

Passenger Rail Performance 2020-21 Quarter 1

17 September 2020

Background:

This quarterly statistical release contains information on passenger rail performance measures of punctuality and reliability for Great Britain.

These are: **On Time** at every recorded station stop, **PPM**, **Cancellations**, **Severely disrupted days**.

It also contains information on train **delays and their causes** and more detailed information by train operating company.

Source: Network Rail

Latest quarter: 2020-21 Q1
(April to June 2020).

Contents:

Train punctuality – p3
Train reliability – p5
TOC analysis – p7
Other measures – p9
Annexes - p10

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Next publication:

3 December 2020

Performance during the first quarter of 2020-21 was affected by the coronavirus (COVID-19) pandemic. There was a substantial reduction in train services and passengers on the network which led to improvements in punctuality and reliability.

For the **On Time** punctuality measure, the percentage of recorded station stops arrived at 'on time' (early or less than one minute after the scheduled arrival time) in Great Britain was **86.4%** in 2020-21 Q1.

Great Britain - 2020-21 Q1 (April to June 2020)		Compared with 2019-20 Q1	
On Time	86.4%	↑	17.1 pp
PPM	96.2%	↑	6.2 pp
Cancellations Score	1.2%	↓	-1.2 pp

Using the **Public Performance Measure (PPM)**, **96.2%** of trains were punctual (early or less than 5/10 minutes after the scheduled arrival time) at their final destination in 2020-21 Q1.

Both measures of punctuality were the highest quarterly percentages (i.e. best) since the time series began (2014-15 for On Time, 1997-98 for PPM).

The proportion of trains classified as **Cancellations** in 2020-21 Q1 was **1.2%**. This was the lowest quarterly percentage (i.e. best) since the time series began in 2014-15. The cancellation measure is a weighted score which counts full cancellations as one and part cancellations as half.

All data tables, a quality and methodology report and an interactive chart associated with this release are published on the [passenger rail performance page](#) of the ORR data portal. Key definitions are in annex 1 of this release.

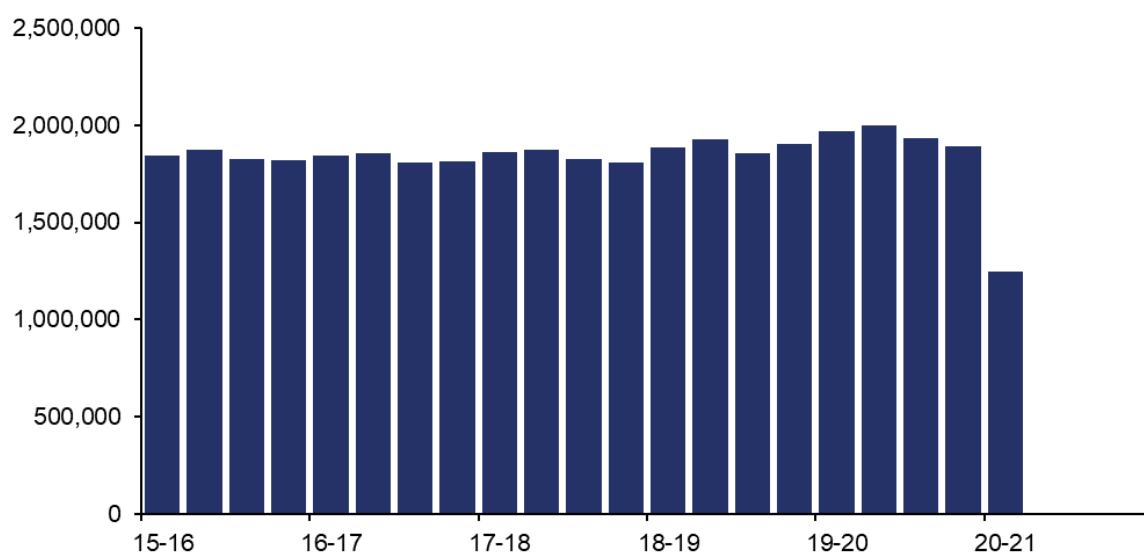


Impact of the coronavirus pandemic

Performance during 2020-21 Q1 (1 April 2020 to 30 June 2020) was affected by the coronavirus (COVID-19) pandemic. Following the start of restrictions in the UK in March this year, there was a substantial reduction in trains planned and rail usage. This led to improvements in punctuality and reliability over the following months.

In 2020-21 Q1, there were 1.2 million trains planned in Great Britain. This was down 36.7% compared with the same quarter last year and was the lowest number of trains planned in a quarter since our data records began in 1997-98.

