Department for Transport

Light Rail and Tram Statistics, England: 2017/18

About this release

This statistical release presents the latest annual information on light rail and tram systems in England during the 2017/18 financial year. The release covers light rail and tram use, infrastructure, revenue and passenger experience.

This publication covers eight urban systems that are predominantly surface-running (see table 1 for a list of systems covered). Smaller systems, e.g. heritage railway and airport transit systems, are not included. London and Glasgow undergrounds and Edinburgh Trams are also excluded but statistics for these systems are available online.

England figures for light rail and tram use decreased by 0.2% in 2017/18, the first decrease since 2009/10. However, outside London passenger journeys increased by 2.4%.

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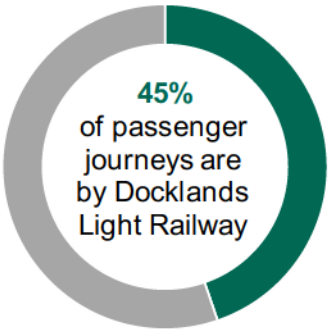
There were 267.2 million passengers journeys made on the eight light rail and tram systems in England, a 0.2% (416,000 passenger journeys) decrease compared with the previous year. This is the first time passenger journeys have decreased since 2009/10.

Despite this, passenger journeys on Blackpool Tramway, Manchester Metrolink and Nottingham Express Transit increased when compared to the previous year.



Almost half (45%) of journeys in 2017/18 consisted of those made on Docklands Light Railway.

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Light Rail and Tram Factsheet

Passenger journeys

267.2 million passenger journeys

15.4 passenger journeys per head

Passenger journeys decreased by 0.2% in 2017/18.

Concessionary journeys

33.3 million passenger journeys

12% of all light rail passenger journeys were concessionary

Revenue

£371.5 million revenue from passenger journeys

of which **£30.7 million** concessionary revenue

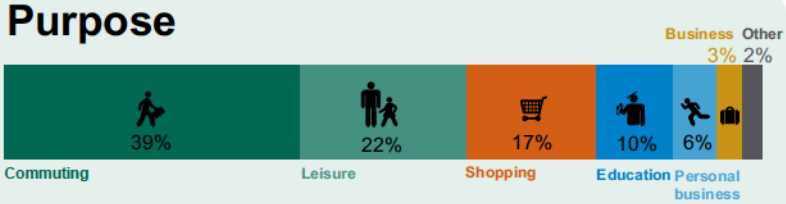
£1.39 average revenue per passenger journey

£0.92 average revenue per concessionary journey

46% of passenger revenue came from Docklands Light Railway

Revenue increased by 3% in 2017/18.

Purpose



Commuting, leisure and shopping are the most common purposes for journeys.

Source: National Travel Survey

3% of public transport journeys are made on a light rail or tram.

Infrastructure

212 route miles ➲ 0.0%

400 stations ➲ 0.0%

512 carriages ➚ 0.2%

Stage time

Stage: Trips consist of one or more stages. A new stage is defined when there is a change in the mode of transport.

Most stages are 15 to under 30 minutes.

Source: National Travel Survey

Passenger satisfaction

91% of passengers are satisfied with their overall journey (93% in 2016)

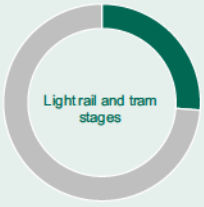
68% of fare paying passengers are satisfied with the value for money for their journey (69% in 2016)

88% of passengers are satisfied with the punctuality of the tram (same as 2016)

75% of passengers are satisfied with the availability of seating or space to stand (78% in 2016)

Source: Transport Focus

Users



25%

A quarter of stages are carried out by those aged 21 to 29

stages per year	9	8
distance (miles)	39	37

Source: National Travel Survey

Summary figures

Table 1 summarises the latest light rail and tram annual figures. Figures for England are shown for each tram system in London and England outside London.

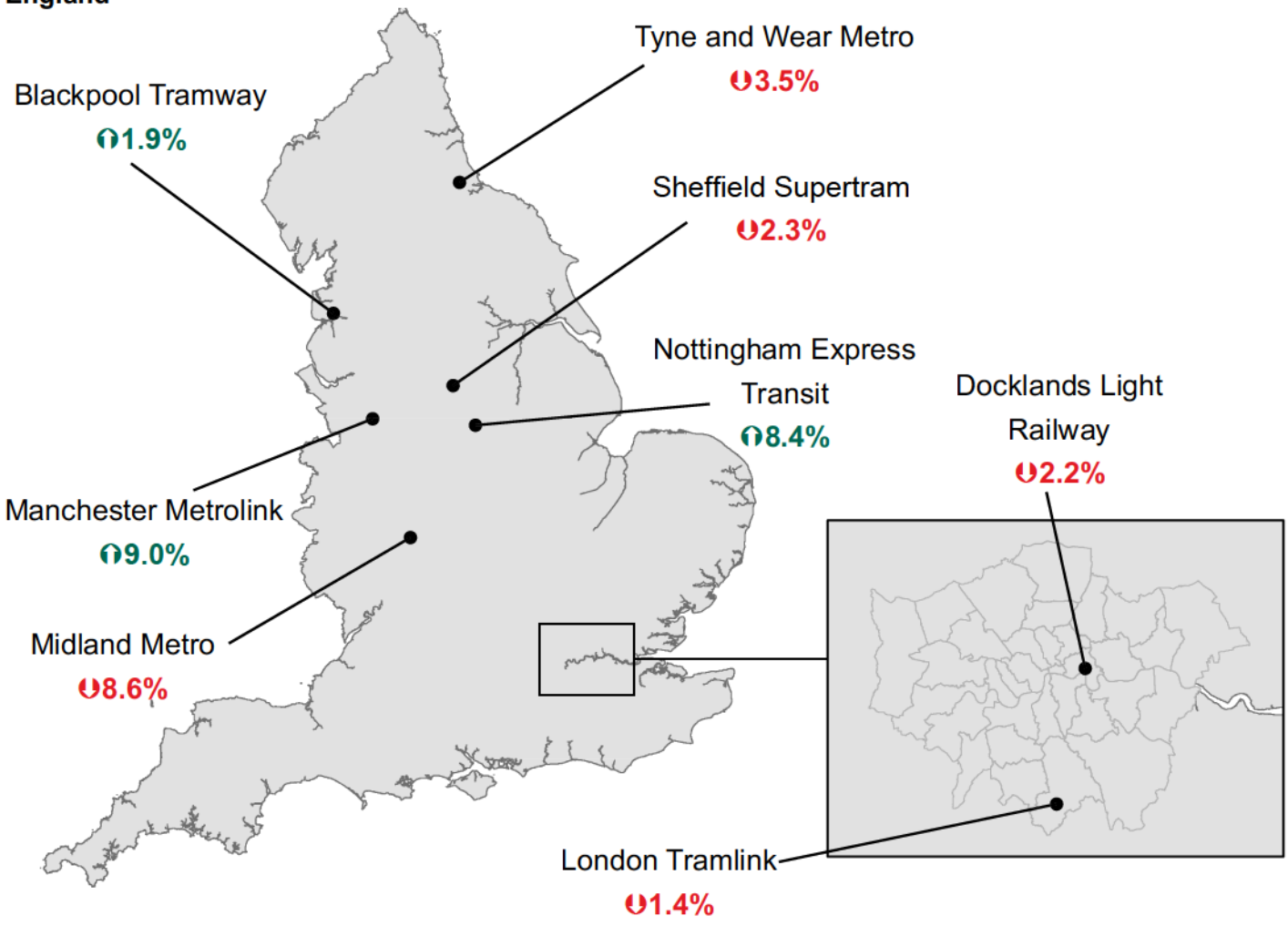
Table 1: Summary of the latest annual light rail and tram figures (2017/18) compared with the previous year (2016/17)

