



# Tram Passenger Survey

Key findings  
Autumn 2016





Jeff Halliwell

# Foreword

Transport Focus seeks improvements for transport users by understanding their needs and experiences, measuring passenger satisfaction across numerous transport modes. Our latest Tram Passenger Survey (TPS) benchmarks six tram operators and authorities against one another across robust measurements of satisfaction, gathered from nearly 5400 passenger responses. Last autumn, the fourth annual survey revealed Edinburgh Trams to be 'best in class' with a 99 per cent overall journey satisfaction score.

Since the first survey in 2013, continued investment in re-engineering, new lines, infrastructure and trams, as well as, initiatives designed to improve the offering to tram passengers, has created more opportunities to take more journeys. In four years the number of passengers travelling across the six networks has increased from 55 million to 75 million.

Across the six networks surveyed, overall satisfaction has reached its highest point at 93 per cent, driven by improvements in two key areas: punctuality and reliability.

Edinburgh Trams has achieved the best ever result for any network surveyed in the TPS, with a near perfect score. Passengers rated it highly for journey experience, value for money, punctuality and their experience waiting at tram stops.

As reported in previous surveys, the impact on the passenger experience is apparent when a network expands. Delivering new investment has created more challenges as more passengers are taking more journeys. These growing pains will need close monitoring by operators and authorities to manage overcrowding and seat availability for a better passenger experience.

Delivering these improvements can cause daily journeys to be fraught with uncertainty during periods of disruption: passengers need both a timely service and accurate information. Tram operators must balance these issues otherwise it can increase passenger dissatisfaction.

Midland Metro's work on the extension to Birmingham New Street station caused a sharp decline in passenger satisfaction in 2015 due

to the severe service disruption. Therefore, the recovery in its overall results from 81 per cent in the last survey to 92 per cent is welcome. Similarly, the construction of Manchester Metrolink's Second City Crossing has proved a challenge for passengers on a daily basis, and was completed after our research was conducted. The increase in capacity and flexibility should see progress in future passenger satisfaction levels.

This coming year should see a relatively stable and consistent service for passengers across the majority of the surveyed networks, with major engineering works limited to Midland Metro.

The TPS is increasingly recognised as a benchmark for understanding the passenger experience and the survey is being used by local authorities to plan improvements. Future surveys will explore further why tram journeys achieve higher overall passenger satisfaction than other modes.

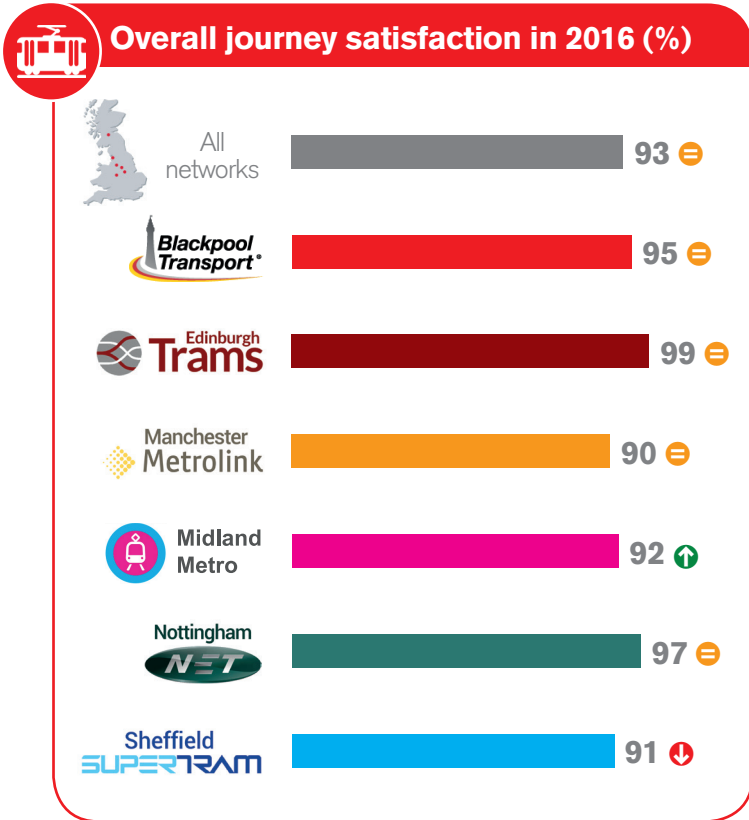
We are grateful for the cooperation and additional funding from the six tram operations covered in the survey: Blackpool Transport, Edinburgh Trams, Nottingham Trams, South Yorkshire Passenger Transport Executive, Transport for Greater Manchester and Transport for West Midlands. This has helped boost the size of the survey providing an even more robust picture of passenger experiences.

A handwritten signature in black ink that reads "Jeff Halliwell".

