



Passenger and Freight Rail Performance 2016-17 Q4 Statistical Release

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Background

This release contains information on passenger and freight rail performance in Great Britain with the latest quarterly data referring to January, February and March 2017.

All data in this release are sourced from Network Rail.

Passenger performance is assessed using two measures: **Public Performance Measure (PPM)** and **Cancellations and Significant Lateness (CaSL)**.

In addition to the PPM and CaSL data in this release, **delay minute data** are published quarterly on the [Data Portal](#).

The **Freight Delivery Metric (FDM)** is the primary measure of freight performance in Great Britain.

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Rail passenger performance (**Public Performance Measure**) in 2016-17 (87.7%) was the lowest annual score recorded since 2005-06.

Performance on the **Thameslink, Southern and Great Northern (TSGN)** franchise continued to deteriorate. **Govia Thameslink Railway** recorded the franchise’s lowest annual performance score since the time series began in 2004-05.

PPM - 2016-17 Q4

		Compared with 2015-16
National (GB)	87.7%	↓ -1.4 pp
Regional and Scotland	91.3%	↑ 0.1 pp
London & South East	85.2%	↓ -2.6 pp
Long Distance	87.6%	→ 0.0 pp

The proportion of trains **cancelled or significantly late** in 2016-17 (3.8%) was the highest since 2002-03 (4.3%).

The **London and South East sector** recorded its highest CaSL rate (4.8%) since the time series began in 1997-98.

CaSL - 2016-17 Q4

		Compared with 2015-16
National (GB)	3.8%	↑ 0.8 pp
Regional and Scotland	2.3%	↑ 0.2 pp
London & South East	4.8%	↑ 1.3 pp
Long Distance	4.8%	↑ 0.2 pp

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1. Public Performance Measure (PPM)



Quarter 4 Headlines:

- The lowest **National** Q4 performance (89.1%) since 2006-07 (88.5%).
- The lowest **London and South East sector** Q4 performance (86.7%) since 2003-04 (81.9%).
- The second highest **Regional and Scotland sector** Q4 performance (92.6%) since the time series began in 1997-98 (the best was 93.2% recorded in 2011-12).

Public Performance Measure (PPM) is the proportion of trains that arrive at their final destination on time. On time is defined as arriving at the destination within five minutes of the planned timetable for London and South East, Regional and Scotland operators, or within ten minutes for the Long Distance operators. The **moving annual average (MAA)** reflects the proportion of trains on time in the past 12 months. In Q4, the MAA also represents the PPM for the financial year. A higher score indicates higher performance.

This release contains information on passenger and freight rail performance in Great Britain since 1997-98. The latest data in this release refer to Q4 of 2016-17 (1st January to 31st March 2017).

PPM and CaSL are judged against what is known as the plan of the day. This is confirmed by the operator and Network Rail at 22:00 on the previous evening. Trains removed from the railway systems before this time are excluded from the PPM and CaSL calculations.

For further information on the collection of this data, please refer to [Annex 2](#).

PPM by sector

2016-17 Quarter 4 Results

National PPM in 2016-17 Q4 was 89.1%. Down slightly compared with 2015-16 Q4, this is the worst Q4 score recorded since 2006-07 (88.5%). The London and South East (LSE) sector recorded a PPM score of 86.7% in Q4. This was down 0.6 pp compared with the same quarter the previous year and is the lowest Q4 score recorded since 2003-04 (81.9%).

In Q4 of 2016-17, Govia Thameslink Railway (GTR) operated 15% of all services in Great Britain. While the rest of the network experienced a 0.1 pp increase in the Q4 PPM, GTR's Q4 PPM was 1.3 pp worse in 2016-17 than it was in 2015-16. Furthermore, GTR services were responsible for 49%¹ of the decline in the LSE PPM in Q4. That is, GTR services that failed PPM accounted for 0.3 pp of the overall 0.6 pp fall in the quarterly LSE PPM for Q4.

Services in the Regional and Scotland sector recorded a PPM of 92.6% in Q4 of 2016-17. Up 0.6 pp compared with same quarter the previous year, this is the second highest Q4 score recorded since the time series began in 1997-98 (the best was 93.2% recorded in 2011-12). The Long Distance sector recorded a PPM of 89.2% in Q4. This was up 0.8 pp compared with 2015-16 Q4.

All delay minutes 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. Delays caused by issues with trains or traincrew are attributed to train operators. In 2016-17 Q4, 61.6% of delays to passenger trains were attributed to Network Rail with external factors accounting for 17% of the overall total. Further information on the causes of delay can be found on the [Data Portal](#).

The decline in performance in the LSE sector can be attributed to a number of causes. Delays relating to third rail faults (2,600 PPM failures) increased by 39% and delays due to problems at stations (4,400 PPM failures) were up 41% compared with 2015-16 Q4. There was also an increase in uninvestigated delays². These accounted for 10,200 PPM failures³ in 2016-17 Q4 which was up more than 900% compared with the same quarter the previous year.

- Annual and quarterly PPM by sector data are available on the Data Portal in [Table 3.43](#)

¹ For more information on estimating this figure, please see the [methodology annex](#).

² The delay attribution process can become overwhelmed at the times of severe disruption leading to some delays being uninvestigated.

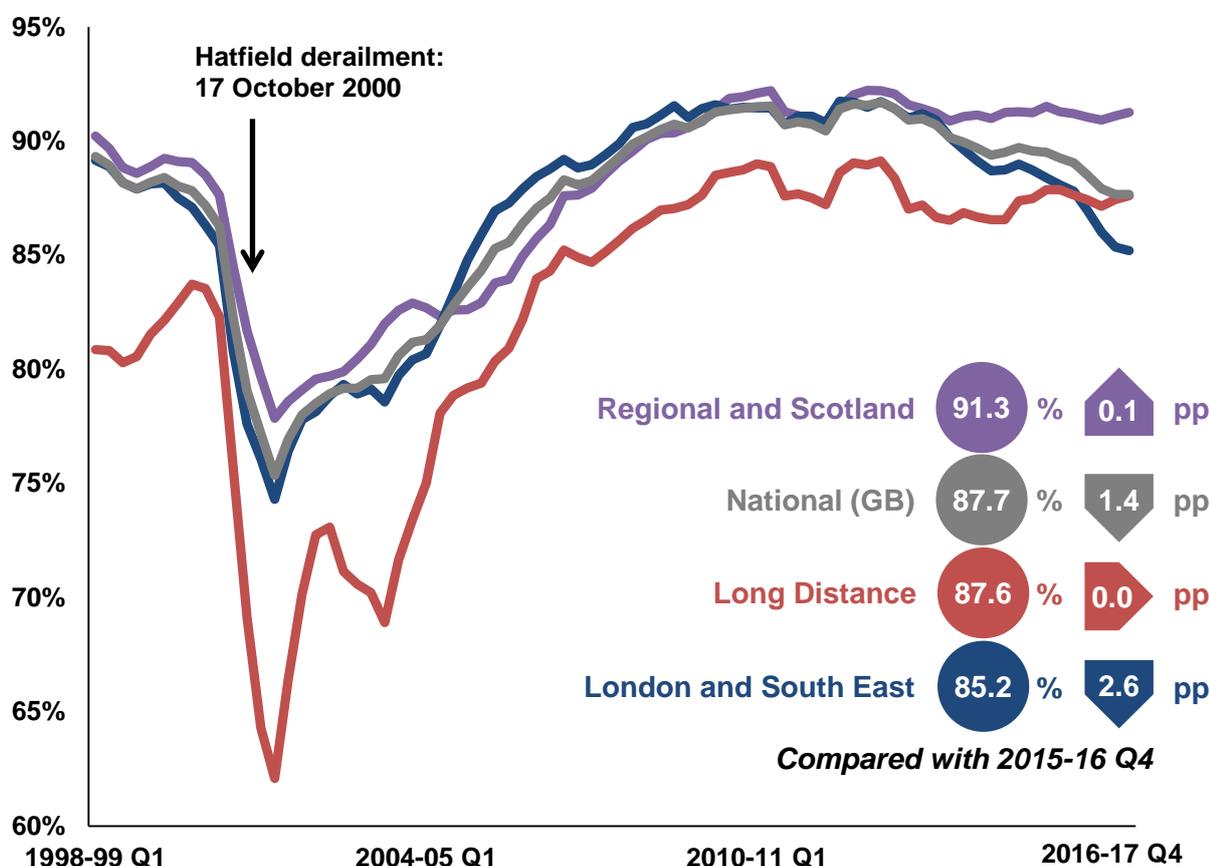
³ A PPM failure is when a passenger train does not arrive at its final destination within five minutes of its scheduled arrival time (within ten minutes for Long Distance services). Delay minutes are used to apportion responsibility for PPM failures and can be split between multiple causes of delay.