Trains Planned, Great Britain, 2015-16 Q1 to 2020-21 Q1 (Table 3123)



There has also been a reduction in passenger rail usage compared to last year. The Department for Transport publishes daily statistics on [transport use by mode](#), compared to the equivalent week in 2019. According to these early estimates, during 2020-21 Q1, National Rail usage reached lows of 4% of the equivalent weekly levels in 2019 and remained less than 20% of equivalent weekly levels throughout the quarter.

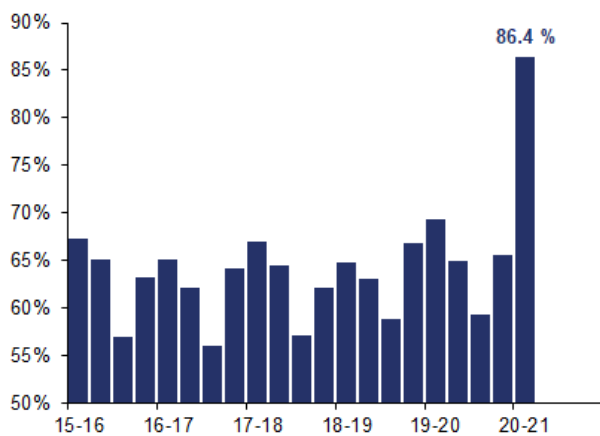
These changes in trains planned and passenger usage have resulted in improvements to punctuality and reliability. These improvements in performance are clearly visible in the Q1 statistics but less so when using moving annual averages (MAAs) to present changes in performance. This is because 2020-21 Q1 performance carries a lower weight in MAA calculations (due to the lower number of trains running that quarter compared to the previous three quarters). As a result, we have focused the presentation of statistics in this release on the latest quarterly data (compared to the same quarter last year, 2019-20 Q1).

1. Train punctuality

Punctuality at each recorded station stop

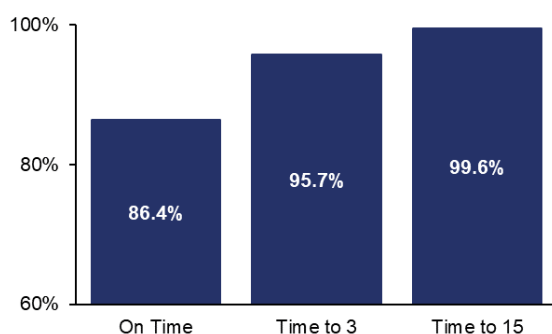
In 2020-21 Q1, 86.4% of recorded station stops in Great Britain were arrived at **On Time** (early or less than one minute after the scheduled arrival time). This was 17.1 percentage points (pp) higher (i.e. better) than the same quarter a year earlier (2019-20 Q1) and the best On Time percentage since the time series began in 2014-15.

Figure 1.1: On Time, Great Britain, 2015-16 Q1 to 2020-21 Q1 (Table 3133)



The **moving annual average (MAA)** reflects the proportion of trains on time in the past 12 months. In this release the On Time MAA for 2020-21 Q1 represents the performance from 1 July 2019 to 30 June 2020. In the year ending 2020-21 Q1, 67.5% of recorded station stops in Great Britain (50.0 million out of 74.0 million) were arrived at On Time. This was up 2.9 pp (i.e. better) compared with the previous year (ending 2019-20 Q1). This is the highest (i.e. best) On Time percentage since the time series began in 2014-15, largely due to the high On Time percentage in Q1.

Figure 1.2: Punctuality at recorded station stops, Great Britain, 2020-21 Q1 (Table 3133)

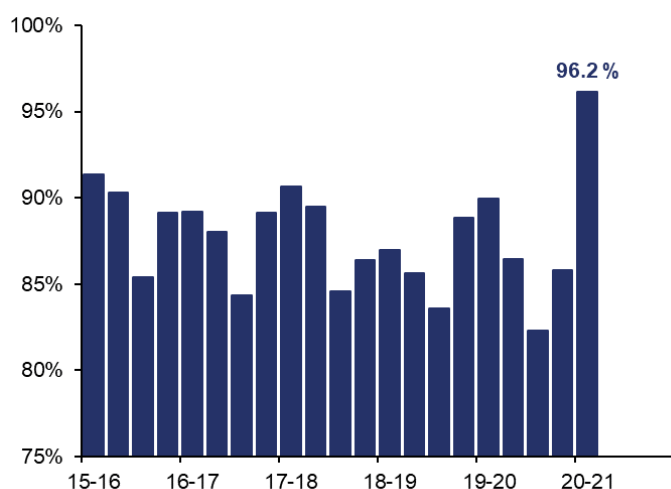


In 2020-21 Q1, 95.7% of recorded station stops were arrived at early or less than three minutes after the scheduled arrival time (Time to 3). This was 8.3 pp higher (i.e. better) than the same quarter last year (2019-20 Q1). For Time to 15, the figure was 99.6% which was 0.7 pp higher (i.e. better) than 2019-20 Q1.

