



Regional Rail Usage Profiles - Passenger Journeys:

Quality Report

Release date: February 2019

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Introduction

This is a report on the quality of the Regional Rail Usage statistical release and data portal tables. It helps users to understand the quality of our statistics, and also ensures ORR is compliant with principle 4 of the Code of Practice for Official Statistics¹.

The quality report covers the following areas:

- **Methodology** – detail on the various data sources and methodology used to compile the statistics;
- **Historic background** – a background to each statistic and details of changes throughout the time series;
- **Relevance of the data** – the users of the statistics, and our engagement;
- **Accuracy and reliability** – the accuracy of each statistic;
- **Timeliness and punctuality** – our timescales for the production, quality assurance and publication of each statistic;
- **Accessibility and clarity** – the format of our statistics and where they can be found;
- **Coherence and comparability** – comparisons to similar statistics published elsewhere.

The Origin Destination Matrix (ODM), a comprehensive matrix of rail flows throughout Great Britain, is the source of data. This is mainly derived from the rail industry's ticketing and revenue database, LENNON, supplemented with other industry data for some regions.

¹ Principle 4: Sound methods and assured quality. Statistical methods should be consistent with scientific principles and internationally recognised best practices, and be fully documented. Quality should be monitored and assured taking account of internationally agreed practices. The Code of Practice can be accessed here <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

Methodology

As Britain does not have a fully gated rail network, ORR commissions Steer to produce the annual ODM data. It is based upon the MOIRA2 rail planning tool which itself is derived from LENNON, the rail industry's ticketing and revenue system. In addition, ODM is further augmented by a range of other data sources to provide a more complete representation of travel on the national rail network. These consist of:

- Journeys with non-geographical destinations, e.g. zonal products, Rovers;
- Tickets sold at some non-National Rail outlets, e.g. newsagents; and
- Train Operating Company (TOC) tickets on airport flows, and tickets for TOCs.

A passenger journey presented in Regional Rail Usage is based on the origin and destination stations named on the ticket. For example, a journey from London to Halifax would be classed as one journey despite the need to change trains. This differs from the definition used in the [Passenger Rail Usage statistical release](#), which would class the above example as two journeys, taking into account the number of legs of a journey. The Regional Rail Usage statistical release therefore produces lower estimates than the total journeys published each quarter in the Passenger Rail Usage statistical release. Please see [Passenger journeys in Great Britain](#) which explains the differences in more detail.

A number of improvements to the methodology have been implemented over recent years. These changes should be taken into account when considering year-on-year changes in journeys for some regions as it may not reflect an actual change in demand.

In the 2017-18 dataset the following methodological improvements have been implemented:

- Improved season ticket journey adjustments for allocation of passenger demand;
- Updated demand allocation at Group stations.

Historical background

Regional rail usage profiles

Between 1990-91 and 2002-03, regional rail usage profiles were calculated from CAPRI (Computer Analysis of Passenger Revenue Information) which was the rail industry's former central ticketing system.

Since 2003-04 the rail industry's central ticketing and revenue system, LENNON, has been the basis for calculating regional rail usage profiles. LENNON holds information on the vast majority of national rail tickets purchased in Great Britain and is used to allocate the revenue from ticket sales between TOCs. LENNON contains two datasets; pre-allocation (sales) and post-allocation (earnings).

Regional rail usage profiles are based on the pre-allocation dataset which does not disaggregate the data by train operating company. For example, a passenger may purchase a ticket for "ANY PERMITTED" route between London Terminals and Birmingham BR. In the pre-allocation dataset this is classed as one journey but in the post-allocation dataset, the attribution of that journey would be split between all of the TOCs that operate services between London and Birmingham.

In 2006-07, additional estimates for rail travel using TfL sold travelcards and airport links was included.

- TfL sold travelcards data were attributed to individual flows (origin to destination) using data from the London Area Travel Survey, carried out in 2001² and the Travelcard Diary Survey³.
- Gatwick Express and Stansted Express tickets were estimated using data received from the operators as not all airport link ticket sales were recorded in LENNON.

