South East Route Control Period 6 Delivery Plan

March 2019

Foreword

My 3,500 colleagues and I are proud to provide an essential service for the many people that use our railway to travel around the South East region and into London. How we perform has a direct impact on these passengers, their employers, their businesses and as a consequence, on the economic performance of the South East of England and the UK as a whole. This is a plan that will improve that service over the next 5 years.

Following extraordinary levels of growth over the last decade we now deliver almost 500 million passenger journeys per annum, a third of the national total, and this is expected to grow. Freight demand on the Route is also projected to further increase, on top of the 20% growth experienced since 2014. This has been driven by the growing construction industry and supports businesses and economic performance across the region.

I am delighted this has been recognised by the Regulator and as a result we are set to receive a record £4.3 billion to pay for the busiest and most congested part of Britain's rail network, an increase of over £1 billion more than we received in CP5.

In our Route Strategic Plan we requested an increase in funding to improve train performance and put right the historic funding shortfalls. Based on views and feedback from passengers, freight customers, train operating customers and other stakeholders, our vision is that by the end of CP7 we will efficiently and sustainably be "Proud to be running the UK's most successful metro-style railway".

I am hugely grateful for the strong support from stakeholders across the region in making our case and we look forward to continuing to work with you as we collaboratively deliver a railway that we are all proud of.

In CP6 we will prioritise investment in maintenance to keep our infrastructure running reliably while we use the additional funding to renew critical assets to improve performance for the longer term. We are pleased that asset sustainability has been recognised in the Final Determination and that we have received an additional £66m to address the long term decline of our track and metallic structures. We will also seek to manage risks across our business so we can re-invest our risk fund into renewing the railway for the future. In addition, we will continue to make the case for more

capital investment in this region, with your support, so we can fund improvements that will inspire growth and move us closer to our vision of a metro-style railway that passengers deserve.

Achieving our vision will require a further increase in funding in CP7. Our ambition is to find ways to bring forward improvements into CP6 where affordable.

Train performance on the South East Route has been amongst the worst in the country during CP5. However, through close working with Southeastern and Govia Thameslink Railway (GTR) and using improved data and technology to increase our understanding of the causes of delay, in the last quarter of 2018 we delivered the best ever Right Time punctuality for the respective periods since these franchises began. We will continue this approach in CP6 and will incentivise further improvements through agreeing stretching targets with Southeastern and GTR each year.

We are also working with Southeastern and GTR to deliver innovative solutions such as offsite assembly of materials to minimise the duration of line closures and ensuring plenty of visible passenger communications well before they happen. As well as minimising the impact to passengers, this also helps reduce financial waste in delivery of our work.

In addition, we are excited to be delivering many additional initiatives to improve the service we provide to our customers and passengers, and provide improvements for our people and those that we work with. For example, to provide support to all of our staff we have recently opened a new Occupational Health Centre and we will run programmes to improve awareness and support on mental well-being. We will improve the safety of our front line workforce with new technology such as Negative Short Circuit Devices that dramatically reduce the safety risk of working on the railway and drive more efficient working.

We will proudly deliver our planned financial efficiencies including our stretch target; our plan requires us to deliver more efficiencies than we have ever delivered before, focusing on key areas with the greatest opportunity to make savings. We will transform how we plan work on the railway, how we work with our supply chain, and improve decision making and reporting through our new capital expenditure Portfolio Management Office.

This business plan is our first as a devolved Route and we are proud of the plan we have developed. My team and I are determined to work closely with our train operator colleagues to deliver the best possible service to our customers and passengers with the funding we have secured.

In this document, our Delivery Plan for CP6, you will read about what we will deliver and how we will deliver it using our change programme, Framework 42.

John Halsall
Route Managing Director

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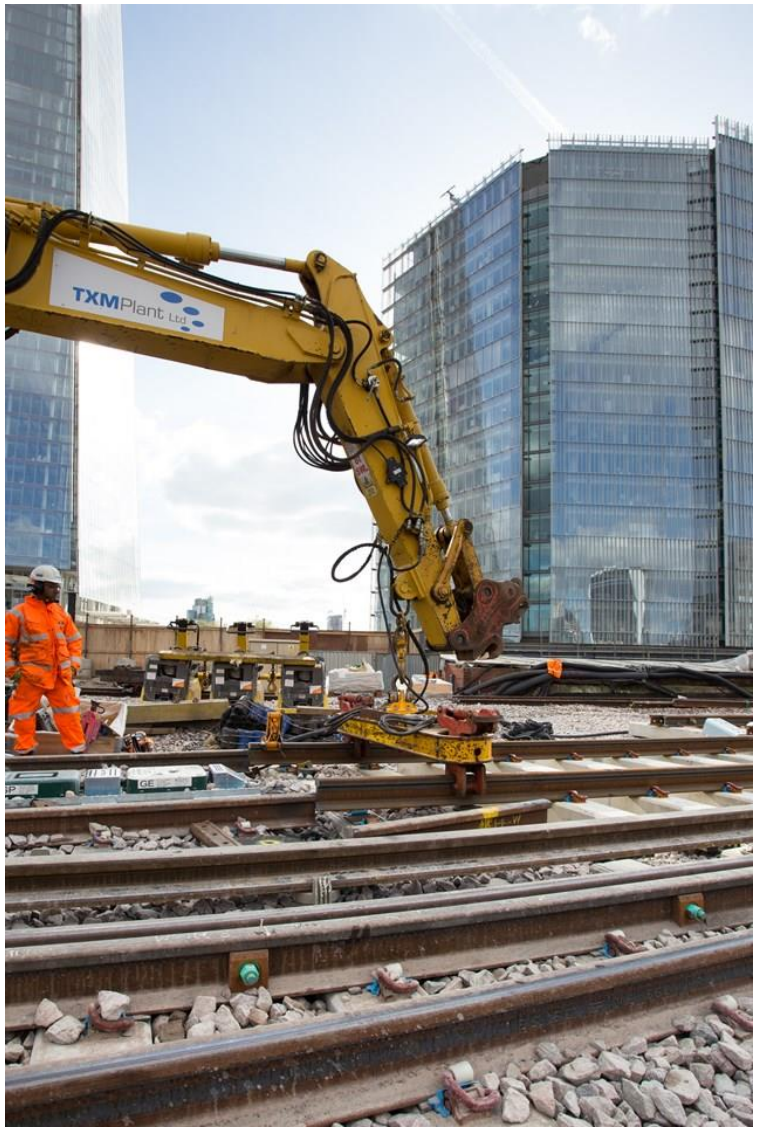


1. Overview

The South East Route network is complex, extremely busy and vital to the UK's economy. We connect the capital and its southern and south-eastern suburbs with Kent, Surrey, Sussex and Channel routes to Europe. Around 5,000 passenger trains run every day over almost 2,000 miles of track to deliver almost 500 million passenger journeys a year. We manage four of the busiest stations in the country – London Victoria, London Bridge, Charing Cross and Cannon Street. The Route carries more passengers than any other, being relied on every day by the travelling public in this congested part of the country. Additionally, we have seen an increase of over 20% in freight traffic volume since the start of Control Period (CP) 5, with continued growth projections throughout CP6. Implementation of the Thameslink network introduces a further step change in passenger services.

This document sets out our CP6 Delivery Plan for the South East Route. It includes key milestones, outputs and outcomes that our operations, maintenance and renewals plan will deliver in CP6, as well as how we will be developing Enhancements to improve the network for passengers and freight customers. It also describes how we will improve as an organisation to provide a better service to passengers and our customers through delivery of our change programme, Framework 42.

1.1. Context

Over the course of CP5 (2014 – 2019), train performance on the South East Route has been amongst the worst in the country. While significant improvements have been made, we are still not providing a service that reliably meets the needs of our passenger and freight customers[1]. This is primarily due to poor train performance, with too many trains running late, or not at all. From a Network Rail perspective this has been primarily influenced by:

- **Growth** – While we are extremely proud to provide services to our many passengers and freight customers, the significant growth over the past 10 years and future growth expectations puts pressure on our infrastructure, which is among the heaviest used in the country.
- **Asset age and condition** – Outside of the central Thameslink areas, South East infrastructure is among the oldest in the country. As a result, our asset base is fragile, with potential for high impact failures causing significant delays to our passengers and freight customers. Improvements have been made to the asset base in CP5, but on the journey to a high capacity railway these are insufficient to compensate for the increases in train journeys and wear and tear on the network.
- **Network complexity** – 12 of Britain's 15 busiest flat junctions, (where tracks merge or cross at the same level) are on South East Route, meaning small delays are amplified through knock on impacts to other services.
- **Deteriorating railway system resilience** – The timetable and stock and crew diagrams are increasingly strained and complex, reducing the system's ability to recover the service when something goes wrong.
- **Limited investment in technology** – Opportunities offered by new forms of technology have not been fully exploited, with many important parts of the Route still running on old, antiquated and inefficient systems.
- **Neglecting the basics** – Simple activities such as vegetation clearance and trespass mitigation have not been funded or delivered in sufficient quantity to protect the railway service.

Many of these issues are as a result of historic underinvestment, so we are delighted that our funding settlement for CP6 is over £1 billion more than we received for CP5. The final determination of funding by the Office of Rail and Road (ORR) for CP6 is intended to see greater investment in renewing the railway, to put it on a more sustainable footing. For the South East, this will enable a more dependable service to our customers and stakeholders during CP6 and beyond.

[1] Spring 2018 National Passenger Survey Scores: 79% GTR (weighted average of Southern, Gatwick Express and Thameslink) and 75% Southeastern, compared to national average score of 81%.

1.2. Vision

Our vision is that by the end of CP7, we will efficiently and sustainably be "Proud to be running the UK's most successful metro-style railway". This is based primarily on views and feedback from customers, stakeholders, passengers and freight customers. The vision means provision of a service that is:

- Safe;
- Efficient;
- Sustainable;
- Dependable;
- Punctual; and
- Frequent

Proud to be running the UK's most successful metro-style railway

These elements, or metrics, are underpinned by measurable outcomes and targets, and will be delivered efficiently and sustainably to deliver value for money and continued provision for future generations (Figure 1-1).

These performance objectives align with our long term scorecard so that we can continue to develop our plans and monitor progress throughout CP6 and into CP7. For example, our vision outcomes for train performance are 'dependable' and 'punctual'. By 'dependable', we mean an available service that is trusted by passengers. We will use the scorecard metrics of Cancelations and Average Passenger Lateness as our measure for this, with vision targets of 1% and 1.5 minutes respectively. By 'punctual', we mean a railway service that arrives on time at every station and we will use the metrics of On-time arrivals and PPM[1], with vision targets of 72% and 94% respectively.

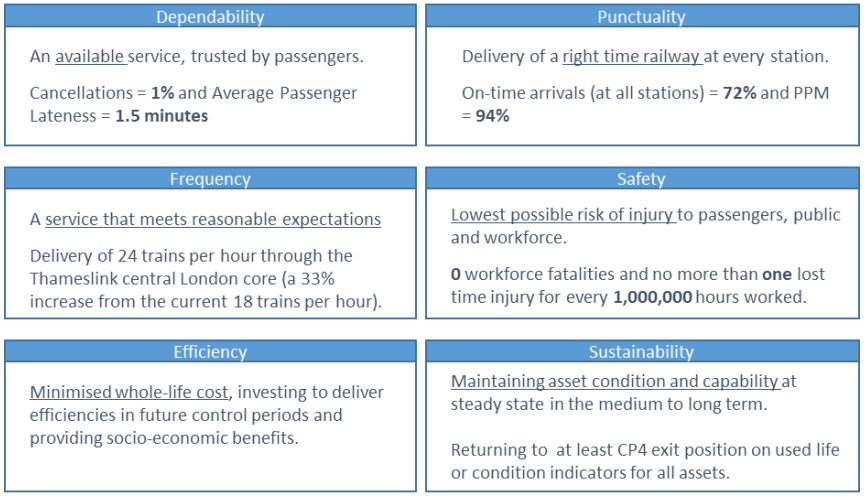


Figure 1-1 South East Route vision

In order to support a metro-style operation, every service running on the network is required to be dependable and punctual. This includes services which run to, from or through London (approximately 80% of Route traffic), regional services, freight trains, and all long distance, high speed and stopping services. The network is so complex and constrained that the right time departure of a train from Dover or Eastbourne is every bit as important as one from London Bridge.

The final settlement we have received does not guarantee delivery of our vision by the end of CP7. However, we are committed to maintaining this vision as an aspiration to drive focus on improving safety, sustainability, train performance, and efficiency as we continue to increase the frequency of the train service to 24 trains per hour. The vison will be reviewed as the Control Period progresses and also as the future operating model of Network Rail is finalised.

[1] Public Performance Measure (PPM) is the percentage of trains which ran their entire planned journey calling at all scheduled stations and arriving at their terminating station within 5 minutes. It combines figures for punctuality and reliability into a single performance measure, and is the industry standard measurement of performance.

1.3. Design Principles

In developing our Delivery Plan we have used three principles to underpin our approach:

a) Customer and stakeholder focused

- Customer and passenger centric planning - understand and incorporate passenger, customer and stakeholder requirements.

b) Line of sight - prioritisation and outcomes

- A clear link between strategic objectives, activities and outcomes

c) CP5 Lessons learnt - cost forecasting, efficiencies and deliverability

- Certainty on costs and efficiency
- Activity (e.g. volumes) and efficiencies are deliverable
- Locally owned bottom up plans

Alongside the Delivery Plan, our Framework 42 change programme provides a structure for improving our capability, giving the Route the best chance of delivering the plan successfully and improving passenger service. For this reason, this Delivery Plan is structured in line with our Framework 42 programme.

1.4. Our CP6 Plan

Over the last three years, Network Rail has been working closely with the Office of Rail and Road (ORR), customers and stakeholders to enable the ORR to make a determination of the Network Rail funding settlement and associated regulated outputs for CP6, the time period from April 2019 to March 2024. This is the first time that a settlement has been disaggregated to individual routes (and our System Operator function) and monitored by the Regulator. It has involved us setting out our funding requirements for operations, maintenance and renewals activities, and sharing the predicted outputs and outcomes this will deliver.

The process has developed over time. Our last comprehensive outline of our funding request to the ORR was explained in the South East Route Strategic Business Plan published in February 2018.

Our plan minimises risk across performance, asset sustainability, safety and reputation within the funding available. We have increased funding in maintenance to manage risks to train performance in the short term, and prioritised capital expenditure (Capex) on renewing the railway for the longer term. The CP6 Capex Plan is summarised in Figure 1-2 below, which sets out how we have prioritised the capital investment in our assets[1].

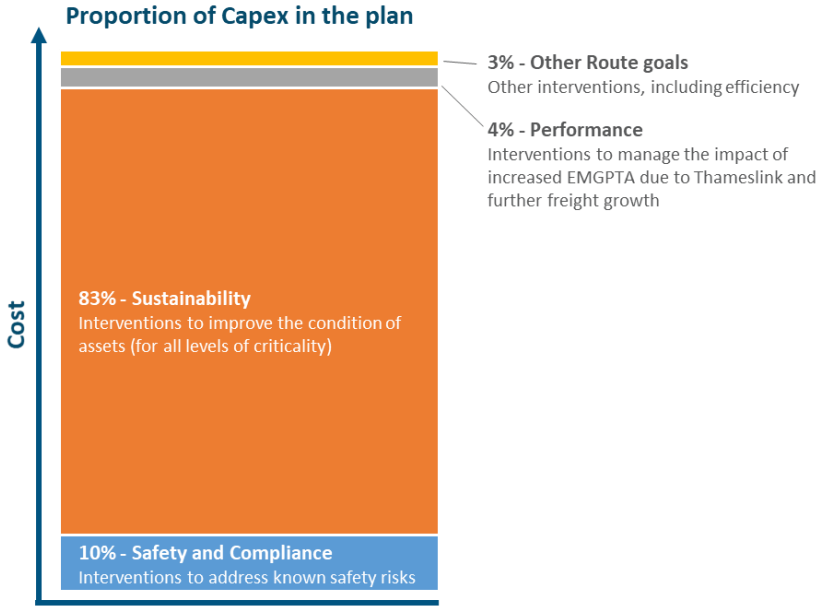


Figure 1-2 Allocation of Capex investment in the CP6 Plan

In addition to our key outputs of providing the best train performance we can and looking after the long term performance of the railway, we are also excited to be delivering many additional initiatives to improve the service we provide to our customers and passengers, and provide improvements for

[1] The Capex Plan summary has been updated to reflect Asset Sustainability Funding.

our people and those that we work with.

- For our **Customers and Stakeholders** we will build on the process used to develop our CP6 plan so we are responsive and engaged on understanding their needs and issues. This way we will resolve problems sooner and build a long term plan that is built with them looking towards CP7.
- We will continue to work closely with our **TOC and FOC partners** to develop joint train performance improvement plans and to work together to improve the way we manage access to the railway so we can deliver work more efficiently and minimise disruption for **passengers**.
- We are committed to improving the experience for our **passengers,** based on work we have undertaken to understand their needs, we will work to improve their experience at managed stations. We have already achieved an improvement in passenger satisfaction at London Victoria station through joint working with Southeastern and Govia Thameslink Railway (GTR).
- We will deliver a **step change in** improvements for the **safety of our workforce and those that work with us**. We will do this by making improvements to process and systems and introduction of new technology such as **Negative Short Circuit Devices** that dramatically reduce the safety risk of making electrical isolations before work can be conducted on the railway. However, just as importantly, we also will focus on culture and wellbeing. For example, our recently opened **Occupational Health Centre** will provide readily accessible support to all of our staff and we will also deliver a programme to improve and provide support on mental health.
- We will improve **safety for our passengers and the public** through our level crossing strategy. We will introduce new technology such as new warning systems and will deliver campaigns to improve public awareness of the risks at level crossings.
- We have an **Environmental and Sustainable Development** vision to become the **most environmentally sustainable and socially responsible Route in Network Rail**, proactively managing our environmental impact and enabling social and economic benefits.
- We will **reduce our business risk through better assurance and improved controls**. We have established a capital expenditure Portfolio Management Office to improve capital delivery performance through improved controls, improved integrated planning and a data led single source of the truth on our £2bn capital renewals portfolio.

In addition to our plan, we have also developed additional investment schemes, our Vision Schemes, with financially positive business cases to further improve the railway and move us towards our vision to efficiently and sustainably be “proud to be running the UK’s most successful metro-style railway”. Delivery of these schemes would meet needs of customers and stakeholders sooner and put us on a trajectory towards achieving lowest whole life cost management. While these are currently unfunded, we will continue to work to secure funding to deliver these Vision Schemes. We will do this by managing our risk funding and using the contingent asset management fund provided by the Final Determination, as well as by working with external parties to attract funding into the rail network.

1.5. The Efficiency Challenge

Being more efficient is a core component of our CP6 strategy; it is one of our vision outcomes. While funding constraints in the Control Period and the condition of our assets means delivering minimal whole life costs will still be challenging, improvements are still possible across our operating model.

An efficiency programme has been developed bottom-up and top-down, which has been tested for completeness against the Institute of Asset Management operating model framework. These efficiency plans are ambitious and challenge the Route beyond anything delivered in before. We have worked together with deliverers and national working groups to put together a challenging but deliverable portfolio of efficiencies based on the main cost risks that could impact our work. Delivery programmes for these efficiencies have started already as part of the route’s change programme, Framework 42. We recognise that not all of these plans will deliver and, making full advantage of our options as a devolved route, we will continue

to work to identify and develop new efficiency plans in order to deliver our commitments. This will be of further importance as the Route's aim is to deliver work 11% more efficiently[1] by the end of CP6; this includes a stretch target of £51m that we do not currently have plans in place to deliver. Our immediate priority is on the delivery of existing plans so that we can meet CP6 performance targets and manage asset risk. However we expect that additional efficiency opportunities will arise later in the Control Period. In particular we will be working with Network Rail Safety, Technical and Engineering (STE) throughout the Control Period to understand any potential for further efficiencies through new technologies.

1.6. Route Risk Provision

Within CP6, South East Route is now responsible for the management of its own risks. The total risk allowance for South East Route has been split across two categories:

- Route-controlled Risk Funding
- Contingent asset renewals funding

The size of these route held risk funds is based on a relative assessment of the amount of risk in our plan as a proportion of the total risk faced by Network Rail overall.

1.7. Contingent Renewals

Where we are able to manage risks within our plan so that risk funds can be released, we will invest in renewing the railway where the asset sustainability need is greatest. We have a prioritised list of schemes which have been developed from our asset sustainability focussed vision schemes. These are described below:

- **Track Sustainability** - A plan to address ballast condition[2] with the highest used life in the country.
- **Metallic Structures Sustainability** – Proactive interventions on metallic structures (e.g. bridge girders) where asset condition is impacting train performance due to traffic restrictions. This will reduce disruption, future costs, and avoid a future bow wave of full renewal work that will be increasingly challenging to deliver in CP7.
- **Charing Cross Hungerford Bridge** – A plan for proactive intervention to mitigate the risk of traffic restrictions of a critical national bridge between Waterloo East and Charing Cross
- **Electrification and Plant (E&P)** - Within the CP6 Plan, funding has been prioritised to address safety and legislative compliance requirements, with planned renewals volumes being much lower than the forecasted need. As a result, additional funding would be used to replace assets including DC switchgear and ageing cables
- **Improving Safety Scheme –** We have developed a package of work that would further improve safety. It comprises of:
  - Level Crossings
  - Trespass and Suicide mitigation
  - Electrical wiring upgrades
  - Passenger Safety
  - Workforce Safety

We will use an over-planning process, improved controls through our new capital delivery Portfolio Management Office, and management of our risk funds to identify opportunities to deliver these contingent renewals.

1.8. Our CP6 Plan Outcomes

Outcomes of our CP6 plan describe the level of performance or change to performance factors that we expect to see as a result of our CP6 financial settlement. Each of these outcomes directly impacts our passengers and customers through the performance and reliability of our network, and the safety of our railway, passengers and customers, as well as our own staff.

Delivery of these outcomes in CP6 means it will be challenging to deliver our vision targets by the end of CP7. However, we will seek to manage our risks so that we can invest our risk fund in renewing the railway as well as continuing to seek additional investment in order to move us closer to achieving our vision by the end of CP7.

[1] This excludes the Route's share of central Network Rail efficiencies targets
[2] Ballast is the name for the 'stones' beneath the rail track; it forms the trackbed and supports the track, as well as helping with drainage and preventing vegetation growth which can be a hazard.

1.8.1. Train performance: dependability and punctuality

There have been significant challenges with train performance during CP5, however, through close working with Southeastern and Govia Thameslink Railway (GTR) and using improved data and technology to increase our understanding of the causes of delay, in the last quarter of 2018 we delivered the best ever Right Time punctuality for the respective periods since these franchises began. While we will continue with these approaches to improve the management of the network, our asset age and condition will remain fragile and the complexity of the network will increase. Through the Thameslink facilitated timetable implementation early in CP6, we will be introducing a large number of new services building up to 24 trains per hour through the core[1], an increase in duty of approximately 15% (EMGPTA[2]) over CP6. Throughout CP6, there remains significant uncertainty around train performance forecasts, this is largely driven by:

- The Thameslink timetable implementation; while lessons have been learnt on driver availability following the May 2018 timetable, we still do not yet know if the remaining assumptions will be valid because of the limitations of the existing timetable.
- There are franchisee changes for both Southeastern and GTR, which could fundamentally affect our assumptions on train performance.

We expect that it will be necessary to update train performance forecasts in CP6 following further updates to the Thameslink facilitated timetable and the Southeastern and GTR refranchising. Our passengers expect trains in the South East network to reliably run on time, and when they are timetabled. We forecast that dependability and punctuality measures will be modestly improved at the end of CP6

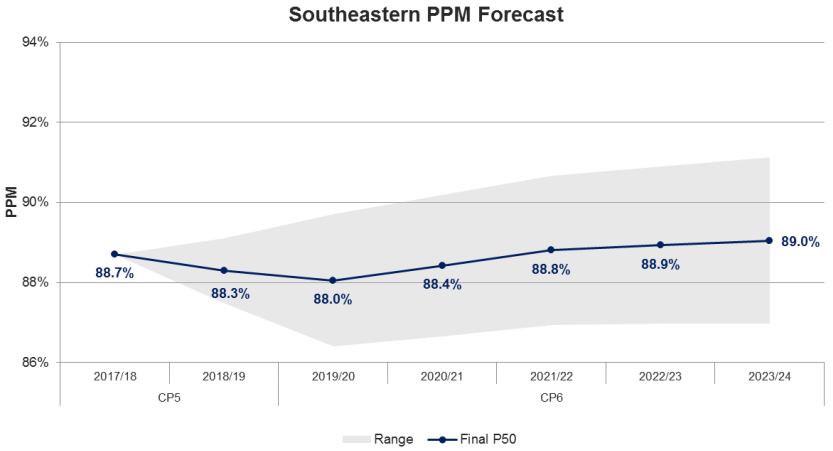


Figure 1-3 Revised Southeastern PPM Forecast

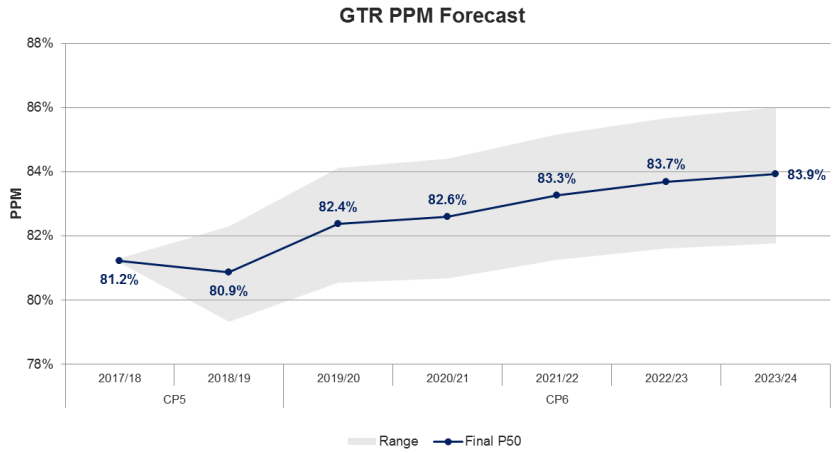


Figure 1-4 Revised GTR PPM Forecast

[1] The 'core' refers to the part of the South East Route network that passes through central London, between St Pancras and Blackfriars
[2] Equivalent Million Gross Tonnes Per Annum

At these forecast levels, our vision would not be delivered by the end of CP7, however, we will continue to work at identifying additional funding to improve this within CP6, improving the likelihood of delivery of our vision by the end of CP7.

