies and procedures'.

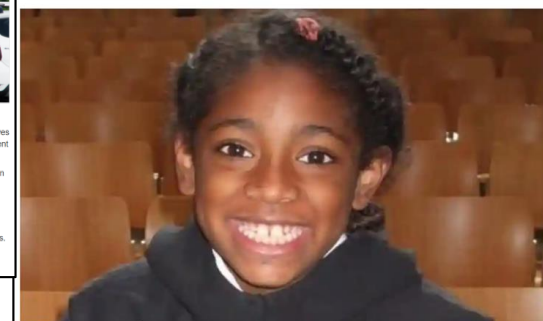
He wrote: 'This funding is being allocated specifically to address the backlog in traffic signal maintenance and upgrading works in English local authorities and cannot be used to replace existing allocated resource but is funding for new work or additional top up to existing programmes. The funding will be awarded based on demonstration of need and evidence of authorities understanding of their estate, maintenance priorities and policy vision.'



This article is more than 4 months old

## Air pollution a cause in girl's death, coroner rules in landmark case

Coroner says failure to reduce pollution levels to legal limits was factor in death of Ella Kissi-Debrah, who had severe asthma



B News Midlands News Birmingham City Centre

## New Moor Street 'bus gates' make you drive further to reach the Bullring

Now that Moor Street Queensway has a bus gate in both directions, the implications are profound - if you make just one mistake you could be in for quite an extra detour

SHARE 8 COMMENTS

By Graham Young  
05:30, 12 DEC 2020

NEWS

# How Can WM5G and the Programme Help?

## Bridging Business, Government & Technology



**Business**

WM5G Transport



**Government**

### **OBJECTIVE:**

Support the growth of **new Products and Services** which tackle Transport problems or create a better Transport environment... meeting government strategic priorities

**Technology**



# To Support The wider Transport Challenges ...

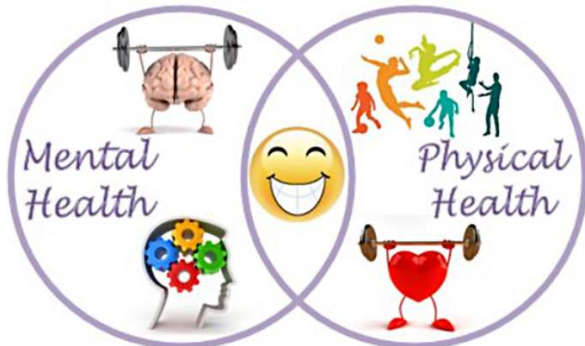
## WM5G Transport Has Three Strategic Objectives



- Explore operational **EFFICIENCIES** on road and rail to improve service, reduce costs and improve environmental impact.



- Support transport **EXPANSION**, encourage use of public transport & provide better connection between transport services.



- Improve traveller **EXPERIENCE** through better journey information and improved leisure /productivity services.

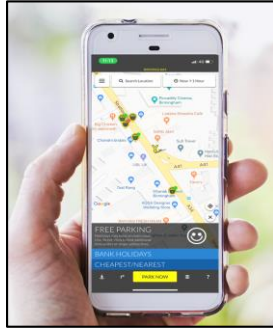


# Transport Early Projects Short Term Trials (Demonstrators)

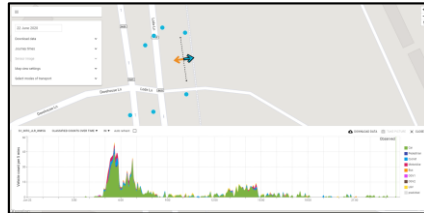


## Project

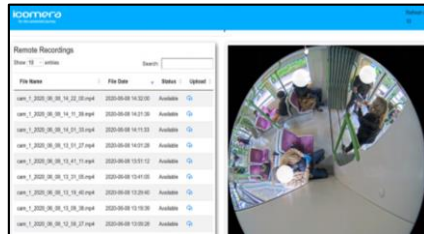
- Appyway  
(Roadside detection)



