

# Understanding & Managing Traffic Congestion in Worcestershire

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# Presentation overview

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- Traffic congestion trends on local authority managed roads
- The impact of increasing traffic congestion for policy makers
- 3 key congestion management principles to consider
- The impact of current transport policies in Worcestershire
- Good practice demand management policies in other areas of UK

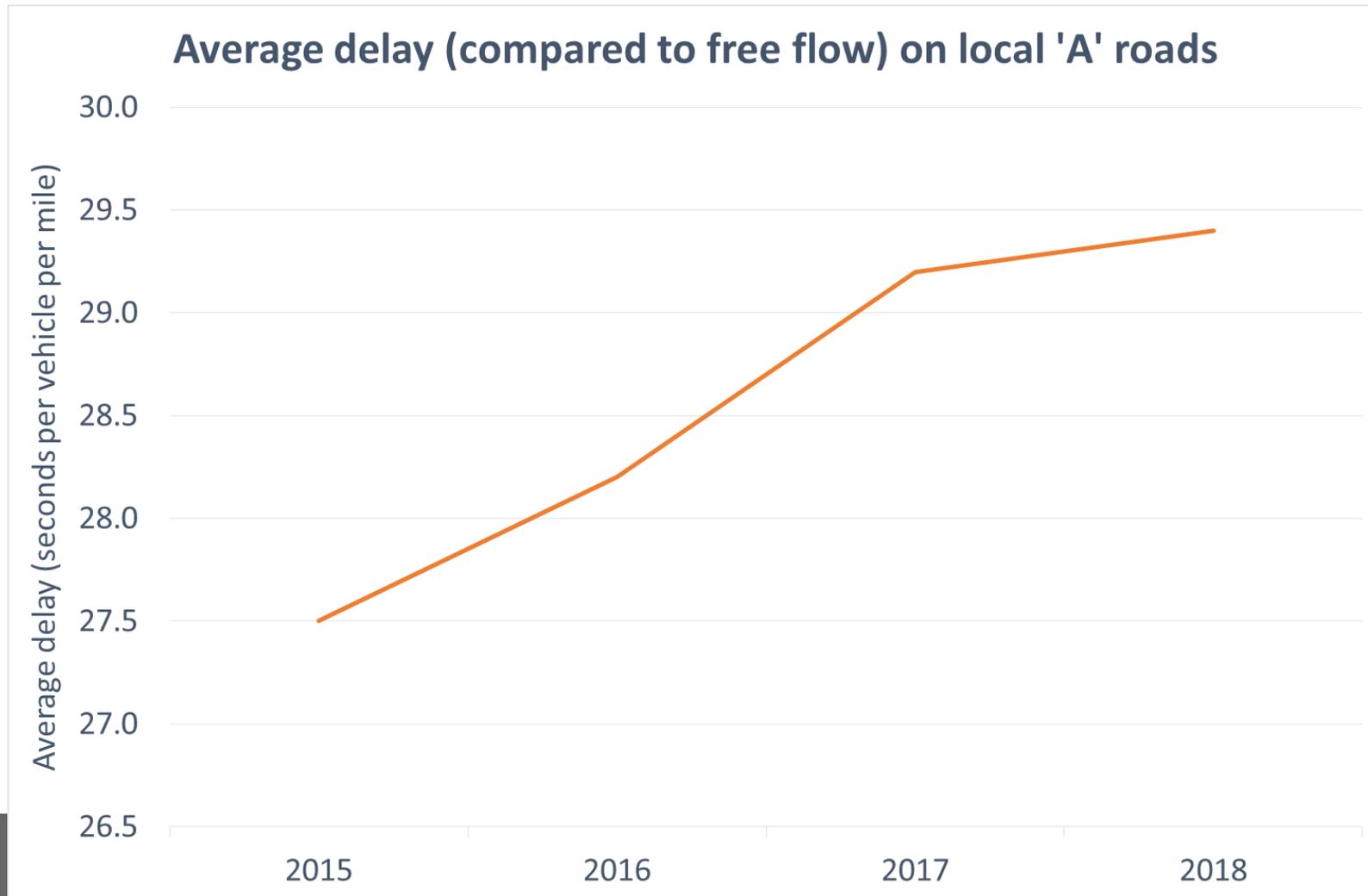
# What is traffic congestion?

