

# *Rail Delivery Group*

---



National Rail



BRITAIN  
RUNS  
ON RAIL

# Partnership railway's transformation in numbers

Dataset on rail industry finances, performance and investment since 1997-98

December 2017

***Rail Delivery Group***



## The railway is vital to the economic health of the country and is a significant industrial sector in its own right:

- Each year the rail industry and its supply chain contributes up to £10.4bn in GVA
- Britain's railway provides benefits to the UK economy of up to £31bn a year, including: benefits to customers as well as companies using freight; reduction of congestion on roads; and wider economic impacts through closer links between businesses and communities.
- Investment from both public and private sectors through the partnership railway will secure almost £85bn of additional economic benefits to the country
- The railway and its supply chain employ 240,000 people with a further 100,000 job opportunities across the country anticipated by 2027
- The industry has a target to create 20,000 new apprenticeships by 2020, 10,000 of whom will be new recruits from more diverse backgrounds

Sources: Oxera, 2017, "How does rail contribute to the UK economy?"  
Oxera, 2017, "Investment in rail: the economic benefits"  
Rail Delivery Group, 2017, "In Partnership for Britain's Prosperity"

## Highlights from the RDG dataset:

- Sustained rise in passenger journeys and freight carried
- Train companies making record contributions to government - industry income covers day-to-day costs and supports investment
- Taxpayers paying smaller share of rail costs and customers a larger share – the result of policy of successive governments
- Government support to the railway is at its lowest level since 2002-03 and private sector investment at its highest level since being measured
- Safety, satisfaction, number of services and fleet size have improved significantly
- Delay incidents down but more congested network means worse impact on customers
- Government spending funds extra capital expenditure to boost capacity and improve services

# Partnership railway - finances snapshot

**Rail Delivery Group**

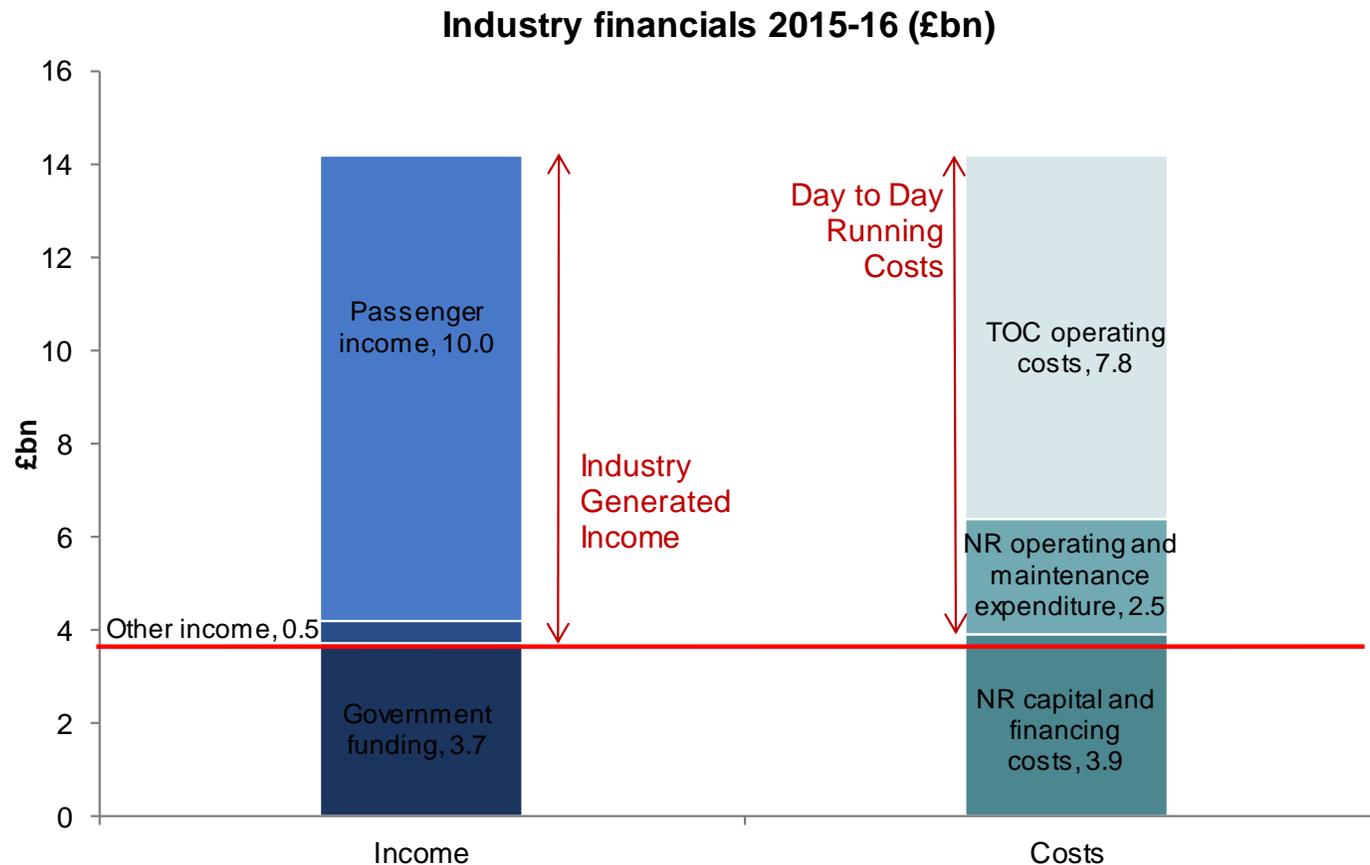


National Rail



BRITAIN  
RUNS  
ON RAIL

- The £10.5bn of revenue generated by the rail industry now more than covers the day-to-day running costs of the railway (£10.3bn)

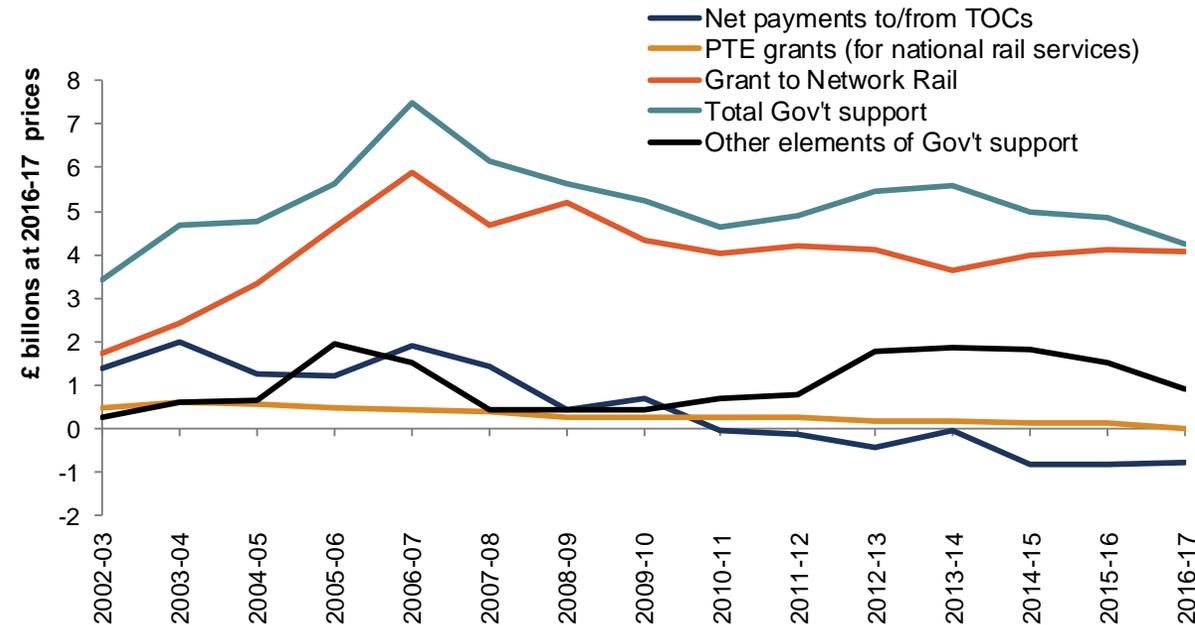


Note: Day-to-day running costs excludes renewals and enhancements costs  
Source: ORR "GB rail industry financial information 2015-16"

# Government Support to the Rail Industry

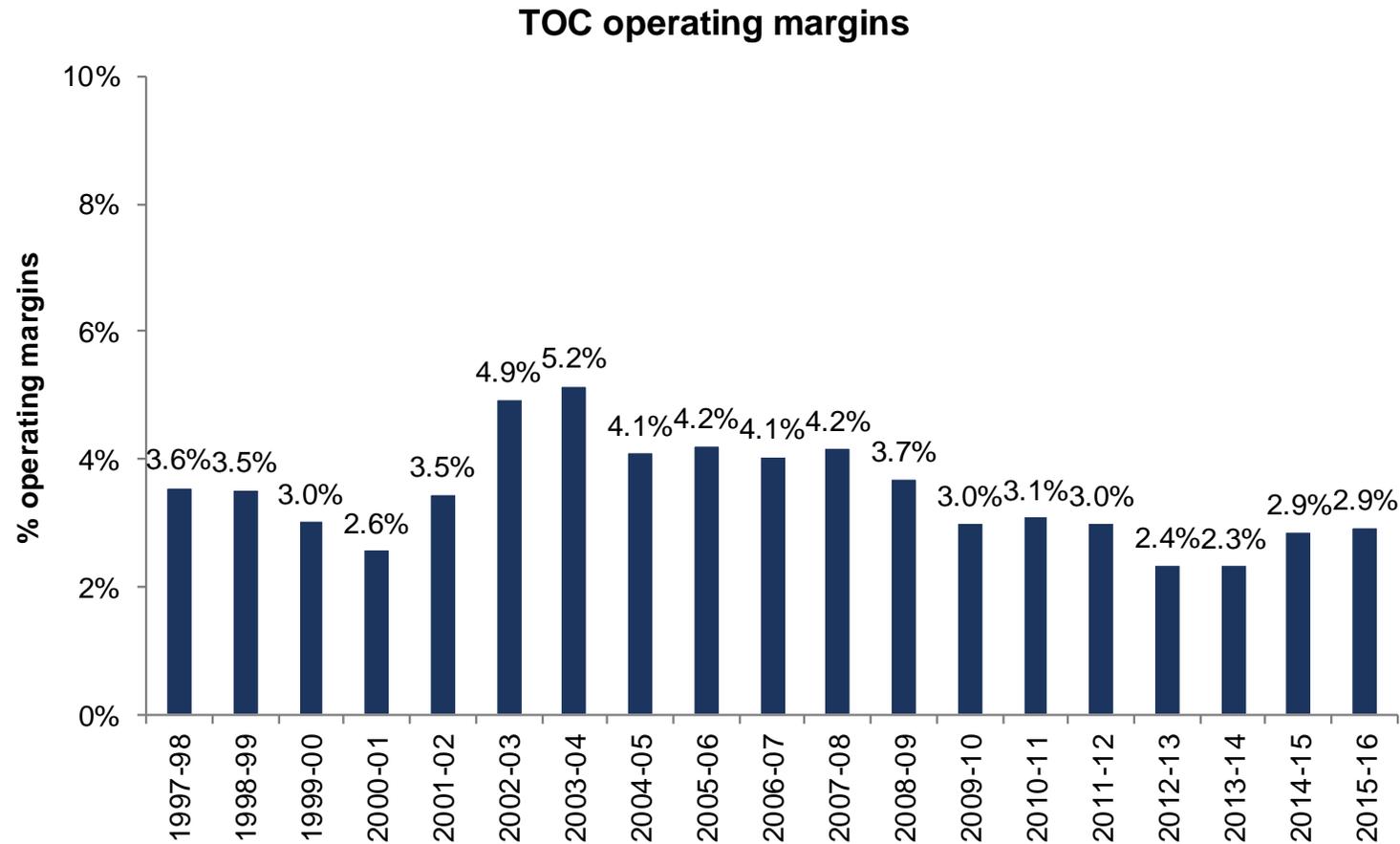
- Train operating companies in 2016-17 paid central government a net total of £0.8bn, whereas in 2002-03 they received £1.4bn from central government in real terms.
- Total Government support to the industry is at the lowest level since 2002-03.
- Grant to Network Rail peaked in 2006-07 (£4.3bn), in 2015-16 this was £4.1bn

Government support to the rail industry since 2002-03 (real terms)



Note: This data is presented from 2002-03 due to a change made to the allocation of funding for infrastructure from that year  
Note: 'Other elements of Government support' comprises central government expenditure on major projects, support to arms length bodies including British Transport Police and Transport Focus, a grant to British Rail to finance its residual activities, and other adhoc rail projects.  
Source: ORR data portal

- Operating margins as a proportion of revenue are lower than when franchising began

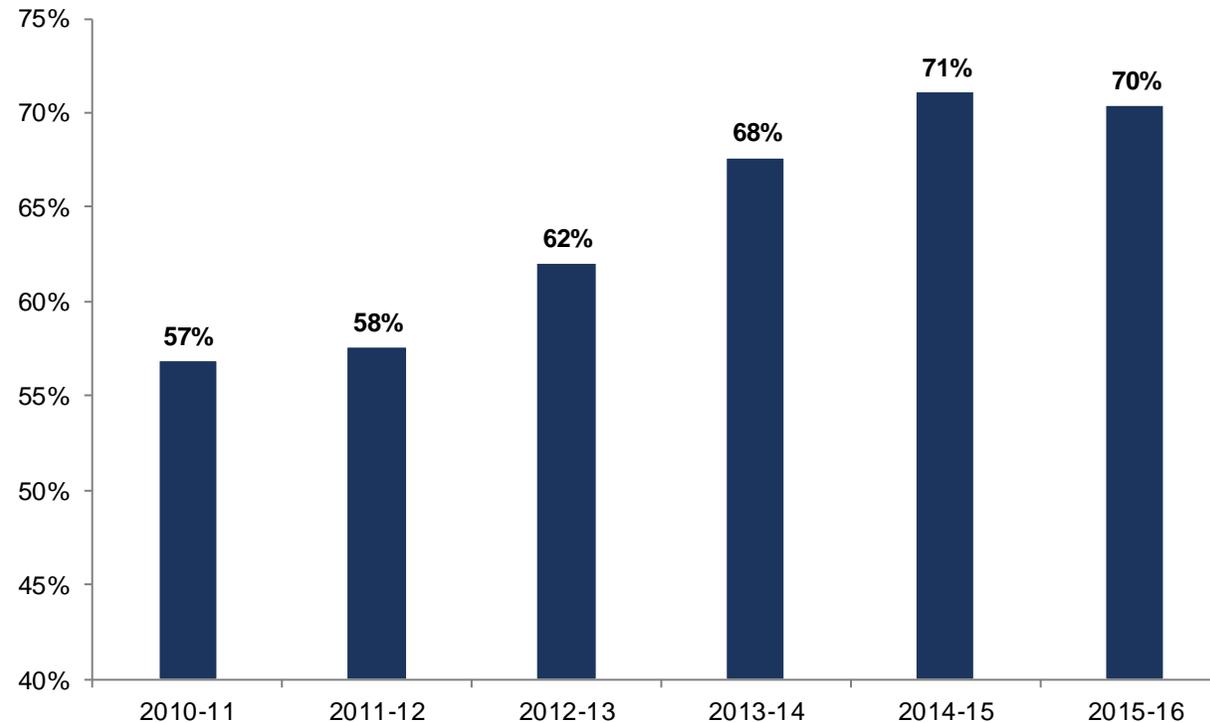


Note that 'operating margin' (gross of tax) is used as 'profit margin' (net of tax) is not available for the full time series.  
Source: Rail Industry Monitor, Statutory Accounts and ORR "GB rail industry financial information 2015-16"

# Passenger Share of Rail Income

- Passenger share of total rail industry income has increased from 57% in 2010-11 to 70% in 2015-16, a slight fall from 2014-15
- In 2010-11, passengers contributed £6.6bn compared to £10.0bn in 2015-16. Over the same period the average price paid per journey in real terms reduced from £5.66 to £5.54

