Net Zero: The Future of Bristol's Transport System

Reporting on FUTURES Relay workshop undertaken with Bristolians

Introduction

The world is in a climate crisis. In the recent report "Making Peace with Nature", the United Nations called for an "urgent and clear break with current trends of environmental decline" [1]. Such a break requires large scale transformations. Cities and settlements play a large and growing role in the current environmental decline and are also key players in climate action. Day-to-day patterns such as mobility need to change [1–3].

Transport is a key contributor to global greenhouse emissions and is the highest emitting sector in the UK, representing 24% of all greenhouse gas emissions [4]. While other sectors have been decarbonising, transport has proved to be more stubborn to address.

This document reports on a two-part online workshop with citizens in March 2023 (spread over two Saturdays) planned and undertaken by Mott MacDonald and the University of the West of England (UWE) to explore the future of Bristol's transport system: how it might achieve net zero emissions and what a net zero transport system in 2050 might look like. This document is a summary report presenting:

- FUTURES Relay as a method for structured brainstorming
- How and why FUTURES Relay was applied to foster a conversation with citizens
- Bristol, key facts
- Results (participants and outcomes of the discussions by stage)
- Participants' feedback
- Learning
- Conclusions

What is the FUTURES Relay and why is it important?

FUTURES [5] stands for Future Uncertainty Toolkit for Understanding and Responding to an Evolving Society. FUTURES is a process developed by Mott MacDonald and the University of the West of England in 2019 that aligns with the Government Office for Science Futures Toolkit [6]. FUTURES is a decision support tool for making vision-led robust decisions when the future is uncertain. In this case, FUTURES has been applied in Bristol enabling citizens to consider the city's transport systems, examine the present, the desired future, and uncertainties; develop exploratory scenarios; and consider actions that can help get closer to the desired future, in those scenarios [5].

Since 2021, Mott MacDonald has been applying a simplified format of FUTURES called the FUTURES Relay to a range of global cities to explore – with transport professionals - net zero transport systems (Figure 1). The **FUTURES Relay** allows hands-on experience of the FUTURES process within two workshop sessions involving usually 20 to 30 participants. The workshop covers six stages or themes (Figure 2): the current state; visions for 2050; uncertainties; ideas for moving towards a future net zero system; how to prioritise ideas; and the useful next steps. It has proven a useful method for supporting strategic thinking that addresses both uncertainties and a broader vision of access, including both physical and online dimensions.