2016-17 Quarter 4 MAA Results

Headlines:

- The lowest **National** PPM MAA (87.7%) since Q2 of 2006-07 (87.5%).
- The lowest **London and South East** sector PPM MAA (85.2%) since Q4 of 2004-05 (84.8%).
- **Govia Thameslink Railway** accounted for 74%⁴ (1.0 pp) of the year-on-year decline in the national PPM MAA and 73% (1.9 pp) of the year-on-year decline in the LSE PPM MAA.

PPM MAA by sector, Great Britain, 1998-99 Q1 to 2016-17 Q4 ([Table 3.42](#))



While the overall performance is still better than that recorded in the early 2000s, the national PPM MAA has declined steadily since the start of 2013-14. The national MAA of 87.7% is the lowest it has been since Q2 of 2006-07 (87.5%). Despite the extra five minutes afforded to Long Distance services for meeting PPM, the Long Distance sector

⁴ For more information on estimating this figure, please see the [methodology annex](#).

has historically had the lowest PPM scores. However, the Long Distance sector ended Q4 with a PPM MAA of 87.6% and continues to have a higher MAA than the LSE sector (85.2%).

In the 12 months to the end of 2016-17 Q4, GTR operated 15% of all services. PPM failures by GTR services, however, were responsible for 74%⁵ of the year-on-year decline in the national PPM MAA. That is, GTR services that failed PPM were responsible for 1.0 pp of the overall 1.4 pp fall in the national PPM MAA. For the LSE sector, GTR accounted for 73% (1.9 pp) of the 2.6 pp year-on-year fall in the PPM MAA for Q4.

- Quarterly PPM MAA by sector data are available on the Data Portal in [Table 3.42](#)

⁵ For more information on estimating this figure, please see the [methodology annex](#).

PPM by Train Operating Company (TOC)

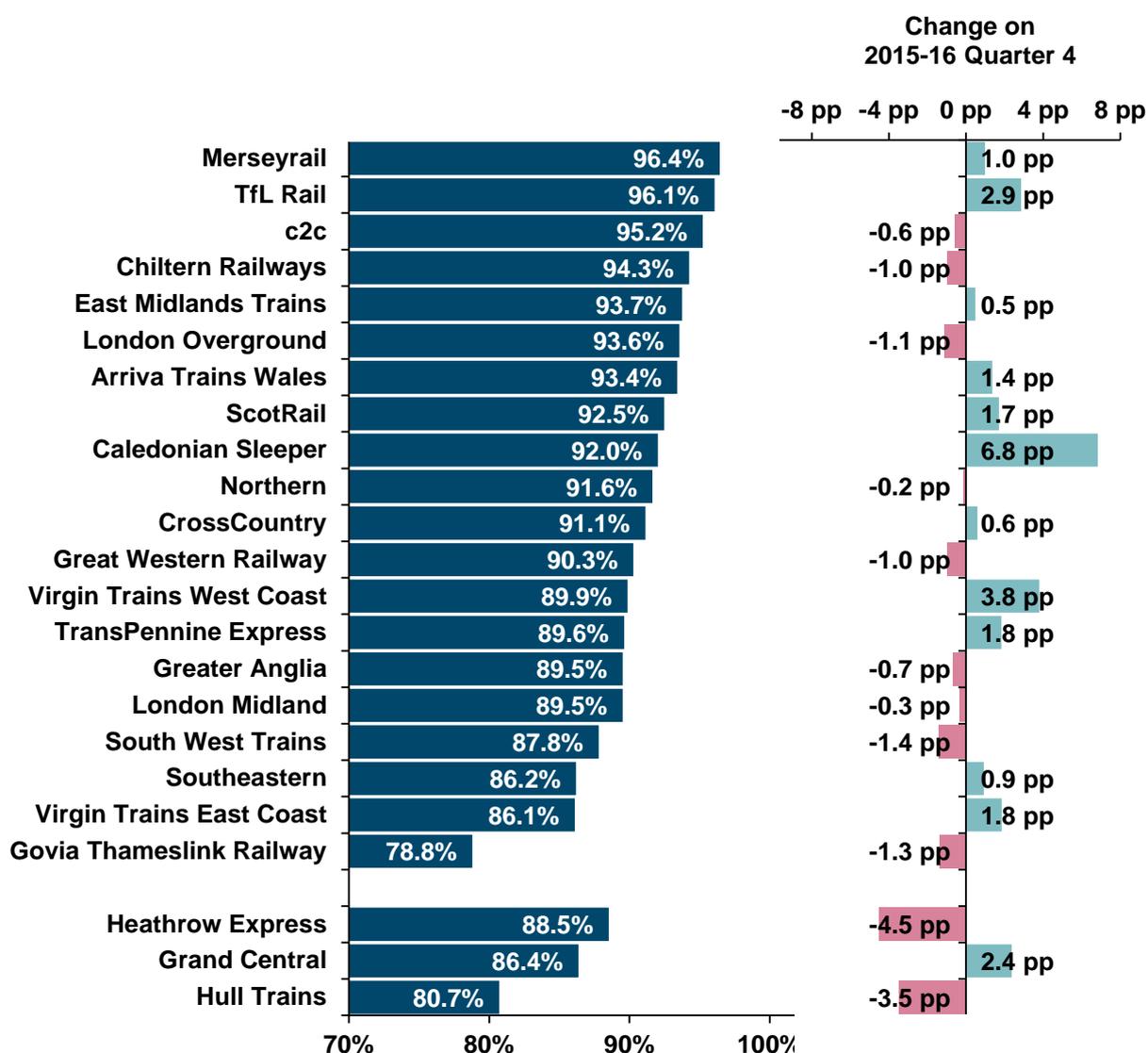
Please refer to the [Annex 3](#) for details of changes to train operating companies.

2016-17 Quarter 4 PPM Results by TOC

Quarter 4 Headlines:

- The lowest **Govia Thameslink Railway** Q4 PPM (78.8%) since the time series began in 2004-05.
- The fifth consecutive year-on-year fall in **South West Trains** quarterly PPM. The Q4 PPM of 87.8% was 1.4 pp down on the same quarter last year.

PPM by TOC, Great Britain, 2015-16 Q4 and 2016-17 Q4 ([Table 3.44](#))



Performance was also adversely affected by ongoing staffing issues at GTR⁶ and a number of other incidents including a track fault at East Croydon, a power failure on a train at Farringdon and points failure at Earlswood.

Eleven of the 20 franchised train operators had a higher percentage of trains on time when compared with the same quarter the previous year. The 92.0% recorded by Caledonian Sleeper was 6.8 pp better than the previous year and the best Q4 for these services since the time series began in 2011-12. This was due to more benign weather in 2016-17 and a reduction in operational and fleet failures. VTWC (up 3.8 pp) also benefitted from the better weather, but also suffered fewer PPM failures due to track faults. Both the TOC and Network Rail contributed to TfL Rail's 2.9 pp improvement in Q4. TfL Rail also benefitted from an 88% reduction in PPM failures caused by trespass and fatalities.

For the fifth successive quarter, South West Trains (SWT) recorded a year on year fall in quarterly PPM. Their Q4 score of 87.8% was 1.4 pp down on the same quarter last year. An increase in track faults and delays at stations contributed to this fall in PPM as did a number of incidents such as an object being struck on the line near Wimbledon.

As well as GTR (down 1.3 pp), London Overground (down 1.1 pp), Great Western Railway (GWR) and Chiltern (both down 1.0 pp) also recorded lower PPM scores in Q4 compared with the same quarter last year. London Overground experienced an increase in station delays in Q4, while the closure of the Romford to Upminster Line caused by Storm Doris also contributed to the fall in PPM. For GWR, there was a 73% increase in signal related PPM failures while PPM failures caused by other operators increased 40%. As well as being affected by Storm Doris, Chiltern experienced a doubling of track fault PPM failures and a 140% increase in station delays.

Peak services:

Train services arriving into London termini between 07:00 and 09:59 in the morning and departing London termini between 16:00 and 18:59 in the evening are classified as peak services. For the LSE sector as a whole, peak PPM in 2016-17 Q4 was 81.2%. This was up 0.6 pp compared with 2015-16 Q4. Up 3.3 pp compared with the previous year, TfL Rail recorded the highest peak PPM in the quarter at 93.9%. This was the highest Q4 peak PPM since the time series began in 2010-11.

GTR had the lowest peak PPM in Q4 at 73.2% which was up 0.8 pp compared with the previous year. Down 4.7 pp on Q4 last year, GWR's 80.5% was their second worst Q4

⁶ While the industrial action has affected performance, the PPM and CaSL statistics mask the full impact of the dispute. This is because GTR have implemented a revised timetable on strike days. Trains excluded from the plan of the day before 22:00 on the previous day are not included in the PPM and CaSL calculations.

peak PPM score since 2007-08 (76.4%). Similarly, SWT (81.7%) experienced a fall of 2.5 pp compared with the previous year giving them their worst Q4 score since 2003-04 (69.5%).

Non-franchised operators:

Down 4.5% compared with the same quarter last year, the 88.5% recorded by Heathrow Express was their worst Q4 PPM score since 2007-08 (88.3%). As with GWR, Heathrow Express suffered from a 259% increase in signal related PPM failures while track fault PPM failures quadrupled. However, PPM failures attributed to Heathrow Express were also up 39% compared with 2015-16 Q4.

