

# TECHNICAL NOTE

## REVIEW OF RAIL PERFORMANCE INCENTIVES

### DESK RESEARCH EXERCISE

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### TABLE OF CONTENTS

<b>1.</b>	<b>INTRODUCTION</b>	<b>3</b>
<b>1.1</b>	<b>RESEARCH BACKGROUND</b>	<b>3</b>
<b>1.2</b>	<b>DESK RESEARCH EXERCISE</b>	<b>4</b>
<b>2.</b>	<b>SUMMARY OF MECHANISMS</b>	<b>5</b>
<b>3.</b>	<b>CONTRACTUAL</b>	<b>9</b>
<b>3.1</b>	<b>INTRODUCTION</b>	<b>9</b>
<b>3.2</b>	<b>TRACK ACCESS CONTRACTS</b>	<b>9</b>
<b>3.3</b>	<b>FRANCHISE AGREEMENTS</b>	<b>15</b>
<b>4.</b>	<b>MONITORING</b>	<b>18</b>
<b>4.1</b>	<b>INTRODUCTION</b>	<b>18</b>
<b>4.2</b>	<b>ORR MONITORING, ENFORCEMENT AND REPORTING</b>	<b>18</b>
<b>4.3</b>	<b>DfT MONITORING OF FRANCHISED TOCS</b>	<b>20</b>
<b>4.4</b>	<b>OTHER MONITORING</b>	<b>22</b>
<b>5.</b>	<b>MARKET-LED</b>	<b>26</b>
<b>5.1</b>	<b>INTRODUCTION</b>	<b>26</b>
<b>5.2</b>	<b>FARE-BOX INCOME</b>	<b>26</b>
<b>5.3</b>	<b>FREIGHT MARKET COMPETITION</b>	<b>26</b>
<b>6.</b>	<b>REPUTATIONAL INCENTIVES</b>	<b>28</b>
<b>6.1</b>	<b>INTRODUCTION</b>	<b>28</b>
<b>6.2</b>	<b>PERCEPTIONS OF PERFORMANCE BY THE PUBLIC AND MEDIA</b>	<b>28</b>
<b>6.3</b>	<b>PERCEPTIONS OF PERFORMANCE BY OTHER STAKEHOLDERS</b>	<b>30</b>

<b>7.</b>	<b>INDIVIDUAL-LEVEL INCENTIVES</b>	<b>33</b>
<b>7.1</b>	<b>INTRODUCTION</b>	<b>33</b>
<b>7.2</b>	<b>CODES OF CONDUCT</b>	<b>33</b>
<b>7.3</b>	<b>PERFORMANCE-RELATED PAY</b>	<b>34</b>
<b>8.</b>	<b>NEXT STEPS</b>	<b>36</b>

# 1. INTRODUCTION

## 1.1 Research background

1.1.1 Reliability and punctuality are the fundamental building-blocks of a high-performance railway network, as recently recognised in the Williams Rail Review<sup>1</sup>, and confirmed by Transport Focus<sup>2</sup>, Network Rail<sup>3</sup>, The Office of Rail and Road (ORR), and users and operators of passenger and freight train services across Britain. Despite the high priority given to reliability and punctuality in the industry’s processes since privatisation, however, evidence from recent years shows that from a high-point in 2011/12, there has been a medium to long-term decline in performance. In the year ending 2019-20 Q2, just 65.1% of services arrived at station stops on time and 2.8% of services were cancelled<sup>4</sup>. Furthermore, data from 2019-20 Period 10 shows 4.5% of services were cancelled or significantly late<sup>5</sup>.

1.1.2 There are a number of organisations responsible for the delivery of train service performance across Britain’s railway network (GB Rail). The key player in this regard is the Infrastructure Manager, primarily Network Rail, which owns and manages the track and supporting signalling systems, and manages the timetable process to regulate traffic. Passenger Train Operating Companies (TOCs) and Freight Operating Companies (FOCs) also play an important role in the delivery of service performance, through their provision of trains and staff to run the timetabled services, whilst public sector funders such as the Department for Transport (DfT) and Transport Scotland, and rail regulator the Office of Rail and Road (ORR) also play key roles in facilitating and monitoring performance, including agreeing contractual and ad-hoc Performance Incentives that seek to improve the decisions that affect the performance of rail services, particularly those decisions made by Infrastructure Managers and operating companies.

1.1.3 ORR has told SYSTRA that some in the industry believe that aspects of the current performance incentive framework may reward investment in shifting responsibility for delays, rather than investment in actually reducing delays. This would be likely to lead to undesirable outcomes for users of the railway.

1.1.4 As part of their aim to drive for a safer, higher performing and more efficient rail network, ORR, the independent safety and economic regulator of the railway network, commissioned SYSTRA to undertake a review of train performance incentives. The overall aim of this review is to build an understanding of what, in practice, motivates people and organisations to improve rail performance.

<sup>1</sup> Williams Rail Review update: <https://www.gov.uk/government/speeches/williams-rail-review-an-update-on-progress>

<sup>2</sup> Transport Focus Rail Punctuality Comment: <https://www.transportfocus.org.uk/news-events-media/news/train-punctuality-measured-minute/>

<sup>3</sup> Network Rail Railway Performance: <https://www.networkrail.co.uk/who-we-are/how-we-work/performance/railway-performance/>

<sup>4</sup> Passenger Rail Performance 2019-20 Q2 Statistical Release: <https://dataportal.orr.gov.uk/media/1629/passenger-performance-2019-20-q2.pdf>

<sup>5</sup> ORR, CaSL data by TOC: <https://dataportal.orr.gov.uk/statistics/performance/passenger-rail-performance/casl-by-toc-and-sector-table-37/>

1.1.5 A previous review of the rail industry’s performance incentives was conducted in Network Rail’s Control Period 4 (CP4)<sup>6</sup>, but little up-to-date evidence exists to describe the importance and effect of incentives on current decisions and outcomes, especially those focused on train performance.

## 1.2 Desk research exercise

1.2.1 This document describes the findings of a desk-based exercise undertaken to identify the mechanisms which currently exist to influence people’s and organisations’ decisions related to train performance.

1.2.2 This exercise was based on an extensive and systematic search for relevant literature, undertaken by SYSTRA in collaboration with ORR. A full list of the literature identified in this exercise can be found in Appendix A.

1.2.3 The findings from this desk research exercise will be used in the second phase of the review, which is based on interviews with a sample of stakeholders to build an in-depth picture of motivating factors, with a wider stakeholder survey to quantify the positions identified.

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<sup>6</sup> Evidence gathering on the effectiveness of PR08’s incentives regime:  
[https://orr.gov.uk/data/assets/pdf\\_file/0004/19588/credo-report-evidence-gathering-on-the-effectiveness-of-PR08s-incentives-regime.pdf](https://orr.gov.uk/data/assets/pdf_file/0004/19588/credo-report-evidence-gathering-on-the-effectiveness-of-PR08s-incentives-regime.pdf)

Review of Rail Performance Incentives	
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## 2. SUMMARY OF MECHANISMS

- 2.1.1 The following table provides an overview of key influencing factors identified as part of the desk-based review that impact performance. Some of these are formally documented mechanisms, designed to ensure certain levels of performance are reached and maintained (e.g. elements of Track Access Contracts and Franchise Agreements), whilst others are less formally documented (e.g. desire to maintain reputation amongst stakeholders and ascribing to company code of conduct).

**Table 1. Key Performance Incentive Mechanisms and their Intended Outcomes**

MECHANISM TYPE	NAME	ORGANISATION(S) INCENTIVISED	INTENDED OUTCOME	INTENDED PERFORMANCE IMPACT
Contractual – Track Access Contract	Schedule 4	Network Rail	Engineering works are planned as early as in advance as possible and completed in the shortest amount of time possible, to minimise compensation payments made from NR to operators	Passengers can make alternative travel provisions in advance, with periods of travel disruption and delays to freight movements kept to a minimum
Contractual – Track Access Contract	Schedule 8	Network Rail	Unplanned disruption to traffic caused by NR is resolved as quickly as possible, to minimise compensation payments made from NR to operators	Decisions are made to minimise the impact of delay to passenger and freight trains
Contractual – Track Access Contract	Schedule 8	Operators	Unplanned disruption caused by operators is resolved as quickly as possible, to minimise compensation payments made from operators to other operators	Decisions are made to minimise the impact of delay to passengers, regardless of which operator they are travelling with, and freight movements
Contractual – Track Access Contract	The Network Code – Working Timetable	Network Rail and Operators	NR and operators work together to create a timetable that best meets operator demands (e.g. from franchise commitments) whilst meeting safety and resilience standards	The rail network is used to the best of its capacity to meet both passenger and freight needs
Contractual – Franchise Agreements	Schedule 7.1	Passenger Train Operating Companies (TOCs)	TOCs deliver performance outcomes at or above the agreed benchmarks	Delays to passengers (cancellations, late running services and short formations) are minimised

