

Passenger Rail Performance 2020-21 Quarter 4

20 May 2021

Background:

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

These include: **On Time** at every recorded station stop, **train delays**, **PPM**, **Cancellations** and **Severely disrupted days**.

It also contains more detailed information by train operator.

Source: Network Rail

Latest quarter: 2020-21 Q4 (January to March 2021).

Contents:

Background – p2
Train punctuality – p4
Train reliability – p7
Train operator analysis – p10
Annexes – p12

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Next publication:

16 September 2021

Performance during the fourth quarter of 2020-21 continued to be affected by the coronavirus (COVID-19) pandemic. Train service and passenger levels on the network were higher than earlier in the year, but remained at historically low levels.

Great Britain - 2020-21 Q4 (January to March 2021)

Compared with
2019-20 Q4

On Time	80.4%	↑	14.8pp
PPM	92.9%	↑	7.2pp
Cancellations score	2.4%	↓	-1.4pp

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 **80.4%** in 2020-21 Q4. This was the second highest (i.e. best) quarterly On Time percentage since the time series began in 2014-15. The only quarter with a higher On Time percentage was the first quarter of this year (2020-21 Q1).

Using the **Public Performance Measure (PPM)**, **92.9%** of trains were punctual (early or less than 5/10 minutes after the scheduled arrival time) at their final destination in 2020-21 Q4. This was the highest Q4 PPM percentage since the time series began in 1997-98.

The proportion of trains classified as **Cancellations** in 2020-21 Q4 was **2.4%**. This was the lowest Q4 cancellation score (i.e. best) since 2016-17. 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 dashboard 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.

1. Background

Impact of COVID-19

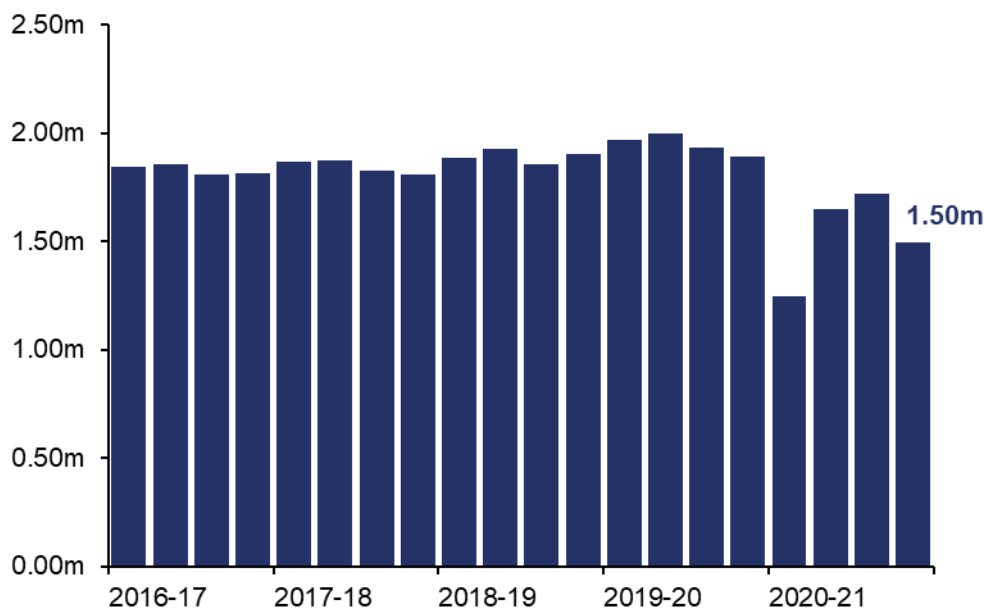
Performance during 2020-21 Q4 (1 January 2021 to 31 March 2021) continued to be affected by COVID-19. Since the start of 2020-21 there has been a substantial reduction in train services and passenger usage relative to previous years. This has led to improvements in both punctuality and reliability.

In 2020-21 Q4, there were 1.50 million trains planned in Great Britain. Despite an increase on the first quarter of the year (1.25 million trains planned), this was down 21% compared with the same quarter last year (2019-20 Q4). This follows measures taken to limit the impact of the coronavirus pandemic, [including national restrictions in place since 4 January 2021](#).