Grand Central and Hull Trains operate long distance services on the East Coast Main Line. Grand Central's PPM score of 86.4% in Q4 was up 2.4 pp compared with the previous year while Hull Trains scored 80.7% which was a fall of 3.5 pp.

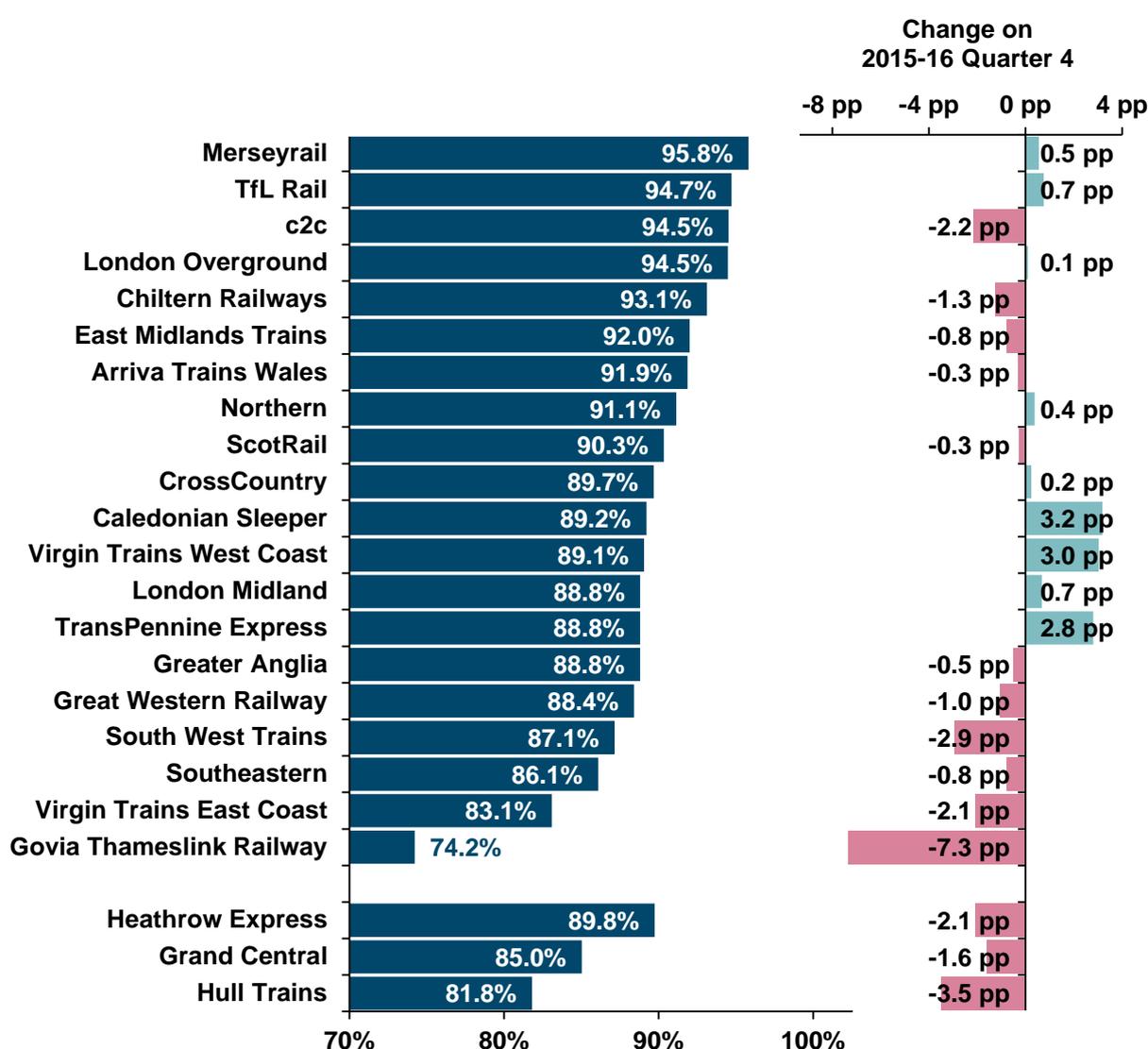
- Quarterly PPM by TOC data are available on the Data Portal in [Table 3.44](#)

2016-17 Quarter 4 PPM MAA Results by TOC

Quarter 4 Headlines:

- The lowest **Govia Thameslink Railway** PPM MAA since the time series began in 2004-05. The Q4 MAA of 74.2% was down 7.3 pp compared with the previous year.
- The lowest **c2c** PPM MAA (94.5%) since Q1 of 2008-09 (94.5%).
- The highest **Virgin Trains West Coast** PPM MAA (89.1%) recorded by this TOC since the time series began in 1997-98.

PPM MAA by TOC, Great Britain, 2015-16 Q4 and 2016-17 Q4 ([Table 3.44](#))



For the second consecutive quarter, Merseyrail recorded the highest PPM MAA in 2016-17 Q2 (95.8%). Up 0.7 pp compared with the same quarter last year, TfL Rail (94.7%) recorded the highest PPM MAA for these services since the time series began in 2010-11. Conversely, third placed c2c's PPM MAA continues to fall. They ended 2016-17 with an MAA of 94.5% which is the lowest it has been since Q1 of 2008-09 (94.5%).

Caledonian Sleeper (up 3.2 pp), VTWC (up 3.0 pp) and TPE (up 2.8 pp) experienced the largest year-on-year increases to end 2016-17 at 89.2%, 89.1% and 88.8% respectively. For VTWC, this is the highest their PPM MAA has been since the time series began in 1997-98. Also benefitting from improved performance on the West Coast Main Line, London Midland recorded 0.7 pp year-on-year increases to their MAA.

At 74.2%, GTR had the lowest MAA at the end of 2016-17. Down 7.3 pp compared with the previous year, this was the lowest MAA recorded by GTR since the time series began in 2004-05. Down 2.9 pp from a year ago, SWT ended 2016-17 with a PPM MAA of 87.1%. This is the lowest it has been since Q1 of 2005-06 (85.0%).

Peak services:

The combined peak PPM MAA for the LSE sector in 2016-17 Q4 was 80.3% which was down 2.0 pp compared with the previous year. At 93.5%, c2c ended 2016-17 with the highest peak MAA. However, it was down 2.3 pp compared with the previous year and the lowest it has been since Q4 of 2004-05 (92.7%).

The 69.7% recorded by GTR was the lowest peak MAA in 2016-17 Q4. SWT's peak PPM fell 4.0 pp year-on-year to end 2016-17 at 81.7%; the lowest it has been since Q1 of 2005-06 (81.4%).

Non-franchised operators:

Heathrow Express ended 2016-17 with an MAA of 89.8% which was down 2.1 pp compared with the previous year. This is the lowest it has been since Q4 of 2007-08 (88.9%). Grand Central ended the year with an MAA of 85.0%, which was down 1.6 pp compared with the same time the previous year. The MAA for Hull Trains also fell by 3.5 pp to end 2016-17 at 81.8%.

- Quarterly PPM MAA by TOC data are available on the Data Portal in [Table 3.44](#)

European Comparisons

Comparisons with railways in the rest of Europe are available for the 2014 calendar year. For trains in the Regional and Scotland sector and LSE sector combined, 89.8% of services arrived within five minutes of their scheduled arrival time at their final destination. This ranks Britain 18th best out of 23 countries⁷.

With 91.0% of long distance services arriving at their final destination within 15 minutes of their scheduled arrival time, Britain ranks 9th best out of 22 countries.

⁷ [European Commission \(2016\)](#), pages 130-132

2. Cancellations and significant lateness (CaSL)



2016-17 Quarter 4 CaSL Results

Quarter 4 Headlines:

- The highest **National** Q4 CaSL (3.4%) since 2002-03 (3.8%).
- The highest **London and South East** sector Q4 CaSL (4.1%) since 2000-01 (4.7%).

Cancellations and significant lateness (CaSL) captures the percentage of trains that have caused significant disruption to at least some passengers. The **moving annual average (MAA)** reflects the proportion of trains cancelled or significantly late in the past 12 months. In Q4, the MAA also represents the PPM for the financial year. A lower score indicates higher performance.

A train is considered to be **significantly late** if it calls at all booked stations, completes its entire booked journey and arrives between 30 and 119 minutes after the scheduled arrival time at the final destination.

A train is considered to be a **part cancellation** if it covers more than half the scheduled mileage and either failed to run the whole journey or failed to stop at any station on the way. Trains completing their scheduled journey but arriving at their final destination late by 120 minutes or more also count as part cancellations.

A train is considered to be a **full cancellation** if it covers less than half the scheduled mileage, or does not run at all.

A train that fails CaSL also fails PPM.

CaSL by Sector

During 2016-17 Q4 the proportion of train services classified as cancelled or experiencing significant lateness was 3.4%. This was 0.3 pp worse than 2015-16 Q4 (3.1%) and was the worst Q4 score since 2002-03 (3.8%).