In 2008-09, the generation of the regional rail usage profiles was integrated with the demand matrix in MOIRA, a software tool used by the industry to model the impact of timetable changes

² <http://data.gov.uk/dataset/london-area-travel-survey-lats>

³ <https://tfl.gov.uk/corporate/about-tfl/how-we-work/planning-for-the-future/consultations-and-surveys/travelcard-survey>

on the rail market. The benefit of integrating the regional rail usage profiles with MOIRA was that, in addition to having LENNON data, MOIRA also provided more robust estimates of rail travel on TfL sold travelcards and airport links.

It also included estimates of rail travel in PTE⁴ areas which had previously been excluded from the regional rail usage profiles due to a lack of data. The inclusion of these new estimates for rail travel in PTE areas ensured that the regional rail usage profiles had a more complete representation of all rail travel in Great Britain.

From January 2010, rail travel using Oyster pay-as-you-go (PAYG) was included in LENNON so these data were included in regional rail usage profiles from 2009-10 with the first full year of data being 2010-11. Oyster PAYG was available on some national rail services before January 2010 so where passengers had switched from traditional paper tickets to Oyster PAYG before January 2010, these would not have been picked up by either LENNON or the TfL estimates. Therefore, any comparisons with earlier years should be treated with caution.

Methodological changes in 2011-12

In 2011-12, we included improved estimates of travel in the Centro (West Midlands) PTE area as opposed to using the MOIRA PTE infill. The Passenger Demand Forecasting Council (PDFC) had commissioned a piece of work to construct a matrix for the Centro area in 2010-11. The data was based on the original MOIRA methodology but drew in additional data from other sources to make specific adjustments for known issues such as directionality.

In 2011-12, we also included estimates of rail travel made using a small number of Rover and Ranger products. Previously, these have been omitted from the regional rail usage profiles as they are recorded in LENNON but have no geographical origin and/or destination (more details on products omitted from the regional rail usage profiles data can be found in the 'Accuracy' section of the report). However, journey estimates for a limited number of products were

⁴ Passenger Transport Executives (PTEs) are local government bodies which are responsible for public transport within large urban areas. They are accountable to Integrated Transport Authorities (ITAs) which were formerly known as Passenger Transport Authorities (PTAs) prior to 2008 and the Local Government Act 2008. There are five PTEs in England, for each of the metropolitan counties (Merseyside, South Yorkshire, Tyne and Wear, West Midlands and West Yorkshire) with the former Greater Manchester Passenger Transport Executive being replaced by Transport for Greater Manchester from April 2011. In Scotland the Strathclyde Partnership for Transport is the equivalent body covering the region of Strathclyde. For convenience, we continue to refer to these areas as PTEs.

constructed for 2011-12 based on aggregate journey data in LENNON and the underlying ticket travel distribution of the stations covered by the ticket. The tickets included in 2011-12 were:

- St Ives Day Ranger
- Valleys Night Rider
- Cambrian Coaster Ranger

Whilst volumes of travel on these products are relatively small, in the specific area of use they can be significant.

We made further incremental improvements to the dataset in 2012-13:

Building on the inclusion in the 2011-12 dataset of an improved infill for the Centro area, an improved PTE infill was included in the 2012-13 dataset for two of the remaining PTEs – West Yorkshire (WYPTE) and Greater Manchester (GMPTE/TFGM). This was produced using a process derived to construct infill demand for the Rail in the North demand and revenue model produced by Mott Macdonald and MVA for the Rail in the North (RiN) consortium for the year 2011-12.

Furthermore, estimates of rail travel using TfL's concessionary product, the 'Freedom Pass', were included for the first time in 2012-13. Unlike paid for Oyster products, travel on the Freedom Pass were not previously included in regional rail usage profiles. However, in 2012-13, TfL provided the following data to enable an estimate of Freedom Pass journeys on the rail network:

- Total journeys on Freedom Pass with touch in/out on at least one end of the journey.
- Origin and destination breakdown of Freedom pass journeys where the passenger touched in or out for one four-week period of data.