Passenger income as a share of rail industry income



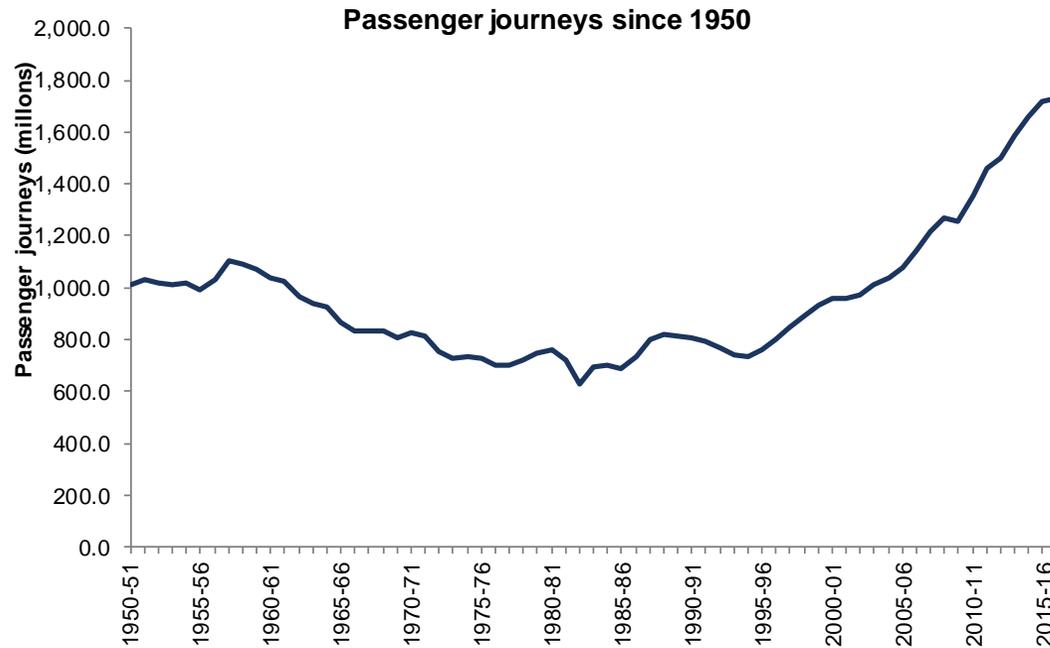
Note: Rail industry income excludes DfT loans to Network Rail  
Source: ORR "GB rail industry financial information 2015-16" and previous releases

# Partnership railway - delivering a vital and growing public service

***Rail Delivery Group***



- Passenger numbers have more than doubled since 1997-98, the first full year of rail franchising
- Average annual journey growth has been 3.84%, compared to 0.5% in the 18yrs prior
- Rail journeys per head of population have increased by 82%



Passenger Journey Growth	
Period	CAGR <sup>1</sup>
65 years to 2016-17	0.79%
1977-78 to 1996-97	0.53%
1997-98 to 2016-17	3.84%

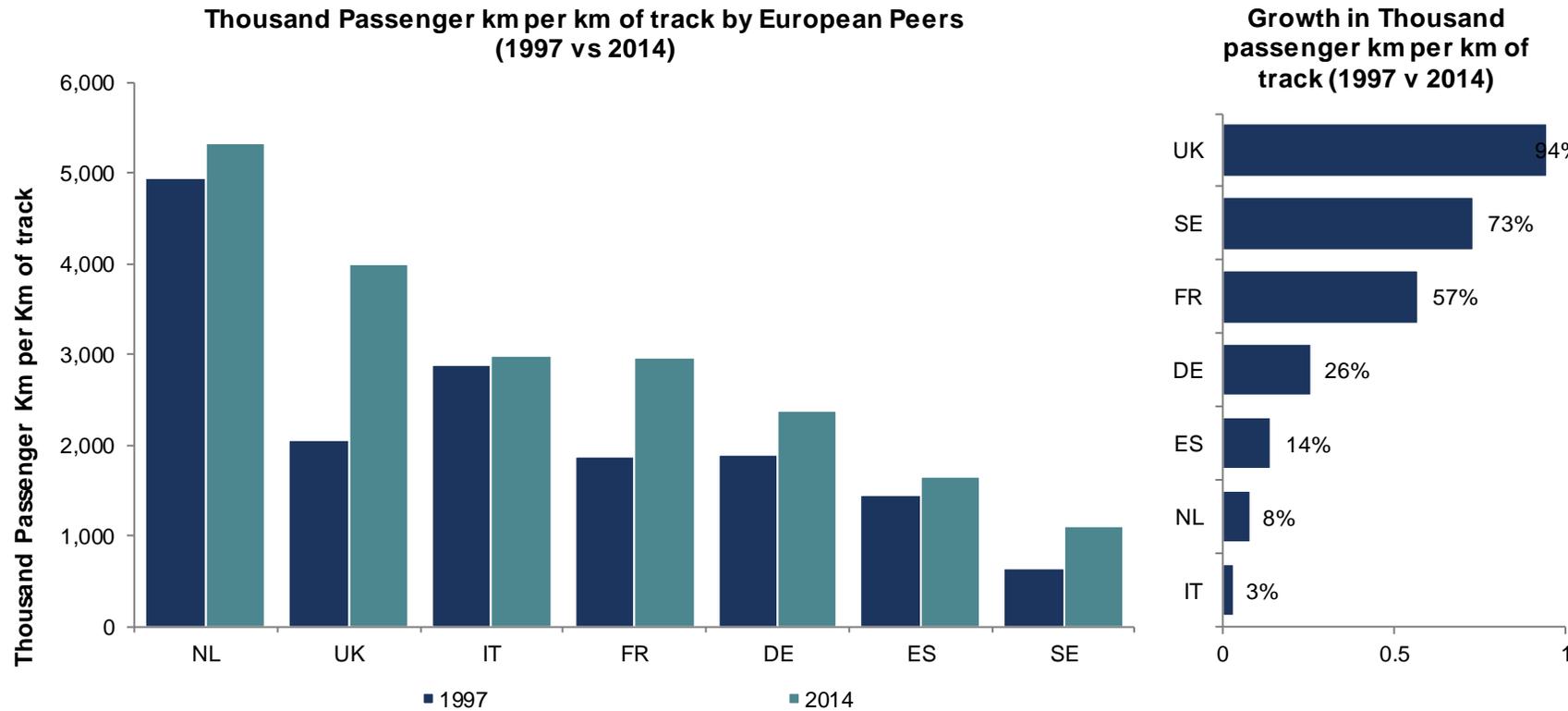
<sup>1</sup> Compound Annual Growth Rate

Rail journeys per head of population	
Year	Annual journeys per capita
1981-82	13.12
1997-98	14.93
2016-17	27.15

Source: ORR data portal

# Rail Volume Growth vs European Peers

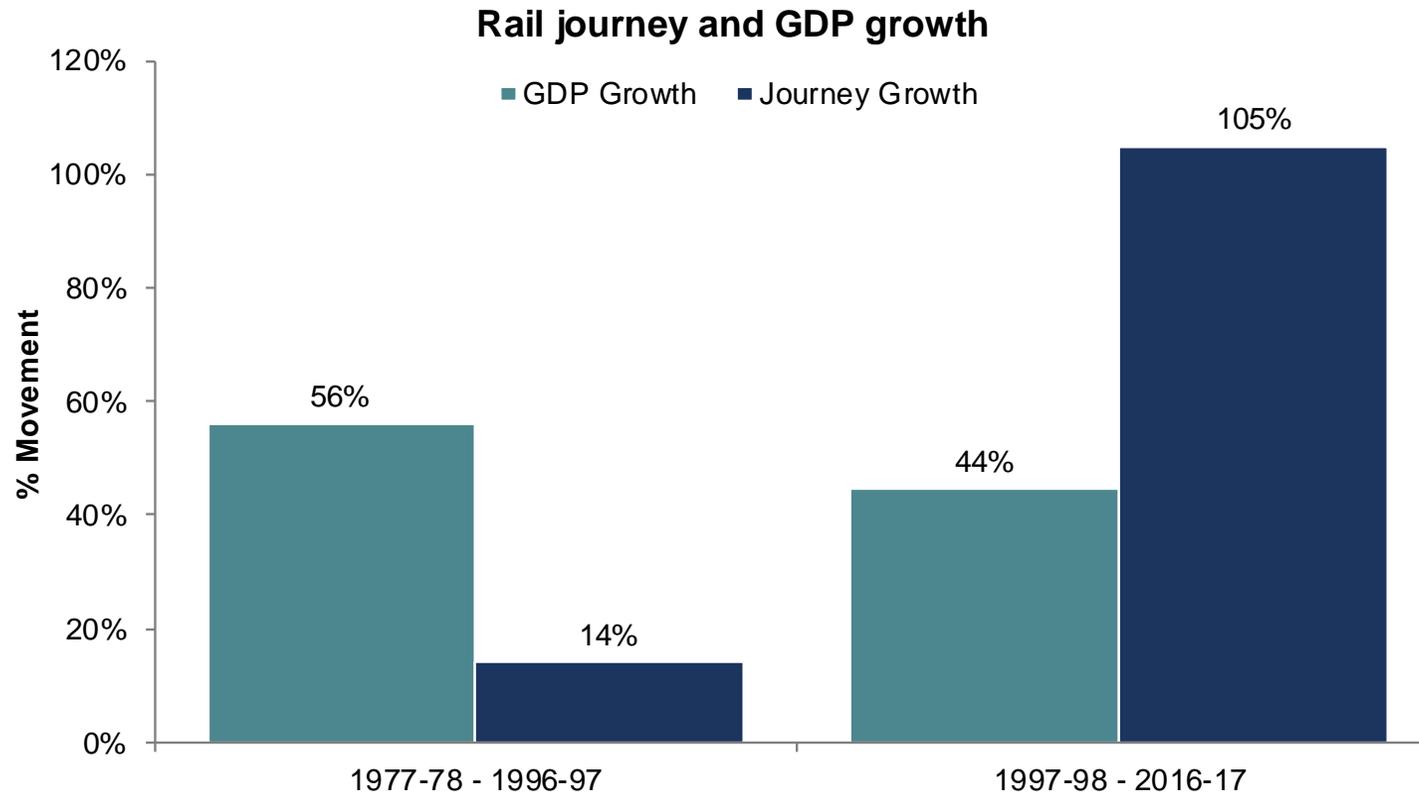
- Distance travelled by passengers per km of track has nearly doubled since 1997, outperforming growth seen from many of its European peers



Source: Eurostat database

# Passenger Journeys vs GDP Growth

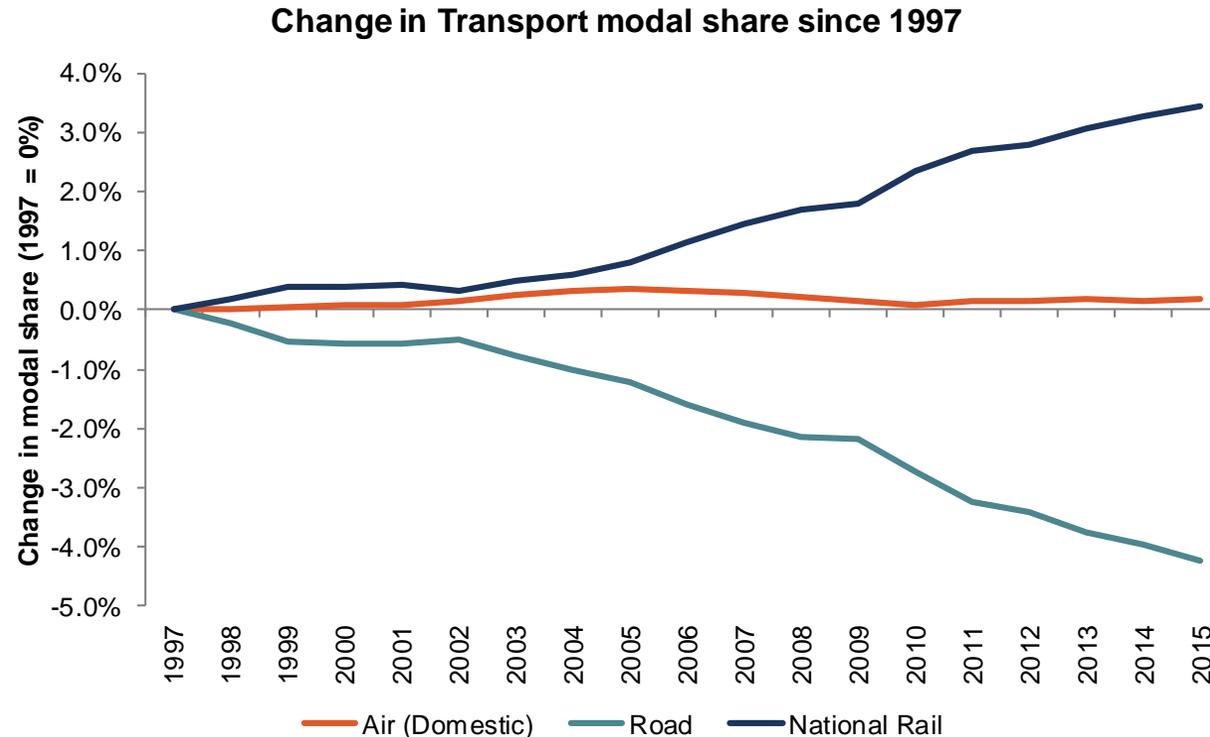
- Since 1997-98, journey growth has been more than double GDP growth



Source: ORR data portal and Cebr Economic Forecast

# Modal Change – Shift to Rail

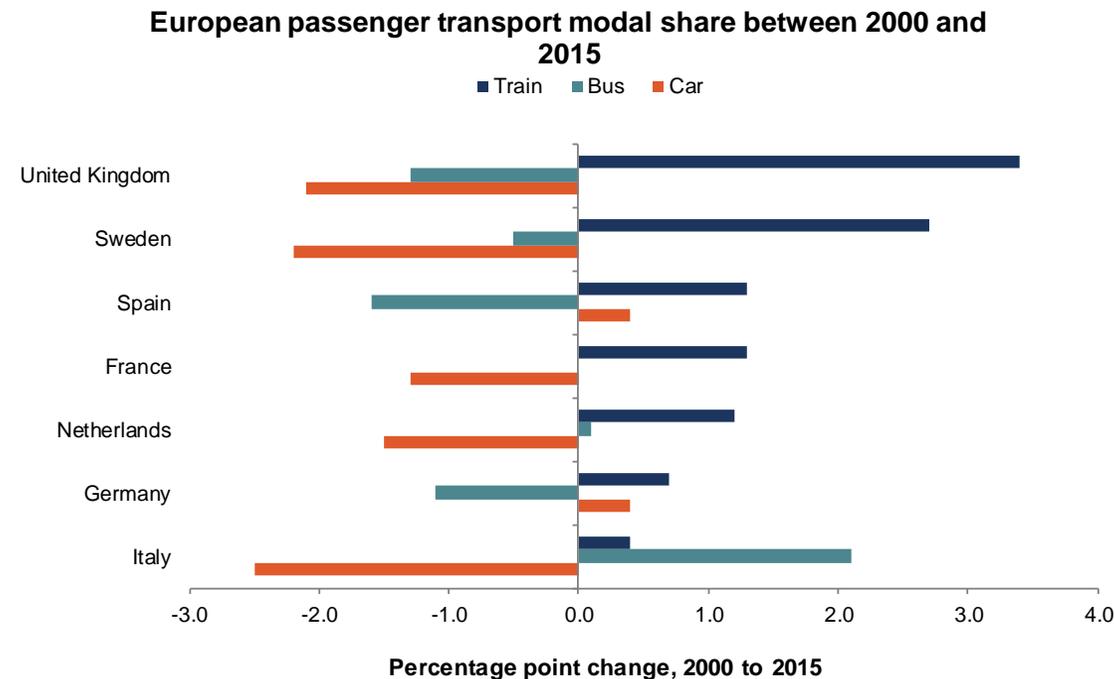
- Since 1997, National Rail has increased its modal share of all travel by 3.4%, while domestic air travel has remained broadly flat and road travel has fallen by 4.2%
- Passenger km by road have increased by 22bn since 1997 to 707bn passenger km with National Rail increasing by 30bn to 65bn