In the full year 2020-21, there were 6.11 million trains planned. This was down 22% compared with 7.79 million trains planned in 2019-20.

Figure 1.1 Trains planned remained at historically low levels but have increased since Q1

Trains Planned (millions), Great Britain, 2016-17 Q1 to 2020-21 Q4 (Table 3123)



There has also been a reduction in passenger numbers compared with last year. The Department for Transport publishes [daily statistics on transport use by mode](#), compared with the equivalent week in the previous year. According to these estimates, during 2020-21 Q4, rail passenger journeys remained around a quarter or less of the equivalent weekly levels in the previous year. Passenger usage increased throughout March as restrictions were eased, with [schools and colleges across England re-opening from 8 March](#).

These changes in trains planned and passenger usage have led to improvements in punctuality and reliability relative to previous years. Prior to this quarter, these improvements in performance have been clearly visible when looking at individual quarters but less so in moving annual averages (MAAs). The 2020-21 Q4 MAAs now include a full year of data since the start of the pandemic and therefore improvements are more pronounced.

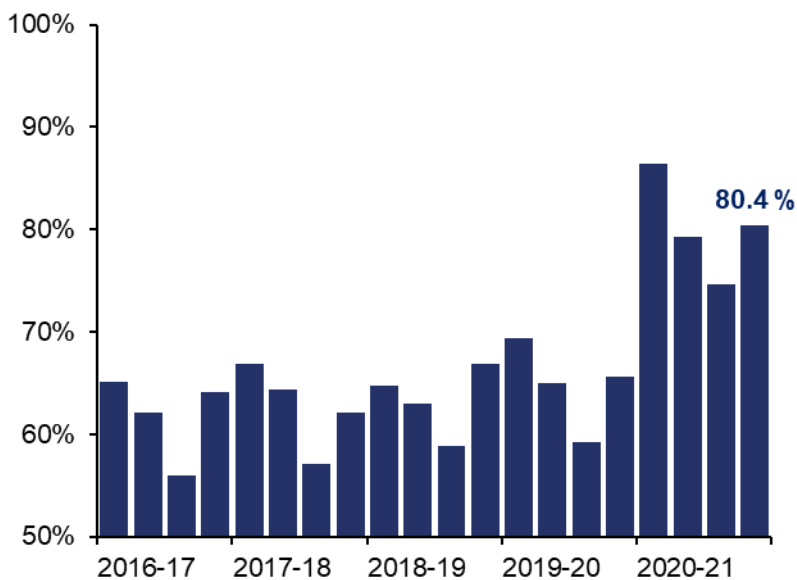
2. Train punctuality

Punctuality at each recorded station stop

In 2020-21 Q4, 80.4% 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 14.8 percentage points (pp) higher (i.e. better) than the same quarter a year earlier (2019-20 Q4). The only quarter with a higher On Time percentage was the first quarter of the year (2020-21 Q1).

Figure 2.1 Q4 had the second highest On Time percentage since the time series began

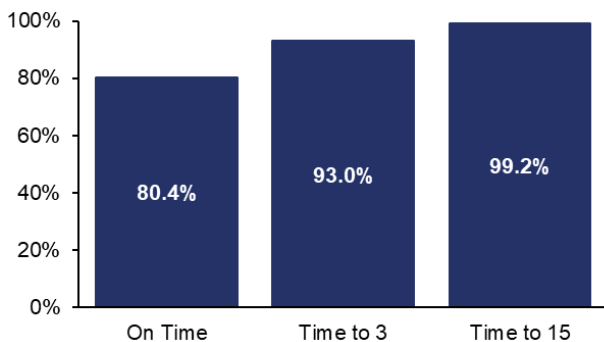
On Time, Great Britain, 2016-17 Q1 to 2020-21 Q4 (Table 3133)



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 Q4 represents the performance from 1 April 2020 to 31 March 2021. In the year ending 2020-21 Q4, 79.7% of recorded station stops in Great Britain (53.1 million out of 66.6 million) were arrived at On Time. This was up 14.9pp (i.e. better) compared with the previous year (ending 2019-20 Q4). This is the highest (i.e. best) On Time MAA percentage since the time series began in 2014-15. The improvements in punctuality since the start of the pandemic are now more visible in the MAAs given all quarters were affected.