Up 0.6 pp compared with 2015-16 Q4, the LSE sector recorded a CaSL score of 4.1% in 2016-17 Q4. This was the worst Q4 score recorded by this sector since 2000-01 (4.7%). In Q4, GTR contributed 58%⁸ (or 0.2 pp) of the 0.3 pp increase in national CaSL and 58% (or 0.3 pp) of the 0.6 pp increase in the LSE CaSL.

⁸ For more information on estimating this figure, please see the [methodology annex](#).

The 4.4% recorded in the Long Distance sector was almost identical to the 2015-16 Q4. The Regional and Scotland sector had a CaSL score of 2.1% during 2016-17 Q4 which was up slightly compared with Q4 the previous year.

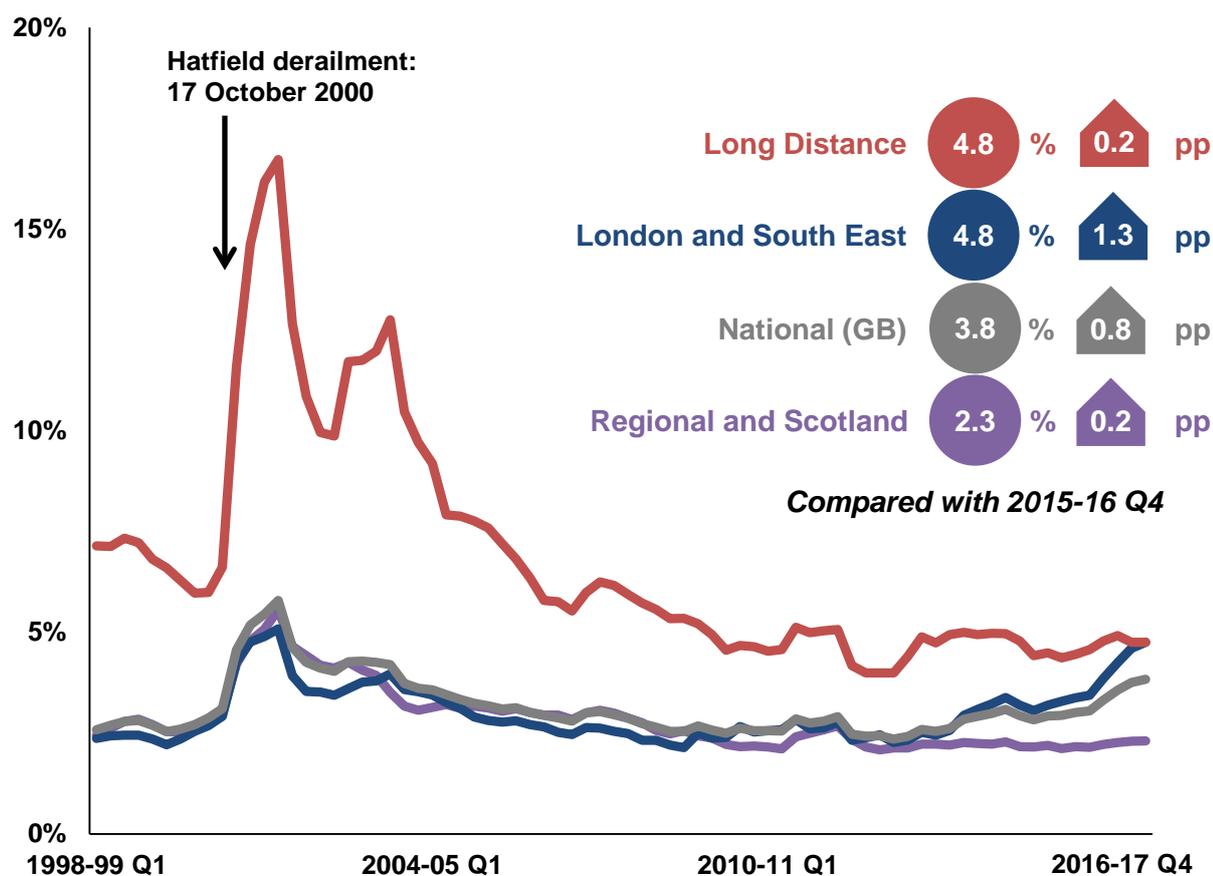
■ Annual and quarterly CaSL by sector data are available on the Data Portal in [Table 3.6](#)

2016-17 Quarter 4 CaSL MAA Results

Quarter 4 Headlines:

- The highest **National** CaSL MAA (3.8%) since Q2 of 2003-04 (4.2%).
- The highest **London and South East** sector CaSL MAA (4.8%) since Q2 of 2001-02 (5.1%).
- **Govia Thameslink Railway** accounted for 73%⁹ (0.6 pp) of the year-on-year rise in the national CaSL MAA and 79% (1.0 pp) of the year-on-year rise in the LSE CaSL MAA.

CaSL MAA by sector, Great Britain, 1998-99 Q1 to 2016-17 Q4 ([Table 3.5](#))



⁹ For more information on estimating this figure, please see the [methodology annex](#).

The national CaSL MAA in 2016-17 Q4 was 3.8%. Up 0.8 pp compared with 2015-16 Q4, this is the worst national MAA score recorded since Q2 of 2003-04 (4.2%). The national MAA peaked in Q2 of 2001-02 at 5.8%. It then decreased steadily to reach a best/low of 2.4% in Q2 of 2012-13. During 2013-14 the MAA deteriorated due to causes such as storms and flooding in the winter of 2013-14. The current MAA of 3.8% is 1.1 pp higher than the MAA recorded in Q2 of 2013-14 which was before the bad weather occurred.

The LSE sector Q4 MAA of 4.8% was up 1.3 pp compared with the previous year and is the highest MAA recorded since Q2 of 2001-02 (5.1%). GTR contributed 73%¹⁰ (or 0.6 pp) of the overall 0.8 pp increase in the national CaSL MAA and 79% (or 1.0 pp) of the 1.3 pp increase in the LSE CaSL MAA. The CaSL MAA of services in the Regional and Scotland sector recorded increased by 0.2 pp to end Q4 at 2.3%. The Long Distance sector ended the quarter with an MAA of 4.8%, up 0.2 pp and fractionally higher than the LSE sector.

- Quarterly CaSL MAA by sector data are available on the Data Portal in [Table 3.5](#)

¹⁰ For more information on estimating this figure, please see the [methodology annex](#).