1.8.2. Asset Sustainability

Asset sustainability measures are the truest long term indicators of our infrastructure performance. Network Rail's sustainability strategy is to provide a railway fit for the future, and to deliver outstanding value for money to taxpayers, customers and funders. For assets within the South East Route, this means:

- Managing short-term performance risks arising from asset age and condition, while
- Maintaining asset condition and capability at a steady state in the medium- to long-term and avoiding future bow waves in cost or volume delivery

Over 80% of Capex investments in the CP6 plan are sustainability-driven. However, due to the current age and condition of our assets and the increased demand in CP6, the outcome will still be a broadly steady level compared to CP5 exit in some asset types, with a minor deterioration in sustainability indicators across the remaining. This is described in Section 6.

1.8.3. Future Network Rail Operating Model

Network Rail's Operating Model is currently under review. This may require changes to our vision and other elements of our plan.

Asset	Sustainability Indicator	Exit CP5	Exit CP6	Change CP5 to CP6 exit	Risk of bow wave in CP7?
Track	Service Affecting Failures	454	454	-	Yes (Ballast)
	Track average used life	59%	59.7%	↓	
Structures	% poor PLBE* overbridges	8.7%	7.6%	↑	No
	% poor PLBE* underbridges	6.0%	6.1%	-	Yes
Buildings	Stations PARL** on critical features	47%	46%	-	Yes
Signalling	Signalling Infrastructure Condition Assessments (remaining life)	14.9	12	↓	Yes
Earthworks	Condition score	1.94	1.98	↓	Yes
E&P	Conductor rail remaining life (%)	65%	62%	↓	Yes

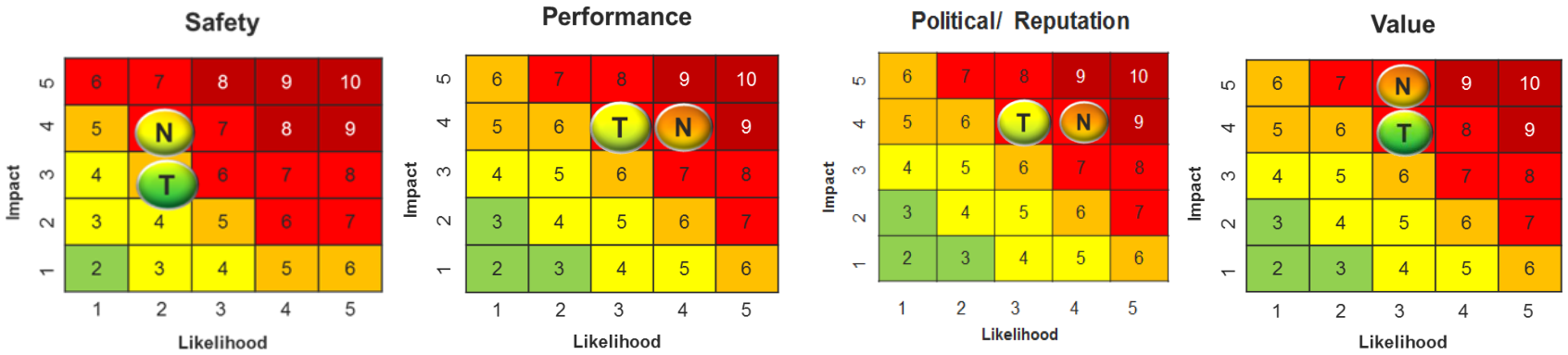
* PLBE = Principal Load Bearing Element
** PARL = Percentage Asset Life Remaining
↑ = Improving
↓ = Declining

Figure 1-5 Sustainability Indicator Changes: Exit CP5 to Exit CP6

1.9. Summary of costs and risks

A summary of the costs and outcome risk level is presented below. Risks are presented in accordance with Network Rail's Corporate Risk Assessment Matrix methodology. 'N' represents the position at the end of CP5, 'T' represents the Target risk outcomes to be delivered by our plan at the end of CP6. All costs in this Delivery Plan are presented in cash prices unless specifically stated otherwise.

	CP5 (£m)	CP6 (£m)						CP7 (£m)	
	18/19	19/20	20/21	21/22	22/23	23/24	CP6 Total	24/25	25/26
Operations	148	153	149	151	154	161	769	186	191
Maintenance	171	220	240	248	255	264	1,227	301	310
Risk Funds	0	0	58	61	75	110	304	0	0
Total Renewals	256	359	393	438	447	393	2,030	514	514
Total Expenditure	573	733	840	897	932	928	4330	1000	1015



Further detail of the assumptions and risks for this plan are detailed in Appendix B: Key assumptions and risks.

1.10. How we will measure success

The scorecard detailed on the following pages summarises South East Route's performance measures for CP6. Many of these measures are closely linked to train performance which contains significant uncertainty due to the Thameslink timetable implementation and re-franchising for both Southeastern and GTR in CP6.

Safety		19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	Achievability
Lost Time Injury Frequency Rate (LTIFR)	WORSE THAN TARGET	0.453	0.365	0.310	0.255	0.190	0.190	0.190	N/A	
	TARGET	0.431	0.385	0.31	0.242	0.170	0.170	0.170	N/A	
	BETTER THAN TARGET	0.409	0.295	0.250	0.205	0.150	0.150	0.150	N/A	
Risk Management Maturity Model (RM3)	WORSE THAN TARGET	0.600	2.971	3.14	3.313	3.484	3.655	3.826	3.997	
	TARGET	0.800	3.214	3.43	3.642	3.856	4.070	4.284	4.498	
	BETTER THAN TARGET	1.000	3.414	363%	3.842	4.056	4.270	4.484	4.698	
Train Accident Risk Reduction (TARR)	WORSE THAN TARGET	60%	60%	60%	60%	60%	60%	60%	N/A	
	TARGET	80%	80%	80%	80%	80%	80%	80%	N/A	
	BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	100%	N/A	
Top 10 milestones to Reduce Level Crossing Risk	WORSE THAN TARGET	6	6	6	6	6	6	6	N/A	
	TARGET	8	8	8	8	8	8	8	N/A	
	BETTER THAN TARGET	10	10	10	10	10	10	10	N/A	
Train Performance		**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**Achievability**
Consistent Route Measure – Performance (CRM-P) Network Rail Caused Delay Minutes	WORSE THAN TARGET	3.03	3.31	3.28	3.19	3.10	3.10	TBC	N/A	
	TARGET	2.99	2.98	2.88	2.84	2.81	2.79	TBC	N/A	
	BETTER THAN TARGET	2.62	2.80	2.75	2.63	2.51	2.51	TBC	N/A	
Freight Delivery Metric (FDM-R)	WORSE THAN TARGET	87.5%	87.5%	87.5%	87.5%	87.5%	87.5%	TBC	N/A	
	TARGET	89.3%	89.3%	89.3%	89.3%	89.3%	89.3%	TBC	N/A	
	BETTER THAN TARGET	90.2%	90.2%	90.2%	90.2%	90.2%	90.2%	TBC	N/A	
Freight Growth - Net Tonne Miles	WORSE THAN TARGET	0.20	TBC	TBC	TBC	TBC	TBC	TBC	TBC	
	TARGET	0.23	TBC	TBC	TBC	TBC	TBC	TBC	TBC	
	BETTER THAN TARGET	0.25	TBC	TBC	TBC	TBC	TBC	TBC	TBC	
Time to 3 - South Eastern	WORSE THAN TARGET	86.9%	83.9%	84.2%	84.3%	84.3%	84.3%	84.3%	N/A	
	TARGET	87.5%	86.1%	86.6%	86.8%	86.9%	86.9%	86.9%	N/A	
	BETTER THAN TARGET	88.0%	88.4%	89.0%	89.3%	89.6%	89.6%	89.6%	N/A	
On time - GTR	WORSE THAN TARGET	59.4%	59.5%	60.1%	60.4%	60.5%	60.5%	60.5%	N/A	
	TARGET	61.1%	61.3%	61.9%	62.2%	62.5%	62.5%	62.5%	N/A	
	BETTER THAN TARGET	62.6%	62.9%	63.6%	64.0%	64.3%	64.3%	64.3%	N/A	
Level of Cancellations CaSL - SE	WORSE THAN TARGET	2.5%	2.5%	2.4%	2.4%	2.4%	2.4%	2.4%	N/A	
	TARGET	2.2%	2.2%	2.1%	2.1%	2.1%	2.1%	2.1%	N/A	
	BETTER THAN TARGET	1.9%	1.8%	1.8%	1.7%	1.7%	1.7%	1.7%	N/A	
Level of Cancellations CaSL - GTR	WORSE THAN TARGET	4.5%	4.5%	4.3%	4.2%	4.1%	4.1%	4.1%	N/A	
	TARGET	3.9%	3.9%	3.7%	3.5%	3.4%	3.4%	3.4%	N/A	
	BETTER THAN TARGET	3.4%	3.3%	3.1%	2.9%	2.8%	2.8%	2.8%	N/A	
Average Passenger Lateness - SE	WORSE THAN TARGET	2.70	2.7	2.6	2.6	2.6	2.60	2.60	N/A	
	TARGET	2.40	2.4	2.3	2.3	2.3	2.30	2.30	N/A	
	BETTER THAN TARGET	2.10	2.1	2.0	1.9	1.9	1.90	1.90	N/A	
Average Passenger Lateness - GTR	WORSE THAN TARGET	2.82	3.6	3.5	3.5	3.5	3.50	3.50	N/A	
	TARGET	2.52	3.3	3.2	3.1	3.1	3.10	3.10	N/A	
	BETTER THAN TARGET	2.19	3.0	2.9	2.8	2.7	2.70	2.70	N/A	

Locally Driven Measures		19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	Achievability
NRPS Se	WORSE THAN TARGET	76.1%	77.3%	77.8%	78.2%	78.4%	TBC	TBC	TBC	
	TARGET	78.1%	79.3%	79.8%	80.2%	80.4%	TBC	TBC	TBC	
	BETTER THAN TARGET	80.1%	81.3%	81.8%	82.2%	82.4%	TBC	TBC	TBC	
NRPS GTR	WORSE THAN TARGET	77.1%	76.9%	77.7%	78.3%	78.9%	TBC	TBC	TBC	
	TARGET	79.1%	78.9%	79.7%	80.3%	80.9%	TBC	TBC	TBC	
	BETTER THAN TARGET	81.1%	80.9%	81.7%	82.3%	82.9%	TBC	TBC	TBC	
Pulse Check GTR	WORSE THAN TARGET	3.5	3.5	3.5	3.5	3.5	N/A	N/A	N/A	
	TARGET	4.0	4.0	4.0	4.0	4.0	N/A	N/A	N/A	
	BETTER THAN TARGET	4.5	4.5	4.5	4.5	4.5	N/A	N/A	N/A	
Pulse Check LSER	WORSE THAN TARGET	3.5	3.5	3.5	3.5	3.5	N/A	N/A	N/A	
	TARGET	4.0	4.0	4.0	4.0	4.0	N/A	N/A	N/A	
	BETTER THAN TARGET	4.5	4.5	4.5	4.5	4.5	N/A	N/A	N/A	
Sustainability and Asset Management Capability		**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**Achievability**
Renewals – 7 Key Volumes	WORSE THAN TARGET	90%	90%	90%	90%	90%	90%	90%	N/A	
	TARGET	95%	95%	95%	95%	95%	95%	95%	N/A	
	BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	100%	N/A	
Improvement in Composite Reliability Index (CRI)	WORSE THAN TARGET	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	N/A	
	TARGET	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	N/A	
	BETTER THAN TARGET	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	N/A	
Composite Sustainability Index (CSI)	WORSE THAN TARGET	*To be measured at Control Period exit only.*				-4.4%	N/A	N/A	N/A	
	TARGET					-3.9%	N/A	N/A	N/A	
	BETTER THAN TARGET					-3.4%	N/A	N/A	N/A	
Improvement in Service Affecting Failures (SAF)	WORSE THAN TARGET	-2%	-3%	-3%	-3%	-3%	-3%	-3%	N/A	
	TARGET	1%	0%	0%	0%	0%	0%	0%	N/A	
	BETTER THAN TARGET	4%	3%	3%	3%	3%	3%	3%	N/A	
Financial Performance		**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**Achievability**
Financial Performance Measure (FPM) – Gross Profit & Loss	WORSE THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	TBC	N/A	
	TARGET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	
	BETTER THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	TBC	N/A	
Financial Performance Measure (FPM) – Gross Renewals	WORSE THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	TBC	N/A	
	TARGET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	
	BETTER THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	TBC	N/A	
Financial Performance Measure (FPM) – Gross Enhancements	WORSE THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	TBC	N/A	
	TARGET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	
	BETTER THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	TBC	N/A	
Cash Compliance	WORSE THAN TARGET	TBC	TBC	TBC	TBC	TBC	TBC	TBC	N/A	
	TARGET	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	
	BETTER THAN TARGET	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Investment		**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**Achievability**
Top Investment Milestones	WORSE THAN TARGET	80%	80%	80%	80%	80%	80%	80%	80%	
	TARGET	90%	90%	90%	90%	90%	90%	90%	90%	
	BETTER THAN TARGET	100%	100%	100%	100%	100%	100%	100%	100%	

2. The CP6 Delivery Plan

2.1. The CP6 Delivery Plan

This Delivery Plan sets out how South East Route is going to deliver its plans for Control Period 6 (CP6), from April 2019 – March 2024. This includes investment and interventions that will be made to deliver the outcomes for improved passenger experience set out for CP6, including: train capacity, performance, reliability and sustainability.

This plan has been led by the Route leadership team, with individual executive leaders responsible for each element of the Delivery Plan. Throughout CP6 we are committed to putting our vision to be the UK's most successful, metro-style railway at the heart of everything we do, and to continuing to engage with our stakeholders in order to develop solutions that benefit our passengers.

2.2. Framework 42

In addition to the Control Period planning cycle, South East Route has developed an organisational change programme, Framework 42 (F42), to support the delivery of our vision throughout CP6 and beyond. There are eight elements within F42, with our customers and passengers at the heart of all work streams:

- Highly regarded by our customers and stakeholders
- One performance problem, one plan
- Improving passenger experience
- Excellent asset management
- Everyone home safe every day
- Well organised, with robust assurance
- Proud to be more efficient
- A great place to work, where our people feel valued

Each workstream within F42 has agreed goals, milestone plans, critical success factors and Key Performance Indicators (KPIs) that will deliver CP6 outcomes as well as longer-term organisational change to bring us closer to our vision.

Figure 2-1 Framework 42 (F42) Elements

All functional areas now have F42 plans in place, we have also developed mechanisms for the governance and tracking of F42 plans and these have been implemented at an Executive level. These will make sure that we are firstly 'getting the basics right' and then 'becoming brilliant at the basics'.

We recognise that there is a need to plan and deliver outcomes beyond the Control Period planning cycle that will have a direct impact on our passengers, customers and asset base in the long term. F42 helps us to focus on longer term solutions while delivering to the Control Period performance scorecard targets. Further information on the delivery of Framework 42, not just for CP6 but also beyond, can be found in Section 8.

2.3. How this document works

This document sets out our CP6 Delivery Plan, using F42 as a structure to organise what we will be delivering during CP6 and beyond. This document is divided into the elements of F42, with each section setting out:

1. **Description of the F42 element:** This sets out the change each F42 element his intended to achieve in the long term
2. **Context:** A description of the existing context for the F42 element within the South East. Context is important, because in many cases the decisions, investments and external factors that occurred in previous Control Periods have a flow-on effect into CP6 and have influenced our strategy for delivering improvements. The context will also determine how we have set objectives for CP6, as well as the risk factors that have been taken into account
3. **What we will deliver:** A summary of the key activity that we will undertake in CP6 to deliver performance outcomes, and set us up to achieve the long-term goals of the Framework 42 Change Programme
4. **Strategies and activity**: A summary of the delivery strategies relating to each element, with a focus on influencing factors and how we are engaging with stakeholders to develop plans that provide the best possible outcome in CP6 and beyond
5. **How we will measure success:** The performance metrics that we will use to measure the success of each F42 element within CP6, and any other indicators that will be established or tracked in the long-term to continue to measure success beyond CP6
6. **Key milestones:** A high level summary of the milestones that will be achieved in CP6 under each F42 element

The milestones and activity set out in this CP6 Delivery Plan have been endorsed by the senior leadership of South East Route, and we are committed to their delivery.

3. Highly regarded by our customers and stakeholders

Highly regarded by our customers and stakeholders

This element of F42 aims to build trust, confidence and challenge misconceptions among external customers and stakeholders and help the business make the case for continued sustained investment by demonstrating successful and efficient delivery for the benefit of passengers.

We aim to be recognised as an industry leader, a company that puts passengers first and a proactive agent for change in the communities we serve.

3.1. Context

3.1.1. Introduction

Stakeholder engagement is an essential part of how we deliver our business in South East Route. Being customer and stakeholder focussed is the first of our three CP6 key principles and we have developed our route vision collaboratively with our customers and stakeholders. Of the 88 organisations consulted in developing the CP6 plan, 39 organisations provided 370 individual requests as input into the planning process. This was an intrinsic part of how we developed our route funding proposal for CP6, and it will be equally intrinsic to how we deliver on the commitments with the settlement we have received. This is not just about customers and stakeholders understanding what we do and having confidence in us, although that is of course important. In many cases it is also about us being unable to fully deliver without their support. We aim to develop a mutually beneficial relationship, where we are able to meet the majority of our stakeholders' needs and, where we cannot, we explain to them why not and what we *can* deliver for them.

We regard the TOCs as our key customers and partners, with whom we collaborate closely to effectively manage and run the railway for the benefit of our passengers. To this end, we collaborate with them closely and come together regularly in a range of different forums, holding ongoing constructive conversations every period[8]. Examples of these meetings include the GTR Alliance Board and Southeastern Partnership Board, both of which are attended by Route Managing Director John Halsall and other senior representatives of the route and the TOC. The GTR Alliance Board also includes passenger representatives, including Transport Focus. The objectives of these boards are to critically assess performance period on period, and to strategically develop and drive joint initiatives which will help to deliver improvements in train performance and passenger experience.

3.1.2. How this plan has been developed

Stakeholder requirements, feedback and priorities for CP6 were gathered through direct conversations, workshops, exhibitions, presentations and questionnaires. We kept stakeholders fully informed of how their requirements and priorities informed our submission for CP6, and were equally open and transparent where we had to prioritise or compromise between competing requirements. A record of this process is included in the stakeholder log appended to our submission.

3.1.3. How we incorporated customer and stakeholder requirements

The key themes raised through stakeholder consultation are shown in Figure 3-1 below. These themes directly influenced the development of our route vision and objectives.

[8] The calendar year is divided into four-weekly management cycles

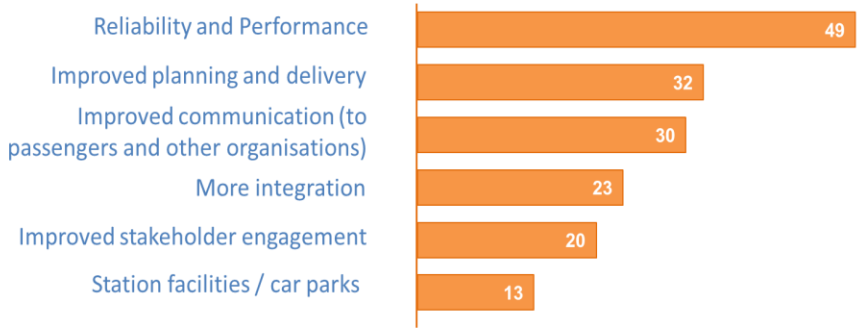


Figure 3-1 Stakeholder consultation themes

It has been necessary to prioritise stakeholders' needs, and in some cases reach a compromise between conflicting requests. We have taken an open and transparent approach to this, making it clear in our conversations and record of resultant activities what decisions have been made, the logic behind them, and how this has informed the vision and CP6 plan. Our response to these requests is discussed within each section of this Delivery Plan:

- **Reliability and Performance**: Section 4 - One performance problem, one plan and Section 6 - Excellent asset management
- **Improved Planning and Delivery:** Section 6 - Excellent asset management and Section 8 - Well organised with robust assurance
- **Improved communications to passengers and other organisations –** Section 3 - Highly regarded by our customers and stakeholders and Section 5 - Improving passenger experience
- **More integration:** Section 6 - Excellent asset management and Section 8 - Well organised with robust assurance
- **Improved stakeholder engagement:** This section, Highly regarded by our customers and stakeholders
- **Station facilities / car parks:** Section 5 - Improving passenger experience

Examples of what we have included in response to customer requests, and also examples of where we will strive to do more with any additional funding that we are able to secure, are shown in Figure 3-2.

Requirement	CP6 Plan	Additional investment opportunities / Contingent Renewals
Use engineering access more efficiently	£93.3m included for installation of NSCDs which will provide up to one hour of more productive time per isolation.	Vision Scheme to secure NSCDs for full route coverage
Improve the capability of the asset as part of its renewal	Included for some signalling schemes in order to integrate future Digital Railway capability.	Performance Vision Scheme
Improve platform / train interface	Funding included for most critical Platform Train Interface renewals	Safety Vision Scheme
Carry out more vegetation clearance works	£14m of Opex included for vegetation clearance works.	Performance Vision Scheme
Do not let the asset age further	Additional £66m for track and structures assets received as part of the ORR Final Determination Asset Sustainability fund.	Contingent Renewals to be funded through funds released through managing the route's risks and identification of additional funding.

Figure 3-2 – Response to customer and stakeholder requests

3.2. Updating Customers and Stakeholders following the determination

On receipt of our final determination on 31 October 2018, we wrote to key stakeholders, including all MPs and council leaders, to thank them for their support and to inform them of our settlement. We reminded them how in our submission we had asked for money to be invested in the South East Route to improve train performance and put right the historic funding shortfalls which have not reflected the age of our infrastructure, how intensively it is used, and the economic and social significance of the route. We informed them that under the CP6 settlement we will receive a record £4.3 billion to pay for the operational running of what is the busiest and most congested part of Britain's rail network, as well as vital maintenance and upgrades, over the next five years.

We welcomed the fact this is more than £1 billion over what we received for the previous funding period and means we can continue striving to improve

our service, which carries almost 500 million passengers a year – a third of the nation's total.

We explained that within this settlement we must prioritise maintenance and renewals to keep ageing infrastructure running reliably, to make sure passengers and freight can move freely and continue to fuel the region's economic growth. However, we have much bigger ambitions and want to run a railway service which is sustainable, dependable, punctual and frequent, as well as safe.

That is why we will continue to work with train operators, key stakeholders and potential investors to go on making the case for more capital investment in this region, so we can fund more improvements that will inspire growth and move us closer to our vision of running the UK's most reliable metro-style railway that passengers deserve.

3.3. How we will continue to work with Customers and Stakeholders

We will build on our customer and stakeholder engagement to actively manage our plan throughout CP6 in line with the needs of passengers and our customers and stakeholders. Through this process, we will also be developing our CP7 plans.

To further improve our approach to engagement with customers and stakeholders we have established a regular Stakeholder Engagement and Communications Group (SECG), including the RMD and with representation from Communications, System Operator, Sponsorship, Business Development and Property. This group is committed to the principles set out in Network Rail's Stakeholder Relations Code of Practice (SRCoP):

- We will respond to the needs and opinions of our stakeholders
- We will act fairly and not discriminate
- We will engage effectively on decisions that impact stakeholders
- Our engagement will be proportionate
- We will be transparent in our dealings with stakeholders
- We will provide good quality information to our stakeholders
- We will employ governance over our engagement with stakeholders
- We are committed to continuously improving our engagement with stakeholders

The SECG is in the process of developing a stakeholder engagement framework in the following stages:

Figure 3-3 Development of the South East stakeholder engagement framework

Stages 1 and 2 have been developed via an internal workshop, at which we identified the key stakeholder groups relevant to external stakeholder engagement and the business outcomes that engaging with them can help support.

The tables on the following pages summarise each of the stakeholder categories that we work with, and each of the business outcomes that we have identified as important to those stakeholder groups, or require us to engage with them in order to deliver. Note that these list are not necessarily exhaustive and continue to evolve.