Source: Department for Transport Statistics and ORR data portal

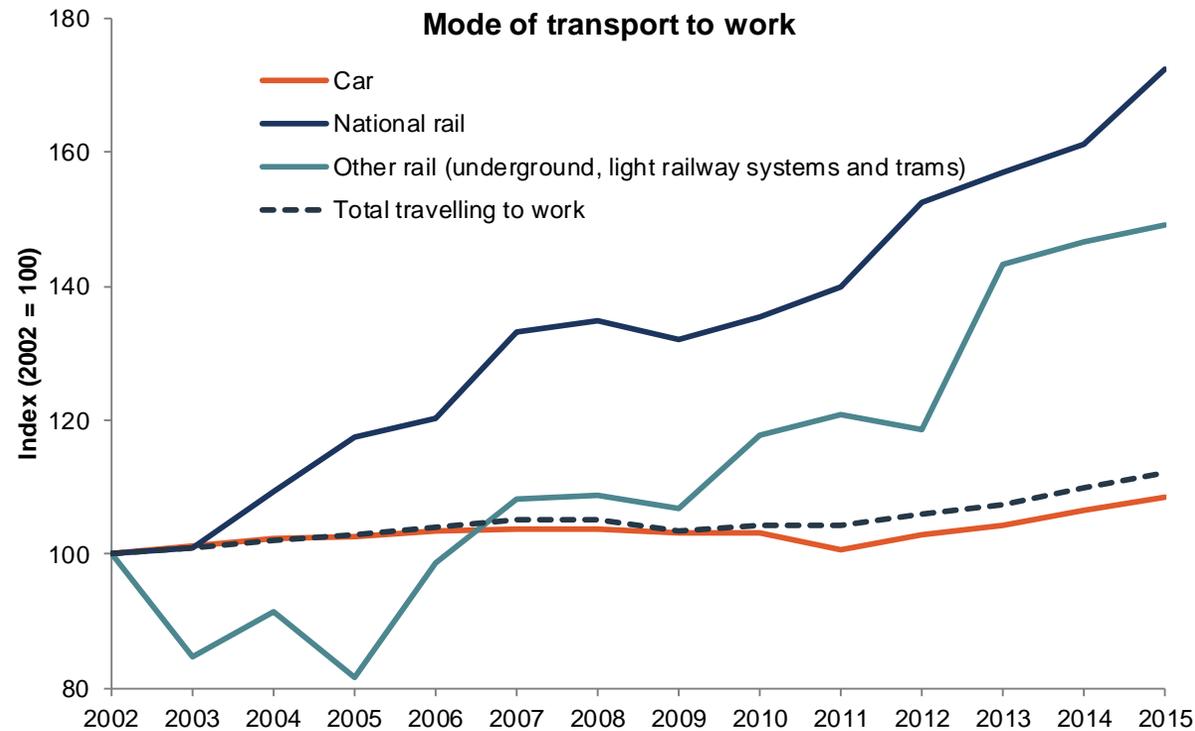
# Growth in Rail – European Comparisons

- Growth in UK rail's share of passenger transport has far outstripped other European countries with only Sweden seeing similar growth
- Spain, France and the Netherlands have all seen around 1 percentage point increase in rail's modal share since 2000 whereas UK rail's share has increased by 3.4 percentage points



Source: Eurostat database

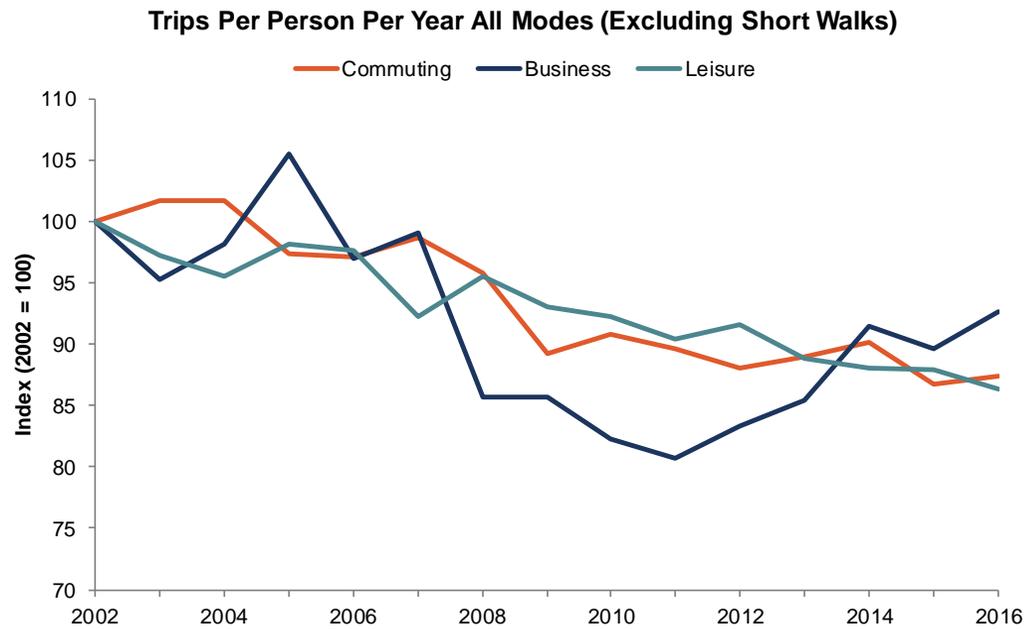
- National Rail as the chosen mode of transport to work has increased by 73% since 2002, compared to a 8% increase in car commuting, a 49% increase in other types of rail and an overall increase of 12%



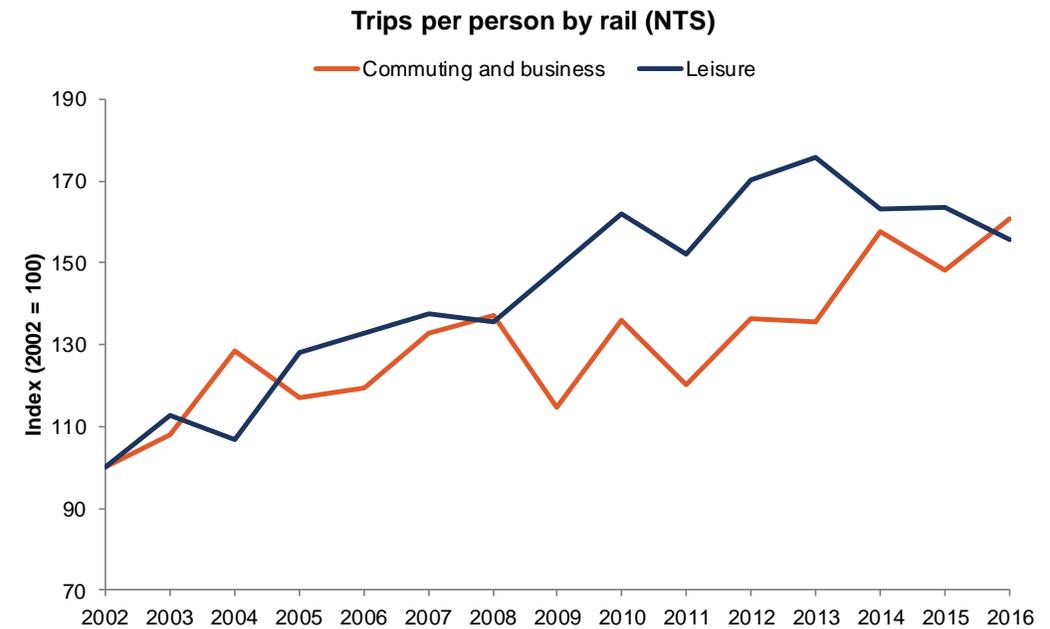
Source: Department for Transport Statistics and ORR data portal. (N.B. Oldest available data is 2002)

# Trips per person all modes vs rail

- Whereas trends across all modes for trips per person for all journey purposes have fallen by 13% since 2002, trips per person by rail has climbed by close to 60%



Source: Department for Transport Statistics, National Travel Survey

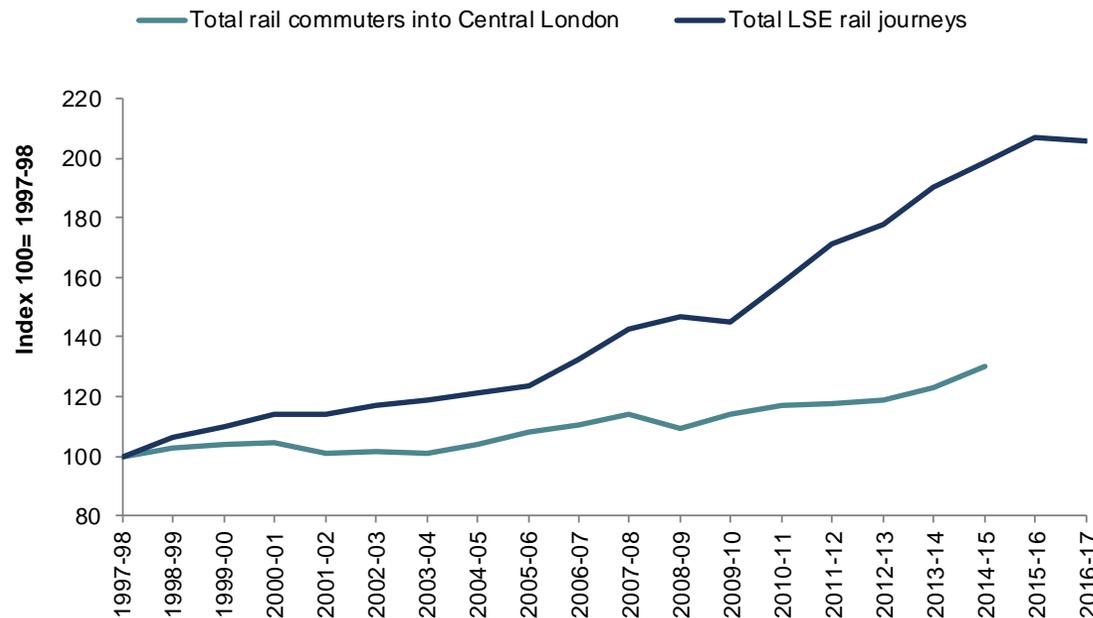


Source: Department for Transport Statistics, National Travel Survey

# Journey Growth in London & South East

- Journey growth is not just due to increased demand from commuters - since 1997-98 total rail journeys in London and the South East have increased by more than rail commuting into Central London
- Rail journeys have also increased faster than journeys on the London Underground

Growth in rail journeys versus growth in commuter numbers

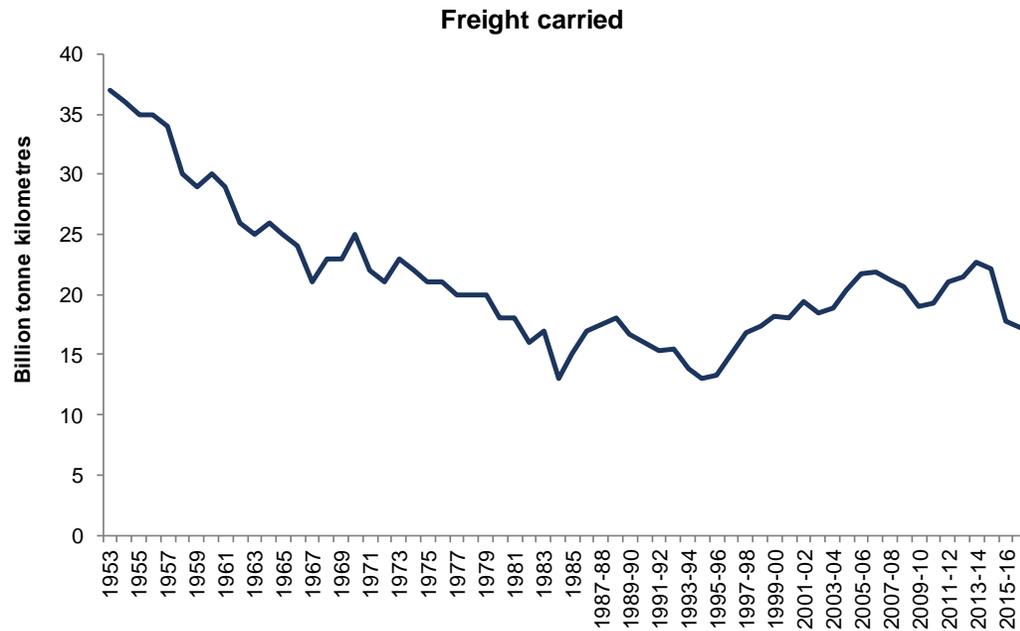


Journey growth - Rail versus London Underground	
1997-98 to 2016-17	Journey growth
London Underground	65.6%
London and South East rail	106.0%

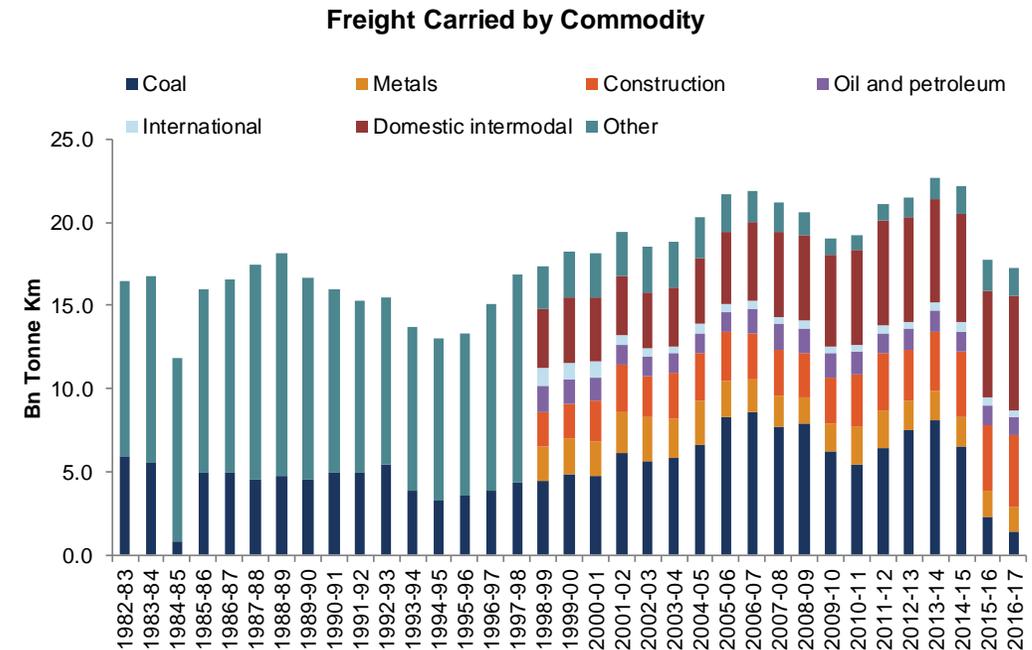
Source: ORR data portal, LUL Statutory Accounts

# Rail Freight – Growth in Goods Carried

- Before 1997-98, rail freight was in steady decline (down 59% between 1953 and 1996-97)
- It has since stabilised with growth in 13 of the 19 years since then
- A sharp fall in coal moved (from 6.5 to 1.4bn tonne kilometres) almost single-handedly drove the decline between 2014-15 and 2016-17
- Domestic intermodal carried has increased by 93% since 1998-99



