SOUTH YORKSHIRE SYMCA MAYORAL COMBINED AUTHORITY
Enhanced Partnership (Bus)

ENHANCED PARTNERSHIP BOARD
4 October 2022
Item 06 - Data Plan – Exchange and Analysis

Executive Summary

Customer demand on South Yorkshire's bus network is currently c55.6m against a target of c77m customers by March 2025, which is a major challenge.

It is pivotal to urgently consider interventions that will improve customer demand in a sustainable way. Data and research can play a pivotal role in informing what interventions could be most effective in addressing the demand challenge.

This paper sets out a three-staged data plan, which looks at what data and research is available immediately for informing shorter term action. It also looks beyond to give an initial view of data and analysis gaps that could be addressed in the medium to longer term, but would offer rich information sources to support the aim of attracting more customers to the bus network.

Recommendations

It is recommended that the EP Board:

- **notes** the content of this paper setting out a three-staged data plan;
- **provides** a steer as to what data could be most beneficial in supporting demand improvement activities, on which basis the team will develop a more detailed delivery plan and;
- **endorses** the arrangement of a follow up meeting with data experts from all partners in the EP, to determine what stage 1 data is particularly useful to support demand change and to facilitate data sharing (stage 1).

Consideration by any other Board, Committee, Assurance or Advisory Panel

None

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1. Background

1.1 The EP Board recognised and discussed the very significant challenge we are facing to achieve a target of 77m passengers on our bus network by March 2025. We currently have 55.6m passengers, annualised to end May 2022, with the outturn

for 2022/23 estimated at 62.2m assuming the September 2022 bus service levels. The service reductions expected in October 2022 and further potential reductions in 2023 are likely to suppress this number. At the current 22m shortfall, we would need to generate and retain 0.75m additional passengers every month for the next 30 months to achieve the target.

1.2 The operators advise that although they report demand data to SYMCA on a regular basis, they would benefit from analysis that helps to assess and forecast changes in travel behaviours, trips (origin and destinations), and changes in economic activity to develop new service plans and attract new demand.

1.3 In response to the EP Board request, this paper sets out an initial "data plan". The aim of this plan is to collectively enhance our insights in current and emerging travelling public behaviours and opportunities from the economic and demand data, to support the Enhanced Partnership in developing interventions that attract new demand to the bus network in the short as well as the longer term.

The approach considered here is to bring together data held by operators and SYMCA to create intelligence-led interventions to improve customer demand. This should assist operators in pro-actively responding to emerging market trends (e.g. cost of living crisis aligned fares strategies, new markets to be served based on changes in economic activity).

Instead of solely considering the information we can derive from data we have today, this paper also considers gaps in intelligence and future research that could aid in improving demand for buses, which forms the "data plan" further detailed below for consideration by the EP Board.

2. Data Plan

2.1 Stage 1: Short term – What current data do we have and how could we use this information?

Although across the Partnership there is extensive information about existing travel patterns, there is less clear understanding of people's wider movements across the region. SYMCA's Transport Directors are meeting a number of research companies that have the ability to monitor people movements and travel patterns across South Yorkshire. This information will be invaluable in better tailoring bus services with people's travel needs and we will be looking to incorporate this into the work programme in the coming months.

A working group of SYMCA officers convened to look at what could be provided to bus operators and what could be developed to provide all Enhanced Partnership stakeholders with better understanding and insights that may assist in driving forward improvements in demand.

The group identified a series of **people and economic activity** related datasets that can be provided in the short term to provide indicators for current travelling needs for the public of South Yorkshire. This includes data on:

- Current national and local economic data
- Unemployment and job seekers

- Income levels
- Major employers/Job posting hotspots
- Indications into groups or profiling of population groups
- Schedule of major events (e.g. RLWC)
- Current demographics (most detailed available in Spring)
- Current employment sites/hotspots
- Current housing sites
- Major employers (private and public sector)
- Major public services (shopping or hospitals)
- Town and city centre activity via footfall

SYMCA also has a strong understanding of current **transport supply** from transport related datasets (see **Appendix A 2022 Review Transport Data Sources**):

- Supply (service levels)
- Passenger travel patterns for all customer types by location, day, time etc. enabling tracking of the proportional recovery to pre-Covid overall, by customer type and district and by operator
- Bus performance
- ENCTS passes in circulation including customer current location
- Infrastructure, including cycling
- Customer experience from surveys and customer comments
- Patronage data from comparable geographic areas
- Public transport usage (all modes) for South Yorkshire and nationally

In addition to this data, we have customer and employee survey information on behaviour change. This includes working from home impacts on travel frequency by journey purpose as well as wider context data such as post covid reductions / avoidance of public transport (see **Appendix B Research Carried Out Since 2015**).

The data available reflecting current people and economic activity, could be combined with data on the current provision of public transport to inform shorter term interventions. For example:

- Comments and feedback from customers to inform adjustments to the network.
- Pilots that could drive new demand.
- Events and working with organisers to temporarily step up and promote supply of services to drive new demand.
- Low car ownership levels from demographic data combined with data on low levels of public transport supply, but high levels of nearby people activity (e.g. employment sites, businesses, leisure) could indicate unmet transport demand.
- High unemployment rates from demographic data combined with accessible employment activity (e.g. job postings) within travelling distance, combined with low levels of public transport supply could indicate unmet transport demand.

