eScooters in the West Midlands:– An emerging proposal

Operator Engagement Day
04/06/2020

West Midlands eScooter

West Midlands eScooter

West Midlands eScooter

West Midlands eScooter

Agenda

1. Welcome & introduction to the team
2. Micro-mobility in the West Midlands
3. Indicative Trial Zones
4. Practical maters
5. How we can help you
6. Timetable
7. Immediate next steps
8. Open Q&A

Welcome to the West Midlands

West Midlands eScooter

We are working together:-

To drive inclusive economic growth in the West Midlands region and enable a healthier, happier, better connected and more prosperous population

A West Midlands Renaissance

- Sustained economic growth
- Two of the Top Five most Entrepreneurial Cities (Birmingham and Coventry)
- Londoners moving to the West Midlands
- Changing face of our towns and cities
- Above average housing delivery rates
- Cultural pride: Coventry City of Culture and Birmingham 2022 (CWG)
- Devolution is changing the way we deliver

Current Population

2.86m
WMCA Constituent authorities

4.58m
WMCA Constituent & non constituent authorities

Projected to increase by 440k by 2035

34% of WM residents are aged 0 to 24

Most ethnically diverse area outside of London with a 30% BAME population

Approach: Inclusive and Better Places

West Midlands eScooter

Big transport challenges

1,473
Deaths per year related to air pollution, of which transport is a major contributor.

41%
Of all car journeys are within 2 miles

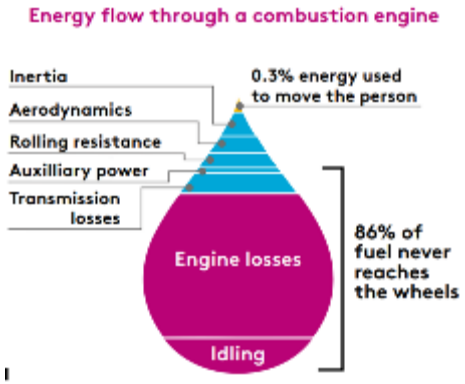
216,000
Fewer people are within a 45 minute bus journey time of Birmingham city centre compared to 2008 because of congestion

- Everyone not benefitting from regional growth
- Short of affordable housing
- Increased homelessness
- Climate Crisis
- Skills levels below national average
- Increased congestion and poorer air quality
- Less active lifestyles
- How will future mobility impact the transport sector and future housing?

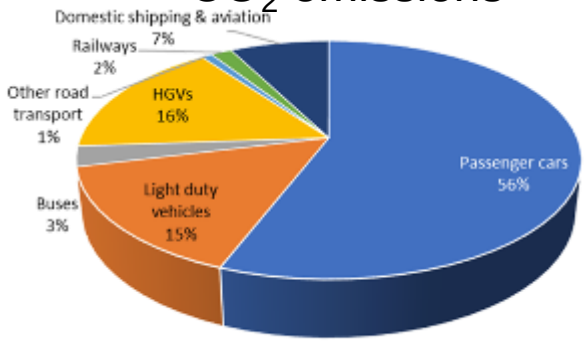
Need for shift in mobility

West Midlands eScooter

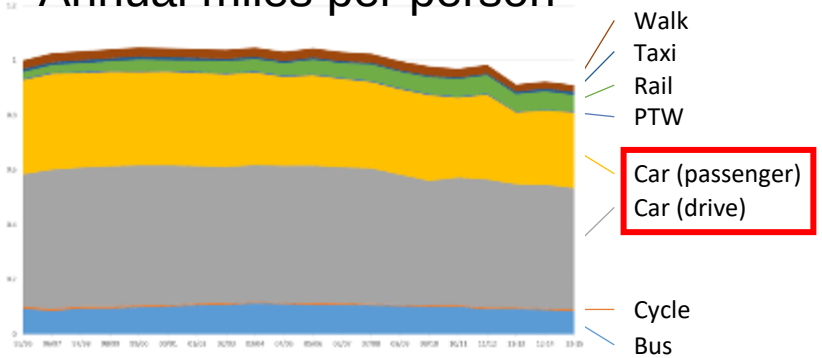
62% of car trips are as a lone driver

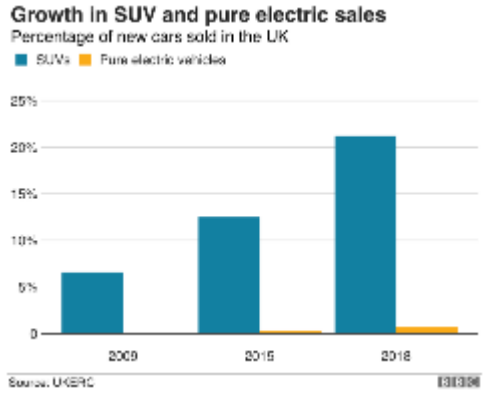


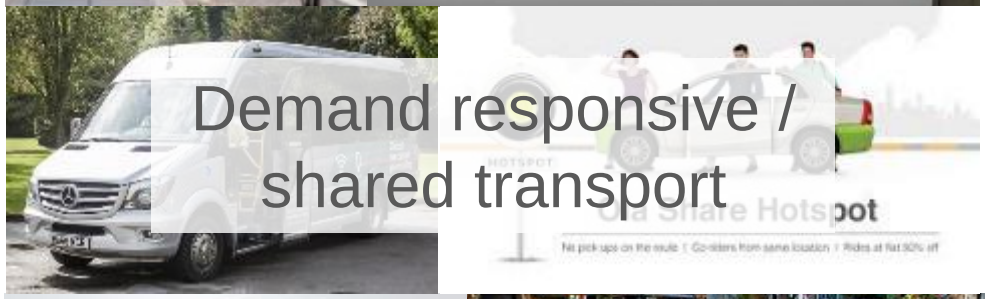
CO_2 emissions

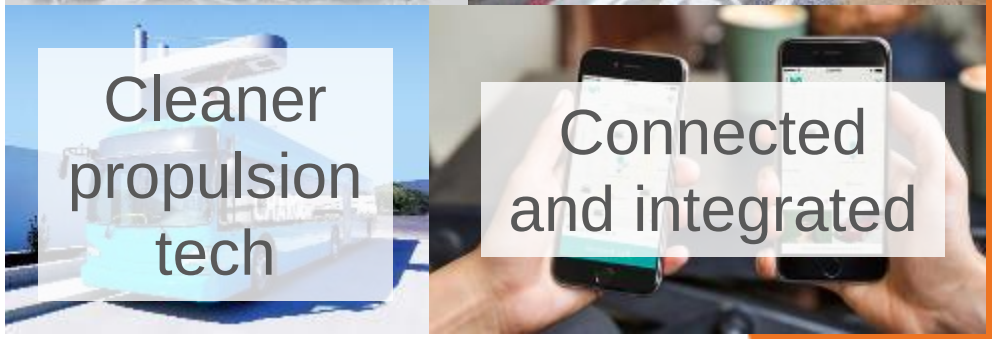


Annual miles per person



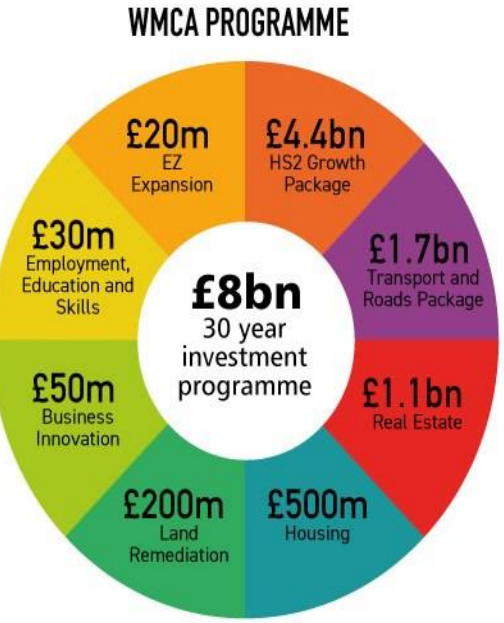




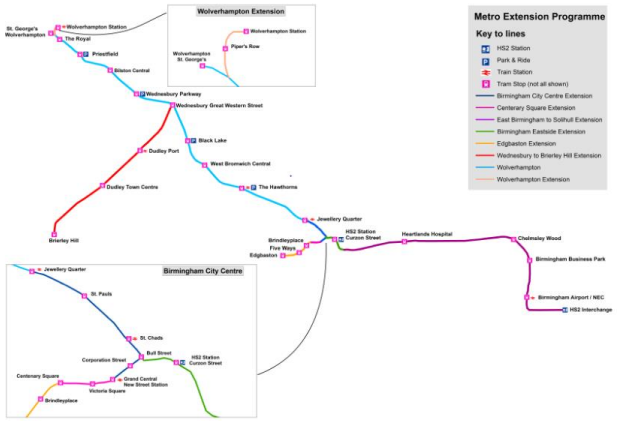


Major investment in response

West Midlands eScooter



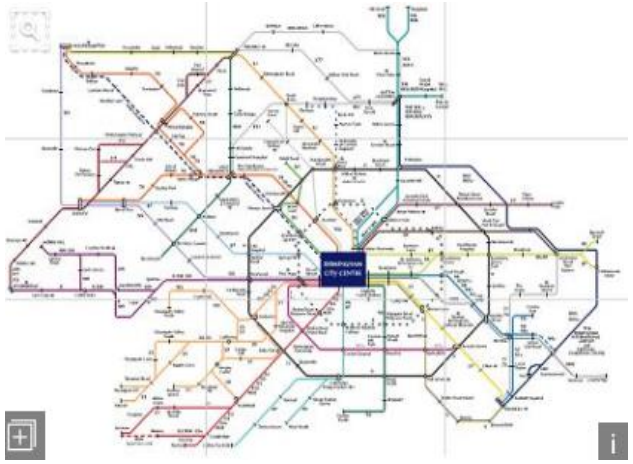
Metro



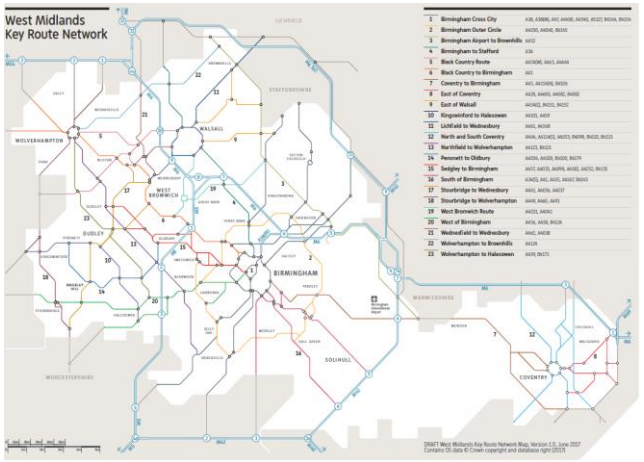
Sprint

Rail

Bus



KRN



HS2

Aligning Housing, Transport, Digital & Clean Growth Investments

West Midlands eScooter

£321m › £695m

Investing in transport in the West Midlands

West Midlands eScooter

Joined up approach & customer experience across the local authority areas

Track record of cross LA co-ordinated service introductions & delivery *(from ticketing, to public transport and cycling)*

Already the UK Pathfinder for Future Transport

Diversity of urban and rural areas – allowing testing of different service models, vehicles and user response

Strong heritage in innovation, AME and IP generation

The West Midlands eScooter Team

West Midlands eScooter

Micro-mobility in the West Midlands

Objectives

Overarching

- Supporting a healthy and green re-start post COVID
- Supporting clean air and de-carbonisation, including a cultural shift to a shared economy and sustainable active travel
- Enabling inclusion and increasing accessibility across the social spectrum
- Stimulus to drive manufacturing and management of micro-mobility to the West Midlands
- Provides a catalyst to attract further innovation schemes

Transport specific

- Provide another financial viable and sustainable mode of transport that encourages a transition from single occupant car travel.
- Providing faster access to more places.
- Accelerating the ability of the transport system to return to normal.
- Off-setting the potential for a mass reversion to car use in urban areas.
- Providing learning:
  - Improving the evidence base, which globally is inconclusive
  - Understanding if eScooters could be made safer if they are not safe enough
  - Informing future legislation and/or regulation
  - Better understanding pricing / operational models

A Potential West Midlands Response to Micro-mobility?