The number of Freedom Pass journeys included is necessarily a conservative estimate since it does not capture journeys where the passenger did not have to touch in or out. In addition, the smallest flows in the four-week dataset have not been included since it was not practical to

categorise every single flow. Inclusion of Freedom Pass journeys added 10.6m journeys into the regional rail usage profiles.

Methodological changes in 2012-13

Building on the work done in 2011-12, a further five Rover and Ranger products were included in the 2012-13 dataset:

- Anglia Plus – Norfolk, Suffolk and Cambridge
- Devon Day/Evening Ranger
- Ride Cornwall
- Freedom Travel Pass – Bristol, Bath, North Somerset and South Gloucestershire

Methodological changes in 2013-14

In the 2013-14 dataset a number of changes were made to improve the representation of journeys on PTE-sponsored tickets in South Yorkshire, Merseyside and Strathclyde, as detailed below:

- South Yorkshire - Building on the inclusion in the 2012-13 dataset of an improved infill for the West Yorkshire (WYPTE) and Greater Manchester (GMPTE/TfGM) PTE areas, an improved infill for the South Yorkshire (SYPTTE) PTE area was included in the 2013-14 dataset. This was produced using a process derived to construct infill demand for the Rail in the North demand and revenue model produced by Mott MacDonald and MVA for the Rail in the North (RiN) consortium and was supplied by Mott MacDonald. This is consistent with the methodology underlying the improved West Yorkshire (WYPTE) and Greater Manchester (GMPTE/TfGM) infills. At the total PTE level, the impact of the new infill has been to reduce demand by approximately 0.7m journeys.
- Merseyside - Recognising the deficiencies of the existing infill, a new infill has been produced by Mott MacDonald building on the PTE infill in the Liverpool City Region Model (LCRM) produced for Merseytravel. Unlike the other PTE infills, journeys in the Merseyside infill have been scaled to count data at an aggregate level across all affected stations where complete counts are available to ensure a robust match

with 'reality'. This is possible since count data in the Merseyside area is more extensive and comprehensive across stations than in other areas. The inclusion of the new infill increases journeys by approximately 5.4m (5.1% of total North West journeys).

- **Strathclyde** - A more sophisticated infill has been developed by Mott MacDonald to capture demand in the Strathclyde area on a number of SPT products, namely: Zonocard, Roundabout and Daytripper. Total sales data for these tickets has been obtained from a combination of LENNON data and off rail sales figures from SPT. The number of journeys on each ticket type has been established by applying appropriate tip rate proxies for each type. The data has been distributed using Zonocard forum travel diary data and LENNON station-station reduced ticket proportions to produce an estimate of station-to-station movements. The new infill results in a drop of approximately 2.2m journeys (2.5% of Scotland's total journeys).

Methodological changes in 2014-15

In the 2014-15 dataset further improvements were made to the dataset, which are explained in detail below:

- **Tyne & Wear PTE** - An improved infill for the Tyne & Wear PTE area has been included in the 2014-15 dataset. This was produced using a process derived to construct infill demand for the Rail in the North demand and revenue model produced by Mott MacDonald and MVA for the Rail in the North (RiN) consortium. At the total PTE level, the impact of the new infill has been to reduce demand by 0.4m relative to the numbers reported in the 2013-14 Station Usage statistics - primarily due to a reduction in the estimate for Sunderland as a result of the change in methodology.
- **Pay As You Go (PAYG) journeys** - In January 2014 a change was made to the way PAYG journeys were recorded in LENNON with non-National Rail origins and destinations recorded as well as National Rail origins and destinations. The underlying methodology used to construct the MOIRA2 demand matrix had not been updated to reflect this with the result that PAYG journeys starting or ending at a non-National Rail station have been allocated by default to London BR as their

origin or destination in the MOIRA2 demand matrix rather than the station at which they join the National Rail network. For example, a PAYG journey between Canary Wharf and Clapham Junction prior to January 2014 would most likely have been recorded in LENNON as being a journey from Canada Water to Clapham Junction whereas post January 2014 it would be recorded as Canary Wharf to Clapham Junction with the result that in the MOIRA2 demand matrix it is recorded as being a London BR to Clapham Junction journey. In the 2014-15 an adjustment process has been made to account for the change in LENNON treatment of PAYG journeys to make the statistics more consistent with previous years. This reduces the number of journeys associated with London Terminals and increases journeys at key interchange stations.