Public Performance Measure (PPM)

In 2020-21 Q1, the **Public Performance Measure (PPM)** for Great Britain was 96.2%. This was 6.2 pp higher (i.e. better) than the same quarter a year earlier (2019-20 Q1) and the best PPM percentage since the time series began in 1997-98.

Figure 1.3: PPM, Great Britain, 2015-16 Q1 to 2020-21 Q1 (Table 3113)



The PPM MAA for the year ending 2020-21 Q1 was 86.9%. This was down 0.2 pp (i.e. worse) compared with a year earlier (ending 2019-20 Q1). This fall was different to the improvement seen in the On Time MAA (up 2.9 pp). There is likely to be a number of reasons for this given the differences between the two measures. For example, this may be attributable to the increase in recording at station stops in the On Time dataset. As all trains planned are included in the PPM dataset only timetable changes affect the consistency of the PPM time series.

Delay minutes

In 2020-21 Q1, National (GB) train delay minutes attributed to Network Rail decreased by 68% compared with the same quarter last year (2019-20 Q1). Delay minutes attributed to train operators decreased by 75% compared with a year earlier.

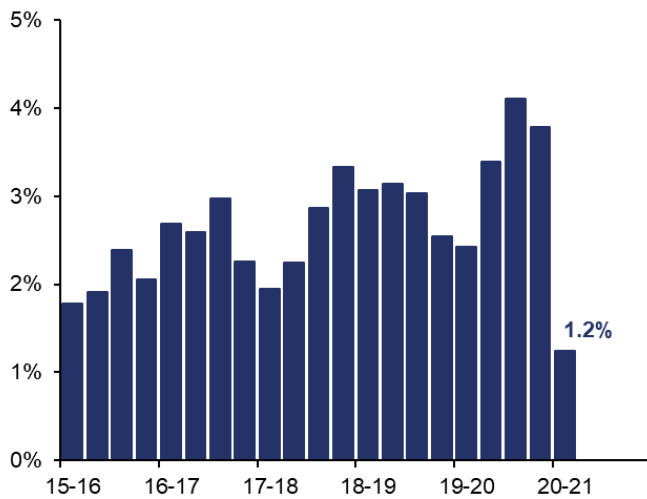
For detailed information on Network Rail and train operator performance this quarter, please see our [new interactive performance charts](#) on the ORR data portal.

2. Train reliability

Cancellations

In 2020-21 Q1, the proportion of trains classified as **Cancellations** was 1.2%. Of 1.25 million trains planned, 0.01 million were full cancellations and 0.01 million were part cancellations (this measure is a weighted score which counts full cancellations as one and part cancellations as half). The 2020-21 Q1 score was 1.2 pp less (i.e. better) than the same quarter a year earlier (2019-20 Q1) and the lowest cancellations score since the time series began in 2014-15.

Figure 2.1: Cancellations, Great Britain, 2015-16 Q1 to 2020-21 Q1 (Table 3123)