West Midlands eScooter

West Midlands Cycle

Expanding the horizon of cycling infrastructure

Integrated

swift

West Midlands Network

West Midlands eScooter

New travel freedoms for all

Cohesively embedded and expanding to embrace clean urban deliveries and other micro-mobility

Targeted Outcomes

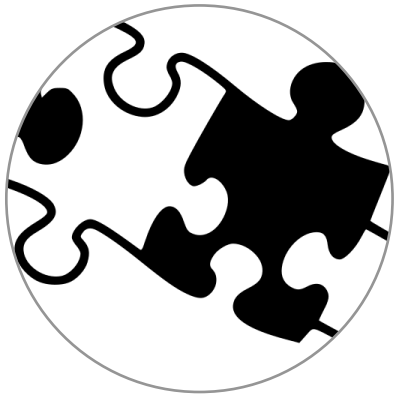
West Midlands eScooter

Additive

- Positively received increased accessibility
- Positive mode switching
- Stronger ‘place’ value
- Financial sustainability
- Economic benefits (industry, services, retail)

Safe

- COVID resilient car free access enabled
- No increase in RTAs
- Comfort of other road users
- Proven Geo-fencing

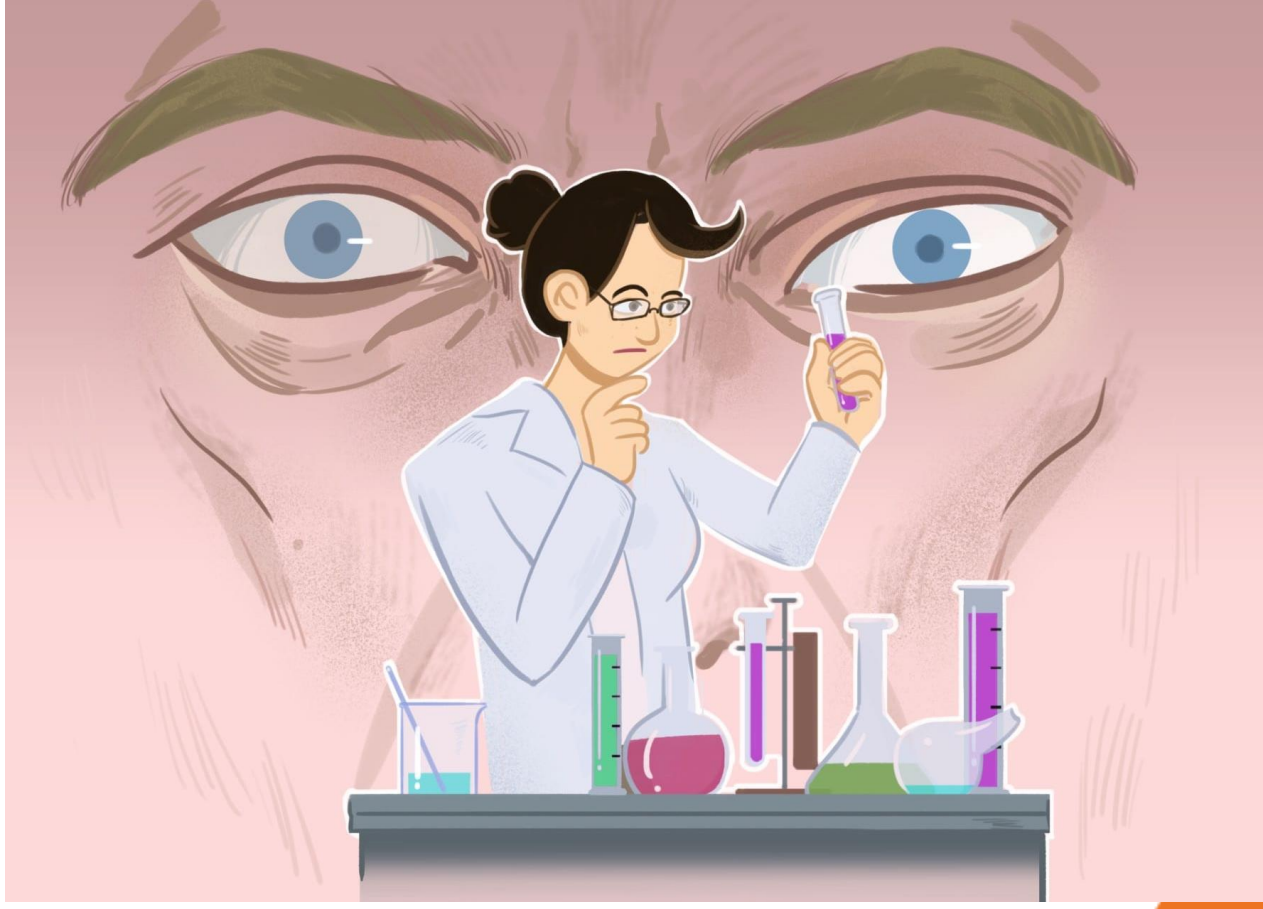


Integrated

- MaaS/Swift integration
- Increase uptake of multi-mode active journeys
- Culture of considerate user behaviour
- Accepted pathway to travel behaviour change

Informative

- Evidenced view of ‘good’ generated
- Increased citizen awareness of climate change & low-carbon
- Pricing & demand elasticities established
- Effective partnerships



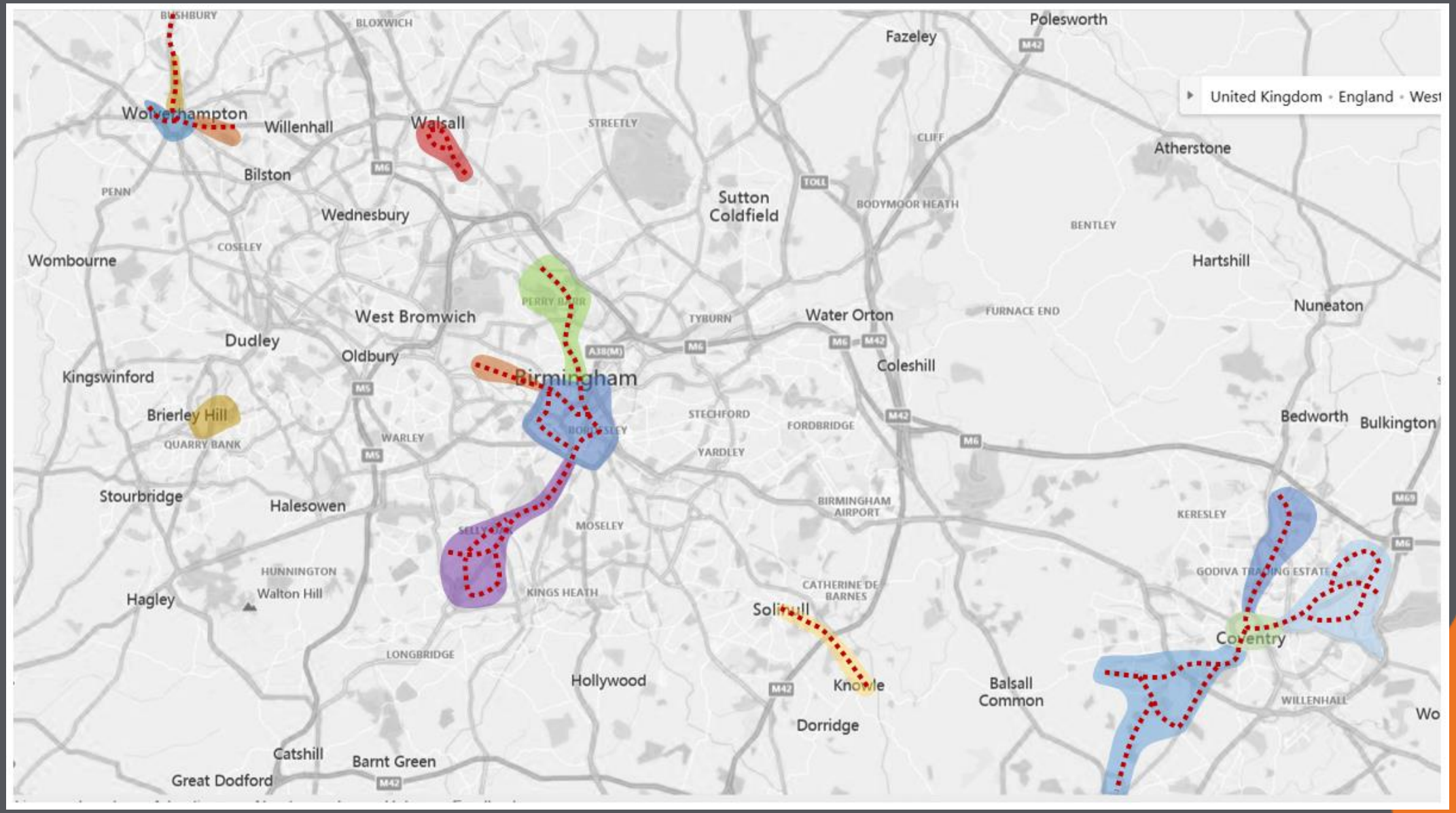
Evaluating Success

Trial zones

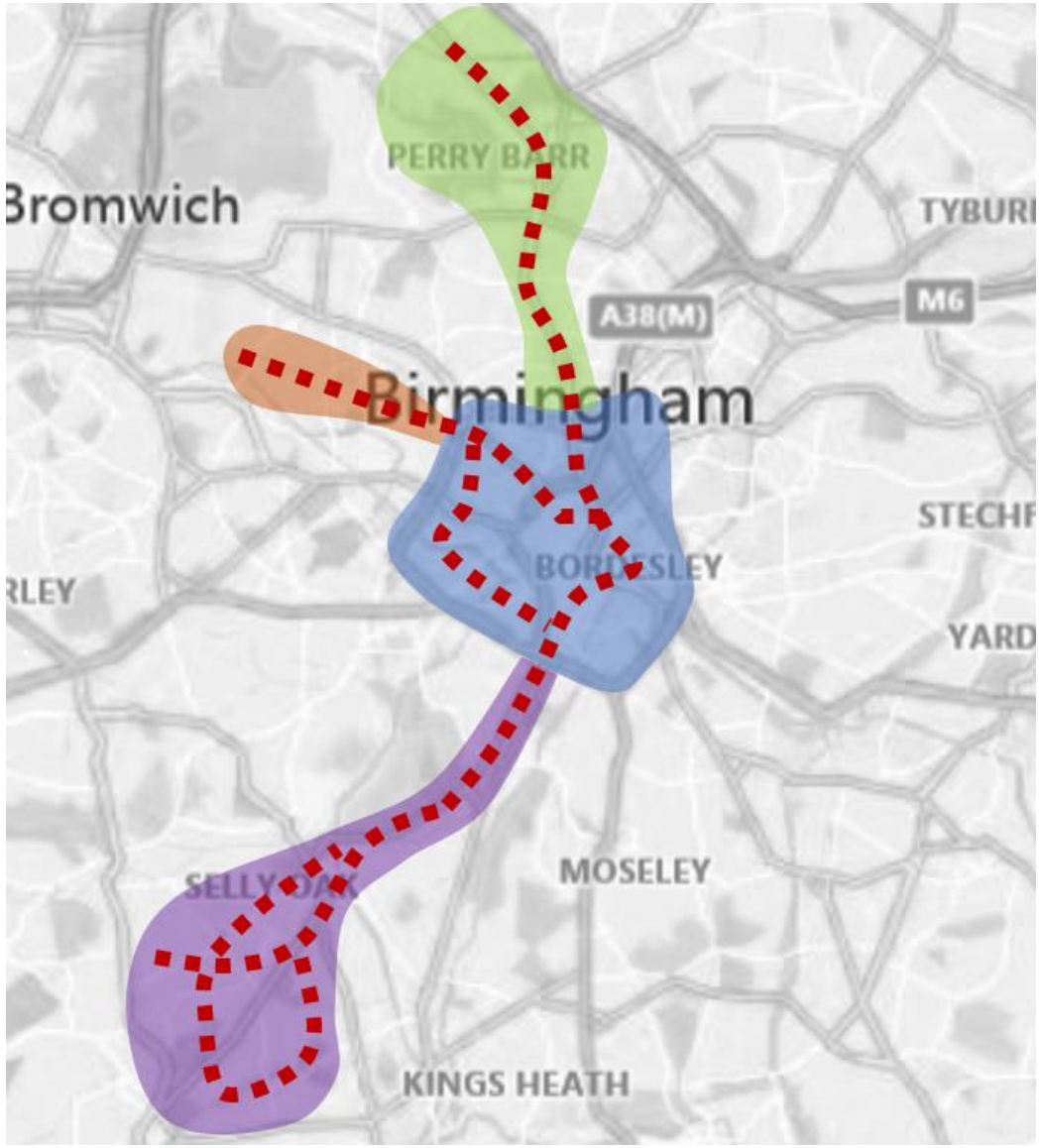
INDICATIVE PROPOSALS UNDER DEVELOPMENT

Trial zones

West Midlands eScooter



Birmingham



Area 1

- City centre cultural and economic hub and major travel infrastructure (rail and bus stations)
- home of Aston and BCU campuses

Area 2

- Extends out to Perry Bar to north, site of CWG
- High quality blue route cycle infrastructure along A34