- London Bridge - Engineering work as part of the Thameslink Programme resulted in changes in service patterns to London Bridge in 2014-15. As many tickets 'to London' do not distinguish between specific terminals, the existing methodology for the production of the Station Usage statistics has been to use the proportions implied by the London Area Travel Survey (LATS) to split total journeys between specific terminals. As the LATS data does not account for the ongoing engineering work at London Bridge, an alternative approach was required to enable an adjustment arising due to changes in journey patterns as a result of the London Bridge works. Transport for London's Oyster Clicks Model (OCM) contains historical data of journeys made using Oyster cards, as well as estimates for paper tickets. This data was used to estimate the number of journeys 'to London Bridge' and the number of journeys 'to London Terminals'.
- Digby & Sowton - A large number of journeys were being made to Exeter Central and Exeter St. David's on tickets with a recorded destination of Digby & Sowton. Season journeys have been redistributed in 2014-15 to Exeter Central and Exeter St. David's from Digby & Sowton. Journeys were allocated to Exeter Central and Exeter St. David's according to the proportion of season ticket journeys in the MOIRA2 matrix.

Methodological changes in 2015-16

In 2015-16, the following improvements were made:

- **In-boundary London Travelcard Methodology** - In previous years, London Travelcard journeys have been allocated to stations using London Area Travelcard Survey (LATS) data from 2001. For the production of the 2015-16 dataset, Oyster Clicks Model (OCM) data from Transport for London (TfL) has been used to allocate journeys made wholly within the London Travelcard Area to individual London stations. This has in general re-allocated some journeys that would have been to London Terminal stations to stations outside of Zone 1.
- **London Terminals Demand Allocation** – The 2015-16 data has been disaggregated by individual London Terminal where possible, such as where a ticket is bought to a specific terminal rather than to the generic ‘London Terminals.’ This provides an improved reflection of journey origins and destinations. As a result of the two changes mentioned above, direct comparisons of journeys at a sub-regional level in London for 2015-16 and previous years are not valid.
- **St. Ives Branch Line Counts** - A large number of journeys on the St. Ives Bay line (St. Erth to St. Ives) are made using Ranger or Rover tickets, which allow for flexible travel between any stations on the line. As most of the five stations on the branch do not have a ticket office and an increasing number of tickets are being sold by staff on platforms which do not record a geographic location, it has not been possible to produce a robust link between ticket sales and entries and exits. To address this, passenger counts were carried out at all five stations in August 2016. The results of these counts have been used to produce a more accurate allocation of entries and exits from sales of ranger or rover tickets across the stations.
- **Season Ticket Journey Allocation** – An adjustment to the allocation of usage at stations around Southend was made in 2015-16. Analysis of LENNON data showed that season tickets issued for travel to or from Southend Victoria were actually being used to travel from alternative stations, as the price of a season ticket is the same. Through consultation with train operating companies (TOCs) and analysis of LENNON sales data a number of other locations where it is

thoughts this is occurring were identified and the same adjustment has been applied.