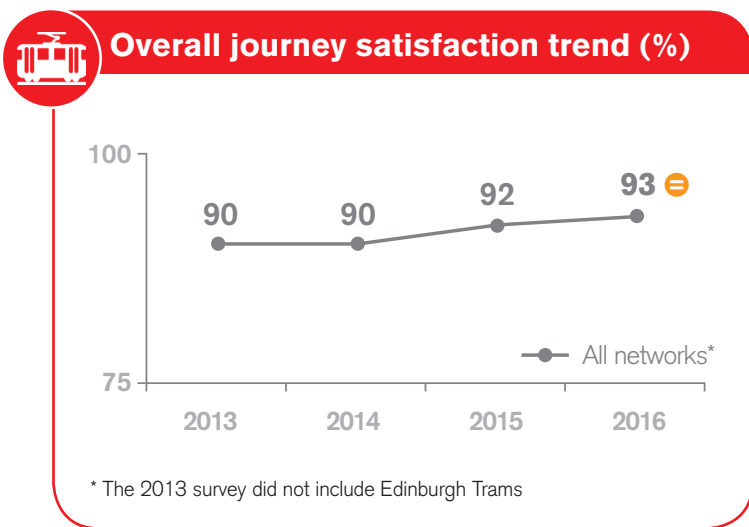
**Jeff Halliwell**  
Chair  
Transport Focus

# Key findings

## Overall satisfaction with the journey



- Across all six tram networks **overall satisfaction** with the journey has increased slightly since 2015, from 92 to 93 per cent. The number of passengers saying they were 'very satisfied' with their journey has also increased, from 57 per cent in 2015 to 59 per cent in 2016.
- Satisfaction is high across all networks although ratings of Sheffield Supertram have decreased significantly since 2015 (to 91 per cent).
- The largest increase in overall journey satisfaction has been seen on Midland Metro services, increasing significantly from 81 per cent in 2015 to 92 per cent. The 2015 score was influenced by network improvement works being conducted during fieldwork (the survey was conducted over a period in which the improvement works started); overall journey satisfaction before the works began was 85 per cent, which provides a better like-for-like comparison. In contrast, the network extension into Birmingham city centre opened before fieldwork started in 2016, and there were no major engineering works during the survey period. The increase from 85 per cent (before the 2015 improvement works began) to 92 per cent (in 2016) is still a significant increase in overall journey satisfaction.



↑ Statistically significant increase since 2015  
 = No change  
 ↓ Statistically significant decrease since 2015

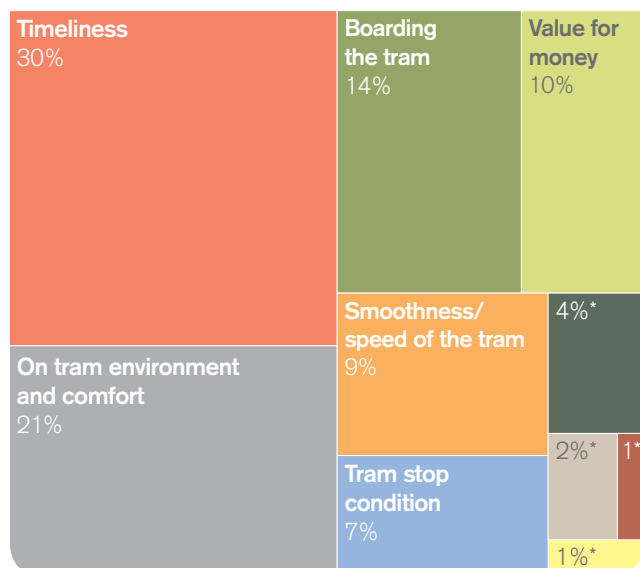


## What makes a satisfactory or great journey?

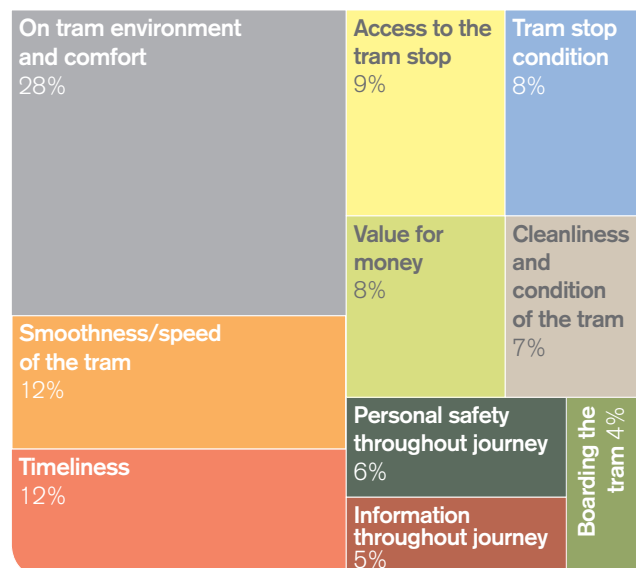


### The top factors linked to overall journey satisfaction\*

#### What makes a satisfactory journey?



#### What makes a great journey?



- The key factor which makes tram journeys satisfactory for passengers is the **timeliness** of trams. Satisfaction with punctuality has increased significantly to 88 per cent (2015: 86 per cent) and satisfaction with waiting time has also increased significantly to 88 per cent (2015: 84 per cent).
- The key factor which makes passengers 'very' rather than 'fairly' satisfied with tram journeys (that is, what makes for a 'great' journey) is the **environment and comfort on board** the tram. Attributes relating to this have remained relatively consistent compared to 2015, with passenger satisfaction changing significantly for only one on board factor: amount of personal space. This decreased significantly to 73 per cent (2015: 76 per cent).