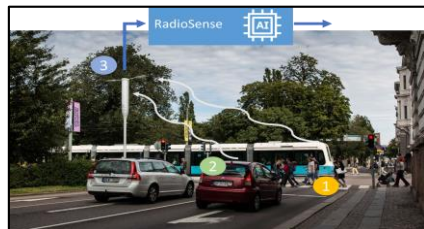
- Vivacity  
(CCTV at road junct)



- GoMedia  
(CCTV in Tram)



- Ericsson  
(Mast as a sensor)



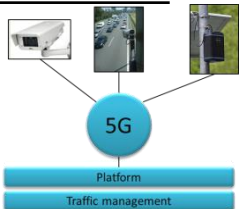
## Benefit

- Live scan data from passing vehicles to inform Kerbside availability.
- Congestion & time looking for space reduced.
- Live road user sensing – traffic numbers and behavior.
- Enables better traffic mgt & offers insight to road use.
- Live Transport vehicle occupancy status.
- Provides enabler for multiple uses from passenger counting, safety, social distancing and interactive services.
- Traffic density and counting without the need for sensors.

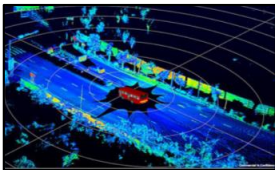
# Transport Grant Funded Projects Development Project Portfolio



## Roads Infrastructure



Road traffic & environment monitor



Roads I-structure monitor



Kerbside parking location



Congestion / incident mitigate

## Rail Infrastructure



Rail track assess & alert



Pantograph & line assess & alert

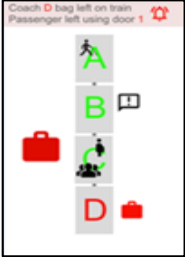


VLIR remote monitor

## Traveller Experience



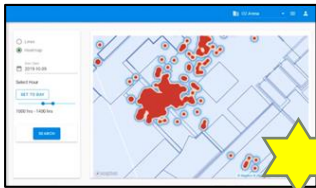
Partially sighted



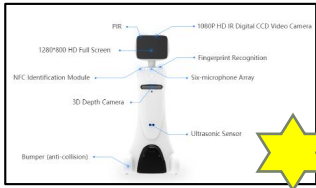
Security



Customer Sat & alerts



Station Crowding/guidance



Station Info & support



Bus Service crowding



Events & Travel choice



= 2<sup>nd</sup> competition projects

# WM5G Transport Projects..... “Road Infrastructure”



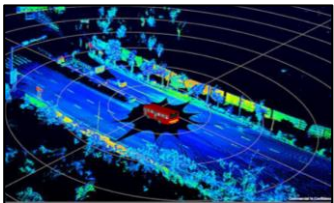
## Capacity Manager (Road Traffic model)



### Benefit

- Better planned traffic management.
- Better Incident management.

## Curbs (infra structure scanning)



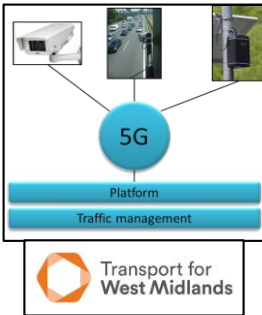
- Live road surfaces and road-side infra structure monitoring.
- Maintenance at point of need.

## Predikt (Kerbside parking)



- Accurate roadside parking availability.
- Reduction in congestion / journey time.

## Road Sensor Network (Traffic & Pollution Monitoring)



- Live traffic and road user type detection.
- Live emissions and weather monitoring.
- Better traffic management.

### Transferability of Service & Users

- All Road types
- Local Authorities
- Road Operators

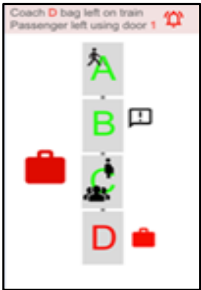


# WM5G Transport Projects..... “Traveller Experience”



## Tram Safety

(Carriage object detection)



Customer Alert/Distress



Customer Satisfaction

## Passenger Manager

(Customer feedback)



## Transport Accessibility

(Assist Partially sighted)



## Urban Tourism

(Event management)

### Benefit

- Improved passenger safety and assurance.
- Operator service improvement.
- Continuous customer feedback to operators.
- Live alerts thro picture messaging.
- Helps partially sighted to “navigate” stations and transport vehicles.
- Accessibility for independent travel.
- Influence travel options to events.
- Live feedback for travelers and operators.