Millions

	Passenger journeys		Vehicle Miles		Revenue	
England	**267.2**	**↓ 0.2%**	**21.6**	**↓ 0.3%**	**371.5**	**↑ 2.7%**
London Systems	**148.7**	**↓ 2.1%**	**5.8**	**↑ 1.5%**	**196.3**	**↑ 0.2%**
Docklands Light Railway	119.6	↓ 2.2%	3.8	↑ 0.6%	172.2	↑ 1.1%
London Tramlink	29.1	↓ 1.4%	2.1	↑ 3.4%	24.1	↓ 5.4%
England outside London Systems	**118.6**	**↑ 2.4%**	**15.7**	**↓ 0.9%**	**175.2**	**↑ 5.6%**
Nottingham Express Transit	17.8	↑ 8.4%	1.9	↓ 1.9%	19.1	↑ 7.7%
Midland Metro	5.7	↓ 8.6%	1.1	↓ 4.7%	9.8	↓ 5.4%
Sheffield Supertram	12.3	↓ 2.3%	1.5	↑ 0.7%	13.9	↑ 3.6%
Tyne and Wear Metro	36.4	↓ 3.5%	3.4	↓ 2.0%	50.9	↑ 0.7%
Manchester Metrolink	41.2	↑ 9.0%	7.2	➲ 0.0%	74.8	↑ 11.0%
Blackpool Tramway	5.2	↑ 1.9%	0.6	↓ 0.2%	6.7	↑ 3.6%

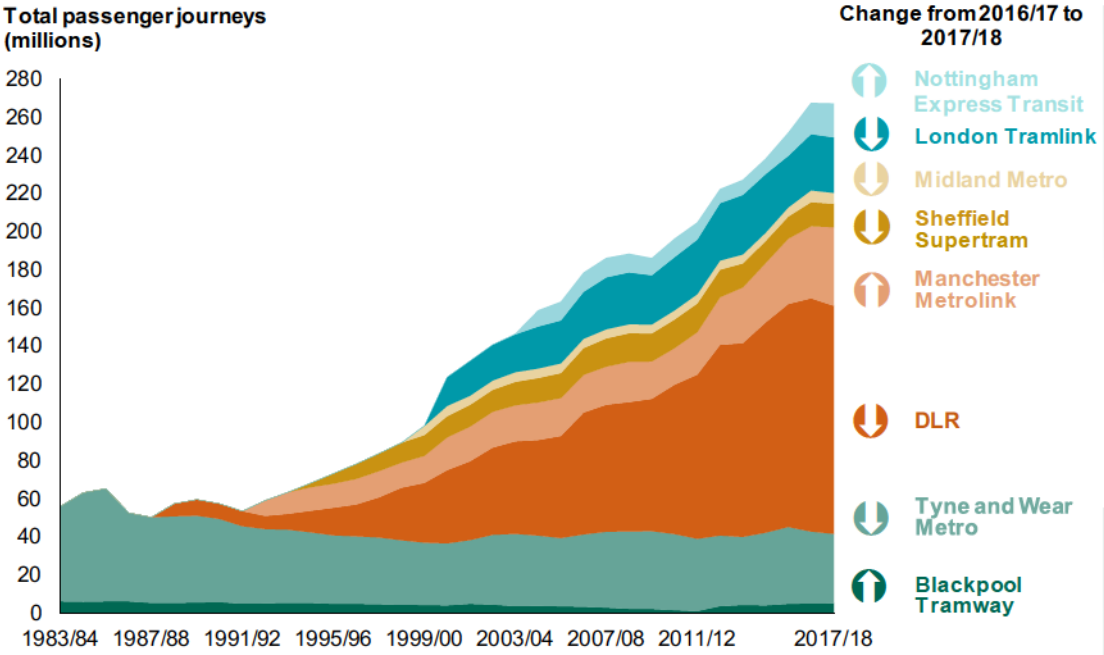
Further Statistics on the London Underground, Glasgow subway and Edinburgh Trams are available in tables LRT9901, LRT9902 and LRT9903 respectively.

Map 1: Location and latest annual change in passenger journeys of each light rail and tram system in England



In England, in 2017/18, passenger journeys on light rail and tram systems decreased to 267.2 million, a fall of 0.2% (around 416,000 passenger journeys) when compared with the previous year. However, since 2007/08, light rail and tram passenger journeys have increased by 43% (chart 1).

Chart 1: Light rail and tram passenger journeys by system: England, annually from 1983/84 (table LRT0101)



Detailed statistics

on passenger journeys from 1983/84 can be found in table LRT0101.