Categorisation	Stakeholders
Passengers	Commuters
	Individuals with Reduced Mobility
	Leisure
	Business Passengers
Passenger representatives	Rail user Groups
	Transport Focus
	London Travel Watch
	Disabled Passenger Groups
	Campaign Groups (e.g. BML 2)
Community	Residents' Associations
	Lineside neighbours
	Community Rail Partnerships
	Communities – Hospitals, Universities, Schools, Sporting Associations
	Rights of Way Holders
	Land Owners
Emergency Services	British Transport Police / The Metropolitan Police
	Police – Kent/East Sussex/West Sussex
	Fire and rescue London/Kent/East Sussex/West Sussex
	Ambulance service – London/Kent/East Sussex/West Sussex
Political	Members of Parliament
	Transport Ministers
	Mayor of London/London Assembly Members
	Local Authority elected members – County Councils/Unitaries/District Councils/ London Boroughs
	Transport Select Committee
	Public Accounts Committee
	Southern Rail All-Party Parliamentary Group
Government	Department for Transport officials
	Other government departments
	City Hall
	Local Authority officials – County Councils/Unitaries/District Councils/London Boroughs - transport/environmental/health/planning
Professional Bodies	Institute of Chartered Engineers, Association for Project Management
	Crown Commercial Service
	Civil Engineering Environmental Quality Assessment and Award Scheme
Regulatory	Office of Rail and Road (ORR)
Partnerships	Local Enterprise Partnerships
	Transport for the South East

Categorisation	Stakeholders
Train operators	Train Operating Companies (TOCs)
	Freight Operating Companies (FOCs)
Transport bodies	Transport for London (TfL)
	Ports
	Airports (Gatwick, London City, Luton)
	Highways England
	Rail Delivery Group (RDG)
	Rail Safety and Standards Board (RSSB)
	Rail Accident Investigation Branch (RAIB)
	Transport Security
	Railway Heritage Trust
	High Speed 1 Ltd
	Heritage Rail
	Sustrans
Third party funders	Potential large investors
	Property developers
Business	Business Improvement Districts
	Station retailers
	Regional/Sub-regional Chamber of Commerce bodies
	Trade organisations (IOD, London First, FSB, CBI, RIA)
	Lease holders
	Blackstone Group and Telereal Trillium
	Major impacted businesses
Statutory undertakers	Utilities
Environment	Historic England
	Natural England
	National Trust
	Environmental Groups
	National Parks
	Environment Agency
Tourist Bodies	E.g. Brighton Tourism Alliance, Visit Kent
Media and Social Media	National broadcast/print/digital
	Local broadcast/print/digital
	Trade media
	Social Media influencers
Supply Chain	Infrastructure Projects contractors/sub-contractors
	Works Delivery contractors/sub-contractors
	Other suppliers
Trade Unions	RMT, TSSA, UNITE

Figure 3-4 List of South East Route stakeholders

People	Efficiency	Passenger Experience	Safety	OMR Funding (CP6/CP7)	Enhancement/ Investment	Environment	Corporate Responsibility
Attract, retain and engage our workforce through: ▪ Promoting South East Route as a good employer ▪ Positive advocacy to support employee pride ▪ Promoting diversity and inclusion Engaging trade unions to support more effective industrial relations Impact of remuneration Attract people with the right skill	Delivery productivity improvements by: ▪ Right level of access ▪ Use of radical access options (e.g. Balcombe) Be perceived as efficient: ▪ Service interruption is appropriate ▪ Minimising disruptive access ▪ Not being wasteful Optimising efficiency through the supply chain by: ▪ Moving the supply chain closer to the decision makers ▪ Commitment and certainty of workbank Delivery efficiency by appropriate use of smarter solutions as stakeholders are advocates of use of technology Deliver efficiency through improvement in operating model and organisation by: ▪ Devolution ▪ Route organisational change	Deliver increased capacity by: ▪ Digital Railway (TM, CDAS, ATO, ARS) ▪ Reigate 12-car ▪ Wallington turnback Deliver increased performance ▪ CARS ▪ Digital Railway (TM, CDAS, ATO, ARS) Journey time, service pattern and connectivity improvement: ▪ Access to East Kent and Hastings ▪ Dartford and Ebbsfleet ▪ Brighton to Southampton ▪ Maidstone Transform passenger experience at stations through enhancement investment ▪ Gatwick ▪ Victoria ▪ Lewisham, Peckham Rye, Denmark Hill Whole journey (E2E) Passenger Information During Disruption (PIDD) Intermodal collaboration Transform passenger experience at stations through Access for All (AfA) National Stations Improvement Programme investment Improve perception of passenger experience at stations by more effective communication of: ▪ Improved toilets ▪ Seating ▪ Retail ▪ Way finding ▪ Availability of staff ▪ WiFi ▪ Reduce vagrancy Ticket and fares policy, including behavioural aspects	Reduce level crossing risk by support for closures and upgrades Improve safety through removing risk from leaves and fallen trees Reduce trespassing ▪ Awareness of third rail Reduce suicide ▪ Improved mental health out-patient support Improved incident management through joint working and collaboration with other services Reduced number of bridge strikes Reduce passenger train interface risk Passenger/public change behaviour campaigns Reduce crime ▪ Against our people ▪ Against passengers ▪ Vandalism Maintaining good perception of industry safety leadership	Ambition to bring forward funding from CP7 for metallic structures and track Increase CP7 funding to allow South East Route to sustainably maintain asset base Investing to mitigate against risk associated with climate change Investing more for environmental improvement	Securing sufficient government funding by demonstrating clear, specific benefits Show business cases that demonstrate all options for third party funding have been explored Create an environment for third party investment ▪ Demonstrate our openness to business ▪ Deliver efficiently ▪ Provide sufficient incentive to invest ▪ Secure sufficient funding for Victoria, East Croydon, new stations, station improvements (e.g. Crawley)	Reduce our carbon footprint ▪ Encourage use of public transport Increase efficiency of train/conductor rail Lead on environmental sustainability ▪ Improve awareness of existing and forthcoming initiatives Reduce noise disruption Caring for the environment ▪ Recycling in delivery (e.g. waste management) ▪ Increasing recycling and reducing use of plastics Compliance with law ▪ Property acquisition ▪ Animal habitats ▪ Planning	Community engagement ▪ Public realm enhancements (e.g. London murals) ▪ Lineside neighbour engagement Engage with volunteer groups Modular housing for the homeless Delivery on Community Rail programme Maximise commercial opportunity of property for a positive impact on community Effective and socially responsible acquisitions of property (e.g. CARS) ▪ Gain understanding of rationale behind acquisitions ▪ Responsibility to deal with acquisitions sensitively Abide by regulatory rules

Figure 3-5 Business outcomes that are relevant for our stakeholders

We are currently working on Stage 3 of our stakeholder framework development, 'Understanding and mapping the stakeholders'. This involves drilling down into the detail to understand the impact we have on the stakeholders, what they want from us and the influence they have on what we are trying to achieve. This will help us to prioritise what we want to engage on, map stakeholders by project and develop the engagement plan for each stakeholder

Developing this stakeholder engagement framework forms part of our route communications strategy. This sets out a clear purpose for our communications team, which is to:

- Be a trusted advisor and the 'conscience' of the route, providing effective strategic communication counsel to the executive and business functions to influence their informed decision-making
- Build trust, confidence and challenge misconceptions among stakeholders and help the business make the case for continued sustained investment by demonstrating successful and efficient delivery for the benefit of passengers
- Develop a strategic narrative, tone of voice and key messages for agreed themes, consistent with national Network Rail brand
- Support the successful delivery of each stage of railway projects by designing and delivering impactful and efficient communications, supporting the business in engaging with stakeholders
- Develop and deliver internal and external campaigns for the route to drive safety and business performance, and support engagement
- Develop the capability of the wider business to communicate within the functions

3.4. What we will deliver

We expect to complete Stage 3 of our stakeholder management framework (Figure 3-3), 'Understanding and mapping stakeholders', by the beginning of CP6. The focus will then be on the remaining stages: defining stakeholder outcomes and developing the plans in Year 1, and then managing and reviewing those plans regularly thereafter.

From Year 2 we will start to develop the CP7 plan though customer and stakeholder workshops.

3.4.1. Completed Stakeholder Activity Summary

In 2018, we presented to a total of 73 stakeholders our plans for CP6 and showcased that we are 'Open for Business' for third party investment. At two events, one in Kent and one in Sussex, we delivered three workshops on:

- Day to Day operations and asset management
- Investment and putting the customer first
- Working in partnership to secure third-party investment

Guests responded well to technical subject matter presented in a straightforward way. They have reported that it helped them understand the pressures the route faces and has informed subsequent conversations with their colleagues. There was the opportunity for a frank discussion about plans and how Network Rail would communicate with other organisations during CP6.

There was a clear appetite for further such engagement regularly and we are currently developing our plans, including how to extend participation to other stakeholder groups.

We are also working with both our train operators GTR and Southeastern across both areas to improve the timeliness and accuracy of passenger information during disruption. This recognises that how we deal with delays when they occur is a primary source of dissatisfaction as reported in the National Rail Passenger Survey (NRPS). There are also safety aspects, as evidenced by the passenger self-evacuations from stranded trains in severe weather at Lewisham in March 2018, which better information to those stranded might have helped to prevent. Our passenger communications strategy is discussed in more detail in Section 5.4.

Kent

We issue a periodic newsletter to all MPs on Kent route. We also have a close relationship with colleagues from Southeastern and in January 2019 we held a joint relationship workshop, which focussed on their priorities and challenges for 2019/20, how we can work better together, and agreeing our joint scorecard measures.

Sussex

Since the issues following the introduction of the May 2018 timetable

change we have worked closely with colleagues from Govia Thameslink Railway (GTR) to keep stakeholders informed through face-to-face engagement and a joint weekly newsletter. This has continued throughout the planning and delivery of the December 2018 timetable change and we will consider whether joint newsletters should be an ongoing feature.

Another focus for joint working with GTR has been the launch in November 2018 of the public consultation for the Croydon Area Remodelling Scheme (CARS). We worked closely with key local stakeholders in the planning to ensure they were supportive. A total of 845 people or organisations responded to this first phase of consultation, with 90 per cent of all respondents supportive of the proposals. The next phase of consultation will be in summer 2019 and we will work closely with stakeholders throughout the Transport and Works Act process.

Our passenger communications strategy is discussed in more detail in Section 5.4.

3.5. Property Strategy

We are working to use the property within our estate to improve passenger experience as well as expanding the role that it plays in providing a sustainable funding position and supporting delivery of government targets for increasing availability of housing stock. The Route's objectives in support of this are to:

- Give clear and early client's requirements of rail schemes to the Property team acting as service provider to the Route
- Deliver collaborative Retail investments that lead to sustainable income growth and improvements to customer experience
- Support timely delivery of central targets for Government residential targets
- Attract third party investment into the railway with the close working of Business Development and Property
- Innovative commercial land uses to drive increased revenue streams through Land Strategy

Examples of the approach which we will continue and expand in CP6 in support of these objectives include:

- Moving from rented head office accommodation to a refurbished building already within the Route estate resulting in a saving of £2m per year during CP6
- Using development of land to help fund improved accommodation to make the Route a great place to work
- Building a land strategy to support the Croydon Area Re-modelling Scheme which integrates commercial development and compulsory acquisition while contributing to the development of the local area
- Developing master plans to turn Victoria and other locations into world class major stations that use retail and other commercial property opportunities to enhance the passenger experience
- Exploring innovative approaches to income generation

3.6. Enhancing the Network

While the regulatory settlement determines the funding available for operating, maintaining and renewing the South East Route, and the outcomes we will deliver, the service we provide to our passengers can also be improved through developments to the train service. It is essential that our regulatory commitments and changes to the service are managed in as joined up a way as practically possible.

The System Operator South East team will work as an integral part of the route, leading long term development of the train service and creating improved system resilience. The future timetable will be based on a train service specification that aims to deliver the optimum balance between performance, journey time, connectivity, and opportunity for engineering access.

The future train service is founded on:

- Ongoing refreshment of the Kent and Sussex Route studies via Continual Modular Strategic Planning to reflect passenger demand
- Consultation with Department for Transport (DfT), industry partners, sub regional transport bodies (Transport for London and Transport for South East) and a wide political spectrum
- Emerging DfT franchising policy
- Ongoing review of optimal utilisation of recent significant improvements in system capacity e.g. HS1, Thameslink, Crossrail, replacement of 1980s rolling stock with the class 700 fleet
- Investment in Traffic Management, capacity analysis and timetable technology capability systems to test the robustness of each published timetable

DfT investment in network capacity improvement will be governed via the Railway Network Enhancement Pipeline (RNEP):

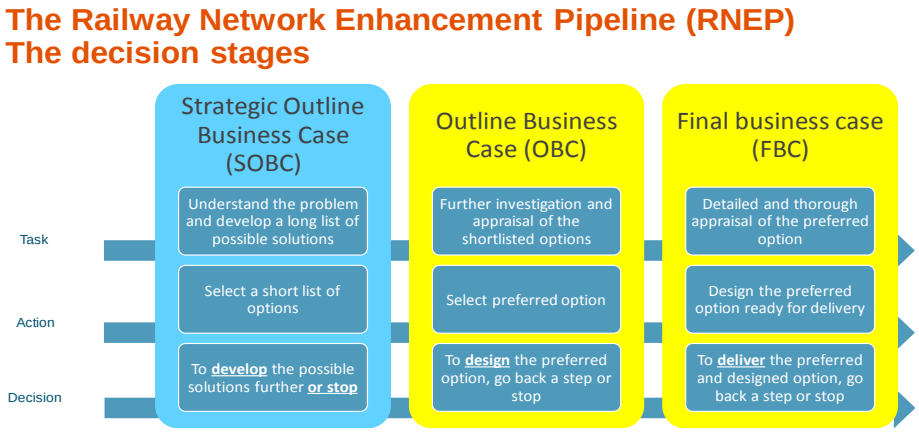


Figure 3-6 RNEP Decision Stages

3.7. Implementing Service Change

Changes to train service specification will be executed via new franchises / concessions and/or introduction of new rolling stock and/or specific service changes triggered through investment in network capacity. During CP6 new franchises will replace the existing Southeastern and Govia Thameslink Rail (GTR) franchises and Arriva Rail London concession.

3.8. Network Capacity Improvement Programme

From December 2018, we have been operating an additional 200 train services on South East Route (all off-peak and shoulder peak), and have collectively supported 36 additional (daytime) services due in May 2019. Much of this planning has been informed by stakeholder feedback and output from the January/February 2019 Passenger Demand Review so that we are delivering the capacity that our customers and passengers need.

There is ongoing work to establish readiness, contingency and transition plans to make sure operators are able to deliver a reliable service on the South East Route, but there remains work to be done to reduce uncertainty. We have developed a Network Capacity Improvement Programme that will seek funding in order to increase capacity in a way that delivers robust service, new fleet (on the Great Northern Metro route) and an increase in the overall number of train services.

Our Network Capacity Improvement Programme objectives are:

- To alleviate current overcrowding and meet forecast passenger demand by providing increases in peak capacity by 2040 in the following service groups:
  - Brighton Main Line 18%
  - Chatham and Tonbridge Main Lines 30%
  - Southeastern High Speed 55%
  - Suburban/Metro 40%
- To facilitate regional economic growth through the following
  - Reduction in journey time on services to Thanet, Hastings/Bexhill/ Eastbourne and West Sussex
  - Improved choice by offering competitive quality of rail services connecting expanding areas of housing and employment across the South East and neighbouring regions
- To improve end to end journey times and offer a significant improvement in customer experience by redeveloping Gatwick Airport and London Victoria stations, and other severely congested stations on the South East network
- To grow the proportion of passengers accessing Gatwick Airport by rail to 45%
- To enable growth of the freight market by improving capability of the network to cater for traffic via Port and construction aggregates.
- To significantly improve our capability to assess/test system capability and capacity
- To refresh the Kent and Sussex route studies via a programme of modular studies in response to emerging market trends

This in turn supports further enhancement proposed to remove known bottle necks in the Croydon area in CP7 and increase capacity on the main line routes between London and Brighton.

3.9. Business Development and 3rd Party Funding

As part of our approach to bringing forward much needed investment in our rail infrastructure, we have established a Business Development capability within the route to work closely with private investors to seek and secure further funding for the railways during CP6.

We will secure investment that contributes to the cost of upgrades already planned in order to reduce the cost to the taxpayer. Further to this we will also promote private investment in upgrades that are required but have fallen short of the priority criteria within the limited CP6 funding allocation. Without private funding and/or financing, these upgrades, which are often of critical importance at a local level but less so at a national or regional level, will not happen within CP6. This will include opportunities to bring forward any priority schemes scheduled for CP7.

The Business Development team will be the front door for investors / proposers to discuss opportunities for investment in rail. The key focus for Business Development in CP6 will be to attract investment that:

- improves the services offered to our passengers (customer service, security, safety, performance, reliability, Access for All)
- connects communities and makes them more accessible
- better integrates the railway in local plans / master plans to fit with wider local and regional strategy
- supports economic growth, housing growth targets and increases value of units for property developments
- allows stations to act as key hubs / be focal points of the community (including proposals for new stations)
- allows infrastructure / utilities to be routed more easily and at lesser cost e.g. laying fibre optic cabling to connect communities

Business Development will also focus on securing private investment in major complex programmes such as the Victoria Station Redevelopment and Croydon Area Remodelling Scheme. The key objective for these schemes will be to unlock options for local communities and the market to maximise the benefits of a once in a generation opportunity to redevelop these nationally significant sites.

3.10. Digital Railway

3.10.1. National Context

Network Rail is committed to the Digital Railway Strategy[9] and has completed first deployment projects in CP5 for knowledge building and lessons learned while developing plans for targeted deployment in the medium term (CP6 to mid-CP7) where there are compelling stand-alone business cases. A longer-term asset condition based delivery strategy for European Train Control System (ETCS) is being established tied to the notional asset life of command, control and signalling assets.

To inform national CP6 plans for Digital Railway investment, five Strategic Outline Business Cases[10] (SOBCs) were completed in 2017 to inform allocation of the £450 million National Productivity Investment Fund (NPIF) earmarked to accelerate deployment of a selection of digital schemes to deliver customer benefits by mid-CP6. A South East Route SOBC proposing completion of route wide Traffic Management to reduce reactionary delay was one of the five SOBCs presented, and offered the highest value for money of all the national cases. However, it is currently only funded to continue design development into CP6.

3.10.2. South East Route

The Thameslink Programme has completed implementation of the infrastructure for Automatic Train Operation (ATO) and ETCS and is continuing delivery of Traffic Management in South East Route which is required to support the expansion of Thameslink services when the frequency through central London increases from 22tph to 24tph in CP6. Knowledge and lessons learned from the Thameslink Programme schemes during CP5 are being used to inform development and delivery of the next phase of digital deployments in CP6.

The South East Route challenge through CP6 will continue to be the

[9]Digital Railway Strategy April 2018, https://cdn.networkrail.co.uk/wp-content/uploads/2018/05/Digital-Railway-Strategy.pdf

[10] These SOBCs represented an early stage of the investment decision framework (HMT's 'Green Book') as required in the memorandum of understanding agreed between Network Rail and the DfT signed on 23 March 2016.

reliability and performance of the high capacity Thameslink timetable and the Digital Railway programme should be a key component part in the delivery.

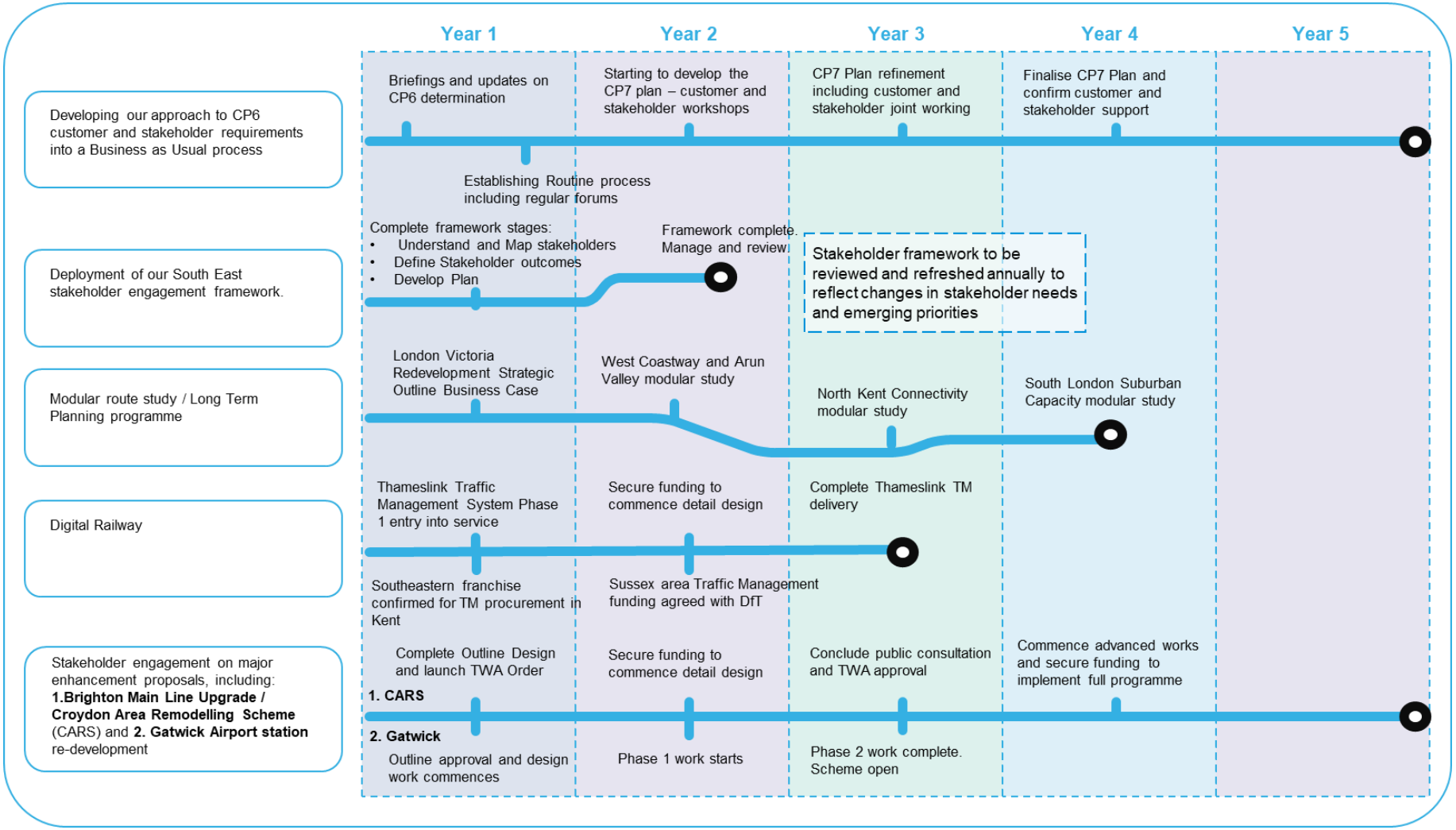
3.11. How we will measure success

We will assess ourselves each year against the agreed criteria developed by Network Rail's Planning and Regulation team, covering how we plan, implement and review our stakeholder engagement.

Stages 4 and 5 of our Stakeholder Engagement Framework will involve setting clear targets for key stakeholders for the priority business outcomes that we identify. These will identify where the key stakeholders are now, and where we need each of them to be, on a scale of Unaware – Aware - Understanding – Supporting – Advocating – Co-owning. For these priority projects we will track progress periodically and apply a RAG rating – Green where they are at the step on the scale that they we need them to be; Amber where they are one step away; and Red where we clearly need to engage more closely with them.

Ultimately of course the quality of our stakeholder engagement will be measured by whether or not we achieve the identified priority business outcomes.

3.12. Key Milestones



4. One performance problem, one plan

One performance problem, one plan

This element of F42 focuses on meeting performance objectives through:

- A shared vision for performance improvement
- The right sized organisation to deliver more maintenance and improved quality in our assets
- A dedicated response capability in our high value locations
- A focus on critical asset performance
- Analytics-led decision making

4.1. Context

Train performance is at the heart of our business and is key to delivering for passengers and freight customers. There have been significant challenges with train performance during CP5, however we are now seen as leading the way in delivering sustainable performance improvement. We believe our performance improvement is a result of the actions we have taken over the last two years. In the last quarter of 2018, we delivered record breaking results for Southeastern and GTR with periods 8, 9 and 10 recording the best ever Right Time punctuality for the respective periods since the franchises began.

We operate the most complex and congested railway in the country, we have continued to work collaboratively with our train operators to demonstrate our ability to understand and target improvement in key areas causing train delay, which resulted in the South East Route being removed from the Regulatory escalator for GTR and Southeastern performance, as well as Network Management attribution.

As we near the end of CP5 we are ahead of our scorecard Right Time Moving Annual Average (MAA) targets for both GTR and Southeastern. We have committed to drive further improvement in train performance next year which is above that set out in our CP6 Strategic Business Plan by using the scorecard taper to set a realistic target but incentivise out performance. We hold two thoughts in our mind in our journey to improve performance: firstly, whilst maintaining a healthy dissatisfaction with our performance and recognising it is not at the level our passengers rightly deserve; secondly, we still recognise our achievements over the last couple of years, giving us confidence that we can continue to deliver sustainable improvement. The need for a robust and defendable plan is vital to prevent a never-ending knee jerk reaction to challenges by many highly influential industry stakeholders who have strongly held views about what needs to be done to fix performance problems.

Our vision is that by the end of CP7, we will efficiently and sustainably be “Proud to be running the UK’s most successful metro-style railway”. The vision means provision of a service which is:

- Safe;
- Efficient;
- Sustainable;
- Dependable;
- Punctual; and
- Frequent

As noted previously, this vision is supported by our Change Programme, Framework 42. The one performance problem, one plan workstream has clear goals that align to phased delivery of the vision including ‘getting the basics right’ and ‘becoming brilliant at the basics’. This is driven by our unique data-led galaxy plan (example shown in Figure 4.1), which visualises all causes of train delay, and critically represents a digestible, single version of the truth.

We have successfully implemented joint performance teams with both GTR and Southeastern, with a single dedicated Head of Performance aligned to each operator who is accountable for driving performance improvement across the whole system.

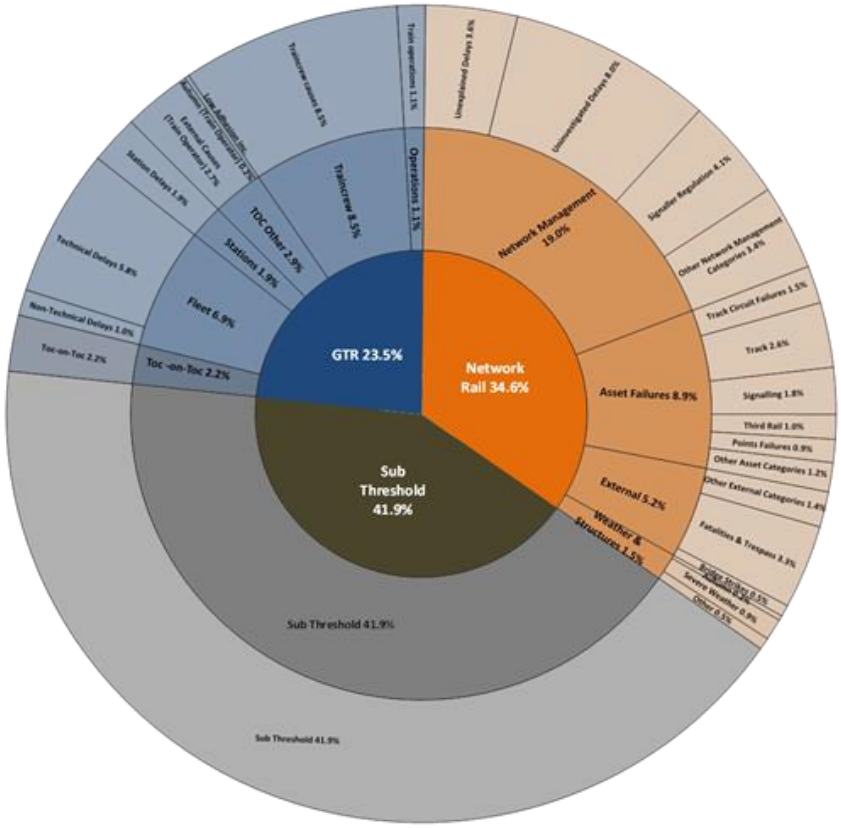


Figure 4-1 - Example of a Performance Galaxy Plan

4.2. Our Train Performance Strategy

Consistently delivering strong train performance for our passengers requires all parts of the 'railway system' to align and work together. During CP6 we will continue to build the closest possible relationships with our train and freight operator customers which will undoubtedly deliver further benefits.

Building on our successes, we will continue to relentlessly focus on driving out all causes of train delay to improve punctuality. There are areas of the South East Route, such as the 0-8 mile area from London where the intensity of the train service results in even a small incident causing huge delays and disruption to our passengers.

We will continue to use Right Time as the primary measure of punctuality recognising that on a high frequency railway a 5-minute PPM tolerance is rightly not acceptable to our passengers. Average passenger Lateness and cancellations will also be key scorecard metrics to monitor and reduce 'high impact' incidents and achieve a balanced approach between cancellations and service recovery. We have worked with GTR and Southeastern to develop a suite of cross-industry measures with particular focus on leading rather than lagging measures.

4.3. Developing Our Deeper Understanding of Delays

During CP5, our plans were predominately focused on reducing delays caused by factors such as infrastructure/asset, fleet, train crew, weather and external factors. The grey area of galaxy (Figure 4.1) shows that a significant amount of overall delay is not currently attributed as it falls below the three-minute attribution threshold and as a result the root cause is not understood. This sub-threshold delay is the result of both small and large incidents causing delay that are difficult to measure. By gathering more information through a combination of more data sources, the issues and root causes can be made increasingly transparent.