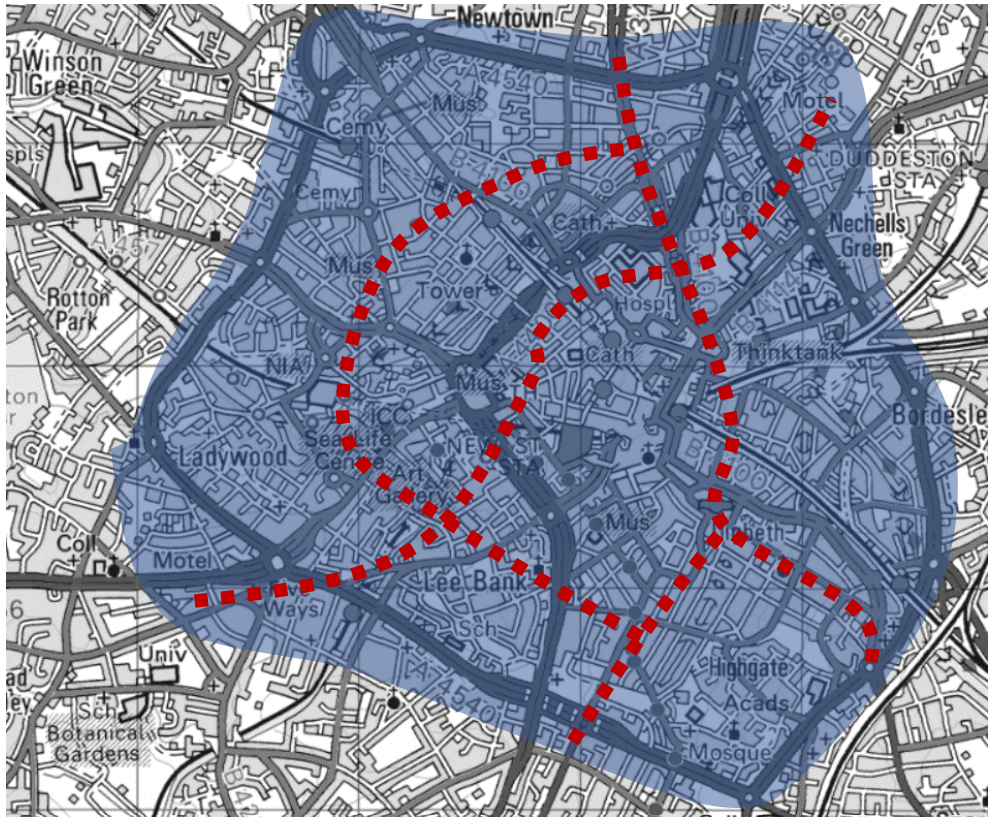
Area 3

- Western arm out towards Metropolitan Hospital Campus
- Potential links into adjacent authority area (Sandwell)

Area 4

- To south lie University of Birmingham and QE Hospital campuses
- High quality blue route cycle infrastructure along A38

Birmingham City Centre



Key Operational Issues and Requirements

- Significant scope for interaction with pedestrians and other road users
- Scooter storage and parking when not in use needs to be tightly defined
- Having sufficient coverage of Scooters available
- Rebalancing supply / servicing scooters without having a detrimental environmental impact

Key Characteristics

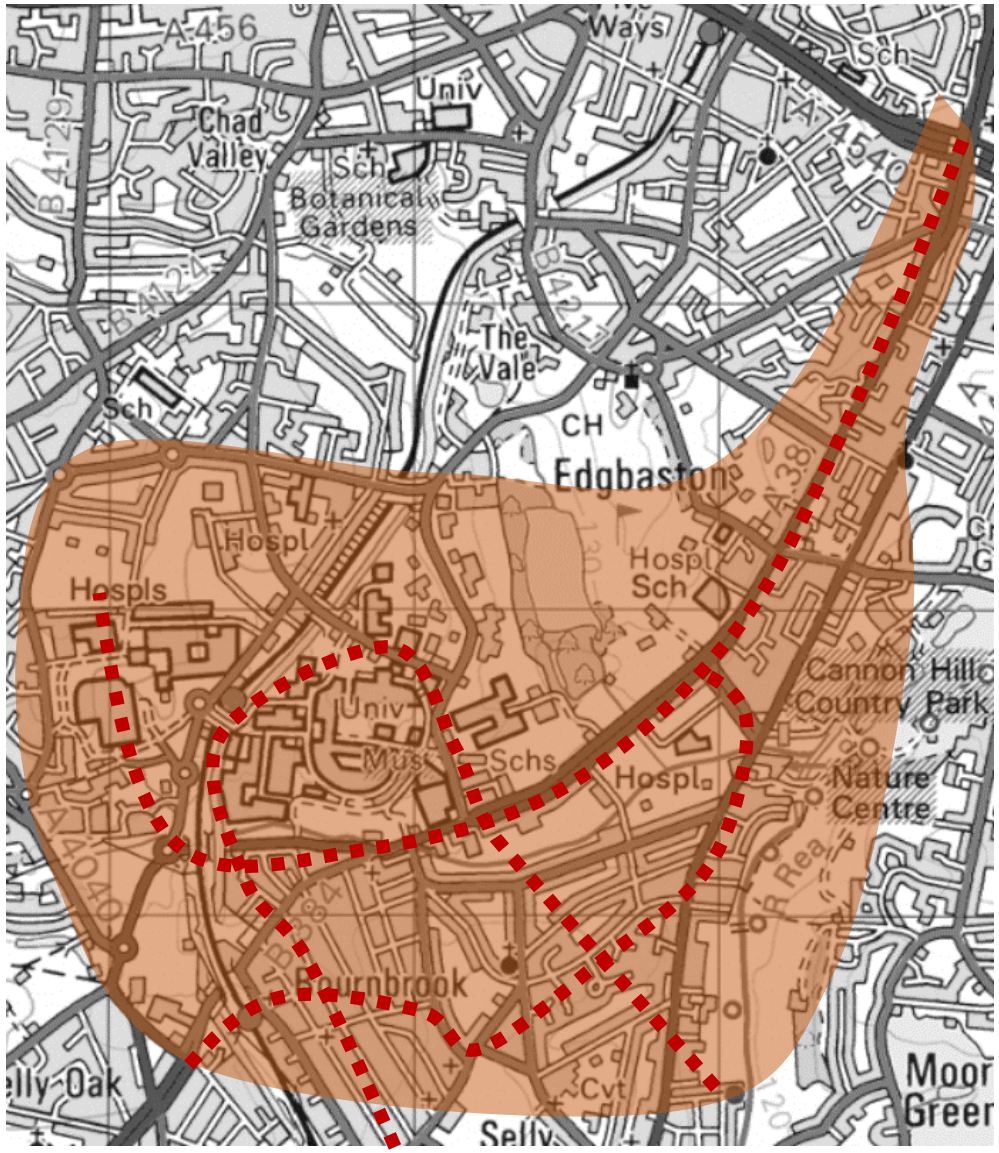
- Major urban centre
- Undergoing a period of very significant investment and regeneration
- Delivery of major areas of new residential development
- Major transport projects underway including plans to significantly reduce traffic in the central area
- Implementation of CAZ and major parking policy update
- Major investment in local and national rail (HS2) and Metro extension

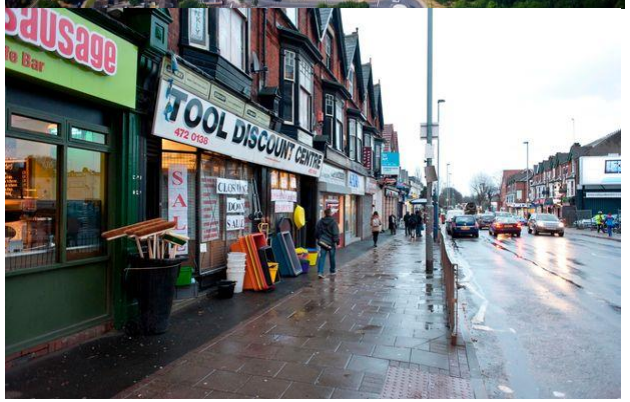
Key Connections

- A large city centre with a significant number of trip attractors spread across its geographical area
- Distinct pre-existing and emerging retail, cultural, educational and business quarters and investment in new residential
- 3 major rail stations (plus Five Ways)
- Canal providing a lengthy off-road network of cycleways via towpaths (unclear what potential for use)

Bristol Road / Selly Oak

West Midlands eScooter





Key Characteristics

- Major radial corridor into city centre from the south
- Area includes one of the UK's largest hospitals and a major university campus
- Large student population and catchment for NHS staff
- Recent significant investment in cycling infrastructure on A38

Key Connections

- City centre lies at the northern end of corridor
- Selly Oak town centre nearby, bypass but still very congested
- Rail stations at university and in Selly Oak town centre

Key Operational Issues and Requirements

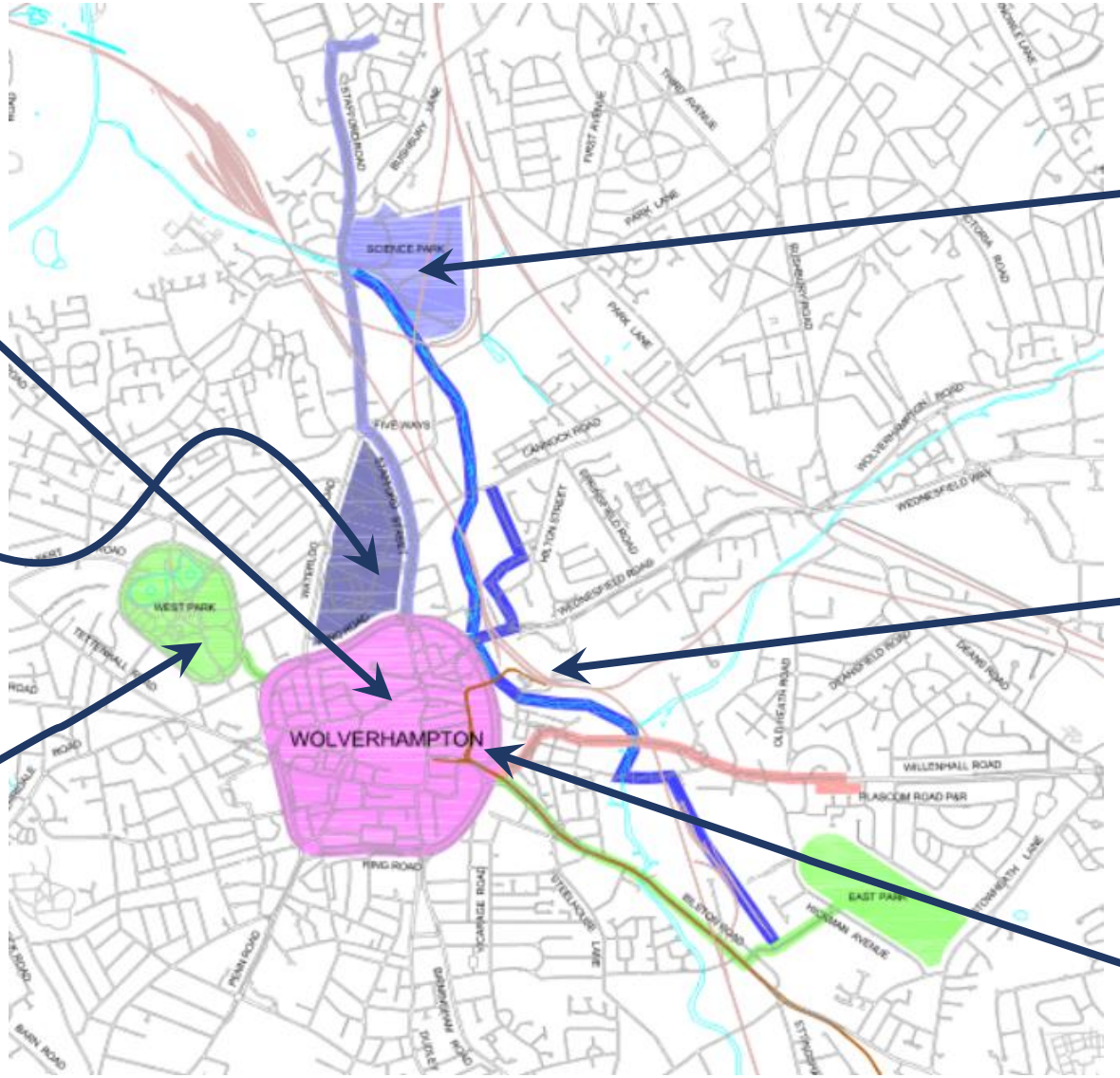
- Significant scope for interaction with pedestrians and other road users
- Scooter storage and parking when not in use needs to be tightly defined
- Having sufficient coverage of Scooters available / tidality of movements
- Lkely low driver licence registration in area
- Engagement with local residents