In context

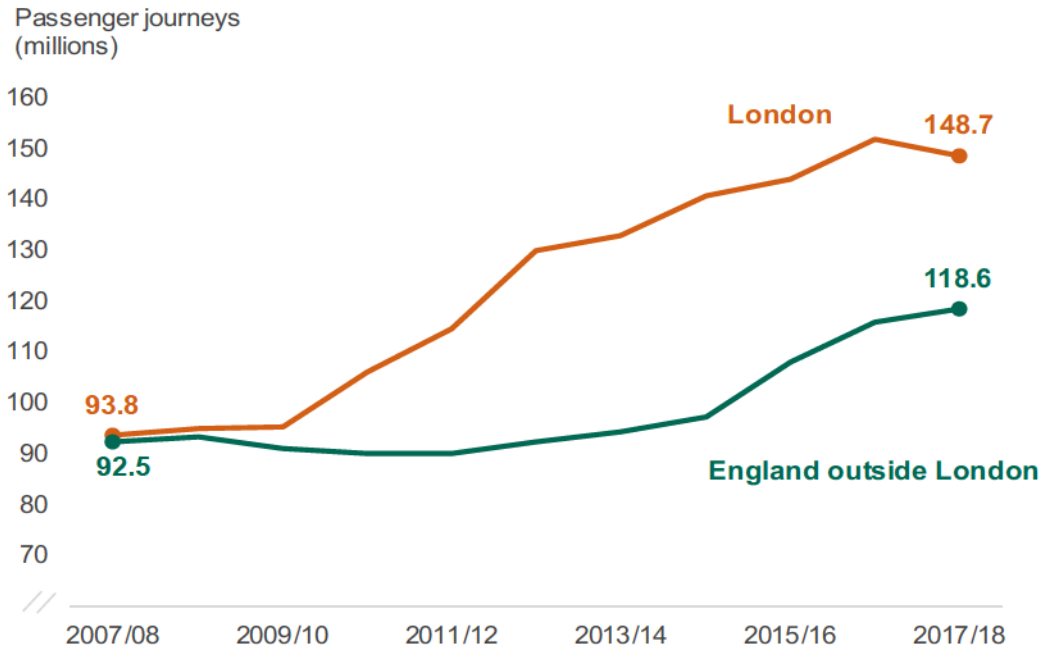
Manchester Metrolink benefitted from a full year of the final extension to Second City Crossing. Nottingham Express Transit benefitted from another full year of the fully opened network following the phase 2 extension in August 2015. Sheffield Supertram is undergroing a five year project, due to be completed in 2020. A full list of factors impacting the passenger journey figures can be found in background information.

Despite the decline this year, passenger journeys on three of the eight light rail and tram systems in England had increased from the previous year, with Manchester Metrolink seeing the greatest increase, up 9% from the previous year (map 1). Manchester Metrolink and Nottingham Express Transit have benefitted from network extensions. Likewise, the decrease in passenger journeys on some systems (for example, Docklands Light Railway and Sheffield Supertram) are likely to be a result of planned work closures. Further details can be found in the background information.

In 2017/18, there were 118.6 million passenger journeys in England outside of London, a 2.4% increase (2.7 million passenger journeys) compared to the previous year. In London, there were 148.7 million passenger journeys, a 2.1% decrease (3.1 million passenger journeys).

Over the past 10 years, growth in passenger journeys has mainly occurred in London. Since 2007/08, there has been a 59% rise in passenger journeys in London compared with a 28% increase in England outside London (chart 2).

Chart 2: Light rail and tram passenger journeys: London and England outside London, annually from 2007/08 (table LRT0101)



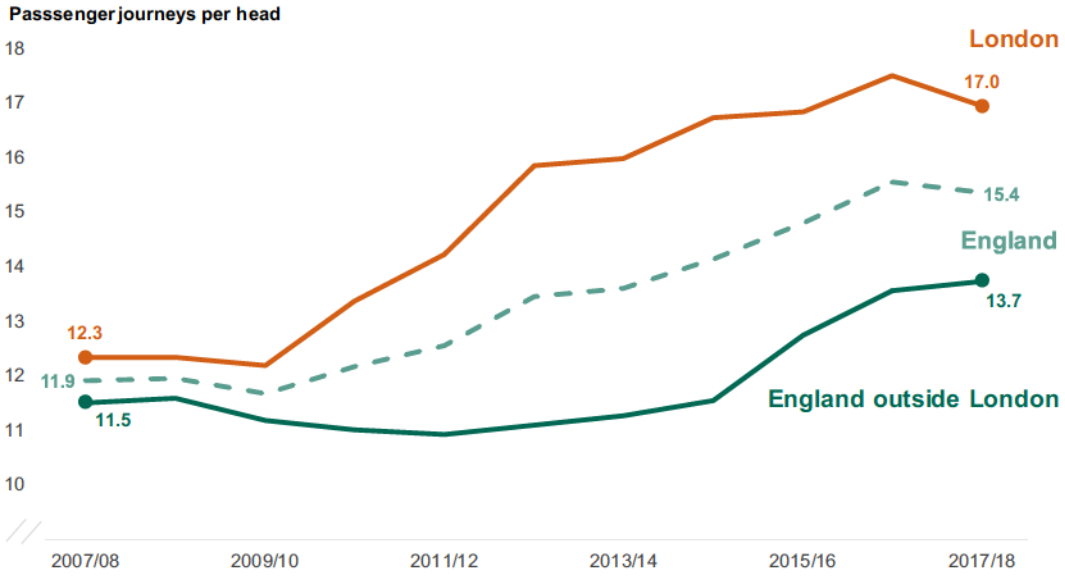
Journey length

The average light rail and tram journey in 2017/18 was 4.2 miles in England. On the two London systems, average journey length was lower (3.3 miles) than England outside London (5.4 miles).

Passenger journeys per head

In England, the average number of light rail and tram journey per head was 15.4 in 2017/18, compared with 11.9 journeys per head in 2007/08. The main factor for this growth has been a 91% increase in passenger journeys per head on the Manchester Metrolink system since 2007/08.

Chart 3: Light rail and tram passenger journeys per head: London and England outside London, annually from 2007/08 (table LRT0109)



How are passenger journeys per head calculated?

Passenger journeys per head were calculated as passenger journeys divided by the number of people in the respective Passenger Transport Executives/higher tier authority. Population figures were based on the ONS 2016 mid-year population estimates.

Detailed statistics

on passenger journeys per head can be found in table LRT0109.

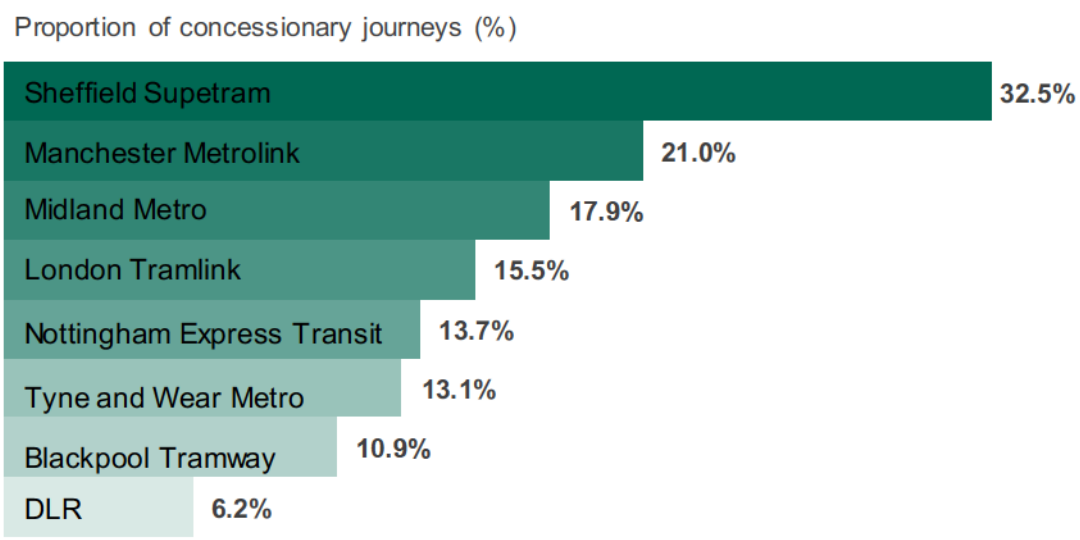
Average passenger journeys per head in London in 2017/18 were 23% higher than in England outside London (chart 3).