Over the last 18 months, we have invested in and continue to develop cutting edge analytical tools such as Quartz, COSMOS and Critical Assets Hub that allow us to better understand causes of delay, including subthreshold delay. There have been some notable successes with front line teams using the Quartz dwell time dashboard to identify and reduce subthreshold delay at key stations but there is a huge amount still to do.

We are working with Southeastern and the University of Middlesex to harness real time on-train information to provide greater granularity of factors such as driving styles (loss in running) and extended station dwell times that are currently unavailable from wider industry reporting systems.

During CP6, we will continue to develop platforms that bring together cross-industry data to improve our understanding of the root causes of subthreshold delay, allowing it to be systematically eliminated. Our ambition

is by the end of CP6 to have no more than 5% of overall delay allocated to the subthreshold category and to have significantly shrunk the overall size of the galaxy.

4.4. Our Asset Reliability

Strong infrastructure asset reliability is a key component in delivering a punctual train service - our Asset Management strategy covering maintenance and renewals is discussed in Section 6 Excellent asset management. We have enhanced the capacity and capability within our maintenance organisation by recruiting a dedicated Head of Track Asset and a Head of Signalling & Electrification Asset. These new roles, that are unique to the South East Route, provide a strong link between maintenance and asset management, and are focused on prioritising targeted short to medium term asset reliability interventions.

In CP6, we will drive a reduction in the amount of reactive maintenance, transitioning to more focused, proactive, preventative maintenance. Our aim is to deliver more systematic targeted interventions while continuing to deliver high quality maintenance and inspection. To support this approach the volume of planned maintenance has been increased during CP6 particularly for our track and lineside assets.

Remote Condition Monitoring of assets has been progressively increased during CP5 and we are on target to achieve 100% of mainline points being monitored by the end of this year. In CP6, we will harness additional benefit from this Remote Condition Monitoring as we exploit the data it provides by removing the need to undertake track side maintenance on some assets by deploying Reliability Centred Maintenance methodology in the locally driven programme called RCM^2.

Technology is an important element of enhancing our maintenance capability and effectiveness. During CP6 we will complete the roll out of Plain Line Pattern Recognition and Eddy Current technology which provides an enhanced view of our asset condition and supports our transition to greater targeted asset interventions. The South East will develop the capability and productivity of our two Mobile Maintenance Trains through enhancements such as the train not being required to work in a possession, and through working with the adjacent line open, automating the isolation process and delivering increased functionality such as an inbuilt ballast rail vacuum and welding capability. Demonstrable efficient delivery with our current two machines will allow a business case to be generated for investment in further Mobile Maintenance Trains.

4.5. Our External Delays

External delay, in particular route crime, in the South East has presented a significant challenge, and a rising trend through CP5. We have recently implemented a senior 'Head of External Delay' role, who is already successfully drawing on his previous experience as a police superintendent to drive targeted improvements through the introduction of a 4-tiered operating model (Prevention, Prediction, Response and Recovery). Strong collaborative relationships have been built with industry partners and stakeholders through the establishment of an external delay steering group with a remit to target both Network Rail and Train Operator factors which cause external delay.

To support continued improvement, we have funded a dedicated team of seven British Transport Police officers to enhance the resources available to the route crime team, providing additional depth in terms of focus and follow up. For example, working with local schools and communities to proactively prevent route crime rather than just respond to it. The delivery of an ambitious external delay reduction plan is a key deliverable on the South East Route scorecard in CP6.

4.6. Our Operating Strategy

The operational capability is fundamental to running a safe and punctual railway for our passengers. Our CP6 workstreams combine the delivery of new technology and the development of our people. Key areas of focus are:

- Automatic Route Setting and Traffic Management
- Electrical Control/SCADA
- Route Control
- Incident Management

4.6.1. Traffic Management

Initially, Traffic Management in the South East Route was specified to support the expansion of Thameslink services, and increases in the train frequency through central London towards when the service reaches 24 trains per hour through the Thameslink core. Informed by the subsequently developed South East Route Strategic Outline Business Case, a combination of Traffic Management and Connected Driver Advisory System (CDAS) is further proposed across the Route, to improve the timetable for the day, support train running decision making and reduce the high level of reactionary delay in the medium term. Development work is ongoing through 2019 to secure funding to proceed with plans to extend Thameslink Traffic Management across the whole of Sussex, and we will also establish if procurement of traffic management for the Kent area will be through the Southeastern Franchise.

4.6.2. Electrical Control / SCADA

The South East Route's five electrical control rooms (Lewisham, Paddock Wood, Canterbury, Selhurst and Brighton) form part of the national programme to update the life expired SCADA assets at 16 control centres during the first two years of CP6. Although the primary driver is asset renewal it also unlocks future benefits such as electronic securing of Negative Short-Circuiting Devices which will not only enable a step change in electrical safety but also improved access efficiency.

4.6.3. Route Control

The transformation packages focus on process mapping, waste elimination, duplication of tasks, current and future system utilisation and an optimised desk layout and information systems such as the use of video walls. There have been significant organisational changes on the control floor at Three Bridges Rail Operating Centre, and much work has already been done to re-organise the layout of the control desks to improve the overall flow of information, improving our ability to make quick decisions on network control. However, it is apparent that the current arrangements do not give optimum support to the required communication structures and further improvements can be made. It is recognised that there is significant scope for improvement and there is an aspiration to transform Three Bridges control into a world-class centre of excellence.

The plan focuses on three key phases:

- Fit for purpose facility
- One team
- Future Layout

This is illustrated further in Figure 4-2 below.

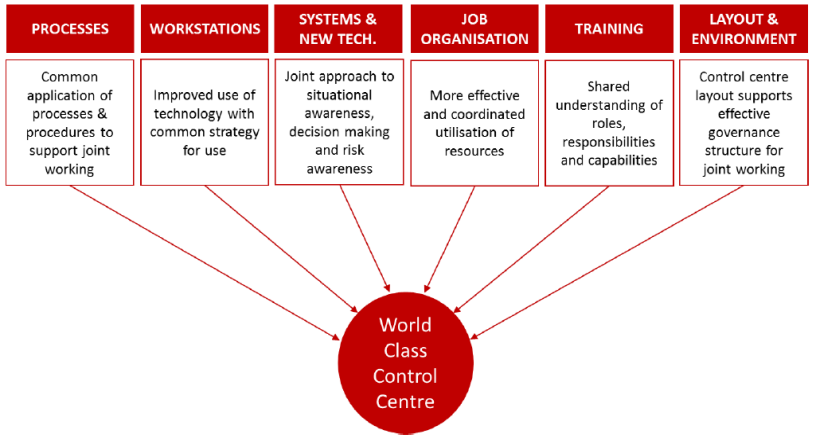


Figure 4-2 Route Control Transformation Programme

Re-location of the Kent Integrated Control Centre (KICC)

There is a requirement to move the KICC out of Friars Bridge Court due to Southeastern's lease expiring in September 2019. The KICC is business critical and fundamental to the South East Route. We will use this opportunity to improve processes and communication flow between the KICC and our operational teams.

4.7. Incident Response

Delivering a safe, timely and consistent response to incidents is critical to minimising the impact of disruption to our passengers.

The route has completed a deep dive of all existing Command & Control processes and training in conjunction with our train operators and we have identified the following areas for improvement:

- Network Rail and Train Operator processes
- Training and competency
- Real-time simulation and practice

At the end of CP5 we are in the process of rolling out a new Incident Management System which will simplify the control processes associated with the hundreds of incidents which occur every week. While this is a positive step forward there is still significant development required in CP6 to realise the full benefits, particularly around interfacing with other industry systems.

Airwave radio has been deployed in Kent and provides direct communication from control to operational staff on the ground during incidents. This direct communication removes the need for multiple telephone calls and as a result improves situational awareness and speeds up decision making. Once the protocols and training have been tested the technology will be extended to the operations team across the whole route. Future developments in CP6 will extend to maintenance responders and technical incident leads.

The Incident Officer organisation was introduced in CP5 and supports our journey of delivering excellence in incident management. The shape and structure of the Incident Officer organisation will be considered as part of the review of the two South East control centres noted in the previous section.

Technical support and guidance during incidents is key to supporting our front-line teams in identifying and rectifying faults in a timely manner. In CP5 this support is delivered out of office hours by on-call managers. During CP6 we will review how we support the technical response to incidents (particularly on signalling assets) reflecting the intense 24/7 nature of the railway that we run.

A core focus for CP6 will be our people, so that they have the competence and confidence to carry out their work right first time every time. For example, to deliver high quality maintenance and fault response we must deliver a blend of class room training and ongoing ‘practice’ using realistic simulation environments. We have seen notable success in this area with the London Bridge signalling maintenance team regularly using “sand pit” areas to practice and hone their skills. This approach will be further developed in CP6 replicating “sandpits” at locations across the Route.

Figure 4-3 London Bridge Signalling Teams practicing using the “Sandpit” simulation areas

4.8. Planning Transformation

We recognise that access to work on our infrastructure is a valuable commodity. We must use it efficiently to deliver our essential programme of maintenance and renewals while minimising the disruption to our passengers. Our CP6 access strategy is set out in Section 6.8: Access Strategy and Plans.

In CP5 we have started on our journey to transform planning and this will continue throughout CP6. We have completed our restructure of the route and maintenance planning teams, splitting the route into five local geographical areas and appointing a single senior controlling mind for each area to optimise all activities requiring infrastructure access.

Throughout CP6 we will focus on five key workstreams (People, Process, Safety, Efficiencies & Reporting and Technology) each targeting improvements in access planning and the delivery of planned work. We are working closely with the company wide Access Optimisation Programme to make sure that our plans are aligned and we share/embrace good practice.

4.9. Safer and Faster Isolation

The current methodology of isolating the 3rd rail DC traction power system to safely undertake work on the infrastructure is slow, labour intensive and requires people to attend multiple trackside locations often in the dark carrying awkward equipment increasing the risk of accident and injury. The Safer and Faster Isolation programme is transformational both in terms of

safety and efficiency. As shown on the map below, during CP5 we commenced the installation of new technology (Negative Short Circuit Devices) which, supported by the upgrade of the SCADA electrical control system in CP6, will enable traction system isolations to be implemented remotely without the requirement for staff to go trackside. In addition to improving safety this will significantly increase productivity of teams working on the infrastructure by increasing the amount of working time.

Whilst we are not fully funded for this currently, our ambition is that by the end of CP6, all 3rd rail mainline isolations on the South East Route will be taken using Negative Short Circuit Devices remotely operated.

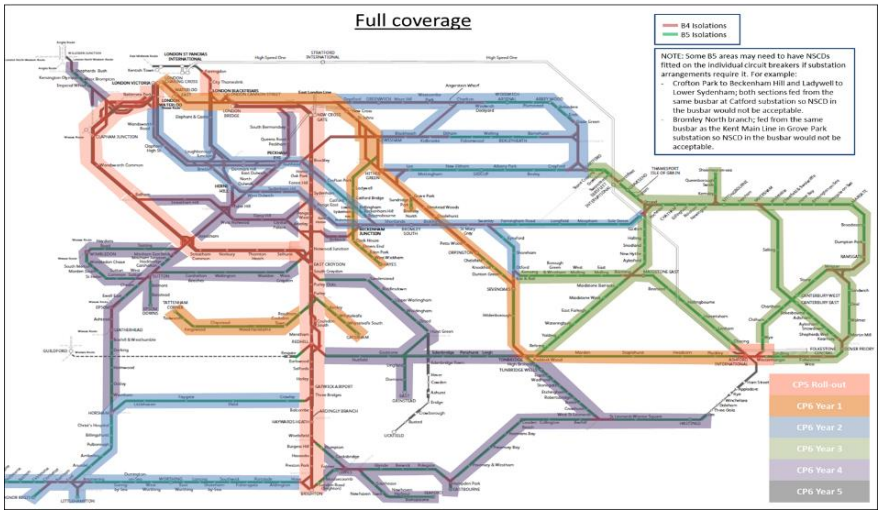


Figure 4.9 Negative Short Circuit Devices Programme

4.10. Our People

All of our plans are underpinned by developing our people and making the South East Route a great place to work.

We need to attract, recruit and develop high calibre people to not only deliver in the short term but to make sure we have strong succession planning for the future.

A full summary of our Framework 42 workstream ‘A great place to work’ can be found in Section 10.

4.11. Quality Improvement

The Quality Improvement Programme (QIP) is key to supporting the workstreams highlighted in the previous sections. Across operations, maintenance and planning we have identified key outcomes and processes to develop as a priority in phase 2 of the programme. Improving our processes and key controls will improve consistency of delivery to our passengers and enhance our first line assurance. Full details of the QIP programme are contained within Section 8 of this report

An example of the key outcomes and process identified in phase 1 are shown below:

Planning

Outcomes	Priority Processes	QIP Next Steps
1) Negotiate the required access to deliver our work bank within the constraints of schedule 4 budgets.	1) **Engineering Access Planning 1 (EAS) T-2 years + to T-40 weeks**	1) Phase 2 to commence in Q1 19/20
2) Optimise the use of available access to deliver the required; maintenance, renewals and enhancements.	2) **Managing late changes** to planned activities 3) **Deconfliction Process** (NR Delivery Teams)	2) Planning for Phase 2 to commence in next few weeks 3) Planning for Phase 2 to commence in next few weeks

Operations

Outcomes	Priority Processes	QIP Next Steps
1) Lead, develop and manage a team of highly qualified and experienced technical professionals and safety critical frontline employees, to support the safe operation of train services. .	1) **LOM Management of Signallers** (including Quality Assurance in Operational Competence and Monitoring of Spoken Communications) 2) **Significant Operational Business Change** (e.g signal box to ROC, Electrical Control Rooms)	1) Phase 2 to commence in Q2 19/20 2) Phase 2 to commence in Q3 19/20
2) Operate the system for train services to support passenger safety and the achievement of train performance targets.	**Not within scope of phase 2**	
3) Manage operational and infrastructure incidents, creating a system to demonstrate all incidents are dealt with at the appropriate level within the organisation through to resolution or mitigation.	3) **Incident Management (command & control)**	3) Phase 2 to commence in Q1 19/20
4) To prevent occurrence / re-occurrence of operational incidents.	4) **Trespass prevention** (Management of Route Crime)	4) Commence scope planning in the next few weeks

4.12. How we will measure success

Performance will be measured using several metrics on the route scorecard. In addition to the traditional output measures of performance such as Right Time, PPM and Cancellations we have also worked closely with our customers to develop some leading measures of train performance and maintenance quality.

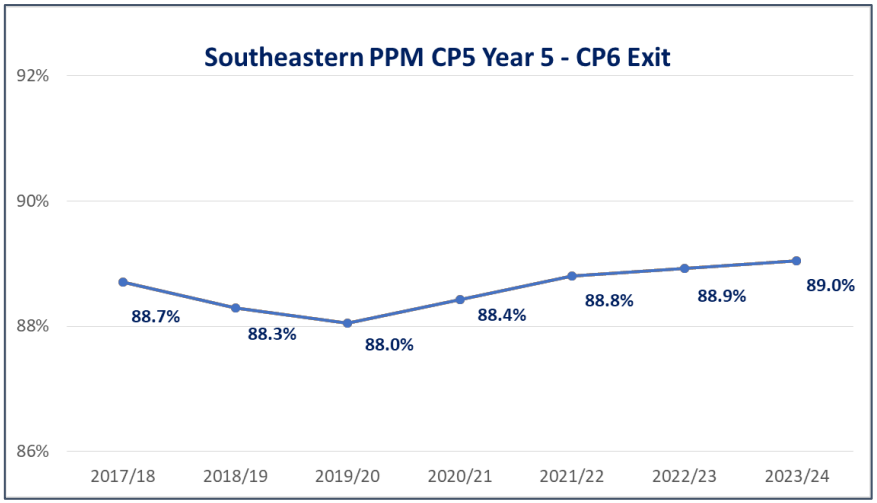
We have worked collaboratively with our customers to use the route scorecard taper (Baseline, Target, Better Than) to incentivise out-performance of the 50% confidence trajectory set out in the Strategic Business Plan (shown in the graphs below). Our joint objective with our customers is to deliver the best possible train service for our passengers. Scorecard targets will be agreed on a year by year basis throughout CP6 using the best information available at the time.

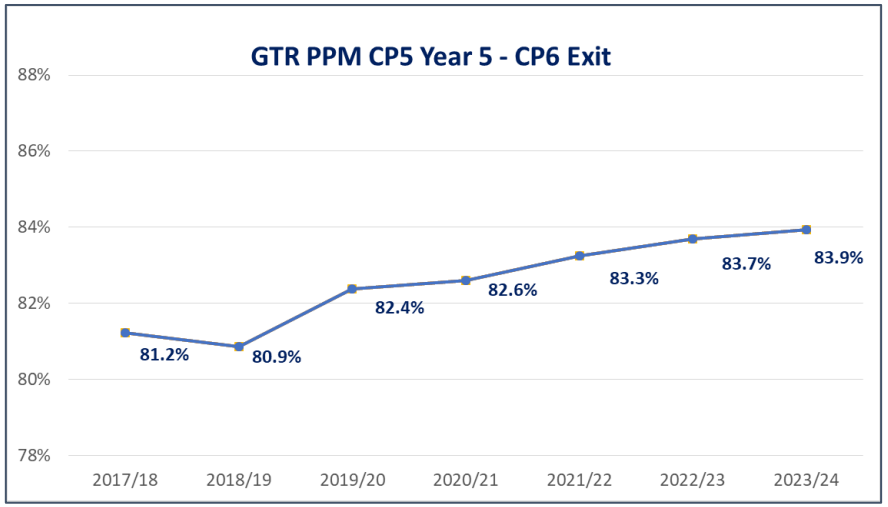
The table below shows the performance targets agreed for year 1 of CP6. The targets are expressed in Right Time with these number derived from PPM using a regression model.

Train Performance	Baseline	Target	Better than Target
Right Time MAA Final Destination Only (GTR)	55.6%	57.2%	58.8%
Right Time MAA Final Destination Only (LSER)	64.9%	65.7%	66.4%

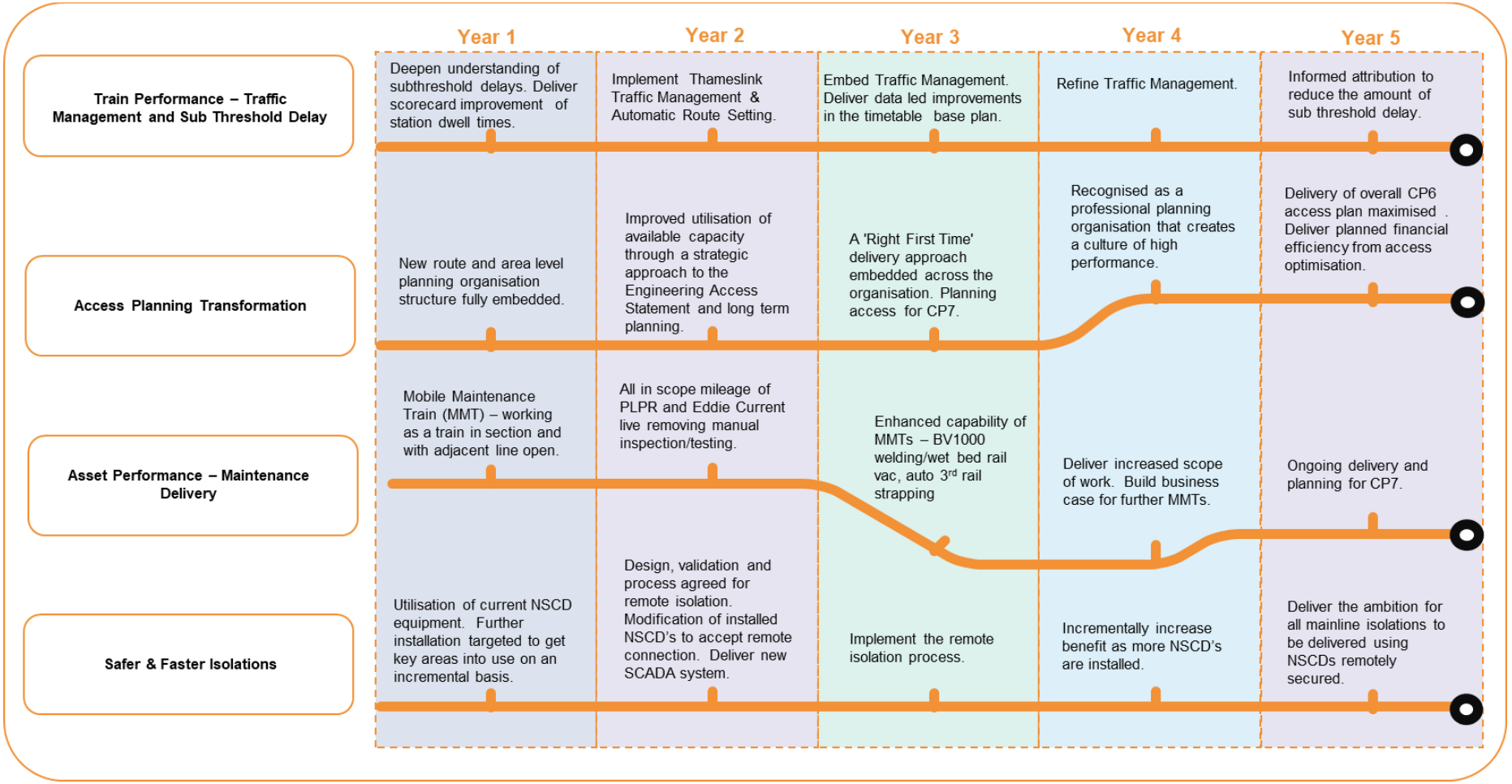
We will also use the new regulatory measure for train performance, CRM-P. This is the new standardised route measure for train performance, introduced for CP6. It is defined as the annual delay to passenger trains in service due to incidents attributed to Network Rail occurring within the route boundary, normalised by the actual annual distance travelled by passenger trains in service within that route. The benefit of CRM-P is that it gives the route greater visibility of its contribution to train service performance compared to PPM and Right Time, which are sensitive to factors outside of the route's direct control.

Our train performance forecasts for Southeastern and GTR are presented below. Whilst CRM-P is our regulatory measure and we will use improved measures such as Right Time with our TOC partners, these forecasts are presented in PPM as it remains the most widely understood measure for now.


Southeastern PPM CP5 Year 5 - CP6 Exit
92%
90%
88%
86%
88.7%
88.3%
88.0%
88.4%
88.8%
88.9%
89.0%
2017/18
2018/19
2019/20
2020/21
2021/22
2022/23
2023/24


GTR PPM CP5 Year 5 - CP6 Exit
88%
86%
84%
82%
80%
78%
81.2%
80.9%
82.4%
82.6%
83.3%
83.7%
83.9%
2017/18
2018/19
2019/20
2020/21
2021/22
2022/23
2023/24

4.13. Milestones



5. Improving passenger experience

Improving passenger experience

This element of F42 focuses on our passengers. Our organisation exist for passengers, and so we will put passenger experience at the heart of everything we do.

5.1. Context

5.1.1. Introduction

The South East Route has an impact on almost 500 million passenger journeys every year, with that number forecast to grow throughout CP6. We are committed to delivering a plan that centres around our passengers, putting them at the heart of everything we do and focusing on improvements which will make a difference to their journey. Whilst train performance is a key driver for passenger satisfaction, as discussed in the previous section, there is more we can do to improve passenger satisfaction.

Experiences along the passenger journey, and the interactions they have on the way, encompass many aspects which influence passenger satisfaction. These include elements such as how punctual and reliable the train service is, to the availability of seating on the train, and the experience of navigating through the station, to name but a few.

We have introduced a Transformation Programme, working alongside our Managed Stations team[11]. The programme is focused on implementing transformational change and will enable our teams to place the passenger at the heart of everything we do. We are using data and insights from passengers to drive decision making and steer projects in the direction that will have the greatest impact on the passenger.

The transformation team is working closely with the train operator to establish the different passenger types. This journey mapping exercise is being designed and rolled out to understand where we are getting things right and wrong for different passenger types. This will identify passenger priorities which will be embedded within the Route, giving our Route teams a clear understanding of the needs of our passengers and how the decisions we make impact them.

Looking through the lens of a passenger, we know that they do not recognise the difference in responsibilities between the organisations which operate the railway (Network Rail, Train Operating Companies, TfL). Our passengers are largely concerned with having a reliable, safe and accessible transport service to complete their journey and expect the same service from all organisations. Therefore, we will focus on delivering improvements in CP6 which will promote closer working with our industry partners and further collaboration to create an integrated and seamless journey. This will further develop the successful work we have already completed with the train operators through the creation of Team Victoria, where passenger satisfaction has improved, and is setting the benchmark for collaborative working across Network Rail.

To deliver a plan in CP6 that centres on the passenger, we will be introducing the role of Passenger Services Director to the Route. This role will make sure our Executive team and whole organisation are focused on making passenger centric improvements.

5.1.2. National Rail Passenger Survey

Throughout CP5 the South East Route has used the National Rail Passenger Survey (NRPS) as a measure of passenger experience. This survey assesses passenger satisfaction scores across the rail industry.

The NRPS scores for Southeastern and GTR are shown in Figure 5-1 and are formed of many drivers – these are shown in Figure 5-2 and set out the key elements that impact on passenger NRPS scores.

Punctuality and reliability are one of the main influences of passenger

[11] The Managed Stations are London Victoria, London Bridge, Cannon Street and Charing Cross; these are stations where Network Rail is the Station Facilities Operator with specific responsibilities (e.g. health and safety).

satisfaction levels, as demonstrated by Figure 5-1 which displays NRPS scores which correlate to changes in train performance levels. Therefore delivering improved train performance is key to improving passenger satisfaction.

Through the Framework 42 programme, punctuality and reliability are specifically addressed under our One performance problem, one plan workstream to deliver a punctual, dependable and frequent service for our passengers. This will deliver an improved train performance element of NRPS.

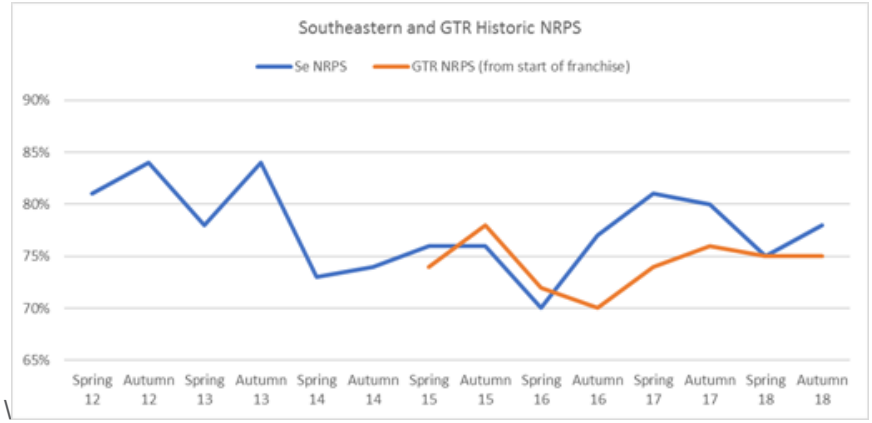


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Figure 5-1 CP5 NRPS Scores

The provision of information to passengers during disruption will be a strong focus for the Route and train operators going forward. A joint workstream has been created with Network Rail and Train Operators working collaboratively to link information between on-train, control centres and stations to enable quick and seamless information transfer to passengers.