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- Traffic congestion occurs as road network use increases and is characterised by slower speeds, longer travel times and increased vehicular queueing
- Common measures of congestion relate to the physical progress of vehicles through the network in comparison to 'free flow' time:
  - Average travel time delays
  - Falling traffic speeds
  - Worsening road network reliability

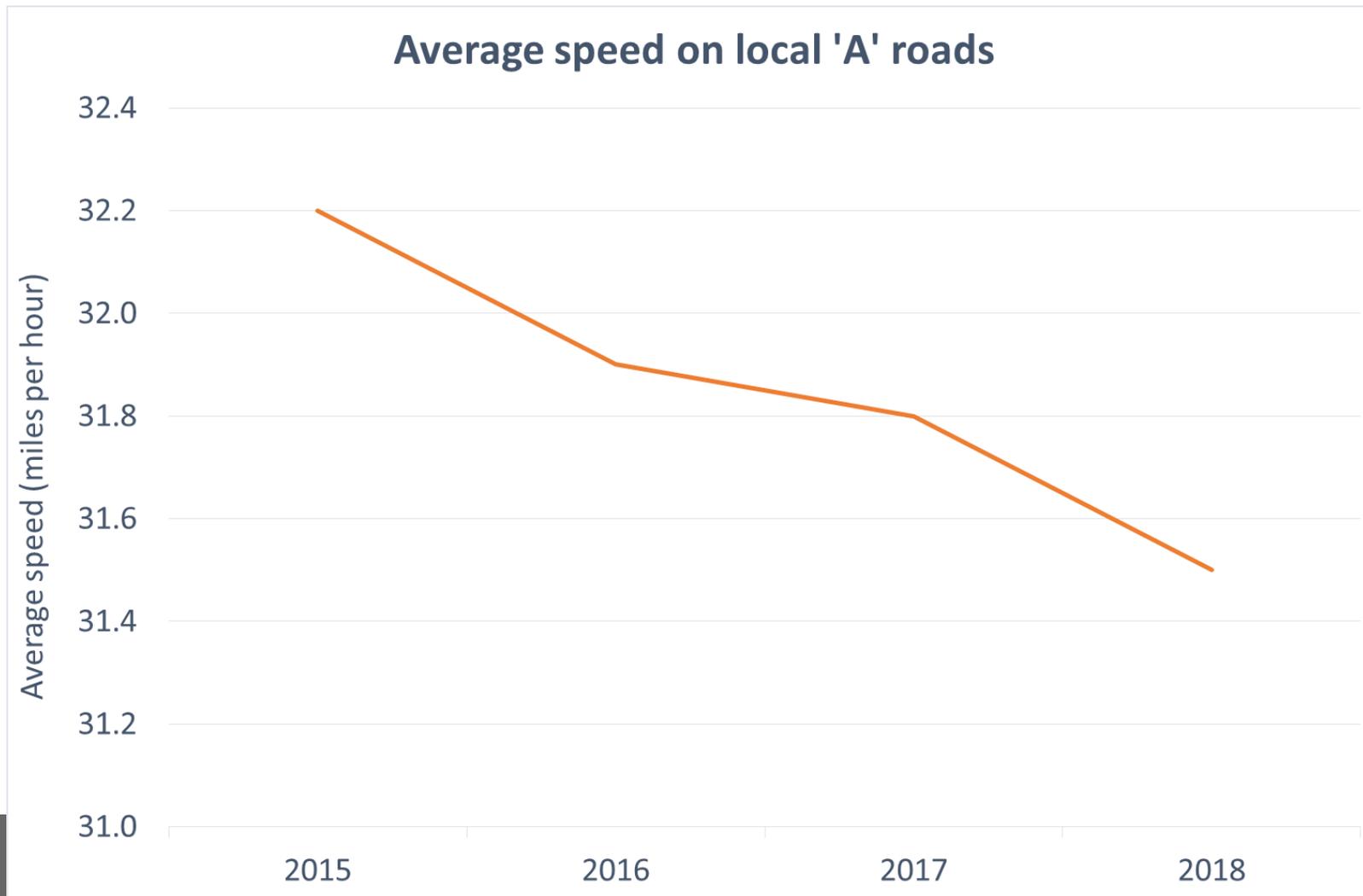
# Traffic Congestion Trends in Worcestershire

# Congestion on WCC managed roads: Delay



- In 2018 the average delay across the County (all rural and urban roads) was estimated to be 29.4 seconds per vehicle per mile compared to free flow representing a 7% increase on 2015 figures