Average passenger journeys per head in England outside London increased by 1.4% in 2017/18 from the previous year. Manchester Metrolink and Nottingham Express Transit had increases in passenger journeys per head from the previous year of 8.0% and 6.4% respectively. Passenger journeys per head ranged between 2.0 on Midland Metro to 54.8 journeys on Nottingham Express Transit.

Concessionary journeys

Similar to last year, in England 12.5% of all light rail and tram passenger journeys were concessionary. In 2017/18, concessionary journeys on the DLR have increased to 6.2% (from 5.5% in 2016/17) and Sheffield Supertram have increased to 32.5% (from 32.2% in 2016/17), whilst all other areas have slightly decreased. Almost one third of journeys on the Sheffield Supertram were concessionary journeys (chart 4).

Chart 4: Proportion of concessionary journeys on each light rail and tram system: England 2017/18 (table LRT0102)



Concessionary travel on light rail and tram represents a relatively small proportion of passenger journeys when compared with local bus passenger journeys in England (34%).

All light rail and tram schemes in England currently offer free off-peak travel to older and disabled residences in their local authority area on a statutory basis in London and a discretionary basis elsewhere.

What is a concessionary journey?

Concessionary journeys are those carried out by holders of a concessionary travel pass. These are issued by local authorities for use on buses as part of the English National Concessionary Travel Scheme. Local authorities outside of London can offer free travel on light rail systems as a discretionary extra to this scheme. In London, this is a statutory requirement.

Detailed statistics

on concessionary light rail journeys can be found in table LRT0102. Further information on concessionary revenue can be found in table LRT0302.

on concessionary bus journeys can be found in table BUS0105.

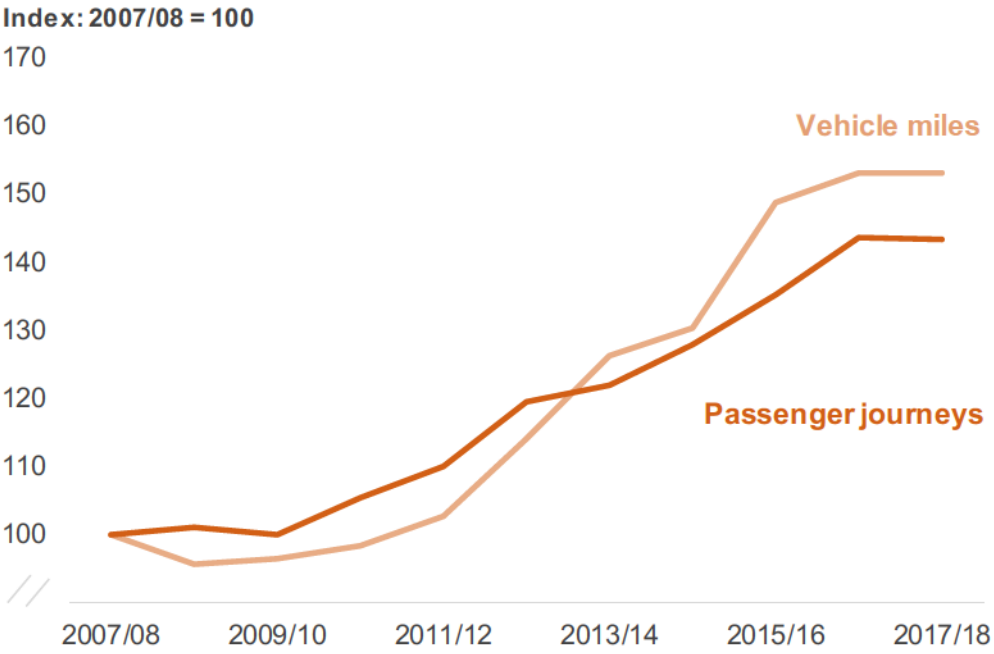
Vehicle miles

In England, vehicle mileage remained the same as 2016/17 (21.6 million miles). Vehicle mileage on light rail and tram systems and passenger journeys have increased since 2007/08 by 53% and 43% respectively (chart 5).

Detailed statistics

on vehicle miles can be found in table LRT0106. In kilometres, this can be found in table LRT0105.

Chart 5: Light rail and tram passenger journeys and vehicle miles index: England, annually from 2007/08 (tables LRT0101 and LRT0106)



Detailed statistics

on route length open for passenger traffic by system can be found in miles in table LRT0204 and in kilometres in table LRT0203.

In London, vehicle mileage increased by 1.5%, from 5.7 million miles in 2016/17 to 5.8 million miles in 2017/18. In England outside London, vehicle mileage decreased by 0.9% from 15.9 million miles in 2016/17 to 15.7 million miles in 2017/18.

Since 2007/08, vehicle mileage in London has increased by 41% from 4.1 million miles in 2007/08 to 5.8 million miles in 2017/18. In England outside London vehicle mileage has increased by 57% from 10 million miles in 2007/08 to 15.7 million miles in 2017/18.

Infrastructure

Between 2016/17 and 2017/18 there were an additional two passenger carriages for Blackpool Tramway and one passenger carriage removed from London Tramlink. The number of stations and route miles stayed the same on all light rail and tram systems.