MECHANISM TYPE	NAME	ORGANISATION(S) INCENTIVISED	INTENDED OUTCOME	INTENDED PERFORMANCE IMPACT
Monitoring – by ORR	Monitoring and enforcement	Network Rail	Agreed targets (PPM, on-time and cancellations) between NR and operators are formally monitored and, if below standard, steps taken which forces NR to identify actions to tackle performance issues	NR takes proactive action to address performance issues, bringing performance back in line with targets if it falls below agreed thresholds
Monitoring – by franchise authority	Franchise Delivery	Franchised TOCs	TOCs deliver performance against the contractual terms of their franchise (cancellations, delays, short-formations) or franchise authorities can remove the franchise; the targets also influence the possibility of securing future franchises	TOCs deliver the agreed performance targets, resulting in the minimum agreed performance service for passengers or above
Market Influencers	Fare-box income	TOCs	High performance improves customer satisfaction, directly resulting in increased ticket sales and therefore fare-box income/revenue	TOCs deliver the best performance within their capabilities
Market Influencers	Market competition	Freight Operating Companies (FOCs)	FOCs are incentivised to provide high performance services, to compete against others on the network and road freight, to maximise revenue	FOCs deliver the best performance within their capabilities
Reputational	Reputation amongst public and media	TOCs	A good perception of performance will increase rail use, increasing fare-box revenue, whilst poor performance can attract significant public and social media	Performance by published metrics remains high

MECHANISM TYPE	NAME	ORGANISATION(S) INCENTIVISED	INTENDED OUTCOME	INTENDED PERFORMANCE IMPACT
			attention, potentially impacting on revenue	
Reputational	Reputation amongst other stakeholders	Network Rail and Operators	Stakeholder views and priorities are identified and used to e.g. develop performance targets and timetable changes. Stakeholders include national/regional and local level government	Stakeholder priorities are met, meaning the network is run to meet a wide range of expectations
Individual Motivators	Performance related pay	Network Rail and Operators	Good performance on the network provides a financial incentive at individual level	Even the smallest, individually-based decisions are made with performance in mind
Individual Motivators	Vision and Values/Code of Conduct	Network Rail and Operators	A standard of expected behaviour which may influence decisions through peer pressure and the maintenance of personal professional reputation, and earned respect	Even the smallest, individually-based decisions are guided with core company principles in mind



### 3. CONTRACTUAL

#### 3.1 Introduction

3.1.1 This section outlines the current rail industry contractual agreements which are intended to influence train service performance delivery. These are primarily:

- Track Access Contracts, agreed between Network Rail and operators;
- Franchise Agreements, agreed between franchised TOCs and franchise authority.

#### 3.2 Track Access Contracts

3.2.1 All access to the GB Rail network is agreed through a Track Access Contract (TAC) between an operator and Network Rail. The clauses of these contracts follow The Network Code<sup>7</sup> which ensures Network Rail and individual operators are held to the same standards and timescales in the following areas:

- Performance monitoring;
- Operational disruption.
- Creating timetables;
- Making changes; and
- Protecting the environment.

3.2.2 ORR decides on applications for track access in line with its statutory duties, including the promotion of improvements in and maintenance of high service performance<sup>8</sup>.

3.2.3 TACs include **two key financial incentives** related to performance of the rail network: Schedule 4 and Schedule 8. Performance issues are categorised depending on their nature and cause; each Schedule is designed for particular types of performance issues.

3.2.4 The general structure and requirements of both Schedules 8 and 4 within TACs do not change greatly between operator contracts, as each is based on a template, available via the ORR website.

3.2.5 The subsequent sections below therefore concentrate on each Schedule, in the knowledge that each will apply to the large majority of services in operation, including, in some form, to both passenger and freight operations on the network.

3.2.6 The contents of this section are based on the model Passenger<sup>9</sup>, Charter<sup>10</sup> and Freight<sup>11</sup> contracts, and the consultation responses from the re-drafting of Schedules 4 and 8 in

<sup>7</sup> Network Rail Network Code: <https://www.networkrail.co.uk/industry-and-commercial/information-for-operators/network-code/>

<sup>8</sup> ORR, The Regulation of Access: [https://orr.gov.uk/\\_data/assets/pdf\\_file/0007/17593/regulation-of-track-access.pdf](https://orr.gov.uk/_data/assets/pdf_file/0007/17593/regulation-of-track-access.pdf)

<sup>9</sup> Model passenger track access contract: [https://orr.gov.uk/\\_data/assets/pdf\\_file/0018/2934/model-passenger-contract.pdf](https://orr.gov.uk/_data/assets/pdf_file/0018/2934/model-passenger-contract.pdf)

<sup>10</sup> Model charter track access contract: [https://orr.gov.uk/\\_data/assets/pdf\\_file/0019/2935/model-charter-contract.pdf](https://orr.gov.uk/_data/assets/pdf_file/0019/2935/model-charter-contract.pdf)

<sup>11</sup> Model freight track access contract: [https://orr.gov.uk/\\_data/assets/word\\_doc/0010/40897/model-freight-track-access-contract.docx](https://orr.gov.uk/_data/assets/word_doc/0010/40897/model-freight-track-access-contract.docx)

2018<sup>12</sup> as part of the reviews of Schedules 8 and 4 carried out as part of ORR's 2018 periodic review (PR18)<sup>13,14,15,16</sup>.

## Schedule 8

### *Outline*

- 3.2.7 The payment element of Schedule 8 is intended to act as an incentive to both Network Rail and operators to limit unplanned disruption to services, therefore improving the level of performance on the railway.
- 3.2.8 The Schedule 8 performance regime is designed to compensate a TOC or FOC for unplanned disruption to services caused by Network Rail and/or another operator. The nature of the regime depends on the type of contract in use (e.g. franchised operations, open access, freight and charters).
- 3.2.9 Both Franchised (i.e. TOCs) and non-Franchised (i.e. Open Access Operators) Passenger Operators have similar Schedule 8 mechanisms in their Track Access Contracts, although the clauses regarding Sustained Poor Performance are not included as a contractual mechanism for Open Access Operators.

### *Nature of Incentivisation*

- 3.2.10 Schedule 8 provides a financial incentive to both Network Rail and operators to maintain an acceptable level of performance on the network. This financial incentive exists in the form of benchmarked levels of performance which are compared against the performance achieved.
- 3.2.11 The nature of payments under the Schedule 8 regime are as follows:
- If benchmarks are met in each case, no payments are made.
  - If one party falls short of its benchmark, a payment is made **to** the other party.
  - If one party performs better than the benchmark, a payment is made **by** the other party.

### *Calibration of Benchmarks*

- 3.2.12 The benchmarks used within Schedule 8 of Franchise Agreements are calibrated based on future performance, for every (28-day) Rail Period of the Rail Year. TOCs are able to recalibrate these benchmarks within this period, should the operator and Network Rail

<sup>12</sup> ORR Schedules 4, 7 and 8 consultation conclusions:

[https://orr.gov.uk/\\_data/assets/pdf\\_file/0005/28274/conclusions-to-january-2018-consultation-on-improvements-to-the-drafting-of-schedules-4-7-and-8.pdf](https://orr.gov.uk/_data/assets/pdf_file/0005/28274/conclusions-to-january-2018-consultation-on-improvements-to-the-drafting-of-schedules-4-7-and-8.pdf)

<sup>13</sup> Schedule 4 Review - [https://orr.gov.uk/\\_data/assets/pdf\\_file/0004/17617/track-access-guidance-possessions-regime.pdf](https://orr.gov.uk/_data/assets/pdf_file/0004/17617/track-access-guidance-possessions-regime.pdf)

<sup>14</sup> Schedule 8 Review - [https://orr.gov.uk/\\_data/assets/pdf\\_file/0005/17618/track-access-guidance-performance-regime.pdf](https://orr.gov.uk/_data/assets/pdf_file/0005/17618/track-access-guidance-performance-regime.pdf)

<sup>15</sup> Summary of PR18 review: [https://orr.gov.uk/\\_data/assets/pdf\\_file/0017/39311/pr18-final-determination-overview-of-charges-and-incentives-decisions.pdf](https://orr.gov.uk/_data/assets/pdf_file/0017/39311/pr18-final-determination-overview-of-charges-and-incentives-decisions.pdf)

<sup>16</sup> Consultation responses to PR18 review: [https://orr.gov.uk/\\_data/assets/pdf\\_file/0017/39302/pr18-draft-determination-consultation-summary-of-comments-and-orr-response.pdf](https://orr.gov.uk/_data/assets/pdf_file/0017/39302/pr18-draft-determination-consultation-summary-of-comments-and-orr-response.pdf)

agree and ORR grant approval<sup>17</sup>. Benchmarks are set at the service group level, rather than for the operator as a whole. Therefore, for a given operator, there may be several benchmarks for any given Rail Period.

- 3.2.13 Network Rail payment rates are also calculated at the service group level. These are calibrated based on the Marginal Revenue Effect, i.e. the modelled revenue impact that changes in performance have on an operator’s revenue. The modelling calculation takes into account the type of flow (e.g. within London/South East), and the journey purpose profile of passengers.
- 3.2.14 Operator payment rates relate to the delays caused by each operator to other operators on the network. The payment levels used are based on the principle that if all operators performed at the benchmarked level, no operator would have a net gain or loss in payments it receives or makes to Network Rail.
- 3.2.15 Benchmarks are set in a similar way for passenger, freight and chartered rail services. The units of performance differ however:
  - Franchised Passenger Operator agreements use Average Minutes Lateness (AML); and
  - Freight and Charter Operator agreements use benchmarks defined using a measure of minutes of delay per 100 miles operated.