# Congestion on WCC managed roads: Speeds



- In 2018 the average speed across the County (all rural and urban roads) was estimated to be 31.5 miles per hour representing a 2% decrease on 2015 figures

# Considerations for Policy Makers

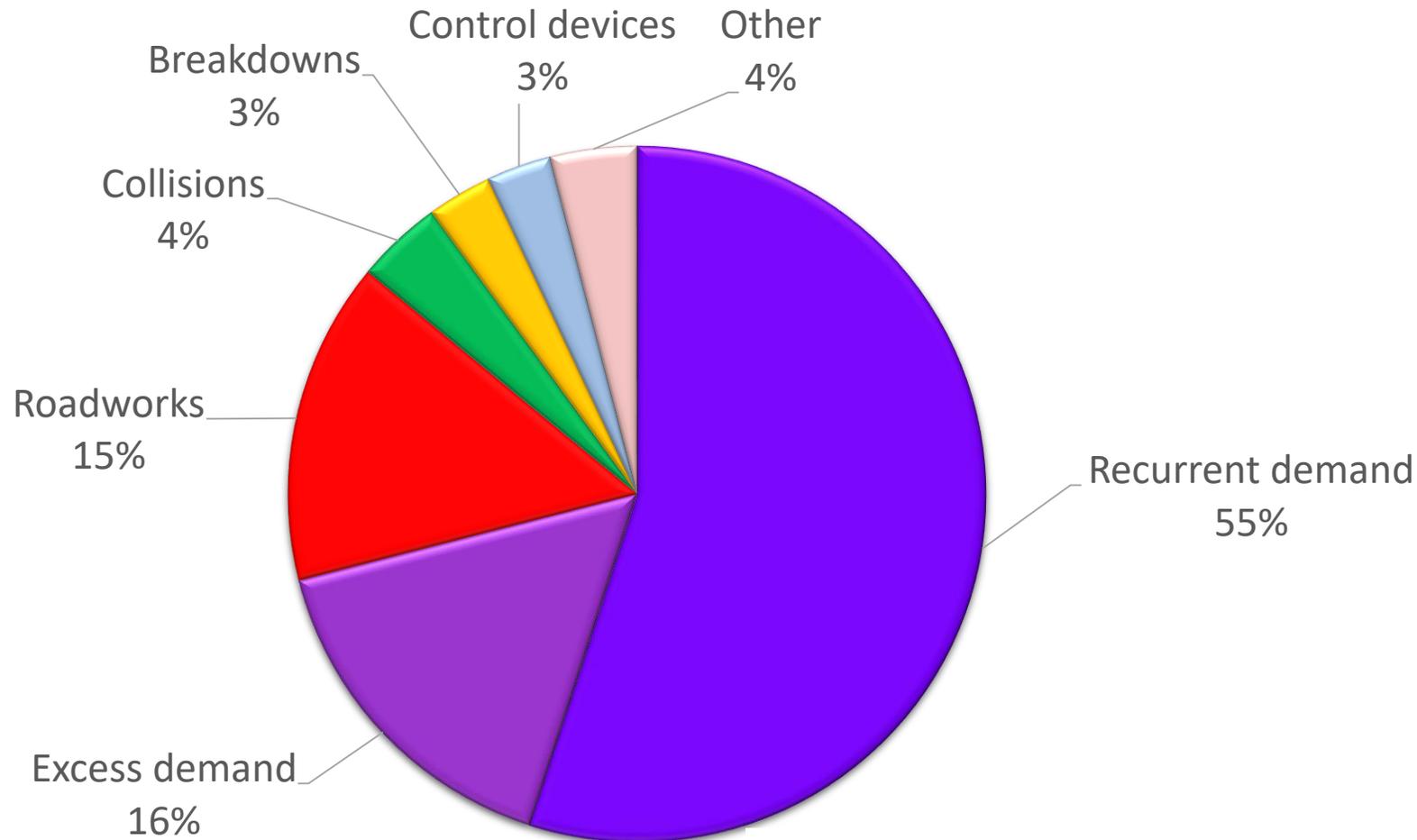
# Impact of increasing congestion on LTP4 objectives