### How the top factors linked to overall journey satisfaction performed in 2016

#### What makes a satisfactory journey?

##### Timeliness

88% Length of time waiting for the tram

88% Punctuality

Statistically significant increase since 2015

No change

Statistically significant decrease since 2015

#### What makes a great journey?

##### On tram environment and comfort

78% Availability of seating or space to stand

77% Comfort of the seats

73% Amount of personal space

81% Provision of grab rails

83% Temperature

\*See page 13 for an explanation of how these themes were calculated

## Other findings

- Amongst fare-paying passengers 69 per cent were satisfied with the **value for money** of their journey, the same as in 2015.
- When evaluating whether their journey represented value for money passengers' main criteria were the cost for the distance travelled and the cost of the tram versus other modes of transport.
- When thinking more generally about trams in the local area (rather than a specific journey) passengers are generally satisfied with a range of factors. These included connections with other modes of transport (87 per cent satisfied), ease of buying tickets (86 per cent), punctuality (83 per cent) and frequency of trams (84 per cent). The slightly lower levels of general satisfaction (compared to satisfaction with a specific journey) indicate that there is still room for improvement and that not all journeys meet the same experience as that captured in the survey.
- While overall journey satisfaction was high, 33 per cent of passengers did spontaneously **suggest an improvement** to their journey. These varied by network but mostly concerned the design, comfort and condition of trams (particularly for Midland Metro and Nottingham).
- Other improvements frequently mentioned included the seating and capacity on board trams (mostly for Metrolink) and the fares and tickets available (particularly in Edinburgh).
- Eight per cent of passengers experienced a delay to their journey in 2016 (2015: 9 per cent), and when delayed the average length of delays was 10 minutes (2015: 12 minutes).
- Seven per cent of passengers were troubled by the **anti-social behaviour** of other passengers. When there was cause for concern this related mostly to rowdy behaviour.
- Almost half (47 per cent) of passengers were using the tram to **commute**, with 39 per cent commuting to work and 8 per cent to education.
- The **profile** of tram passengers remains quite young, with 23 per cent aged 16-25. However, Blackpool has the oldest profile with over a third (37 per cent) aged 60 or over.

## Passenger experience in 2016 across the networks (%)



All networks



### Satisfaction with key measures:

Measure	All networks	Blackpool Transport	Edinburgh Trams	Manchester Metrolink	Midland Metro	Nottingham NET	Sheffield SUPERTRAM
Overall journey	93 =	95 =	99 =	90 =	92 ↑	97 =	91 ↓
Value for money	69 =	86 =	83 =	62 ↑	68 =	78 =	71 ↓
Punctuality	88 ↑	94 =	94 =	86 ↑	87 =	96 =	82 =
Overall stop	90 =	91 =	97 =	89 =	88 =	94 =	89 ↓

### Satisfaction with other measures which make a satisfactory journey:\*

Length of time waiting for the tram	88 ↑	94 ↑	94 =	85 ↑	86 =	95 =	84 =
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### Satisfaction with other measures which make a great journey:\*

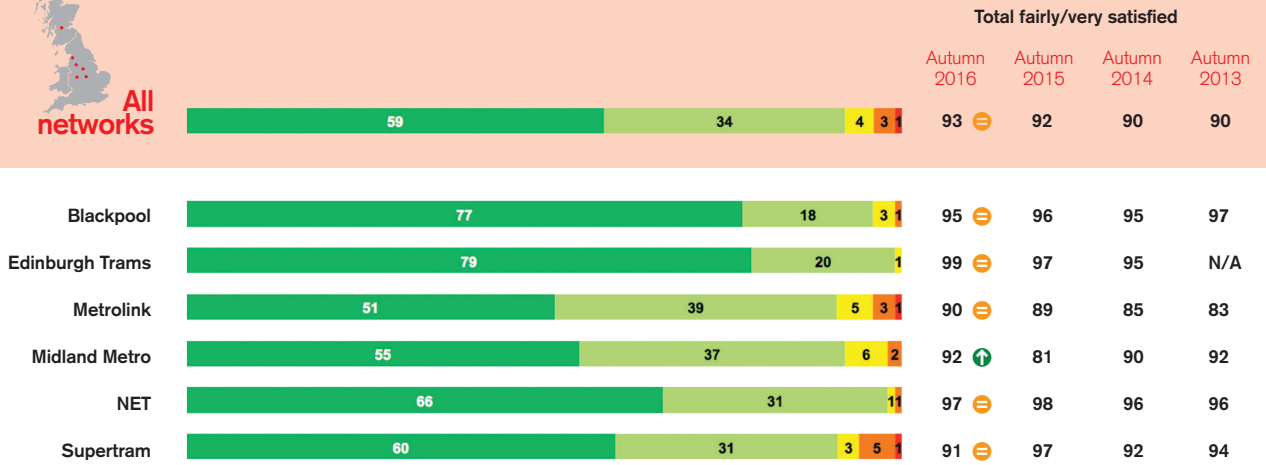
Space to sit or stand on boars	78 =	87 =	90 =	74 =	70 =	80 =	79 =
Comfort of seats	77 =	88 =	94 =	73 =	53 =	81 =	86 =
Amount of personal space on board	73 ↓	83 =	89 =	71 =	61 =	72 =	74 ↓
Provision of grab rails	81 =	90 =	91 =	80 =	72 =	79 =	84 =
Temperature on board	83 =	90 =	89 =	81 =	78 =	83 =	84 =

\*Drivers of satisfaction differ by network. The most common drivers across TPS are shown here

↑ Statistically significant increase since 2015    = No change    ↓ Statistically significant decrease since 2015



## Overall satisfaction with the tram journey (%)



### Q Overall, taking everything into account from the start to the end of this tram journey, how satisfied were you with your tram journey today?