*Star Model*

- 3.2.16 Operator’s Payments, referred to as “TOC-on-TOC” delay payments, are made by operators to Network Rail (rather than to other TOCs). Network Rail makes payments to those operators that have been affected by the TOC-on-TOC delay. As such, Network Rail sits at the centre of what is known as the ‘Star Model’. The Star Model is not a simple pass-through mechanism, but by the parameters of its design, Network Rail is intended to be kept financially neutral.
- 3.2.17 The benefit of this approach is that there is no requirement for contractual agreements between operators for the payment of TOC-on-TOC delays, reducing the complexity of the contractual framework considerably. As such, no operator makes payments directly to another operator under Schedule 8.
- 3.2.18 This approach necessitates an assumed link between the level of TOC-on-Self and TOC-on-TOC disruption. This is because TOC-on-TOC disruption is accounted for in Network Rail’s benchmarked performance for a given TOC, which assumes other TOCs meet their TOC-on-Self benchmarks.
- 3.2.19 The Star Model is limited in cases where there are significant changes to the network, e.g. a marked increase in services due to a timetable change, where imbalances in payments may arise. In such cases, Network Rail is exposed to the financial implications arising in Schedule 8 payments. Appeals may be made to ORR to recalibrate Schedule 8 parameters, if needed to restore the presumed underlying neutrality of the regime.
- 3.2.20 The Star Model is used for the compensation of TOC-on-TOC delays for both Franchised and Open Access Operators.

<sup>17</sup> Summary of PR18 review: [https://orr.gov.uk/data/assets/pdf\\_file/0019/39304/pr18-final-determination-overview-and-decisions.pdf](https://orr.gov.uk/data/assets/pdf_file/0019/39304/pr18-final-determination-overview-and-decisions.pdf)

### Summary

Schedule 8 outlines the payments to be made when operators are unable to use a specific route on their timetabled path due to unplanned disruption. It is intended to provide a financial incentive to quickly resolve issues affecting performance.

It financially incentivises NR to resolve unplanned disruption attributed to NR as quickly as possible, to minimise compensation payments made from NR to operators.

It financially incentivises operators to resolve unplanned disruption attributed to operators as quickly as possible, to minimise compensation payments ultimately made to other operators.

The performance implication is that impacts of delay to passenger and freight movements are minimised through the fastest resolution.

There are concerns by some that Schedule 8 influences decisions which result in better financial outcomes but poorer performance outcomes.

### Other Factors

3.2.21 **Sustained Poor Performance (SPP)** – For Franchised TOCs, Schedule 8 also outlines the SPP mechanism. This is an additional financial incentive for Network Rail to meet its performance benchmarks; if it continually misses benchmarks over a defined period, the revenue impact on the operator is deemed to increase, triggering an additional compensation payment to the Operator in line with the extra revenue and cost impacts<sup>18</sup>. This mechanism is not included in Open Access Track Access Contracts.

3.2.22 **Cancellation Sum** – Freight agreements include payment rates for cancellations to specific services that are attributed to Network Rail, as specified in the TAC for the FOC. In addition, if Network Rail does not provide sufficient notice of a Schedule 4 cancellation, a Late Notice Cancellation Sum is paid to the FOC, provided that an alternative slot for the service cannot be agreed. These sums are in addition to benchmark-related payments contained within Schedule 8.

### Schedule 4

3.2.23 The incentives provided by Schedule 4 are twofold:

- To encourage the safe, efficient and timely planning of engineering work on the railway by Network Rail.
- To ensure that operators are reimbursed for the impact of planned disruption to their service provision; and

3.2.24 Schedule 4 outlines the compensation payments to be made to operators by Network Rail, when operators cannot access the network because of Network Rail’s engineering

<sup>18</sup> Report on possible changes to SPP definition:  
[https://orr.gov.uk/\\_data/assets/pdf\\_file/0007/39454/final-decision-on-the-approach-to-recalibrating-the-spp-thresholds-in-the-franchised-passenger-schedule-8-recalibration-regime.pdf](https://orr.gov.uk/_data/assets/pdf_file/0007/39454/final-decision-on-the-approach-to-recalibrating-the-spp-thresholds-in-the-franchised-passenger-schedule-8-recalibration-regime.pdf)

work. Such events are termed as ‘possessions’ for Franchised Passenger Operators (TOCs) and ‘variations to services’ for Freight Operators (FOCs).

3.2.25 Events that are included as possessions in TOC contracts include:

- Restricted use of the network due to engineering work carried out by Network Rail;
- Sustained periods of planned disruptions; and
- Over-runs of engineering work.

3.2.26 For FOCs, the criteria for variations to service are more restrictive, and require a certain level of disruption which results in one or more of: cancellations, alternative train slots, diversions, and non-availability. These are set out below in paragraph 3.2.32.

#### *TOCs*

3.2.27 Compensation is paid to the operator regardless of the type of work carried out during the possession (e.g. maintenance, repairs or installation of new infrastructure). This incentivises the consideration of performance impacts for all type of possessions.

3.2.28 Payments are based on rates set out in Appendix 1 of Schedule 8 in the TAC, in which Network Rail can reduce the amount of money paid by giving longer advanced notice of such works taking place. This is designed to not only encourage collaboration between Network Rail and Franchised TOCs, but also to encourage both organisations to acknowledge the interests of passengers.

3.2.29 Franchised TOCs make track access charge supplement payments to Network Rail as part of their Franchise Agreements. These payments provide the financial source for Network Rail to pay out to operators through Schedule 4. Track access charge supplements are therefore calibrated according to the forecasted impact of possessions during the relevant period.

3.2.30 As Open Access (i.e. non-Franchised) Train Operators do not, by default, make track access charge supplement payments, they are not entitled to all Schedule 4 compensation by default, and are only compensated for long-term or sustained disruption. Open Access Operators may, however, opt to make track access charge supplement charges; in such cases, they are eligible for Schedule 4 compensation.

3.2.31 Both types of Passenger Operator are entitled to compensation in cases of Sustained Planned Disruption (SPD). In order for such a payment to be paid, the Operator must serve an SPD Notice and negotiate with Network Rail to determine the payment to be made to the operator to compensate them for the possession. The criteria for meeting this are as follows<sup>19</sup>:

- Revenue loss greater than 20% of defined service group revenue over three consecutive periods; or
- Revenue loss greater than 15% of defined service group revenue over seven consecutive periods.

#### *Freight Operators*

<sup>19</sup> Review of Sustained Planned Disruption values:  
[https://orr.gov.uk/data/assets/pdf\\_file/0014/11732/cp5-sch4-sustained-planned-disruption-2014-04-01.pdf](https://orr.gov.uk/data/assets/pdf_file/0014/11732/cp5-sch4-sustained-planned-disruption-2014-04-01.pdf)

3.2.32 Payments made to FOCs (termed ‘Service Variation Sums’) require more criteria to be met than for passenger operators. Such criteria include the following<sup>20</sup>:

- Diverted services have a journey length > 5 miles more than the original service;
- Requirement to use an additional locomotive vehicle *en route*; or,
- Departure/Arrival time of the beginning/end of route change by more than 30 minutes.

3.2.33 In addition to the Service Variation Sum, FOCs can claim two levels of additional payment if multiple criteria are met. If there are significant changes to journey distance and/or timing, a Normal Planned Disruption Sum may be claimed. If services are cancelled and/or additional locomotives are required to accommodate the planned work, an Enhanced Disruption Sum may be claimed.

### Summary

Schedule 4 is intended to compensate operators for revenue loss caused by planned disruption to the network.

It financially incentivises Network Rail to plan engineering works as early as in advance as possible and to complete them within their planned timescales, to minimise compensation payments it needs to make to operators.

Schedule 4 is calibrated to incentivise the rail industry to work together to ensure that passengers can make firm travel plans at least 12 week in advance, and to minimise the impact of any planned work which affects this outcome for either freight or passenger services.

### Other Infrastructure Managers

3.2.34 As per the Railways Regulations (2016)<sup>21</sup>, all infrastructure managers must have agreements and regimes in place to maintain benchmarked performance levels. As well as Network Rail, this also covers infrastructure managers such as HS1.<sup>22</sup>

3.2.35 As per the HS1 Network Statement, HS1 Track Access Agreements contain a Performance Regime which sets benchmarks for performance and payment rates for occasions where benchmarks are missed.<sup>23</sup> As a number of services using HS1 infrastructure also run on infrastructure managed by other organisations (e.g. Network Rail), this Performance Regime only explicitly applies to performance on HS1 track.

3.2.36 In addition to penalties for missing benchmarks, the Infrastructure Manager is entitled to bonus payments from the Operator in cases where a deemed ‘Good Performance Threshold’ is surpassed.

<sup>20</sup> Colas Rail Track Access Contract – [https://orr.gov.uk/\\_data/assets/pdf\\_file/0003/22269/colas-rail-limited-tac-consolidated.pdf](https://orr.gov.uk/_data/assets/pdf_file/0003/22269/colas-rail-limited-tac-consolidated.pdf)

<sup>21</sup> The Railways Regulations (2016): <http://www.legislation.gov.uk/ukxi/2016/645/made>

<sup>22</sup> HS1 Network Statement: <https://highspeed1.co.uk/media/gh3nxoyw/hs1-network-statement-2020-final.pdf>

<sup>23</sup> Southeastern Track Access Agreement: [https://orr.gov.uk/\\_data/assets/pdf\\_file/0008/17837/hs1-lser-3rd-supplemental-agreement.pdf](https://orr.gov.uk/_data/assets/pdf_file/0008/17837/hs1-lser-3rd-supplemental-agreement.pdf)

3.2.37 As part of the Performance Regime on HS1, poor performance over three consecutive periods can result in the party at fault being obliged to submit a performance improvement plan.

3.2.38 As with Network Rail TACs, the payment rates set out in the Performance Regime on HS1 are designed to represent the marginal revenue effect of delays on services affected.

**Summary**

Other Infrastructure Managers, such as HS1, also have Track Access Agreements which contain performance benchmarks and payment rates for the IM and Operators for when benchmarks are missed or surpassed.