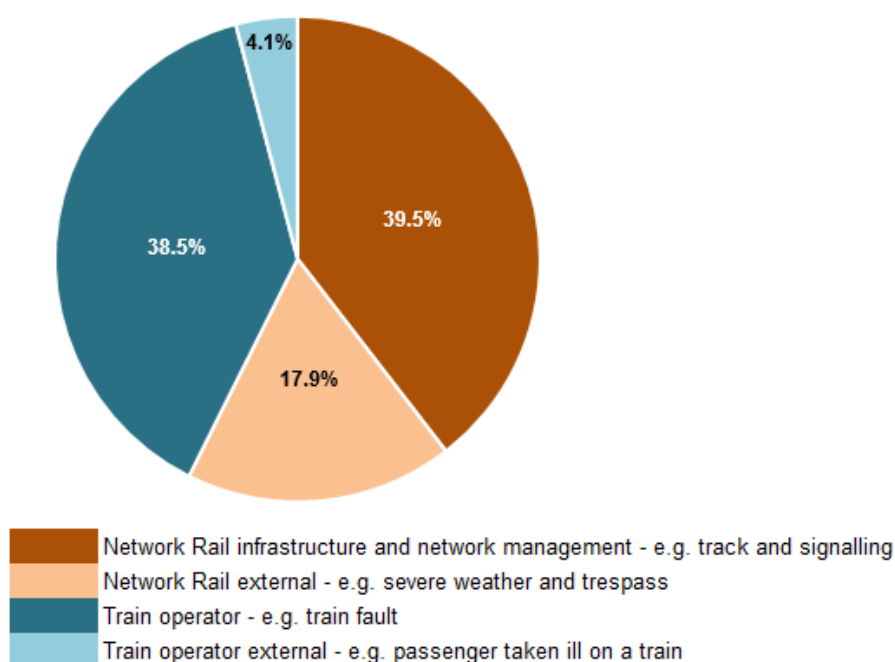
The cancellations MAA for the year ending 2020-21 Q1 was 3.3%. This was up 0.5 pp (i.e. worse) compared with a year earlier (ending 2019-20 Q1) and the highest Q1 MAA cancellations score since the time series began in 2014-15.

Train cancellations Table 3123 (quarterly) and Table 3124 (periodic) now include data on the number of full and part cancellations by train operator.

Responsibility for Cancellations

In 2020-21 Q1, train operators were attributed with responsibility for 42.6% of cancellations that occurred. Network Rail was attributed with 39.5% of cancellations for infrastructure and network management issues and 17.9% for external incidents (e.g. severe weather and trespassing). External incidents are attributed to the party considered best placed to mitigate their effects.

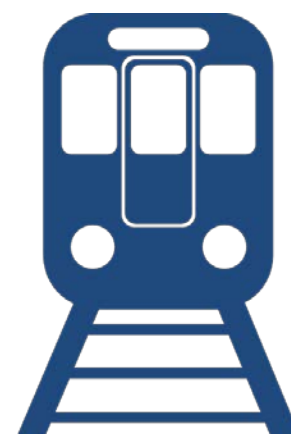
Figure 2.2: Proportion of Cancellations by responsibility category, Great Britain, 2020-21 Q1 (Table 3123)



Severe disruption

A **Severely Disrupted Day** at a National (GB) level occurs when the cancellations score is 5% or more.

Nationally, there were **zero** severely disrupted days in 2020-21 Q1, which was **one less day** compared with 2019-20 Q1.



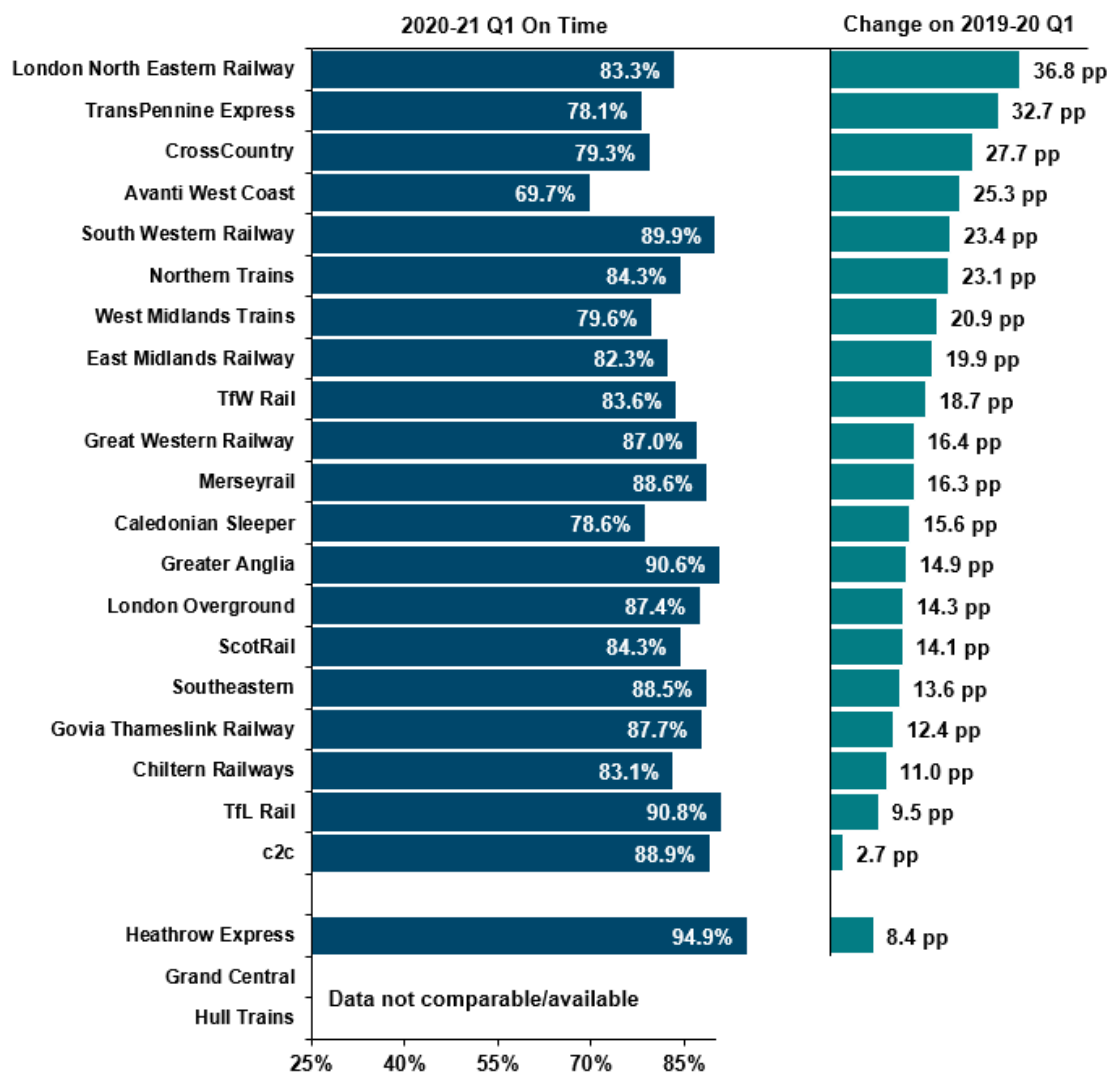
Periodic (four-weekly) data on severe disruption at a National and sub-operator level can be found in Table 3157.