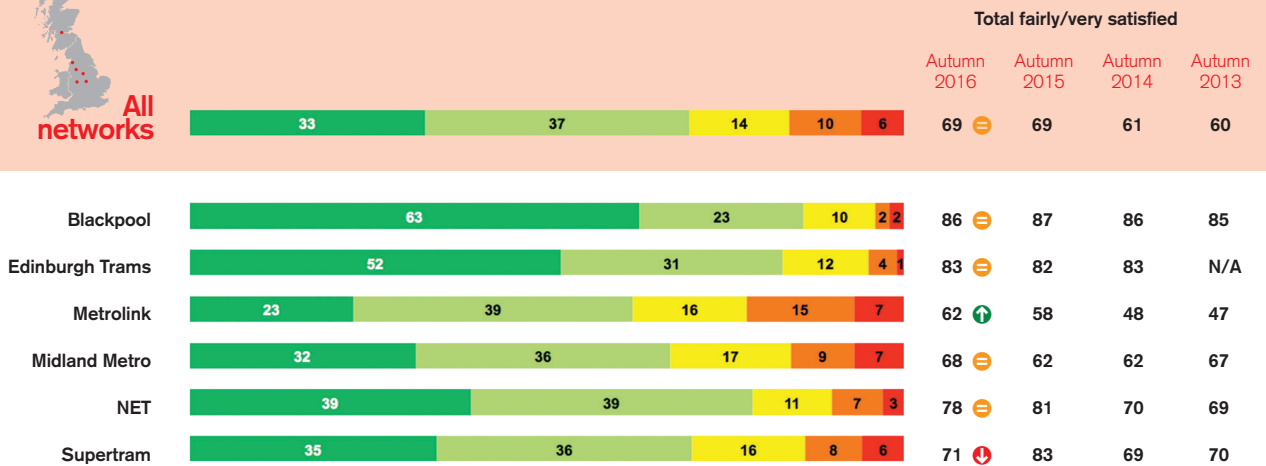
Base: all passengers – 5281 (All networks), 569 (Blackpool), 515 (Edinburgh Trams), 3022 (Metrolink), 607 (Midland Metro), 289 (NET), 279 (Supertram)

■ Very satisfied  
 ■ Fairly satisfied  
 ■ Neither/nor  
 ■ Fairly dissatisfied  
 ■ Very dissatisfied

↑ Statistically significant increase since 2015  
 = No change  
↓ Statistically significant decrease since 2015



## Value for money – fare-payers only (%)



### Q How satisfied were you with the value for money of your journey?

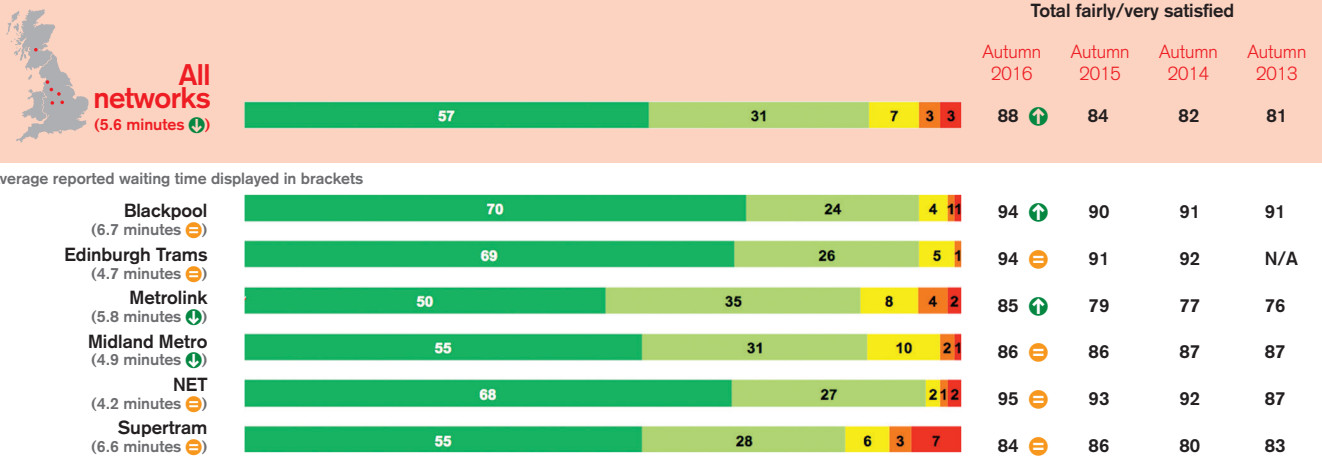
Base: all fare-paying passengers – 3715 (All networks), 448 (Blackpool), 431 (Edinburgh Trams), 1978 (Metrolink), 516 (Midland Metro), 174 (NET), 168 (Supertram)

■ Very satisfied  
 ■ Fairly satisfied  
 ■ Neither/nor  
 ■ Fairly dissatisfied  
 ■ Very dissatisfied

↑ Statistically significant increase since 2015  
 = No change  
↓ Statistically significant decrease since 2015



Satisfaction with waiting time (%)



Q How satisfied were you with the length of time you had to wait for the tram?