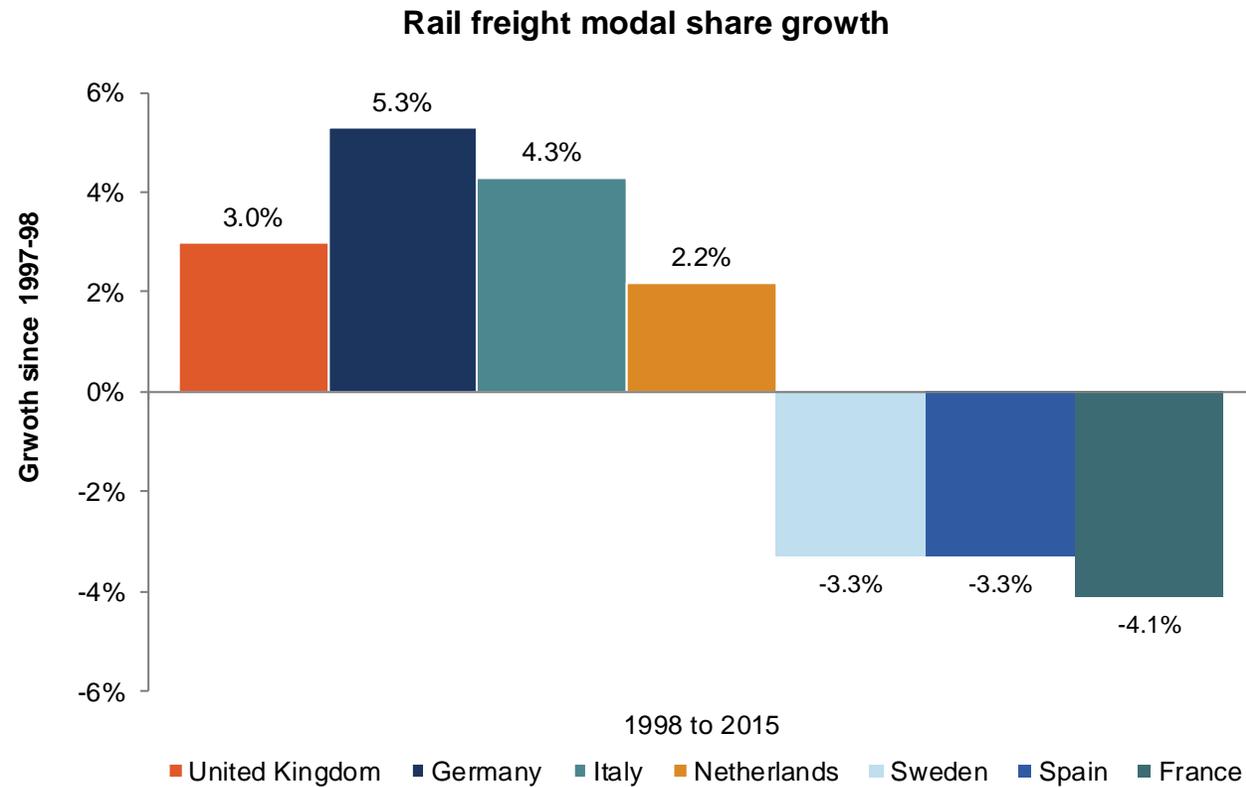
Source: ORR data portal



Source: ORR data portal

# Freight Growth vs European Peers

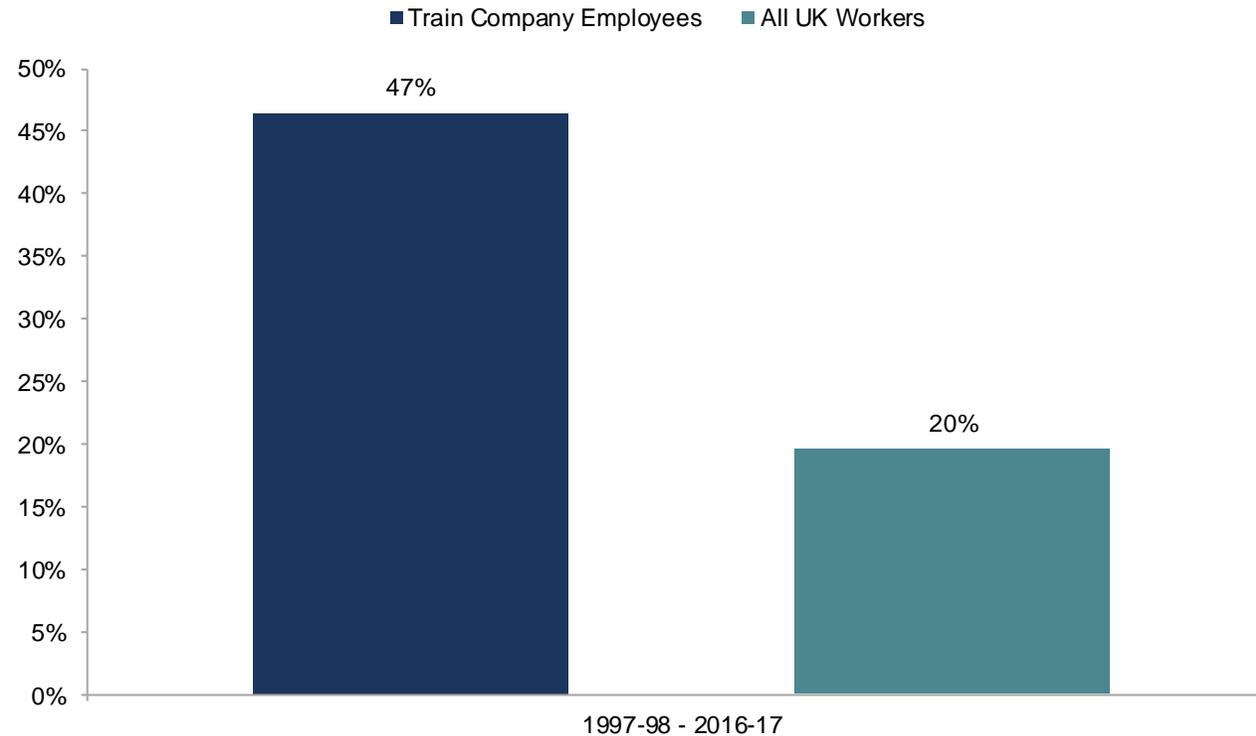
- Of comparable European railways, UK freight mode share growth, at 3.0% since 1997-98, is behind only Italy and Germany (which has a more favorable regulatory environment where lorries are not permitted on roads on Sundays)



Source: Eurostat database

- The rail industry and its supply chain employ up to 240,000 people
- The number of people employed by train companies has increased by 47% since 1997/98

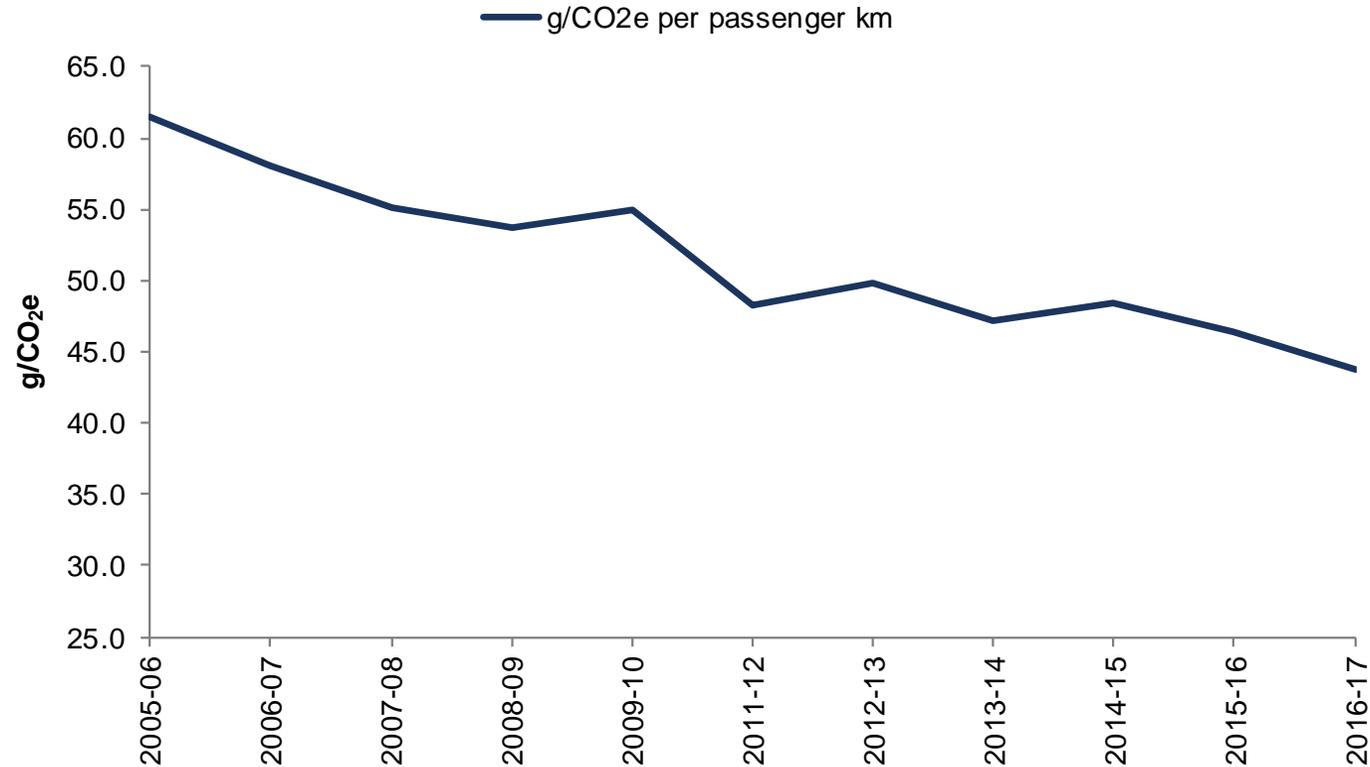
### Train Company Employees and UK Workers



Source: ORR data portal and ONS

- Already a relatively green mode of transport, CO<sub>2</sub> emissions generated per kilometre by passenger operators have decreased by 25% since 2005-06.

Traction energy - CO<sub>2</sub> emissions per km



Source: ORR data portal

# Partnership railway - successful for customers

***Rail Delivery Group***



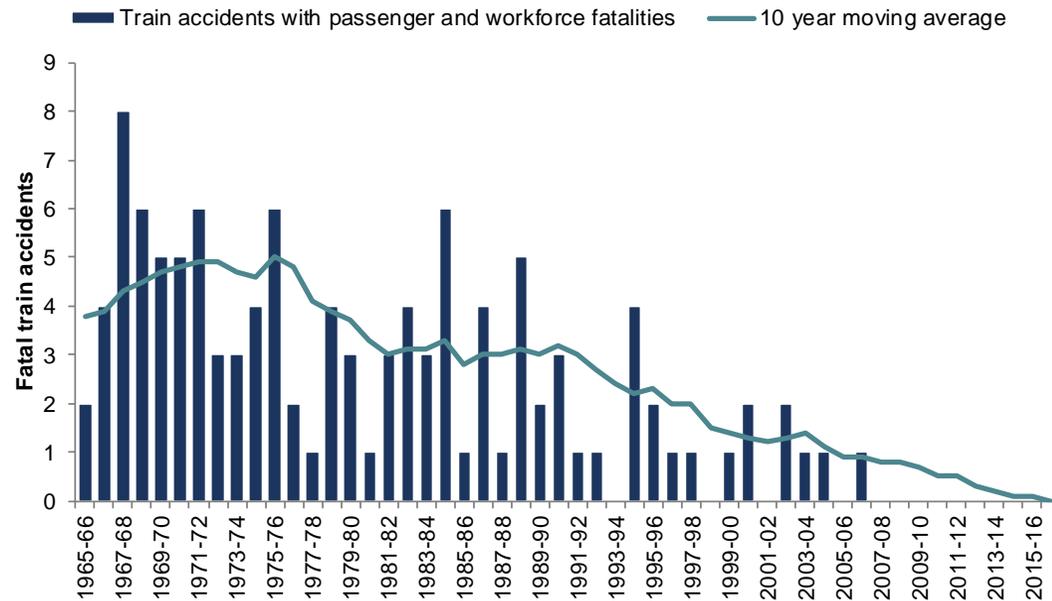
National Rail



BRITAIN  
RUNS  
ON RAIL

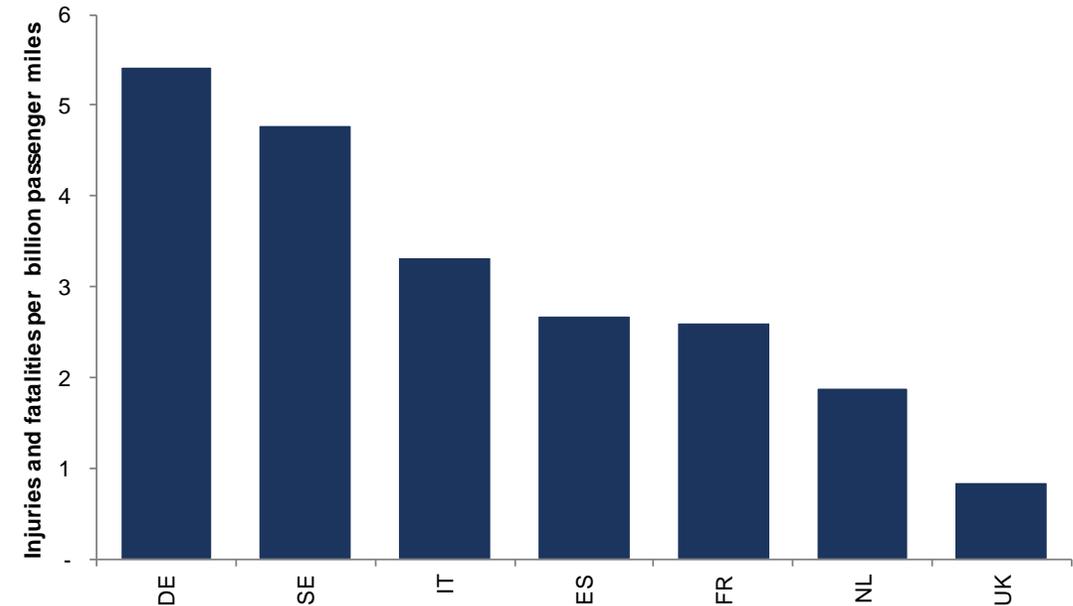
- Safety has continued to improve. The UK continues to be amongst the safest railways in Europe for customers and workforce.

UK train accidents with passenger or workforce on-board fatalities since 1965-66



Source: ORR data portal

All network Injuries and Fatalities Per Billion Passenger Miles (2014)

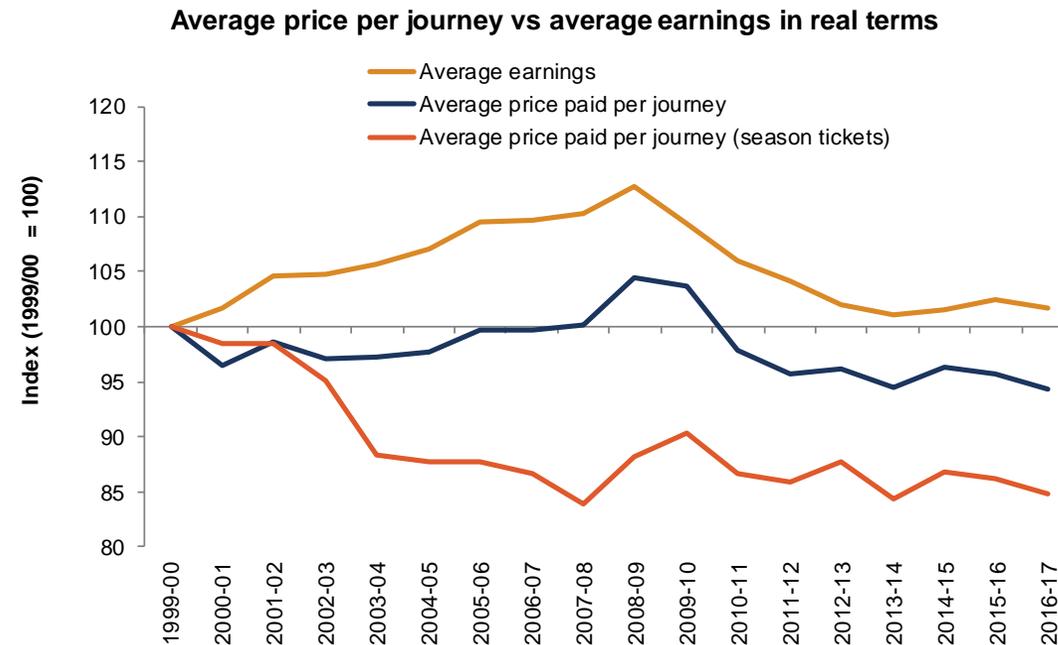


Source: Eurostat

Note: Includes all recorded injuries and fatalities on the rail network including workforce and those at level crossings