Figure 1: Cities where FUTURES Relay have run

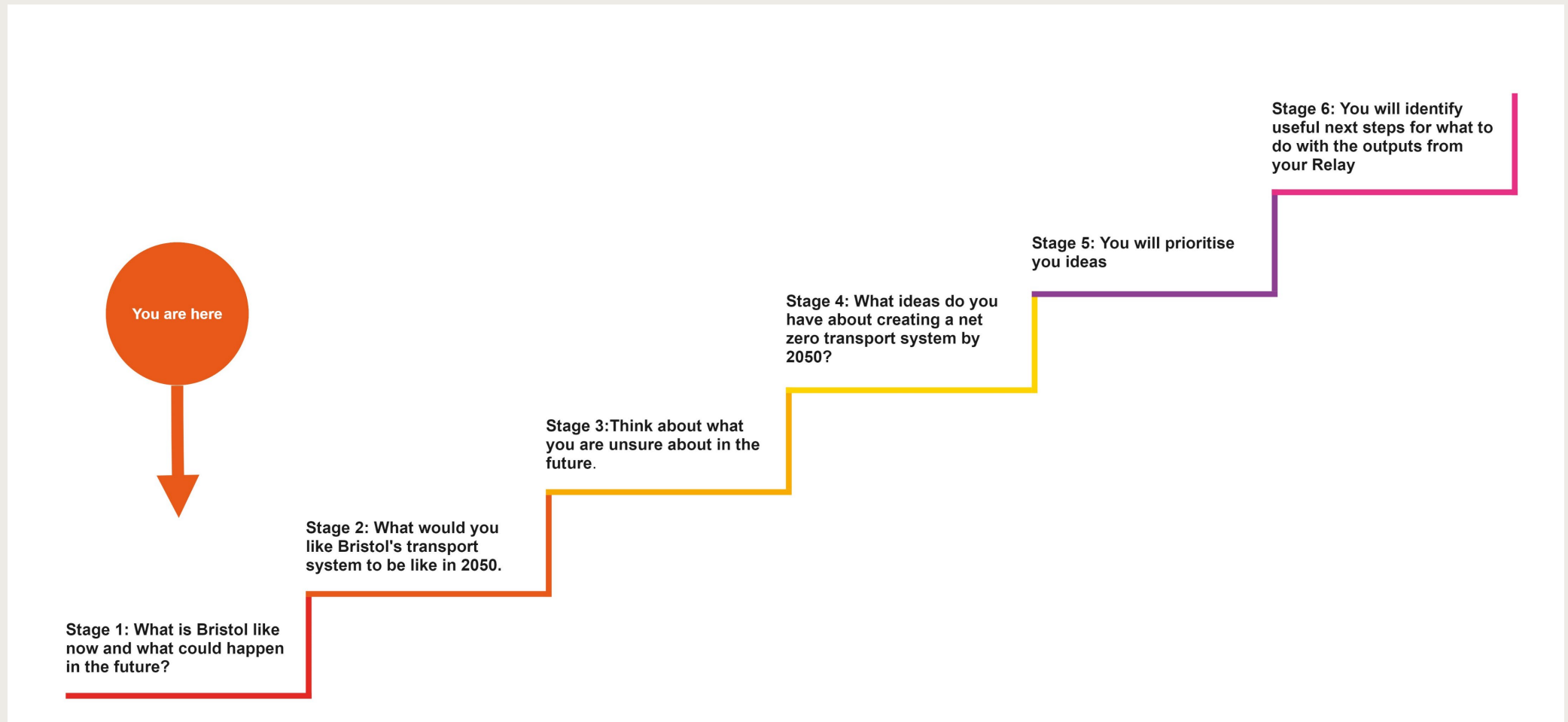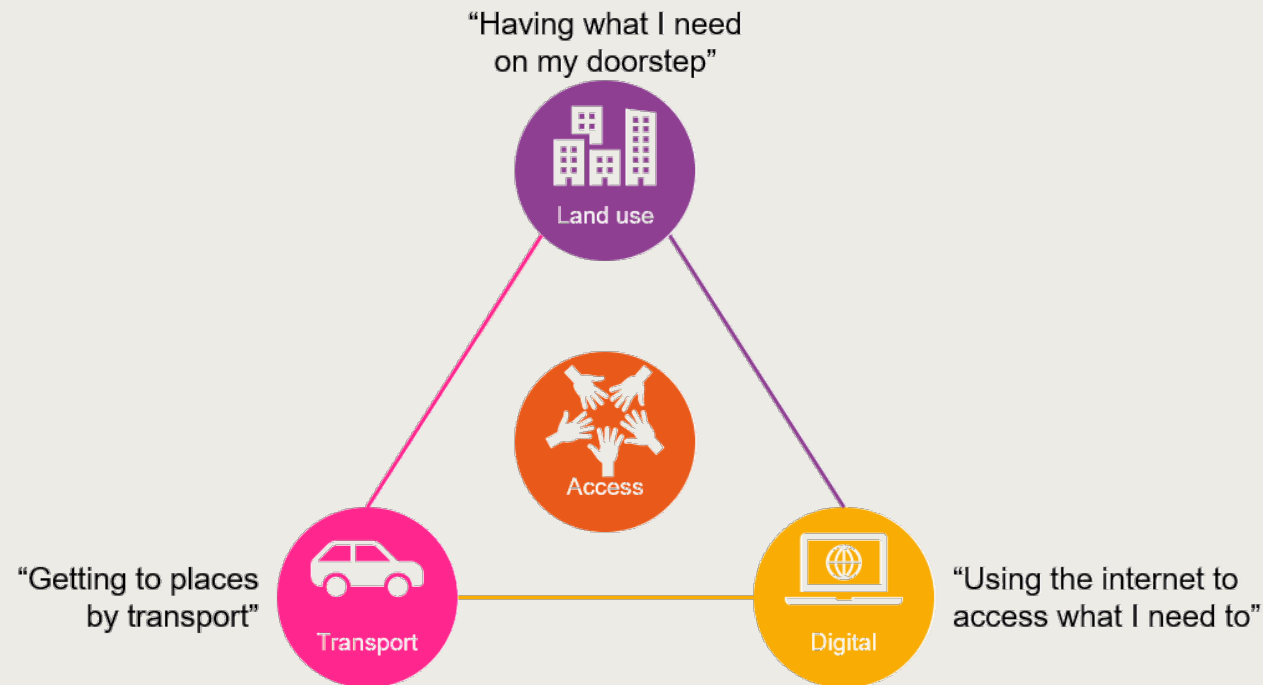# What is the FUTURES Relay and why is it important?

Figure 2: Structure of the FUTURES Relay workshop (workshop session 1: stages 1-3; workshop session 2: stages 4-6)

What is the FUTURES Relay and why is it important?

Triple Access Planning

The FUTURES Relay encourages the future to be considered through the lens not only of transport but of 'triple access' - access determined by transport, land use, and digital dimensions. The notion of triple access is briefly presented at the start of the workshop, reminding participants to consider all three aspects, within each step of the process. As was the case with the professionals, the sessions were run either as a plenary, or as breakout groups (four groups in this case, used for brainstorming stages 2 through 6).

"Having what I need on my doorstep"

Land use

Access

"Getting to places by transport"

Transport

"Using the internet to access what I need to"

Digital

FUTURES Relay applied for a citizen-centred conversation

While in other cities, the FUTURES Relay had been run with professionals, Bristol was the first city in which the process was trialled with citizens. In all the cases, the workshop was run online (using Microsoft Teams). Ahead of the Bristol workshop, adaptations were needed to its format to make the process as inclusive as possible. The adaptations were relatively minor, and covered:

- **The wording**, which was to be jargon-free and straightforward for participants who are not necessarily transport professionals. The changes included giving the workshop a non-technical name ("Planning the future of transport in Bristol – what would you do?"), re-labelling the SWOT analysis (Strengths / Weaknesses / Opportunities / Threats related to the transport system) as: "What is easy / difficult to access; what is exciting about the future; and what might cause worries about the future?"

- **The format of the activities** – for instance, the scenarios were discussed in a relatively open format, identifying ideas, their importance, and their level of uncertainty, while in the professionals' workshop participants explicitly considered the dimensions of land use, attitudes, or infrastructure quality. Testing the scenarios was done here along straightforward questions (What is easy and difficult to access? Who is winning and losing? What worries or excites you?), while the professionals developed options and rated them red-amber-green according to the extent to which they would help move closer to the vision.

- **A counter-part** – participants were offered a thankyou shopping voucher as a sign of appreciation of their time.