As well as this financial incentive, IMs may be required to submit performance improvement plans for poor performance of their infrastructure. This creates a reputational incentive for the IMs to improve performance against stated strategies.

**The Network Code – Working Timetable**

3.2.39 Network Rail is required to work with passenger and freight operators to develop and publish the Working Timetable. Operators submit their requirements and Network Rail, guided by The Network Code, make decisions that balance out the capacity and safety requirements of the network.

3.2.40 The creation of each timetable is designed to be an iterative process which has the creation of a robust schedule as a key objective. A key element of this is ‘de-conflicting’, in which Network Rail identifies potential threats to train service performance from the introduction of new and changed train paths, and works with the operators, within the parameters of their contractual rights to run services, to optimise performance whilst delivering the committed level of train services.

**Summary**

Network Rail and operators work together to create a timetable that best meets operator demands (e.g. from franchise commitments and their contractual rights to introduce and change train services) whilst meeting safety and resilience standards.

The intended performance outcome is that the rail network is used to the best of its capacity to meet both passenger and freight needs

**3.3 Franchise Agreements**

3.3.1 The rights to run passenger services on the GB Rail network are granted by one of two industry processes: the awarding of a Franchise Agreement (FA), or the granting of a licence for Open Access operation. Most services are delivered under the franchise model, whereby the requirements expected of the Operator<sup>24</sup> are specified in a Franchise contract awarded by franchise authorities following a bidding competition.

<sup>24</sup> House of Commons ‘Rail passenger franchises’ briefing paper:  
<http://researchbriefings.files.parliament.uk/documents/SN01343/SN01343.pdf>

Review of Rail Performance Incentives	
Desk Research Exercise	ORR/CT/19-57 109559
Final Report	19/10/2020

- 3.3.2 On award, the Operator and franchise authority sign an FA which sets out the terms of the contract. In addition, it also includes incentivisation mechanisms which encourage the successful delivery of the franchise. If the performance standards set in the FA are not met, the DfT may terminate the franchise before its contracted end-date.
- 3.3.3 Each FA is based on the DfT's Template Franchise Agreement and, as such, most FAs currently in operation conform to the same basic pattern. In all such Agreements, Schedule 7.1 addresses the delivery of performance, with benchmarks set for the performance levels of the franchise.
- 3.3.4 It is worth noting that Open Access Operators do not have an FA. In these cases, the main incentivisation to deliver good levels of performance derives from Schedules 4 and 8 of their TACs (as described in sections 4.2.8 and 3.2.24 above) and the revenue and reputational incentives from providing a good service to their customers.

### **Schedule 7.1**

- 3.3.5 Schedule 7.1 of all Franchise Agreements sets out the benchmarks agreed between the DfT and the TOC for the franchise term. There are three sets of benchmarks:
- Cancellations;
  - TOC Minute Delays; and
  - Short Formations.
- 3.3.6 Cancellations and delay minutes can be attributed to either Network Rail or train operators (and in some limited cases attributed jointly). As these may be disputed, it is possible that the attribution of a given delay remains unattributed when the calculation of actual levels of performance is carried out. In these cases, the proportion of these disputed delays attributable to NR and the TOC are based on the proportions calculated for the attributed delays for each operator.
- 3.3.7 The key difference between Schedule 7.1 in FAs and Schedules 8 and 4 in TACs is that whilst Schedule 7.1 does contain some provision for the attribution of delays and cancellations, these are not taken into account in the 'rewards and penalties' payments, with benchmarks set for performance regardless of the attribution of delays. This is intentional, as a mechanism of encouraging communication between Network Rail and operators. However, if Network Rail is primarily at fault for poor performance, DfT has discretion on the enforcement of the 'consequences of poor performance' outcomes contained within Schedule 7.1.
- 3.3.8 SYSTRA understands that the scale of payments under Schedule 7.1 is generally smaller than in the TAC schedules. Therefore, it will be important, in the purposes of this exercise, to determine how TOCs view this mechanism's efficacy for improving performance on the railway in comparison to Schedules 8 and 4 of their TACs.

### *Cancellations*

- 3.3.9 In each 28-day Rail Period, the percentage of a TOC's services which were cancelled is calculated. This covers cancellations caused by both Network Rail and the TOC themselves.
- 3.3.10 The only services which may be excluded from this calculation are services which were cancelled as part of a 'Service Recovery Plan', including emergency timetables.



3.3.11 The number of cancellations is calculated as shown below:

$$Full\ Cancellations + \frac{1}{2} * (Part\ Cancellations)$$

*TOC Delay Minutes*

3.3.12 Delays are accounted for in a similar way to cancellations, with delay minutes that are attributable to the TOC, rather than Network Rail, included.

3.3.13 The sum of delay minutes attributed to the franchisee in the previous year is calculated, and then divided by the train mileage across the same period. This derives a rate of delay per mile operated.

*Short Formations*

3.3.14 For this calculation, the number of services which ran with less capacity than timetabled is calculated. Similar to cancellations, services affected by the implementation of a Service Recovery Plan are not included.

**Summary**

Schedule 7.1 sets performance benchmarks with regards to Cancellations, TOC Minute Delays and Short Formations, with a rewards and penalties regime based on actual performance, and with benchmark levels set for Default and Breach in respect of each metric.

If the Breach benchmarks are not met, then an operator is in contravention of their Franchise Agreement with DfT, and may be liable for a financial penalty or ordered to develop a performance improvement plan.

For significant, or persistent, failures to reach the benchmark, DfT can, in exceptional cases terminate the franchise.

TOCs are therefore incentive to deliver performance outcomes at or above the agreed benchmarks, and delays to passengers are minimised.

## 4. MONITORING

### 4.1 Introduction

4.1.1 This section outlines the key monitoring mechanisms in place to incentivise performance across the rail sector. These include:

- ORR enforcement policy and monitoring and reporting to assess Network Rail’s performance standards against the terms within their licence;
- DfT’s monitoring of franchised TOC performance against their contractual terms; and
- Other performance monitoring.

### 4.2 ORR Monitoring, Enforcement and Reporting

4.2.1 Network Rail is authorised to operate the GB Rail network through the Network Licence<sup>25</sup>. This Licence outlines Network Rail’s core duties, including the facilitation of railway service performance, with acknowledgement of the interests of Operators, stakeholders and passengers.

4.2.2 ORR monitors Network Rail’s operation against the requirements in their Licence, and the targets set for the current Control Period (CP), through ongoing<sup>26</sup> and five-yearly reviews<sup>27</sup>. A number of metrics are monitored, including in relation to performance, asset management and efficiency in spending. Some of these metrics are measured by Network Rail through Scorecards which show the annual target, the most recent performance figures and a forecast of where the company expects to be at the end of the year<sup>28</sup>. Measures within Network Rail’s Scorecards are determined at regional levels by stakeholder and customer priorities, train operators’ priorities and the Network Rail business plan and are signed off and monitored by the ORR.

4.2.3 As well as being a regulatory mechanism, this monitoring is thought to create a reputational incentive for high performance by Network Rail, as the publicly available reports encourage improvements in the monitored metrics. Specific elements of the ORR’s monitoring which may have this effect are:

- Comparisons of performance between each of Network Rail’s fourteen geographic routes, which may facilitate performance improvements and best practice sharing<sup>29</sup>. These metrics are also used to determine the impact of unplanned disruption events for the financial incentives within Schedule 8 (described below); and

<sup>25</sup> Network Rail Infrastructure Limited, Network Licence:

[https://orr.gov.uk/\\_data/assets/pdf\\_file/0012/3063/netwrk\\_licence.pdf](https://orr.gov.uk/_data/assets/pdf_file/0012/3063/netwrk_licence.pdf)

<sup>26</sup> ORR’s Network Rail Monitor: <https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/monitoring-performance/network-rail-monitor>

<sup>27</sup> ORR’s Network Rail Regulation, price control reviews: <https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/price-controls>

<sup>28</sup> Network Rail Scorecard Guidance: <https://cdn.networkrail.co.uk/wp-content/uploads/2019/11/Scorecard-Guidance-2019-20.pdf>

<sup>29</sup> ORR’s Network Rail Monitor, Year 5 of CP5 Report: [https://orr.gov.uk/\\_data/assets/pdf\\_file/0008/41300/network-rail-monitor-route-comparison-july-2019.pdf](https://orr.gov.uk/_data/assets/pdf_file/0008/41300/network-rail-monitor-route-comparison-july-2019.pdf)

- Reports on Network Rail’s efficiency and financial performance may reassure rail users and funders that Network Rail are delivering, and are prepared to deliver, a network capable of high performance<sup>30</sup>.

4.2.4 Furthermore, should ORR believe that Network Rail is in breach of its Licence, investigation and enforcement action is taken. Early investigation seeks to achieve resolution of the breach, to protect the interests of rail users. ORR can consider the following investigatory actions:

- In-depth information gathering;
- Appointing an Independent Reporter;
- Holding ORR hearings; and
- Requiring Network Rail to instigate formal improvement plans.

4.2.5 Where such issues are not resolved, ORR can take enforcement action against Network Rail.

4.2.6 An example of this process can be found in 2018, where ORR made a Provisional Order to Network Rail, in conjunction with Franchised Passenger Operators, to address issues related to passenger train performance and service recovery after disruption<sup>31</sup>. Network Rail responded to this order, outlining their plan for performance improvements across the network<sup>32</sup>.