Methodological changes in 2016-17

In the 2016-17 dataset a number of improvements were made, which are explained in detail below:

- **London BR Allocation Update** - In the production of the 2015/16 statistics, there were a number of journeys included in the underlying MOIRA2.2 matrix with both an origin and destination of London BR. The methodology uses LENNON sales data to allocate journeys to BR stations, and investigation showed that due to limited ticket data for London BR to individual London Terminals, there was an overstatement of the number of journeys for Kensington Olympia. Reallocation of some of these journeys has led to a decrease in the recorded usage at Kensington Olympia, and a small increase in usage at other London Terminals. Note that this is a methodological change and does not imply an actual drop in the number of passengers using Kensington Olympia.
- **Season Ticket Journey Adjustments** - In the production of the 2014/15 and 2015/16 statistics, adjustments were made to account for situations where passengers buy season tickets for travel to/from a station other than the one they generally travel from, in order to allow additional flexibility. For the production of the 2016/17 statistics, the analysis underpinning this reallocation was updated with 2016/17 LENNON data.
- **Updated Demand Allocation at Group Stations** – In order to validate and improve the allocation of journeys between stations within groups (e.g. Worcester BR), passenger counts were carried out at selected group stations on the network. These counts were carried out in Autumn/Winter 2016 and have informed the allocation of demand at the following station groups: Dorchester BR, Newark BR, Southend BR, Warrington BR, Wigan BR and Worcester BR.

Methodological changes in 2017-18

In 2017-18, the following methodological improvements were made:

- **Season Ticket Journey Adjustments** - Similar to previous years, adjustments were made to account for situations where passengers buy season tickets from a station other than the one they generally travel from, to allow additional flexibility. Also in some areas, multiple stations have identically priced season tickets to London. As a result, London season tickets are generally sold as being from the furthest station, regardless of the actual origin station. LENNON sales data was used to estimate the number of tickets where the issuing office was a branch line station but the ticket origin showed a station further along a line. For the production of the 2017/18 statistics, the analysis underpinning this reallocation was updated with 2017/18 LENNON data.
- **Updated Demand Allocation at Group Stations** – Passenger counts were carried out in Autumn 2017 and have informed the allocation of demand at the following station groups: Bicester BR, Birmingham BR, Farnborough BR, Southend BR, Warrington BR, Wigan BR and Worcester BR.

For more detailed information on the background and limitations of the Origin Destination Matrix (ODM) data please contact rail.stats@orr.gov.uk

Sub-regions

Regional rail usage profiles present the number of rail passenger journeys made on the network between each region of Great Britain and within each region. This is broken down by sub-regions.

The sub-regions used in all the 11 regional tables use the 2015 NUTS2 boundary definitions.

For London, details on which London boroughs are mapped to each sub-region are provided below:

Inner London - East	Inner London - West	Outer London – East and North East	Outer London - South	Outer London – West and North West
Hackney, Haringey, Islington, Newham, Lambeth, Lewisham, Southwark, Tower Hamlets	Camden, City of London, Kensington and Chelsea, Hammersmith and Fulham, Wandsworth, Westminster	Barking and Dagenham, Bexley, Enfield Greenwich, Havering, Redbridge, Waltham Forest,	Bromley, Croydon, Kingston upon Thames, Merton, Sutton	Barnet, Brent, Ealing, Harrow, Hillingdon, Hounslow, Richmond upon Thames

Relevance

The degree to which the statistical product meets the user needs in both coverage and content.

Regional rail usage profiles provide a clear indication of the number of passengers using rail and the volume of journeys made on the network, providing an indication of the levels of demand for rail travel at a regional level. This can help in both short-term and long-term planning for the industry and wider stakeholders.

In 2008-09, following feedback and consultation with our stakeholders, we changed the format for presenting regional rail usage profiles, moving from an index based approach to providing underlying numbers. As part of this, we also published data at a greater level of disaggregation, providing district level data for both journeys between regions and journeys within regions.

More detailed information on users of ORR statistics and meeting the needs of users is available on our [user engagement webpage](#).

Accuracy and reliability

The proximity between an estimate and the unknown true value.

While LENNON is the major source of data for regional rail usage profiles, it is augmented by a range of additional data sources to provide a more complete representation of travel on the national rail network. Since 2008-09, this has included estimates of journeys and revenue made in major urban areas on PTE sponsored tickets which were previously excluded due to issues of distributing passenger journeys to specific origin-destination flows.