LTP 4 Objectives (2018-30)	Increasing traffic congestion impacts
<ul style="list-style-type: none"><li>Supporting economic competitiveness and growth</li></ul>	<ul style="list-style-type: none"><li>Costs businesses money (increases delivery costs &amp; time workers spend in traffic)</li><li>Damages the reputation of towns and cities as 'places to do business'</li><li>Constrains planned development growth (c. 50,000 dwellings to 2030)</li></ul>
<ul style="list-style-type: none"><li>Limiting the impacts of transport on the environment</li></ul>	<ul style="list-style-type: none"><li>Falling traffic speeds increase NOx emissions</li><li>Makes streets unpleasant places for people to walk and cycle</li></ul>
<ul style="list-style-type: none"><li>Optimising equality of opportunity for all citizens</li></ul>	<ul style="list-style-type: none"><li>Delays vital bus services (17% of residents have no access to a car)</li><li>Creates conflict with non-motorized road users (cyclists and pedestrians)</li></ul>
<ul style="list-style-type: none"><li>Improving safety, health, life expectancy</li></ul>	<ul style="list-style-type: none"><li>Increases road traffic accidents</li><li>Increases incidences of pollution related health issues</li><li>Challenges the promotion of healthy lifestyles through active travel</li></ul>
<ul style="list-style-type: none"><li>Enhancing the quality of life for residents</li></ul>	<ul style="list-style-type: none"><li>Increases time spent travelling thereby reducing available personal time</li><li>Creates less pleasant environments for residents to live and work in</li></ul>

# Key principle 1: The causes of congestion

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**TfL: Contribution of various factors to congestion (2015)**

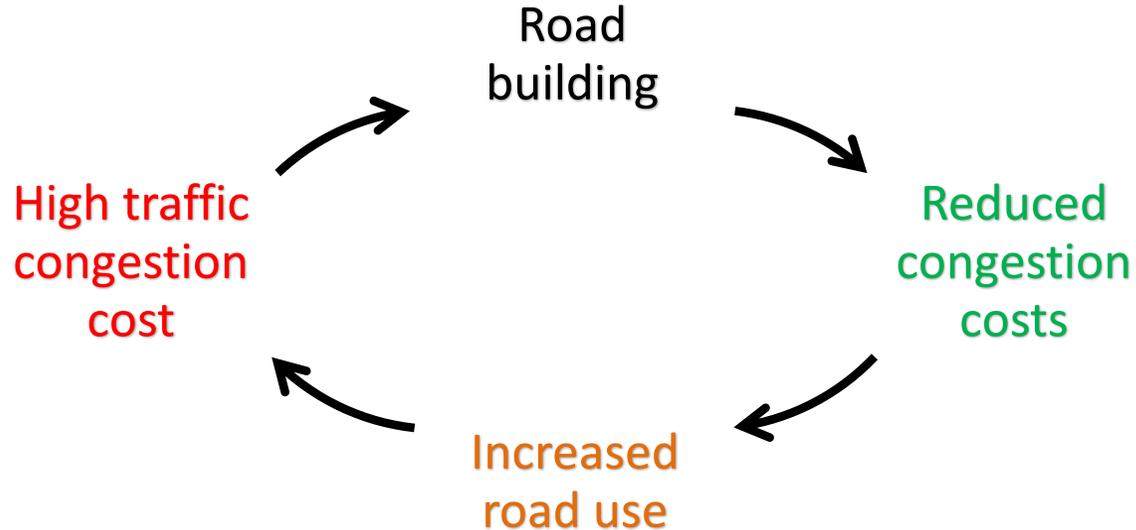


Source: Transport for London, 2015

# Key principle 2: Concept of “induced demand”

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- It's impossible to build your way out of congestion!



# Key principle 3: Most efficient road space utilisation

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**PTV GROUP**  
the mind of movement

**5 modes of transport  
with 200 people each**

Which mode will be the first to cross the line?

Occupancy per mode:

- ▶ 1.5 people in 133 cars
- ▶ 20 people in 10 busses
- ▶ 40 people in 5 trams
- ▶ 200 bikes
- ▶ 200 pedestrians

# Options for Managing Demand for Road Space in Worcestershire

# The Travel Demand Management (TDM) toolbox

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- Fiscal measures (e.g. road and fuel tax)
  - Road pricing / congestion charging
  - Rail capacity improvements
1. Parking management
  2. Supporting commercial bus services
  3. Cycling and walking investment
  4. Behaviour change programmes

# 1. Parking management

- All day parking charges in comparator towns / cities:

Town	Av. All Day Parking Charge (£)	Av. Daily Network Bus Ticket (£)	Difference (£)
All Worcestershire towns	£4.66	£3.80*	-£0.86
Winchester	£5.50	*Higher than the average all day parking charge in both Worcester and Malvern and the same as in Droitwich, Evesham and Pershore	
Chester	£6.00		
Lincoln	£7.00		
Taunton	£7.50		
Salisbury	£7.80		
Cheltenham	£8.00		
Nottingham	£15.00		

- Result:** Plentiful supply of low cost parking incentivises car use

# Parking management: Good practice



- Workplace Parking Levy (WPL) introduced in Nottingham in 2012:
  - Employers with 11 or more parking spaces charged £380 per space (2017/18)
  - Not applied to shoppers, occasional business users or Blue Badge holders
  - Grants available to businesses to encourage reduction in workplace parking through initiatives such as a cycling grants for showers and cycle facilities
- **Result:** WPL acts as a **disincentive to commuter car use** and has raised **£44m in revenue** ring fenced by law to spend on:
  - The NET tram network, electric link bus network and railway station redevelopment

## 2. Bus service support

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- Current situation in Worcestershire:
  - Patchy bus priority measures with buses having to queue in traffic resulting in reduced operating speeds and increased passenger dissatisfaction:
    - Every 10% reduction in average operating speed leads to about a 10% reduction in patronage and a higher cost to the commercial operator
    - National Bus Passenger Survey 2018 – lowest levels of passenger satisfaction in GB
- **Result:** Majority of Worcestershire's commercial interurban bus network is now operating at **marginal viability: Bus network attrition inevitable** unless bold decisions are made to reverse the trend