Bristol: Key Facts

- Bristol is home to 472,400 residents speaking at least 91 different languages [7]
- The city has a hilly landscape, marked by the valleys of the rivers Avon and Frome
- Walking and cycling are used by respectively 20% and 18% of the commuters [7]. Majority of residents (57%) walked five or more days per week in 2021, which corresponds to the pre-pandemic level [8]. Travel by other modes has however changed since the pandemic, the percentages traveling by different modes five or more days per week having decreased across the board between 2019 and 2021 (34% to 25% for driving, 14% to 10% for cycling, and 11% to 6% for public transport [8]).
- The 2021 Quality of Life survey examined opinions regarding traffic and bus services, showing that 57% were satisfied with the local bus services and 70% thought that traffic congestion was a problem locally (56% in the most deprived areas) [9]
- Despite the trips walked, cycled, or by public transport, air pollution due to traffic exceeds the UK and EU air quality limits [7]
- Traffic also represents a burden for citizens:
    - 70% to 74% perceive it as a problem, in their area [7]
    - 88 people died or were seriously injured in traffic crashes, during 2021/22 [7]
    - In the most deprived areas, children are six times more likely to be injured in traffic crashes as compared to children living in least deprived areas [7]
- Overall:
    - 74% of residents are satisfied with their local area as a place to live, but only 51% of people in the most deprived areas [9]
    - 87% were satisfied with their current accommodation (68% in the most deprived areas) [9]
    - Minority (21%) agreed they could influence decisions affecting their local area (17% in the deprived areas) [9]
    - The opinion that "people from different backgrounds get on well together" is shared by 70% residents, but down to 57% in the most deprived areas [9]

Participants

Participants were recruited through an announcement in Bristol City Council's fortnightly mailer "Ask Bristol". Twenty-seven people participated in both parts of the workshop, and three participants were part of the first part but could not attend the second part. The demographic data and the reasons for participating, below, represent all 30 participants.

Demographic Characteristics

While an effort was made to recruit a diverse group, the sample is not representative of Bristol's age groups, disability statuses, education levels, income levels, or ethnic backgrounds. The participative workshop developed using the FUTURES methodology can be adapted for a group up to approximatively 30 participants. (This limit is beneficial for moderation and participant experience but incompatible with strict representativeness from the perspective of qualitative research.) The group recruited:

- **Included a range of age groups**, from 18-29 (8 participants) to 80+ (1 participant, and 6 aged 70-79). Note that middle-aged people were under-represented (4 participants were aged 30-49). Despite the strong representation of the 18-29, 18 of the 30 participants were aged 50+.
- **Was predominantly white** (26 participants; 22 identified as British). The group included four non-white participants, two identifying as Asian or Asian British and two as Black, Black British, Caribbean or African.
- **Was skewed towards higher education** – from the 29 participants who answered this question, 23 had a college-, university-, or postgraduate degree
- **Was skewed towards higher incomes** – 24 participants saw their income as "enough or more than enough" to cover their needs; six their income as "just enough" compared with their needs; and no one declared earning not enough to meet their needs
- **Was slightly gender-imbalanced** with no participant identifying as non-binary or gender-fluid. Nineteen participants identified as male, and 11 as female.
- **Included four participants self-identifying as disabled** (three reporting physical impairments and one an autism spectrum disorder)
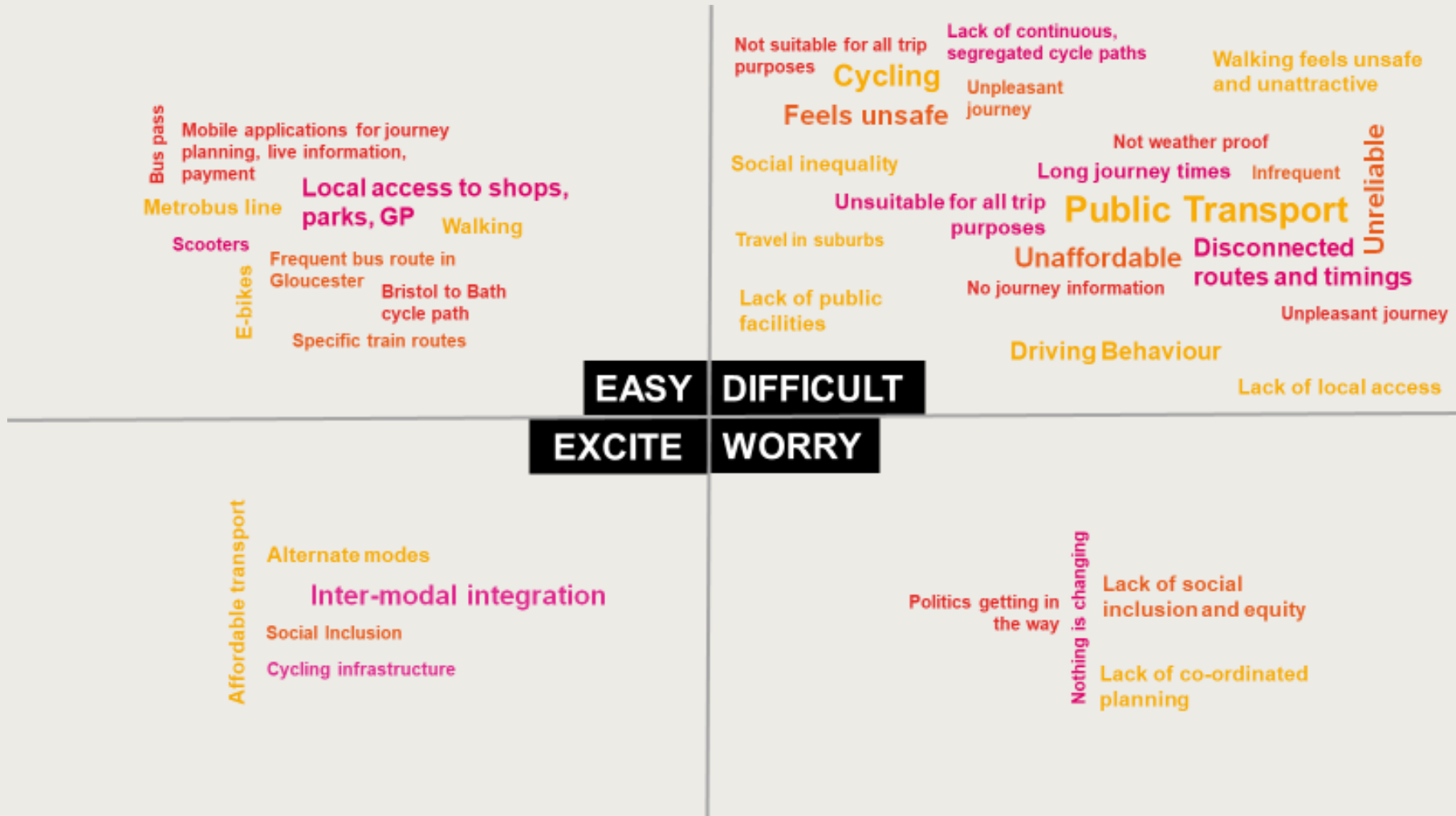
Participants