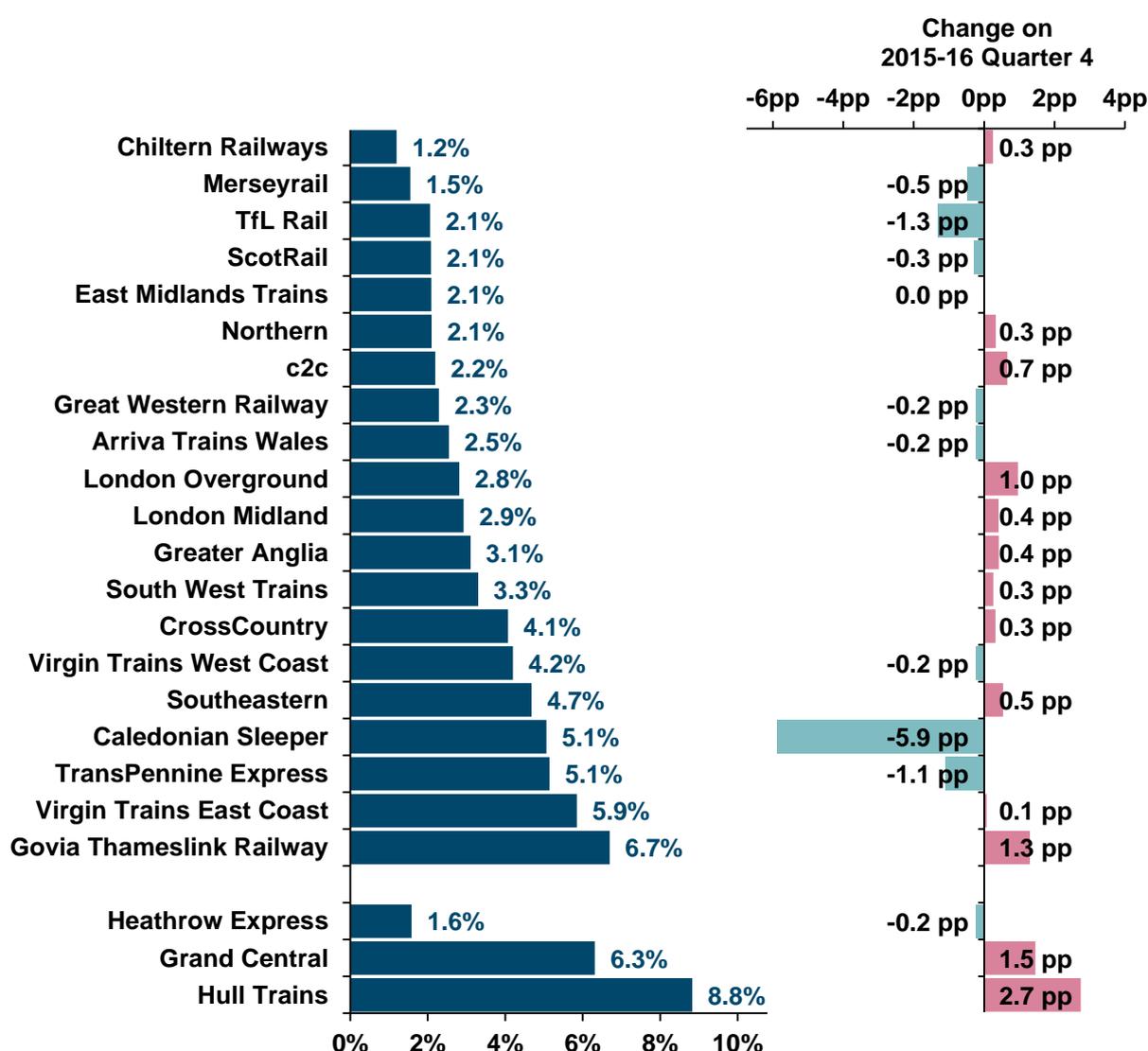
CaSL by TOC

Please refer to the [Annex 3](#) for details of changes to train operating companies.

2016-17 Quarter 4 CaSL Results by TOC

- The highest **Govia Thameslink Railway** Q4 CaSL (6.7%) since the time series began in 2004-05.
- As a result of a derailment of a freight train at Lewisham, the highest **Southeastern** Q4 CaSL score (4.7%) since 2000-01 (4.7%)
- The lowest **Merseyrail** Q4 CaSL score (1.5%) since the time series began in 1997-98.

CaSL by TOC, Great Britain, 2015-16 Q4 and 2016-17 Q4 ([Table 3.7](#))



Chiltern achieved the best/lowest CaSL score in 2016-17 Q4 at 1.2% While this was 0.3 pp compared with the previous year, it was still the second best Q4 since 1999-00 (the best being 2015-16 at 0.9%). Merseyrail improved upon last year's Q4 score of 2.0% to record the second lowest CaSL score this quarter. The 1.5% recorded this year was Merseyrail's best Q4 since the time series began in 1997-98. Similarly, the 2.1% recorded by TfL Rail was down 1.3 pp compared with last year and the best Q4 score for these services since the time series began in 1997-98.

GTR (6.7%) recorded the worst CaSL score in 2016-17 Q4. Up 1.3 pp compared with 2015-16 Q4, this was the highest Q4 CaSL score recorded by this TOC since the time series began in 2004-05. Full cancellations accounted for 0.8 pp of the increase, with 36% of GTR CaSL failures¹¹ in Q4 resulting from traincrew problems (30% the previous year). It should also be noted that GTR planned to run nearly 16,600 fewer trains (5.8%) in Q4 of 2016-17 compared with the same quarter the previous year¹².

At 5.9%, Virgin Trains East Coast (VTEC) recorded the second worst CaSL score in 2016-17 Q4. This was up 0.1 pp compared the same quarter the previous year. Benefitting from better weather, Caledonian Sleeper's Q4 CaSL score of 5.1% was down 5.9 pp from the 10.9% recorded in the same quarter last year. TPE's score of 5.1% was down 1.1 pp compared with 2015-16 Q4. This was largely due to a decrease in number of traincrew caused CaSL failures.

The closure of the Romford to Upminster Line during Storm Doris contributed to London Overground's Q4 CaSL score of 2.8 pp. This was up 1.0 pp compared with the same quarter last year. Up 0.7 pp compared with the same quarter last year, c2c's CaSL score of 2.2% was the TOC's highest Q4 CaSL since 2007-08 (3.0%). This increase was driven largely by CaSL failures caused by the TOC (e.g. traincrew problems and fleet failures).

The 4.7% recorded by Southeastern in Q4 was up 0.5 pp compared with the same quarter last year. Furthermore, it is the highest Q4 score recorded by Southeastern since 2000-01 (4.7%). This was in large part due to the derailment of a freight train at Lewisham.

Non-franchised operators:

Of the non-franchised operators Grand Central recorded a CaSL score of 6.3% in 2016-17 Q4. This was 1.5 pp higher than the same quarter the previous year. Hull Trains recorded a CaSL of 8.8% which was up 2.7 pp on the previous year. The failure of a VTEC train at Retford contributed to the increased CaSL scores of these operators in Q4.

¹¹ A CaSL failure is when a passenger train does not arrive at its final destination within 30 minutes of its scheduled arrival time and/or is cancelled either in full or in part. Delay minutes and other intelligence are used to apportion responsibility for CaSL failures and can be split between multiple causes of delay.

¹² [Data Portal – disaggregated GTR data](#)

Heathrow Express recorded a CaSL score of 1.6% in Q4 which was down 0.2 pp compared with the same quarter the previous year.

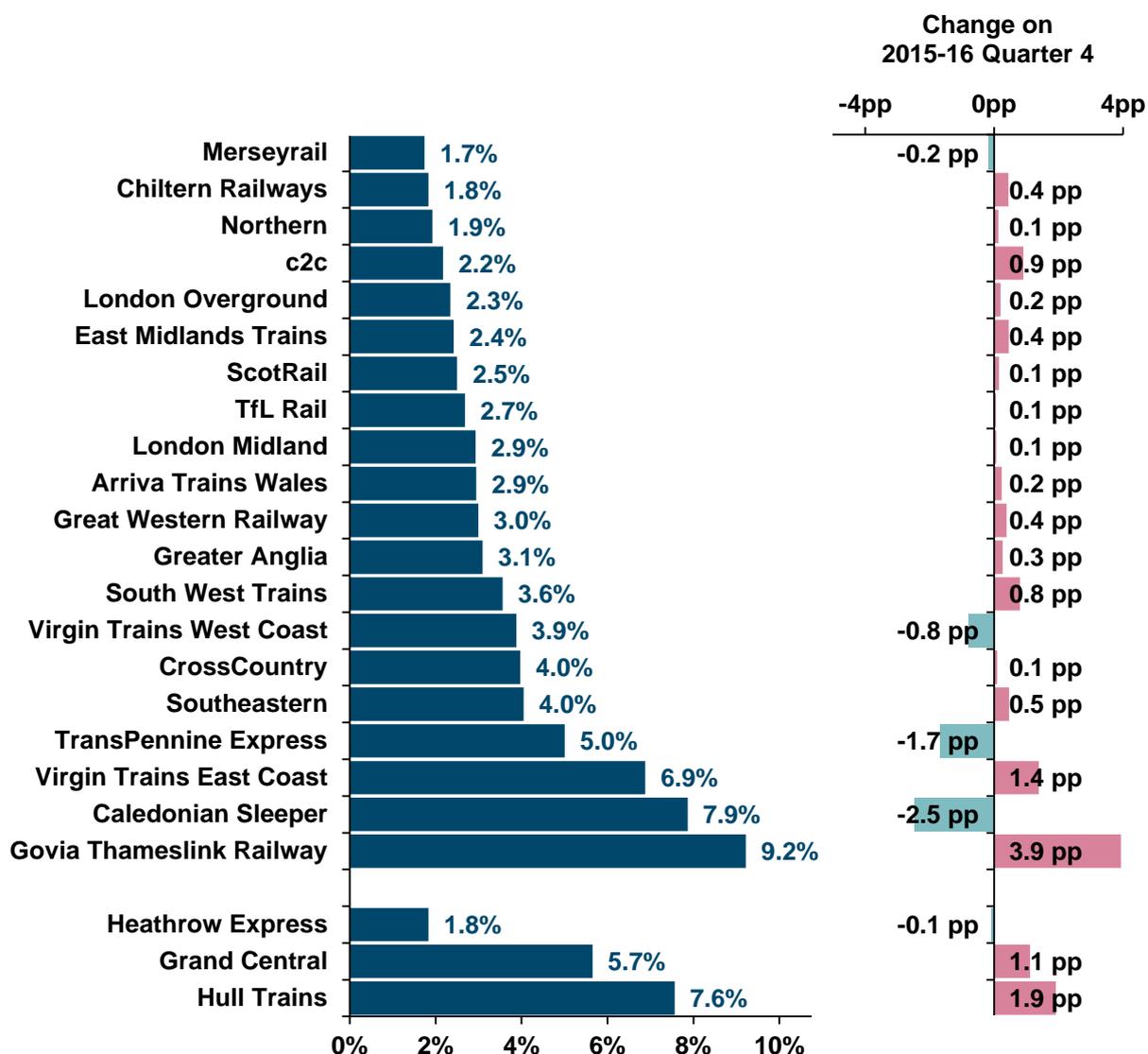
- Quarterly CaSL by TOC data are available on the Data Portal in [Table 3.7](#)

2016-17 Quarter 4 CaSL MAA Results by TOC

Quarter 4 Headlines:

- The highest **Govia Thameslink Railway** CaSL MAA since the time series began in 2004-05. The Q4 MAA of 9.2% was up 3.9 pp compared with the previous year.
- The highest **South West Trains** CaSL MAA (3.6%) since Q2 of 2004-05 (3.9%).
- The lowest **Virgin Trains West Coast** CaSL MAA (3.9%) recorded by this TOC since the time series began in 1997-98.