# Average Journey Price vs Average Earnings

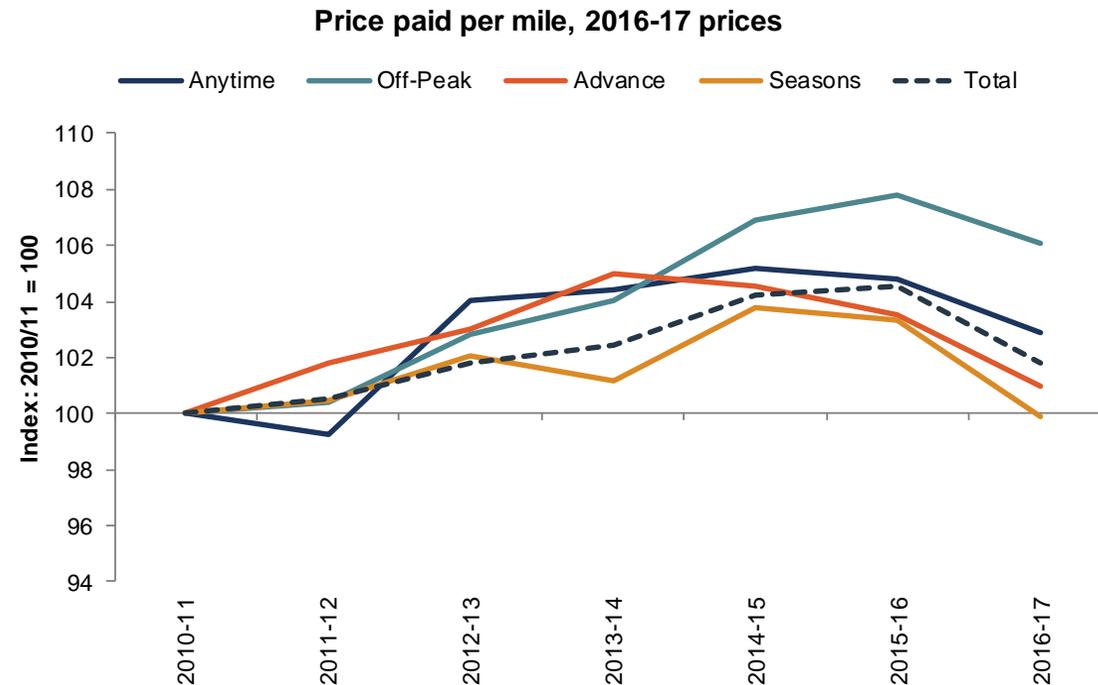
- Average earnings (+1.7%) have grown faster in real terms than the average price paid per journey (-5.6%) since 1999-2000
- The average price paid per journey in real terms was £5.46 in 2016-17
- In contrast, the average price paid per journey on a Season ticket has fallen in real terms by 15.1% since 1999-2000 and has been relatively flat since 2003-04



Source: ORR data portal and Cebr Economic forecast  
Note 1999-00 is the first available year for Average Earnings within the Cebr Economic Forecast

# Average Price Per Passenger Mile

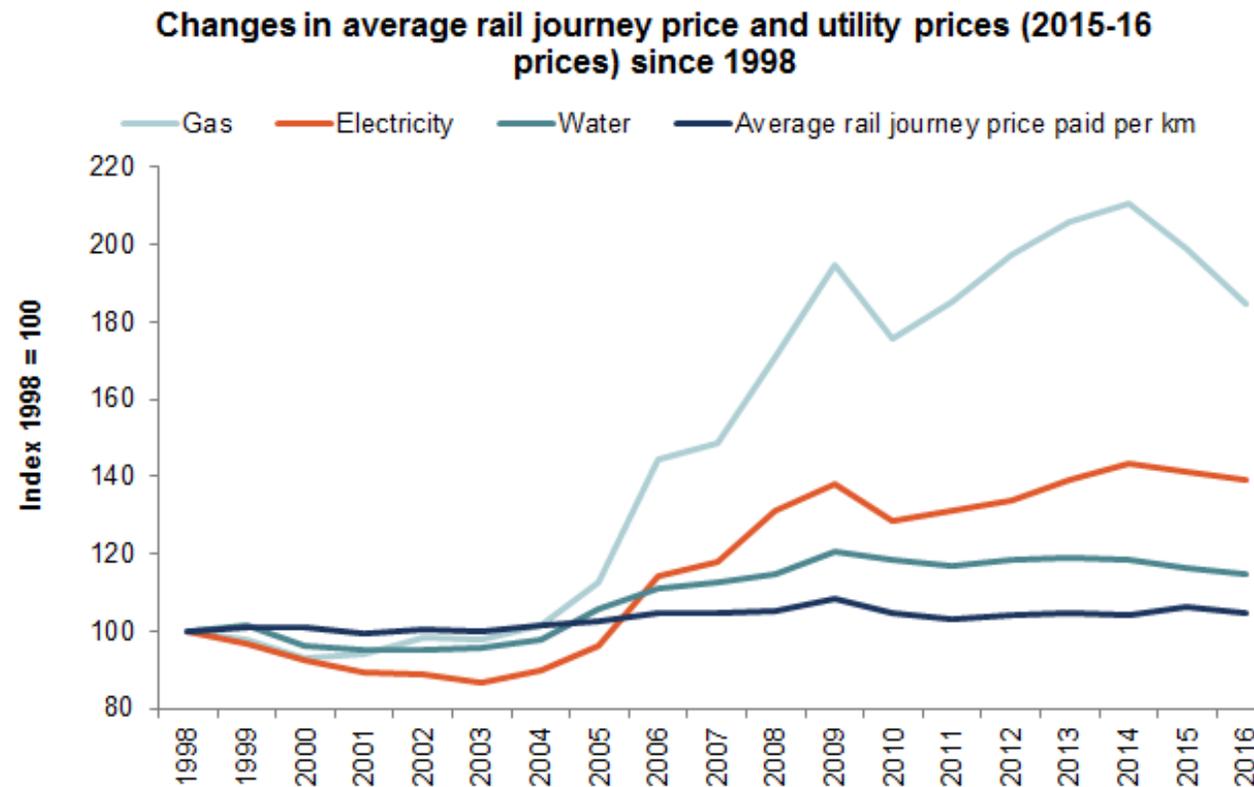
- The average price paid per passenger mile has increased by 1.8% in real terms since 2010-11
- Prices paid for Anytime fares have increased over this period (by 2.9%), compared to -0.1%, 6.0% and 1.0% increases for Seasons, Off-Peak and Advance respectively as operators price tickets to encourage people to travel on cheaper Advance fares



Source: ORR data porta. Product level information only available from 2010-11

# Average Journey Price vs Utility Prices

- Since 1998 average rail journey price (per km) has increased in real terms by 4.9%, whereas water prices increased by 14.9%, electricity prices are up 39.1% and gas prices up 84.6%

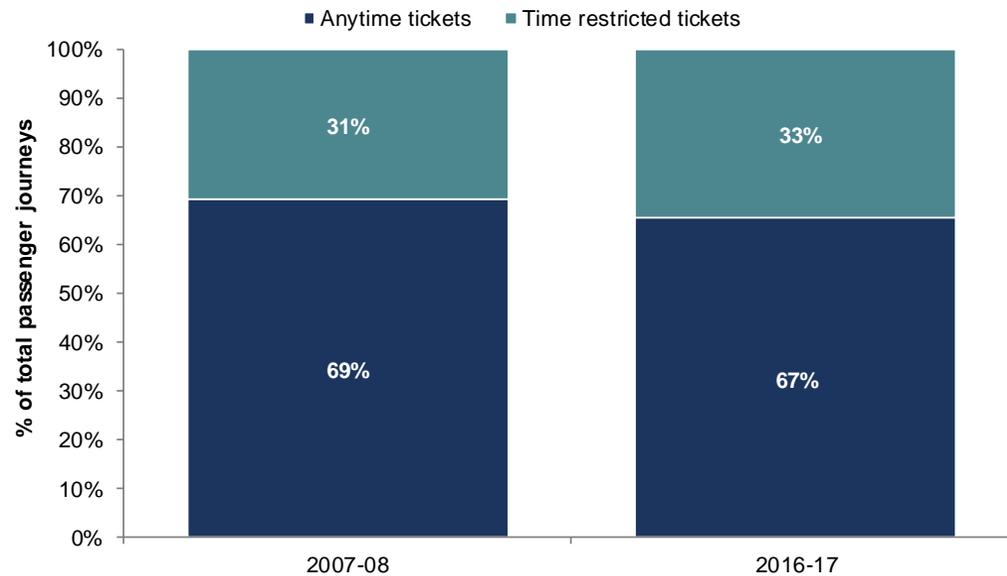


Source: ONS RPI component data, ORR data portal

# Journeys and Revenue by Ticket Type

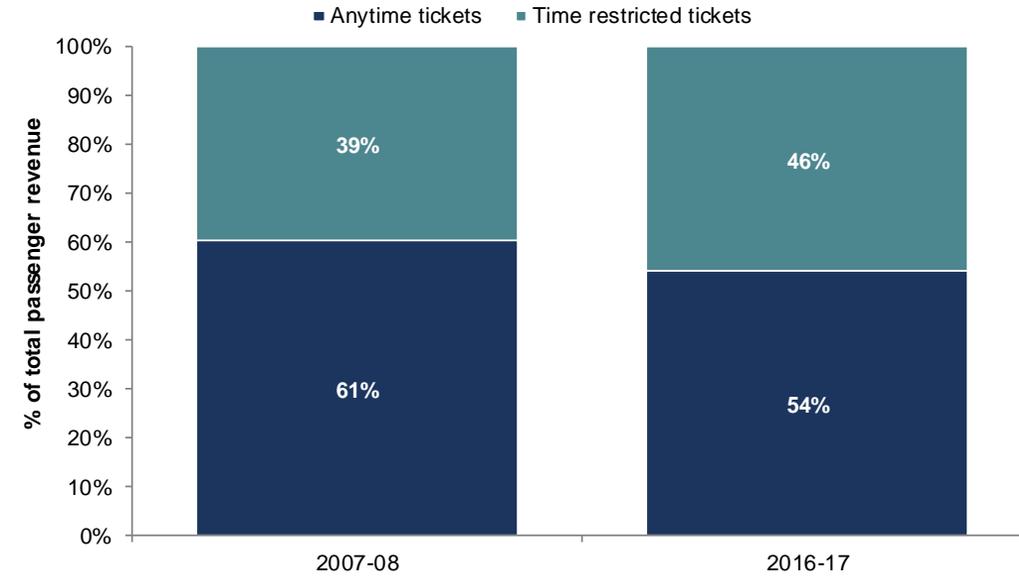
- Nearly half of all passenger revenue now comes from cheaper time restricted tickets (Off-Peak, Super Off-Peak and Advance), up from 39% ten years ago, whilst the proportion of journeys on discounted tickets has also increased.

Journeys on anytime travel and restricted times



Source: LENNON data

Revenue from anytime travel and restricted times

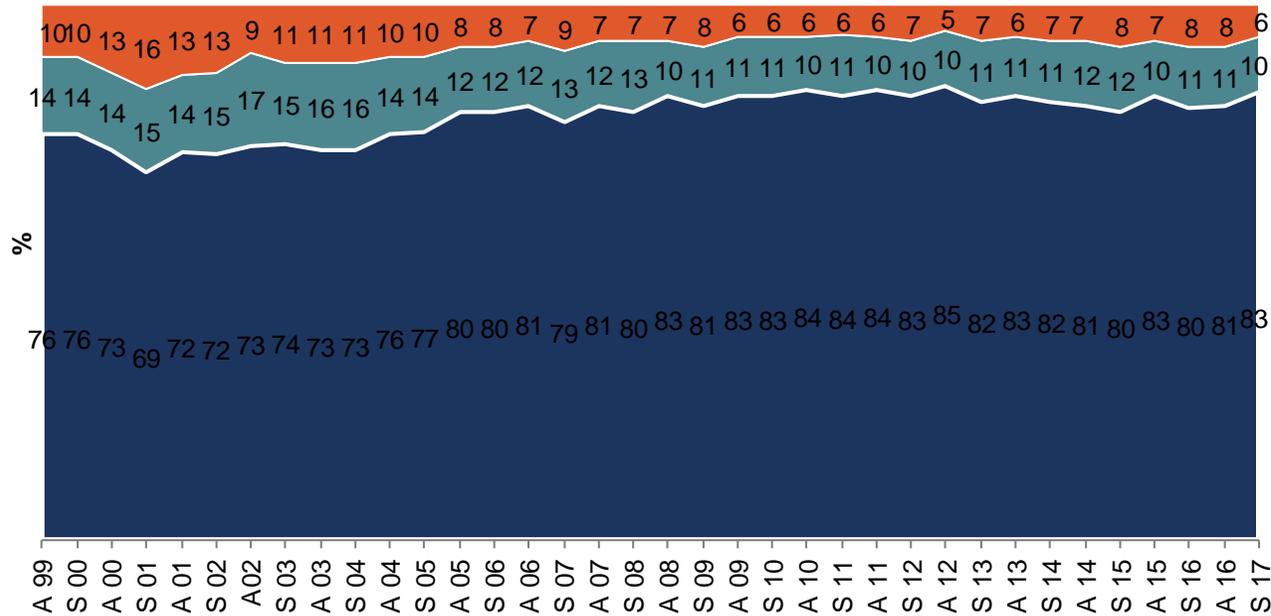


Source: LENNON data

- Since surveys began in 1999 customer satisfaction has increased from 76% to 83%
- The number of customers rating their journey as “satisfied” or “good” is now 1,437 million, up from 708m in 1999, an increase of 103%

Customers' Overall Satisfaction

■ % satisfied or good' ■ % neither nor' ■ % dissatisfied or poor'



Annual-equivalent journeys in millions rated as "Good" or "Satisfied"

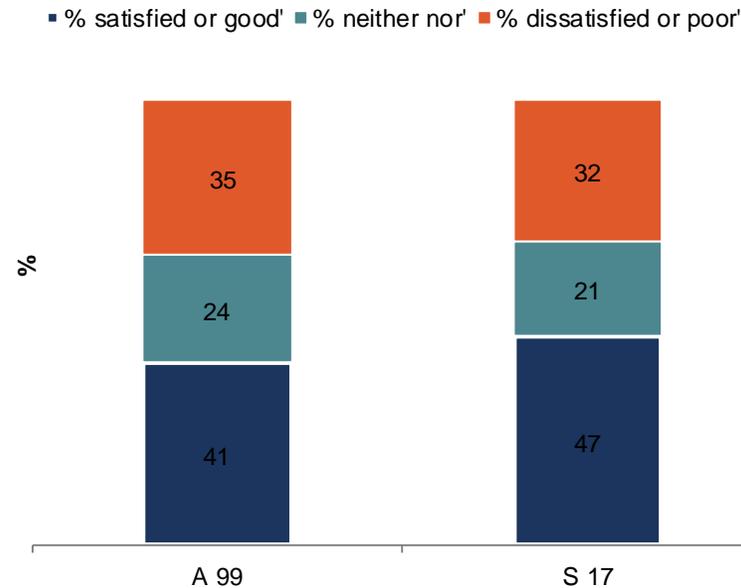
	1999-2000	2016-17	Difference
<b>Journeys (m)</b>	708	1,437	730

Source: ORR data portal and National Rail Passenger Survey

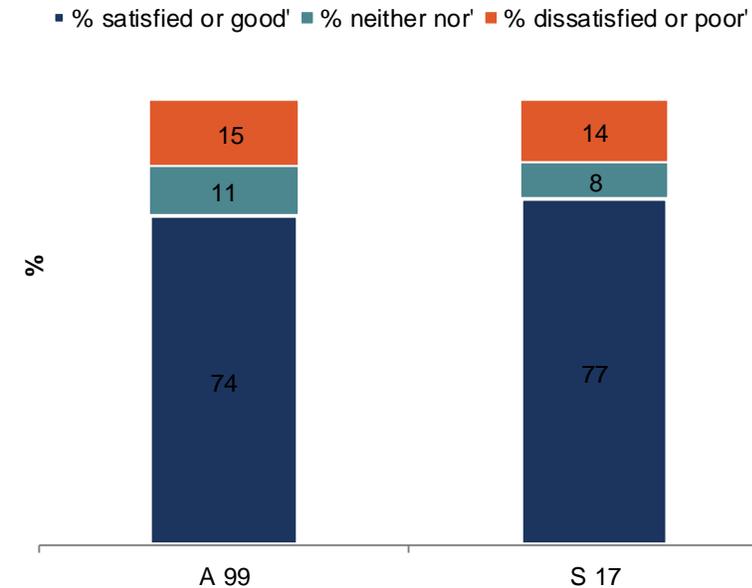
Note: A – Autumn, S – Spring  
Source: Network Rail Passenger Survey (started in Autumn 1999)

- Whilst overall satisfaction has increased from 76% to 83%, satisfaction with value for money has increased from 41% to 47% and those satisfied with service punctuality has increased by 3 percentage points.