Reasons for Participating

Participants were invited to briefly introduce themselves and say what had motivated them to participate in the workshop. Two key topics were noted: participating to help contribute to change, and to make sure other people's voices are represented. They are illustrated below with participants' quotes.

- **Helping contribute to change** (often noting elements of frustration with the current system)
  - *"I find travelling in Bristol frustrating and want to be part of improving it"* – Male, 50-59, non-disabled
  - *"Anything I can do to help maybe influence the improvement of Bristol's public transport, it is probably the main reason I've joined"* – Female, 40-49, non-disabled
  - *"I use all sorts of different types of public transport and it can be quite difficult to get around Bristol, so I'd love to see Bristol be as good as other places are."* – Male, 30-39, non-disabled
  - *"I've returned to Bristol after 30 years being away and my interest really is about transport and what hasn't changed in that 30-year period and why hasn't it changed?"* – Female, 40-49, non-disabled
- **Talking on behalf of others** and making sure their needs are considered.
  - *"I want to make sure that the interests of older people aren't overlooked or ignored."* – Female, 80+, living with arthritis
  - *"I [am also here] on behalf of my mum who is also 84 and is reliant on buses and would love to be able to keep her independence and at the moment really can't, in Bristol."* - F, 40-49, non-disabled
  - *"[…] like most of the people on this call, I'm middle class […]. My concern is public transport decisions are being taken by the middle class and they need to be taken by the blue-collar workers."* – Male, 60-69, lives with kyphosis
  - *"I'm interested in improving the air quality of Bristol and specifically for young people who need to have clean air because of the lung damage that is being forced on them without anybody taking any notice."* – Male, 60-69, non-disabled

Stage 1: Experience of living, working, and playing in Bristol

The brainstorming was structured in four aspects: what is easy to get to and why?; what is difficult to get to and why?; what is exciting about Bristol's future?; and what might cause worries, about the future? These questions were discussed in plenary, and the main topics are reported here.

What is easy to access and what makes it easy to access?

Participants touched on land use, infrastructure, transport services, new mobility devices and digital access. The appreciated aspects included:

- **Walkable neighbourhoods (activity hubs):** Participants living in the inner city or close to neighbourhood activity hubs enjoyed being able to easily walk to everyday destinations
- **Specific well-designed walking and cycling infrastructure:** the Bristol to Bath cycle path was praised as convenient and user-friendly. One participant said: *"Bristol to Bath cycle path is a real asset, and easy to use. Excited for it to be completed at the city centre end."*
- **Specific public transport services**, noting the Metrobus, local train services and the Gloucester Rd (with several bus lines to/from the city centre)
- **Communication tools,** especially helpful for live information (noting however issues with bus services' live updates)
- **E-bikes** as a powerful means of getting around despite Bristol's hilly environment (safe storage facilities might however be missing)
- **Shared e-scooters** as a convenient addition to the transport system

What is difficult to access and why?

The discussion about difficulties was animated. Seventy-six ideas, focusing mainly on public transport, cycling, and walking, were suggested (compared to 17, for the question of what is easy).

The difficulties around public transport included:

- **Lack of reliability** – trips can take much longer than expected and announcements of waiting times can be inaccurate
- **Network design and operation** – radial network making it "difficult to get to anywhere that isn't the city centre"; timetables of bus/train lines not synced; overall long travel times and low service frequency; some parts of the city are underserviced.
- **Uncomfortable travel** – buses can be overcrowded, and waiting can be non-protected from rain

Cycling might feel unsafe and unpleasant, which was associated by some with a lack of appropriate infrastructure

- "As an experienced/assertive rider I still feel intimidated by fast moving cars (especially taxis) and vans. I can appreciate why many people would not want to cycle on such hostile roads."
- "I want my children to cycle to school, but it scares me to have them cycling across Bristol."
- "Discontinuous cycling provision and tail-pipe emissions make cycling into the city unpleasant".

Difficulties regarding walking included lack of pedestrian priority, lack of lighting, exposure to traffic fumes and lack of public toilets. To be noted that no participant identified as blind / low vision; deaf / hard of hearing; or as a wheelchair user, groups that can have acute difficulties traveling [10, 11].

Stage 1: Experience of living, working, and playing in Bristol

What is exciting about Bristol's future?