3. Train operating company (TOC) analysis

Punctuality

Levels of **punctuality** were higher for all 21 operators that ran services throughout 2020-21 Q1 compared with a year earlier (2019-20 Q1).¹ London North Eastern Railway (up 36.8 pp compared with the same quarter last year), TransPennine Express (up 32.7 pp) and CrossCountry (up 27.7 pp) had the largest increases in On Time percentages compared with the same quarter last year.

Figure 3.1: On Time by TOC, 2020-21 Q1 and change on 2019-20 Q1 (Table 3133)



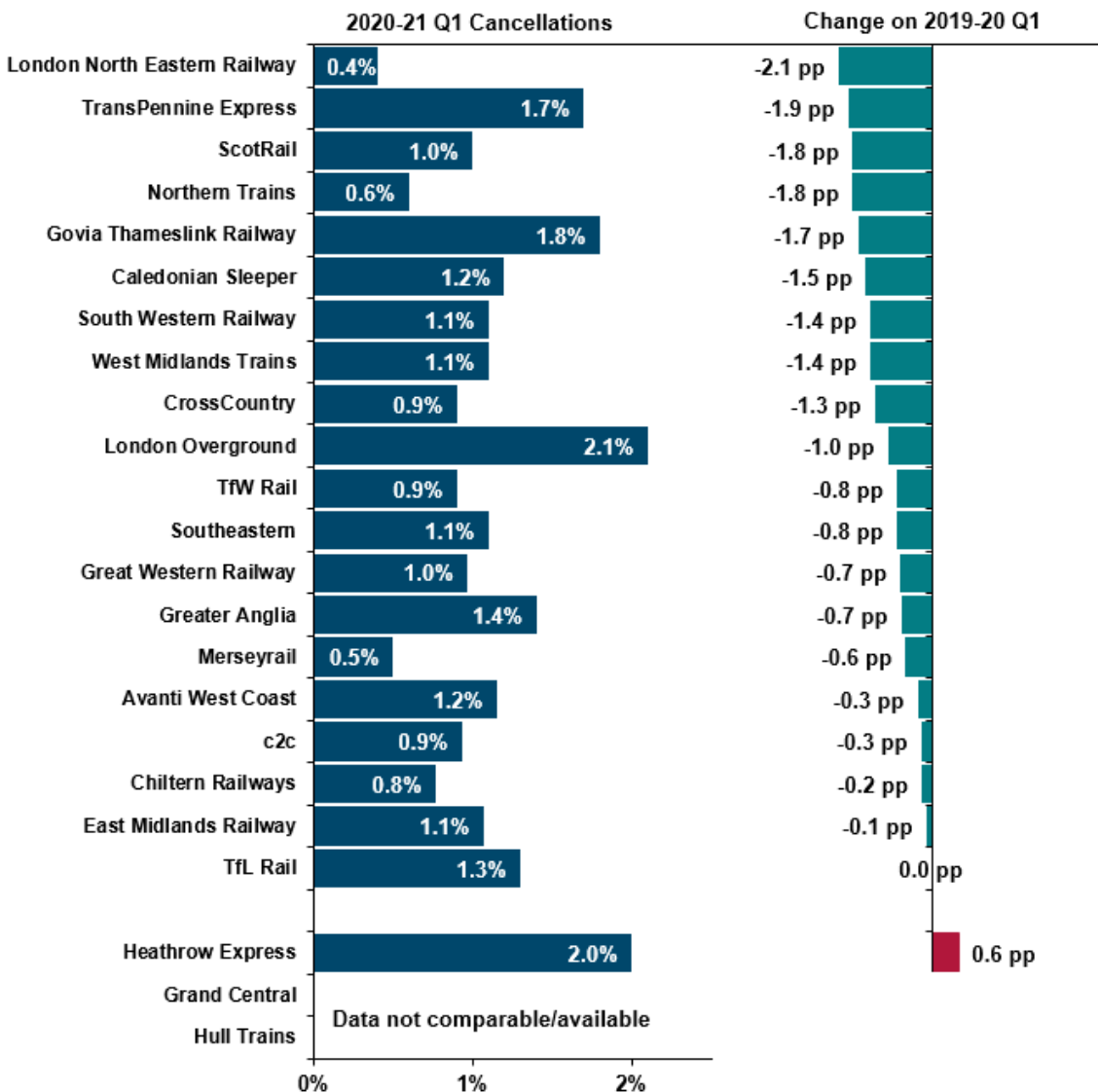
¹ Hull Trains did not operate any services throughout 2020-21 Q1. Grand Central did not operate a service after 3 April 2020.

Reliability

The **reliability** of 19 TOCs improved in 2020-21 Q1 compared with the same quarter last year (2019-20 Q1). London North Eastern Railway (down 2.1 pp), TransPennine Express (down 1.9 pp), ScotRail and Northern trains (both down 1.8 pp) had the largest decreases in cancellations.

Only Heathrow Express had a higher Cancellations percentage (up 0.6 pp) in 2020-21 Q1 compared to the same quarter last year (2019-20 Q1).

Figure 3.2: Cancellations by TOC, 2020-21 Q1 and change on 2019-20 Q1 (Table 3123)



Further information on individual train operating companies, including route maps, can be found via the [Rail Delivery Group website](#).

4. Other rail passenger performance measures

Consistent Region Measure – (Passenger) Performance

The Consistent Region Measure – (Passenger) Performance (CRM-P) monitors the passenger train delay attributed to Network Rail from incidents occurring in each [Network Rail Region](#). The measure is normalised by the train kilometres operated in the Region. Data for CRM-P can be found in Table 3174.

CRM-P is one of the key measures used by ORR for the routine monitoring and assessment of Network Rail's passenger rail performance. ORR monitors delivery against annual CRM-P targets and regulatory floors set for each of the five Network Rail Regions. Performance of this measure was reported in the [annual assessment of Network Rail 2019-20](#).

Average passenger lateness

Average passenger lateness measures the average lateness of a passenger as they alight from their train. Data for average passenger lateness can be found in Table 3194.