4.2.7 Following the response from Network Rail, ORR developed their Holding Network Rail to Account policy for Control Period 6, covering April 2019 – March 2024 (CP6)<sup>33</sup>. This policy includes:

- A pledge to continue the monitoring of Network Rail’s operation;
- A requirement for Network Rail to increase its engagement with key stakeholders, including all Operators, in order to deliver higher levels of service performance in line with passenger expectations; and
- An outline of the enforcement routes available to ORR where a Licence breach has been identified. A summary of these routes, and the associated incentive mechanisms, can be found in the figure below.

<sup>30</sup> ORR’s Monitoring of Network Rail’s efficiency: <https://orr.gov.uk/rail/economic-regulation/regulation-of-network-rail/monitoring-performance/efficiency-and-finance-assessment>

<sup>31</sup> ORR’s Provisional Order to Network Rail dated 28<sup>th</sup> November 2018: [https://orr.gov.uk/\\_data/assets/pdf\\_file/0008/39842/provisional-order-published-2018-11-29.pdf](https://orr.gov.uk/_data/assets/pdf_file/0008/39842/provisional-order-published-2018-11-29.pdf)

<sup>32</sup> Network Rails Response to ORR’s Provisional Order dated 28<sup>th</sup> November 2018: <https://cdn.networkrail.co.uk/wp-content/uploads/2019/05/Network-Rail-Response-to-Provisional-Order-15-February-2019.pdf>

<sup>33</sup> ORR’s holding Network Rail to Account Policy, 2019: [https://orr.gov.uk/\\_data/assets/pdf\\_file/0003/40782/holding-network-rail-to-account-policy.pdf](https://orr.gov.uk/_data/assets/pdf_file/0003/40782/holding-network-rail-to-account-policy.pdf)

Figure 1. Regulatory enforcement actions and associated incentive mechanisms

ENFORCEMENT ORDERS	FINANCIAL PENALTY	ROUTE FINANCIAL
<ul style="list-style-type: none"> <li>• A statutory order directing Network Rail to take action to comply with their licence</li> <li>• The order may require Network Rail to establish an improvement plan or board or pay a financial penalty if the order is not complied with</li> <li>• This action can only be used for current or likely future breaches in licence</li> </ul>	<ul style="list-style-type: none"> <li>• A financial penalty can be imposed under the 1993 Railways Act, payable to HM Treasury</li> <li>• ORR may make this penalty payable from Network Rail's management bonuses</li> <li>• This action can only be used for breaches in licence (past or current)</li> </ul>	<ul style="list-style-type: none"> <li>• A non-statutory financial penalty which reduces Network Rail's cost management measure</li> <li>• This measure is used by Network Rail to determine, in part, management bonuses which may then be adversely affected</li> <li>• This action can only be used for past or current breaches in licence</li> </ul>

4.2.8 ORR has recently published an update on Network Rail's impact on passenger train service, highlighting concerns for the impact of its operations on train performance in the North West and Central region of England. ORR has put Network Rail on warning to make sure its plans for performance improvements deliver for passengers in these areas<sup>34</sup>.

### Summary

ORR monitors Network Rail's operation against requirements in their License, and sets targets for each Control Period which include those in relation to performance. Some of these are measured by Network Rail through Scorecards. All monitoring and reporting by ORR is publicly available, creating a reputational incentive for Network Rail to provide a high-performance network.

Furthermore, where ORR believes Network Rail is in breach of its License, enforcement action can be taken, ranging from information gathering, formal hearings, the development of independent investigative reports and improvement plans, and financial penalties, which may be payable from management bonuses.

These processes are designed to create both personal and corporate financial and reputational incentives to maintain and improve network performance in line with the Licence conditions.

## 4.3 DfT Monitoring of Franchised TOCs

### Benchmarks and Incentivisation

4.3.1 All three forms of performance measurement – cancellations, delay minutes and short formations – have similar forms of incentivisation mechanism in place. In general, the Franchise Agreement includes non-financial and financial elements. Whilst some FAs do

<sup>34</sup> ORR's update on Network Rail's poor performance: <https://orr.gov.uk/news-and-blogs/press-releases/2020/office-of-rail-and-road-investigating-network-rail-for-poor-performance-in-north-west-and-central-england>

not include the financial element (e.g. the state-owned TOC LNER<sup>35</sup>), the majority include both financial and non-financial regimes, for instance those of Greater Anglia<sup>36</sup>, South Western<sup>37</sup>, Northern<sup>38</sup> and Transpennine Express<sup>39</sup>.

- 4.3.2 The non-financial regime works at a Rail Period level. For each period, Default and Breach Performance Levels are set out in Schedule 7.1. Not achieving the Breach Performance Levels in a period is deemed a contravention of the Franchise Agreement, meaning that Government can require the TOC to provide a Remedial Plan to outline how performance will be improved. Subsequent non-delivery of such a Plan can result in early termination of the Franchise Agreement without compensation.
- 4.3.3 The financial element of the regime requires the calculation of cancellations, minutes of delay and short formations on a rolling annual level. These are then compared against an annual benchmark target. If the TOC misses the target benchmark, the difference between actual and target is used to calculate a payment to be made by the operator to Government.
- 4.3.4 A ‘Floor’ benchmark is also specified for the financial regime; if the actual level achieved is lower than this, the payment is capped at the amount calculated by taking the difference between floor and target benchmarks, rather than actual and target benchmarks.

**Prospect of Running Future Franchise(s)**

- 4.3.5 As well as the contractual incentives included in Franchise Agreements, there are additional incentives associated with passenger franchises which encourage the incumbent Franchised Passenger Operator to deliver good performance. These are primarily commercial and reputational in nature.
- 4.3.6 Most franchises are awarded through a competitive bidding process. Therefore, when an Franchised Passenger Operator’s bid is being considered, Government will take into account its performance on existing franchises which it may run. Through this, TOCs are incentivised to deliver high levels of performance on franchises they run both to improve the likelihood that they will retain the contract in the next bidding process, and also on new contracts for other franchises.

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<sup>35</sup> London North Eastern Railway Franchise Agreement (Public Register Copy):  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/855890/london-north-eastern-railway-limited-east-coast-franchise.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/855890/london-north-eastern-railway-limited-east-coast-franchise.pdf)

<sup>36</sup> Greater Anglia Franchise Agreement (Public Register Copy):  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/838923/east\\_anglia\\_2016\\_franchise\\_agreement.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/838923/east_anglia_2016_franchise_agreement.pdf)

<sup>37</sup> South Western Railway Franchise Agreement (Public Register Copy):  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/833157/south\\_western\\_railways\\_2017\\_rail\\_franchise\\_agreement.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/833157/south_western_railways_2017_rail_franchise_agreement.pdf)

<sup>38</sup> Northern Franchise Agreement (Public Register Copy):  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/819882/northern-franchise-agreement.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/819882/northern-franchise-agreement.pdf)

<sup>39</sup> Transpennine Express Franchise Agreement (Public Register Copy):  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/800497/tpe-franchise-agreement.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/800497/tpe-franchise-agreement.pdf)

### Summary

DfT’s monitoring of the terms of Franchise Agreements under Section 7.1 incentivises TOCs to deliver performance outcomes at or above the agreed benchmarks. Not doing so will result in financial penalties and reputational damage which may affect bids for future franchises.

In the most severe cases, the Franchise Agreement can be terminated early.

DfT’s monitoring of the TOC’s performance also plays a role incentivising high performance as it impacts on the likelihood of being awarded any renewal of subsequent franchises.

## 4.4 Other Monitoring

### Performance Improvement Plans

- 4.4.1 The creation of a performance improvement plan by Network Rail, a train operator, or both working together, can be a result of enforcement action (as described, for instance, in section 4.2.7 above), or as a result of the industry working together in response to fears of reputational damage or revenue loss. This section reviews such plans, highlighting common themes emerging from them.
- 4.4.2 The highest level of performance improvement plan identified takes the form of a network-wide review looking at the suitability of performance measures used in the passenger and freight sectors, such as ORR’s review of scorecards as part of the 2018 periodic review final determination<sup>40</sup>. Whilst these reviews do not contain committed actions, they provide useful suggestions for the improvement of measures. There is, for instance, evidence of cross-industry support for the development of passenger-specific metrics that provide an incentive for on-time services at all stations, a highly relevant issue for passengers<sup>41,42</sup>.
- 4.4.3 Whilst these strategic reviews and plans contain actions and recommendations for the improvement of rail performance, the level of incentivisation to deliver on these actions is lower than that of the regimes and mechanisms set out in contracts covered in other sections of this review.