In Bristol's future, participants saw the prospects of **reliable, efficient, and convenient alternatives to driving**, mentioning:

- **An interconnected and reliable public transport system**, affordable and with integrated ticketing
- **Better infrastructure for walking and cycling:** safe, accessible to people of all ages and abilities, well connected to public transport

What might cause worries, about Bristol's future?

Participants were worried about the ability to deliver a better and more equitable transport system. The aspects noted included:

- **Policy and governance**, participants noting issues around roles split between authorities (regional / local, and between districts), collaboration, and accountability. One participant feared "*petty rows and party politics [halting] any real progress in transport for our region*". Another noted: "*The 'hope' depends on government (esp. local govt) having the powers to coordinate and manage transport, land use and service delivery together. We have systematically undermined this in UK over the last 40 years.*"
- **Lack of social inclusion and inequity** as an outcome, noting specific issues such as a lack of integration between land use and transport systems, resulting in housing being hard to get to/from, or the transport system failing to respond to the needs of working people.
- **The need to effectively deliver change,** which is a worry for some given the track record, participants noting: *"All things that have been problems for many years - Bristol now needs to invest"* or *"Nothing is changing!! City needs serious investment and change"*

Stage 2: Bristol in 2050: What matters most, and how it has been transformed

The team identified key themes in participants' vision for Bristol: efficient, interconnected, car-independent, safe, convenient, and inclusive. These themes were presented back to the group in the second part of the workshop. There was a general agreement, however participants stressed the importance of equity in the ability to access destinations, across incomes.

In each of the four groups, participants contributed a rich set of ideas for how the vision could be achieved, from the conceptual to the specific, and at different scales. The feedback was structured in four categories presented below: (a) qualities of the transport system (e.g., quality of service); (b) broader outcomes (e.g., air quality, health); (c) strategies (e.g., investment in heavy infrastructure); and (d) specific measures (e.g., freight consolidation hubs). Sometimes, inputs touched on several topics – e.g., introducing tram systems (specific measure) because they "revolutionise accessibility" (quality of the transport system).

| A. Qualities of the transport system	B. Broader outcomes
• Availability of alternatives • Universal accessibility (everyone can reach their destinations comfortably without relying on a car; planning considers diverse needs) • Efficient public transport, unimpeded by congestion, seamlessly interconnecting administrative areas • Walking is easy and safe	• Clean air • Green, equitable, safe city • More friendly environment, where people walk quietly and safely • "Virtually no cars", but people traveling comfortably by other modes
C. Strategies	**D. Specific measures**
• Decentralised land use, with hubs providing for different needs / 15-minute neighbourhoods / local destinations • Prioritising the development of sustainable travel solutions, e.g., delivering cycleways • Planning and delivering clean corridors – streets prioritising public transport, walking and cycling • Integration of transport systems: physical (hubs comfortably interconnecting modes) and operational (ticketing) • Challenging the right to drive in the city (which must go in parallel with the broad availability, accessibility, and efficiency of alternatives) • Delivering efficient public transport first, when developing non-central neighbourhoods • Minimising the need to travel • Greening the city	• Autonomous buses • Consolidation of freight and waste collection – hubs facilitating local deliveries and higher efficiency through a smaller number of service providers • Using the waterways for transport • Availability of water and toilets as enablers of public transport and walking • Affordable public transport • Taxes on vehicles based on size

Stage 3: Uncertainties that could impact reaching the developed vision

The uncertainties mentioned by the participants related to:

- **The transport system** (e.g., public transport service, integration between modes, or major investments such as an underground)
- **The behaviours** (e.g., move to electric vehicles)
- **Land use** (e.g., housing developments)
- **Technology,** including new developments and resource availability
- **Engagement** (the extent to which diverse people and their diverse needs are actively included in the process)
- **Residents' readiness to change** (e.g., buy in associated with progressive projects)
- **Policy and governance**, including funding availability and allocation, national / local long-term visions, levels of ambition, collaboration between policymakers, within and across administrative boundaries.

When asked to place the uncertainties on a scale, from the least important to the most important, in terms of achieving the desired visions and certainty, two topics were key for the four breakout groups:

- **Policy and governance** – the topic was the most discussed, and consistently noted as very important in achieving the vision. Participants had high levels of uncertainty regarding long-term vision, funding, collaboration, and ambition.
- **Residents' readiness to change** – the topic was noted as very important in two of the four groups in terms of motivation and engagement on the one hand, and possible resistance to giving up the relative freedom offered by driving on the other hand.
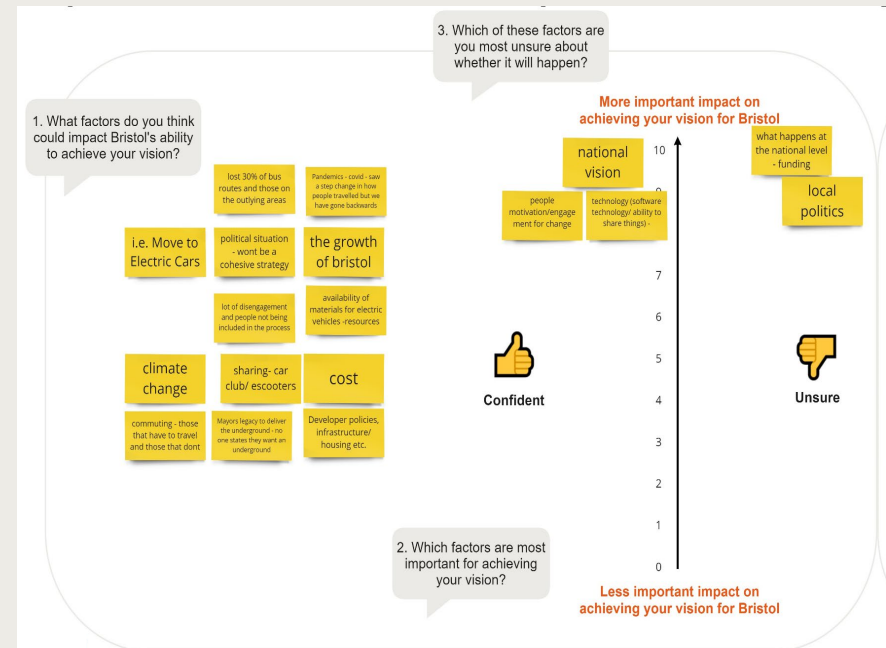
Stage 4: Possible stories about Bristol's future