5. Annexes

Annex 1 – Definitions

- **On Time** measures the percentage of recorded station stops arrived at early or less than one minute after the scheduled time (as per timetable). Early trains are classified as 'on time'. *A higher On Time score indicates better punctuality.*
- **Time to 3 and Time to 15** measure the percentage of recorded station stops arrived at early or less than three and 15 minutes respectively after the scheduled time. The percentages are cumulative.
- **A recorded station stop** is defined as a location with both a planned timetable time and an actual recorded time where a train has stopped. Up to around 90% of all station stops are currently recorded. No estimates have been made for punctuality at the c.10% of station stops not recorded.
- The **moving annual average (MAA)** reflects the proportion of trains On Time (or cancelled if referring to cancellations measure) in the past 12 months
- **Public performance measure (PPM)** is the proportion of trains arriving at their final destination early or less than five minutes after the scheduled time for London and South East, Regional and Scotland operators, or less than ten minutes for Long Distance operators. For two of the non-franchised operators (Hull Trains and Grand Central), it is less than ten minutes, while Heathrow Express services it is less than five minutes. Where a train fails to stop at one or more booked calling points on the journey, the train is considered to have failed PPM. *A higher score indicates better punctuality.*
- **Cancellations** measures the amount of trains that are cancelled as a percentage of trains planned as confirmed by the train operator and Network Rail at 22:00 on the previous evening. This would include trains missing stations and/or not reaching their destination. The Cancellations measure is a score which weights full cancellations as one and part cancellations as half. *A lower Cancellations score indicates better reliability.*
- **Responsibility for cancellations:** A delay attribution process is used to apportion responsibility for cancellations and any one cancellation can be split between multiple causes of delay. **External incidents** are attributed to the party considered best placed to mitigate their effects.