CaSL MAA by TOC, Great Britain, 2015-16 Q4 and 2016-17 Q4 ([Table 3.7](#))



Down 0.2 pp compared with the same quarter last year, Merseyrail recorded the lowest CaSL MAA in 2016-17 Q4 (1.7%). While the 1.8% recorded by Chiltern was the second lowest MAA at the end of 2016-17, this was the highest it has been since Q3 of 2011-12 (1.9%). Similarly, c2c's CaSL MAA continues to rise. It ended 2016-17 at 2.2% which is the highest it has been since Q1 of 2011-12 (2.3%).

For the first time since the times series began in 1997-98, the TOC with the worst CaSL MAA is not a long distance operator. GTR ended 2016-17 with a CaSL MAA of 9.2%. Up 3.9 pp compared with the end of 2015-16, this is the highest it has been since the time series began in 2004-05.

At 7.9%, Caledonian Sleeper had the second worst CaSL MAA at the end of 2016-17. It was, however, down 2.5 pp compared with the end of 2015-16. There was also an improvement of 1.7 pp for TPE which ended 2016-17 with a CaSL MAA of 5.0%. For VTEC, however, their CaSL MAA ended 2016-17 at 6.9% which was up 1.4 pp compared with the same time last year.

VTWC ended Q4 with an MAA of 3.9%. Down 0.8 pp compared with the 2015-16 Q4, this is the lowest score recorded since the time series began in 1997-98. This is due to improvements by both Network Rail (fewer signal and track failures) and the TOC (fewer fleet failures and traincrew problems).

Conversely, SWT ended 2016-17 with an MAA of 3.6%. Up 0.8 pp from the same quarter last year, this is the highest the MAA has been since Q2 of 2004-05 (3.9%). This has been driven by a 109% increase in signal related CaSL failures, a 149% increase in track fault CaSL failures and 24% increase in traincrew caused CaSL failures.

Non-franchised operators:

Up 1.9 pp, Hull Trains had the highest MAA in Q4 at 7.6%. This was followed by Grand Central which recorded an MAA of 5.7% - an increase of 1.1 pp. The MAA of 1.8% for Heathrow Express was down 0.1 pp compared with the previous year.

- Quarterly CaSL MAA by TOC data are available on the Data Portal in [Table 3.7](#)

European Comparisons

Comparisons with railways in the rest of Europe are available for the 2014 calendar year. For trains in the Regional and Scotland sector and LSE sector combined, 2.6% of services were cancelled (including part cancellations). This ranks Britain 17th best out of 20

countries¹³. With 3.1% of long distance services cancelled, Britain ranks 16th best out of 19 countries.

¹³ [European Commission \(2016\)](#), pages 132-133

3. Thameslink, Southern and Great Northern

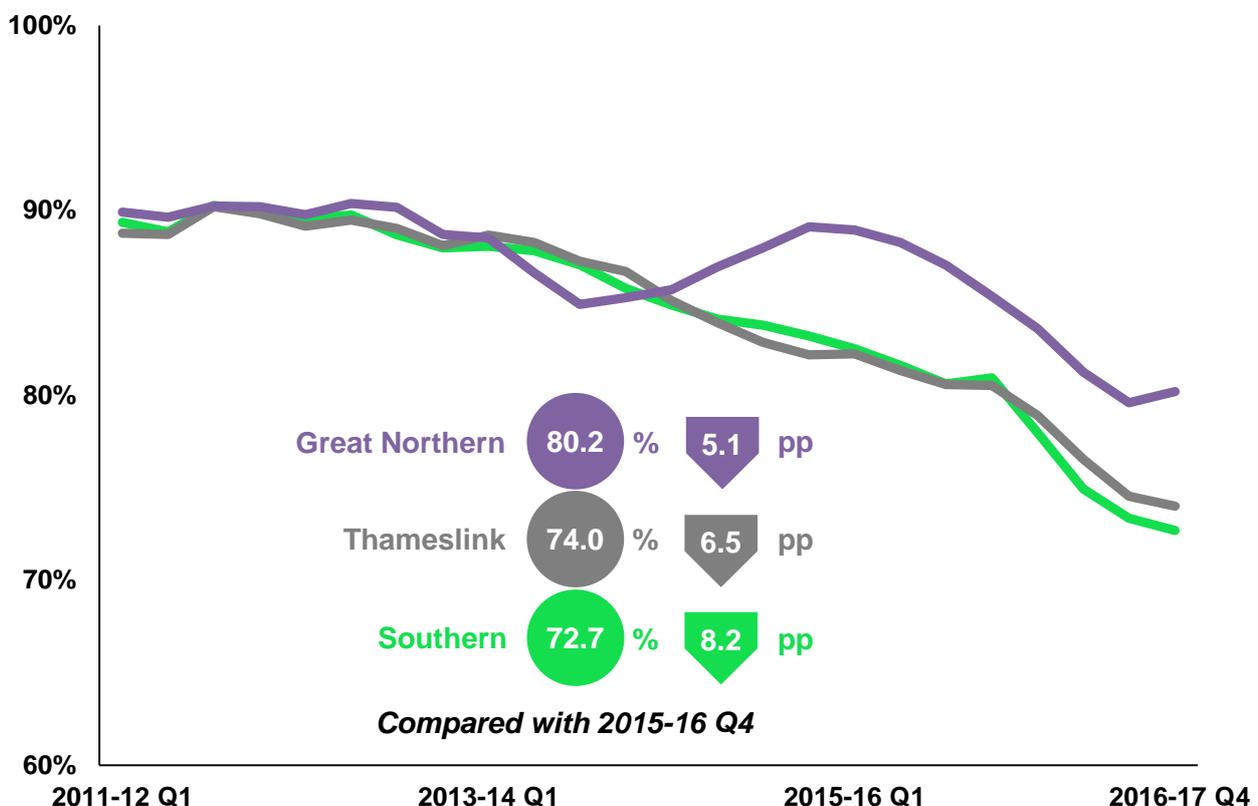
On 26 July 2015, the Thameslink, Southern and Great Northern franchise began operation as Govia Thameslink Railway (GTR). Performance of all three sub-operators has deteriorated in the last four years. This additional section provides a summary of how performance has deteriorated during that time.

In Q3 of 2011-12, all three sub-operators had a PPM MAA in excess of 90%. During 2014-15, the Thameslink PPM MAA fell 4.5 pp and the Southern PPM MAA fell 2.6 pp in the same time. The Great Northern PPM MAA, however, recovered 3.8 pp to end 2014-15 at 89.1%.

Q1 of 2015-16 was the last full quarter in which Southern was not part of GTR. It ended that quarter with a PPM MAA of 82.5%. For Thameslink the figure was 82.2% and for Great Northern it was 88.9%. At 2016-17 Q4, the position was as follows:

- Southern: 72.7% (down 9.2 pp (on 2015-16 Q1), 84.0% of which occurred in the last year).
- Thameslink: 74.0% (down 8.2 pp, 79.1% of which occurred in the last year).
- Great Northern: 80.2% (down 8.7 pp, 58.9% of which occurred in the last year).