Customers' satisfaction with value for money



Customers' satisfaction with punctuality/reliability

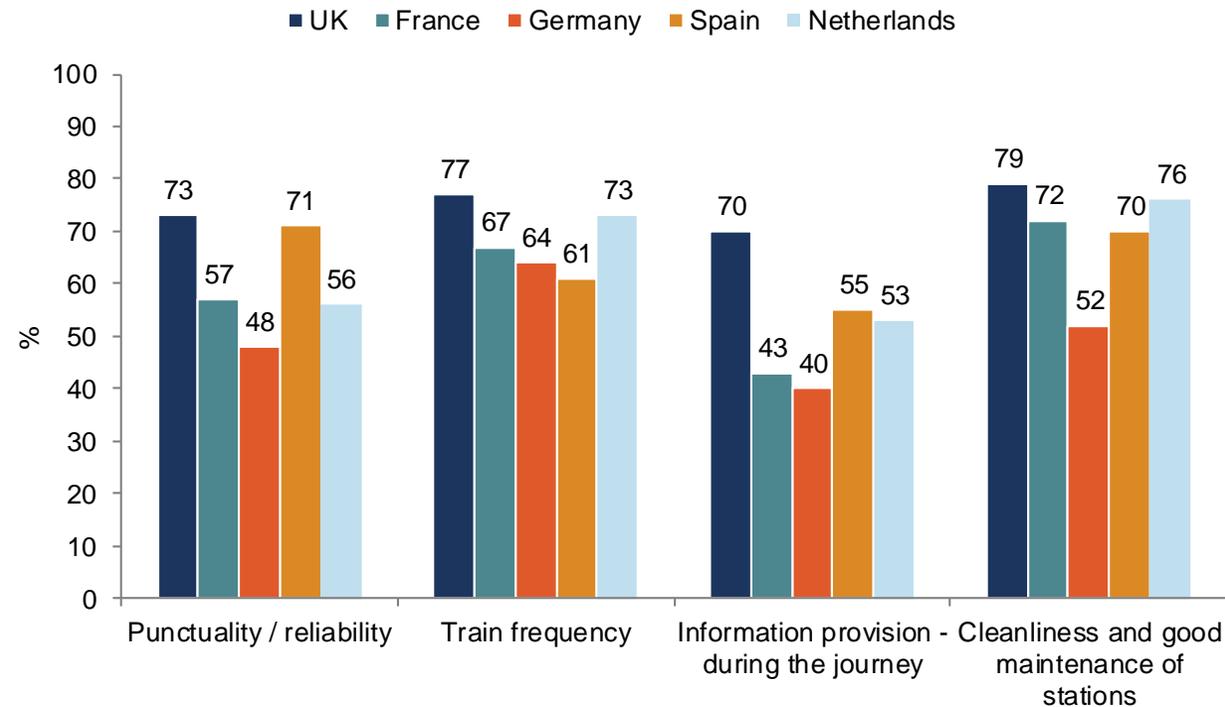


Note: A – Autumn, S - Spring  
Source: Network Rail Passenger Survey (started in Autumn 1999)

# Customer Satisfaction vs European Peers 2013

- Customers in the UK score rail services higher on a number of measures than do those in France, Germany, Spain and the Netherlands
- Overall, rail customers in the UK were more satisfied than those of any other major European railway

Customers' Satisfaction vs European Peers on Key Metrics



# Partnership railway - successful for taxpayers

***Rail Delivery Group***



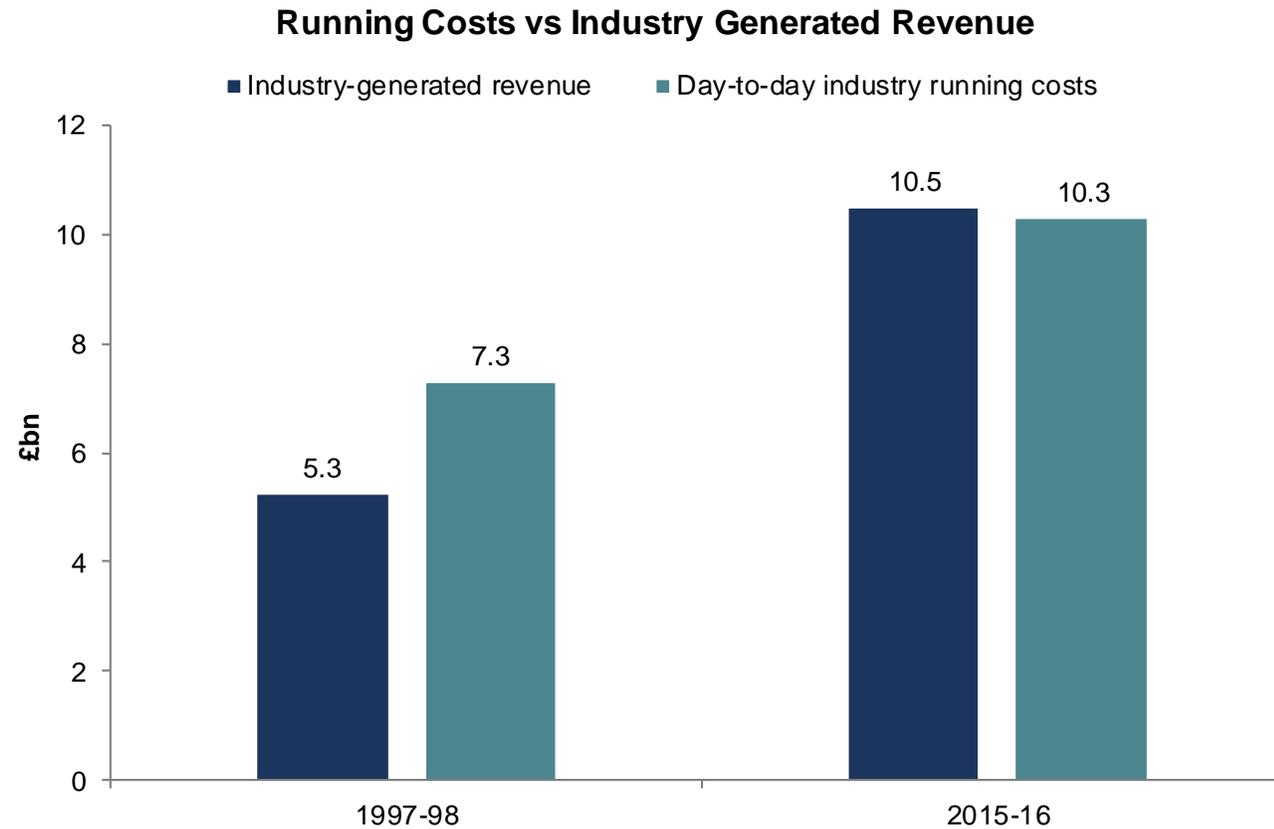
National Rail



BRITAIN  
RUNS  
ON RAIL

# Running Costs vs Industry Generated Revenues

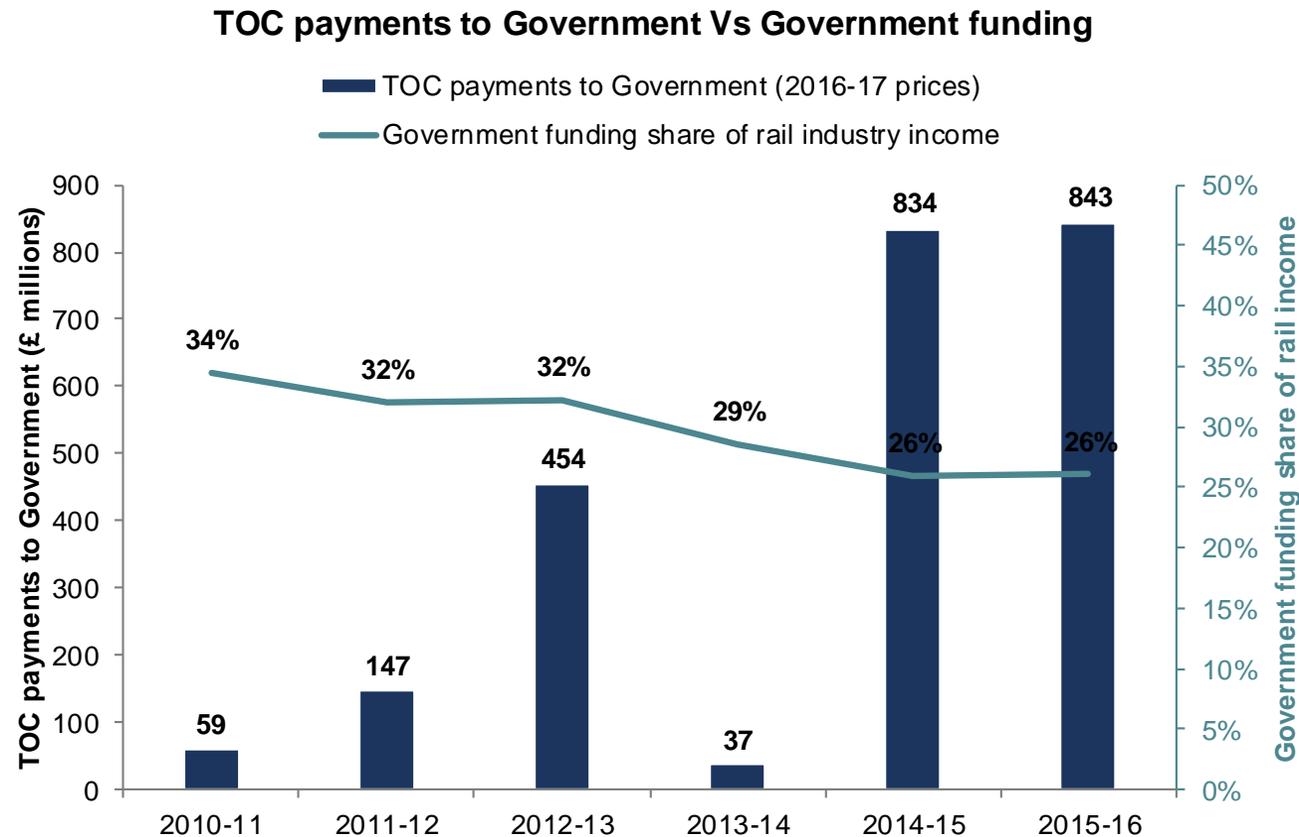
- In 1997-98, the railway ran at a £2bn a year loss in terms of its day-to-day costs, in 2015-16 it more than covered those costs



Note: Day-to-day running costs excludes renewals and enhancements costs  
Source: ORR "GB rail industry financial information 2015-16"

# TOC Payments Vs Government Funding

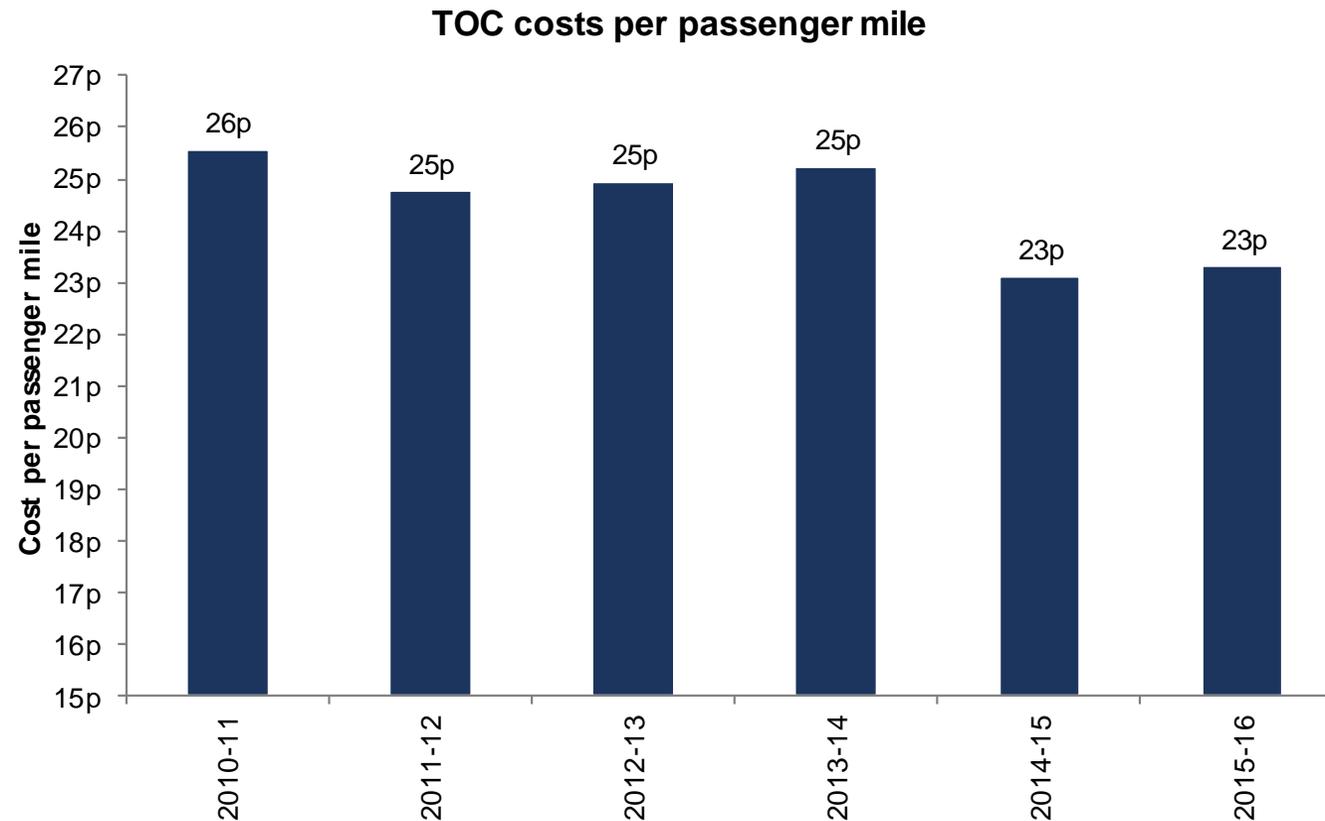
- Net payments from Train Operating Companies to government increased to £843 million in real terms, while government funding as a share of total rail industry income remained at 26% in 2015-16



Note: As per ORR's GB rail industry financial information 2015-16, government loans to NR are not included  
Source: ORR data portal and ORR "GB rail industry financial information 2015-16" (plus previous releases)

# Passenger Train Unit Costs

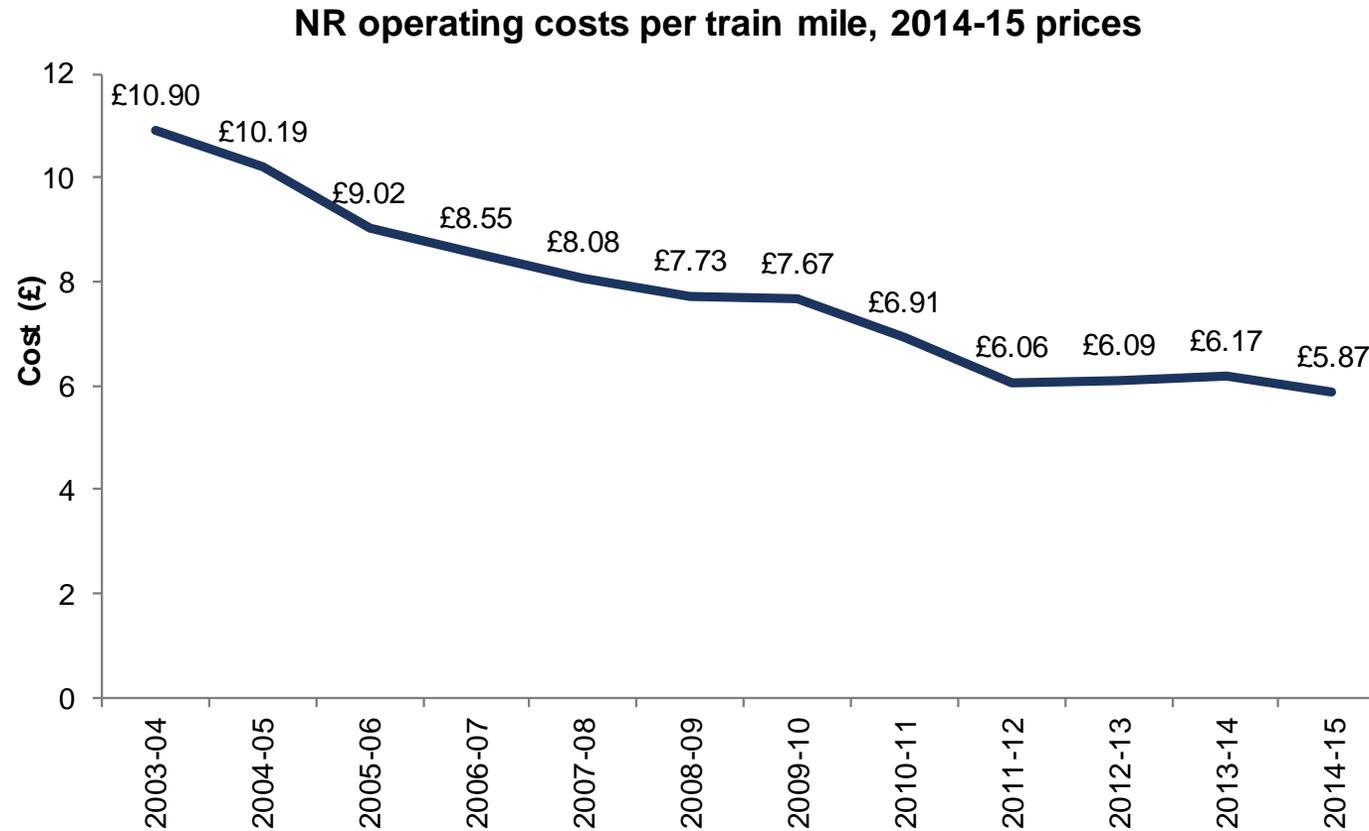
- Since 2010-11, passenger train company costs per passenger mile have declined by 8.8% in real terms