212 route miles	➲	**0.0%**
400 stations	➲	**0.0%**
512 carriages	↑	**0.2%**

Light rail and tram revenue

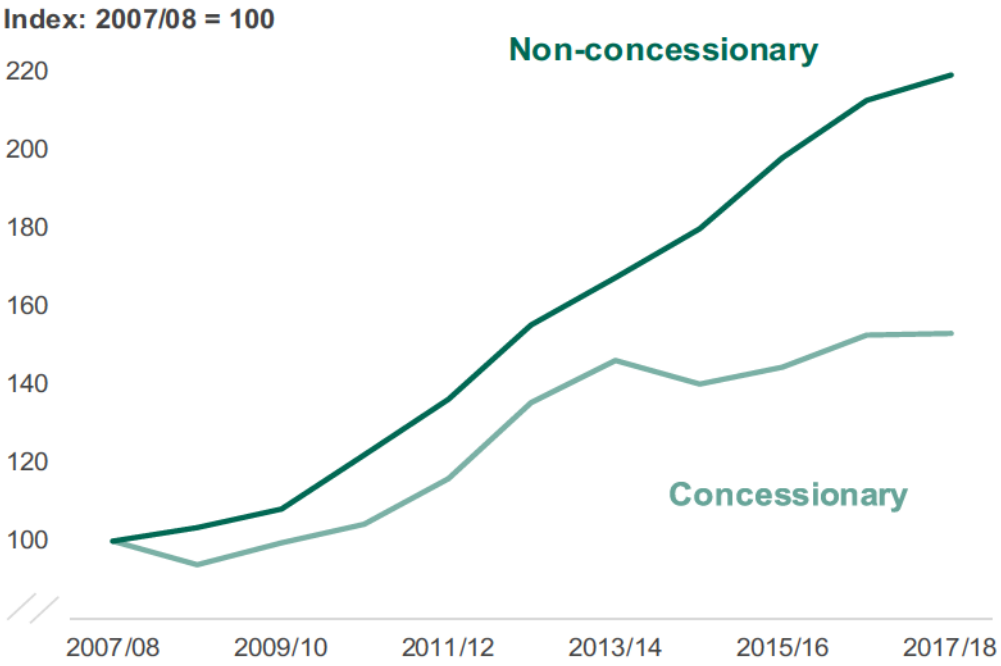
Light rail and tram revenue has continued to increase, up by 2.7% from the previous year, driven by a 3% increase in non-concessionary revenue. Concessionary revenue increased by 0.1% from the previous year (chart 6).

Light rail and tram revenue increased by 2.7% (£9.8 million) to £371.5 million in 2017/18 when compared with 2016/17. Therefore, average revenue per journey increased from £1.35 to £1.39 between 2016/17 and 2017/18. This increase was mainly driven by an increase of £7.4 million in passenger revenue on Manchester Metrolink.

Almost half of the revenue (46%) was earned from Docklands Light Railway (DLR). Revenue earned from DLR and London Tramlink formed 53% of total revenue.

Similar to the previous year, concessionary revenue remained at £30.7 million in 2017/18. Average concessionary revenue per journey therefore increased from £0.91 to £0.92 between 2016/17 and 2017/18.

Chart 6: Light rail and tram passenger and concessionary revenue index: England, annually from 2007/08, at actual prices (tables LRT0301a and LRT0302a)



Detailed statistics

on passenger and concessionary revenue at 2017/18 prices by system can be found in tables LRT0301 and LRT0302 respectively.

Average vehicle occupancy

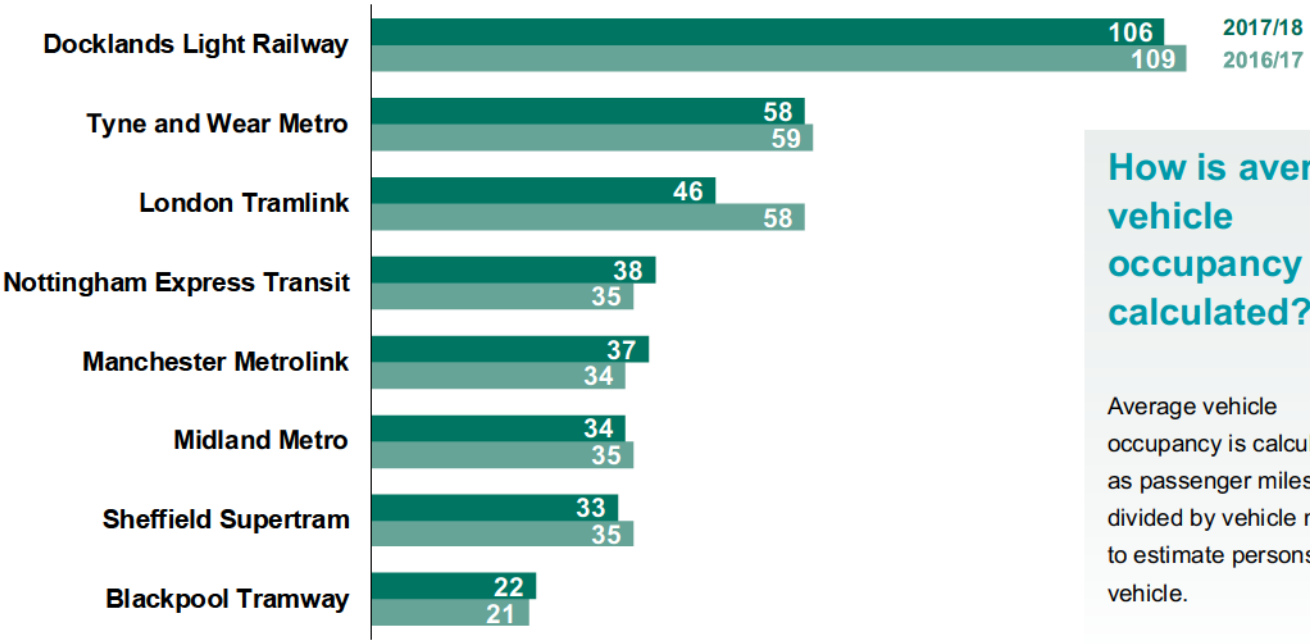
The average number of passengers per light rail and tram in England decreased by 0.9% to 52 passengers per light rail and tram when compared with the previous year. This is 7.8% lower than the highest average occupancy reached in 2011/12 (57 passengers per light rail and tram).

In 2017/18, tram occupancy decreased for all systems except Blackpool Tramway, Nottingham Express Transit and Manchester Metrolink. Tram occupancy was the highest on Docklands Light Railway. See Chart 7 for tram occupancy on each light rail and tram system.

Detailed statistics

on average vehicle occupancy can be found in table LRT0108.

Chart 7: Light rail and tram estimated vehicle occupancy: England, 2017/18 (table LRT0108)



How is average vehicle occupancy calculated?

Average vehicle occupancy is calculated as passenger miles divided by vehicle miles to estimate persons per vehicle.

Passenger satisfaction

The Department for Transport collects information on light rail and tram system use, infrastructure and revenue. Transport Focus measures the passenger experience of using light rail and tram systems, gathering satisfaction levels at both overall and individual level. Comparing these two datasets allows a more complete understanding of light rail and tram systems as a whole.

Passenger experience on five light rail and tram systems in England outside of London were surveyed by Transport Focus in 2017. The five English systems surveyed were: Blackpool Tramway, Manchester Metrolink, Midland Metro, Nottingham Express Transit and Sheffield Supertram.