- **A severely disrupted day** at a National (GB) level is defined when the Cancellations score is 5% or more. At a sub-operator level, a severely disrupted day is defined when the Cancellations score for any sub-operator is 20% or more.
- **Delay minutes** are defined as the time lost between consecutive timing points. Delay incidents producing three or more minutes of delay on Britain's railways are attributed to either Network Rail or a train operator. As well as infrastructure and operational delays such as signal failures and overrunning engineering works, delays caused by external factors such as severe weather, vandalism, cable theft and trespass are also attributed to Network Rail. This is because they are considered best placed to mitigate for such incidents.
- **Consistent Region Measure – (Passenger) Performance (CRM-P)** is defined as the delay attributed to Network Rail from incidents occurring in each Network Rail Region, per 100 train kilometres. *A lower score reflects better performance.*
- **Average passenger lateness (APL)** measures the average lateness of a passenger as they alight from their train. It is estimated for each train by multiplying the number of passengers expected to alight at main stations by the punctuality to the nearest minute at those stops. The measure also takes into account passenger lateness resulting from cancelled trains.

Further information on each of these measures and other definitions can be found in the quality and methodology report on the [passenger rail performance page](#).

Annex 2 – Quality and methodology

Data source

Most of the data contained within this statistical release are collected automatically from Network Rail's TRUST System (Train Running System on TOPs (Total Operation Processing System)). The latest data should be treated as provisional, as train operators provide Network Rail with information e.g. on cancellations, which can be updated over time. These updates are only provided at TOC level. As such, aggregations of sub-operator data can provide slightly different figures to those published at the operator level.

All of these measures are judged against what is known as the plan of the day. The train operator and Network Rail confirm this at 22:00 on the previous evening. Trains removed from the railway systems before this time are excluded from the measures presented in this statistical release and associated data tables.

Network Rail provides data to ORR within 21 days of the end of each of the 13 railway reporting periods (each period lasts four weeks). Where possible, Network Rail remaps historical data to match the railway franchises that exist today. The quarterly data in this release are derived by splitting the periodic data according to the number of days of the period that falls within each quarter.

Punctuality and reliability by TOC

The data provided in Table 3133 (Train punctuality at recorded station stops) and Table 3123 (Train cancellations) show the railway as it exists today. Historical data are shown for the existing TOCs as far back as data are available. For some TOCs, data are available as far back as 1997-98. While comparisons can be made with historical data, it should be noted that the service provided by many operators has changed substantially.

As an example, Virgin Trains West Coast (VTWC) planned to run 55,600 trains in 1997-98. By 2012-13 this figure had almost doubled to reach 110,400. In December 2013, however, VTWC reconfigured their timetable to extend Scotland to Birmingham services to London in place of some Birmingham to London services. A change in service composition such as this would have had an effect on the overall level of performance of the TOC.

Trains planned, PPM and CaSL performance of the TOCs that existed at the time is available in Table 3103.

Sub-operator level data for TOCs

Train punctuality and reliability performance data by sub-operator can be found in Table 3167 (Disaggregated train punctuality and reliability performance on the rail network).

In some cases, individual TOCs are broken down into different sub-operators under different brand names e.g. Govia Thameslink Railway operates as Gatwick Express, Great Northern, Southern, and Thameslink.

Four TOCs provide services in more than one sector: East Midlands Trains, Great Western Railway, Greater Anglia, and West Midlands Trains. Each of these TOCs is broken down into different sub-operators corresponding to each sectoral component.

Further development of these statistics

We have introduced a 'full' and 'part' cancellation split in Table 3123 and Table 3124.

We continue to develop a dataset showing On Time train punctuality at recorded station stops for individual stations. We are also discussing the availability of additional data at a sector level with our data supplier (Network Rail).