PPM MAA by sub-operator, GTR, 2011-12 Q1 to 2016-17 Q4 ([Table 3.16](#))¹⁴



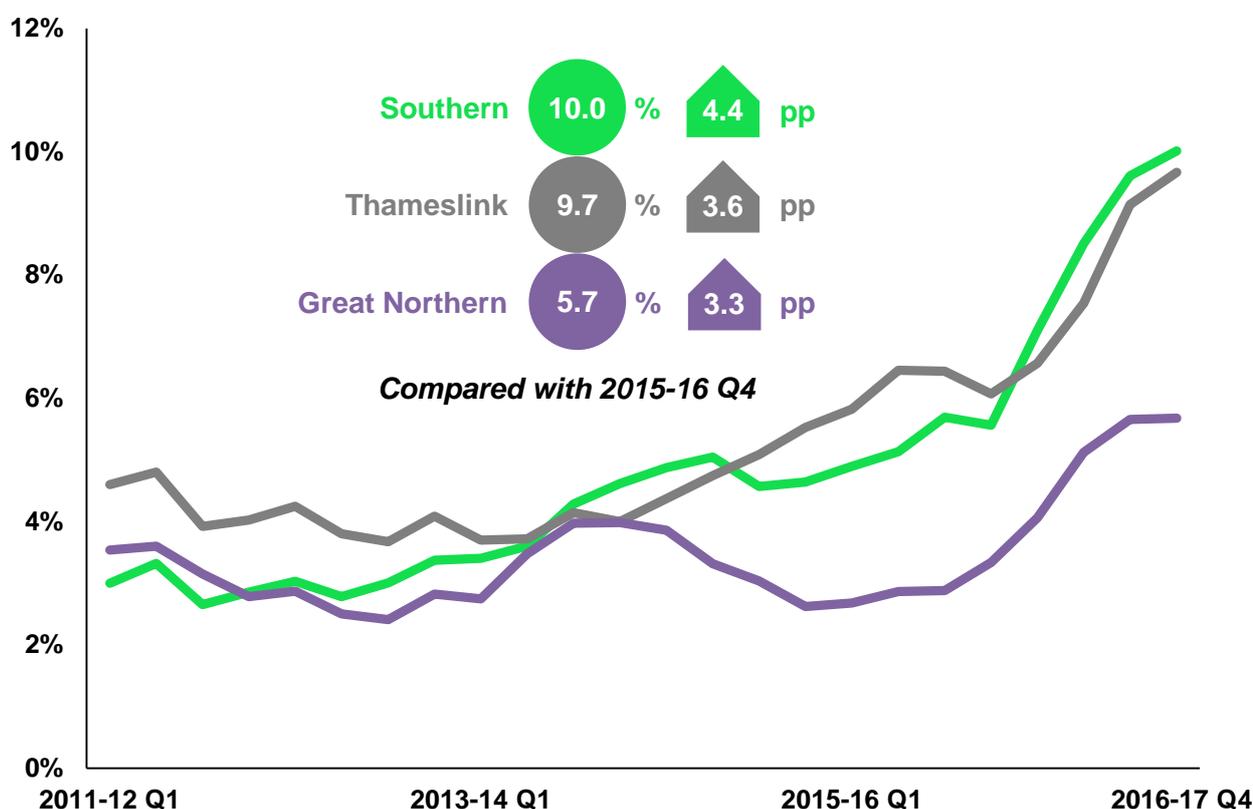
¹⁴ Southern consists of Southern Mainline and Coast, Southern Metro and Gatwick Express.

In 2012-13 Q2, Thameslink (3.8%) had a higher (worse) CaSL MAA than Southern (2.8%) and Great Northern (2.5%). By 2013-14 Q2, the Southern MAA had increased to 3.6% and the Great Northern MAA had increased to 3.5%. The Thameslink MAA, however, decreased slightly to 3.7%.

Q1 of 2015-16 was the last full quarter in which Southern was not part of GTR. It ended the quarter with a CaSL MAA of 4.9%. For Thameslink the figure was 5.8% and for Great Northern it was 2.7%. At the end of 2016-17, the position was as follows:

- Southern: 10.0% (up 5.1 pp (on 2015-16 Q1), 86.9% of which occurred in the last year).
- Thameslink: 9.7% (up 3.8 pp, 93.6% of which occurred in the last year).
- Great Northern: 5.7% (up 3.0 pp, 78.1% of which occurred in the last year).

CaSL MAA by sub-operator, GTR, 2011-12 Q1 to 2016-17 Q4 ([Table 3.16](#))¹⁵



¹⁵ Southern consists of Southern Mainline and Coast, Southern Metro and Gatwick Express.



4. Freight Delivery Metric

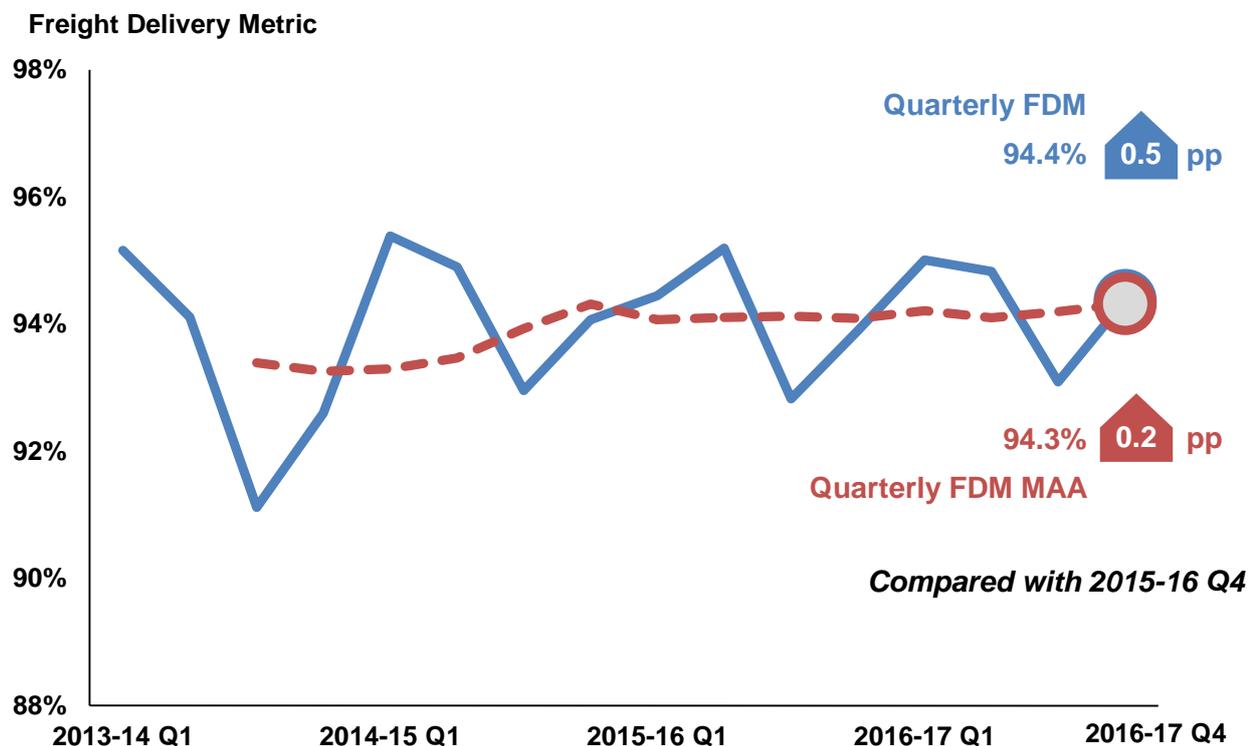
Freight Delivery Metric (FDM) is the percentage of freight trains that arrived at their destination within 15 minutes of their scheduled arrival time. Freight trains are only considered to have failed FDM where the delay was caused by Network Rail. The **moving annual average (MAA)** reflects the proportion of trains that met FDM in the past 12 months. In Q4, the MAA also represents the PPM for the financial year. A higher score indicates higher performance.

FDM was introduced for CP5 (Control Period 5: 2014-15 – 2018-19), although it has been recorded since the end of the 2012-13. It replaced the **Freight Performance Measure (FPM)** which previously was used to provide an indication of the punctuality of freight journeys.

2016-17 Quarter 4 FDM Results

At 94.4%, FDM was 0.5 pp higher in 2016-17 Q4 than the same quarter the previous year. The FDM MAA ended Q4 at 94.3%, which was up 0.2 pp compared with the previous year.

FDM, Great Britain, 2013-14 Q1 to 2016-17 Q4 ([Table 3.41](#))



- Quarterly FDM data are available on the Data Portal in [Table 3.41](#).
- Quarterly FPM data up to 2014-15 are available on the Data Portal in [Table 3.50](#).

Annex 1 – List of pre-created reports available on the Data Portal

All data tables can be accessed on the [Data Portal](#) free of charge. The data portal provides on screen data reports, as well as the facility to download data in Excel format and print the report. We can provide data in csv format on request.

PPM

- PPM by sector, 1997-98 to 2015-16 (annual) and 1997-98 Q1 to 2016-17 Q4 (quarterly) – [Table 3.43](#);
- PPM (MAA) by sector, 1997-98 Q4 to 2016-17 Q4 (quarterly) – [Table 3.42](#);
- PPM by TOC, 1997-98 Q1 to 2016-17 Q4 (quarterly) – [Table 3.44](#); and
- Disaggregated PPM at sub-operator level, 2010-11 Period 1 to 2016-17 Period 10 (periodic) – [Data Portal](#) ([Table 3.9](#) (All TOCs) to [Table 3.29](#) (Caledonian Sleeper))

CaSL

- CaSL by sector, 1997-98 to 2015-16 (annual) and 1997-98 Q1 to 2016-17 Q4 (quarterly) – [Table 3.6](#);
- CaSL (MAA) by sector, 1997-98 Q4 to 2016-17 Q4 (quarterly) – [Table 3.5](#); and
- CaSL by TOC, 1997-98 Q1 to 2016-17 Q4 (quarterly) – [Table 3.7](#)
- Disaggregated PPM at sub-operator level, 2010-11 Period 1 to 2016-17 Period 10 (periodic) – [Data Portal](#) ([Table 3.9](#) (All TOCs) to [Table 3.29](#) (Caledonian Sleeper))

FDM

- FDM, 2013-14 Q1 to 2016-17 Q4 (quarterly) – [Table 3.41](#)

Right Time and Delay Minutes

Right Time performance measures the percentage of trains that arrived at their final destination within one minute of the scheduled arrival time. Unlike PPM, the threshold for Right Time performance is the same for all operators. ORR publishes periodic Right Time data on [Table 3.9](#) of the Data Portal by TOC and sub-operator¹⁶. The national Right Time score for 2015-16 was 64.4%. This was compared with a national PPM score of 89.1%.