Regional rail usage profiles data are derived primarily from LENNON ticket sales, with the addition of “infills” for London Travelcards, airport links and multi-modal and zonal products sponsored by Passenger Transport Executives (PTEs).

In the absence of a completely gated system that allows a complete recording of flows through stations or comprehensive and robust count data, the use of LENNON is the best approach available. In particular, its national coverage makes it suitable as a basis for the production of Regional rail usage profiles. However, this data does have weaknesses when utilised for this purpose and, although some of these are catered for in the methodology, the user should be aware of these acknowledged limitations. The key limitations are:

- **Non-point to point tickets** – There is an inherent difficulty and uncertainty associated with estimating the number of journeys associated with many rail products which do not simply represent point to point single or return journeys and furthermore the distribution of those journeys. This is a particular issue for the London Travelcard Area and PTE areas where estimates are included in the regional rail usage profiles. There are a number of products of this type that are omitted from the data due to a lack of information. These are:
 - Rover and Ranger tickets (except those listed in the ‘Historical Background’ section of the report which were included for the first time in 2011-12) – These products provide unlimited travel within a certain geographical area over a specific period of time;
 - BritRail tickets – These products provide access to all trains on Great Britain's National Rail Network for non-UK residents;
 - Gate passes – Usually used by railway staff;

- **Concessionary travel** – Most PTEs subsidise some form of free travel for passengers over a certain age and those with disabilities. From 2012-13, we have included estimates of journeys made using TfL’s Freedom Pass. Generally, the volume and distribution of journeys associated with these products is not recorded so the current approach is to include this demand where data has been made available by PTEs. These data are generally derived from surveys;
- **Group stations** – Many products to major destinations are sold with the origin or destination as a group of stations (e.g. London Terminals, Manchester BR stations). Current industry data does not distinguish between the component stations and therefore a split between these stations has to be estimated. These estimates are currently apportioned to individual stations based on a combination of known sales between specified origins/destinations and “most likely” route. For example, a journey from Milton Keynes to Birmingham BR would be most likely be assigned to Birmingham New Street as Milton Keynes is on the West Coast Mainline serving Birmingham New Street as opposed to the Chiltern Mainline, which serves Birmingham Moor Street and Birmingham Snow Hill;
- **Ticketless travel** – Journeys associated with ticketless travel are not included in the datasets. This is likely to be an issue on some flows and in some areas where ticketless travel is significant. As more stations have become gated over time and train operating companies focus on revenue protection activities this is likely to be less of an issue than in the past in contributing to a shortfall in journeys;
- **Journey factors** – Ticket transactions are converted into an estimate of the number of journeys made by applying a series of ticket type journey factors. Therefore, the journeys data in Regional rail usage profiles represents an assumed number of journeys made based on the ticket type sold. Single and return tickets translate into one and two journeys respectively, and the main season tickets use the journeys factors:

Season ticket validity	Journey factor
Weekly	10.3
Monthly	45
3 monthly	135
6 monthly	270
Annual	480

Timeliness and punctuality

Timeliness refers to the time gap between publication and the reference period. Punctuality refers to the gap between planned and actual publication dates.

The gap between publication and the reference period is due to the availability of data. For example, data from PTEs can take up to nine months to be provided. The implementation of methodology improvements can also lead to delays in publication. Once all of the available data are provided, aggregated journey estimates need to be converted into a journey distribution matrix. ORR will continue to work with our external consultants responsible for the data collation and our stakeholders to shorten the time between the reference period and publication.

More detailed information on timeliness and effectiveness of the statistical output is available on our [user engagement webpage](#).

Accessibility and clarity

Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the metadata, illustrations and accompanying advice.

All data tables can be accessed on the [Data Portal](#) free of charge.

The procedures and policy used to ensure sound confidentiality, security and transparent practices.

ORR is fully compliant with the Statistics and Registration Service Act 2008 and principle 4 of the Code of Practice for Official Statistics.