<sup>40</sup> ORR 2018 periodic review final determination, supplementary document related to Scorecards: [https://orr.gov.uk/\\_data/assets/pdf\\_file/0019/39313/pr18-final-determination-scorecards-and-requirements.pdf](https://orr.gov.uk/_data/assets/pdf_file/0019/39313/pr18-final-determination-scorecards-and-requirements.pdf)

<sup>41</sup> Network Rail and Office of Rail and Road, Independent Reporter – Lot 3: Mandate L3 AR 004: Review of New Performance Metrics: [https://orr.gov.uk/\\_data/assets/pdf\\_file/0005/25376/review-of-new-performance-metrics-2017-07-18.pdf](https://orr.gov.uk/_data/assets/pdf_file/0005/25376/review-of-new-performance-metrics-2017-07-18.pdf)

<sup>42</sup> Williams Rail Review, The user experience of the railway in Great Britain: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/788410/user-experience-railway-in-gb-evidence-paper.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/788410/user-experience-railway-in-gb-evidence-paper.pdf)

## Performance measures

- 4.4.4 Two reviews of general performance measures have been analysed to determine the level of confidence in performance measures currently used, or planned for use, on the rail network. A brief summary of the findings from these reviews is outlined below.
- 4.4.5 A list of new performance metrics for passenger services has been independently reviewed for ORR including the Right Time metric to be used to measure performance in CP6. These new measures have been compared against business requirements<sup>43</sup>. The report found that the Right Time measure, if implemented at all stations, would better aid efforts to identify inherent issues in performance, e.g. ‘inaccurate sectional running times or inappropriate aspects of the Timetable Planning Rules.’ These measures are also expected to focus more on the impacts of delays on passengers, thus improving business cases developed to implement improvements in performance.
- 4.4.6 The Freight Delivery Metric (FDM) measures the percentage of freight trains that arrive at their destination within 15 minutes of the scheduled time. Network Rail and operators measure and publish this information, which is monitored by ORR, creating a regulatory incentive.
- 4.4.7 In Scotland, Ministers require a minimum FDM of 93% at the start of CP6, with staged improvements achieving a minimum of 94.5% at the end of CP6<sup>44</sup>. This regulatory target seeks to incentivise improved performance by FOCs in Scotland only.
- 4.4.8 FDM was independently reviewed in CP5. In this review, the FDM was graded ‘B’ for reliability (on a scale where ‘A’ represents the highest level of reliability)<sup>45</sup>. The reviewers noted that to improve reliability, formal procedures and internal reviews should be designed and implemented to ensure that the measure remained relevant to the industry and stakeholders. This would include reviewing data for ‘material variances’ in FDM which would necessitate a review of the scheme, and the data included and excluded from calculation of the measure.
- 4.4.9 It should be noted, however, that use of Right Time measures significantly increases the number of reported delays as a percentage of trains run. This type of reporting, if used in customer-facing context, therefore has the potential to undermine user confidence in rail services, delivering the perverse outcome of lowering demand for rail as a result of initiatives to improve train performance.

<sup>43</sup> ORR Review of new performance metrics:

[https://orr.gov.uk/\\_data/assets/pdf\\_file/0005/25376/review-of-new-performance-metrics-2017-07-18.pdf](https://orr.gov.uk/_data/assets/pdf_file/0005/25376/review-of-new-performance-metrics-2017-07-18.pdf).

<sup>44</sup> Scottish Ministers’ High Level Output Specification for CP6:

<https://www.transport.gov.scot/media/39496/high-level-output-specification-hlos-for-control-period-6-final.pdf>

<sup>45</sup> ORR Review of freight performance metric:

[https://orr.gov.uk/\\_data/assets/pdf\\_file/0014/23117/review-of-freight-delivery-metric-2016-10-24.pdf](https://orr.gov.uk/_data/assets/pdf_file/0014/23117/review-of-freight-delivery-metric-2016-10-24.pdf)

## Summary

National reviews of the rail industry’s structure and performance have been commissioned by the government and rail industry on an at least annual basis for the past 10-15 years – the latest of these is the Williams Review. Many of these focus on the issue of improving train service performance, and have resulted in the setting-up of industry initiatives such as those described above.

As the outcomes are generally non-contractual, however, it is not clear if there has been a positive impact on service performance as experienced by passengers from these initiatives

### Operator reviews and reports – Common Themes

- 4.4.10 A number of individual reports and reviews have been carried out in recent years in response to events on the network that have resulted in poor train service performance, particularly for passenger services. Key lessons for performance improvement have been drawn out from these reports below. Conclusions and measures from performance improvement plans from TOCs and ‘Alliance Boards’ of TOCs working together with Network Rail have also been included.
- 4.4.11 A number of common themes for improvement appeared throughout each of the reviews analysed. These are outlined in the following paragraphs in order of frequency across the reviews.
- 4.4.12 Primary among these was a better understanding of performance planning, reporting and project management. This was highlighted in :
  - Donovan Review for ScotRail<sup>46</sup>;
  - Atkins review for South Western Railway<sup>47</sup>; and
  - Gibb report on Southern’s performance<sup>48</sup>.
- 4.4.13 Communication between Franchised Passenger Operators and Network Rail is also raised continually as a cause of poor performance management. The creation of the ScotRail Alliance (a formal organisation incorporating members from ScotRail and Network Rail) was designed to tackle this key issue; this was praised in the Donovan Report for nurturing a ‘can-do’ attitude amongst staff in the Alliance, and allowing ScotRail to include infrastructure management in its own performance improvement plan<sup>49</sup>.

<sup>46</sup> Nichols Report: [https://orr.gov.uk/data/assets/pdf\\_file/0012/40035/jn5419-nichols-scotland-performance-report.pdf](https://orr.gov.uk/data/assets/pdf_file/0012/40035/jn5419-nichols-scotland-performance-report.pdf)

<sup>47</sup> South Western Railway Performance Review: <https://www.southwesternrailway.com/~media/files/other/about-us/performance-review/swr-performance-review-report.pdf?la=en>

<sup>48</sup> Gibb Report: <https://www.gov.uk/government/publications/southern-rail-network-gibb-report>

<sup>49</sup> ScotRail Performance Improvement Plan: [https://www.scotrail.co.uk/sites/default/files/assets/download\\_ct/performanceimprovementplanober2016.pdf](https://www.scotrail.co.uk/sites/default/files/assets/download_ct/performanceimprovementplanober2016.pdf)



- 4.4.14 The reports also drew similar conclusions about Network Rail’s management of assets, recommending better application of processes which allow Network Rail to predict and prevent the deterioration of track, thus reducing the level of unplanned disruption<sup>50</sup>.
- 4.4.15 TOC performance plans covered a number of common themes in actions that would be undertaken to improve performance scores in the subsequent periods. These include:
- Improving staff awareness of how their roles contribute to performance<sup>51, 52</sup>;
  - Surveying rolling stock and identifying stock types that regularly contributed to poor performance<sup>53</sup>; and
  - Working with Network Rail to make passengers aware of upcoming work, both how it will improve performance, and to reduce the impact of the works when being carried out<sup>43, 44</sup>.

### Summary

A large number of performance improvement plans have been created by individual TOCs and regional groups of TOCs, usually in collaboration with Network Rail. These have been in response to both reputational and financial pressures, and as a result of threatened or actual enforcement action.

Whilst a number of positive outcomes from these plans have been identified at a local level, the overall trend in performance in the industry has been downwards during the period of the literature review, suggesting that this type of local action cannot, on its own, provide sufficient incentive to drive an industry-wide improvement in service performance.

<sup>50</sup> ORR Report: Network Rail’s performance delivery to Southeastern:

[https://orr.gov.uk/\\_data/assets/pdf\\_file/0011/25202/network-rail-performance-delivery-to-southeastern-july-2017.pdf](https://orr.gov.uk/_data/assets/pdf_file/0011/25202/network-rail-performance-delivery-to-southeastern-july-2017.pdf)

<sup>51</sup> Thameslink Joint Performance Improvement Update (February 2018):

<https://www.thameslinkrailway.com/-/media/goahead/gtr-all-shared-pdfs-and-documents/joint-performance-improvement-plan-updates/joint-performance-improvement-update---5--february-2018.pdf?la=en>

<sup>52</sup> Thameslink Joint Performance Improvement Update (January 2019):

<https://www.thameslinkrailway.com/-/media/goahead/gtr-all-shared-pdfs-and-documents/joint-performance-improvement-plan-updates/joint-performance-improvement-update---p11---january-2019.pdf?la=en>

<sup>53</sup> ScotRail Performance Improvement Plan:

[https://www.scotrail.co.uk/sites/default/files/assets/download\\_ct/performanceimprovementplanober2016.pdf](https://www.scotrail.co.uk/sites/default/files/assets/download_ct/performanceimprovementplanober2016.pdf)

## 5. MARKET-LED

### 5.1 Introduction

This section outlines the market influencers in place which could act to incentivise performance across the rail sector. These include:

- Fare-box income; and
- Freight market competition.

### 5.2 Fare-box income

5.2.1 Fare-box income is the revenue from passenger fares. The Passenger Demand Forecasting Handbook (PDFH) quantifies the relationship between train service performance and changes to the demand for rail travel, and therefore passenger revenue.

5.2.2 The research underlying the PDFH metrics shows that strongest link between service performance and passenger demand is, as might be expected, for regular travellers such as season-ticket holders. This has significant implications for industry revenue, as tickets for peak-time travel are significantly higher-priced than for off-peak journeys; this means that reductions in demand due to poor service performance has a disproportionate impact on operators' revenue.

#### Summary

Consistently poor train service performance is proven to reduce demand for rail travel, especially for peak-time services, potentially resulting in significant reductions in revenue over time.

TOCs are therefore incentivised to deliver the best performance within their capabilities to maximise their revenue.

### 5.3 Freight Market Competition

5.3.1 Freight market customers for both road and rail services are increasingly operating a 'just-in-time' economic model, with stock-holding at point of use kept to minimum to reduce costs of purchase and storage. Rail freight operators are therefore incentivised to keep performance of freight services high, in order to provide customers with goods on time, and to avoid losing business to road-based competition.

5.3.2 The strong competition from road freight for most types of traffic across all rail freight providers provides significant incentives for improvements in performance and efficiency, and has seen freight operators making large investments in their services across many control periods<sup>54</sup>.

<sup>54</sup> RDG: Rail Freight – Delivering for Britain:

[https://www.raildeliverygroup.com/files/Publications/2019-05\\_rail\\_freight\\_delivering\\_for\\_britain.pdf](https://www.raildeliverygroup.com/files/Publications/2019-05_rail_freight_delivering_for_britain.pdf)

## Summary

FOCs are incentivised to provide high performance services, to compete against others on the network and road freight, to maximise revenue.