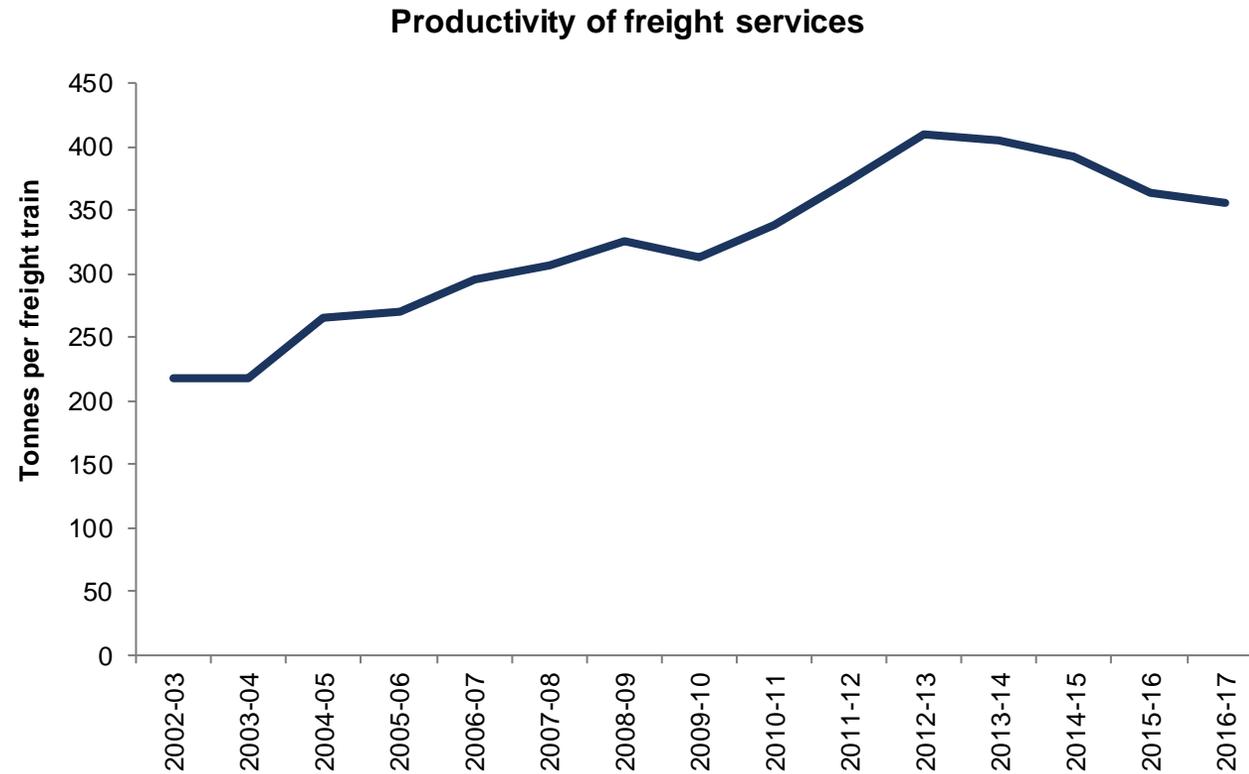
Note: TOC costs cover staff costs, rolling stock costs and other costs (payments to Government are excluded)  
Source: ORR data portal

# Infrastructure Costs per Train Mile

- Network Rail operating costs have fallen by 46% since 2003-04
- This reduction is primarily due to the introduction of new technology, innovation and in-sourcing some key activities



- Freight efficiency has improved as longer and heavier freight trains are now in operation. The number of trains has fallen by 44% since 2002-03 but tonnes per freight train have increased by 63%



Source: ORR data portal

# Partnership railway – connecting communities

***Rail Delivery Group***



- Investment means train companies are running 28% more services since 1997-98
- Frequency of services on many key long distance routes has doubled

	1997-98	2016-17	% change
Number of planned services per year (m)	5.69	7.30	28%

Source: Network Rail

Year	Trains per day			Off-peak hourly frequency		
	1994	2016	% Change	1994	2016	% Change
Manchester to London	17	47	176%	1	3	200%
Leeds to Edinburgh	2	15	650%	0	1	n/a
London to Norwich	19	36	89%	1	2	100%
Leeds to London (1)	17	32	88%	1	2	100%
London to Sheffield	15	31	107%	1	2	100%
Bristol to London (2)	23	33	43%	1	2	100%
Glasgow Queen Street to Edinburgh (3)	37	62	68%	2	4	100%
Leeds to Huddersfield to Manchester (4)	48	81	69%	3	5	67%
Cardiff to London	22	30	36%	1	2	100%

Source: Network Rail

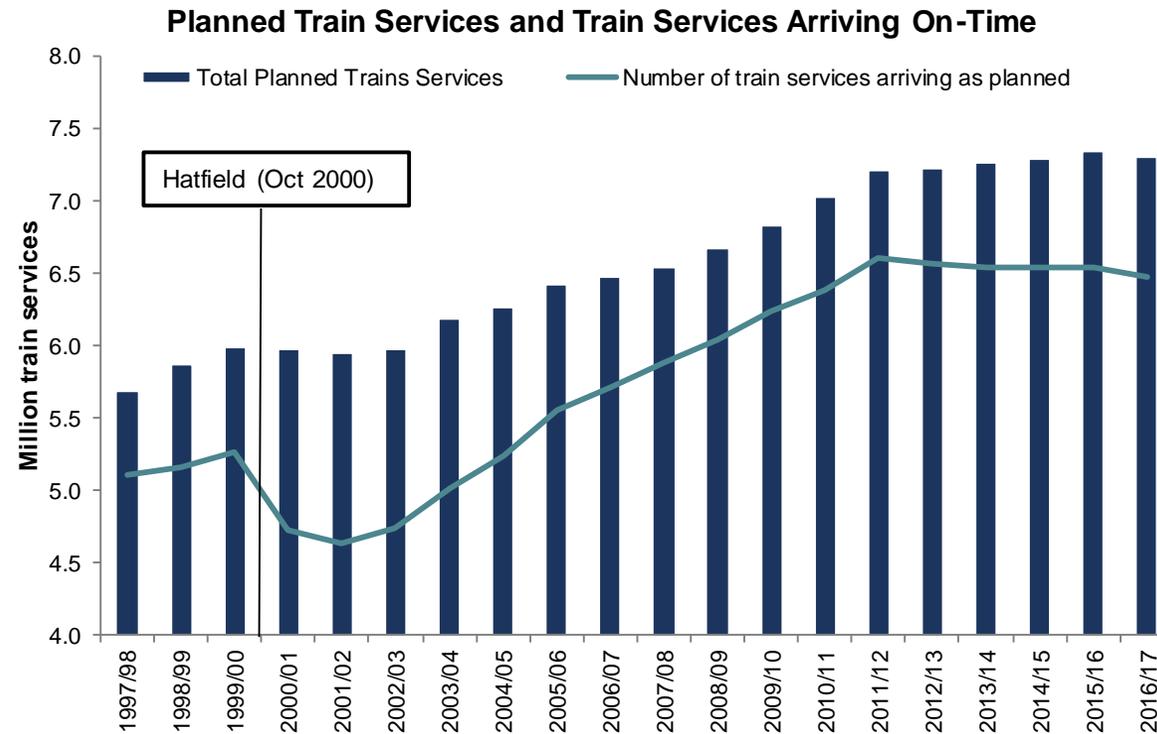
(1) Virgin East Coast only; excludes East Midlands Trains

(2) Bristol Temple Meads only ; excludes Bristol Parkway

(3) Express services via Falkirk only; excludes other routes

(4) Includes services to Manchester Victoria

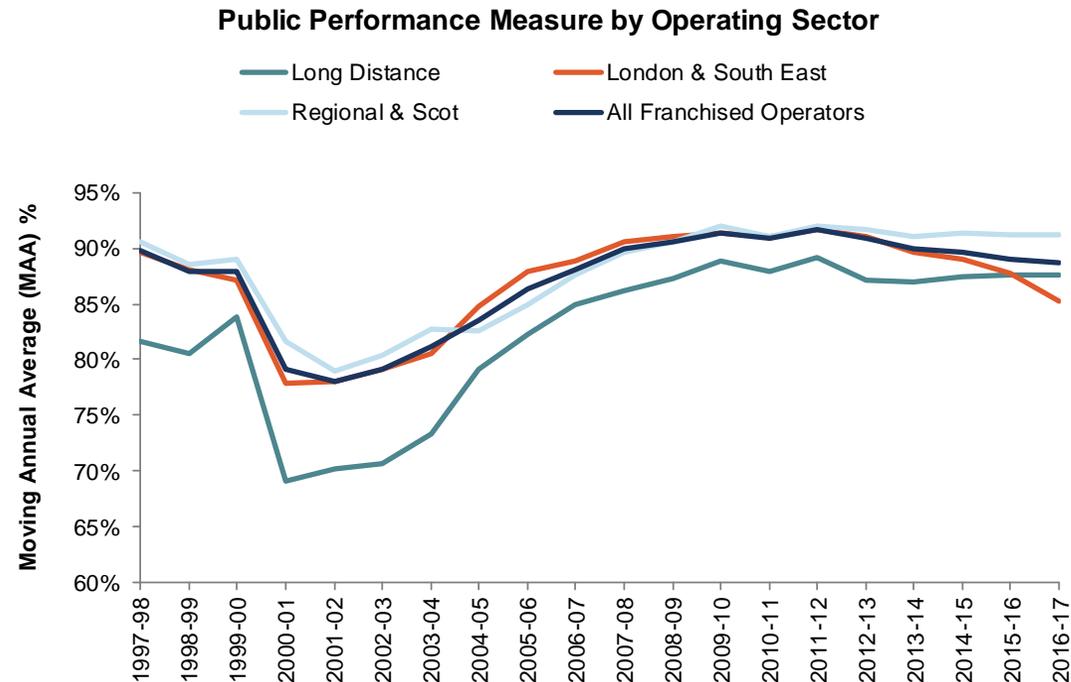
- 1.4 million more trains arrived as planned in 2016-17 compared to 1997-98, nearly 3,800 extra trains per day
- Until 2011-12 extra services were accommodated on the railway with increasing punctuality



Source: Network Rail and ORR data portal

# Punctuality of Passenger Services

- In 2016-17, 88.7% of train services (equivalent to 1.5bn customers) arrived as planned. This equates to 776 million more punctual journeys than in 1997-98
- Punctuality on long distance and regional & Scottish services is static or improving slightly compared to 2012-13 but in London & South East, where the railway is most congested, it is declining

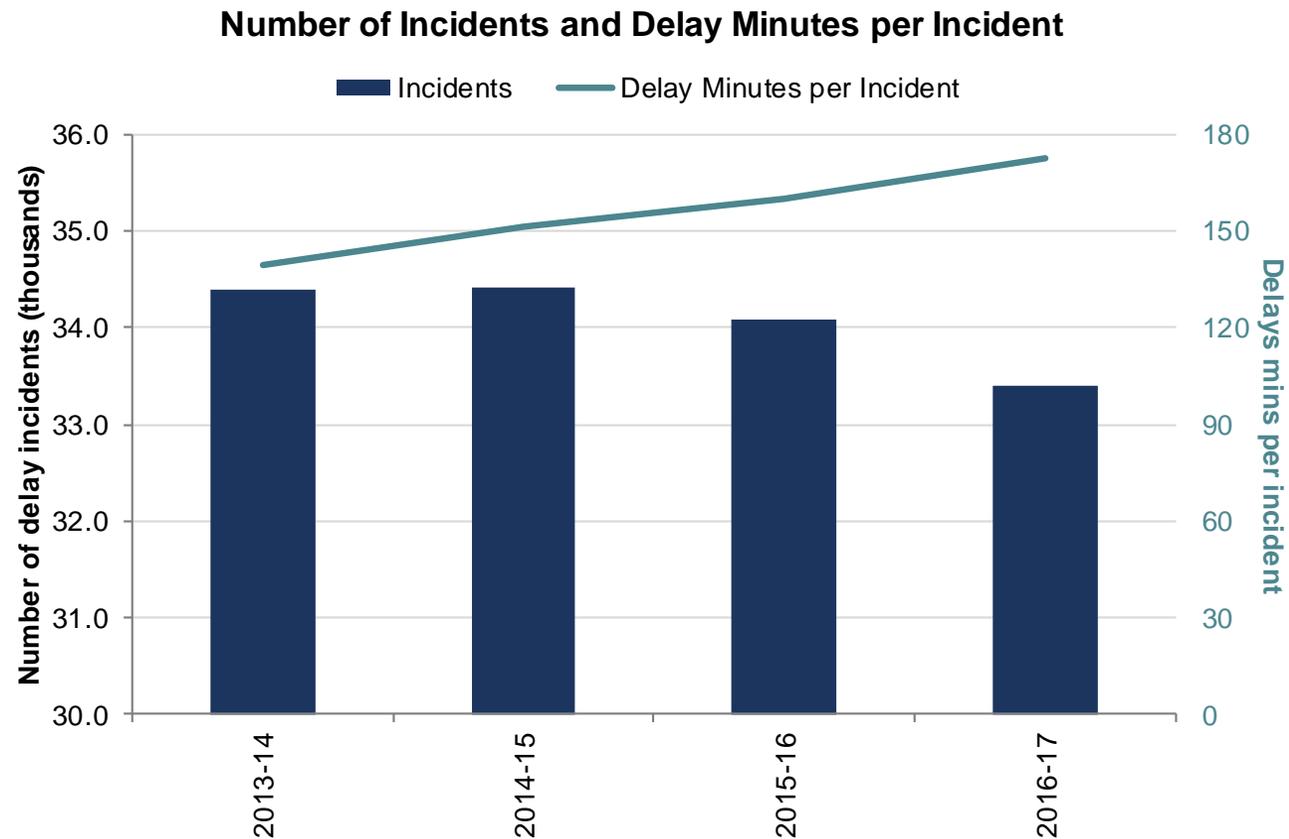


Source: ORR data portal

Note: "as planned" relates to the PPM measure defined as arriving at the final destination within five minutes of the planned timetable for London and South East, Regional and Scotland operators, or within ten minutes for Long Distance operators).