Figure 2.2 93% of recorded stops were arrived at within three minutes of the scheduled arrival time

Punctuality at recorded station stops, Great Britain, 2020-21 Q4 (Table 3133)



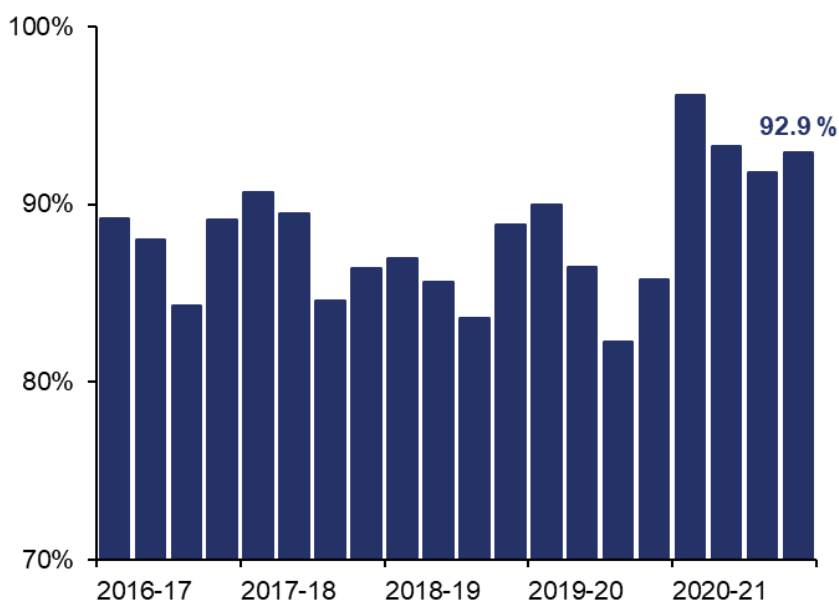
In 2020-21 Q4, 93.0% of recorded station stops were arrived at early or less than three minutes after the scheduled arrival time (Time to 3). This was 9.0pp higher (i.e. better) than the same quarter last year (2019-20 Q4). For Time to 15, the result was 99.2% which was 0.8pp higher (i.e. better) than 2019-20 Q4.

Public Performance Measure (PPM)

In 2020-21 Q4, the **Public Performance Measure (PPM)** for Great Britain was 92.9%. This was 7.2pp higher (i.e. better) than the same quarter last year (2019-20 Q4).

Figure 2.3 2020-21 Q4 had the best Q4 PPM percentage since the time series began

PPM, Great Britain, 2016-17 Q1 to 2020-21 Q4 (Table 3113)



The PPM MAA for the year ending 2020-21 Q4 was 93.4%. This was up 7.2pp (i.e. better) compared with a year earlier (ending 2019-20 Q4). This increase was smaller than the improvement seen in the On Time MAA (up 14.9pp).

Other punctuality measures

Delay minutes

Delay minutes measure the time lost between consecutive timing points on the rail network. In 2020-21 Q4, National (GB) train delay minutes attributed to Network Rail decreased by 57% compared with the same quarter last year (2019-20 Q4). Delay minutes attributed to operators decreased by 70% compared with a year earlier.

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

Consistent Region Measure – (Passenger) Performance

The Consistent Region Measure – (Passenger) Performance (CRM-P) measures passenger train delay attributed to Network Rail from incidents occurring in each [Network Rail region](#), per 100 train kilometres.

CRM-P is one of the key measures used by ORR for 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. Data for CRM-P can be found in Table 3174.

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 3144.

