**BRISTOL
ONE CITY**

Delivery theme 1
Transport

The challenge

The transport challenge refers to all movements of goods and people within Bristol. By its nature, transport is a cross-boundary issue and as such a solution for Bristol will affect, and be affected by, actors, organisations and infrastructure outside Bristol's administrative boundary. Transport accounts for 34% of the average Bristol resident's carbon footprint. Driving is the largest single element - approximately 17% from the use of diesel or petrol cars and 2% from the making of the car. Other transport services, such as buses and trains accounts for 7% and aviation accounts for about 7% of the average resident's footprint. Freight and business travel is also a substantial part of the city's footprint, constituting 17% of the economy's footprint, both within the city and beyond. So how we organise transport within the city, where we source goods from, and how we work with others to organise transport to and from the city are all critical in reducing our carbon emissions.

We also know that our transport system is vulnerable to future climate change; with some major nodes, such as Temple Meads, at risk from future flood events, and the potential impacts of high temperatures, through melting tarmac, or contorted railway tracks. We know the devasting impact loss of access to transport can have on our lives and livelihoods.

Our strategy

We know that we will significantly enhance benefits for the city through a blend of measures to achieve and deliver the carbon neutral strategy for Bristol, minimising cost, and maximising positive outcomes, including health, well-being and social usefulness for people and for businesses. Ensuring our transport system is climate resilient will enable our citizens to have usable and efficient access across the city, and outside with city, no matter what the city's future climate looks like.

Personal travel and freight must be tackled at a local, regional, national and international level, working with regional and national government as well as the private sector. For travel within the city our analysis shows we need to firstly reduce the amount of vehicles on the roads, with more people using buses, walking and cycling instead of private cars. This would positively impact peoples' health due to reduced air pollution and an increase in exercise, as well as improved transport systems benefiting lower income households. We also need to phase out petrol and diesel powered vehicles, converting to electric for most vehicles and biogas or hydrogen for some larger vehicles like buses or lorries. Without the change in travel patterns, a sudden swap to these clean vehicles would require a significant amount of charging infrastructure and would also omit the possible health, congestion and social benefits.

Delivery theme 1
Transport

2030 goal: Bristol will have a sustainable carbon neutral transport system with modal shift to significantly more citizens walking, cycling and using low carbon public transport

2030 goal: Everyone will have access to a transport system that is resilient to a changing climate

2030 Objective (i)

Significant reduction in car mileage achieved through mode shift towards public transport, walking and cycling; commercial vehicle mileage reduced through freight consolidation; aiming for a total 40% reduction in vehicle miles.

2030 Objective (ii)

All of Bristol's cars primarily consist of ultra-low emission vehicles (ULEVs) and 90% of other vehicles to be ULEV.

2030 Objective (iii)

Reduce total carbon emissions from international and domestic air travel associated with residents and businesses.

2030 Objective (iv)

Significant improvements made to accessibility and service of sustainable travel infrastructure to ensure it can support carbon neutral, climate resilient transport systems.

2030 Objective (v)

Existing transport infrastructure enhanced to withstand future climate projections with the effect that the transport network continues to function well during severe climate events.

Delivery theme 1
Transport

Our journey to 2030

We know that we need to make fundamental changes to reach our 2030 goals. Based on the evidence that we have in 2020, we anticipate this will include actions such as:

Engagement, culture and inclusion

People are key to changing our transport system. Therefore we will need to undertake extensive engagement with the public and businesses to achieve our goals across the city. This could involve programmes such as extensive electric vehicle car club/share schemes and personalised travel planning programmes.

Funding and finance

We know we will need to update how transport is financed through actions such as subsidised public transport, road user charging and business rate incentives for sustainable transport use and low aviation mileage.

National and regional action and city leadership

We know the we will need support from local and national government to achieve these objectives. These actions may include:

- The creation of a regional collaborative transport strategy organisation (akin to Transport for London, with buy-in from major public transport providers) with the powers and funding to enable rapid modal shift; and

- Information campaigns, policies and incentives to reduce air mileage of residents and businesses in the city.

Skills and capacity

We know we need to have the skills and capacity in the city to maintain and operate our updated infrastructure.

Data and knowledge

We know that we need further knowledge of how our transport infrastructure is projected to be impacted by future climate hazards. This will enable us to focus action, such as schemes to mitigate risk and enhance resilience for areas most at risk of climate and weather events. We will also aim to harness innovation from the private sector, such as mobility as a service (MAAS) business models to encourage modal shift away from car ownership.

Infrastructure

We will need to implement some new infrastructure to make this transformational change happen. This will need to be through actions like:

- Enhancing walking and cycling experience and infrastructure through reallocation of road space away from the motor vehicle;

- Using transport corridors to enhance blue and green infrastructure;

- Improving public transport services through major expansion of infrastructure and services to create an integrated, segregated, high quality, rapid and reliable service and ultra low emissions vehicles ;

- Delivering a comprehensive freight consolidation scheme, including effective first and last mile solutions, that drastically reduce delivery trips;

- Installing and smart management of electrical vehicle charging and hydrogen infrastructure across the city; and

- Reduction in parking capacity for non ultra low emission vehicles, increased car parking charges and workplace car parking levy.

Delivery theme 1
Transport

Key challenges to delivery:

- Identifying, securing and justifying funding
- Time needed for regulatory and planning processes and for construction of new infrastructure
- The higher capital cost of ultra low emission vehicles, both for private owners and commercial operators
- The input needed from national and international bodies and businesses to change the market, incentives for businesses and individuals, and policy and regulation.

Opportunities:

- Improved public transport, public realm and air quality. It has been identified that this will particularly benefit lower income households and young people.
- Release of land for other uses – e.g. housing, green space, and use of transport corridors to support green infrastructure
- Mode shift to more space efficient options will allow the city to grow effectively while easing the traffic congestion that currently costs the city's businesses
- Improved health outcomes, through both active travel and air quality improvements
- Removing unnecessary journeys by car should free up road space and save time for people whose mobility needs are more acute, such as disabled drivers.