Transport Focus

Transport Focus is an independent transport user watchdog and includes tram systems in England. For more information see Transport Focus.

Transport Focus statistics are not National Statistics.

Passenger satisfaction

91% overall satisfaction

68% value for money

88% punctuality

75% availability of seating or space to stand

In 2017, overall journey satisfaction across all systems surveyed decreased slightly from 93% in 2016 to 91%. This decrease is likely a result of a change in the survey as Edinburgh Trams was not included in the sample in 2017. However, the overall light rail and tram satisfaction remained higher than the National Rail Passenger Survey (81%) and the Bus Passenger Survey (88%) ratings for 2017.

Satisfaction across the five tram systems was high, ranging from 97% on Blackpool Transport to 89% on Manchester Metrolink (table 2). Sheffield Supertram had the greatest increase from 91% in 2016 to 95% in 2017.

Transport for London

Transport for London (TfL) publish London underground performance data. For more information see here.

Transport for London also publish data on DLR performance. For more information see here

Detailed statistics

Transport Focus Tram Passenger Survey can be found here.

Table 2: Summary of passenger satisfaction on light rail and tram systems in 2017 and the change compared with the previous year.

	Overall journey satisfaction		Value for money		Punctuality	
Nottingham Express Transit	92%	5%	79%	1%	91%	5%
Blackpool Tramway	97%	2%	88%	2%	91%	3%
Midland Metro	90%	2%	68%	0%	92%	5%
Sheffield Supertram	95%	4%	74%	3%	82%	0%
Manchester Metrolink	89%	1%	59%	3%	88%	2%

Source: Transport Focus

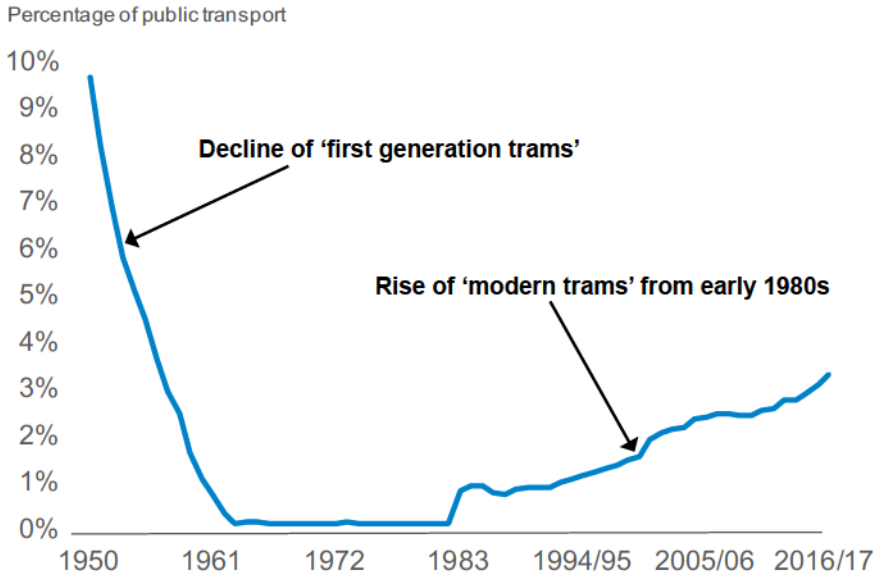
The key factors that make journeys satisfactory or great is the onboard environment, comfort of the tram and timeliness. Factors that contribute to the onboard environment and comfort of the tram remained consistent with the previous year but there was a decrease in the satisfaction ratings for availability of seating or space to stand which decreased from 78% to 75%. Similar to the previous year, factors relating to timeliness (length of time waiting for the tram and punctuality) stayed at 88%. In 2017, 8% of passengers experienced a delay and the average length of their delay was 12 minutes (previously 10 minutes in 2016).

Other findings include the satisfaction with the value for money for their journey. Amongst fare-paying passengers, 68% were satisfied with the value for money. This slightly decreased from 69% in 2016. For details of each system, see table 2.

Public transport journeys

The nine light rail and tram systems accounted for 3.3% of all journeys made by public transport in Great Britain in 2016/17, an increase from 3.1% in 2015/16. This has fallen from 10% of public transport journeys in 1950 (chart 8).

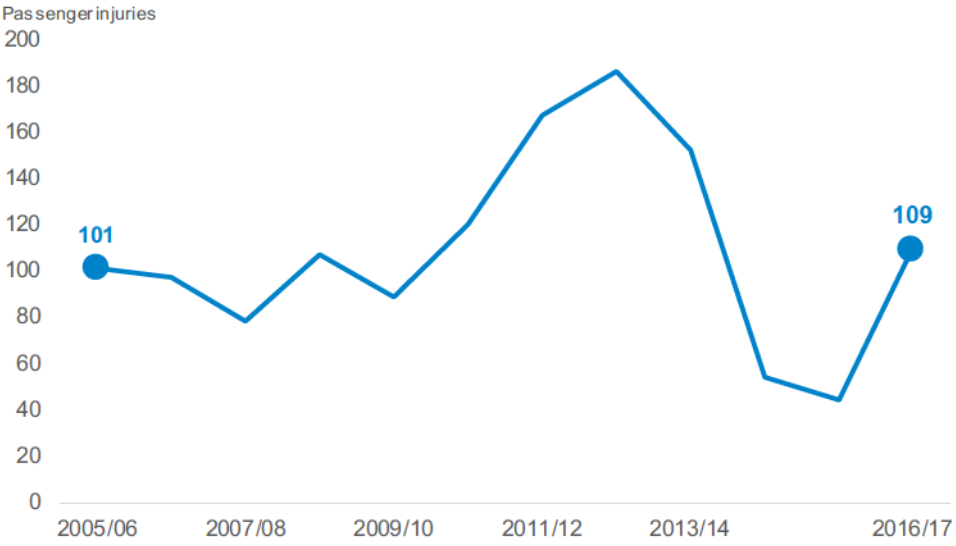
Chart 8: Percentage of public transport journeys that are on light rail and trams: Great Britain, annually from 1950 (table TSGB0102)



Accident Statistics

In 2016/17, there were more than double the number of injuries on trams, metros and other non-Network Rail networks compared with the previous year. 45% of these injuries was a result of the London tramlink derailment that occured in 2016 and consequently led to a fall in passenger journeys on London Tramlink in 2017/18.

Chart 9: Passenger injuries on trams, metros and other non-Network Rail networks: Great Britain, annually from 2005/06 (table 5.18)



Source: Office of Rail and Road

Detailed statistics

Statistics on passenger journeys on public transport vehicles can be found in table TSGB0102

Definition

Public transport consists of rail and underground systems, light rail and tram systems and local bus services.