- Average household income is an indicator of public transport affordability and could be used to shape future fares setting strategies to attract demand or improve yield.

2.2 **Stage 2: Medium term - What are the gaps in information that could support improvements in demand for the bus network?**

There are a number of key areas currently identified where there are gaps in data and insight. These mainly revolve around:

- Longer term forecasts - in very localised changes around economic activity, demographics, policy and socio-cultural changes;
- Evidence based analysis that enables:
    - forecasting of economic, socio-cultural and demographic and policy changes to changes in demand for transport;
    - forecasting of intrinsic changes in the transport system (e.g. pricing, reliability, service frequency, journey time, connectivity, punctuality, quality of service etc) to changes in demand for transport;
- Comprehensive insight into who our current bus customers are as we are lacking robust customer segmentation data – other than for ENCTS customers - identifying where current bus customers live, relevant socio-demographic information, type of ticket purchased, frequency of travel, reason for travel and potential changes to travel patterns;
- Impact of public transport availability on the economy – there is no information on how the presence of the availability of public transport impacts the local economy

Further research and analysis, with specialist analytical support, could be commissioned to build out the data we hold and develop tools to support forecasting models that could help inform future interventions to drive improvements in demand.

We recommend that the EP Board consider what further data analysis and information is to be explored, which could be detailed further through cross-organisational workshops, that could inform a priced proposal for further analysis and development of modelling tools to be considered by the EP Board.

It is envisaged that the data and information above, would provide tools to support the forecasting of localised changes in travel patterns and support changes to the provision of services, fares, service quality, any supporting policy changes and investment priorities to help optimise current customer demand and attract new demand.

2.3 **Stage 3 – Longer term – What progress have we made in data collection?**
Looking beyond existing travel patterns and demand for the current bus network, there is a desire to better understand emerging and future changes in the needs for transport for the people of South Yorkshire. This is in order to understand how we can best respond to these emerging and future needs through the provision of bus services.

Long term geographical changes to demand
Strategic planning or housing or employment sites are likely to change demand over the long term. There is good information on where developments are expected for

housing and employment sites. The East of Doncaster providing an interesting case study in how demand may shift or increase because of both housing and employment.

Strategy led growth
A wider review of the impact of potential policy interventions, not restricted to transport, on patronage would be useful to understand the positive and negative impacts that may be arising in the future.

Economic impact
The MCA has done some further analysis on demand trends such as how the pandemic is influencing economic activity (available here) and how household fragility is geographically dispersed (draft available here). These projects can help shape our understanding of how demand for public transport could change.

Demand modelling, preference, and behaviour dynamics require deeper scientific understanding. There are several potential suppliers of this information including academics, industry specialists and experimental modellers.

Behaviour change
The pandemic has precipitated behaviour changes for many workers. South Yorkshire has fewer employees in office-based jobs than other areas, but other factors are shaping how people get to work, where they work, and the decisions made. From a cost perspective, any upward trends in oil prices may swing demand favourably towards public transport from cars (although other factors also drive behaviour change).

SYMCA is looking to gather data on the impact of Covid on future travel patterns in the Annual Travel Survey which could be available in early 2023.

Transport data challenges
We do have strong and robust transport related datasets however, there are some limitations. For example, transport data tends to focus on commuting patterns and main journey purpose, failing to capture more complex trip chains (such as those involved in the mobility of care.) The census transport questions for example only ask about work journeys, potentially skewing planning and funding towards these journeys. Transport usage is not gender neutral and yet often transport data, modelling and appraisal is gender blind.

These and other challenges are being identified as part of an integrated Urban Transport Group workstream, with the aim to address gaps and issues. The first meeting, including SYMCA representation, was 12 September 2022 and regular progress updates will be disseminated.

Wider demand and forecasts
Whilst wider societal and environmental factors shape decision making, the cost-of-living crisis is impacting decisions on using public transport, cars, and leisure. The MCA has economic models which forecast the economy, but these are utilised carefully. Forecasting or projecting bus demand can be done fairly accurately in the short term but over the longer term this can be challenging; models with ability to make changes remain useful to help make decisions, understand interdependencies and plan likely developments.

Wider benefits of public transport
There is a lack of data and research to assess (and then promote) the wider benefits of public transport such as carbon reduction, economic productivity, net zero and healthy life expectancy.

3. Recommendations for Enhanced Partnership Board

3.1 It is recommended that a meeting is held to explore in greater detail what information would be beneficial to bus operators in supporting plans to improve demand. This may need to be supported by formal data sharing agreements, which can be explored at the meeting.

Informed by further engagement on data needs and a steer from the EP Board, it is recommended that further detailed research requests are explored and one further step could be to commission research on specific aspects of how demand may be shaped going forward.

List of Appendices Included:

Appendix A 2022 Review Transport Data Sources
Appendix B Research Carried Out Since 2015