In FUTURES Relay, scenarios are used to stress-test the options for reaching net zero in contrasted possible future contexts. Two dimensions identified based on the uncertainties reported by the participants were used to characterise the scenarios:

1. **Political agenda**, on a scale between:
   a. **Consistent**, with a sense of responsibility towards making difficult decisions necessary to "catch up for lost time" in terms of CO_2 emissions translating into ambitious steps taken; and
   b. **Inconsistent**, characterised by an inability to implement progressive policies deliver change in the face of climate emergency
2. **Residents' willingness to change,** on a scale between:
   a. **Progressive social change**, marked by a strong awareness of the need for progressive change and a shared sense of ownership over its implementation, as well as collective responsibility to plan for and live in a sustainable way
   b. **Social resistance to change,** manifesting through residents' resignation or anger and resentment over the expectations to change and the political measures, possibly perceived as unfair.

 Four contested scenarios (see next slide) were developed along those dimensions and used as context, for thinking about Bristol's future. It should be noted that some participants did not relate to the notion of social resistance, pointing out that the issue might rather be around the lack of options and alternatives (noting for instance the needs of working people, who might for instance be forced to use the car to access work and bring children to school due to distances and (un)availability of appropriate public transport), or lack of opportunity to have a voice in the process.   Not all participants – in the present – could relate to Bristol's sense of spirit.

Consistent political agenda

Social resistance to change

Progressive social change

Head in a Hot Air Balloon
Consistent political agenda + social resistance to change

The city region is enjoying what might have been meant in the 2020s by the phrase 'strong and stable' governing. A sense of responsibility towards the future is high across the political spectrum with real appetite to make the difficult and necessary decisions and to "catch up for lost time" in terms of addressing CO_2 emissions. However, caught between a rock and a hard place, residents are angry at what they see as the injustice thrust upon them of expectations to change their way of life. Differing needs across the population aggravate this, creating tensions and resistance to change.

Bristol's Independent Spirit
Consistent political agenda + progressive social change

The beating heart of Bristol's sense of spirit is apparent across its diverse population and its political leadership. Consistent and ambitious steps by the authorities have drawn confidence from a public broadly supportive of change across the city which they have come to understand can typically be changed for the better. The pressures of climate change are a constant reminder of the shared responsibility to plan, build and live in Bristol in a way that sees and appreciates the bigger picture.

Dismaland
Inconsistent political agenda + social resistance to change

Years of struggle in the political sphere to push through change in the face of the climate emergency has left governance of the city lack-lustre and volatile. Across the population while pockets of ambition for change endure, many people are resigned to coping in their lives and, in the absence of a belief that the authorities can find a path to a better future for the city, are 'digging in' and getting on with their lives their ways as best they can. The intervening hand of government is widely resented.

Bristol in Suspense
Inconsistent political agenda + progressive social change

The sense of disarray at all levels of government felt strongly during and after the pandemic of the early 2020s never really subsided in the face of multiple challenges, not least climate change. Yet residents of Bristol feel passionate about the need for progressive change and therefore routinely take matters into their own hands through self-organised citizens assemblies. Awareness among residents is raised to the level where people change their behaviours due to social pressure as much as or more than due to political, legal or financial pressure.

Inconsistent political agenda

Stage 4: Possible stories about Bristol's future

Each of the breakout groups was given one of the four scenarios and asked to imagine itself in this scenario in 2050 and send a "message in a bottle to Bristol 2023" telling of what is easy and difficult to access, who is winning or losing, and what causes worries or excitement. It should be noted that the dynamics of group discussions led to some topics not being covered in all the groups. The table below provides the main ideas mentioned.

Scenario	Bristol 2050	Easy / difficult to access	Winning or losing	Worries or excitement
Head in Hot Air Balloon	[This group rather discussed the workshop and its process, some participants questioning the validity, given those not represented]	Easier access was related to improved digital connectivity, new transport solution (tram), and a better integration between land use and transport systems. Difficulties were associated with the possibilities of industries moving out of the city without ad hoc transport solutions.	There is the risk of perpetuating inequities in access – participants mentioned blue-collar workers, having travel needs often not met by public transport.	The worries included geographical inequalities in the ease of access (e.g., East remaining underprivileged); difficulties to travel across the region; and people's persistence in driving.
Bristol's Independent Spirit	Peaceful and calm flows of people traveling, and a city characterised by greener spaces, providing good conditions for walking and cycling, and decentralised "villages"	[This point was not discussed]	In this vision, driving a SUV type of vehicle in the city would become difficult. Participants imagined possibilities for facilitating freight deliveries.	[This point was not discussed]
Dismaland	Population growth is not adequately supported by the infrastructure. People are dissatisfied and move out of the city when they can. Shops are closing, and areas such as South or East feel neglected.	Public transport services to the centre is facilitated and driving made more difficult. The difficulties relate to accessing destinations other than those close by or the city centre.	Wealth and good digital connectivity are associated with good access, while whole demographic groups could be struggling: blue collar workers, workers in low level jobs (distribution centres, care), older people, or disabled people.	A greener city would feel more exciting; however, the climate breakdown and the lack of safety are sources of worry.
Bristol in Suspense	Smaller scale, community-managed facilities; better community engagement (noting the demographic groups not represented in the workshop); publicly owned public transport; buildings in disrepair	Smaller, reliable buses make it easier to access destinations. Physical and digital accessibility not adapted to all the needs discriminates against certain groups (e.g., disabled people, or anyone not speaking English).	The group focused on those who would struggle: disabled people, anyone not speaking English, or people on low incomes.	Relying more on local resources is exciting, but divided opinions on environmental and social issues; flooding; extreme weather; and fuel-poverty cause worries.