Office of Rail and Road

The Office of Rail and Road (ORR) publish information on passenger injuries on trams, metros and other non-Network Rail networks in Great Britain. For more information, please see the latest release for 2016/17 here.

Next update

ORR will publish their next release on passenger injuries on trams, metros and other non-Network Rail networks in Great Britain for 2017/18 in September 2018.

The National Travel Survey (NTS) gathers data on personal travel behaviour across England. NTS data can be used to analyse users of light rail and tram systems.

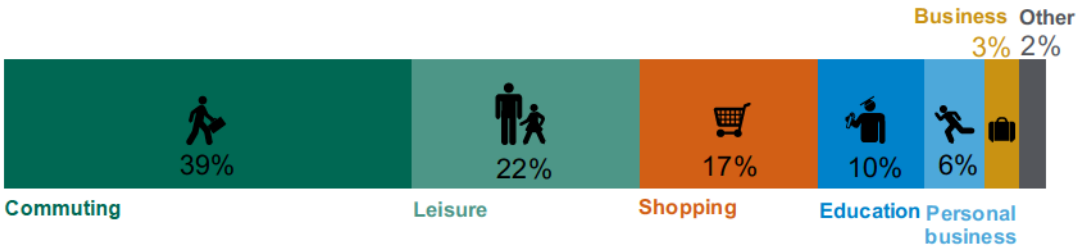
Why do people travel on light rail and tram systems?

Commuting, leisure and shopping are the most common purposes for journeys using light rail and tram systems (chart 10). In England, 15.1 miles are travelled per person per year for commuting purposes, 8.6 miles per person per year for leisure and 6.8 miles per person per year for shopping.

The proportion of stages are generally consistent with trip purposes across all public transport modes. The largest difference is shown for commuting with 39% of stages on light rail and tram systems for commuting compared with 31% when looking at all public transport modes.

Commuting and business purposes accounted for 43% of stages on light rail and tram systems, more than it accounted for across all modes (25%).

Chart 10: Purpose for using light rail and tram systems by the proportion of stages, England average 2009/16 (table LRT0401a)



Differences in why people travel on light rail and tram systems between England outside London and London include:

- London light rail and tram systems are used more for commuting and business purposes than systems in England outside London (57% of stages compared with 30%).
- Leisure and shopping purposes comprise a higher proportion of stages in England outside London (at 26% and 22% respectively) than in London (16% and 12% respectively).
- Light rail and tram systems are used more for education purposes in England outside London than in London (12% compared with 8%).

National Travel Survey

The National Travel Survey is a household survey carried out on over 16,000 individuals in England every year. For more information, please click here.

In the National Travel Survey **light rail and tram** includes the Tyne & Wear Metro, Docklands Light Railway, Manchester Metrolink, Glasgow Subway, Sheffield Supertram, Blackpool Tramway, London Tramlink, Nottingham Express Transit (NET) and Midland Metro. It has been possible to distinguish these modes since 1998, but the number of cases is small so eight years worth of data were combined to achieve a large enough sample size (2009 to 2016).

All modes includes walks of over a mile, car, rail, light rail, local bus, bicycle and other. See here for more information.

What is a stage?

Every trip can consist of one or more stages. A new **stage is defined** when there is a change in the mode of transport.

Differences in how far people travel on light rail and tram systems between England outside London and London include:

- Almost four times as many miles are travelled per person per year for shopping in England outside of London (10.5) than London (2.8).
- Almost twice as many miles are travelled per person per year for education purposes in in England outside London than London (4.3 compared with 2.2).

Detailed statistics

on the proportion of light rail and tram stages carried out by purpose can be found in table LRT0401a.

Differences in how long people spend travelling on light rail and tram systems between England outside London and London include:

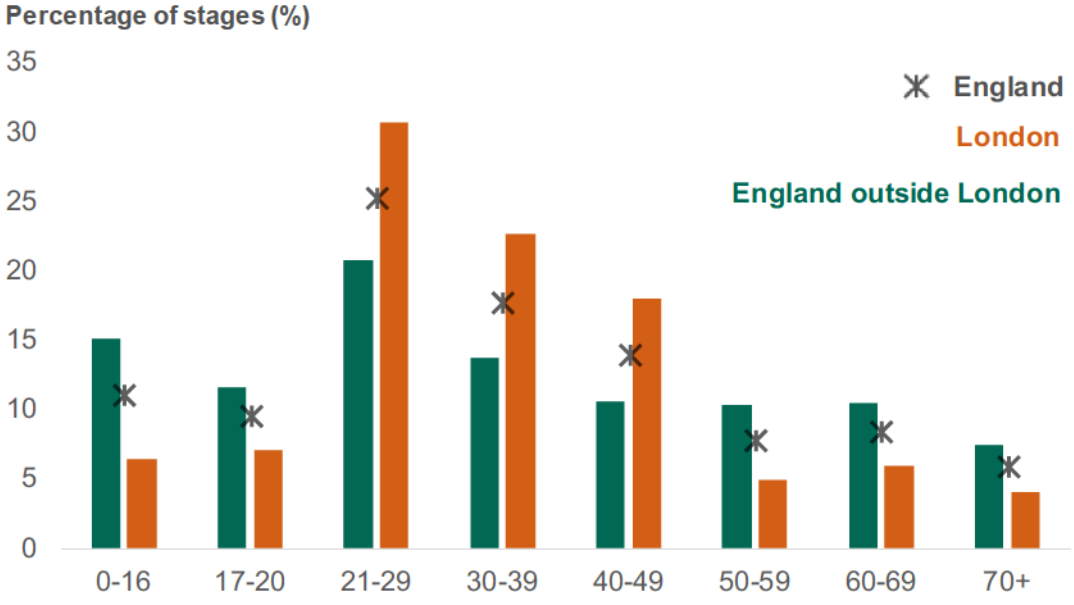
- In London, on average 83 hours per person per year are spent on commuting compared with 61 hours per person per year in England outside of London.
- More time is spent travelling in England outside of London than London (201 hours per person per year compared with 153 hours per person per year respectively).

Who travels on light rail and tram systems?

Age

Young adults carry out the highest proportion of light rail and tram stages of all age groups with 25% of light rail and tram stages being carried out by 21-29 year olds. Above this age, the proportion of light rail and tram stages carried out generally decreases as age increases (chart 11), this is consistent with users of all public transport.

Chart 11: Age profile of users of light rail and tram systems, England, London and England outside London 2009/16 (table LRT0401b)



Detailed statistics

on the proportion of light rail and tram stages, miles travelled and hours travelled broken down by ages can be found in table LRT0401b.

Gender

For all light rail and tram systems, men and women on average carry out a similar number of stages (9 stages per person per year and 8 stages per person per year respectively).