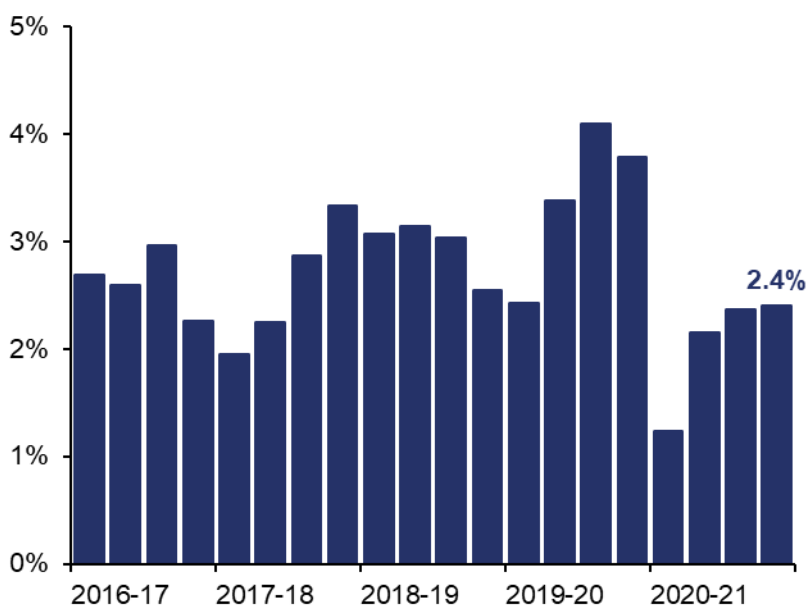
3. Train reliability

Cancellations

In 2020-21 Q4, the proportion of trains classified as **Cancellations** was 2.4%. Of 1.50 million trains planned, 0.03 million were full cancellations and 0.02 million were part cancellations. The cancellations measure is a weighted score counting full cancellations as one and part cancellations as half. The 2020-21 Q4 score was 1.4pp less (i.e. better) than the same quarter a year earlier (2019-20 Q4) and the lowest Q4 cancellations score since 2016-17.

Figure 3.1 Cancellations continue to increase but remain lower than previous years

Cancellations, Great Britain, 2016-17 Q1 to 2020-21 Q4 (Table 3123)



The cancellations MAA for the year ending 2020-21 Q4 was 2.1%. This was down 1.3pp (i.e. better) compared with a year earlier (ending 2019-20 Q4) and was the lowest the MAA has been since 2015-16 Q4.

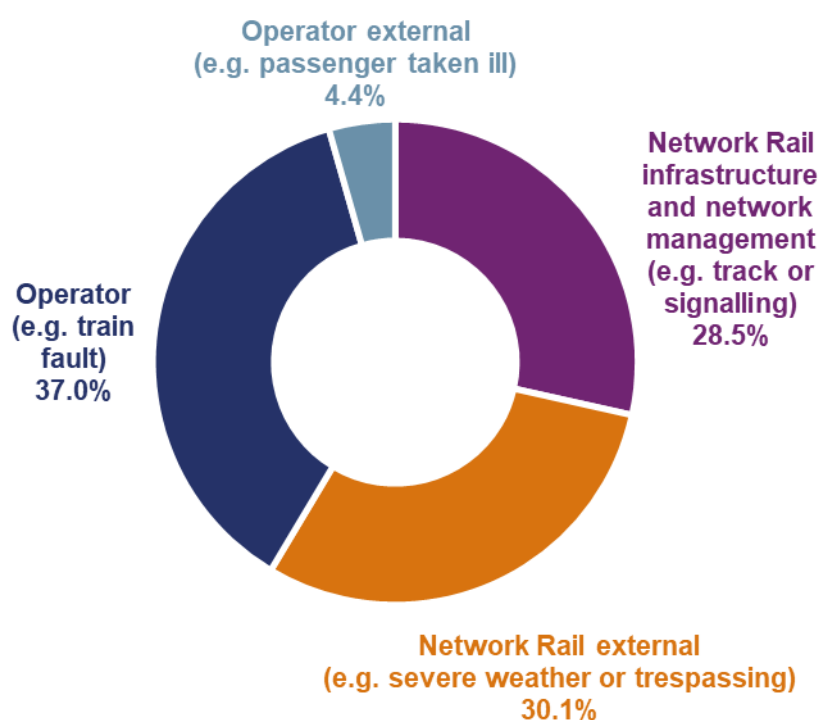
Train cancellations Table 3123 (quarterly) and Table 3124 (periodic) now include data on the number of full and part cancellations by operator.