Stage 5: Ideas to help Bristol reach the imagined net zero visions

The participants were asked *"what ideas can you think of to help move Bristol towards your shared vision between now and 2050? Did anything happen in your story for Bristol that you want to try to stop or encourage?"*, following which they selected their three favourite ideas. The analysis of participants' inputs across the four breakout groups suggests six key themes, each with six or more inputs. **The most frequently mentioned ideas are highlighted in pink.**

- **Engagement** was suggested 22 times, noting the need for **better communication**, outreach, and enabling participation through **funding to pay people to attend citizens assemblies and show their time is valued**.
  - **Co-creation** was an important sub-theme: nine of the engagement-related ideas spoke directly of a transfer of power to the community, mentioning devolution, deliberative democracy, a Transport group with members of the public and of most deprived areas, or community-led trials.
- **Governance** (10 inputs) included ideas of visionary leadership; **accountability (a dedicated transport authority in charge);** rapid delivery of solutions, identifying opportunities; decision-making across administrative boundaries; delivering an integrated system; **delivering small wins to many people**; and valuing engagement.
- **Reduction of inequities** (12 inputs): participants spoke of the need to engage with and deliver for those experiencing highest levels of exclusion, mentioning: people living in deprived areas; those living in areas with poor public transport services; older and younger populations; disabled people; people on low income; or parents. This topic had overlaps with the topics of engagement and public transport.
- **Better public transport service** (12 inputs) had a strong dimension of inclusivity, noting the **need to be accessible to everyone** (reducing inequities), and encompassed **a mass-transit system that is interlinked and not radial**; more efficient systems (tram was mentioned two times); a better use of the existing local railway infrastructure, with new stations; and an all-times-of-the-day service.
- **Better street environments, better conditions for walking, cycling, and public transport** (10 inputs). The inputs were often relatively broad (mentioning for instance simply an active-travel friendly city), with a few specific mentions to inviting public spaces; streets where people feel safe to walk or cycle to any or all of their destinations; a safe cycle infrastructure / cycle super highways; more bus lanes; less traffic and traffic-related noise; better air quality; proximity to local destinations; water and toilets. Five of the inputs targeted specifically a reallocation of road space, speaking of disincentivising parking, and closing off roads to traffic, completely or at certain times. Better street environments should result in **safety across transport modes and areas**.
- **Integration** (6 mentions) referred to **interconnected modes and a single ticketing system**, across the urban area.

Participants also talked about (topics with three or more mentions) the availability of options and car independence, **affordability**, efficient logistics, and the usefulness of **trials to demonstrate effective examples** (two of the three mentions to trials stressed they should be community-led and community-run). **Learning from other cities to improve what we already have** was mentioned once but was part of the favourite ideas.

Stage 6: Testing whether the ideas could help towards achieving the vision

Each group was invited to test the ideas they had generated, identifying options that would be suitable, acceptable, and feasible within their scenario. Thirteen ideas were highlighted, and are presented under the identified topics:

- **Engagement**
  - More community-led trials
  - Better communication, bringing the residents on the journey
  - Co-creation, with citizens but also businesses and within government
  - More funding – to encourage people to participate in citizens' assemblies, enabling participation and showing that their time is valued

- **Governance**
  - A dedicated transport authority, making it clear who is in charge and accountable
  - Delivering small wins for many people, and focusing on transport-deprived areas

- **Reduction of inequities**
  - Everyone has access to public transport and shared assets
  - Delivering small wins for many people, and focusing on transport-deprived areas (noted also under governance)

- **Better public transport service**
  - A mass-transit system that is interlinked and not radial

- **Better street environments, better conditions for walking, cycling, and public transport**
  - Feeling safe to use public transport, walk, or cycle
  - Tackling the size of cars, for instance through a tax system like in Tokyo

- **Integration**
  - Integration across modes and single ticketing system

- **Affordability**
  - Affordable transport options

Participants' feedback on the workshop

After the workshop, participants were invited to fill a short online survey asking about their experience. Twenty-six out of the thirty participants responded (24 had participated to both session and two to the first session only). The feedback is summarised here.