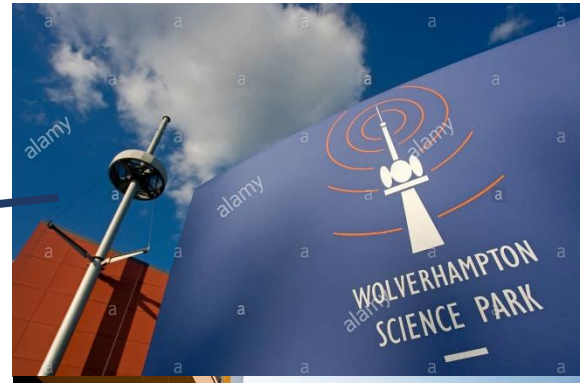
A34 Walsall Road / Perry Barr

West Midlands eScooter

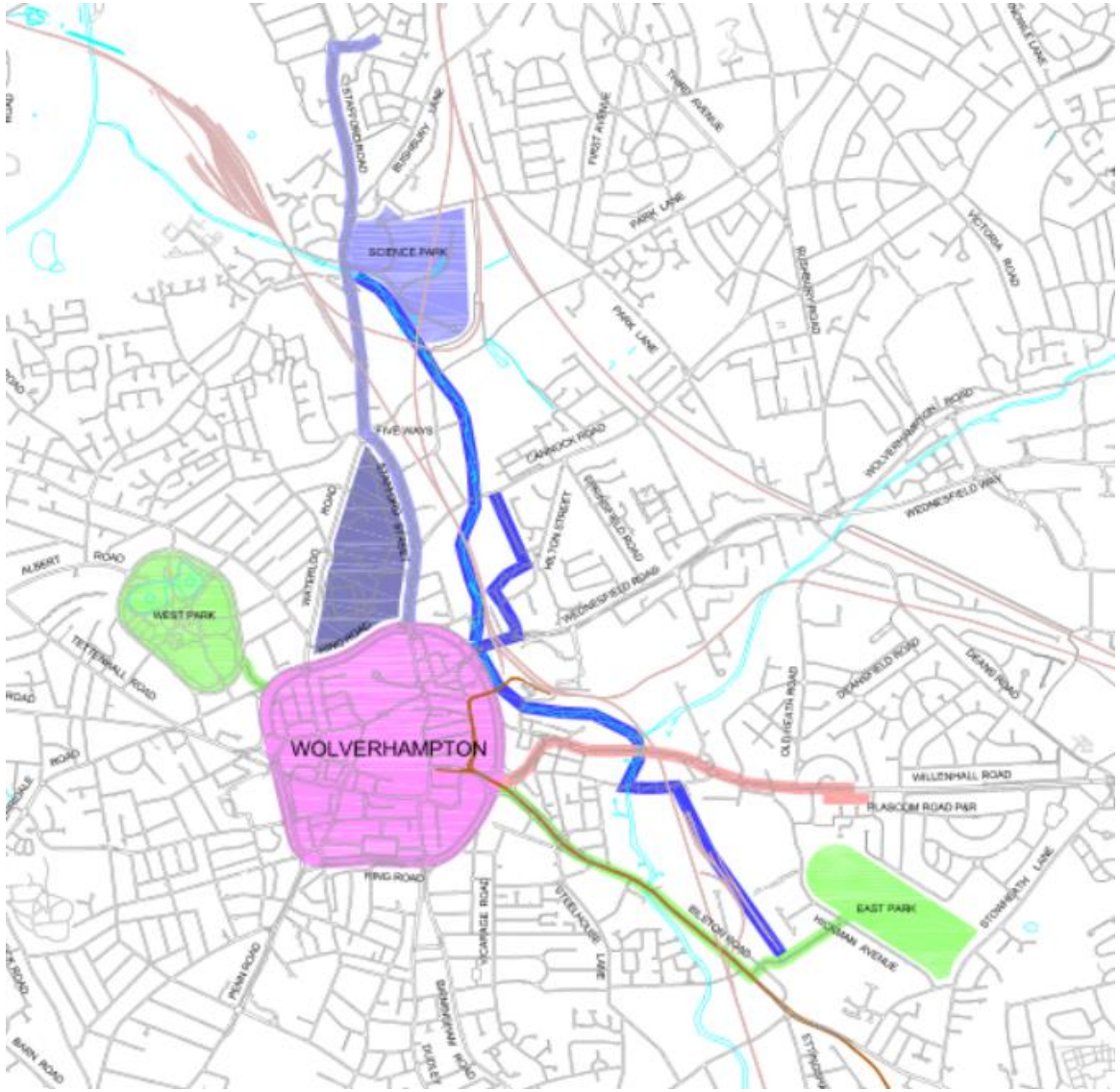
Wolverhampton

West Midlands eScooter





Wolverhampton

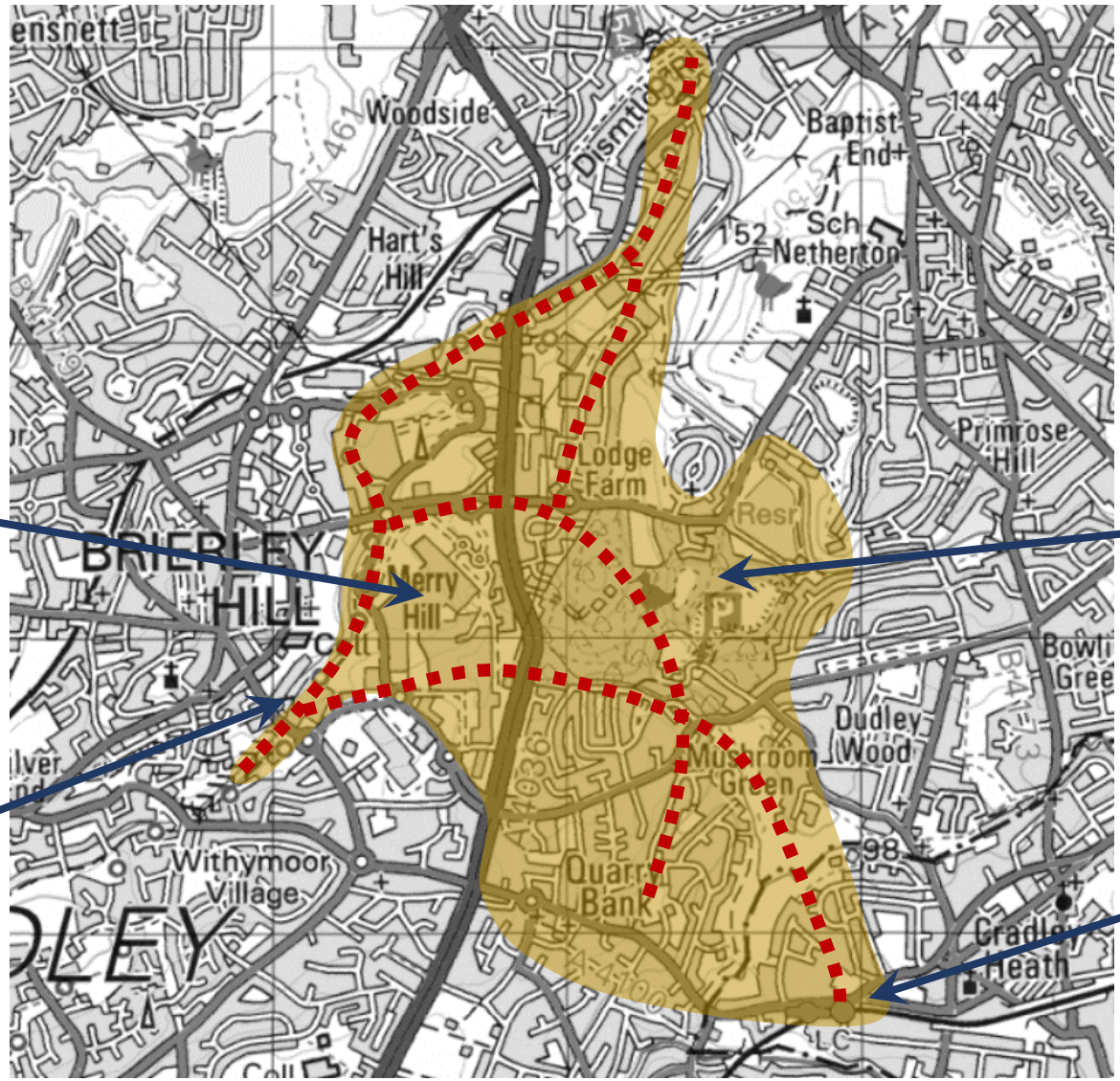


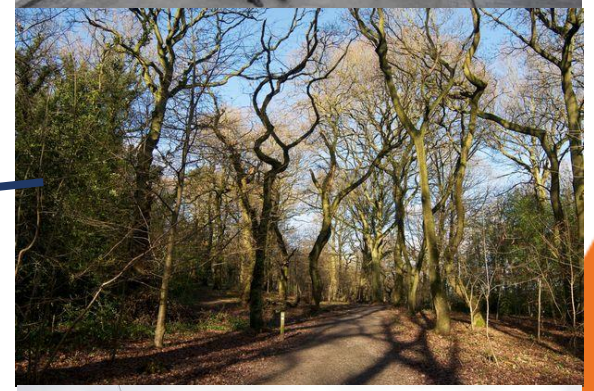
- Compact Ring Road within which a small scheme could be administered. Highway, cycle routes and shared routes exist across the city centre giving good coverage of routes for eScooters. 20mph speed limit
- Capturing and converting last mile journeys
- University Science Park to north of city centre
- Park & Ride sites at Science Park and Plascom Road – last mile travel
- Shared footway / cycleways to north offering potentially appropriate routes and potential towpath routes
- Leisure routes connecting East & West Parks with city centre
- Mainline station regeneration and metro line extension

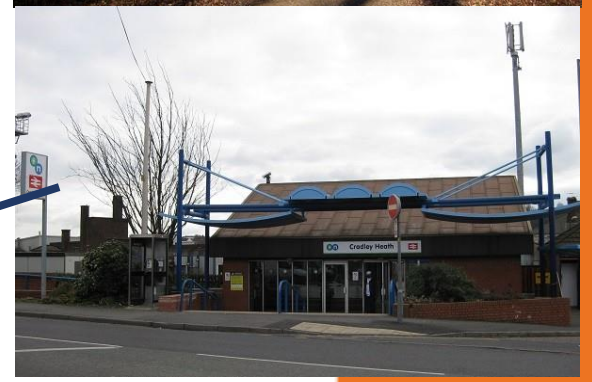
- All reasonable steps are taken to prevent injury, nuisance and reputational harm to CoWC and partners
- All reasonable steps are taken to provide an attractive, reliable service to users
- The trial results in some real-world learning that can be applied in making decisions on local e-scooter policy once it is concluded.