Responsibility for cancellations

In 2020-21 Q4, operators were attributed with responsibility for 41.4% of cancellations that occurred. Network Rail was attributed with responsibility for 28.5% of cancellations for infrastructure and network management issues, with another 30.1% attributed to external incidents such as severe weather or trespassing. External incidents are attributed to the party considered best placed to mitigate their effects.

Figure 3.2 Nearly 60% of cancellations were attributed to Network Rail

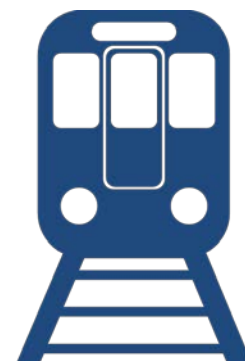
Proportion of cancellations by responsibility category, Great Britain, 2020-21 Q4 (Table 3123)



Severe disruption

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

Nationally, there were **three** severely disrupted days in 2020-21 Q4, which was **seven fewer days** compared with 2019-20 Q4.



The three severely disrupted days in 2020-21 Q4 were on 20 January and 8 and 11 February.

On 20 January, [Storm Christoph brought widespread flooding across large parts of the UK](#) leading to high levels of cancellations across the rail network. There was further weather-related disruption on 8 and 11 February as [Storm Darcy resulted in disruption across the network](#). There were multiple large incidents attributed to ice and snow.

In the full year 2020-21, there were a total of 11 severely disrupted days. This was 29 days fewer compared with 2019-20.

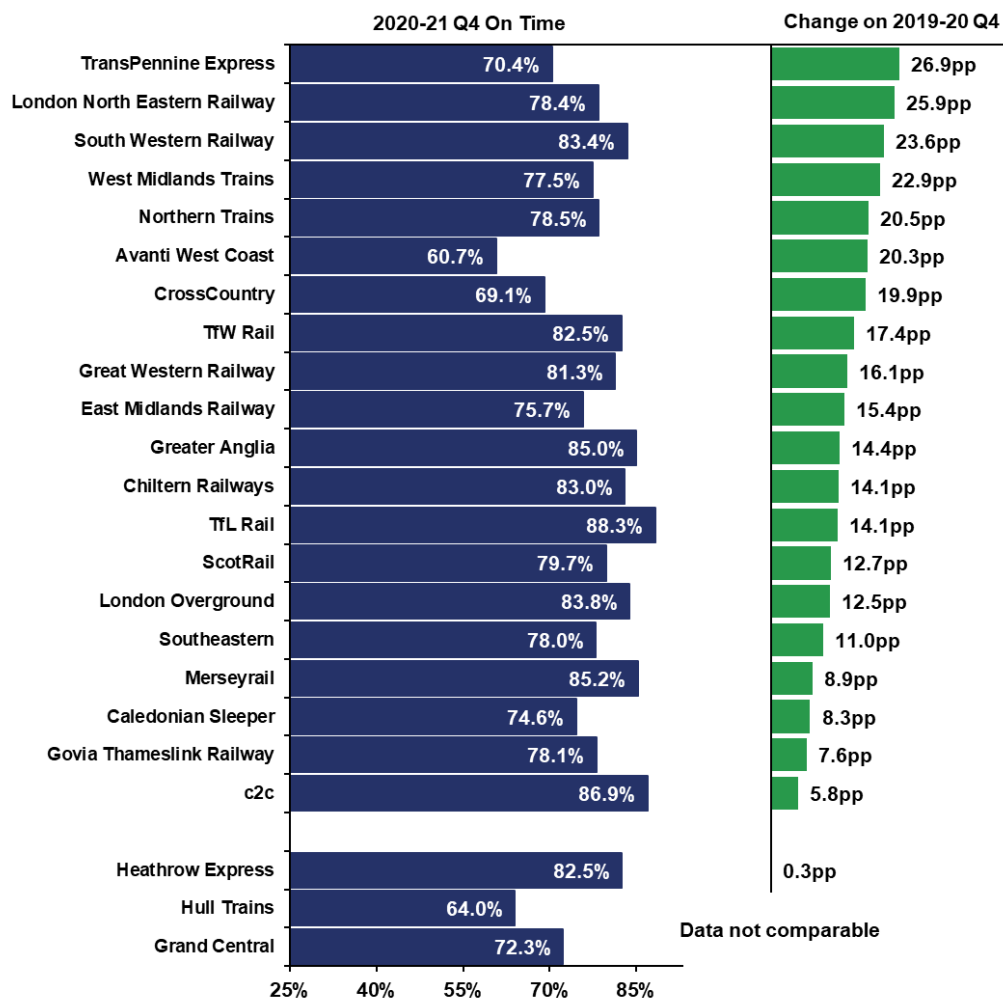
Periodic (four-weekly) data on severe disruption at a National and sub-operator level can be found in Table 3157.