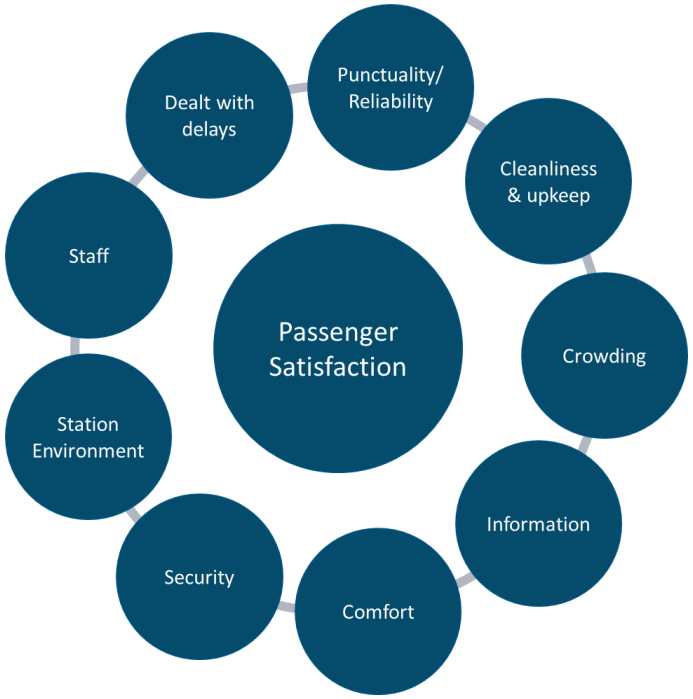


Figure 5-2 CP5 NRPS Drivers for overall satisfaction

The drivers of passenger satisfaction that we are fully in control of are centred on our managed stations. There are 175 million people passing through Victoria, London Bridge, Charing Cross and Cannon St annually, meaning delivering improved satisfaction at our stations is key. Overall, satisfaction levels at our managed stations have been poor during the first 4 years of CP5 and well below the national level.

However, we have seen a significant improvement in the last two surveys, indicating the transformational work being carried out by the station teams is beginning to have a positive impact. The combined NRPS results for our stations during the Spring and Autumn 2018 surveys were the best results experienced in CP5, as shown in Figure 5-3.

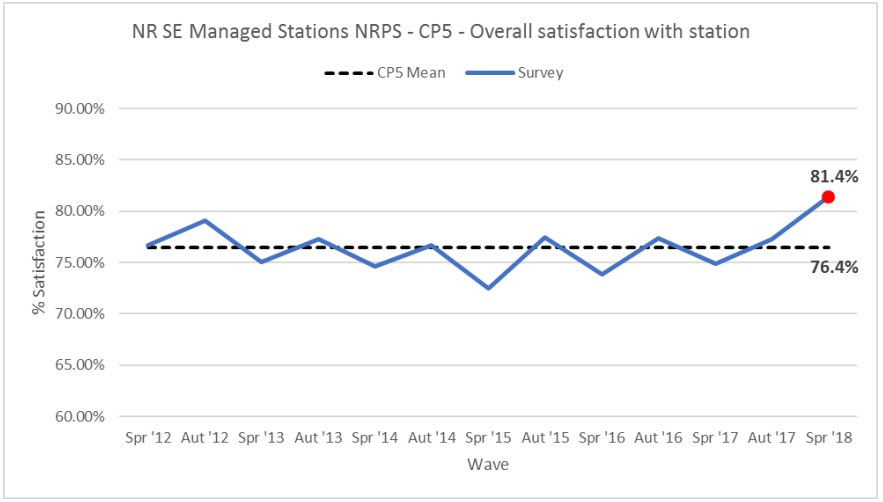


Figure 5-3 CP5 NRPS Managed Station Scores

5.1.3. Passenger hierarchy of needs

We have identified a hierarchy of needs for our passengers within the Route managed stations. Satisfying these needs will enable us to deliver enhanced passenger experience and satisfaction scores. Figure 5-4 describes the different aspects we should be delivering at each level.

Our CP6 plan has identified a programme of works which will meet our passengers' basic needs, help them to travel with care and ease and surprise and delight them while travelling through our stations.

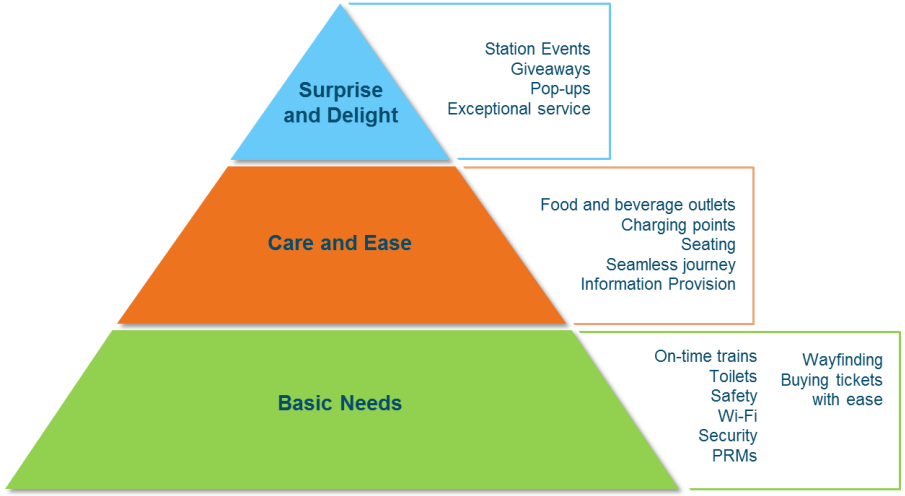


Figure 5-4 Passenger hierarchy of needs

5.2. What we will deliver

The CP6 passenger experience plan at our managed stations has been developed jointly with our train operators. Passenger insight data has been used to develop the plan. We will be further developing how we collect and measure passenger feedback throughout CP6 and continuously search for new methods to address their future requirements.

5.2.1. Being brilliant at the basics

As identified through the passenger hierarchy of needs and supported by NRPS, there is a set of basic needs that the passenger expects to provide the minimum level of satisfaction to their journey.

- **Seating** – The availability of seating has been highlighted as a need for improvement at all our stations. We will be installing new seating at London Bridge and Victoria early in CP6 with Cannon Street and Charing Cross also to get new seating by the end of CP6
- **Cleaning** – Providing a clean environment for passengers is key. Satisfaction scores are currently good for the cleanliness of our stations and we must maintain this throughout CP6 by continuing to

manage the cleaning contract effectively
- **Station Maintenance** – We will be developing a full maintenance strategy for our passenger facing assets such as lifts and escalators
- **Wi-Fi** – The use of digital technology and the requirement for Wi-Fi is now seen as a basic need for the modern traveller. Our station colleagues need to be able to access a network to receive updates which they can use to inform passengers. The ambition in CP6 will be to attempt to secure funding to improve Wi-Fi availability
- **Toilets** – The toilet facilities in our stations have been identified as not being at an acceptable standard. We are delivering a project early in CP6 to refurbish the toilets at London Bridge and Victoria. These facilities will continue to be free for passengers to use
- **Wayfinding** – Network Rail has a national programme to roll out new innovative wayfinding at all stations which we will link into with the ambition of improving wayfinding at all stations
- **Safe and Secure** – This is paramount for passengers and colleagues. There are specific requirements the station will comply with under the National Rail Security Programme as well as our own initiatives to guarantee passenger and colleague safety

We recognise the importance of these basic needs and it is our ambition to make sure these are available at our managed stations.

5.3. Transformational workstreams

To deliver the care and ease, and surprise and delight elements of the passenger hierarchy of needs, we have developed three work streams.

5.3.1. People workstream

Alliance: Based on data and feedback we have identified that working collaboratively with our train operating companies is key to offering a unified approach to the passenger experience.

To bring this to life, we will be creating a unified team approach across our managed stations. The passenger will see us as one team, regardless of who we are employed by.

Short term:

- Team Victoria embed new ways of working which will include the delivery of joint training plans
- Cannon Street, London Bridge and Charing Cross will adopt this initial concept and lessons learned
- By the first year of CP6 all station teams will be in their new uniform, which will make the identification of colleagues easy

Long term:

We will be designing a full deep alliance structure in collaboration with all our train operating company customers. Our methodology is to:

- Understand and build the proposals with the passenger needs in mind
- Create and implement a robust governance structure
- Design a range of options using a risk-based approach
- Make sure teams are engaged throughout the process

A great place to work, where our people feel valued

- We believe that training and competency of our people has a direct impact on the journeys of our passengers. By continuously developing our teams and enabling them to perform to their highest potential, passengers will receive a high level of service from knowledgeable and confident colleagues
- At the start of CP6, we will introduce a dedicated station training and competence manager role. With this role in place we will have the in-house capability to develop a training needs analysis for all colleagues and tailor training accordingly
- We will embark on a journey of joint customer service training for all teams within our stations. The content of this will be shaped by the findings from passenger journey mapping to aid our teams to better respond to passengers with varying needs

Volunteering

In CP5 we experienced a positive response to staff volunteering within our Route managed stations. We acknowledge that we need a more structured programme to attract a wider pool of Route employees to volunteer.

We will develop a volunteering process and programme that incorporates not just the opportunity to volunteer within our managed stations but also the train operator managed stations, lending a supporting hand to our industry partners.

Through creating this process, it is envisaged that our passengers will see

the following benefits:

- Increased availability of staff
- Timely, reliable and accurate information
- Proactive and friendly service, particularly in times of disruption

5.3.2. Passenger journey workstream

Passenger journey mapping

Passenger journey mapping will be conducted in collaboration with the train operators to identify the passenger types travelling through our stations and where we are getting it right or wrong for them. This will help us identify our passenger priorities which will be embedded across the Route to make sure all teams consider the impact on the passenger when developing projects.

This piece of work is one of the most important drivers for all the other workstreams as it will help us guide our projects in a way which delivers passenger satisfaction for all passenger types.

Access for all

Our stations should be a place of seamless and integrated travel for all passengers travelling through them, whether it is commuting or travelling for leisure. We will be rolling out a programme in CP6 which identifies the areas where we are not delivering this for passengers with restricted movement, including disabled passengers, and create a plan which addresses this. It is important that we consider both visible and non-visible disabilities. Our final goal is that we can say our stations are easily accessible to everyone.

Joint scorecard

A joint scorecard with our train operators will be introduced so that all teams are aligned to the same KPIs focusing on passenger priorities.

Homelessness

Homelessness has been highlighted by passengers as an issue within our stations. We are committed to supporting the homeless community by creating a sustainable solution to address the issue. We will be trialling a joint approach with a local charity via an outreach programme in our managed stations. Not only will this programme work with the homeless community, it will also support with training colleagues.

5.3.3. Strategy workstream

Future passenger demand

Understanding the current and forecasted future passenger demand for rail travel is key for steering all project development and investment during the Control Period. The demand at our stations will have an impact on project development, facilities in stations, managing crowding and passenger flows for safety, and understanding our impact on other transport links in London. We will be developing our stations to be fit for the future demand.

Passenger needs

Understanding passenger demand and the increases to capacity the Route will be delivering through the Capacity Improvement Programme will have an impact on the current and future needs of passengers at our stations. To deliver enhanced passenger experience we need to understand passenger needs during business as usual and during disruption now and in the future. We will be developing and implementing a strategy which provides the following for both:

- Seamless communications with passengers to provide the information they need to complete their journey
- Collecting feedback from passengers and actioning it
- Engaging with third party travel applications to influence them to make sure there is a focus on passenger needs
- Considers passenger welfare (free water, snacks etc.)
- Develop better methods for pre-warning passengers of disruption before they travel

Technology advancements

We will utilise the rapid advancements in technology to deliver a better passenger experience and will look at how we can bring technology into our stations, while remaining responsive to future advancements as they happen. As stated above, Wi-Fi is a basic need for passengers and it will also enable us to deliver more technology advancements in the future.

We will also be utilising technology to improve the passenger experience. We will be working with Microsoft to develop technology solutions for the passenger benefit. We will also be utilising technology to better connect our Service Assistants within the station to live control updates which will allow them to better inform passengers during times of disruption. We also have

a project to deliver better information at stations via digital information screens to give the passenger the option of finding the information for themselves.

Station events

To deliver surprise and delight, experiential sites at our stations will be utilised to enhance our passengers' journey. We will do this by marketing the sites to brands to promote their products and services while at the same time providing our passengers with a give-away or form of entertainment. We will also continue to engage with and support local community groups and projects to link our passengers into the local environment at our stations e.g. choirs, art exhibitions, and amateur dramatic performances.

5.4. Passenger communications strategy

Communication to passengers is grouped into three categories:

- Business as usual –Information on the published timetable
- Planned disruption – Advanced warnings of planned amendments to the timetable
- Unplanned disruption – Operational amendments to the timetable on the day due to network incidents

As a result, different channels and types of messages need to be carefully considered and selected appropriate to the outcome intended.

In collaboration with the train operators we are developing a plan to address communication channels for the three categories of information so that passengers receive information as soon as possible and that there is one version of the truth. This will make sure that we are addressing passenger needs by providing the right information at the right point along their journey.

There are generally three stages of the journey where passengers need to receive information to allow them sufficient time to amend their journey:

1. Pre-Journey
2. At the station
3. On-board the train

As far as practically possible we want passengers to be pre-warned of changes to the timetable, be that planned or unplanned changes. The earlier we can provide the information i.e. pre-journey, the better passenger experience we are offering. Occasionally we will not be able to provide the information until the passenger is at the station or on the train. It is therefore imperative that we provide an accurate reason for the issue and are also able to suggest options for alternative travel to allow them to make their journey, whether that is another train service, bus, taxi or tube.

Going forward into CP6, technology and social media will play an increasingly important role as a Route communication channel. We will be using it to promote positive news stories as well as being a crucial part of the pre-warning of potential disruption. We will also be looking at more innovative methods to measure satisfaction of passenger experience and understanding the changing passenger needs using social media. We will be utilising the journey mapping we are conducting to make sure we deliver communication appropriate for all the passenger types we have on the network.

5.5. How we will measure success

Performance will be measured using NRPS for overall journey satisfaction in CP6 to indicate how we are delivering passenger experience. We have set the targets for NRPS in collaboration with the train operators, as below in Figure 5-5.

Locally driven measure	19/20	20/21	21/22	22/23	23/24
NRPS Southeastern	78.1%	79.3%	79.8%	80.2%	80.4%
NRPS GTR	79.1%	78.9%	79.7%	80.3%	80.9%

Figure 5-5 NRPS Targets for Southeastern and GTR – Overall Satisfaction with journey

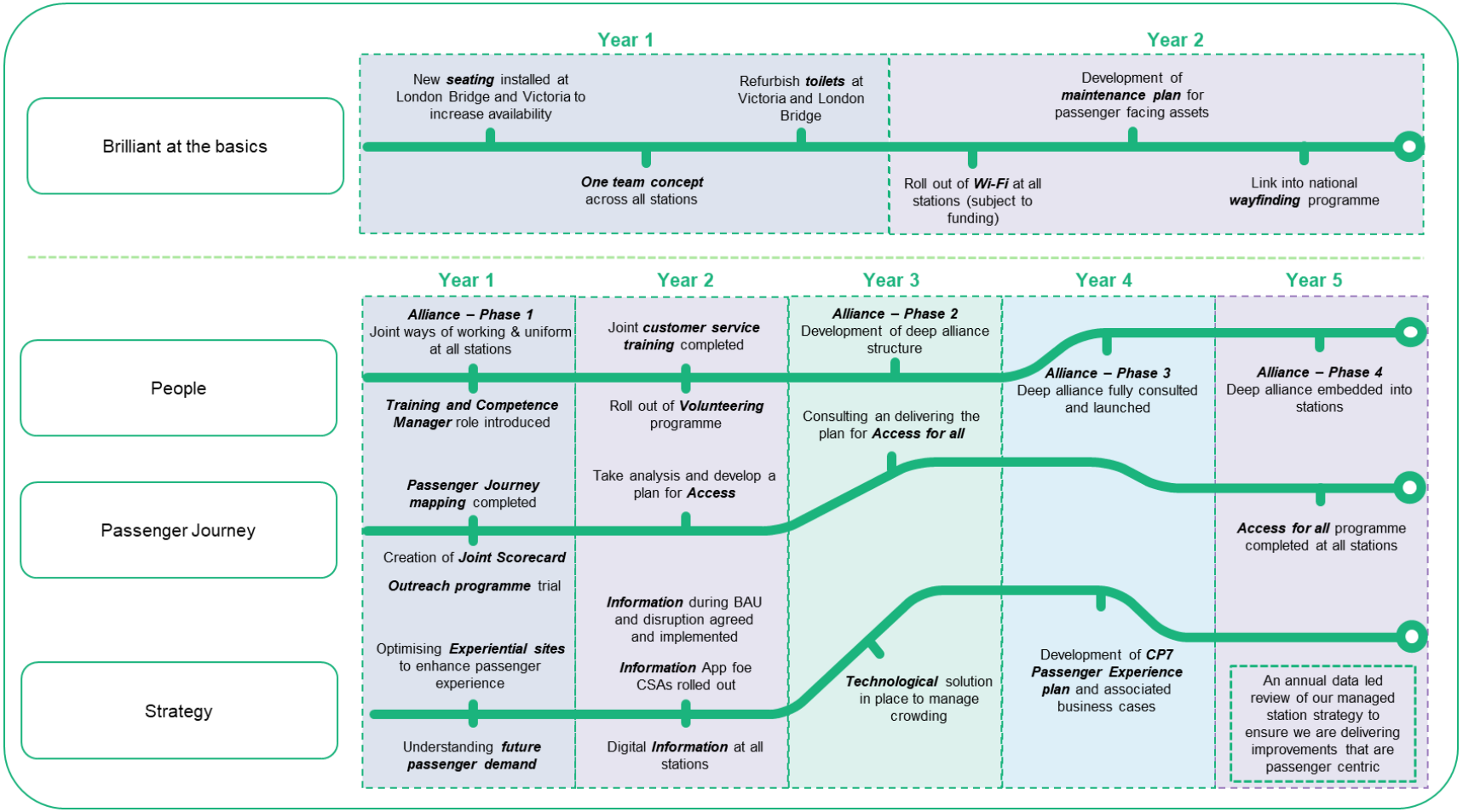
The NRPS survey involves a small number of passengers surveyed twice a year, and so is not readily available to measure and track against when improvements are made. We will therefore be looking at new ways of measuring passenger experience ourselves to steer our workstreams in the direction which add value for the passenger.

We will review KPIs annually in collaboration with the train operators so that we are held to account by passengers and industry partners for the delivery

of exceptional passenger experience:

- We have already started to use the **Customer Satisfaction Surveys** conducted by the train operators. These are the same questions as NRPS but are conducted monthly giving us an up to date view of passenger perception
- **Happy or not** buttons have been deployed in all managed stations for passengers to rate the stations. This is a rich source of passenger feedback and in one month we have received over 90,000 responses from passengers across our managed stations
- **Heartbeat -** a national programme has been developed to better understand passenger experience. This has developed several promises to passengers to measure both operational and emotive passenger experience. We will be linking into this piece of work as it develops to understand how it will help us measure satisfaction and improve passenger experience
- **Social media –** this is providing a platform for passengers to voice their concerns and areas for improvement. We will be working to utilise this form of feedback to measure satisfaction and understand what the passenger wants

5.6. Key Milestones



6. Excellent asset management

Excellent Asset Management

This element of F42 focuses on achieving excellence in asset management through:

- Achievement of the asset management plan for CP6 in terms of work, cost, efficiency, enhanced commercial style, asset performance and condition
- Improved understanding and articulation of our asset requirements and strengthened capability of the asset management organisation
- A rolling seven year asset management plan, evidenced based, sustainable and supported by passengers and stakeholders
- Improved processes in asset life cycle management exploiting RM3 and ISO55000 and advanced quality of asset data for decision making and innovation
- Transformed access methodology centred around the passenger and asset requirements

6.1. Context

The South East Route infrastructure, outside of the central Thameslink area, is amongst the oldest yet most heavily used in the country. As a result, the Route's asset base is fragile, with potential for low frequency, high impact failures, which are hugely disruptive for our customers and passengers. We need to increase investment in our assets to compensate for the increases in train journeys, tonnage and passenger numbers that we have experienced in CP5 and expect to increase further in CP6.

The necessity to tackle the condition of the asset base was recognised within the CP6 Determination, specifically through £66m[12] of additional funding for our track and structures assets. However, it has remained necessary to continue our strategy of managing asset condition through both increased maintenance and focusing our asset renewals based on asset sustainability criteria and line of route criticality to give greatest benefit to the most numbers of passengers. At the same time, we are developing strategies to seek additional funding and improving our capability to make the better use of the funding we do have.

6.2. Asset Intervention Strategy

We have carefully prioritised funding across both operating expenditure (Opex) and capital expenditure (Capex) to minimise the risk by focusing on delivery of safe railway operation, managing short term asset performance through increased maintenance and prioritising Capex investment on asset sustainability for future performance. For the Route's assets, sustainability means:

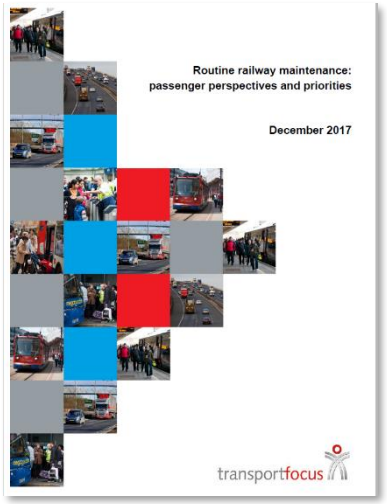
- Managing short-term performance risks arising from asset age and condition
- Maintaining asset condition and capability at steady state in the medium to long term
- Avoiding future bow waves in cost or volume delivery

Due to the legacy of underinvestment, underlying asset condition must be addressed as the first priority to manage short term performance. An increase in maintenance is the only way to do this in the short term for the following reasons:

- Renewals cannot be delivered quick enough because of the scale of the historic backlog
- Renewals of all of our older assets would not be affordable
- Renewals will not contain the risk of short term temporary performance restrictions while they are delivered
- There would be insufficient flexibility to manage emerging risks

To address long term asset sustainability we then developed a process to prioritise and balance sustainability focussed Capex investment.

[12] Value given in 17/18 price levels



To help inform our prioritisation decisions between investments focused on short term improvements in train performance, or on investing in the railway for resilience and value in the longer term, a study was completed in conjunction with Transport Focus to establish passengers' views on asset sustainability. This revealed that, while most media coverage relates to short term performance and disruption, there is a good understanding and appreciation amongst passengers for the need to protect the long-term condition and performance of the railway by investing in sustainability-driven renewals. This feedback was useful in confirming our strategy to manage short term risk whilst prioritising investment in renewing the railway for the longer term. To prioritise our asset investments, we used the following steps:

- **Step 1**: Developed maintenance strategies for each asset type to manage short term performance under forecast passenger, traffic and tonnage demands
- **Step 2**: Developed detailed renewals workbanks for each asset type, aligned with its maintenance strategy to deliver vision outcomes specific to that asset. These were developed considering asset condition, risk and criticality to the Route, as well as stakeholder and line of route specific priorities
- **Step 3**: Spending was then prioritised based on categories developed from Network Rail's Corporate Risk Assessment Matrix (CRAM). A risk / benefits prioritisation framework was then used to balance investment between different asset types. This minimises the overall risk by targeting investment in areas where asset failure would have the highest risk on performance, and directly impact freight or passenger services
- **Step 4**: Alignment of strategies across the different asset types and with our Route strategic priorities (including the Route Operations Strategy), was then re-confirmed following the investment re-allocations
- **Step 5**: Finally, we undertook sensitivity analysis of the risk impact, and used this to cross-check the outcomes of our prioritisation process

6.3. What we will deliver

In summary, our CP6 plan will deliver schemes across each of our asset types:

- **Track:** A planned intervention strategy with prioritisation given to renewals on track criticality 1 and 2 routes with refurbishment and maintenance interventions planned on track criticality 3, 4 and 5
- **Signalling:** Full signalling renewals in the London Victoria Signalling area, transfer of signalling control from London Victoria to Three Bridges Route Operating Centre, renewals on Angerstein and Hither Green
- **Level Crossings:** Renewal of 18 level crossings, two de-commissionings and three level crossing re-controls.
- **Electrical and Power:** Investment focussed on compliance with new electrical safety regulations and core renewals focussed on asset used life and condition
- **Structures:** Strengthening or replacement of poor condition assets including some underline bridges and longitudinal trough wheel timber bridges. Continuation of tunnel maintenance, culvert maintenance, footbridge refurbishment and renewal programmes, and coastal defence work at Folkestone Warren
- **Buildings:** Planned intervention is targeted at our highest risk assets, prioritised by condition, structural capacity and high value locations. This is supported by a planned preventative maintenance and inspection programme, compliant with statutory and regulatory requirements
- **Earthworks:** We will address over 230 sites, from our worst condition assets

- **Drainage:** Recover the priority backlog of drainage interventions from CP5, focus on renewing the highest risk drainage systems and establishing compliant inspections
- **Telecoms:** Targeted renewals for ageing and obsolescent telecommunications equipment and power supplies – in particular, station information and surveillance systems, cables, level crossings and some Driver Only Operations (DOO) assets
- **Asset data:** Professionalising and making best use of the functionality of our systems to improve decisions through data, risk and the use of decision support tools

To maintain performance for now and future Control Periods, the Route needs to be in a position where there is no further erosion of assets' ability to deliver performance. With our CP6 funding, we will be able to control the decline in asset sustainability and we will continue to seek opportunities to fund additional investment via risk funding and the contingent renewals settlement.