Merry Hill / Dudley

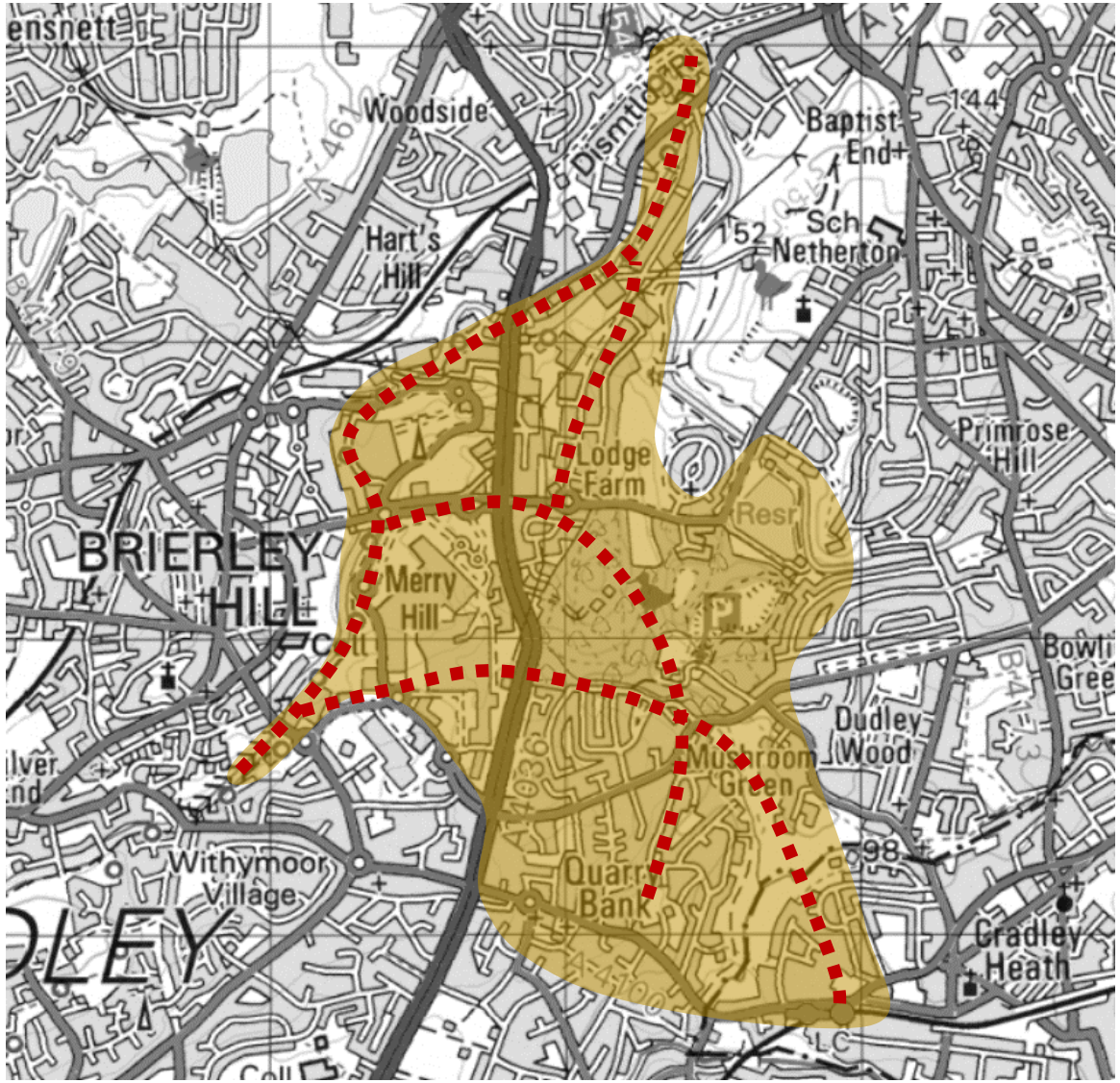
West Midlands eScooter







Merry Hill / Dudley



- Saltwells park linking to Merry Hill/Waterfront
- Would have a number of likely business, leisure and health benefits:
- Alternative mobility for access to, in and around Merry Hill (shops) and Waterfront (businesses)
- Mobility between residential areas to the south east of Saltwells to Merry Hill / Waterfront
- Access to leisure i.e. cinema and restaurants
- Health benefits due to quick access to Saltwells green space area
- Links to National Cycle Route 54 and Quarry Bank shops
- Potential wider access to rail services (via Cradley Heath bus/rail station)
- Potential use of existing cycle paths in Quarry Bank

- Paramount that safety concerns are considered and actively addressed at the outset
- Also considerations about charging and fleet rebalancing requirements

Walsall

Key Characteristics

- self contained University campus in a low traffic area
- ‘student village’ with over 300 study bedrooms….
- ….could be the perfect target demographic for e-scooters!

Key Connections

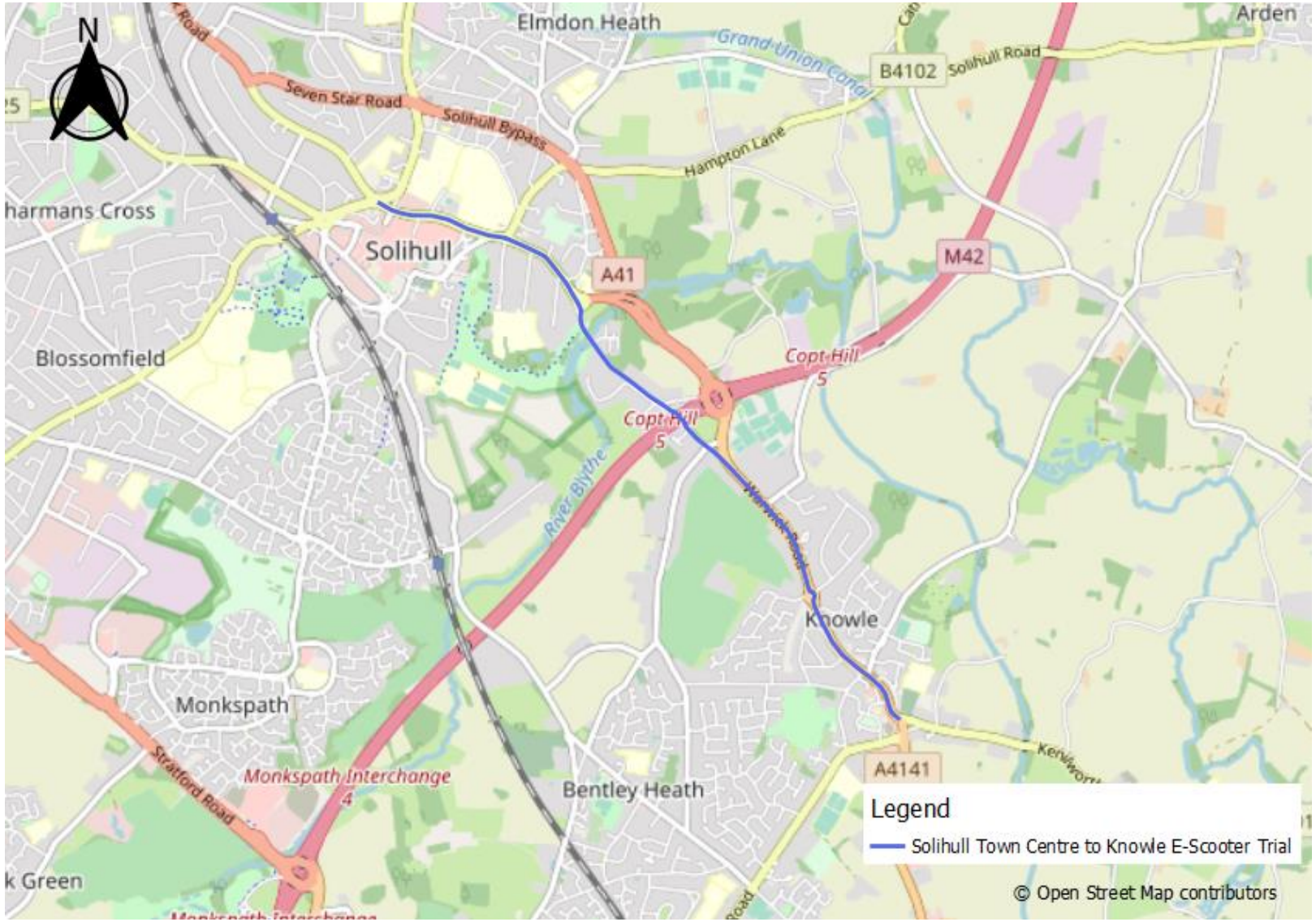
- near to the A4148 ring road around the town centre
- A34 location for cycle improvements
- NCR5 runs adjacent to site

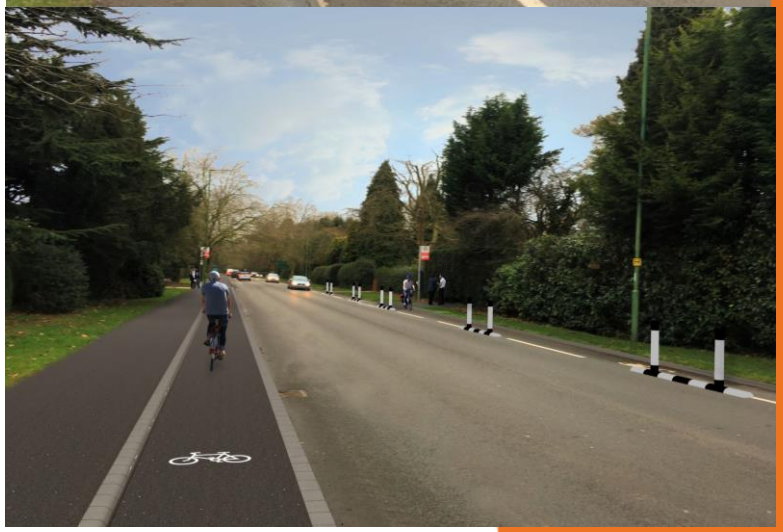
Key Operational Issues and Requirements

- Significant scope for interaction with pedestrians on campus.
- Scooter storage and parking needs to be tightly defined
- Is it possible to tie our two ideas together and explore the opportunity of connecting the University campus to Walsall Town Centre
- Scope to explore connections into the town centre via the A34

Solihull

West Midlands eScooter





Solihull

West Midlands eScooter

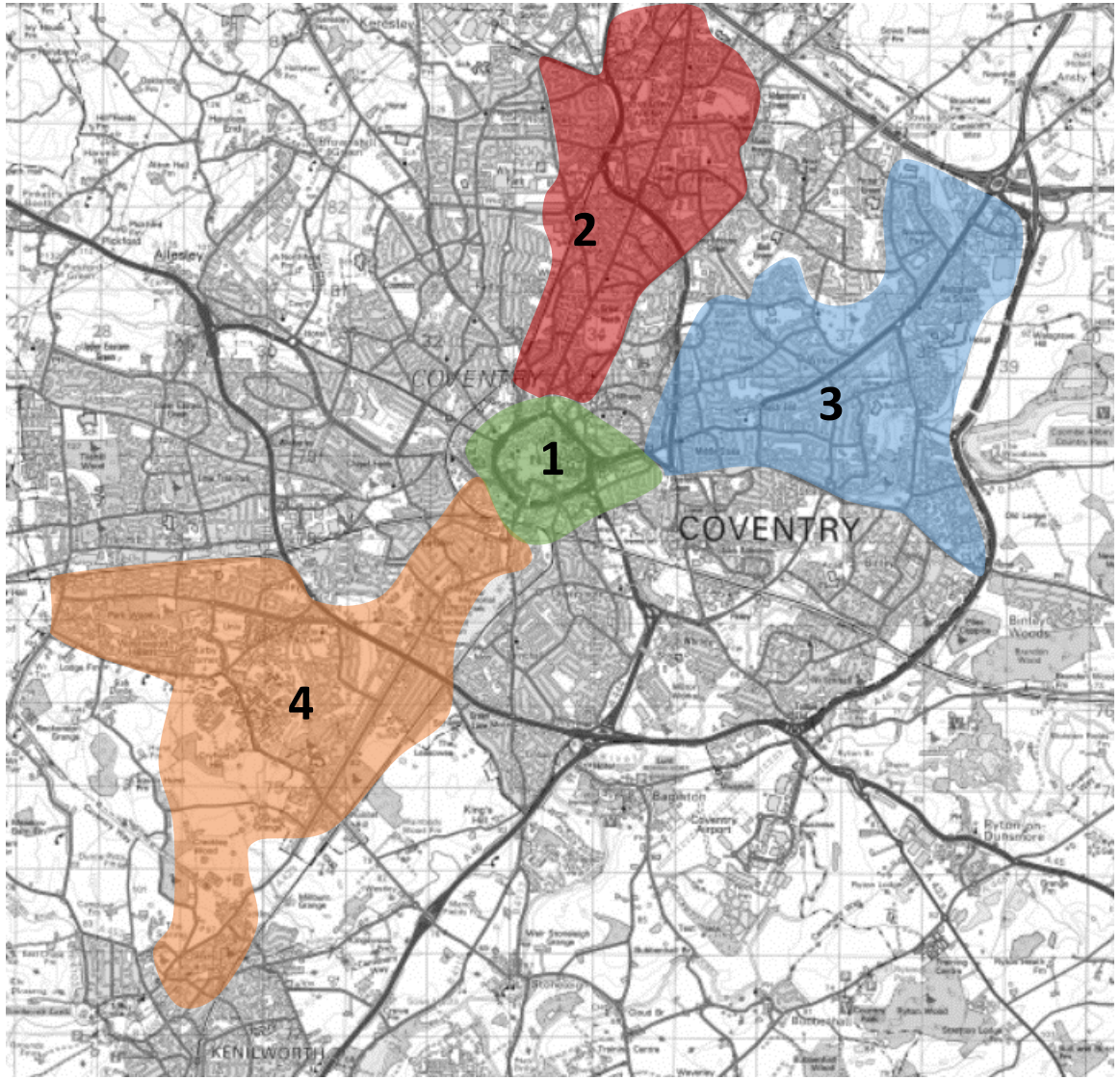
Benefits/Opportunities

- corridor (Warwick Road) provides good opportunity to test rural / urban route
- propensity to Cycle Tool suggest up to a 5% modal increase based on improved infrastructure
- good demonstration of supporting SMBC sustainability and Clean Air Agenda
- supports case for dedicated cycle infrastructure – including along Warwick Road as part of LCWIP
- some cycling provision already in place and can be quickly improved through temporary measures
- route is approximately 5km – ideal distance to trial E-Scooters
- considered likely that eScooters will prove a popular mode of transport with strong local support

Considerations

- safety needs consideration – the potential for eScooter users to mix with other road users is high
- need to consider potential detrimental impact on cycle users with speeds closely aligned to cycle users (max of 18-20mph)
- awareness campaign of trial required
- need to consider the long term impact of delivering a trial especially considering how to prompt modal shift away from the car
- trial must not impact on potential long term benefits
- need confirmation of storage requirements

Coventry



Area 1

- City centre cultural and economic hub and major travel infrastructure (rail and bus stations)
- home of Coventry University and large resident student population