4. Train operator analysis

Punctuality

Figure 4.1 Punctuality of all 20 franchised operators improved this quarter

On Time by operator, 2020-21 Q4 and change on 2019-20 Q4 (Table 3133)



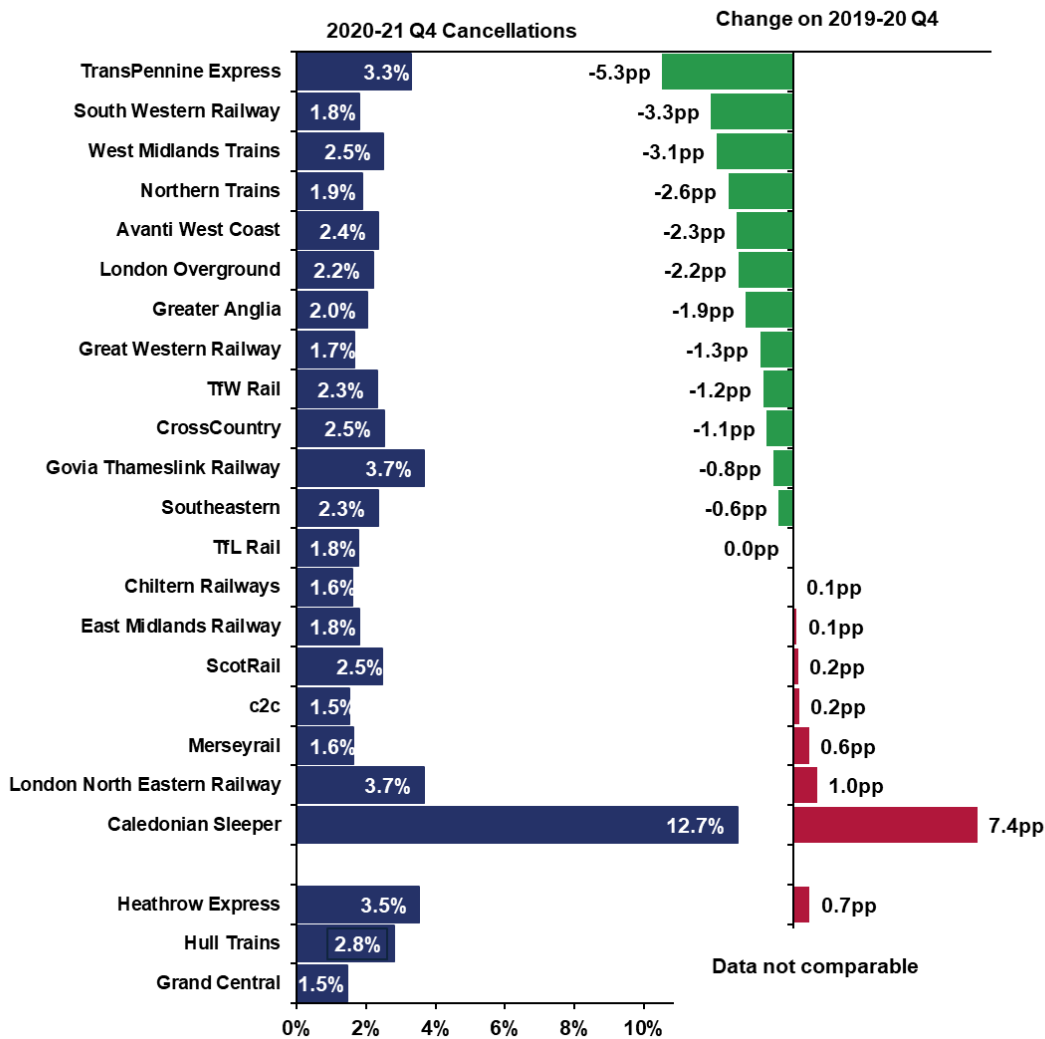
TransPennine Express (up 26.9pp compared with the same quarter last year), London North Eastern Railway (up 25.9pp) and South Western Railway (up 23.6pp) had the largest increases in On Time percentages.