6.4. Summary of activity by asset type

Each of our asset types has a distinct strategy and targeted plan for interventions during CP6. The full detail of these strategies is set out in Annex 3, which describes for each of our asset types:

- Asset context
- Current performance
- Performance expectations for the end of CP6
- A summary of interventions (including the balance between maintenance and renewals) planned for CP6
- The balance between intervention types and priorities

A summary of these asset strategies is included below:

a) **Track** – our track asset used life[13] is the highest in the UK for all track assets and there is a risk of failure which has necessitated Temporary Speed Restrictions in CP5. To reduce the risk of asset failures, we have made the decision to increase preventative maintenance to support the step change in train service frequency and reliability associated with Thameslink while remaining within the funding envelope; this means track performance will improve in the targeted critical routes but is likely to deteriorate elsewhere.

b) **Signalling** – We still have legacy infrastructure in some of the most critical Victoria and London Bridge areas that needs to be replaced. This carries an increasing level of performance risk and so our plan for signalling assets in CP6 is further full signalling renewals focused in the London Victoria signalling area, and the London Bridge signalling area where new signalling has not already been delivered by the Thameslink Programme.

We will initiate migration from the Three Bridges Area Signalling Centre to provide advanced Automatic Route Setting (ARS). This is our first step towards full Traffic Management Systems that will enable automation, flexibility and diagnostics for operations.

We are aiming to maximise the use of asset remote condition monitoring with full coverage on critical assets. This will free maintenance teams to focus on preventative maintenance. We will improve reliability by increasing the use of axle counters and by replacing relay-based interlockings with computer-based and LED-type signal heads.

c) **Level Crossings** – Level Crossings remain a core part of our safety improvement planning for CP6. Although South East Route was the second best performing in the reduction of safety events (FWI[14]) in CP5, we have prioritised further safety improvements on higher risk crossings, including red light enforcement cameras, automatic warning devices and other minor work improvements. All of our level crossings are regularly risk assessed, and this has informed

[13] The useful life of an asset describes the length of time that an asset can be expected to operate effectively; useful life does not mean the length of time the asset will last, but the length of time that it will continue to operate as it was intended. An asset at the end of its useful life would usually need to be refurbished or replaced so that it does not present risk of failure.

[14] FWI is Fatalities and Weighted Injuries, a safety measure that describes an annual number of fatalities and injuries.

our CP6 plans. More information on level crossings can be found in Section 7.5: Level Crossings.

d) **Electrification and Plant (E&P)** – Because of an intensive roll out of Direct Current (DC) traction power in the 1950s, we are faced with a large amount of equipment (e.g. oil filled cables and DC circuit breakers) that is beyond its design life, and failing equipment that is obsolete and no longer available. E&P assets have had a long period of consistently low investment, and major failures have already been experienced in CP5, resulting in service restrictions that impact our passengers.

   Throughout CP6, we will be targeting investment to replace conductor rail cable lugs, which addresses the most widely spread failure mechanism. However, we expect that we will only achieve marginal improvements to performance failures – a reflection of the increasing risk of asset failure as more assets reach their maximum technical life. We are also growing our maintenance workforce in order to mitigate performance risk, support design and planning of maintenance interventions as well as continue monitoring asset data quality. We will be prioritising work to reduce safety risk at depots.

e) **Structures –** The deterioration and subsequent failure of our structures, in particular the Dover Sea Wall and Lewisham flyover, has caused significant impact on our passengers and freight operators due to operational restrictions. South East Route has disproportionally high numbers of substandard bridges when compared nationally, and the highest proportion of metallic underbridge decks which now require significant investment.
   Our asset plans for CP6 focus on strengthening and replacing poor condition assets, and undertaking additional intrusive examinations to improve our understanding of asset condition and strength. We will be undertaking a refurbishment of Cannon Street Bridge, a major structure spanning the River Thames. Despite these interventions, the rate of deterioration will continue, and we expect the renewals backlog to worsen across our portfolio. We have factored into our plans the need for greater reactive works to account for the increasing number of defects that will arise in CP6.

   To ensure that we are managing our poor condition metallic structures effectively we have asked Highways England to conduct an independent review of our approach, and we are independently validating outcomes from our inspections programme on a sample basis.

f) **Buildings** – During CP5, we carried out an accelerated structural assessment programme of our buildings, predominantly stations, that identified extensive footbridge and canopy repair/strengthening interventions needed to mitigate a loss of capacity and address safety and performance risks.

   Throughout CP6, we will undertake a risk-based maintenance and inspection regime to mitigate for the predicted continued decline in asset condition. We have targeted our highest risk structures for renewal intervention based on asset condition, structural capacity for example, where we have had to restrict the use of footbridges, and high value locations. An enhanced preventative maintenance programme is aimed to enable compliance with statutory and regulatory requirements.

g) **Earthworks** – Geology in the South East is volatile and susceptible to significant ground movements under seasonal weather. CP5 saw one of the wettest winters on record, and our passengers suffered from the highest count of delay minutes nationally attributed to earthworks failures. Inclement weather caused failures that also meant emergency interventions in unplanned areas had to be carried out, deferring planned renewals into CP6.

   Due to the significant impact on passenger and customer performance measures, earthworks investment has been increased over other asset investment. Although we expect performance-impacting events will still occur, we will be targeting interventions based on safety risk and location, and criticality based on the

consequence of failure. We will invest in further Remote Condition Monitoring to mitigate the interventions that we cannot afford in the current funding envelope, and to mitigate the impact of larger rectification activities.

h) **Drainage –** Poor weather throughout CP5 has also led to the deferral of three years of drainage work as we have had to prioritise investment in emergency works. We have a backlog of drainage maintenance resulting in low resilience to flooding across the South East Route. In CP6, our focus will be on recovering this backlog of drainage interventions, and addressing high risk drainage systems (e.g. tunnels) to reduce the effects of flooding. Our aim is to have removed all existing Temporary Speed Restrictions caused by poor drainage by the end of CP6.

i) **Telecoms –** Our renewal interventions in CP6 target ageing and obsolescent telecommunications equipment and power supplies to support asset sustainability and performance in station information and surveillance, cable end route renewals, level crossing improvements, telephone concentrators and voice recorders and targeted Driver Only Operation assets.

The introduction of Digital Railway, Automatic Train Operation (ATO), European Train Control System (ETCS) and Traffic Management means that the reliability and resilience of our telecoms network has become critical to performance. Our plans for CP6 include additional technical roles and new competencies to support future maintenance and manage performance risk.

j) **Asset Data –** Asset data is increasingly important to support effective planning and targeted interventions. During CP5, we worked to achieve the 95% data quality target set by the Office of Rail and Road (ORR) in 2017, and data quality will remain a focus in CP6 to drive decision making across the asset lifecycle.

We have established an asset data community with maintenance teams in South East Route to share knowledge and embed new business processes as part of our Asset Data Governance Framework. Our plans for CP6 support professionalising and making best use of our systems to improve decisions through data, risk and the use of decision support tools. We will improve our operational data management so that delivery plans are targeted to deliver the best balance of performance, safety and risk.

6.5. Improving our capability

We will improve our capability through better understanding of our asset base, enabling us to make better decisions, improvements in our process and business systems, and improvements in the capability of our people.

6.5.1. Intelligent Infrastructure

Both research and development (R&D) and intelligent infrastructure projects have been selected from the national portfolio of candidate projects, based upon where we believe we can obtain most benefit from the investment.

We have started to adopt Pattern Hypothesis to identify wider trends in asset performance. This involves using existing data to prove or disprove a hypothesis, and to generate service delivery maps (SDM) on how the assets provide service to the customer. To date, 30 hypotheses have been generated from “our response time is lower on a Thursday” to “percentage of actual time on maintenance is too low at Delivery Unit x”.

We have shared the above model with our customers, which will make it easier to agree access needs in order to deliver the work and improve performance for passengers.

6.5.2. Improving our process and business systems

We will start by utilising our Quality Improvement Programme to improve our asset management processes, RM3 assessment scores and assurance process. We will continue to improve our understanding of asset performance and criticality so we can present business cases for funding and access to the railway based on increasing evidence to our customers, passengers and stakeholders. We will incorporate good practice from other regulated infrastructure sectors such as utilities with a target to achieve compliance with the international standard for Asset management, ISO 55001, by the end of year 3 of CP6.

6.5.3. Improving the capabilities of our people

We will continue to strengthen our asset management competencies, build capabilities in data analytics and data driven decision making, improve our planning capability and transition to 'predict and prevent' maintenance regimes.

Valuing our people is a key workstream. We will become better at listening to our staff through our 'Your Voice' programme. We have already developed a soft skills training programme to improve commercial, understanding, articulation, learning, risk and performance improvement skills. This approach is aligned to the national 'intelligent client' programme including Sponsorship.

6.6. Efficiency plan summary

Our efficiency plans for CP6 are described in Section 9 of this Delivery Plan, 'Proud to be more efficient'. There are some key areas where our Asset Management approach will deliver efficiencies in CP6. We will improve engagement with the supply chain and increase confidence in volumes proposed, the nature of the work and the business outcomes we are seeking. We will also improve our understanding and use of unit rates, cost drivers and 'pound in the ground', mapping these from concept of projects through to how our supply chain price work and ultimately make profit. This will allow us to develop an innovative commercial approach so that the supply chain can achieve a profit whilst also enabling us to deliver improved efficiencies.

Further efficiencies will be enabled as we move towards a data driven asset management operation with asset information at the foundation of operations, maintenance and renewals strategies. This will enable improved decision making to deliver the best performance possible for the most efficient cost. Maintenance delivery will be focussed around an 'on time' approach with tighter controls around planned work to manage the development of a volume backlog.

6.7. Maintenance Strategy

Our CP6 plan will see an increase in planned maintenance volumes ('Maintenance Standard Task'). It has also been necessary to increase reactive maintenance expenditure in areas where we have had to defer renewals in the past due to a lack of funding (most notably in buildings, structures and earthworks), and we are expecting increased reactive maintenance volumes for track.

Our current maintenance plan seeks to achieve asset reliability through a mix of planned maintenance, reactive maintenance and renewal of assets nearing their end of life. We will take action during CP6 to shift from reactive spending to focused, proactive, preventative maintenance. Our aim is a more systematic approach to targeting failing assets, while continuing to deliver maintenance that is directly linked to safety.

In CP6, our aim is to deliver an updated mix of planned maintenance, significantly more targeted maintenance, full replacement of our worst performing assets, asset renewals, and a reduced spend on reactive maintenance.

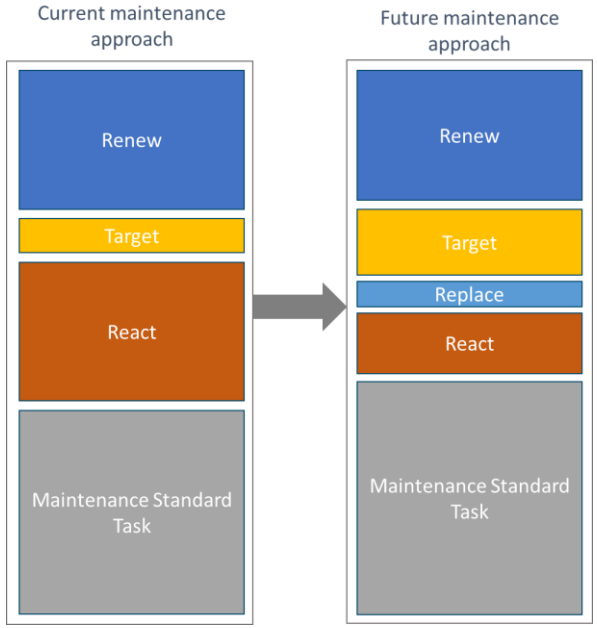


Figure 6-1 Change in approach to maintenance

By focusing our resources on key failing assets we will begin to reduce the volume of reactive work, which will release further resource to tackle additional target assets, including replacement of 'bad actors', those assets which have the highest failure rates and have the biggest impact on train performance.

Mechanised maintenance (i.e. tamping, stoneblowing and grinding) will be increased in cyclical access, timed to control defect propagation and minimise reactive maintenance. In particular, cyclical grinding in the Thameslink core will be targeted in order to mitigate the impact of ATO, where the potential for rail defects is increased through the acceleration and braking characteristics of the trains.

The number of maintenance teams on the Route will be increased as part of this asset strategy, to address the underlying poor asset condition, increase in requirements following Thameslink completion and to facilitate a shift to preventative maintenance. This will enable a reduction in the proportion of reactive maintenance and delivering increasing efficiency benefits to the Route during CP6.

6.8. Access Strategy and Plans

In CP6, we will deliver our planning transformation programme as described in Paragraph 4.8. A key element of this is our access strategy, this consists of three primary themes:

1) Obtaining the optimum level of access for delivery of maintenance, renewals and enhancements
2) Utilising access more efficiently through a wide-ranging programme of planning improvements, better integration of works and the adoption of new technology to reduce the time taken to set up and take down possessions and isolations
3) Minimising the overall level of disruptive access wherever possible through the packaging of works[15]

The proposed approach to access planning is to:

- **Minimise disruptive access requirements by packaging works:** The Route's performance-driven strategy means that many interventions are focused on the same key parts of the network. This approach allows work to be combined into a lower number of disruptive weekend possessions to maximise efficiency[16]
- **Maximise opportunities**: At present, midweek night access is agreed around long plain line sections, with two track options available where there is flexibility to divert onto other sections. We are exploring opportunities to negotiate longer midweek night access on key sections of the Route to allow the delivery of more work and again reduce disruptive access at weekends. It should be noted that this is a challenge that needs to be balanced against the demand for later services and franchise requirements around the running of overnight services on some routes
- **Identify regular access opportunities in key locations**: The access strategy for maintenance works in each area will be cyclic, with most locations seeing regular access on a 6-weekly or 12-weekly basis. Central London areas which directly affect the Thameslink network will require access on a weekly basis as part of the better use of 'predict and prevent' technology such as Remote Condition Monitoring, in order to eliminate issues before they escalate to affect service operation. Timetable plans will need to include the requirement to build in these access windows
- **Significantly improve planning capability, capacity, methodology and processes** along with possession delivery through a comprehensive Planning Transformation programme (see Paragraph 4.8). This has been commenced in CP5 with a complete restructure of the Route and Maintenance planning organisation. Throughout CP6 the programme will focus on five key workstreams each targeting improvements in access planning and the delivery of planned work on the infrastructure aligned to our Framework 42 Plan and vision.

[15] For example, by packaging multiple works for delivery under one possession.

[16] For example, track renewals work between Haywards Heath and Brighton has been completed simultaneously with tunnel and maintenance works between Three Bridges and Haywards Heath. This creates a single instance of disruption rather than two between London and the South Coast.

6.9. Confidence in project delivery

Our workbanks have been reviewed and consolidated so that we can deliver in Year 1 of CP6, with some re-profiling of the E&P asset workbank. We have increased confidence in the workbanks for the remaining four years of CP6 as we now mobilise towards Year 1.

We have secured access for the significant elements of Year 1 of CP6, with some exceptions in the E&P and track work banks delivered by our Works Delivery organisation. However, due to the low complexity of the work, we expect to be able to manage these risks to delivery during the year. The signalling workbank has also been profiled to smooth demand on national supply chain resource.

The Works Delivery and Route Asset Manager (RAM) delivery structure is currently being populated so that we have the capacity and capability to deliver our CP6 workbanks.

The Infrastructure Projects (IP) Delivery Plan depends on access and critical resources, and is very much linked to three key contracts:

- National Track Alliance
- MaSREF (Replacement Digital Framework for Signalling)
- Southern Multi-disciplinary Framework (SMDF), covering Structures, Building, Geotechnical and E&P

The National Track Alliance contract preferred bidder has been announced and is due to executed mid-2019. All track remits for S&C and Plain Line track have been received for Year 1.

The Signalling MaSREF contract is in progress and due at the end of Year 1 of CP6; Year 1 delivery will focus on Angerstein and Hither Green which are both in contract with access and resources identified. Full signalling renewals in the London Victoria Signalling area are now in development and planned for completion by the end of CP6.

The Southern Multi-disciplinary Framework (SMDF) contract was awarded in December and the framework teams have commenced mobilisation and are planning to start works in April 2019. To support this we have received all our remits for year 1, the access and critical resources are identified and booked where required.

These procurement activities link into our efficiency plan by improving supply chain engagement and challenge and will continue to be developed throughout the Control Period. The key areas of efficiency will be access, commercial, technology, delivery, design and workbank planning.

6.10. Delivery Capability Improvement plans

Following strong delivery performance in CP5, the Works Delivery organisation has been further strengthened in preparation for the increase to our workbank in CP6. The internal team has been bolstered with additional senior management, project management, technical, and supervisory posts, and additional dedicated resource is now in place to enhance the safety and assurance framework. This will drive better compliance and safety performance in CP6, delivering a year on year reduction in our Long Term Injury Frequency Reports, continuing the trend from CP5.

In recognition of the importance of long term planning and securing enhanced Engineering Access Statement (EAS) returns, we have also enhanced the resilience of the planning term by adding specialists who will work closely with the Route Planning team and our operators. This will help us to optimise access throughout CP6 and provide robust possession assurance. It will also drive down late change and enable efficiencies in delivery.

Externally, the supply chain for CP6 delivery is largely in place and mobilised. For the buildings and civils portfolios, framework contracts are in place for the next five years to manage minor works. Larger renewals will be tendered within a pre-qualified pool of experienced Principal Contractors enabling efficient and flexible delivery. While there have been delays to awarding contracts within the geotechnical, track and E&P portfolios, this risk has been mitigated by adjustments to our delivery profile for Year 1 where necessary, and extending current frameworks to cover the mobilisation period of the new contracts.

Underpinning delivery, our enhanced Programme Controls team will support stronger baseline development and monitoring, tighter Change Control, and accurate reporting and trend analysis to drive effective decision making and continuous improvement – working closely with the Route Portfolio

Management Office (PfMO). This will build on the principles from the Continuous Improvement Leadership Programme run within Works Delivery during years four and five of CP5, which saw all managers trained in lean tools and techniques in preparation for CP6.

6.11. How we will measure success

Success will be measured using key measures that are on our scorecard. These are:

- Improvement in Service Affecting Failures (SAF)
- Improvement in Composite Reliability Indicator (CRI)
- Composite Sustainability Indicator
- Delivery of key volumes
- Delivery of Train Accident and Level Crossing Risk Reduction measures
- Delivery of our investment milestones

These measures are described in more detail below.

Asset management measures	19/20	20/21	21/22	22/23	23/24
Improvement in Service Affecting Failures (SAF)	1%	0%	0%	0%	0%
Composite Reliability Index (CRI)	1%	1%	1%	1%	1%
Composite Sustainability Index (CSI)	Measured at end of control period				-3.90%
Delivery of Key Volumes	95%	95%	95%	95%	95%
Safety measures	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Train accident risk reduction (TARR)	80%	80%	80%	80%	80%
Top 10 milestones to reduce Level Crossing risk	8	8	8	8	8
Top investment milestones	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Top investment milestones	90%	90%	90%	90%	90%

Improvement in Service Affecting Failures

SAF is a measure of the total number of asset failures that impact passenger services. SAF numbers have significantly reduced in the South East during CP5, even though the volume of passengers, freight, and kilometres travelled has steadily increased. We have achieved this by implementing Remote Condition Monitoring on assets, including points and earthworks, to detect signs of failure before they occur. The Thameslink Resilience Programme has also allowed us to deliver additional maintenance activity. However, the age and condition of our assets has meant that SAF rates have levelled out over the final 24 months of CP5.

In CP6, the implementation of the Thameslink facilitated timetable will introduce a further increase in demand on the network. We have prioritised asset renewals to target the very poorest condition assets, and assets in locations where failures would affect the greatest number of passengers. Unfortunately, this means that we will still have a large number of assets that are in poor condition that we cannot afford to replace in CP6 - especially in areas of the network that are used by fewer passengers. Therefore, whilst we will improve asset reliability in key areas, there may be an increase in the total number of asset failures as investment has been focussed where it will provide a greater benefit to the most passengers.

We have planned for additional maintenance in CP6 so that the benefits delivered by the Thameslink Resilience Programme continue, but this will be balanced with increased demand on the network as a result of the Thameslink facilitated timetable. As a result, our forecast for SAF improvement in CP6 is 1% improvement in Year 1, followed by level performance in the following years. We recognise that this is unsatisfactory for our passengers, and so we will continue to seek additional funding to further improve the condition of the network.

Improvement in Composite Reliability Indicator

The Composite Reliability Indicator measure is closely linked to SAF, but involves weighting by impact on passengers. We expect that there will be an uplift in the definitions of track criticality across the South East Route as a result of increased traffic following the Thameslink facilitated timetable. While we have matched our target for CRI with our SAF forecast, CRI will be more challenging to deliver in practice.

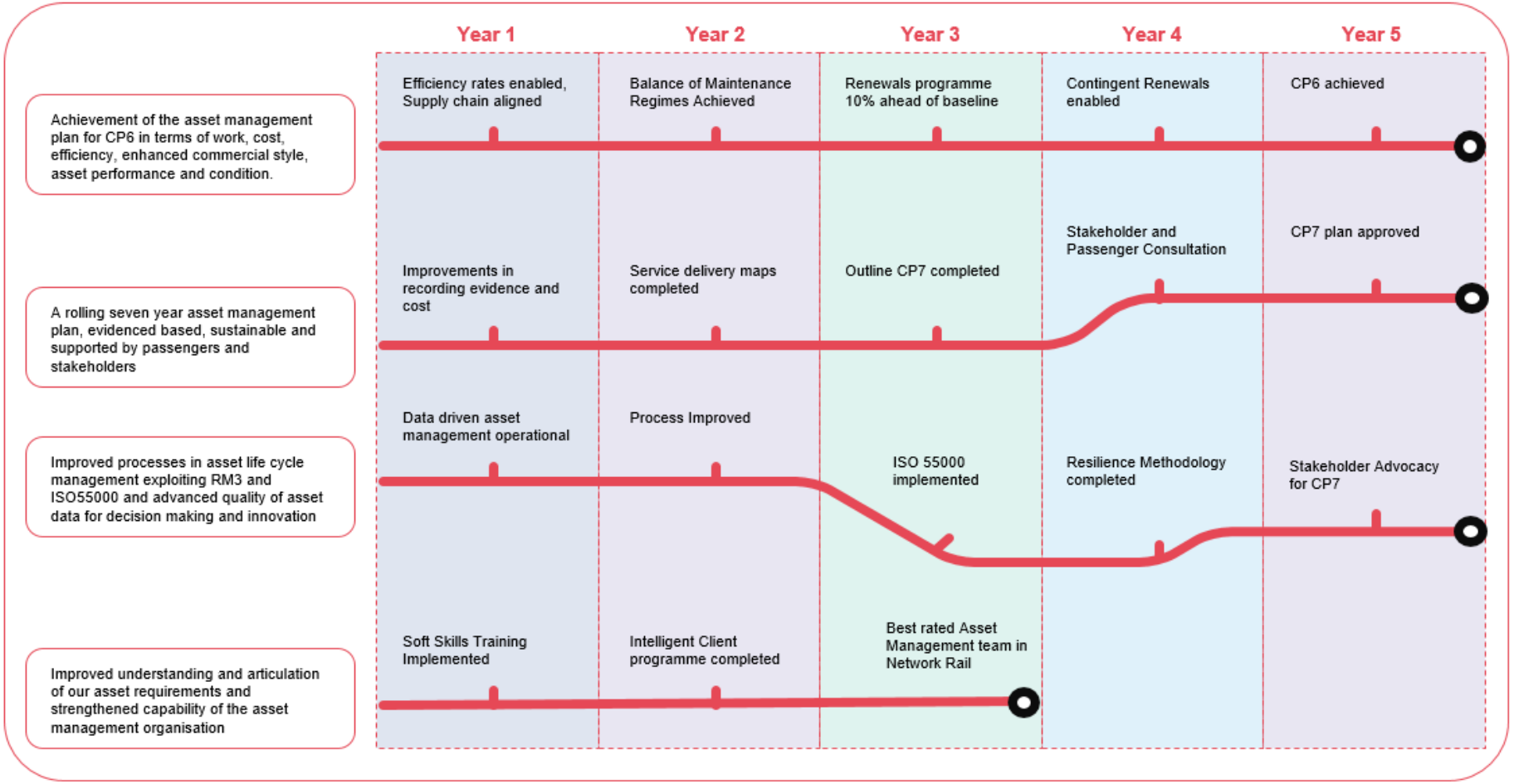
Given the poor condition of many of our assets, it is imperative that we manage the decline in our assets in line with our forecast, see Figure 6-2 below, and wherever possible, deliver our contingent renewals (via risk funds or other sources) to improve this position.

Asset	Sustainability Indicator	Exit CP5	Exit CP6	Change CP5 to CP6 exit	Risk of bow wave in CP7?
Track	Service Affecting Failures	454	454	-	Yes (Ballast)
	Track average used life	59%	59.7%	↓	
Structures	% poor PLBE* overbridges	8.7%	7.6%	↑	No
	% poor PLBE* underbridges	6.0%	6.1%	-	Yes
Buildings	Stations PARL** on critical features	47%	46%	-	Yes
Signalling	Signalling Infrastructure Condition Assessments (remaining life)	14.9	12	↓	Yes
Earthworks	Condition score	1.94	1.98	↓	Yes
E&P	Conductor rail remaining life (%)	65%	62%	↓	Yes

* PLBE = Principal Load Bearing Element
** PARL = Percentage Asset Life Remaining
↑ = Improving
↓ = Declining

Figure 6-2 Sustainability Indicator Changes: Exit CP5 to Exit CP6

6.12. Key Milestones



7. Everyone home safe every day

Everyone home safe every day

This element of F42 focuses on health, safety and sustainability with the following aims:

- Our workforce returns home safe everyday demonstrated by a reducing LTIFR and a reduction in operational close calls
- Our passengers and public return home safe everyday demonstrated by a reducing level crossing risk, train accident risk and FWI
- We are recognised as a responsible railway, delivering value for money while protecting the long-term wellbeing of our railway people and community, the natural environment, and our business infrastructure
- Our workforce is physically and mentally healthy, and are able to thrive both in and outside of the workplace
- Continuously improve and strive to learn effectively from all accidents and incidents

7.1. Context

Safety and sustainability are core values, and crucial to our success as a Route. Good management of our safety, health, environmental and social impact is key to delivering the UK's most successful metro-style railway. A significant step change in safety is required in CP6 to reduce the likelihood of harm to our workforce.

By the end of CP6, we will change the way we access the railway by developing a programme to eliminate any unassisted lookout warning red zone working and further implementing Standard 019, the safety standard for people at work on or near the line. The way in which we do our work will change by identifying new, and further embedding existing technology to allow for remote and automatic inspection. We need to establish a more mature safety culture focusing on the introduction of risk based commentary and on site risk management to create a step change in the way our teams prioritise safety on site.

The Route's documented safety, health and wellbeing strategy is based on the RM3 structure for safety maturity. The Plan-Do-Check-Act cycle makes sure that a structured continuous improvement process is in place in all areas of health and safety for our passengers, the public and our workforce. It facilitates our aim to get "Everyone home safe every day" while still linking to Framework 42. The aim of this cycle is to make sure that there is compliance to current standards and significant improvements in accident performance and employee health and wellbeing.