Base: all passengers – 5246 (All networks), 558 (Blackpool), 521 (Edinburgh Trams), 3003 (Metrolink), 606 (Midland Metro), 283 (NET), 275 (Supertram)

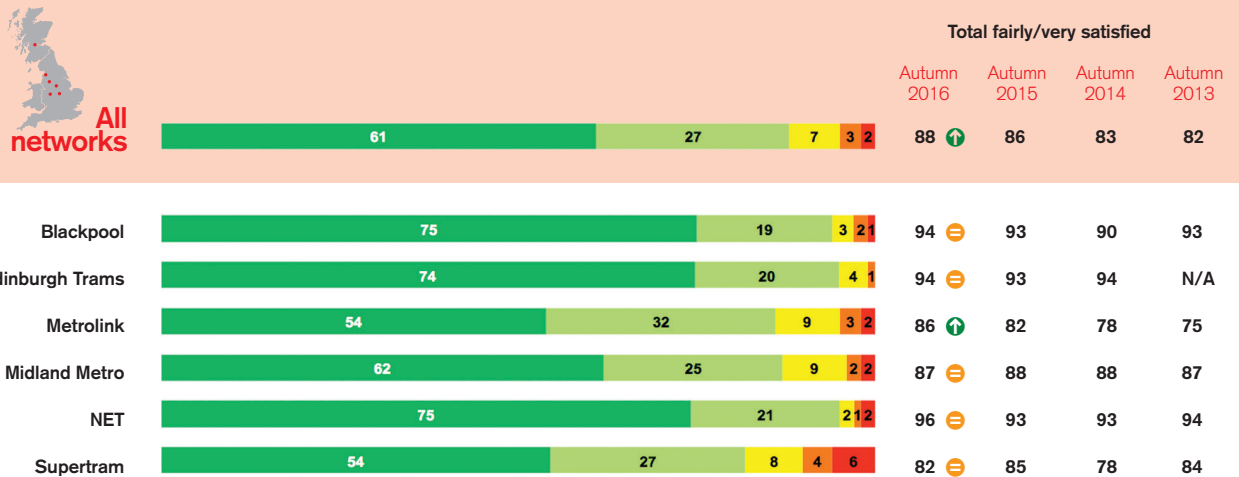
Very satisfied Fairly satisfied Neither/nor Fairly dissatisfied Very dissatisfied

⬇️ Statistically significant reduction in waiting time since 2015

⬆️ Statistically significant increase since 2015 ⚖️ No change ⬇️ Statistically significant decrease since 2015



Satisfaction with punctuality of the tram (%)



Q How satisfied were you with the punctuality of the tram?

Base: all passengers – 4922 (All networks), 524 (Blackpool), 485 (Edinburgh Trams), 2810 (Metrolink), 575 (Midland Metro), 272 (NET), 256 (Supertram)

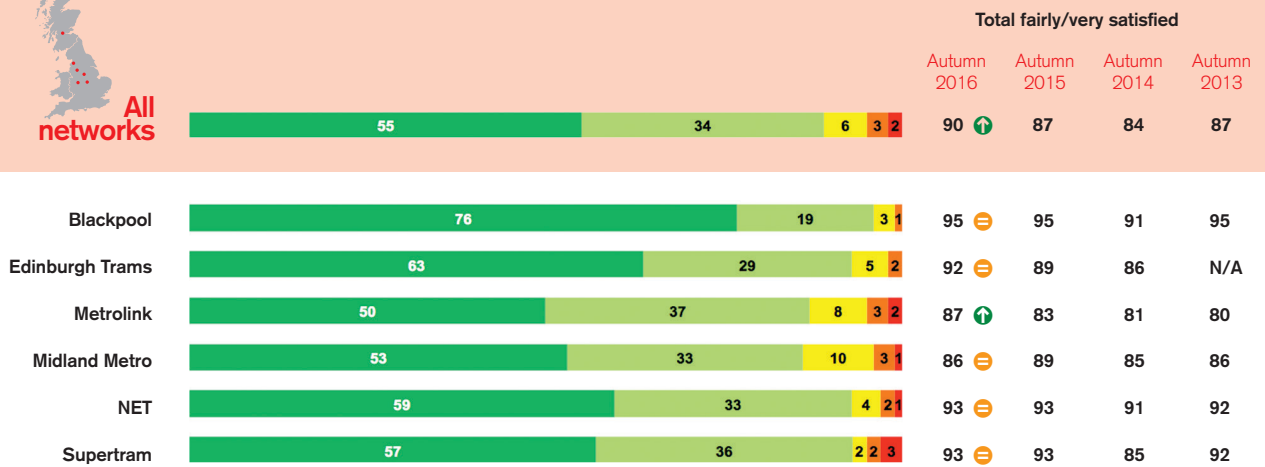
Very satisfied Fairly satisfied Neither/nor Fairly dissatisfied Very dissatisfied