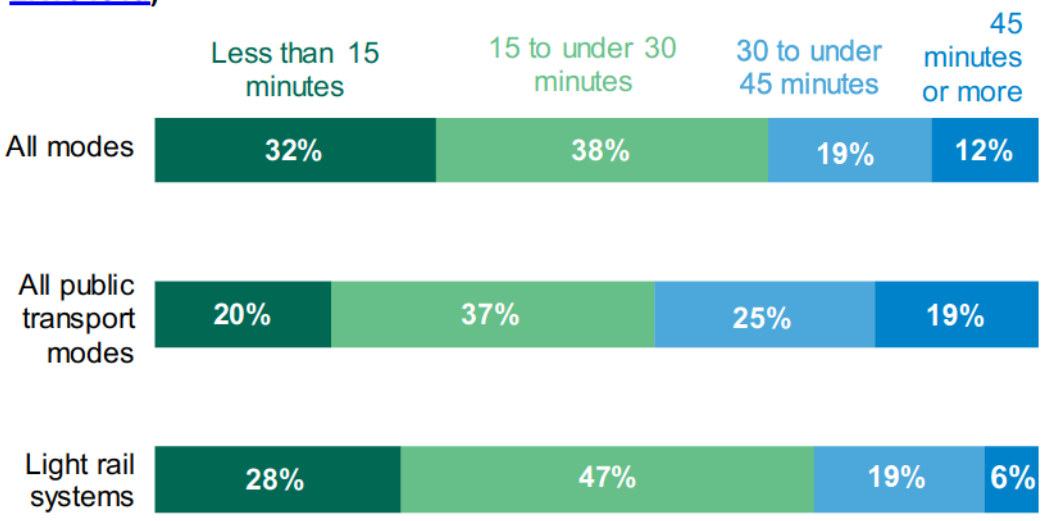
Household income

On average, people living in higher income households use light rail and trams more than those in lower income households, 11 stages per person per year compared to 7 stages person per year in the lowest income households.

How long do people spend travelling?

Across all measures (light rail, all modes and all public transport modes), most stages are 15 to under 30 minutes. In England, a small proportion (6%) of light rail stages took 45 minutes compared to 12% of all modes and 19% of all public transport modes (chart 12).

Chart 12: Proportion of stages by stage time on light rail and tram systems, all public transport modes and for all modes, England 2009/16 (table LRT0401d)



Detailed methodology

Stages on each light rail and tram systems could be distinguished by using trip origin and destination data.

Detailed statistics

on the proportion of light rail and tram stages carried out by gender can be found in table LRT0401c.

on the proportion of light rail and tram stages by household income quintile can be found in table LRT0401f.

Detailed statistics

on the proportion of light rail and tram stages by stage time can be found in table LRT0401d.

What are "all modes"?

All modes includes walks over a mile, car, rail, light rail, local bus, bicycle and other. See here for more information.

Background information

Factors impacting on annual light rail figures:

- Tyne and Wear Metro was affected by ongoing modernisation with lines closed for longer periods (due to be completed in 2021), affecting overall patronage and leisure travel in particular.

- London Tramlink commenced a Wimbledon service in April 2016 utilising a new additional platform, 4 additional trams and 2 further new trams entering service in late 2016. Passenger patronage decreased since the Croydon tram crash incident in November 2016. Measures have been taken to improve safety. The introduction of hopper fares has enabled passengers to make unlimited bus and tram journeys for free within one hour of first touching in with no additional costs.

- Docklands Light Railway was affected by planned weekend closure for Crossrail work, bad weather conditions during the winter period and a two day industrial action that took place in the last period of the 2017/18 financial year. A change in time table resulted in additional departures.

- Midland Metro tram had a partial line closure on the Bilston Road which commenced in June 2017. The line was fully re-opened mid December 2017.

- Nottingham Express Transit benefitted from its second full year of fully opened network following the phase 2 extension.

- Sheffield Supertram is undergoing a five year rail replacement project which began in 2015 and is due to be completed in 2020. In 2016 seven Stadler Citylink vehicles were delivered. Three of the Citylink trams will be used to provide extra capacity on the Supertram system with three (and one spare) being used to operate the Tram Train pilot to Rotherham in Autumn 2018.

- Blackpool Tramway had small increases to early morning frequencies to address increased loadings caused by a modal shift during a protracted period of road closures.

- Manchester Metrolink benefitted from a full year of the final extension to Second City Crossing (2CC) which opened in February 2017.

- Manchester Metrolink mileage figures represent total mileage of each tram ‘set’ and when one train is formed of two sets, the kilometres travelled will be counted twice. Therefore, figures for the years after 2011/12 are not directly comparable with earlier ones (or with other systems) as the proportion of double sets has increased in recent years.

Further information

On the methods used to compile these statistics and background information about the systems covered can be found here

Users and uses of these statistics

These statistics are collected to provide information on light rail and tram systems within England to monitor trends in passenger journeys, service provision and revenue. They help to provide a comprehensive picture of public transport use in Great Britain.

Within DfT, they are used as background information in the development of light rail and tram policy, for ministerial briefing and to answer public enquiries. Outside DfT, known users include researchers, academics and Parliamentary groups with the main known use as context for reports related to light rail.

Feedback received from users suggests that they are generally satisfied with these statistics. However, we welcome feedback on the content, format or timing of the statistics by email to bus.statistics@dft.gov.uk or on 020 7944 3094.

Strengths and weaknesses of the data

These figures are compiled from data provided by operators of the eight light rail and tram systems in England. Passenger journey figures are derived from different sources (most commonly ticket machine data), vehicle mileage is based on scheduled timetables less known lost mileage, and revenue figures are from operators' financial records.

A complete response has been received for many years. Data requested should be readily available to operators, or easy for them to extract. Returns are validated by comparison with previous years and seeking explanation where differences are large or unexpected. This means that figures for each system should be broadly comparable over time, and therefore we consider them appropriate for the uses outlined above.

As the figures are provided by eight operators, there are some differences in the methods used to count journeys or to estimate passenger or vehicle kilometres, which may affect comparisons between different systems. Although the effect of this is difficult to assess we consider it is unlikely to materially affect comparisons. On occasions operators may revise their methodology which could impact on the trends shown. As a result year-on-year changes should be treated with caution, though the effect on broad patterns is likely to be minimal.

National statistics

National Statistics are produced to high professional standards set out in the National Statistics Code of Practice. They undergo regular quality assurance reviews to ensure they meet customer needs.

For details of ministers and officials who receive pre-release access to these statistics up to 24 hours before release, please click here.

Next update

The next Light Rail and Tram Statistics release is due to be published in summer 2019.

To hear more about DfT statistics publications as they are released please follow us on Twitter via our @DfTstats account.