There are growing expectations on us as a Route to help solve environmental and social issues, and how we respond to these challenges will influence our success. Failure to adapt to environmental and social aspects generates dis-benefits and will constrain the delivery of our business objectives and vision. We therefore need to view everything that we do through the lens of sustainable development, and support our workforce to deliver work in a sustainable way.

7.2. What we will deliver

To improve workforce safety, we will reduce track worker risk by increasing the use of technological solutions providing additional protection and warning devices. We will also increase the use of line blocks during possessions with the ambition of eliminating open line working by the end of CP6. For general workforce safety we have plans to improve:

- Manual handling through training, supervision, monitoring and tool selection
- Electrical safety through competence and procedural reviews, PPE improvements and technological changes such as NSCDs
- Slips, trips and falls through safety walkways and access points, risk based commentary training and tidy railway campaigns

We also have plans to improve driving risk, working from height and workforce behaviour that will all feature in our safety workshops that are held twice a year with over half our workforce at a time.

We will create a culture and support network that helps our workforce to feel good and function well. A flagship project is the establishment of Network Rail's first dedicated Occupational Health Centre at Victoria

Station. This will provide a step change in the way we support the physical and mental health of our staff. Our plans will further provide tools and resources to the workforce, enabling them to:

- better understand and choose healthy lifestyles
- increase their personal resilience and capability to manage stress
- achieve better work-life balance and reduce the effects of fatigue

For public and passenger safety, we have plans to reduce level crossing risk through the interventions that are detailed in our Route Level Crossing Strategy, and reduce Signals Passed at Danger (SPADs) and signalling risk through joint improvements with our Train Operating Company (TOC) colleagues.

Our sustainability strategy will enable us to better manage environmental risk and create opportunities to deliver social value. We have plans to:

- deliver an 18% reduction in carbon dioxide equivalent emissions generated by operational (non-traction) energy use, through improved processes and retrofitting of energy efficiency technology
- better protect and enhance biodiversity on our estate through improved digital management systems and new tools including a biodiversity value calculator and biodiversity action plan
- provide tools to measure and report on the social impact of our workforce activities
- better utilise railway assets to connect communities, add social value and promote social inclusion
- further develop a culture of charitable giving and volunteering

7.3. Safety, Sustainability and Health Strategy

Rules, processes and procedures have limitations and although we have sophisticated systems in place, compliance is treated as discretionary, especially if other factors such as time, cost and the environment are driving non-compliance. Great safety culture requires an embedded set of general day to day behaviours that will also drive improvements in environment, health, quality and productivity.

The Route's CP6 programme supports senior leadership to take the Route's performance to a new level of excellence, and a supervisor and frontline worker programme that engages individuals to take personal responsibility for safety and sustainability. The culture of the business has a direct bearing, day to day, on the behaviours and the results of the organisation. To change culture and behaviours requires the willingness of those in senior positions to challenge their own current leadership and be committed to change. The strategy in Figure 7-1 below shows eight workstreams in CP6 that are aligned with the aims and is underpinned by the detailed F42 milestone plans.

Safety, Sustainability and Health Strategy for CP6

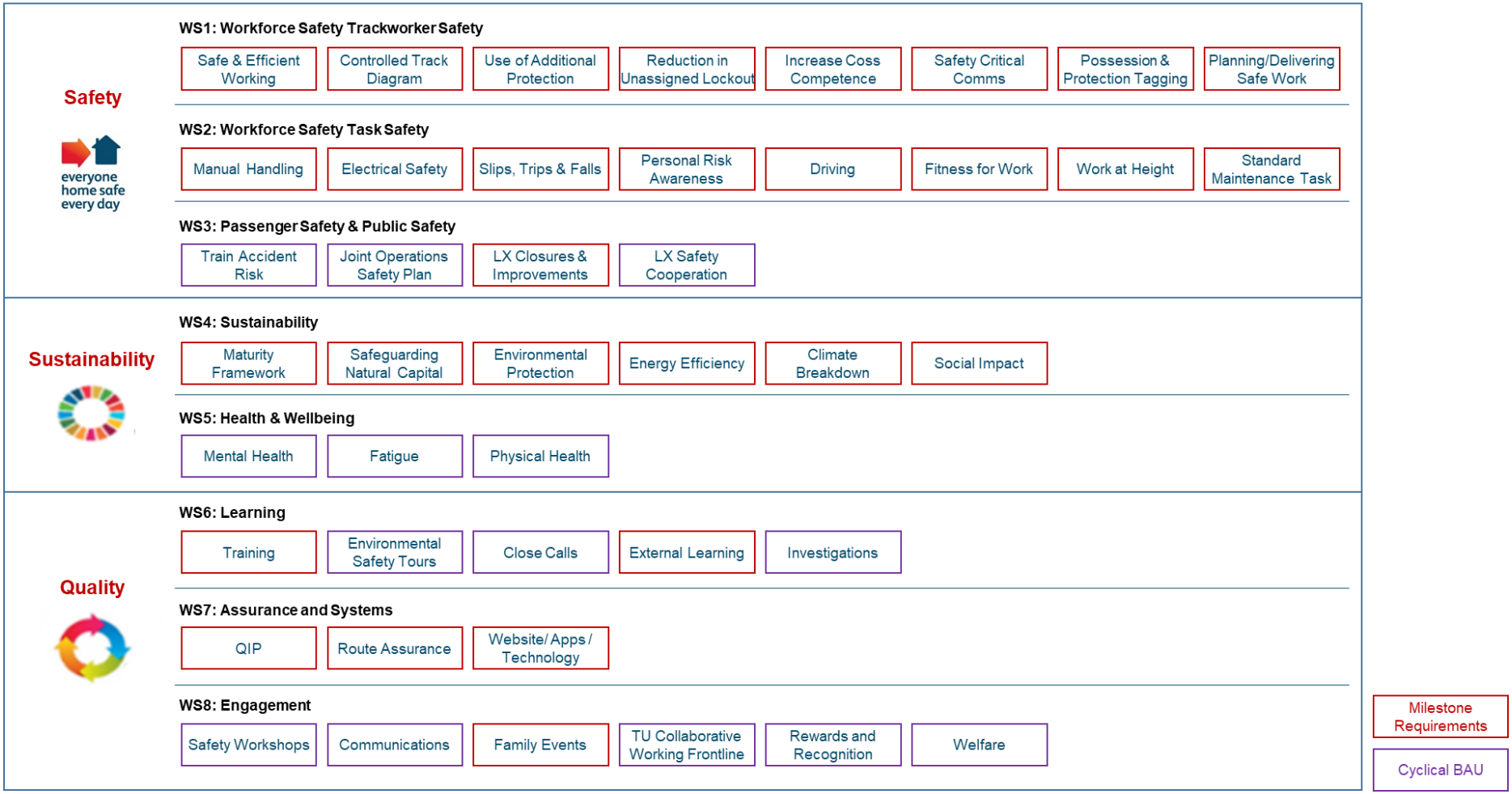


Figure 7-1 South East Route Safety, Sustainability and Health Strategy

7.4. Safe and Effective Working

We will make significant investment into secondary protection improvements. Brighton Maintenance Delivery Unit (DU) has had the first delivery of ZKL 3000, a track circuit operating device system, and training is being scheduled. This is a risk reduction improvement and mitigation on line block irregularities given the increased line blockage utility introduced under Phase 1. In addition it is a culture/step change away from simple line blocks.

Brighton DU is trialling Phase 1 of their Safer Protection Working Programme, which went live in January 2019. Barnham area signal box also went live in January, with an active focus on access utility at nights for high risk activities (track geometry faults, Level 2 work) that would typically be undertaken in open line conditions with unassisted look out protection.

Key measures will be monitored by the Delivery Unit with the first review point in May 2019. Thereafter the roll out will be extended across Brighton and wider Sussex /South East Route in year 1 and 2 of CP6.

7.5. Level Crossings

In addition to following the Network Rail level crossing policy and the national Level Crossing Strategy, the South East Level Crossing Strategy is underpinned by the following objectives;

Workforce Safety - there shall be no manually controlled gated crossings on the South East Route

Irregular Working - staff shall be provided with the optimal equipment to observe obstructions at all CCTV crossings

Public Situational Awareness (Level Crossings) - all public road level crossings on the South East Route will be equipped with the most effective visual and audible warnings

Public Situational Awareness (Passive Crossings) – the South East Route shall seek to provide train detection and warning systems at passive crossings on a risk priority basis

The South East Route will seek to close or upgrade Automatic Half Barrier (AHB) level crossings whenever the opportunity exists

The South East Route will install Red Light Safety Equipment (RLSE) at all AHB level crossings to enforce safe use by road vehicle users

The South East Route Level Crossing Strategy for CP6 includes renewals and upgrades, installation of new train detection and warning technology, improved LED road traffic lights and updated audible warnings. The strategy contains a 'baseline'[17] and an ambitious 'stretch' forecast which have been plotted against the predicted risk increase in order to illustrate the forecast net level crossing risk through CP6:

[17] This reflects the May 18 timetable, and is the reason that FWI is forecast to increase over the first 3 years, as the risk assessments are completed. It does not reflect future timetable changes.

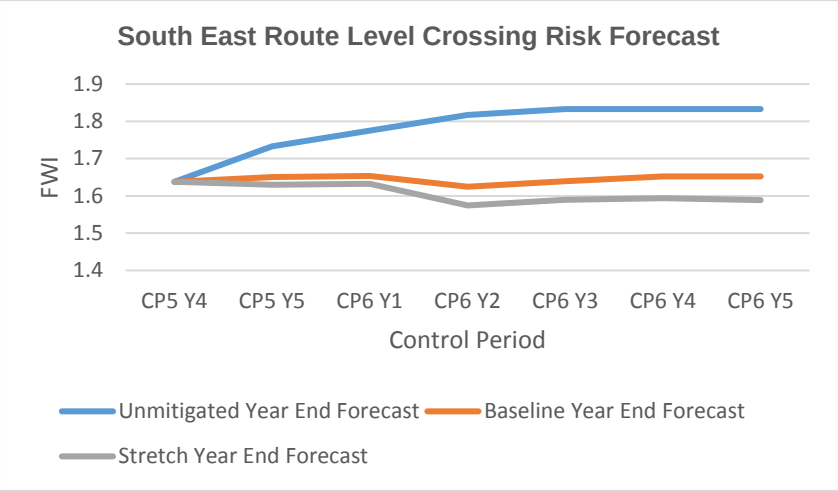


Figure 7-2 South East Route Level Crossing Risk Forecast

Level crossing risk has been modelled based on the current train service timetable. The increase in services from the implementation of the Thameslink timetable causes the decline in FWI starting in CP6 Year 1.

7.5.1. South East Route Level Crossing Strategy

Our Level Crossing Strategy has been developed to target three key areas:

1. Improve and modernise level crossing assets
2. Undertake targeted risk reduction
3. Improve risk management and quality assurance

For each of these areas, several specific workstreams have been designed to deliver benefits – examples of these workstreams are described in the table below:

Improve and modernise level crossing assets	▪ Upgrade or close all six manual gated crossings on the South East Route ▪ Upgrade black and white monitors at 14 CCTV crossings to colour ▪ Upgrade 19 50W halogen road traffic lights (RTLs) to LED ▪ Upgrade audible warning circuitry at Automated Half Barrier (AHB) crossings
Targeted risk reduction	▪ Signalling-led level crossing renewals ▪ RLSE fitment at all AHBs and selected protected crossings ▪ Level crossing closures ▪ Overlay Miniature Stop Lights (MSLs) at user worked crossings ▪ New cost-effective train detection and warning technology at footpath crossings
Improve risk management and quality assurance	▪ LCM workload review and succession planning ▪ Strengthen level crossing risk assessment review and approval process ▪ Improve management information around defect rectification and recommendation tracking

7.6. Environment and Sustainable Development Strategy

For the South East Route, Environment and Sustainable Development (Sustainability) is an approach to meeting our operational needs today while protecting the wellbeing of our employees, customers and the natural environment. Our CP6 vision for sustainability is '*to become the most environmentally sustainable and socially responsible Route in Network Rail, proactively managing our environmental impact and enabling social and economic benefits*'.

The Sustainability Strategy to deliver this vision is informed by and aligned to key international, national, and industry guiding principles and policies, including the United Nations Sustainable Development Goals (SDGs), the UK DfT single departmental plan, the Department for Environment, Food and Rural Affairs 25-Year Environment Plan, the Rail Safety and Standards Board Railway Sustainable Development Principles, and the Network Rail corporate Environment and Social Performance Policy. The Sustainability Strategy is also strongly shaped by our legal obligations as set out in environmental law and associated government guidance.

In the course of delivering the vision, sustainable development performance and capability gaps will be closed, important risks will be removed or controlled, and a number of business benefits delivered, including:

- A more mature culture around environmental, social, and wellbeing management
- Improved safety and resilience of the South East network
- A more sustainable, engaged, healthy and productive workforce
- Reduced risk associated with environmental, pollution and health hazards
- Improved prevention, diagnosis and support of those with work and non-work related health conditions
- Improved compliance with relevant sustainability legislation, standards and requirements set by our stakeholders
- Reduction in the amount of energy and natural resources used by our operations
- Improved capability to add social value and to assess and mitigate impacts on local communities

Our framework for delivery of the environment and sustainable development vision is shown in Figure 7.3. The principles which underpin our vision are the United Nations SDGs - a set of 17 global principles for sustainability. We propose to apply the SDGs as a lens to shape, steer, communicate and report on our strategies, goals and activities, allowing us to capitalise on a range of benefits. Our sustainability obligations, responsibilities and continuous improvement are then delivered through four strategic themes: Environment, Energy and Carbon, Climate Adaptation, and Wellbeing.

Figure 7-3 South East Route Environment and Sustainability Strategy

7.6.1. Environment

The environmental workstream aims to have an improved and robust system in place by the end of CP6, aligned to the ISO 14001 standard, to assure compliance with all environmental regulatory and legislative requirements, a more capable and competent workforce, and to have

delivered significant efficiencies and performance benefits through a number of proactive initiatives. Our priority areas include: the protection and enhancement of biodiversity through applying the principles of natural capital accounting to our estate; improved monitoring and mitigation of water and air pollution caused by our activities or that impact on the health of our workforce; implementation of a more efficient and effective operational waste management and recovery system that will save money, reduce emissions from waste and protect environmental health.

7.6.2. Energy and Carbon

With increasing utility commodity and transmission costs and a greater legislative burden anticipated for CP6, our focus will be on becoming great at the energy management basics. We will develop robust processes and solutions to eliminate billing and supply issues, comprehensively baseline energy consumption, and identify opportunities to improve management of the utilities asset so that energy risk and wastage is minimised. We will establish the principles of the ISO 50001 Energy Management System to embed energy management into our everyday operational practices and drive continual improvement. We will deliver through improved processes and innovative projects an 18% reduction in carbon dioxide equivalent emissions from buildings and operational (non-traction) energy use and fleet operation by March 2024.

7.6.3. Climate Adaptation

A South East Route vulnerability assessment has been undertaken as part of the Weather Resilience and Climate Change Adaption (WRCCA) process. This will feed into the revision of the Route Adaptation Plan planned for publication in early CP6. Our focus will be on monitoring assets identified at risk from current and future weather events, securing funding to improve their resilience, and improving our approach to managing priority assets through our business planning process. Development and management of 'green infrastructure' on our operational land (and beyond in partnership with landowners and natural capital groups) will be explored as a much more cost effective intervention, generating multiple infrastructure benefits through wide spectrum reduction of climate-related risks. There will also be a focus on strengthening of incident management process and developing greater understanding within the workforce of how extreme weather events affects the management of asset types, and how to better plan and prepare for future events.

7.6.4. Wellbeing

Wellbeing covers social performance and occupational health. The latter is concerned with the physical and mental wellbeing of our employees in the workplace, while the former is how Route operations, activities and decisions impact the wellbeing of people - be they employees, suppliers, rail users, communities or other groups affected by the railway's physical and socio-economic presence.

7.6.5. Social performance

The overall aim for CP6 is to increase:

- Route maturity on measuring and reporting social value to not only evaluate the impact of railway works, but also as part of future works planning decisions
- Embedding social value into investment and planning decisions, and using the social value framework to manage requirements during design and construction against new corporate metrics
- Using vacant station space, redundant assets and under-utilised land to connect isolated and vulnerable community groups, building partnerships with local authorities and key stakeholders
- Using volunteering and charitable giving to support this national issue at a local level by working with homeless shelters, food banks, employability programmes, mental health organisations and charities.

7.6.6. Occupational Health and Wellbeing

Our strategy will promote a healthy, high performing and resilient workforce 'fit for the future'. Plans will reduce the impact of conditions that are caused, or made worse, by the work activity or the working environment and align with the Government's Health, Work and Wellbeing Strategy, ORR Occupational Health Strategy and the RSSB strategy Leading Health and Safety on Britain's Railway. Key initiatives will include:

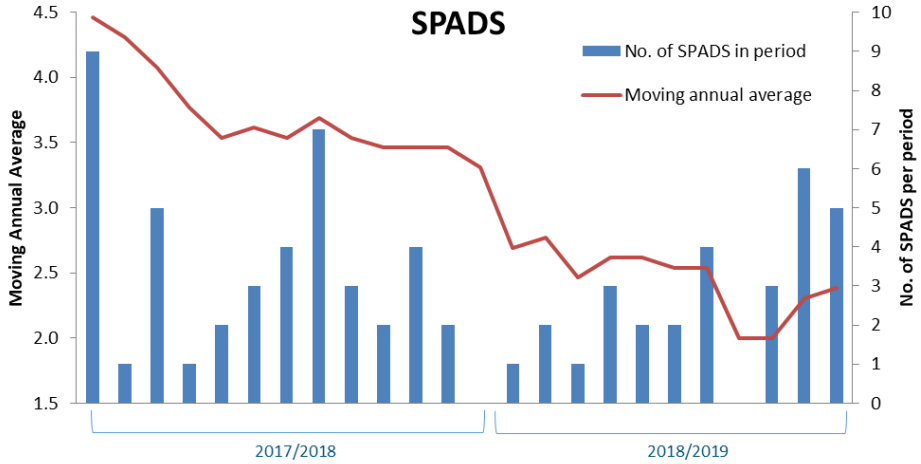
- Establishment of the first Route Occupational Health Centre. This facility will deliver an efficient, timely, and fit for purpose health and wellbeing service, assisting the business to support productivity and

performance

- Development of a feel good culture through establishment of wellbeing metrics, an employee wellbeing network, and crafted communications on health and wellbeing
- Roll out of Mental Health First Aid (MFA) Training and establishment of MFA champion network
- Building a more resilient workforce through application of a wellbeing profiler tool
- Providing opportunities for our employees to participate actively in their healthcare through use of wearable technology
- Enabling and empowering line managers by providing clear, practical and effective policies, processes and development opportunities relating to health and wellbeing
- Creating a hub of resources for managers and employees on Mental Health, stress, fatigue, hand arm vibration syndrome (HAVS), musculoskeletal disorders (MSDs), respiratory illness, and other key health topics along with raising awareness of current Wellbeing offerings
- Rolling out fatigue management impact assessments, education and reporting
- Improving our sickness management systems and processes, and the collaborative working capability of our Sustainability team, Human Resources and the Occupational Health Centre, so to deliver better case reviews and return to work plans
- Application of business intelligence captured from wellbeing initiatives to invest in targeted, long-term and effective initiatives to address key health issues
- Partnership working with external charities such as Samaritans, and support for our workforce to engage with volunteering and charitable activities
- Provision of opportunities for families to engage in health and wellbeing activities and interventions so that the gap between a healthy home and a healthy workplace is bridged

7.7. Passenger Safety

Our Signal Passed at Danger (SPAD) performance has improved at the end of CP5 by nearly 50%, which bucks the national trend. However, we continue to work to improve our safety cooperation with the Train Operating Companies (TOCs) on the Route. Our plan is to create a joint operational safety plan which will detail how we will work together to reduce SPADs, improve station safety and safety critical communications as well as how we cooperate on level crossing risk and trespass/Route crime.



To reduce our underlying risk from SPADs, we are planning to complete assessments on all our plain line signals by the end of year 3 of CP6. To do so we have recruited two new Operations Risk Control Coordinators to significantly increase our assessment rate of Signal Overrun Risk Assessments. Plain line signals will be prioritised on the basis of likely risk.

We will continue to use shared measures for 'passenger and public safety' agreed with GTR and Southeastern. The FWI at NR Managed Stations has improved since last year to 0.015 against 0.018 last year. Unfortunately, the FWI has got worse in the last quarter, due to the increased influence of alcohol on passenger behaviour over the festive period. A platform train interface (PTI) working group will be established in conjunction with the

TOCs, to learn from national and industry research, share best practice and improve collaborative working on passenger safety. Two areas remain a focus for passenger safety: escalators and slips/trips. We have now identified the specific escalators and times of day where accidents are more prevalent and an action plan will be created for a targeted reduction.

7.8. How we will measure success

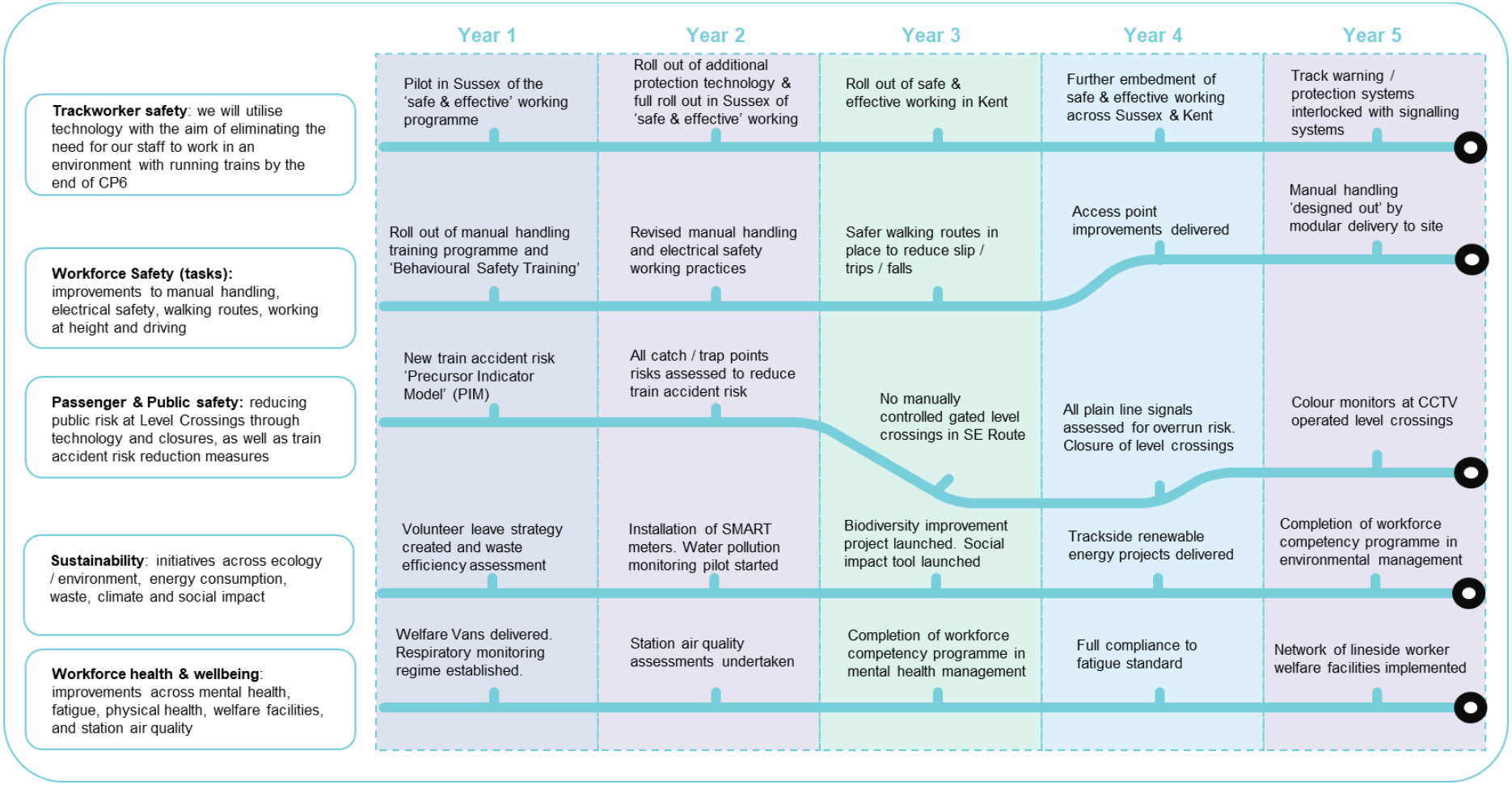
Performance will be measured using key measures for passenger, public and workforce safety. These are Passenger and Train Accident Risk Reduction measures, FWI, and Lost Time Injury Frequency Rates.

The Route Scorecard is described in full in the Executive Summary.

Safety measures	19/20	20/21	21/22	22/23	23/24
Lost Time Injury Frequency Rate (LTIFR)	0.431	0.385	0.31	0.242	0.170
Risk Management Maturity Model (RM3)	0.800	3.214	3.43	3.642	3.856
Train Accident Risk Reduction (TARR)	80%	80%	80%	80%	80%
Top 10 Milestones to Reduce Level Crossing Risk	8	8	8	8	8

Figure 7-4 Safety Scorecard Outcomes

7.9. Key Milestones



8. Well organised with robust assurance

Well organised with robust assurance

This worsktream focuses on ensuring that all business activity is appropriate and consistently governed and managed in accordance with best practice. We will achieve this through:

- Enhanced Route business governance, reporting and assurance
- Robust quality strategy aligned to improvement plans
- Resilient business continuity & security strategy
- Capital expenditure governance, controls and decision-making
- Robust risk management embedded within the Route leadership

8.1. Context

Over the past 18 months we have implemented a rigorous drumbeat for governance, reporting and decision making. We have also developed a clear line of sight in how we manage and mitigate risk. This has allowed us to move from working in a reactive environment with constant troubleshooting, to one with more control and structure. We have got the basics right and recognising the need for continuous improvement we are building on getting better at the basics.

The South East Route is the busiest and most complex route in the country and with this comes great pressure and responsibility. To ensure our processes are embedded in this environment it is key our leaders develop their own controls and processes to lead their teams to embed the change.

With deeper devolution commencing in the first quarter of CP6 it is imperative that the route continues to embed the principles and processes that we implemented 18 months ago and continue to review and improve governance and assurance.

8.2. What we will deliver

- Sustained and continuous improvement of our governance and reporting mechanisms
- Successful delivery and application of 1st line assurance
- A robust single controlling mind and governance processes for all capital delivery programmes within the Route
- An embedded quality improvement change programme which drives the delivery of defined Route outcomes
- An embedded and tested business continuity programme aligned to enhancing the resilience of our critical assets and locations
- Embedded business risk management processes through all levels of the business to section manager level delivering reduction in exposure to threats and maximising realisation of opportunities'
- A Security strategy for the South East Route that is "best in class" in line with the new national formal security management system

8.3. Improved governance and reporting

A revised governance strategy was implemented into the Route 8 months ago which has been fundamental to improving business and decision making. In line with the Route commitment to continuous improvement a post implementation review has been undertaken so that our governance supports the evolving needs for the future. We will be implementing this revised governance regime from 1st April 2019.