⬆️ Statistically significant increase since 2015 ⚖️ No change ⬇️ Statistically significant decrease since 2015





## Satisfaction with on-tram journey time (%)



### Q How satisfied were you with the amount of time the journey took?

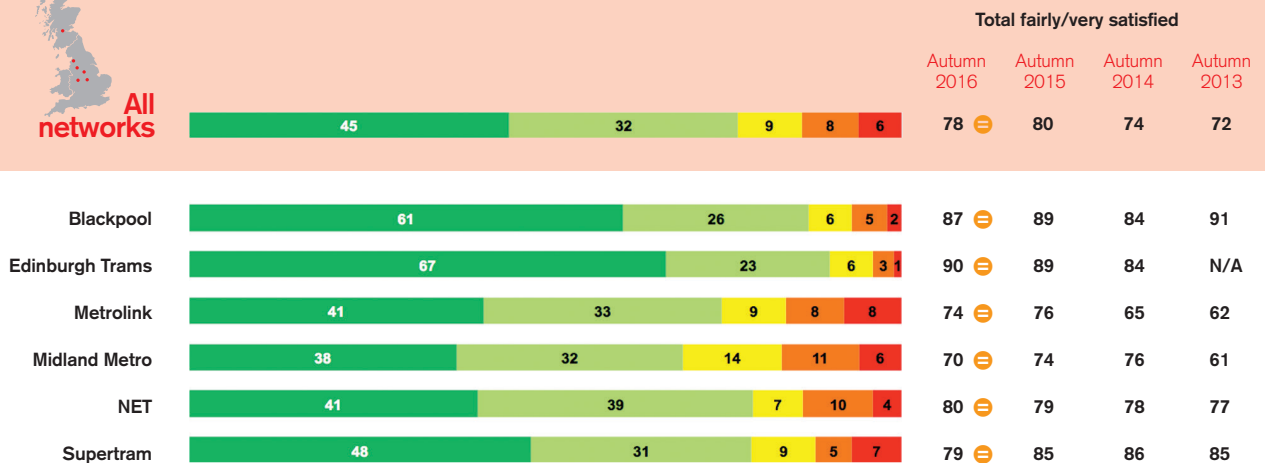
Base: all passengers – 5184 (All networks), 559 (Blackpool), 511 (Edinburgh Trams), 2967 (Metrolink), 591 (Midland Metro), 281 (NET), 275 (Supertram)

■ Very satisfied  
 ■ Fairly satisfied  
 ■ Neither/nor  
 ■ Fairly dissatisfied  
 ■ Very dissatisfied

↑ Statistically significant increase since 2015  
 ⊖ No change  
 ↓ Statistically significant decrease since 2015



## Satisfaction with availability of seating or space to stand (%)



### Q Thinking about whilst you were on the tram, please indicate how satisfied you were with sufficient room for all passengers to sit/stand?

Base: all passengers – 5204 (All networks), 556 (Blackpool), 515 (Edinburgh Trams), 2978 (Metrolink), 602 (Midland Metro), 280 (NET), 273 (Supertram)

■ Very satisfied  
 ■ Fairly satisfied  
 ■ Neither/nor  
 ■ Fairly dissatisfied  
 ■ Very dissatisfied

↑ Statistically significant increase since 2015  
 ⊖ No change  
 ↓ Statistically significant decrease since 2015



Satisfaction with the tram stop (%)



Total fairly/very satisfied

	Total fairly/very satisfied				Autumn 2016	Autumn 2015	Autumn 2014	Autumn 2013
All networks	53	38	6	3	90	91	91	91
Blackpool	64	26	5	3	91	92	92	93
Edinburgh Trams	74	23	2	1	97	96	97	N/A
Metrolink	45	43	7	3	89	88	86	87
Midland Metro	49	39	10	2	88	90	88	90
NET	63	31	4	2	94	95	95	98
Supertram	50	39	8	3	89	94	96	93

Q Overall, how satisfied were you with the tram stop?

Base: all passengers – 5270 (All networks), 563 (Blackpool), 521 (Edinburgh Trams), 3019 (Metrolink), 606 (Midland Metro), 286 (NET), 275 (Supertram)

Very satisfied Fairly satisfied Neither/nor Fairly dissatisfied Very dissatisfied

Statistically significant increase since 2015 No change Statistically significant decrease since 2015



JON PARKER LEE

# Our aim

We wanted to measure tram passenger journey satisfaction for six tram networks in Britain:

- Blackpool
- Edinburgh Trams
- Manchester Metrolink
- Midland Metro (Birmingham/Wolverhampton)
- Nottingham Express Transit (NET)
- Sheffield Supertram.

A detailed overview report together with individual reports for each tram network are available on our website via <http://bit.ly/tram-passenger-survey>

This report shows statistically significant differences compared to the Autumn 2015 Tram Passenger Survey. Some of these significant differences can be explained by changes to the tram networks since the 2015 fieldwork. These include:

- the opening of the Midland Metro extension from Snow Hill to New Street (Grand Central) and a corresponding rise in passenger journey volumes
- significant recent or ongoing engineering works in Manchester (Exchange Square and link to Victoria had re-opened, but work on the second city crossing was still under way).