### Transferability of Service & Users

- Bus, Train, Tram
- Service operators
- Passengers

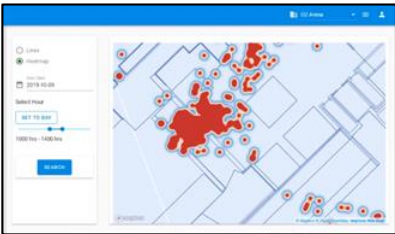
### Transferability of Service & Users

- Bus, Train, Tram, **Road**
- Service operators
- Passengers

# WM5G Transport Projects..... “Traveller Experience”



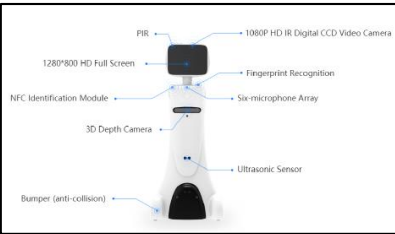
## TravelXR (Crowding in stations)



### Benefit

- Improved passenger assurance.
- Operator service improvement.

## 5GER (Passenger Information and Guidance)



- Central passenger information thro' interactive service.
- Passenger confidence to deal with busy and complicated platforms...more people travelling independently.

## Occupancy (Passenger detection on vehicle and at stops)

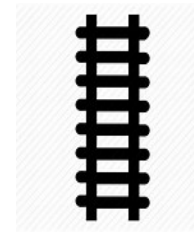


- Helps partially sighted to “navigate” stations and transport vehicles.
- More people travelling independently.

### Transferability of Service & Users

- Bus, Train, Tram
- Service operators
- Passengers

# WM5G Transport Projects..... “Rail Infrastructure”



## Polytrack

(Rail track irregularities)



### Benefit

- Continuous line monitoring ilo infrequent detail measurement train.
- Less people on track.
- Point of need maintenance and quick return to service.

## HPOMS

(Pantograph & O’head line monitor)



- Removes cable and Pantograph damage.
- Maintenance at point of need.

## 5GCAT

(Very Light Rail – VLR - autonomous vehicle and door closure monitor)



- Enables automomous Tram operation.
- VLR is much cheaper tram service with ~20 cities interested.

### Transferability of Service & Users

- Train and Tram
- Service operators
- Train and Tram manufacturers



# WM5G Transport – Who Are Involved?

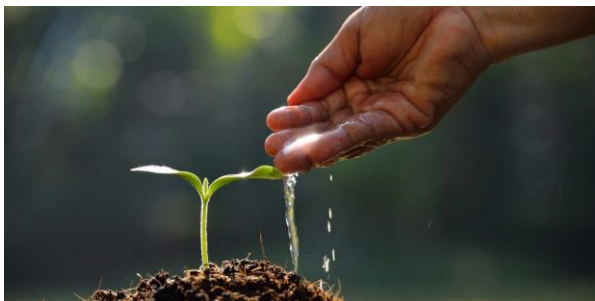


## WM5G Transport Projects Delivery in 18 months:

- 4x Demonstrators / POC's
- 14x Product Development Consortia
- 2x Funding partners & stakeholders
- 30x organisations



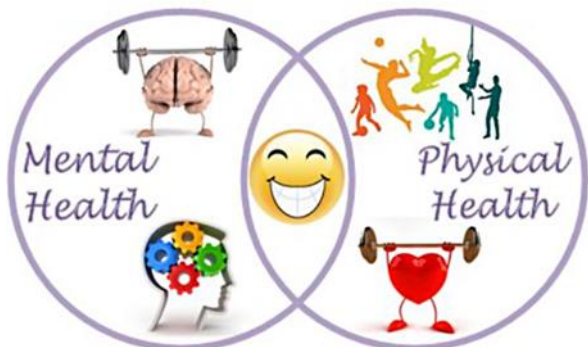
# What Does Success Look Like.....Funded Products And Services Projects?



- **Business ....** New or improved product or service.



**Legacy** to W Midlands (and Nationally..).



- **Make a difference to travel.**