On 9 January 2021, Grand Central and Hull Trains suspended services. As a result, Grand Central only planned 132 services in Q4 compared with 1,334 in the same quarter last year. Hull Trains planned 40 services compared with 1,020 in the same quarter last year. For this reason, data are not comparable with 2019-20 Q4.

Reliability

Figure 4.2 Reliability of 13 of the 20 franchised operators improved this quarter

Cancellations by operator, 2020-21 Q4 and change on 2019-20 Q4 (Table 3123)



TransPennine Express (down 5.3pp compared with the same quarter last year), South Western Railway (down 3.3pp) and West Midlands Trains (down 3.1pp) had the largest decreases in cancellations. Caledonian Sleeper (up 7.4pp) had the largest increase in cancellations in 2020-21 Q4 compared with the same quarter last year. It should be noted that the number of planned Caledonian Sleeper services was 169 in the latest quarter, compared to 512 in the same quarter last year. As previously mentioned, Grand Central and Hull Trains data are not comparable with 2019-20 Q4.

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

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.*
- **Delay minutes** are defined as the time lost between consecutive timing points on the rail network. 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.
- **Cancellations** measures the amount of trains that are cancelled as a percentage of trains planned. 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.

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 operator 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 operator

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 operators as far back as data are available. For some operators, 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, in 1997-98 Virgin Trains West Coast (VTWC) planned to run 55,600 trains. By 2012-13 this figure had almost doubled to reach 110,400. In December 2013, however, the operator 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 operator.

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

Sub-operator level data

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

Recent changes to train operators

On 9 January 2021, Grand Central and Hull Trains suspended services.

From 7 February 2021, the Welsh Government took the Wales and Borders franchise (TfW Rail) into public ownership. The operator continues to be referred to as TfW Rail in this release.

Further development of these statistics

At the start of the year we 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.

For the first time in this release, we have used descriptive chart titles. These are designed to provide readers with the main message from the chart. We welcome feedback on this as we plan to implement this across our other statistical releases too.

Revisions

There have been no revisions to the previously published dataset. Further details on 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 quality and methodology report on the [Passenger Rail Performance page](#).

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

- Trains planned and cancellations by operator and cause – Table 3123
- Trains planned and cancellations by operator and cause (periodic) – Table 3124
- Days of severe disruption by sub-operator (periodic) – Table 3157
- 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

Changes to data tables

There will be no further updates to the following data tables:

- Passenger trains planned by operator (periodic) – Table 3104
- Trains cancelled by operator (periodic) – Table 3128

These tables continue to be available on our [Passenger rail performance page](#). Periodic trains planned and cancellations data will continue to be updated in Table 3124.

Quarterly cancellations and significant lateness data has been removed from the [ORR data portal](#). Periodic data for this measure continues to be updated in Table 3194.

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 [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

Due to differences in how passenger rail performance is measured in other countries, opportunities to make direct comparisons with statistics in this release are limited. Data from other European countries is published in the [IRG-Rail Ninth Annual Market Monitoring Report](#).

[Historic comparisons with railways in the rest of Europe](#) are available for 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 seven annual publications: **Estimates of Station Usage; Rail Industry Finance (UK); 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 three annual publications: **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 Railcards (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**.

The majority of these [statistical releases were assessed in 2012](#) and also 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 [Office for Statistics Regulation](#) (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. [Estimates of Station Usage statistics were assessed in 2020](#).

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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