Blackpool Transport, Transport for Greater Manchester (Manchester Metrolink), Transport for West Midlands (Midland Metro) and Nottingham Trams Ltd (NET) contributed funding to the research to allow for a larger, more robust sample to be undertaken on their networks. South Yorkshire PTE contributed funding to the research to allow for a separate report to be produced for Sheffield Supertram. Edinburgh Trams covered the full cost of the research on its network (this being outside the statutory remit of Transport Focus).

# How we did it

## Fieldwork

**Fieldwork:** 26 September to 4 December 2016. In 2015 fieldwork took place between 17 September and 25 November

**Interviewer shifts:** covered all days of the week and ran from 6am to 10pm. Each interviewer worked a three-hour shift







**Method:** choice of either paper questionnaire or online self-completion questionnaire.

## Sample size:

- **Blackpool:** 575 interviews (423 paper and 152 online)
- **Edinburgh Trams:** 533 interviews (525 paper and 8 online)
- **Manchester Metrolink:** 3073 interviews (2541 paper and 532 online)
- **Midland Metro:** 637 interviews (587 paper and 50 online)
- **Nottingham Express Transit (NET):** 296 interviews (246 paper and 50 online)
- **Sheffield Supertram:** 283 interviews (234 paper and 49 online).

**Research agency:** BDRC Continental

## The networks in context: Autumn 2016

	The network	Passenger journeys*	Ticket purchasing	Information at stops	Frequency	Engineering disruptions/other notes
	1 line 38 stops 11 miles	4.9* million	✗ TVMs at stops ✓ Conductors on board	✓ Info boards at stops (TTs, fares) ✗ Passenger Info Displays	Mon-Sat: every 15-30 mins Sun: 20-30 mins	<ul style="list-style-type: none"> <li>Blackpool illuminations 1 Sep to 5 Nov 2016</li> <li>Heritage trams operate bank holidays, weekends and summer; not covered in this research</li> <li>No significant issues affected fieldwork</li> </ul>
	1 line 16 stops 8.7 miles	5.5** million	✓ TVMs at stops ✗ Conductors on board	✗ Info boards at stops (TTs, fares) ✓ Passenger Info Displays	Mon-Sat: every 8-10 mins Sun: 12-15 mins	<ul style="list-style-type: none"> <li>Network opened 31 May 2014</li> <li>No significant issues affected fieldwork</li> </ul>
	7 lines 93 stops 57 miles	36** million	✓ TVMs at stops ✗ Conductors on board	✓ Info boards at stops (TTs, fares) ✓ Passenger Info Displays	Mon-Sat: every 6-12 mins Sun: 12-15 mins	<ul style="list-style-type: none"> <li>Airport line opened late 2014, covered for first time in 2015</li> <li>Exchange Square and link with Victoria opened in December 2015</li> <li>Increasing use of double carriage trams</li> </ul>
	1 line 26 stops 13 miles	6.1** million	✓ TVMs at stops ✓ Conductors on board	✓ Info boards at stops (TTs, fares) ✓ Passenger Info Displays	Mon-Sat: every 6-15 mins Sun: 15 mins	<ul style="list-style-type: none"> <li>Network extension to Grand Central (New Street Station) opened on 30 May 2016 and was included in the TPS 2016</li> <li>No significant issues affecting fieldwork</li> </ul>
	2 lines 50 stops 20 miles	12.2* million	✓ TVMs at stops ✗ Conductors on board	✓ Info boards at stops (TTs, fares) ✓ Passenger Info Displays	Mon-Sat: every 3-15 mins Sun: 5-15 mins	<ul style="list-style-type: none"> <li>No significant issues affecting fieldwork</li> </ul>
	3 lines 48 stops 18 miles	11.6* million	✗ TVMs at stops ✓ Conductors on board	✓ Info boards at stops (TTs, fares) ✗ Passenger Info Displays	Mon-Sat: every 5-20 mins Sun: 10-20 mins	<ul style="list-style-type: none"> <li>No significant issues affecting fieldwork</li> </ul>

\*Source: Department for Transport, *Passenger journeys on light rail and trams by system in England, 2015/16*

\*\*Source: Direct from operator

## Data analysis

### Base definitions

All charts are based on those who gave an answer to an individual question. Those who either left the question blank or said 'don't know' have been excluded from the base. For this reason the base sizes for those charts based on 'All passengers' vary slightly between the different charts in this report.

### Autumn 2015 comparison

Significant changes between the 2015 and 2016 survey results are shown at the 95 per cent confidence level. ↑ ↓ symbols are used throughout this report to indicate significant positive or negative changes.

### Weighting

This was based on a combination of information published by the Department for Transport about the annual number of passenger

journeys taking place on each network, information provided by each of the operators about how these journeys are split by line (where relevant) and by days of the week and times of day, and passenger profile reports made by interviewers during each fieldwork shift (in which they recorded the age and gender profile of passengers on a cross section of tram journeys). We weighted the responses in the following ways:

- tram network: (by line for those networks which were surveyed at both route and overall network level)
- age: 16-25, 26-59, 60+ (and not stated)
- gender: male, female (and not stated)
- time/day travelled: weekday am peak, weekday pmpeak, weekday off peak and weekend.

Further weighting was applied across each of these by volume of passengers using each network. Full details of the weighting scheme can be found in the TPS Autumn 2016 technical report.