Area 2

- Foleshill Road to north a mixed-use corridor, low level of car ownership

Area 3

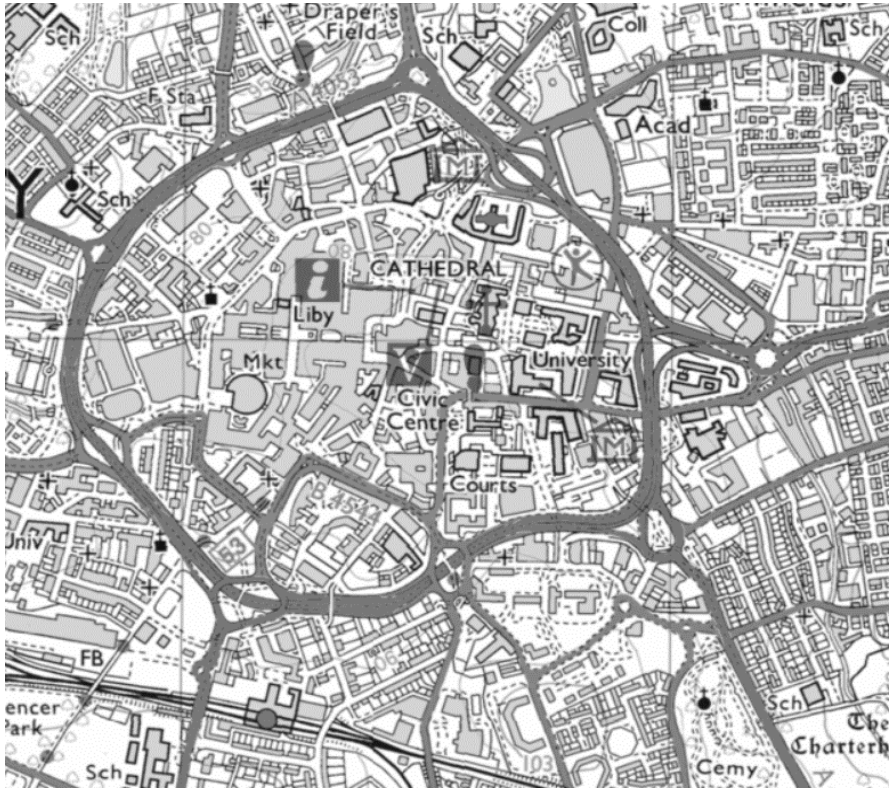
- North-east of city centre lies major campus of Walsgrave Hospital and other employment areas

Area 4

- To south lies University of Warwick campus and Kenilworth

Coventry City Centre

West Midlands eScooter



Key Operational Issues and Requirements

- Significant scope for interaction with pedestrians and other road users
- Integration with shared-space environments
- Scooter storage and parking when not in use needs to be tightly defined
- Having sufficient coverage of Scooters available
- Rebalancing supply / servicing scooters without having a detrimental environmental impact

Coventry Foleshill Road

Key Characteristics

- Major radial corridor into city centre from the north
- Diverse, mixed-use corridor with high-density residential and local retail activity along its length
- Low car ownership and relative inaccessibility
- Congested corridor possible use of pop up cycle lanes and parallel backstreet routes

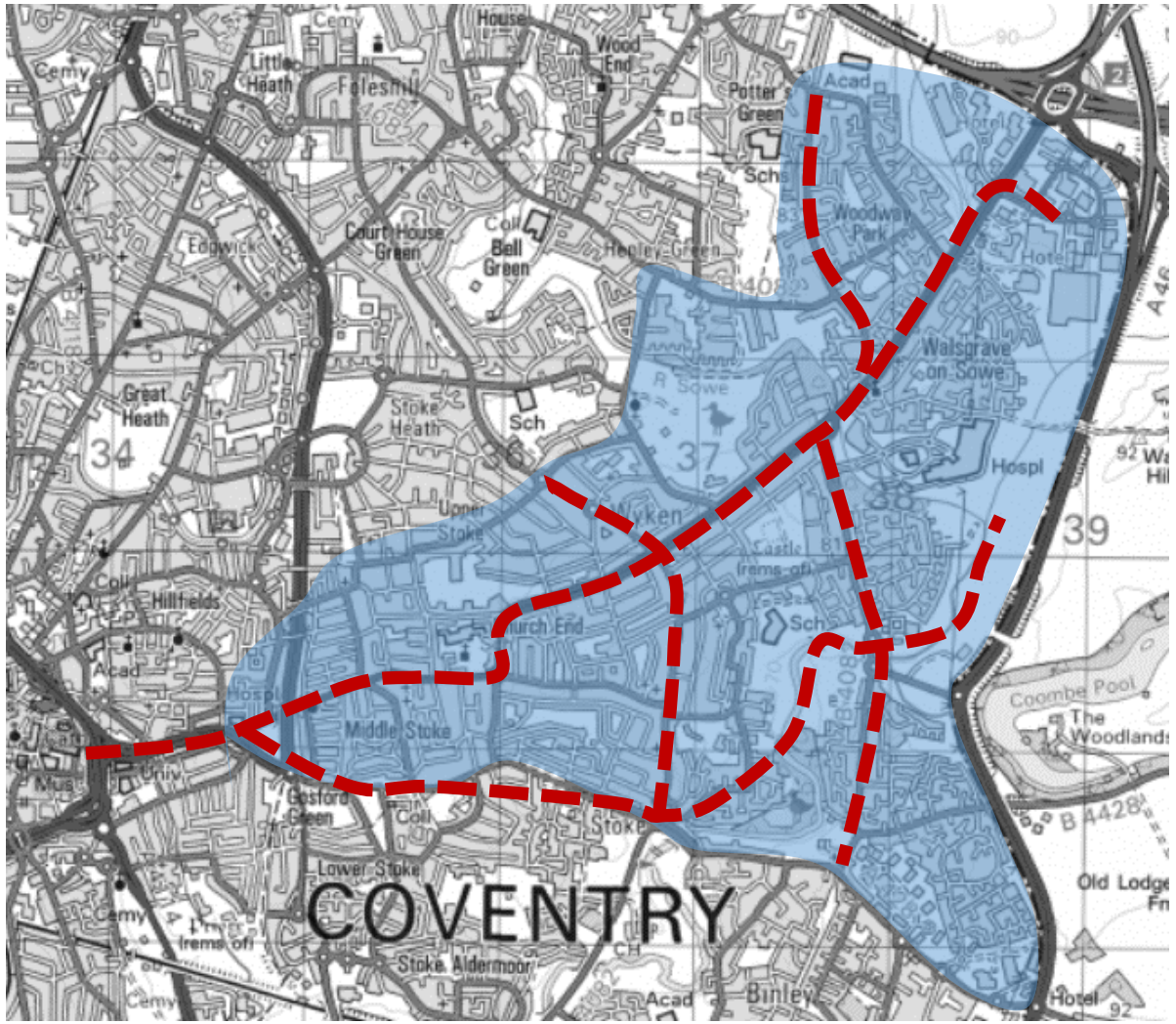
Key Connections

- City centre lies at the southern end of corridor
- Ricoh Arena lies to the north
- Arena rail station located within the zone

Key Operational Issues and Requirements

- Significant scope for interaction with pedestrians and other road users
- Scooter storage and parking when not in use needs to be tightly defined
- Having sufficient coverage of Scooters available
- Rebalancing supply / servicing scooters without having a detrimental environmental impact
- Addressing likely low driver licence registration in the area
- Engagement with local residents
- Potential lease model

Coventry Walsgrave Hospital



Key Characteristics & Connections

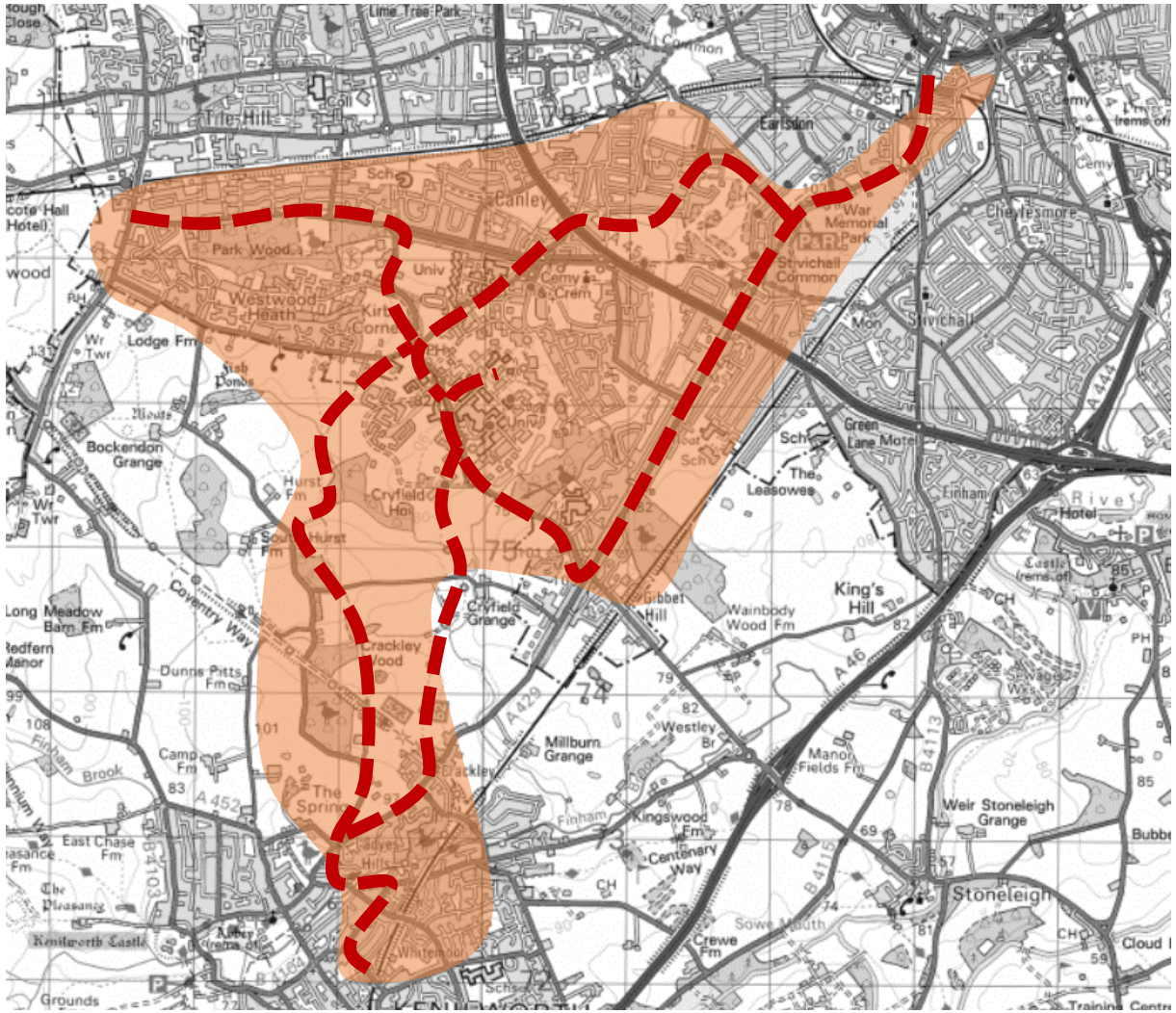
- Area to north-east of city broadly centered around Walsgrave Hospital site
- Significant residential catchment for hospital workers
- Major radial connections into the city centre
- Significant student and low car access population in south-west part of zone
- Substantial shopping area in Middle Stoke

Key Operational Issues and Requirements

- Walsgrave Road a major radial - significant scope for interaction with motor traffic
- Risk of scooter incursion onto footways to avoid traffic
- Use of backstreets likely to be impacted by speed humps / cushions
- Use of off-street cycleways?
- Scooter storage and parking when not in use needs to be tightly defined – potential scale of use at hospital site
- Having sufficient coverage of Scooters available
- Rebalancing supply / servicing scooters without having a detrimental

Coventry South / UoW / Kenilworth

West Midlands eScooter



Key Characteristics

- Area to Southwest of Coventry City Centre
- Significant catchment for Students
- Major connections to Memorial Park & Ride and Warwick University Campus from the train station
- Connectivity to Kenilworth, employment sites at Westwood Heath and Tile Hill, and the railway station.
- Possibilities to extend trials in Warwickshire.

Key Connections

- Stations – Coventry and Tile Hill
- Park And Ride at Memorial Park
- Earlsdon
- University Campus – City Centre
- Warwickshire

Key Operational Issues and Requirements

- Warwick Road a major link to Various key locations
- Significant scope for interaction with motor traffic
- Risk of scooter incursion onto footways to avoid traffic
- Use of backstreets likely to be impacted by speed humps / cushions
- Use of Pop Up Cycle Lanes
- Scooter storage and parking when not in use needs to be tightly defined
- Potential scale of use at University site
- Having sufficient coverage of Scooters available at Key sites

Operational considerations & constraints

West Midlands eScooter

Vehicle numbers are managed to allow for adequate consumer access BUT not so significant their numbers are to the detriment of pedestrian / road users.