Revisions

There have been minor revisions to two previously published datasets on cancellations (Table 3123 and Table 3124). Data prior to 2017-18 was temporarily removed from these tables due to data quality concerns. These issues have now been resolved and therefore data prior to 2017-18 in these tables has been reinstated and updated. Further details on these and historic revisions can be found in the [Revisions log](#).

Further details on railway reporting periods, data collection, the methodology used to calculate the data within this release can be found in the [Passenger rail performance quality and methodology report](#).

Annex 3 – List of data tables associated with this release and other related statistics

Data tables

All data tables can be accessed on the [ORR data portal](#) free of charge in OpenDocument Spreadsheet (.ods) format. We can also provide data in csv format on request.

All tables associated with this release can be found under the Data tables heading at the bottom of the [Passenger rail performance page](#).

Train punctuality

- Train punctuality at recorded station stops by operator – Table 3133
- Train punctuality at recorded station stops by operator (periodic) – Table 3138
- Public Performance Measure by operator and sector – Table 3113
- Public Performance Measure by operator and sector (periodic) – Table 3114

Train reliability

- Train cancellations by operator and cause – Table 3123
- Train cancellations by operator and cause (periodic) – Table 3124
- Days of severe disruption by sub-operator – Table 3157
- Trains cancelled by operator (periodic) – Table 3128
- Cancelled and Significantly Late by operator and sector (periodic) – Table 3194

Other tables

- Disaggregated train punctuality and reliability performance by sub-operator (periodic) – Table 3167
- Average passenger lateness by operator and sector (periodic) – Table 3144
- Delay minutes by operator and cause (periodic) – Table 3184
- Historic passenger trains planned, PPM, and CaSL - quarterly by operator – Table 3103
- Consistent Region Measure (Passenger) Performance by Region (periodic) – Table 3174
- Passenger trains planned by operator (periodic) – Table 3104

Other related statistics

Freight rail performance data tables are published on the [Freight rail usage and performance page](#) on the ORR data portal.

The Department for Transport (DfT) also publishes some [rail statistics](#). For example, Rail passenger numbers and overcrowding on weekdays in major cities. Transport Focus publish the [National Rail Passenger Survey](#) (NRPS).

European Comparisons

[Comparisons with railways in the rest of Europe](#) are available for the calendar years 2014 to 2016. For trains in Scotland and the Regional and London and South East sectors, 87.8% of services in 2016 arrived less than five minutes after their scheduled arrival time at their final destination. This ranks Britain 19th out of 25 countries. For long distance services, 77.5% arrived less than five minutes after their scheduled arrival time at their final destination. This ranks Britain 15th out of 23 countries.

Annex 4 – ORR’s statistical publications

Statistical Releases

This publication is part of ORR’s [National Statistics](#) accredited releases, which consist of six annual publications: **Rail Finance; Rail Fares Index; Rail Safety Statistics; Rail Infrastructure and Assets; Rail Emissions; Regional Rail Usage**; and four quarterly publications: **Passenger Rail Performance; Freight Rail Usage and Performance; Passenger Rail Usage; Passenger Rail Service Complaints**.

In addition, ORR also publishes a number of Official Statistics, which consist of four annual publications: **Estimates of Station Usage; Train Operating Company Key Statistics; Rail Statistics Compendium; Occupational Health**; and four quarterly publications: **Signals passed at danger (SPADS); Delay Compensation Claims; Disabled Person’s Railcard (DPRC); Passenger assistance**.

All the above publications are available on the [ORR data portal](#) along with a list of [publication dates](#) for the next 12 months.

National Statistics

The United Kingdom Statistics Authority designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics. National Statistics status means that official statistics meet the highest standards of **trustworthiness, quality** and public **value**.

Our [statistical releases were assessed in 2012](#) and hold National Statistics status. Since our assessment we have improved the content, presentation and quality of our statistical releases. In addition, in July 2019 we launched our new data portal. Therefore, in late 2019 we worked with the OSR to conduct a compliance check to ensure we are still meeting the standards of the Code. On 4 November 2019, [OSR published a letter](#) confirming that ORR’s statistics should continue to be designated as National Statistics. OSR found many positive aspects in the way that we produce and present our statistics and welcomed the range of improvements made since the statistics were last assessed.

For more information on how we adhere to the Code please see our [compliance statements](#). For more details or to provide feedback, please contact the Statistics Head of Profession (Lyndsey Melbourne) at rail.stats@orr.gov.uk.



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