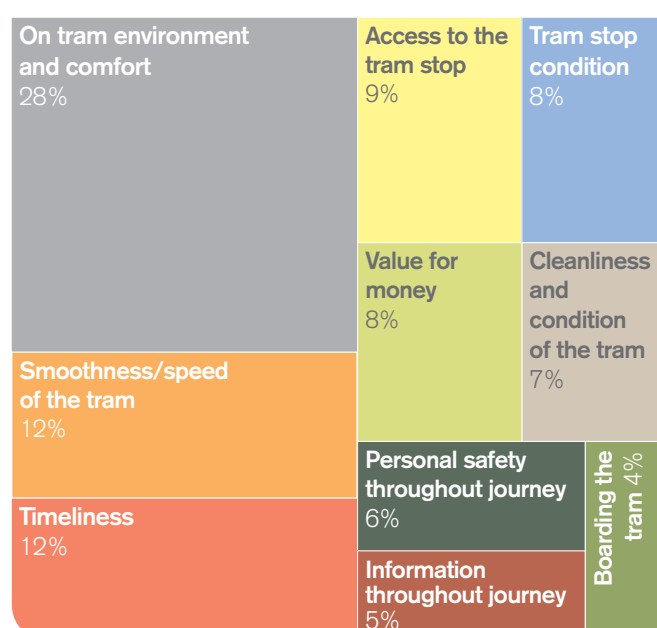
## Themes that are affecting overall passenger satisfaction charts

This year, we introduced a new approach for identifying the key drivers of overall journey satisfaction amongst bus passengers, comprising two stages. At the first stage, we took all 25 individual satisfaction measures from the survey (apart from the overall journey satisfaction) and formed them into themes using a statistical technique known as factor analysis. This groups together those satisfaction measures that are responded to similarly within the data. For instance, where high or low scores are given for measure 'x', there tends to be a similar rating for measures 'y' and 'z', so the 'factor' or theme becomes 'A'. Through this process we identified ten themes, which are shown below, alongside measures that formed each theme.

Theme (factor)	Questions
1 On tram environment and comfort	<ul style="list-style-type: none"> <li>Sufficient room for all passengers to sit/stand</li> <li>The comfort of the seats</li> <li>The amount of personal space you had around you</li> <li>Provision of grab rails to hold on to when standing/moving about the tram</li> <li>The temperature inside the tram</li> </ul>
2 Tram stop condition	<ul style="list-style-type: none"> <li>Its general condition/standard of maintenance</li> <li>Its freedom from graffiti/vandalism</li> <li>Its freedom from litter</li> </ul>
3 Boarding the tram	<ul style="list-style-type: none"> <li>The ease of getting on to and off of the tram</li> <li>The length of time it took to board the tram</li> </ul>
4 Timeliness	<ul style="list-style-type: none"> <li>The length of time you had to wait for the tram</li> <li>The punctuality of the tram</li> </ul>
5 Access to the tram stop	<ul style="list-style-type: none"> <li>Its distance from your journey start e.g. home, shops</li> <li>The convenience/accessibility of its location</li> </ul>
6 Personal safety throughout journey	<ul style="list-style-type: none"> <li>Behaviour of fellow passengers waiting at the stop</li> <li>Your personal safety whilst at the tram stop</li> <li>Your personal security whilst on the tram</li> </ul>
7 Cleanliness and condition of the tram	<ul style="list-style-type: none"> <li>The cleanliness and condition of the outside of the tram</li> <li>The cleanliness and condition of the inside of the tram</li> </ul>
8 Smoothness/speed of the tram	<ul style="list-style-type: none"> <li>The amount of time the journey took</li> <li>Smoothness/freedom from jolting during the journey</li> </ul>
9 Information throughout journey	<ul style="list-style-type: none"> <li>The information provided at the tram stop</li> <li>Route/destination information on the outside of the tram</li> <li>The information provided inside the tram</li> </ul>
10 Value for money	<ul style="list-style-type: none"> <li>How satisfied were you with the value for money of your tram journey?</li> </ul>

For the second stage, these themes were then used to identify how much effect each one has on passengers' rating for overall journey satisfaction, by means of a key driver analysis.

The square diagrams show the proportional influence that each theme has on satisfaction for that area/operator. They should be read like a pie chart where the slices or portions are relative to each other and together add up to 100%. So in the example below, the theme of 'on tram environment and comfort' (shaded grey) has the greatest influence on satisfaction, followed by 'smoothness/speed of tram', while themes such as 'boarding the tram' and 'information throughout journey' have relatively little influence here.



This analysis was only conducted on fare-paying passengers so that the influence of value for money could be included. It also combines data from 2015 and 2016 surveys to increase robustness. The analysis excludes satisfaction measures relating to tram staff. Due to differences in staff availability across the networks, not all TPS questionnaires feature questions about tram staff. In order to run the analysis in a consistent and practical manner all staff measures have been excluded.

There are noticeable and interesting differences in the impact of different themes between the various tram networks.

### Waiver

Transport Focus has taken care to ensure that the information contained in TPS is correct. However, no warranty, express or implied, is given as to its accuracy and Transport Focus does not accept any liability for error or omission.

Transport Focus is not responsible for how the information is used, how it is interpreted or what reliance is placed on it. Transport Focus does not guarantee that the information contained in TPS is fit for any particular purpose.





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