E-scooters use is limited to cycle lanes and designated shared lanes / spaces

Geo-fencing can be used to prevent E-scooters from being used in certain areas where they pose a considerable threat to pedestrians

Operators maintaining clean vehicles and good hygiene standards

Terms and Conditions of use clear on app and signage near hubs to show clearly accountability and rules (e.g. no parking on paths etc)

Communications & Stakeholders

West Midlands eScooter

Co-owned strategy to drive:

- ✓ Who we engage with (public, stakeholder groups, operators)
- ✓ Engagement process (various established and new channels)
- ✓ Clear messages (safety, operations, use and benefits, issues and complaints)

Two levels of engagement:-

Programme Steering group *(acts to inform the strategic messaging and crossing cutting concerns)*

- Lead Local Authority Chair, all LAs involved
- TfWM secretariat and co-ordination
- Includes relevant groups such as: ROSPA, RNIB, Guide Dogs for the Blind
- Insurance bodies
- Potential to include national consumer groups and other groups e.g. Cycling UK, Transport Focus

Trial Zone specific groups *(supporting implementation and operation)*

- Individual Local Authority led
- TfWM (resourcing support) co-ordination
- Local enforcement (e.g. Police)
- eScooter providers
- Local interest groups (cycle, vulnerable user, retail/business, resident etc)

Our communications will:-

- ✓ Be a consistent approach across the region, but with specific information regarding different trial zones
- ✓ Link to the CA's and LAs' wider strategic goals
- ✓ Communicate the trials early and in a clear way to the public and lobby groups
- ✓ Be coordinated with operators – consistent key information, contact details, disaster messaging etc

We welcome any feedback on what works

Financial Factors

West Midlands eScooter

No direct funding support for operators – who must self-finance

Will be seeking open book coverage of direct over-extra costs for Local Authorities – to avoid state aid and manage public finance pressures

Working towards any successful services being self-funding – eScooters should not create an additional subsidy burden

TfWM will fund some coordination for the trials and M&E under the Future Transport Zone programme

Potential to lever other infrastructure initiatives such as road space re-allocation. BUT specific infrastructure will need to be funded by operators (e.g. docking, signing, energy supply)

Keen to explore ideas for meaningful assurance on performance

Anticipate trials will deploy a mix of tariff / rental models and operators will retain revenues to off-set costs

Swift integration on a commercial basis is important during the trials – enabling access to over 500,000 registered users

Procurement & Contracting

West Midlands eScooter

On-going discussion with DfT

Have started due-diligence + appointing additional legal resource

Exploring MoUs and Concession agreements

Umbrella format and content across patch

Trial Zone specific Annexes

Multi-signature?

Separate Back2Back between West Mids and DfT regarding licencing

<u>Speed is King</u> - BUT

- Must have adequate assurance on responsible collaborative and responsive approach
- Needs to comply with public procurement rules
- Must be fair and transparent

Directly relevant initiatives

West Midlands Bike Hire

West Midlands eScooter

A 5-year deal with the ability for an additional 3 years if KPIs are met

The contract is a service agreement with a monthly management fee for the supply of:

- *Rebalancing*
- *Maintenance*
- *Management*
- *Cleaning*
- *Promotion*

Users are being charged an activation fee per bike use

Both E-bikes and Pedal bikes with a minimum to start with of 1500 bikes (1350 pedal 150 Ebikes)

The scheme covers all 7 authorities of the West Midlands

A fully docked solution but with the ability for short term Geo-fenced areas (festivals, City of Culture ect)

A fully integrated system with TfWM Swift payment scheme

Full reporting capability from the supplier to capture all TfWM reporting requirements

Hardware assets owned by TfWM

Bikes to COMO UK standard plus TfWM additions (bell, lights)

Sponsorship of the Bikeshare scheme has been retained by TfWM and is being tendered separately

The Contract is to be signed Summer 2020

Trial of Bikes late 2020 with the scheme to go live early spring 2021

The Bikeshare contract caters to grow the scheme as demand grows and to take on new technologies as they develop or become legal

UK's most progressive transport innovation programme

plus:

Coming soon:
- ULEV Rapid Charing Spine
- Accelerator Programme

Developing:
- Skills
- Financing

KEY:
- *DELIVERABLES WITHIN 2 YEARS*

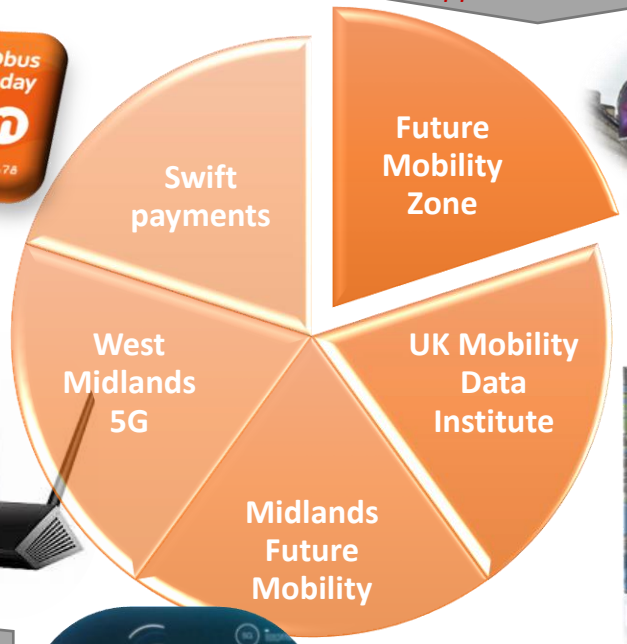
West Midlands eScooter

- *Capping*
- *Parking*
- *White label version*
- *Token agnostic*

450,000+ users
Multi-mode ticketing

- *Mobility Credits*
- *MaaS*
- *Apprentices*

£22m UK Pathfinder Programme



- *Funding & Partners secured*
- *Under development*

£40m
Public:Private
New open tools
Advanced analytics & mapping

£25m connected mobility programme
In-vehicle experience
Integrated modes
New business models

- *Early demonstrators on highway and sensors*
- *Sensor network*
- *Large demonstrator programme*

West Midlands Meridian programme >£55m
3 CAV testbeds of instrumented & mapped open environment

- *80km Urban CAV Lab live*
- *~150km Rural-Inter-Urban near competition*
- *Commercial Data Exchange Operating*
- *First customers using*

PLUS:
- BaU
- ADEPT programme
- Modelling refresh

West Midlands eScooter

ICE to ACES

https://www.tfwm.org.uk/strategy/innovation-future-mobility/

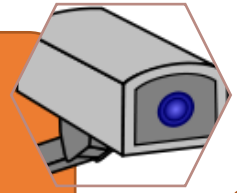
Blue Sky thinking

A better future

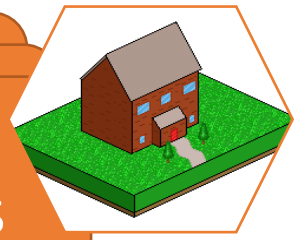
Family of digital products

West Midlands eScooter

SENSOR NETWORK



OTHER FACTORS



RULES OF THE ROAD

DATA SYNTHESIS & GROUND TRUTH ENGINE

SEGMENTATION & PERSONA

- Apps / APIs
- RTI feeds
- Wayfinding / mapping

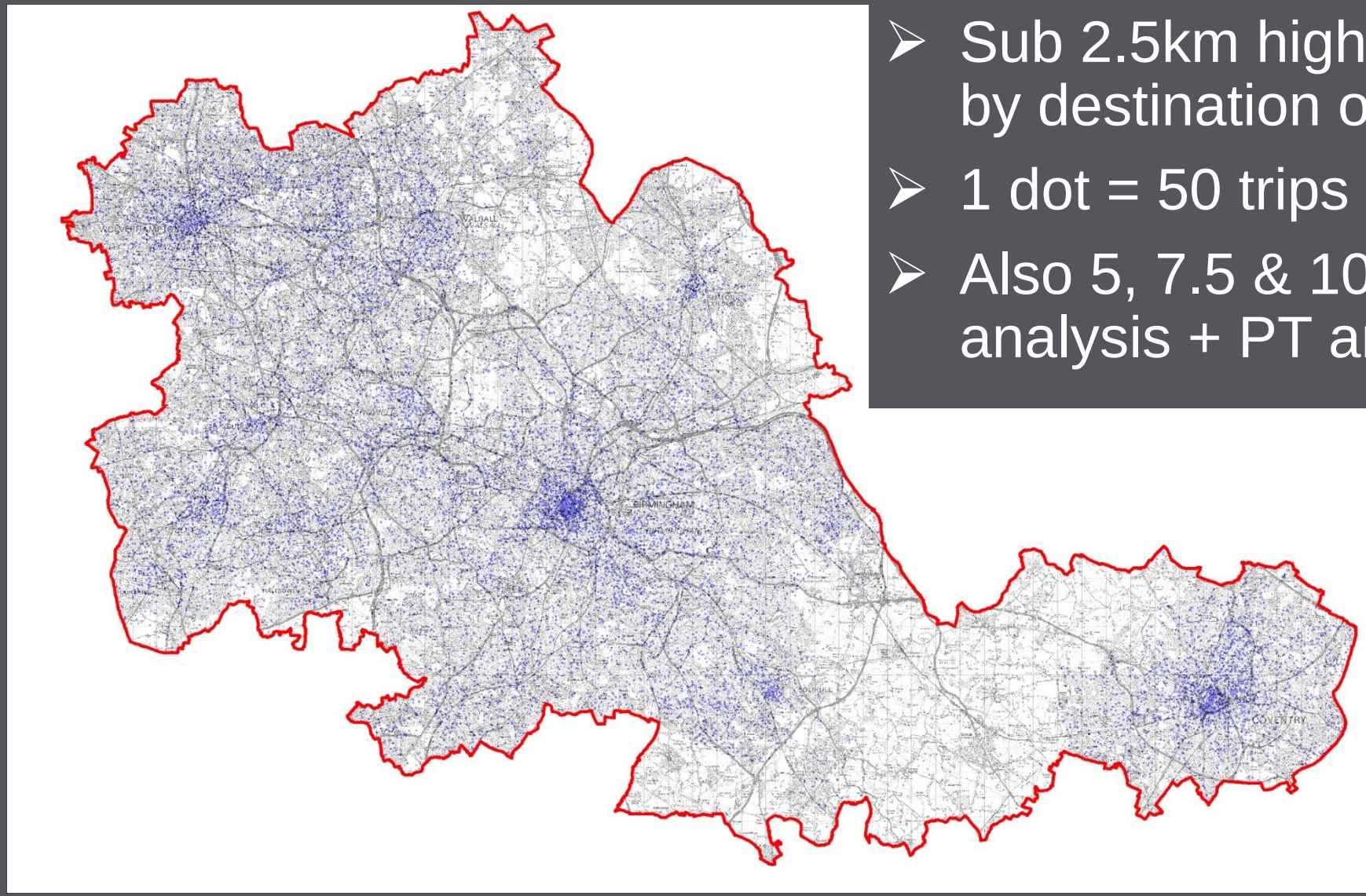
USER TOOLS & SYSTEMS

DIGITAL TWIN(S)

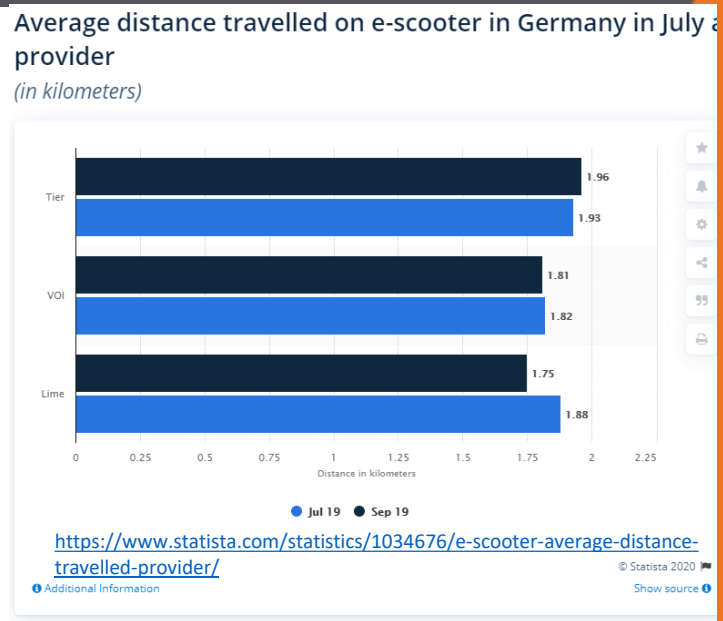
- Live view
- Operational
- Tactical
- Strategic

Transport for West Midlands

Understanding potential demand



- Sub 2.5km highways trips by destination over 24hrs
- 1 dot = 50 trips
- Also 5, 7.5 & 10km analysis + PT analysis



Predicting revenue

eScooters in transport model

Regional coverage

Coded as a separate mode

Option for all or part of public transport trip.