- **Overall rating**
  - The participants were asked to rate the workshop, from 0 (very disappointing) to 10 (excellent). Twenty-five people responded.
  - The median rating was 8, with 19 participants / 25 rating the workshop7/10 or higher
- **What was disliked -** Nineteen participants reported that they disliked something about the workshop. Three topics were identified:
  - **A lack of diversity** – 8/19 participants noted the fact that demographics such as disabled people, non-white people, and workers were under-represented.
  - **A "soapbox" effect** – 6/19 participants complained about others taking too much airtime and/or being there with their own agenda, which was found to be disruptive and unhelpful.
  - **The process** – 9/19 participants were dissatisfied with the process, each one mentioning however different aspects. Interesting points included the lack of follow-up discussion to participants making a point, making that point feel "in isolation"; the fact of not engaging enough with the politics of transport planning; or the format (online vs in person).
- **What was appreciated –** Twenty-two participants noted liked aspects. The comments fell within three topics:
  - **Others' engagement and a diversity of views –** appreciated by 8/19 participants
  - **The deliberative nature of the workshop** was also appreciated by 8/19 participants, six specifically noting the benefit of breakout rooms
  - **The process** – 4/19 participants appreciated diverse aspects of the process, including the prompts to consider scenarios or to send "a radio message from the future", the tools used, the reporting back after the first workshop, and the moderators' effort to keep discussions on track
- **Achieving the aim of the workshop**
  - The participants were asked to what extent the aim of the workshop - to allow citizens to experience the opportunity and challenge of exploring and the future of Bristol and how they would shape it – was achieved, from 0 to 10. Twenty-five people responded.
  - The median rating was 8, with 18/25 responses rating the workshop 7/10 or higher
  - Those rating the achievement lower than 7/10 contributed five specific comments: the lack of diversity (three responses) and being directed (two responses).
- **Valuable insights**
  - Participants were asked if some aspects were of value, for them. Twenty-six indicated insights relating mostly to:
  - **The systemic complexity**, e.g. *I can see why it is so difficult to enact change. I can also see the overwhelming need to have an holistic vision for the city, one that takes all aspects on living here into account. You cannot superimpose transport onto the city; you need to weave it into a large vision of how we live*.
  - **Others' opinions,** including a better understanding of diverse needs
- **The overall wrap-up** given was generally positive, mentioning a friendly atmosphere, several participants finding the workshop "thought-provoking" and "valuable". Four negative comments related to the lack of representation (2), "frustrating" and "quite discursive" (both without further comment).

Conclusions

The Bristolian FUTURES Relay has demonstrated the ability to bring citizens into a participatory environment to allow their voices and ideas to shape thinking that can inform local transport planning. The experience was, overall, very positive yielding a rich set of insights from participants. Identifying a deliverable vision for change in urban mobility is not easy, especially in the face of uncertainty. Approaches such as FUTURES – for professionals and citizens alike – allow this challenge to be addressed through shared thinking, diversity of perspective and structured engagement. The workshop has been a reminder of the importance of citizen engagement both to give a voice to the community affected by change but also to benefit from citizens' perspectives alongside those from professionals in terms of planning for change for the better. It has highlighted the challenges of developing engagement methods that are as inclusive as possible while also being feasible to run as engagement sessions. It was notable during the two parts of the workshop that while encouragement had been given for participants to explore future change from a 'triple access' perspective, much less was said in the discussions concerning the role of digital accessibility. This has also been noted within similar engagement with professionals. It seems that while forms of digital accessibility are increasingly pervasive across society and influencing our patterns of activity and travel needs, it can be hard to bring them into the conversation when minds are naturally drawn to considering transport itself.

References

1. United Nations Environment Programme. (2021). *Making Peace with Nature* (No. DEW/2335/NA) (p. 168). Nairobi, Kenya. https://doi.org/10.18356/9789280738377

2. IPCC. (2023). *AR6 Synthesis Report: Climate Change 2023* (No. IPCC AR6 SYR) (p. 36). IPCC. Retrieved from https://www.ipcc.ch/report/sixth-assessment-report-cycle/

3. C40 Cities. (2018). *Summary for Urban Policymakers: What the IPCC Special Report on Global Warming of 1.5°C means for Cities* (p. 30). C40 Cities. Retrieved from https://www.c40knowledgehub.org/s/article/Summary-for-Urban-Policymakers-What-the-IPCC-Special-Report-on-Global-Warming-of-1-5-C-means-for-cities?language=en_US

4. UK Government. (n.d.). Transport and environment statistics 2022. *GOV.UK*. Retrieved 3 April 2023, from https://www.gov.uk/government/statistics/transport-and-environment-statistics-2022/transport-and-environment-statistics-2022

5. Mott MacDonald. (n.d.). FUTURES: vision-led planning for an uncertain world. Retrieved 3 April 2023, from https://www.mottmac.com/article/59966/futures-vision-led-planning-for-an-uncertain-world

6. Government Office for Science. (2017). *The Futures Toolkit: Tools for Futures Thinking and Foresight across UK Government* (p. 116). UK Government. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/674209/futures-toolkit-edition-1.pdf

7. Insight, Performance and Intelligence Service, Bristol City Council. (2022). *Bristol Key Facts 2022 - July 2022 update* (p. 15). Bristol: Bristol City Council. Retrieved from https://www.bristol.gov.uk/council-and-mayor/statistics-census-information

8. Sustrans. (2022). *Bristol Walking and Cycling Index 2021* (p. 24). Retrieved from https://www.sustrans.org.uk/the-walking-and-cycling-index/bristol-walking-and-cycling-index/

9. Bristol City Council. (2021). *Bristol Quality of Life survey 2020/21* (p. 18). Bristol. Retrieved from https://www.bristol.gov.uk/council-and-mayor/statistics-census-information/quality-of-life-in-bristol

10. Eisenberg, Y., Vanderbom, K. A., & Vasudevan, V. (2017). Does the built environment moderate the relationship between having a disability and lower levels of physical activity? A systematic review. *Preventive Medicine*, *95S*, S75–S84. https://doi.org/10.1016/j.ypmed.2016.07.019

11. Bigonnesse, C., Mahmood, A., Chaudhury, H., Mortenson, W. B., Miller, W. C., & Ginis, K. A. M. (2018). The role of neighborhood physical environment on mobility and social participation among people using mobility assistive technology. *Disability & Society*, *33*(6), 866–893. https://doi.org/10.1080/09687599.2018.1453783