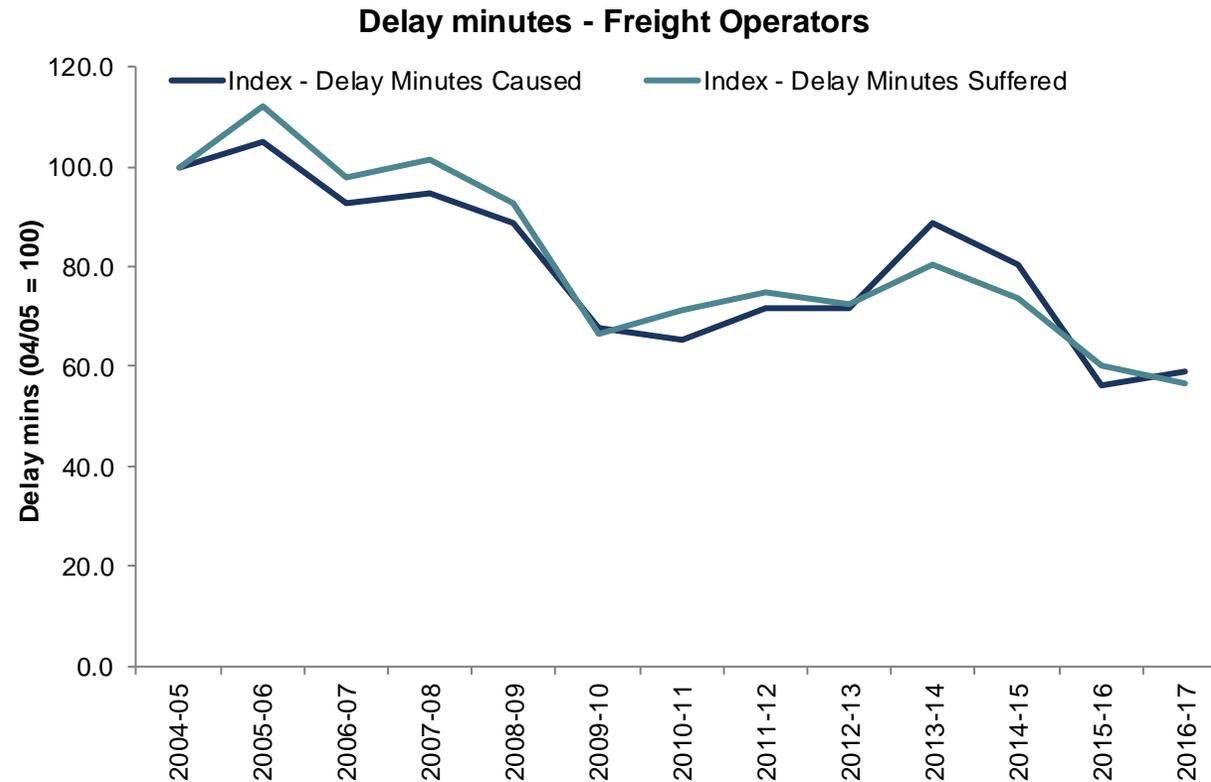
# Number of Incidents and Delay Minutes

- Individual incidents of delay fell by 3% between 2013-14 and 2016-17
- However, the impact of each delay has grown as the railway is more congested



Source: Network Rail

- Delay minutes suffered by freight companies have reduced by 41.0% since 2004-05. Similarly, delay caused by freight companies has reduced by 43.3%
- The rail freight industry has undertaken many performance initiatives in recent years. Fewer and longer freight trains have also resulted in fewer delays to other services.



Source: Network Rail

# Partnership railway – investing to improve

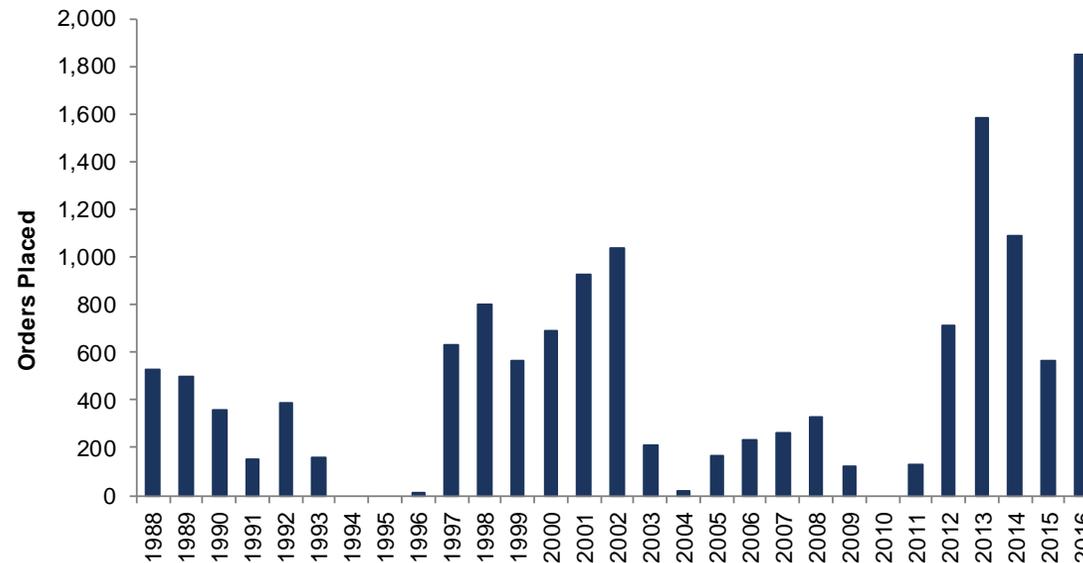
***Rail Delivery Group***



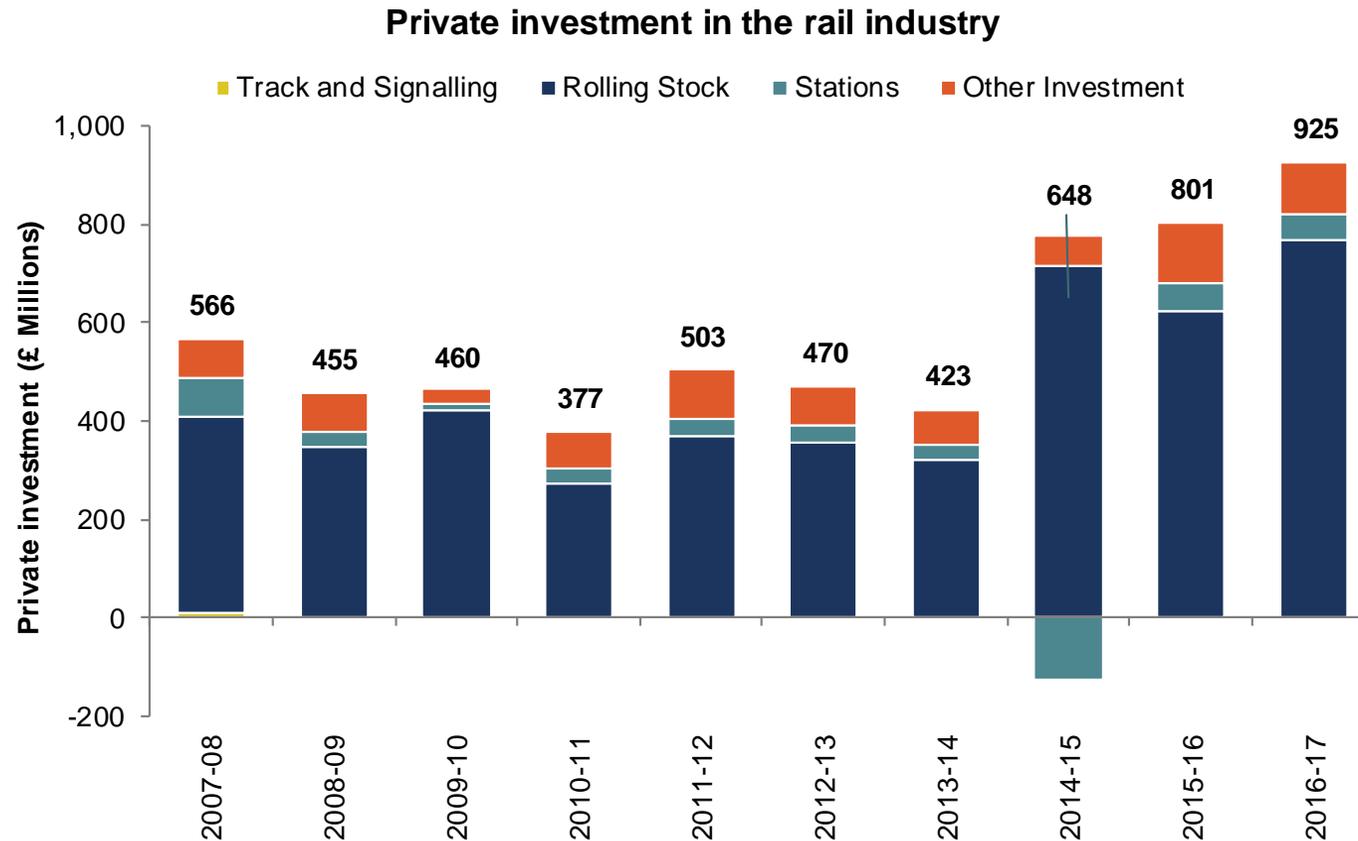
- Compared to 1996-97 there are 2,500 more carriages on the railway, a 25% increase
- Britain’s train fleet is increasing faster than at any time in recent decades. Rail companies have committed to running 5,700 new carriages by 2021 and in 2016 1,850 new carriages were ordered. Around half of these new vehicles will be built in Britain

Change in total fleet size	1996-97	2015-16	Growth
Total vehicles in passenger use	10,400	12,968	25%

Orders placed for mainline passenger rolling stock  
(i.e. excludes LUL/light rail)

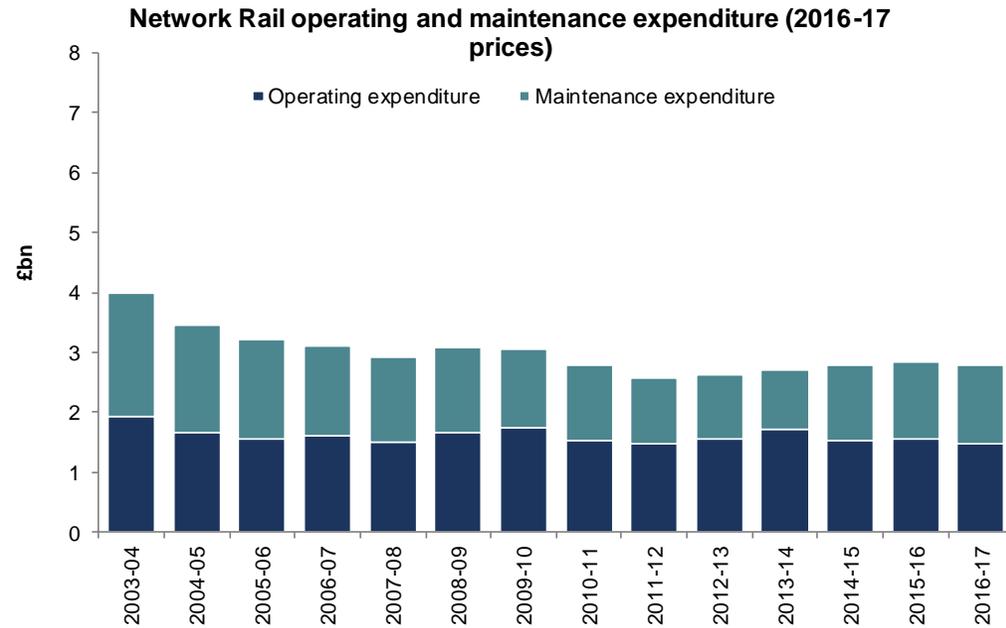


- Private investment in rail has increased 63.5% since 2007-08 driven by the increased investment in rolling stock, up by over 90% to £767m in 2016-17

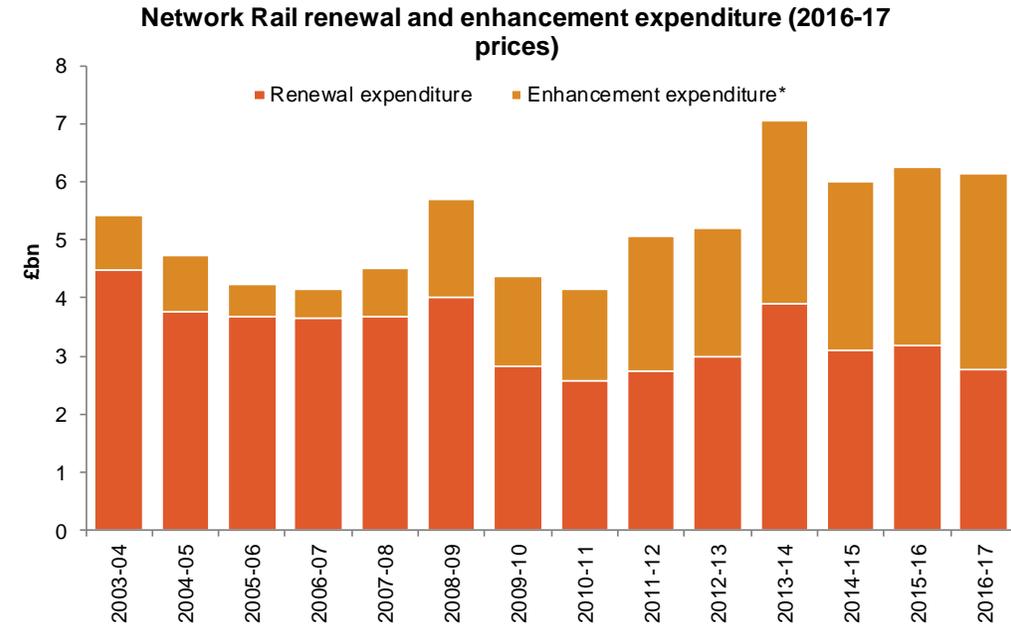


Note: In 2014-15 there were a large number of rail yards sold to Network Rail which is included in the 'Stations' category.  
Source: ORR data portal

- The cost of running the railway has fallen by 20% since 2003-04
- This has supported a 255% increase in investment by governments on enhancements over the same period



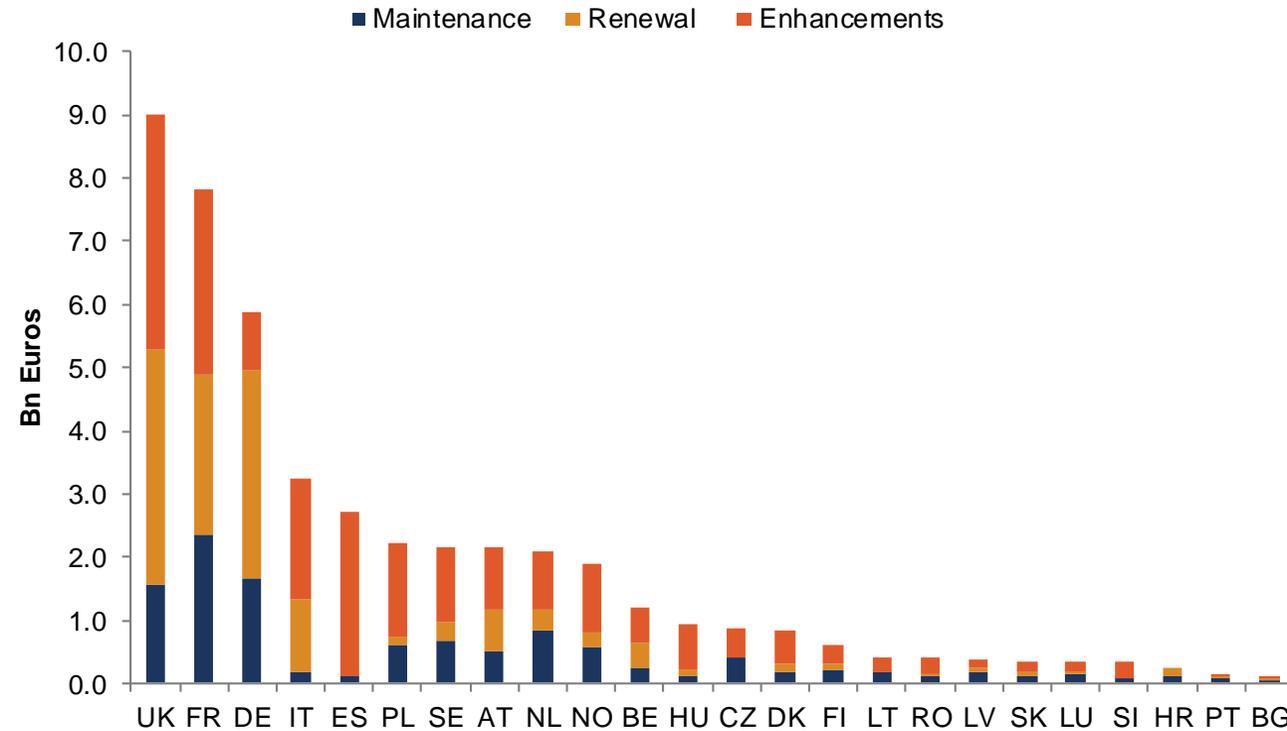
Source: Network Rail Regulatory Accounts



Note: \* Network Rail funded enhancements only  
Source: Network Rail Regulatory Accounts

- Britain is investing over €1bn more than France and over €3bn more than Germany on its infrastructure, despite both countries having over 13,000km more of track

Total infrastructure expenditure in EU Member States



Source: Eurostat 2014

# Methodology

- All data is the most recent data available at the time of compiling
- Where possible, data is from 1997-98 as this was the first full financial year after all franchises had been let
- Earliest data available from the most reliable data sources presented whenever data from 1997-98 is not available
- RPI has been used where figures are adjusted for inflation and set at 2016-17 prices

***Rail Delivery Group***



National Rail



BRITAIN  
RUNS  
ON RAIL

# *Rail Delivery Group*

---