Can assess as a competitor and/or complement to public transport.

Operational insights

Modelling the number of vehicles required to serve demand under various scenarios to provide adequate level of service.

Modelling the amount of relocation required to ensure a balance of availability of eScooters.

Modelling the revenue gained from operations in various scenarios

Calculating revenue

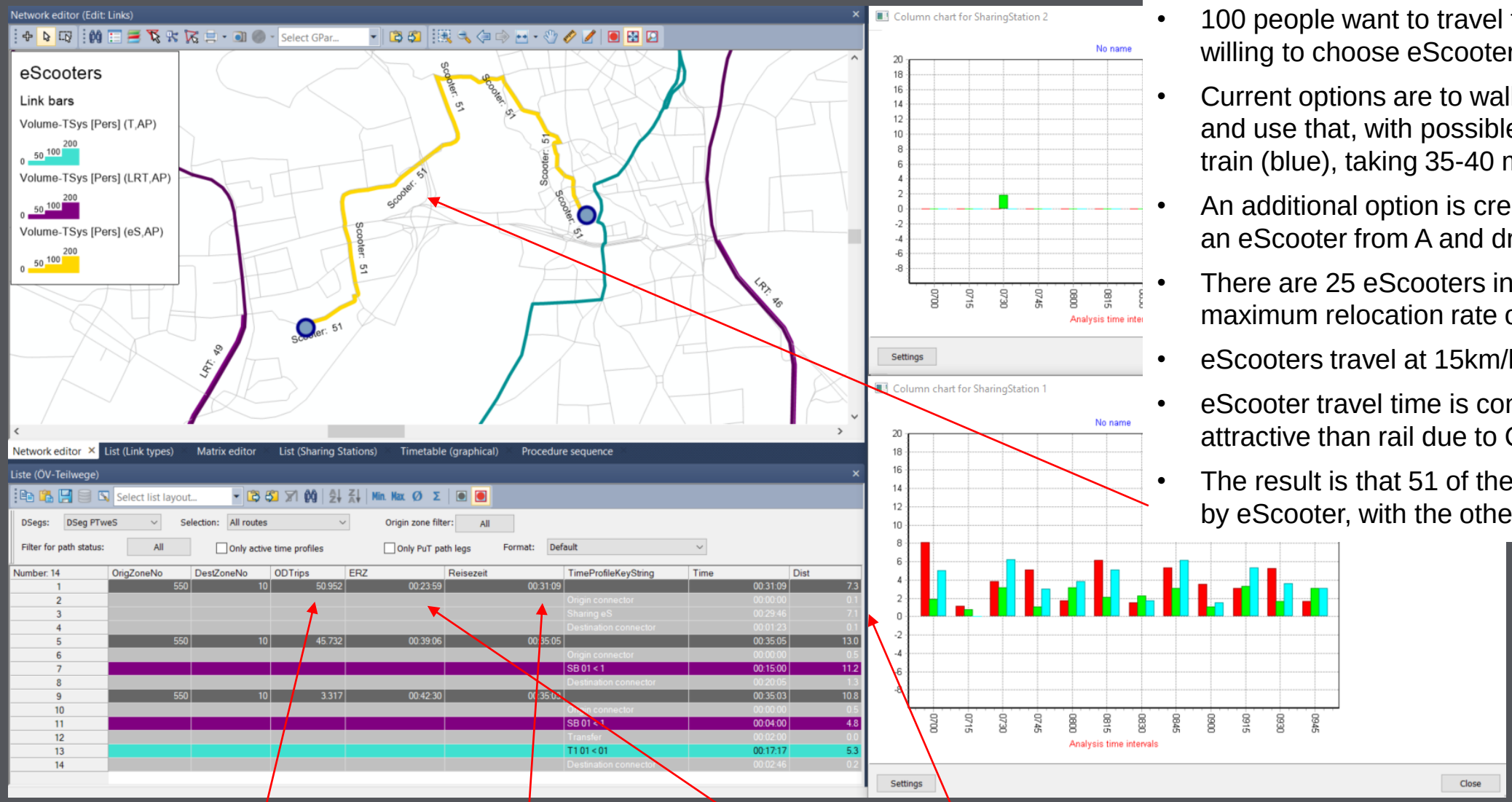
Generalized costs can be set

Charges (fares in the model) can be included so revenues can be calculated

Impact

Included in the Highway Model

PT demand impacts



Number of trips choosing this option | Travel time | Weighted travel time | Distance (km)

Example Setup

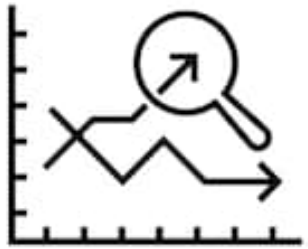
- 100 people want to travel from A to B that are willing to choose eScooter
- Current options are to walk to the LRT (purple) and use that, with possible interchange with train (blue), taking 35-40 minutes
- An additional option is created, which is to rent an eScooter from A and drop it off at B
- There are 25 eScooters in total, with maximum relocation rate of 25 per hour
- eScooters travel at 15km/h
- eScooter travel time is considered 25% more attractive than rail due to Covid19
- The result is that 51 of the 100 people travel by eScooter, with the others choosing rail

PTV GROUP
the mind of movement

Transport for West Midlands

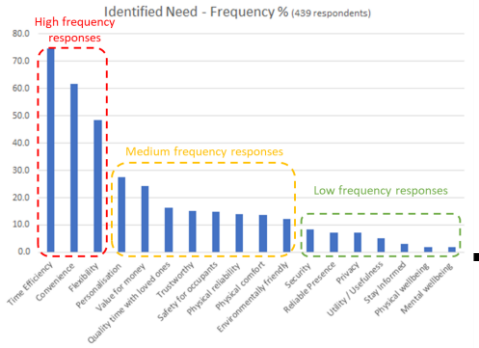
Consumer Insight is key

West Midlands eScooter



CONSUMER UNDERSTANDING

Predicative understanding

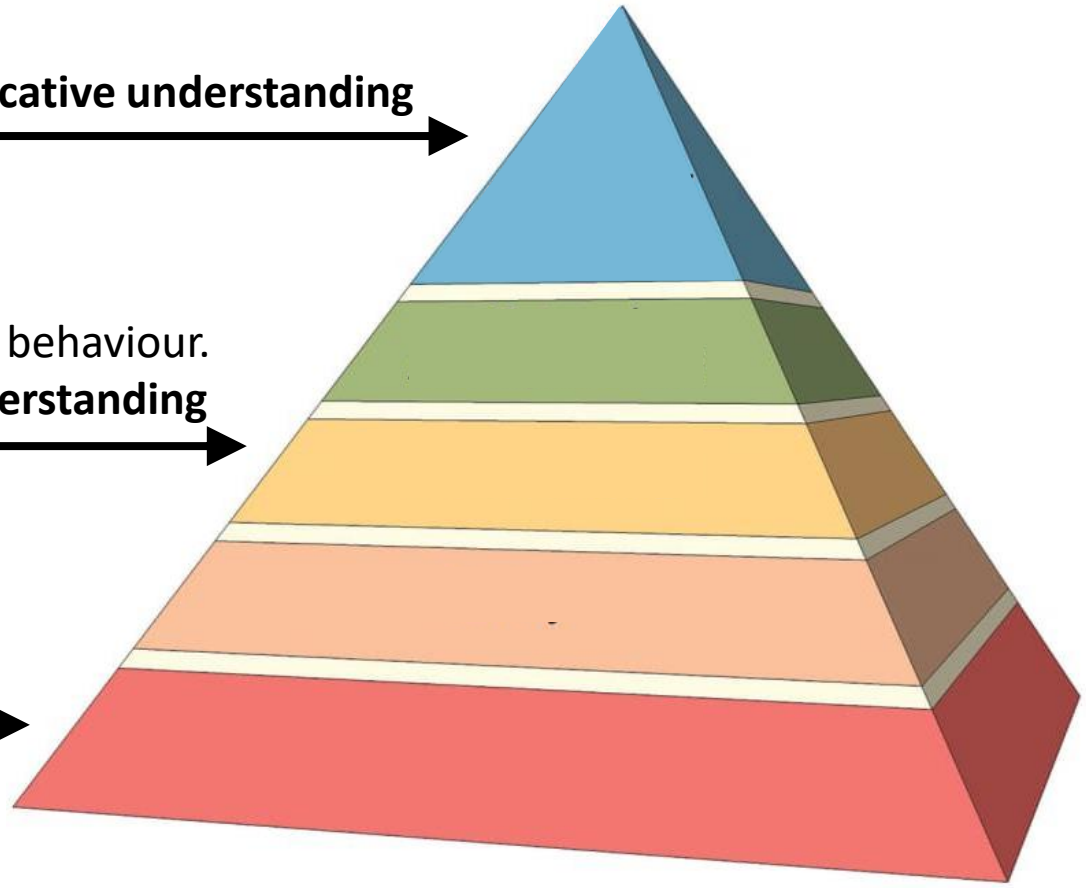


Needs, emotions, behaviour.

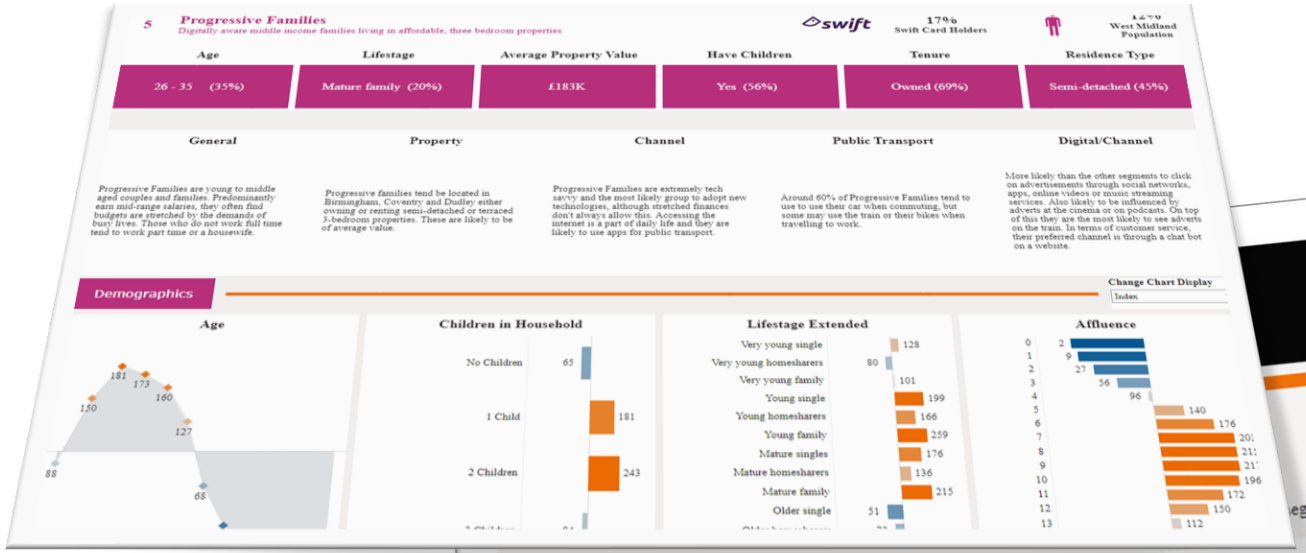
Personalised understanding

Who, what, where?

Generalised understanding



Transport for West Midlands



West Midlands
oter

Transport for West Midlands

Programme

Co-ordinated by BCC and TfWM

DfT Activity

LA specific activity

West Midlands eScooter

25/05	01/06	08/06	15/06	22/06	29/06	06/07	13/07	20/07	27/07

EOI for WMCA region eScooter trial submitted

Supplier engagement events

Supplier nomination and contracting

Initial plans for trial area(s) are defined for each LA. TfWM/BCC to hold sessions with each LA. Initial terms and objectives issued

Proposal refined for publication and subsequent local and DfT approvals

LA Board approvals (as required)

DfT approvals

Supplier mobilisation

Earliest anticipated trial start

DfT consultation ends

WM M&E scope and plan developed, based off DfT input

M&E tender (assuming WM specific activity)

Nomination and deployment of M&E to align with trial start

Immediate next steps

West Midlands eScooter

Informal 1-2-1s → CA Board Approval (5th June) → Return Operator surveys → Refine Trial Zone proposals

Refine Trial Zone proposals → Finalise procurement mechanism → Zone Development Sessions (18th June) → Selection process in liaison with DfT → Detailed negotiations / contracting

West Midlands eScooter

Open Q&A