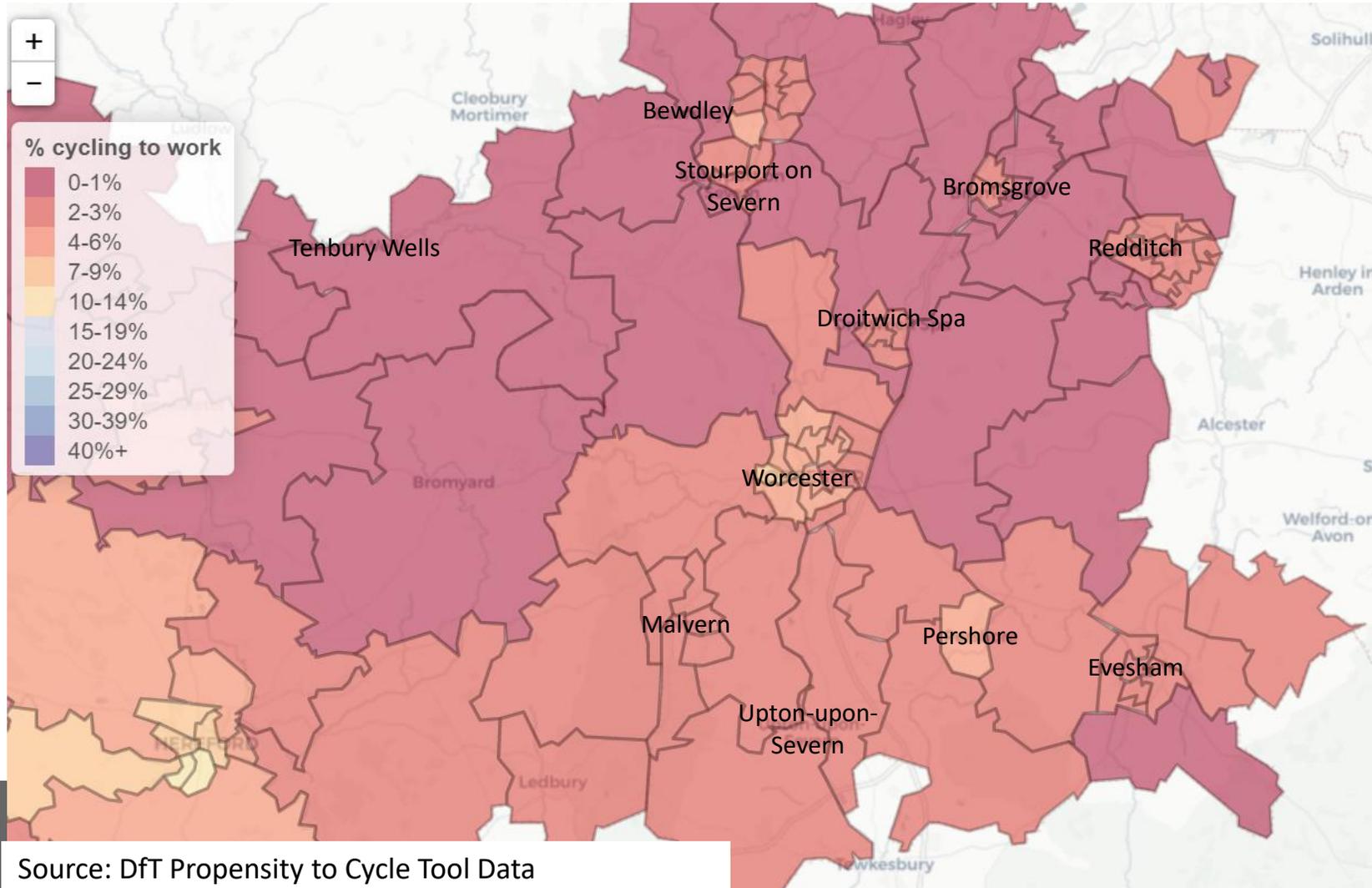
# Bus service support: Good practice

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- The Council implemented a pro-bus policy over the last 20 years:
  - A network of bus lanes to allow buses to bypass traffic
  - Bus priority at traffic signals to give buses a head start in congested traffic
  - Real Time Information at bus stops to let people know when buses are due
  - Accessible bus stops to allow level surface boarding from the pavement
  - The 'Key'; a multi-operator smartcard for train, bus, car club & cycle hire payment and extensive use of mobile phone based ticketing
- **Result:** The number of bus journeys in Brighton & Hove **doubled** from 22 million in 1992/93 to 44.8 million to 2012/13

# 3. Cycling and walking



Source: DfT Propensity to Cycle Tool Data

- Demand for cycling in the County is currently low, particularly in rural areas
- An update on how the Council is delivering on cycling in Worcestershire will follow in the next presentation to the Panel

# Cycling: Good practice

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- Significant investment by successive Mayors in initiatives to promote cycling:
  - Closing minor roads/central areas to through motor traffic & traffic speed initiatives
  - Highway & traffic management changes targeted at problematic locations for cycles
  - A network of dedicated Cycle Superhighways, lanes, tracks and advanced stop lines
  - TfL's launch of the (Santander Cycle) Hire system in 2010
  - Thousands of new bike parking facilities including at railway and tube stations
  - Training, education and enforcement measures
  - Pro-cycling policies importantly accompanied by charging for the use of the busiest roads at the busiest times and parking policies to restrain driving
- **Result:** Between 2000 & 2016, cycling in London **increased by over 130%**

# 4. Behaviour change

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- 2005-2009: Worcester awarded £3.52 million as a Sustainable Travel Demonstration Town to showcase the role of 'soft measures' in reducing traffic by promoting walking, cycling and public transport
- Significant investment in the **Choose How You Move** behavioural change campaign influenced travel patterns and encouraged a switch to sustainable modes of travel with a 10% reduction in car use demonstrated
- Due to austerity measures the programme was not sustained in the longer term on the same scale alongside a failure to 'lock-in' the benefits of supporting investment in walking, cycling and passenger transport infrastructure and services
- **Result:** The increases in car use and traffic congestion previously reported

# Behaviour change: Good practice

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- 2014: “Thinktravel” **Personalised Travel Planning** project targeted at 30,000 households in Gloucester & Tewkesbury (DfT funded):
  - Adopted the London 2012 Games travel planning approach based on a set of motivators and messages to provoke ‘*re-moding*’, ‘*reducing*’, ‘*rethinking*’, ‘*retiming*’ and ‘*rerouting*’ of travel patterns
  - Individualised Marketing approach: travel information and motivation supplemented with incentives (e.g. discounted railcard and bus passes, bike service and safety equipment vouchers, pedometers, water bottles etc.)
- **Result:** 7% reduction in single occupancy car trips amongst the targeted population and a shift towards car sharing, walking and cycling trips, particularly for journeys to the local shops