We currently publish limited Network Rail caused delay minute data on [Table 3.46](#) of the Data Portal. Network Rail attributed delays are also available in the Annual Return which reports Network Rail achievements, developments and challenges for each financial year and the historical record of Network Rail stewardship on the [Network Rail website](#).

Revisions: There have been no revisions to the previously published dataset. Further details on historic revisions to the data set can be found at: [Revisions Log](#).

¹⁶ Right Time data for individual TOCs and sub-operators can be accessed via the [passenger and freight rail performance](#) page.

Annex 2 – Data Collection, Quality and Targets

Most of the data contained within this release are collected automatically from Network Rail's TRUST System¹⁷. The latest data for PPM, CaSL and FDM should be treated as provisional, as train operators provide Network Rail with details of cancellations which can be updated over time. These updates are only provided at the TOC level. As such, aggregations of sub-operator data can provide slightly different figures to those published at the operator level.

Network Rail provides data within 21 days of the end of each of the 13 railway reporting periods. The production of the quarterly results discussed in this report requires the periodic data to be split according to the number of days of the period that falls within each quarter. For example, the dates in period 10 cover both Q3 and Q4. When the quarterly data are calculated for 2016-17, 21/28 of the data are assigned to Q3 (covering 11 December to 31 December) and 7/28 of the data are assigned to Q4 (covering 1 January to 7 January).

Further details on railway reporting periods, data collection, the methodology used to calculate the data within this release, and details of which services are included in each sector, please see the accompanying [passenger and freight rail performance quality report](#).

Where possible, Network Rail remaps historical data to match the railway franchises that exist today. Nevertheless, the number of passenger trains planned increased by 29%¹⁸ between 1997-98 and 2015-16. In the same time, the length of route open for passenger traffic has not increased by a significant amount¹⁹. So the density of trains running on the network is higher now than at the end of the last century. Therefore, the potential for disruption to spread around network has increased, while the ability for services to be recovered has been diminished. Furthermore, twice as many passenger journeys were made in 2015-16 than in 1997-98²⁰. This may have increased station dwell times and harmed performance as it takes longer to get passengers on and off trains during peak hours.

¹⁷ Train Running System on TOPs (Total Operation Processing System)

¹⁸ [ORR Website – Historic PPM and CaSL](#)

¹⁹ The length of route open to passenger traffic has increased by less than 1% since 2007-08 ([Data Portal - Table 2.52: Infrastructure on the railways](#))

²⁰ [Data Portal - Table 12.5: Passenger journeys by year](#)

Changes to Sector Composition

Some services in North West England transferred from the Long Distance sector to the Regional sector at the start of 2016-17. As a consequence they now have a five minute threshold for PPM, having previously been timed to ten minutes. To avoid different versions of PPM scores, the historic data for these sectors and the overall national score have not been adjusted to reflect these changes. The year-on-year changes described in this report have also been calculated using the unadjusted historical data. Nevertheless, using disaggregated data it is possible to assess what the effect of these changes would have been on PPM and PPM MAA in 2015-16:

- **National:** Almost no affect with PPM falling marginally from 89.05% to 89.03%.
- **Long Distance:** PPM reduced from 87.64% to 87.35%.
- **Regional and Scotland:** Almost no affect with PPM falling marginally from 91.21% to 91.17%.

Targets

As a regulator we assess Network Rail's success, through regulatory targets, on whether it achieves the outputs, as set out in the determination, and does so whilst meeting all its licence and statutory obligations. Network Rail has regulatory targets for PPM, CaSL and FDM. Further information regarding the performance targets can be accessed on the [Network Rail website](#).

The ORR publicly reports on Network Rail's outputs with respect to the regulated targets via the bi-annual [Network Rail Monitor](#). The time frame of quarterly data in this statistical release differs from the time frame of the railway period data in the Monitor, and therefore figures may differ slightly. The next Monitor covering periods 8 to 13 of 2016-17 is due to be published in July 2017.

Annex 3 – PPM and CaSL by Train Operating Company (TOC)

The data provided in [Table 3.44](#) (PPM by TOC) and [Table 3.7](#) (CaSL by TOC) show the railway as it exists today. That is, 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.

A [time-series](#) for trains planned, PPM and CaSL is available on the [ORR Website](#) that shows the performance of the TOCs that existed at the time.

Changes to Train Operating Companies

On 26 July 2015, Southern became part of Govia Thameslink Railway (GTR) and, with the exception of [Section 3](#), GTR is treated as a single TOC for this report. Disaggregated PPM and CaSL data for the sub-operators within GTR are still published on the [Data Portal](#). Prior to the merger, GTR consisted of the Great Northern and Thameslink, while Southern was made up of Southern Mainline and Coast, Southern Metro and Gatwick Express.

The new Northern and TransPennine Express (TPE) franchises commenced operation on 1 April 2016. Having previously been operated by Serco-Abellio, the former is now operated by Arriva. The TPE franchise is now solely operated by FirstGroup having previously been run as a joint venture between FirstGroup and Keolis.

Furthermore, services between Manchester Airport and Blackpool North/Barrow-in-Furness and between Oxenholme and Windermere were transferred from TPE to Northern. As described in [Annex 2](#), this has affected the historical PPM scores at the national and sector level. The historic data for Northern and TPE have been remapped to allow like for like comparisons to be made for these TOCs.

On 13 November 2016, operation of the London Overground concession passed from London Overground Rail Operations Limited²¹ to Arriva Rail London. The composition of the services is unaffected and the operator will be continued to be referred to as London Overground.

²¹ LOROL was a joint venture between Arriva UK Trains and MTR Corporation.

Annex 4 – Statistical Releases

This publication is part of the statistical releases which cover the majority of reports that were previously released through the [Data Portal](#). The statistical releases consist of four annual and four quarterly themed releases:

Annual

- Rail Finance & Rail Fares Index;
- Key Safety Statistics;
- Rail Infrastructure, Assets and Environmental;
- Regional Rail Usage.

Quarterly

- Passenger and Freight Rail Performance;
- Freight Rail Usage;
- Passenger Rail Usage;
- Passenger Rail Service Complaints.

A full list of publication dates for the next twelve months can be found in the [release schedule](#) on the ORR website.

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.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is ORR's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

For more details please contact the Statistics Head of Profession Lyndsey Melbourne on 020 7282 3978 or contact rail.stats@orr.gsi.gov.uk.

The Department for Transport (DfT) also publishes a range of rail statistics which can be found at [DfT Rail Statistics](#).

Annex 5 – Methodology: Impact of GTR Services

National performance has declined in the last year. As an example, the extent to which performance of GTR services contributed to the decline in the annual PPM was estimated using the calculations set out below and in the table A. Table B shows the results of these calculations for PPM, CaSL and the MAAs in 2016-17 Q4.

GTR services were separated from the rest of the operators in Great Britain and for both groups a “stand still” number of trains meeting PPM was calculated by multiplying the PPM for last year with the trains planned for this year. This is to account for the changes in trains planned by GTR and the rest of the operators. The difference between the stand still figure and the actual number of trains that met PPM provides the contribution of each part to the overall change in performance. For the annual PPM, the 80,343 extra GTR PPM failures represent 74.5% of the extra failures in total. In percentage point terms this is equal to 1.0 pp of the overall 1.4 pp fall in PPM recorded in 2016-17.

Table A: PPM, National (excluding GTR) and GTR, 2015-16 and 2016-17

PPM	National (GB) excluding GTR			GTR		
	Trains Planned	Met PPM	PPM	Trains Planned	Met PPM	PPM
2015-16	6,161,988	5,575,840	90.5%	1,177,450	960,195	81.5%
2016-17	6,205,709	5,587,833	90.0%	1,096,878	814,147	74.2%
Change	43,721	11,993	-0.4 pp	-80,572	-146,048	-7.3 pp
To stand still		5,615,402			894,490	
Extra Failures		27,569			80,343	
Extra Failures (share)		25.5%			74.5%	
PPM Change (pp)		-0.4			-1.0	

Table B: Contributions to Q4 PPM and CaSL Changes, National, 2015-16 and 2016-17

Type	Metric	National (GB) excluding GTR		GTR	
		% Share	PP Change	% Share	PP Change
Quarterly	Trains Planned (16-17)	85.0%	-	15.0%	-
	PPM*	-116.9%	0.0 pp	216.9%	0.0 pp
	CaSL	41.8%	0.1 pp	58.2%	0.2 pp
MAA	Trains Planned (16-17)	85.0%	-	15.0%	-
	PPM	25.5%	-0.4 pp	74.5%	-1.0 pp
	CaSL	27.0%	0.2 pp	73.0%	0.6 pp

* Q4 PPM for the rest of GB was up 0.1 pp which is why the percentage is negative.



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