FOCs are therefore incentivised to deliver the best performance within their capabilities to maximise their revenue.

## 6. REPUTATIONAL INCENTIVES

### 6.1 Introduction

6.1.1 This section outlines the reputational mechanisms in place to incentivise performance across the rail sector. These include perceptions of performance by the public and media, and by other stakeholders.

### 6.2 Perceptions of performance by the public and media

6.2.1 Industry focus on enhancing service performance in line with passenger perceptions and expectations is not surprising, considering the relationship between transport mode perceptions, and the link between passenger’s choice of transport mode use and fare-box revenues<sup>55</sup>. The incentive therefore exists (for operators who carry revenue risk) to provide a good performance in order to raise as much ticket revenue as possible.

6.2.2 Rail industry bodies recognise the benefits of engaging with the public, specifically current users of the railway. There are a number of existing and ongoing studies assessing railway users’ expectations and perceptions, most of which assess general, or operator/geographic region specific, perceptions of service performance.

6.2.3 The findings from some of these surveys can be found summarised in the table below.

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<sup>55</sup> European Commission – Study on the prices and quality of rail passenger services:  
<https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2016-04-price-quality-rail-pax-services-final-report.pdf>

**Table 2. Findings from surveys assessing railway users' expectations and perception of service performance**

SURVEY	FINDINGS
National Rail Passenger Survey (NRPS) <sup>56</sup>	<p>NRPS has been undertaken quarterly since the 1990's to provide tracking of customers views of rail industry performance over time.</p> <p>Conducted by Transport Focus, the NRPS assesses rail passengers' overall satisfaction with rail travel and satisfaction toward 30 specific aspects of rail travel, including punctuality and reliability. The results are reported at national level and also by TOC.</p> <p>In the first half of 2019, 77% of passengers were satisfied with the punctuality and reliability of rail travel, with TOC-specific satisfaction with punctuality and reliability ranging from 65% to 96%.</p> <p>Passengers are also asked how satisfied they are with TOCs' management of delays. TOC-specific satisfaction on this question ranged from 22% to 69% satisfied.</p>
Transport Focus' 'Rail passengers' priorities for improvement' <sup>57</sup>	<p>In 2017, Transport Focus undertook a survey with rail passengers to understand the aspects of the railway that they would most like improved. Service punctuality was the third most important aspect.</p>

- 6.2.4 The results of these surveys may be used by rail industry bodies to assess reputation and incentivise decisions related to high performance rail services. For example, low levels of satisfaction with punctuality and reliability for a specific TOC, identified through the NRPS, may suggest a low reputation assessment of the TOC by passengers. In order to manage this reputation, the TOCs are incentivised to make decisions which seek to improve the reliability and punctuality of their services. Transport Focus recognises the relationship between passenger priorities and incentive mechanisms, most-recently in its January 2019 response to the Williams Rail Review<sup>58</sup>.
- 6.2.5 ORR's 2018 Periodic Review notes that passenger surveys and engagement could do more to understand passengers' detailed performance expectations and perceptions, including suggestions for delivery beyond what is already agreed in Franchise Agreements.
- 6.2.6 One influence on passenger perceptions of rail service performance may be coverage of rail service performance in the media, especially when performance is poor<sup>59,60</sup>. Negative

<sup>56</sup> National Rail Passenger Survey – spring 2019: <https://www.transportfocus.org.uk/research-publications/publications/national-rail-passenger-survey-nrps-spring-2019-main-report/>

<sup>57</sup> Transport Focus - Rail passengers' priorities for improvement: <https://d3cez36w5wymxj.cloudfront.net/wp-content/uploads/2017/11/23150043/Rail-passenger-priorities-for-improvement-Nov-2017.pdf>

<sup>58</sup> Transport Focus – Williams Rail Review: What do passengers want?: <http://d3cez36w5wymxj.cloudfront.net/wp-content/uploads/2019/02/01160753/Williams-Rail-Review-what-do-passengers-want.pdf>

<sup>59</sup> Yorkshire Post – Northern Rail article: <https://www.yorkshirepost.co.uk/news/politics/prime-minister-says-he-shares-outrage-over-northern-rail-performance-1-10190336>

<sup>60</sup> Herald Scotland - Scotrail article: <https://www.heraldscotland.com/news/18107834.launch-electric-trains-sees-worst-scotrail-lateness-year/>

perceptions of performance in the media could act as a reputational incentive mechanism, encouraging rail industry bodies to make decisions which enhance the performance rail services.

### Customer Compensation

- 6.2.7 Passenger operators operate individual compensation schemes for which they set their own levels of compensation. For many, this is the ‘Delay Repay’ scheme which entitles passengers to compensation for delays of either 15 minutes or 30 minutes or more, as well as cancellations. The money required for compensation is ring-fenced in some Operators’ Franchise Agreements. If a ring-fenced Delay Repay budget is not claimed by passengers then the remaining amount should be invested in passenger services through a scheme agreed with DfT; if this is not the case, then DfT will retain the money, incentivising Operators to invest in service improvements and thus creating a ‘virtuous circle’ of reduced Delay Repay payments.
- 6.2.8 However, if more delays are experienced than anticipated and therefore more Delay Repay claims are made than budgeted, no additional money is then available to make investments in the service, even though more delays may signify a greater need for improvements.
- 6.2.9 Customer compensation may also act as a reputational incentive, as ORR regularly reports on claims made by passengers, disaggregated by train operator<sup>61</sup>. This may encourage operators to improve service in order to avoid being viewed as the ‘worst offender’.

#### Summary

High levels of customer satisfaction is directly related to performance of the network. Higher customer satisfaction leads to higher use of the railways and therefore TOC revenue.

Whilst customer compensation payments are not deducted from TOC revenue, higher compensation payments leave a smaller ‘pot’ available to make performance improvements to the network, with the aim of generating higher levels of performance and therefore customer satisfaction and revenue.

### 6.3 Perceptions of performance by other stakeholders

- 6.3.1 In the rail industry, stakeholders include funders, companies and employees within the supply chain (i.e. TOCs and FOCs), passengers and their representative groups and regulatory authorities.
- 6.3.2 Stakeholder engagement is a vital part of strategic planning and delivery of the railway, providing insight into stakeholders’ expectations for the delivery of the network<sup>62</sup>. Both

<sup>61</sup> ORR - Rail delay compensation claims, 2019-20: <https://dataportal.orr.gov.uk/media/1657/delay-compensation-claims-factsheet-2019-20-q2.pdf>

<sup>62</sup> ORR 2018 Periodic Review, Draft Determination. Supplementary document – stakeholder engagement: [https://orr.gov.uk/data/assets/pdf\\_file/0018/27801/pr18-draft-determination-stakeholder-engagement.pdf](https://orr.gov.uk/data/assets/pdf_file/0018/27801/pr18-draft-determination-stakeholder-engagement.pdf)

the ORR<sup>30</sup> and Department for Transport (DfT)<sup>63</sup> recognise the benefits of stakeholder engagement, prioritising its delivery in the 2018 Periodic Review and franchise prospectus<sup>64</sup> for potential bidders respectively.

6.3.3 Network Rail are required to engage with stakeholders as part of their Network Licence with ORR<sup>64</sup>. Network Rail publish their approach to stakeholder engagement on their website<sup>65,66</sup>, and recognise the relationship between service performance and reputation and stakeholder perceptions. For example:

- In their 2019 Annual Report, Network Rail recognised the negative impacts of exposure to H&S risks when delivering agreed operational performance targets, on the perceptions of their stakeholders. They state that they would only tolerate low exposure to any safety risks in the performance delivery of their service, in order to retain a positive reputation and stakeholder perception of their operation<sup>67</sup>; and
- Network Rail acknowledges the benefits of workforce engagement on the high performance delivery of services, suggesting that it allows them to understand where staff may require more support to improve delivery<sup>35</sup>.

6.3.4 Furthermore, the metrics agreed in Network Rail’s Scorecards are determined by stakeholders priorities, as well as the priorities of train operators in regional areas. These Scorecards are used by the ORR in their monitoring and reporting of Network Rail’s performance. This monitoring could therefore create a reputational incentive for high performance by Network Rail, as the publicly-available reports may encourage improvements in the monitored metrics in order to reduce poor reputation assessments by stakeholders.

6.3.5 Many operators develop publicly available stakeholder engagement plans<sup>68</sup> and deliver annual reports on their stakeholder engagement, outlining the perceptions and expectations of their stakeholders which can act as reputational incentives for high performance services. The table below provides a summary of findings from these reports, with a focus on stakeholders’ perceptions and expectations for service performance. These findings may be used by operators to prioritise decisions related to train service performance.