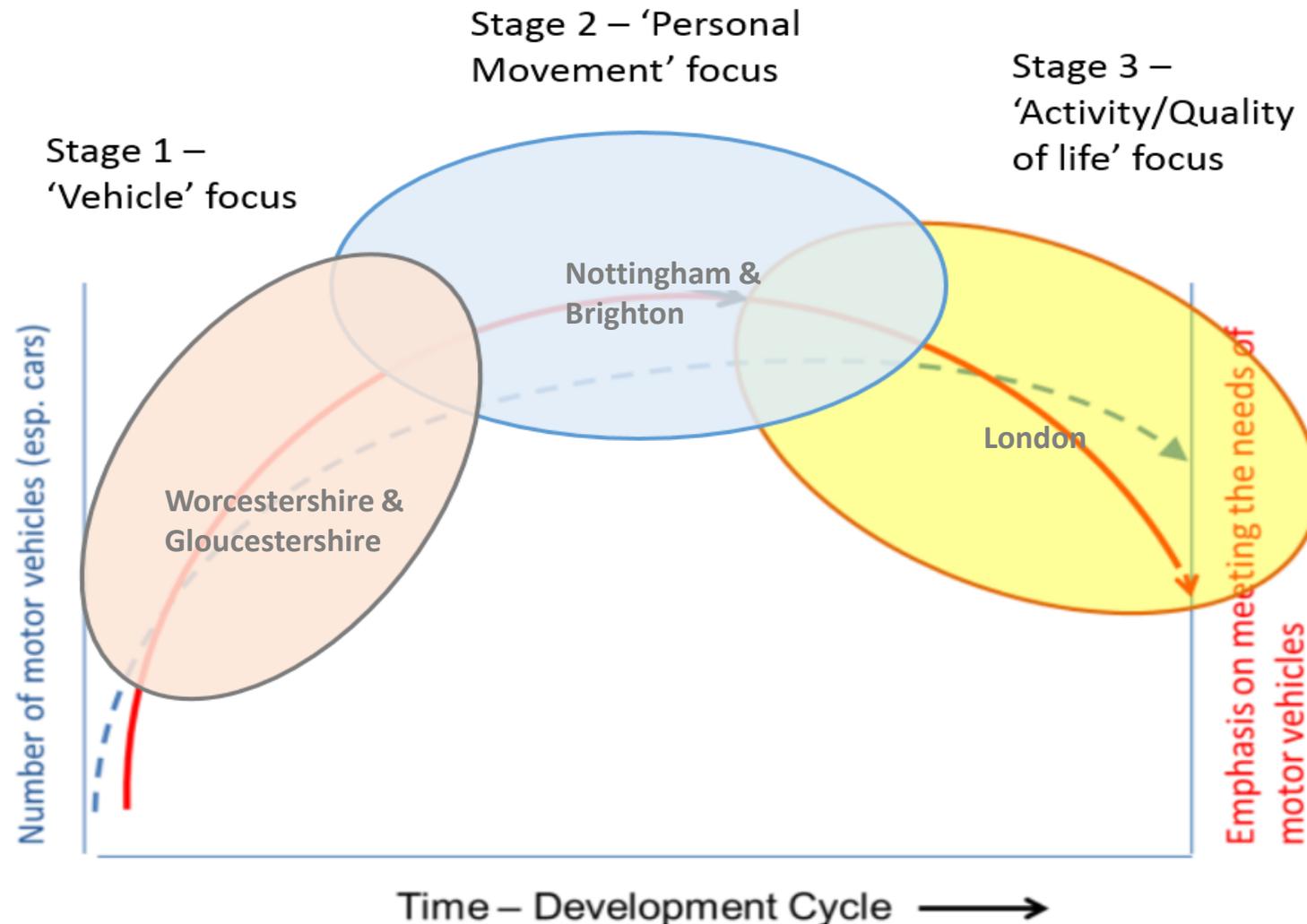
# In Conclusion...

# Summary

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- Congestion is worsening and represents a **critical challenge** to LTP delivery
- Health and the environment are key to future **quality of life** for all residents
- Any future strategy to address congestion should focus on **moving people not vehicles**
- Removal of the incentive of cheap long stay **parking** and supporting **bus services** really must be at the centre of a future strategy if you want to address traffic congestion on Worcestershire's roads
- Plenty of infrastructure and softer supporting measures that can be taken as part of a package to **encourage Smarter Travel** behaviour
- The principal of induced demand means that **'if you build it, they will come'** whether that's by car or by sustainable modes of transport is up to you

# Transport policy evolution in UK towns & cities



Source: CREATE, Congestion Reduction in Europe: Advancing Transport Efficiency (2014)

# Any questions?

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