ORR receives regional rail usage profiles from external consultants though the underlying data are sourced from RSP Ltd (Rail Settlement Plan), who own the LENNON database, the train operating companies and PTEs. The data are supplied to ORR via the external consultant's Cloud site, before being loaded and stored in a data warehouse (ORRbit).

ORR wants the rail industry to be more open and transparent. We have established a transparency programme to drive our ambitious vision for the industry, and govern a number of projects to support our aims and objectives.

Future transparency projects include improving the data portal as a means of disseminating data and encouraging the industry to publish delay minutes data by cause.

More information is available on our [user engagement webpage](#).

Coherence and comparability

Coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar. Comparability is the degree to which data can be compared over time and domain.

Data for Regional rail usage profiles differ from those presented in the passenger rail usage (passenger journeys) statistical release. The aggregate number of journeys within regional rail usage profiles will be lower than the equivalent data for passenger journeys as they do not take into account changes of train during a journey.

The number of journeys calculated in the regional rail usage profiles is based on the origin and destination stations named on the ticket. For example, a journey from Cardiff to Oxford, which may involve two trains (one from Cardiff to Didcot and another from Didcot to Oxford) is treated as one journey in regional rail usage profiles whereas in the passenger rail usage (passenger journeys) release, it is treated as two journeys, accounting for the two services used.

Consistency with past datasets is important to enable comparisons to be made over time. However, stakeholders have indicated that they are keen to see improvements, even where this leads to inconsistency with historic data, provided changes are clearly explained. Incremental improvements have been made to the data which make it difficult to compare with earlier years. The main improvements to the data have been:

- Inclusion of the London Travelcard and Airport infills from 2006-07 onwards;
- Inclusion of PTE infill from 2008-09 onwards;
- Inclusion of Oyster pay-as-you-go data from January 2010 onwards;
- Inclusion of specific Centro (West Midlands), West Yorkshire and Greater Manchester PTE estimates from 2011-12 (2012-13 for West Yorkshire and Greater Manchester);
- Inclusion of some Rover and Ranger products from 2011-12; and
- Inclusion of TfL Freedom Pass from 2012-13.
- Improved PTE infills in for Merseyside, South Yorkshire and Strathclyde from 2013-14.

- Improved infill for Tyne & Wear PTE area, adjustments to account for PAYG journeys in LENNON, London Bridge engineering works and journeys to/from Digby & Sowton station from 2014-15.
- Improved distribution of demand in the London Travelcard Area and improved allocation of demand to London Terminals, improved allocation of journeys associated with Ranger products on the St. Ives Bay line and Season ticket journey allocation adjustments at stations near Southend from 2015-16.
- Improved season ticket journey adjustments and updated demand allocation at Group stations in 2016-17 and 2017-18.

Further details on these improvements can be found in the 'Historical Background' section of this report.

Comparability to European data

Eurostat are the statistical office of the European Union and comparable data on the number of regional passenger journeys are available from the [Eurostat database](#).

The UK is required to provide regional passenger statistics to Eurostat every five years under Regulation 91/2003.

The data for the UK on the Eurostat database differs from the figures published as part of the regional rail usage profiles as Eurostat data includes data from Northern Ireland Railways, Eurostar and estimates of usage on Le Shuttle and Heathrow Express services.

Length of Comparable Time Series

Measure	Time Series	Data Portal Table
Annual regional rail journeys to/from with each region or country, including breakdown by sub-region	1995-96 to 2017-18	Table 15.5 – North East Table 15.6 – North West Table 15.12 – Yorkshire and the Humber Table 15.1 – East Midlands Table 15.11 – West Midlands Table 15.2 – East of England Table 15.4 – London Table 15.8 – South East Table 15.9 – South West Table 15.10 – Wales Table 15.7 – Scotland
Annual regional rail journeys for GB, and England, Scotland and Wales	1995-96 to 2017-18	Table 15.3 – GB and England Scotland and Wales



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