<sup>63</sup> DfT, Cross Country Franchise prospectus: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/723603/cross-country-prospectus.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/723603/cross-country-prospectus.pdf)

<sup>64</sup> Network Rail – Stakeholder relations code of practice: <https://cdn.networkrail.co.uk/wp-content/uploads/2019/04/Stakeholder-Relations-Code-of-Practice.pdf>

<sup>65</sup> Network Rail – How we engage with our stakeholders: <https://www.networkrail.co.uk/who-we-are/how-we-work/how-we-engage-with-our-stakeholders/>

<sup>66</sup> Network Rail – Stakeholder Code of Practice: <https://www.networkrail.co.uk/industry-and-commercial/information-for-operators/stakeholder-code-of-practice/>

<sup>67</sup> Network Rail, Annual Report and Accounts, 2019: <https://cdn.networkrail.co.uk/wp-content/uploads/2019/07/Annual-report-and-accounts-2019.pdf>

<sup>68</sup> Example of a TOC stakeholder engagement plan: <https://www.southeasternrailway.co.uk/-/media/goahead/southeastern/documents/company-information-and-transparency/customer-and-stakeholder-engagement-strategy---2019.pdf?la=en>

Table 3. TOC Stakeholder expectations and perceptions of performance

TOC	FINDINGS FROM STAKEHOLDER ENGAGEMENT
Transpennine Stakeholder Report <sup>69</sup>	<p>Transpennine conducted engagement with internal and local stakeholders including local authorities, industry bodies and Network Rail in 2018/19.</p> <p>Performance was a key element of discussions with these groups, especially considering changes to timetables in 2018 to enhance the resilience of services on the Transpennine network. A survey with 100 stakeholders found that 61% thought that changes to the timetable had had a positive impact on performance.</p>
Great Western Railway (GWR) Annual Stakeholder Report <sup>70</sup>	<p>In GWR’s 2018 Annual Stakeholder Report, GWR reported the findings of their Annual Stakeholder Reputation Audit, with:</p> <ul style="list-style-type: none"> <li>○ 85% of stakeholders satisfied with GWR services overall, but only 35% satisfied with the punctuality and reliability of services specifically;</li> <li>○ 67% of stakeholders believing that GWR were committed to delivering the best quality of service to passengers; and</li> <li>○ 63% of stakeholders having confidence in GWR to develop and improve services and facilities for the future.</li> </ul>

6.3.6 Overall, stakeholder engagement may be used by rail industry organisations to assess expectations for performance from stakeholders. Organisations may then be incentivised to actively manage these expectations by making decisions that maintain or improve performance in order to reduce the risks of low reputation assessments by stakeholders and therefore risks to business.

6.3.7 Similarly, an operator’s performance is a key factor in its public image, affecting the level of demand they attract, and their relationship with key stakeholders such as DfT and local travel groups. Poor performance is often one of the main reasons for media coverage of operators, such as the widespread coverage of disruption in summer 2018 around the timetable change in May.

### Summary

Stakeholder views and priorities are identified and used to e.g. develop performance targets and timetable changes.

The performance outcome is that stakeholder priorities are met, meaning the network is run to meet a wide range of expectations, of which service performance is one element.

<sup>69</sup> Transpennine Express – Taking the North Further, Annual Stakeholder report: <https://www.tpexpress.co.uk/~media/about-us/our-plan/business-management/tpe-stakeholder-report-2019.pdf?la=en>

<sup>70</sup> GWR Annual Stakeholder Report 2018-19: <https://www.gwr.com/~media/gwr/pdfs/about-us/gwr-annual-stakeholder-report-2018-19-low-res.pdf?la=en>



## 7. INDIVIDUAL-LEVEL INCENTIVES

### 7.1 Introduction

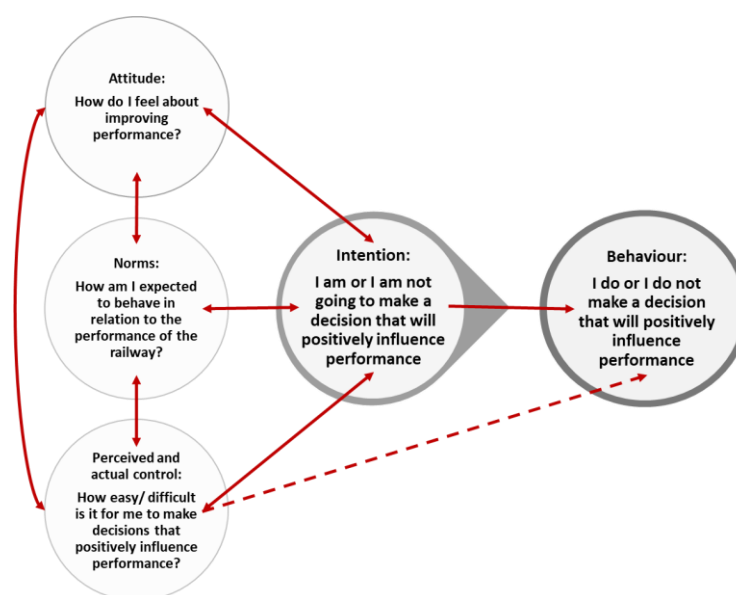
7.1.1 Reputational incentives can act at an individual level by setting expectations for behaviours and good practice by employees. For example:

- Passenger train operators often have Visions and Values which outline how employees should behave, and Network Rail has a Code of Conduct<sup>71</sup> which encourages communication, best use of resources, responsibility and team working within and between internal staff and contractors to enhance performance; and
- Performance-related pay could incentive decisions that improve performance.

### 7.2 Codes of Conduct

7.2.1 Codes of Conduct and/or Vision and Values are intended to set a standard for expected behaviour by rail industry employees which may influence decisions through peer pressure, the maintenance of personal professional reputation and earned respect. This assumption follows the Theory of Planned Behaviour<sup>72</sup>; which postulates that a person's general attitudes, norms and perceived control over their own behaviour shape their *actual* behaviour in a specific context (see Figure 2).

Figure 2. The Theory of Planned Behaviour, adapted from Ajzen (1991)



7.2.2 Central to an individual's behaviour is their intention to undertake it, i.e. their motivation to act in a certain way. However, the existence of this intention depends upon the amount of control an individual has over a situation, that is to say, how available are the necessary opportunities and resources to complete the action e.g. will they be able to reduce delays on the network alone. This is linked to an individual's 'perceived behavioural control' which is how easy or difficult an individual perceives performing the behaviour to be.

<sup>71</sup> Network Rail – Code of Conduct: <https://cdn.networkrail.co.uk/wp-content/uploads/2016/12/Code-of-Conduct.pdf>

<sup>72</sup> Ajzen, I., 1991. The Theory of Planned Behaviour - <https://www.sciencedirect.com/science/article/abs/pii/074959789190020T>.

Both an individual’s ‘control’/ability and ‘intention’ must be compatible for a behaviour to occur e.g. if you intend to improve performance, you must have and perceive yourself to have sufficient opportunity to do so. Behaviour is therefore a function of each of these components but can also be influenced by other subjective factors, such as:

- **Attitudes toward the behaviour:** the degree to which an individual feels positively or negatively toward the behaviour; and
- **Subjective norms:** The perceived social influence to perform the behaviour or not i.e. expectations and guidelines from an employer or colleague (as described above) and the influence of other’s alignment with these.

7.2.3 However, evidence from behavioural economics calls into question the validity of this decision making model, arguing that some external incentives on behaviour, particularly those which are monetary and provided at an individual level, can have a perverse impact on intrinsic motivations to undertake behaviours in line with those incentives aims<sup>73</sup>.

### Summary

A Code of Conduct, or equivalent, sets a standard of expected behaviour, which may influence decisions through peer pressure and the maintenance of personal professional reputation, and earned respect.

The intended performance outcome is that even the smallest, individually-based decisions are guided with core company principles in mind.

## 7.3 Performance-related pay

7.3.1 Performance related pay (PRP) can provide a personal financial incentive for improving controllable elements of train service performance for both Network Rail and Operators. However, the potential scale of this impact is likely to be small, with complex interactions existing between performance levels and individual bonuses. Within Network Rail, PRP is agreed in their annual Management Incentive Plan.

7.3.2 For example, in Network Rail’s 2018/19 Management Incentive Plan, both the Chief Executive and Chief Financial Officer are able to receive up to 9% and 20% of their salary in bonuses, respectively. Bonuses are based on delivery against Network Rail’s national Scorecard which includes measures for train and route performance; these elements combined have a 60% weighting in Network Rail’s PRP, with other measures such as personal development performance, rail safety, financial performance and locally-driven customer measures making up the other 40%<sup>74</sup>.

7.3.3 Overall, evidence from behavioural economics stipulates that performance related pay, provided to individual members of decision-making staff, may cause some decision makers to damage the performance of other decision-makers, therefore impacting the overall performance and aims of the incentive. This complex understanding of the rationales that underpin certain behaviours follows the motivation crowding theory,

<sup>73</sup> Performance Incentives for Network Rail: A Perspective from Behavioural Economics [https://orr.gov.uk/\\_data/assets/pdf\\_file/0010/39790/a-behavioural-economic-perspective-on-performance-incentives.pdf](https://orr.gov.uk/_data/assets/pdf_file/0010/39790/a-behavioural-economic-perspective-on-performance-incentives.pdf)

<sup>74</sup> Network Rail – Management Incentive Plan: <https://cdn.networkrail.co.uk/wp-content/uploads/2019/06/Management-Incentive-Plan-2018-19.pdf>

which postulates intrinsic motivations for a certain behaviour can be undermined by extrinsic incentives for that behaviour.

### Summary

Improving train service performance on the network is financially incentivised at individual-level in both Network Rail and many TOCs. This should mean that even the smallest individually-based decisions are made with performance in mind.

However, there is limited understanding of the outcome of performance-related pay on decision making, and some evidence that individual's behaviour to maximise their own bonus may adversely impact on performance-related outcomes from both other individuals and the organisation as a whole.

## 8. NEXT STEPS

- 8.1.1 This document outlines the key factors that are likely to influence decisions relating to train service performance, both organisationally and individually.
- 8.1.2 Whilst the intended outcome of these factors is clear, the actual outcome is disputed by organisations in a number of cases, and the different weight ascribed to each factor in terms of their influence on decision-making is not clear.
- 8.1.3 The findings from this report will be used to guide a series of discussions with those that work in the rail industry, across a range of organisation types and different types of decision-makers within organisations.