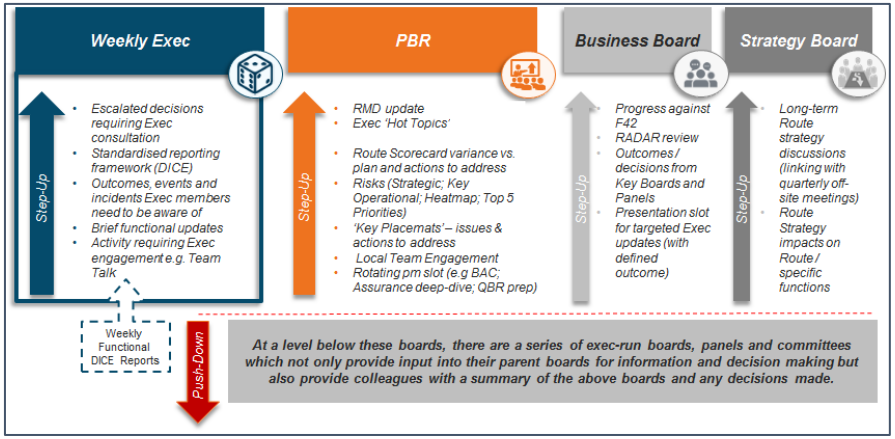


Figure 8-1 Route governance snapshot

As part of detailed design for devolution we will need to revisit our governance to align national, regional and route governance.

8.4. Capital expenditure governance, controls and decision-making

We have recently formed a Portfolio Management team that has developed strong relationships with key stakeholder within the route and a good understanding of the capital works lifecycle. A detailed plan has been agreed for implementation and the principles have been tested with the National Intelligent Client workstream team, which is leading the periodic asset reviews and the migration to a new business planning system. This strong foundation will enable more advanced and consistent metrics to be established over the next quarter and beyond, whilst developing a set of options to enhance integrated planning. This will be supported by cross functional working groups. In summary, the Portfolio Management Office (PfMO) will enable the South East Route to more effectively manage the capital portfolio in light of efficiency, access, financial challenges and constraints within CP6.

8.5. Quality Strategy and Improvement Plans (QIP)

As a route we know that 1st line assurance (and processes) are not working as effectively as they should be. This is evidenced by repeated 'unsatisfactory' and 'unacceptable' rated audit reports. To address this problem, we need to:

- Understand what our critical 1st line business processes are
- Test the effectiveness of these processes and associated controls
- Carry out remedial action as required

By working with functional leads and South East Route executive members, the QIP has identified the most critical processes that the Route undertakes, enabling clear accountability across the Routes senior management team. Through this Phase 1 exercise the QIP Team have also identified the biggest areas for improvement, based on risk - "the top 50 processes".

In Phase 2, which was initiated in February 2019, the QIP Team will work through the 'Top 50 processes' to develop clear end-to-end processes and controls to mitigate the specific risks within each process and ultimately make it easier for people to do their jobs more effectively. The evidence of the QIPs success will be seen by an improvement in audit ratings and ultimately an overall improvement in Route performance and reduction in incidents.

As we conclude the process mapping and controls for each of our highest risk areas over the next 18 months these will be incorporated into the National Integrated Management System (IMS) which will be accessible for all Network Rail staff. This will ultimately help people to undertake their roles more affectively as this will give clear activity steps, handoffs between functions and effective control.

Over the next six months we will work with other routes to apportion the key high-level processes to feed into the IMS.

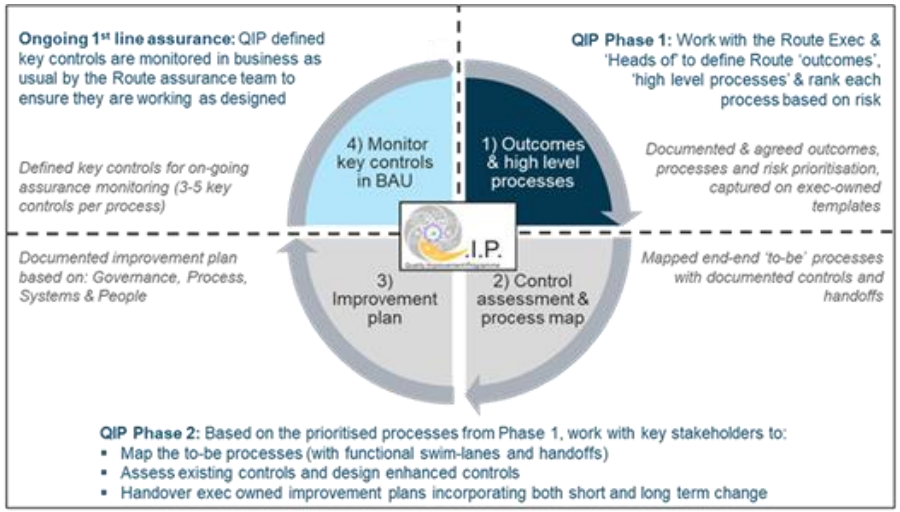


Figure 8-2 Draft approach to enhance 1st line assurance

8.6. Risk Management

The Route will continue to build on the progress made in operational risk management throughout CP5 by developing a programme to shift behavioural change and embed the discipline required for robust risk management in the business. Our teams will focus on the quality of risk information that they provide to reduce risk exposure and manage risk at the first opportunity. The following change initiatives will form part of the overall risk strategy:

- Structured behaviour and change programmes, commencing in March
- Achieving 80% quality on heatmaps
- Alignment of business as usual and business planning risk process

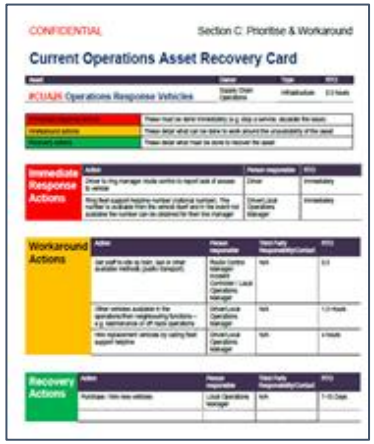
Starting in CP5 and moving into CP6, this programme will build risk analysis capability and processes, via the development of an Opportunities Capture & Management system to support improvement in business planning and contingency forecasting.

We will also continue to develop our people, embed our processes and develop systems to become 'advanced' and then 'leading' in the way in which we manage risk.

8.7. Business Continuity

In the last 18 months we have achieved compliance to NR's Business Continuity Management standard. Business continuity plans have been developed and business impact assessments have been completed for 22 locations, these include Stations, Operations, Maintenance, Telecoms, Electrical Control, Structures, Buildings and Earthworks.

We have also developed asset recovery cards for all high-risk assets across all disciplines. These identify the immediate response actions, the workaround actions and the recovery actions to any loss in continuity to that asset.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Section C: Prioritise & Workaround

Current Operations Asset Recovery Card

Figure 8-3 Example Asset Recovery Card

Moving into CP6 we will test our plans and develop initiatives to reduce the impact of a loss in asset i.e. add axle counters and track circuits into a single line critical tunnel to enable a continuity of signalling if one system fails. We will build these interventions as part of the CP7 business case.

South East - BCM Testing and Validation Schedule				2019									
Area	Status		Tasks	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Electrical Control	18th April 19	1	Identify date and confirm room (Room 0.6)										
		2	Identify critical ARCs and key attendees										
		3	Send invites and brief										
		4	Workshop preparation										
		5	Amend ARCs and produce report - Review and verify										
		6	Publish final report and update master BCP										
Structures	13th June 19	1	Identify date and confirm room (Room 0.6)										
		2	Identify critical ARCs and key attendees										
		3	Send invites and brief										
		4	Workshop preparation										
		5	Amend ARCs and produce report - Review and verify										
		6	Publish final report and update master BCP										
Stations	8th August 19	1	Identify date and confirm room (Room 0.6)										
		2	Identify critical ARCs and key attendees										
		3	Send invites and brief										
		4	Workshop preparation										
		5	Amend ARCs and produce report - Review and verify										
		6	Publish final report and update master BCP										
Earthworks, Drainage and Off Track	3rd Oct 19	1	Identify date and confirm room (Room 0.6)										
		2	Identify critical ARCs and key attendees										
		3	Send invites and brief										
		4	Workshop preparation										
		5	Amend ARCs and produce report - Review and verify										
		6	Publish final report and update master BCP										

Figure 8-4 Extract from Business continuity schedule of testing

8.8. Security Strategy

There have been a number of terror related incidents that have happened in the UK over the past 12-18 months, of which a number of these have been in close proximity to our stations. Tighter security control is therefore becoming increasingly important across the network.

All of our stations and a further nine designated sites have been declared as high-risk locations by the Centre of Protection of National Infrastructure.

For the first time, a terrorism Enterprise Risk Register has been completed for the South East Route highlighting that, although we have a good safety culture in the business, we still lack focus on security.

To enhance security at the identified high-risk locations, over the next 2-3 years we will be:

- Installing additional fencing and anti-climbing aids
- Improving access control for pedestrians and vehicles

- Installing CCTV cameras and enhancing response
- Conducting communication training for specific roles

In our four manged stations the security zones have been adjusted to accommodate better security checks. Training has also begun for all front-line staff in behaviour detection awareness to give our colleagues profiling skills. We are also conducting an internal covert testing programme to enhance our skills at identifying suspicious articles left in stations. This will be rolled out in future to our operational colleagues too.

South East Route looks forward to the creation of a national formal security management system, setting out controls, roles and responsibilities and an assurance framework. We will benchmark ourselves against this management system and will use the expertise of both British Transport Police (BTP) and our Security and Emergency Planning Specialist to enable compliance with the relatively new DfT security arrangements. We have created a fund to undertake security enhancements in CP6.

A collaborative relationship will continue with our partners and stakeholders such as train operators, BTP and DfT inspectors. Our approach will be proportionate and will maintain an ongoing focus on the credible risk environment throughout the next five years.

8.9. Change Management

The South East Route vision is to deliver a metro style railway by the end of CP7. We have developed a change programme, Framework 42, to support delivery of this vision. There are eight workstreams in our transformation journey, each led by a member of the Executive team:

- Highly regarded by our customers and stakeholders
- One performance problem, one plan
- Improving passenger experience
- Excellent asset management
- Everyone home safe every day
- Well organised, with robust assurance
- Proud to be more efficient
- A great place to work, where our people feel valued

Each workstream has agreed goals, milestone plans, critical success factors and KPIs and our plan is split into three phases.

- Getting the basics right
- Becoming brilliant at the basics
- Delivering the vision

We have spent the past 18 months getting the basics right and in CP6 will be continuing our journey to become brilliant at the basics.

As we move into CP6 we need to continue to embed the Framework 42 brand across the business, continually refresh and maintain focus on the plans and are ensure that they are aligned to delivering the vision.

These will continue to be reviewed as part of our governance process and featured in our RMD's leadership events.

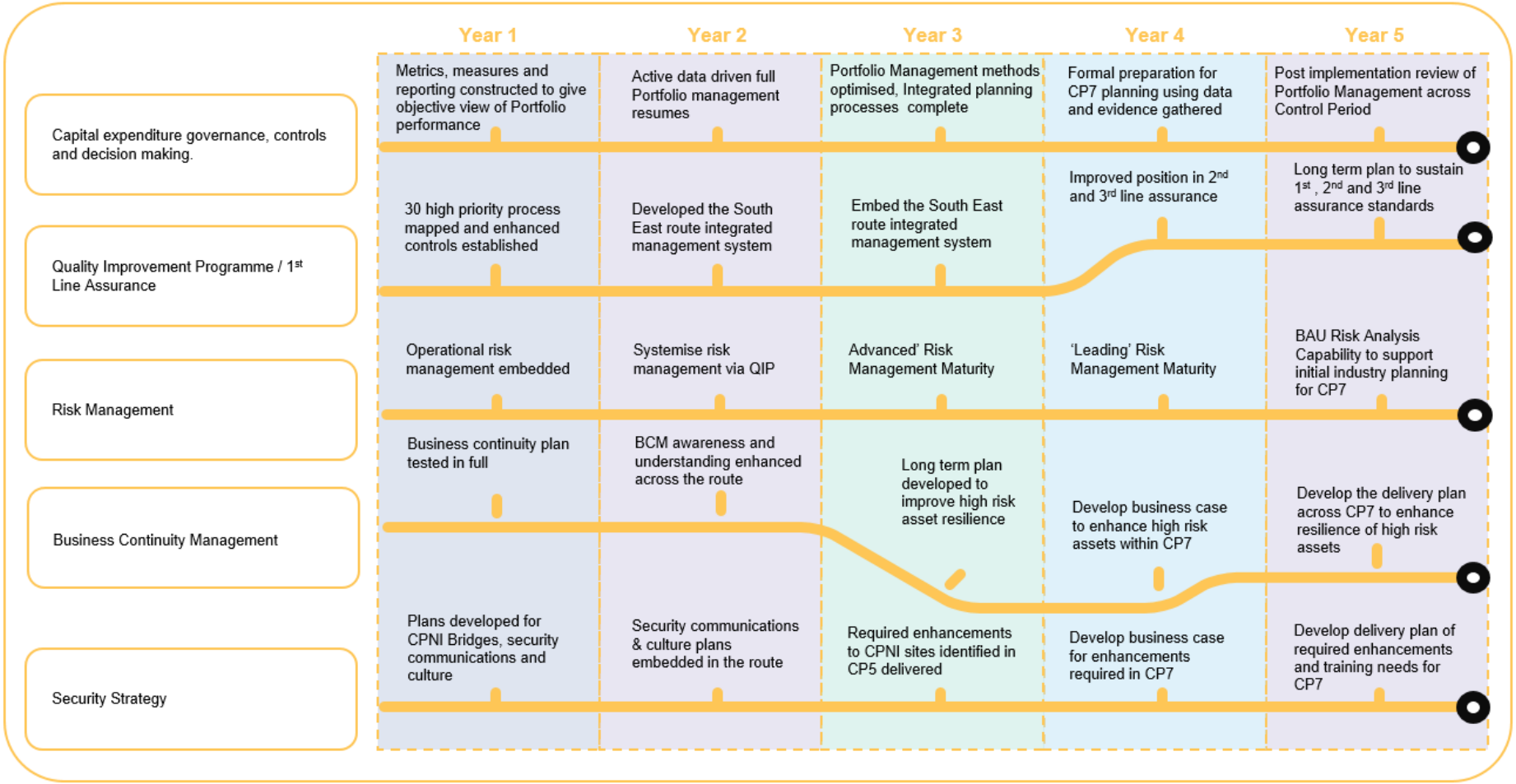
8.10. How we will measure success

Performance against the plan is not measured using the route scorecard metrics, but our work impacts several lead indicators and underpins the governance and operating model to support the achievement of all metrics.

- Improved governance, reporting and utilisation of QIP will result in reduction of non-compliance against corporate audit and reduce temporary variations
- Operating and Capital expenditure governance will support sound financial decision making and monitoring of delivery of key investment milestones and the Financial Performance Measure
- Robust risk management will support the effective 'on-time' and 'on-budget' delivery of programmes, improved train performance via local risk management and help reduce the risk of safety related incidents
- BCM underpins the recovery rate of our business and allows us to operate and respond to a loss in continuity of an asset, supporting our ability to reduce the impact on our railway. Directly relating to performance, financial and customer measures
- Our security strategy will protect our colleagues, customers, finance and reputational impact.

We will also self-assess ourselves against the plan and conduct reviews at six-monthly interval to ensure that we are not only on target but also continuing to do the right things.

8.11. Key Milestones



9. Proud to be more efficient

Proud to be more efficient

This element of F42 focuses on delivering efficiency across the Route through:

- Embedding an efficiency culture
- Business owned deliverable efficiency plans
- Clear understanding of progress with excellent reporting
- Proudly working collaboratively with others

We will focus on key areas, and challenge ourselves to continuously identify new opportunities, embracing innovation, and supporting the delivery of outputs for our customers

9.1. Context

In order to progress towards delivering our vision to be the UK's most successful metro style railway by the end of CP7, the Route needed significantly more funding for CP6 compared to what was available in CP5. Over £1bn more than our settlement for CP5 has been secured for CP6, however this will need to be spent efficiently in order to meet our CP6 outcomes. This is reflected in our gross efficiency challenge of £0.4bn.

We are conscious that efficiencies have not always been delivered, but recognise that a more devolved approach generates an opportunity to do things differently, with an ethos that efficiency works hand in hand with being brilliant at the basics, by delivering greater volume of work, improving performance, and engendering a culture that treats efficiency with a similar level of importance as other key areas such as our focus on safety and train performance.

Within the plans we have also included headwinds. These are factors which are likely to adversely affect the cost of delivering our plan, which in previous Control Periods have not necessarily been recognised.

Our significant efficiency programme for CP6 is designed to take our plans off the drawing board and generate genuine improvements to the way we do things, with a governance structure that holds initiative owners and budget holders to account as well as facilitating effective management of risks that emerge. Some of the initiatives are already underway, but we are not taking the changes required lightly – successful delivery requires transformation in the way that we relate to our supply chain, manage our access booking process and make best use of our people's time.

A number of our initiatives depend on working closely with other areas of Network Rail. For instance, many of our efficiencies relate to improved value for money from our contracts, which are managed on our behalf by our Infrastructure Projects or Route Services teams. However, we are confident that our relationships with these teams have improved dramatically during CP5 and now provide a steady foundation on which to deliver together during CP6, in a more customer-focused organisation. Establishing a Portfolio Management Office for renewals helps embed the collaboration that is needed, and will provide an overview across all delivery mechanisms.

Our efficiency plans have been developed through a combination of bottom up review of costs in CP5 in order to identify where improvements can be made in CP6, and top down strategic challenge from the Route's executive to embed the right level of challenge within the plans. This process involved detailed analysis of cost drivers, and workshops with budget holders across the Route to make sure that our plans are challenging. To test completeness, we cross-checked our plans against the widely recognised Institute of Asset Management operating model.

9.2. What we will deliver

Our plans are to deliver the following level of efficiency in Capital Expenditure (Capex/renewals) and operating expenditure (Opex) over CP6:

	2019/20	2020/21	2021/22	2022/23	2023/24
Opex	-4%	-7%	-8%	-8%	-8%
Capex	-7%	-9%	-12%	-16%	-17%
Total	-6%	-8%	-10%	-12%	-13%

Figure 9-1 Efficiency profile for CP6

We believe that these efficiencies can be delivered to support other outcomes on our scorecard, so that customers and passengers benefit, with the unit cost of achieving required outcomes being reduced. Section 9.7 provides further detail.

In addition to the headwinds and efficiencies developed by the Route, we have accepted an additional £51m stretch challenge (included in the Figure 9-1 above). In light of the thorough nature of our existing plans we believe this is likely to be challenging. However, our approach encourages the identification of opportunities, and we will drive for further efficiencies during CP6 to deliver this challenge. By embedding a culture that lives and breathes efficiencies, we will be able to look for new opportunities, for example in innovation and technology, or by working with customers to progress mutually beneficial initiatives.

9.3. Summary strategy and plans

Our strategy is to focus on a small number of key areas that can have a big impact, that are understood throughout the Route. The key areas identified so far are:

- Planning
- Productivity
- Customer and Contracts
- Continuous Improvement

Within these areas there are a number of initiatives, which are allocated to company-wide themes. The point of this approach is to help drive the ownership of efficiency across the organisation, which is easier if key themes are focused on. It is important that the business initially concentrates on efficiencies that drive the biggest benefit so that the benefits can be seen by all, to further embed an efficiency culture.

Planning

Getting things right at the start of a process or activity is a key element of our planning initiatives, as it helps us to avoid re-planning, changes and abortive costs. This can be seen within our renewals workbank where we aim to fix the scope of our work earlier in the process, avoiding late changes to design. This provides more stability in the workbank and improves our ability to group similar work together, or plan for works in a specific geographical area to secure possession requirements and optimise the delivery strategy. This not only helps reduce the unit cost of activities, it also helps with the communication of any disruptive work to the passenger in advance.

The planning of cyclical maintenance access allows the delivery of ‘on-time maintenance’ using mechanised interventions (tamping, grinding, etc.) and fixed block maintenance windows where improvements are targeted to address specific performance risks. This will reduce backlog and the requirement for temporary variations to manage defects outside of normal compliance timescales. It also enables the rectification of defects before they require time-bound intervention or cause service affecting faults. This not only improves the dependability and sustainability of the railway, it reduces costs of failure.

Also in relation to access planning, we will be maximising opportunities and possession working times by negotiating longer midweek nights, and packaging work in order to do more in the same possession and reduce cost.

Productivity

Being able to undertake tasks in a more efficient way is the focus of our productivity initiatives. This is mainly within our day-to-day operations and maintenance activities, although there are benefits to our renewals works. As noted in Section 4, our maintenance function is maximising “time on tools” through safer, faster electrical isolations and improvements in possession working times using automated devices such as NSCD. This also assists in our renewals activities and will increase both safety and efficiency.

We have invested in mobile maintenance trains (MMT) which will make working on the railway quicker, safer and more efficient as well as less disruptive for passengers and freight. These are engineering trains with large, extendable work areas that allows access to the track below, provides cover, floodlighting and – crucially – protection from passing trains. In CP6, we will maximise the use of these trains, prioritising work on repairing rail defects, weld repair, wet-beds and in restricted access locations, with the aim to improve asset performance, reducing failures affecting train running and protecting our staff, all in a more cost-effective way.

Customer and Contracts

A significant amount of efficiency is planned to be delivered through the supply chain, but it is worth highlighting this is not solely driven by suppliers. We have been reviewing our procurement plans along with other areas of the business that support us, such as Route Services. The first stage is to review the pipeline of activity to identify the opportunities that will arise from the procurement of new contracts. This, linked with our Category Strategy, which is focusing on a number of key categories, allows us to target efficiencies that can be delivered from the procurement and contracting process. Whilst Network Rail is governed by OJEU procurement rules which through competitive tendering drives value, efficiencies will not be delivered through competitive sourcing processes in isolation.

By spending more time up front on quality contracting strategy, considered specification of contracts, and by working with the supply chain, greater efficiencies can be achieved. Whilst price is a key driver of efficiency, plans cannot be delivered by exclusively focusing on price. The quality of services provided, or outputs produced is also paramount.

Supplier management focus is also important to make sure contracts deliver the outputs and value promised, but also to see if any further opportunities can be identified, working collaboratively with the supplier.

We will need to work more closely with our suppliers so that they deliver what is promised, and also to avoid contractual claims that drive cost escalation and inefficiency.

Continuous Improvement

Our group of 'other' activities collects initiatives around continuous improvement and challenging ourselves to be better every day. Network Rail uses the principles of LEAN as a structure in which to do this, and Right First Time delivery will continue to be applied to our work activities.

There will also be a focus on driving efficiency through improving performance, which would lead to Schedule 8 receipts that could meet the further efficiency challenge, or could generate funds to re-invest in driving further performance improvements. Efficiency can lead to performance improvements and further funding – a virtuous circle that we want to exploit.

9.4. Headwinds

There are a number of headwinds that we may face in CP6, these are cost pressures that may arise that are outside our control. We are monitoring these using the same categorisation as our efficiencies, with examples such as:

- Franchise impact of increased traffic on the network
- Increased task complexity of renewals work
- Increased contract rates driven by market pressures
- Apprentice levy
- Changes driven by new railway standards or laws

9.5. Cost drivers and Uncertainty

This section sets out our estimate of the degree of financial uncertainty within our plan.

Pre-efficient costs in our plan are based on 'current rates' but include any additional scope needed to deliver the outputs in the plan. We have used 2016/17 unit rates to develop our capital expenditure forecasts and CP5 exit rates for support, operations and maintenance expenditure forecasts. Drivers of rate increases (headwinds/inefficiencies), or rate reductions (efficiencies/tailwinds), where there is a reasonable expectation they will occur, have been identified separately from the core CP6 plan.

The combination of our core CP6 plan, headwinds/tailwinds and efficiencies/inefficiencies is our 'submission' and represents the 'most likely outcome' for CP6. However, it excludes funding for financial risk, as that is part of the Group Portfolio Fund.

While it is difficult to precisely estimate the likelihood of delivering our plan in CP6, it seems reasonable to suggest that, overall, there is a 45% to 55% likelihood of the outputs in the plan being delivered for the forecast cost in our CP6 plan (i.e. our plan is set at around P50). This means that approximately half of the time, we will be able to deliver our plan for the forecast cost. However, financial uncertainty varies between expenditure categories. For example, we consider that there is significantly more uncertainty in our renewals plan than in the support, operations and maintenance plans in CP6. Our analysis also shows that there is significantly more financial uncertainty in later years of the Control Period.

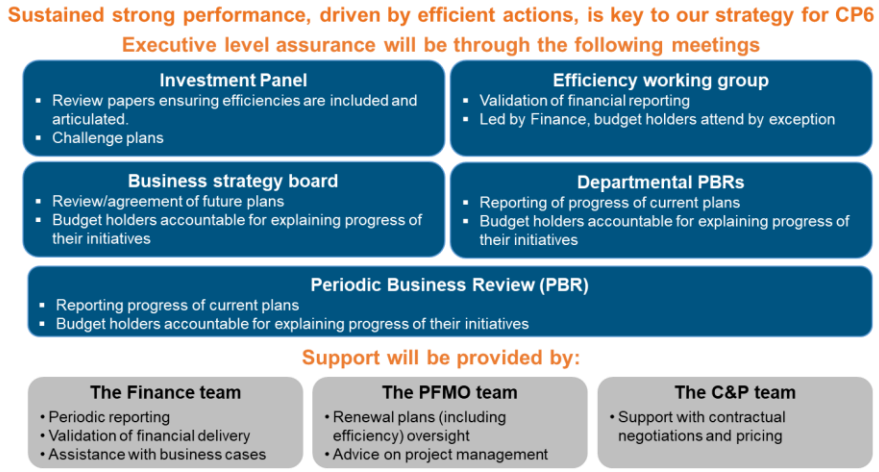
9.6. Governance

The governance of efficiency is important to hold deliverers to account, but also to identify risks and opportunities, and highlights the importance of using quality processes, which the Quality Improvement Programme (described in Section 8) will help to embed.

A key element on the approach to governance is to use existing meetings, as efficiency should be a key part of the review process, as it is key for delivery of financial plans. Efficiency is a key agenda item.

To supplement this there are a number of other forums where efficiency is tracked, reviewed and management held to account. There is a route Efficiency Steering Group, and also there are a number of national meetings which the route will participate in.

The diagram below describes this in more detail:



9.7. How we will measure success

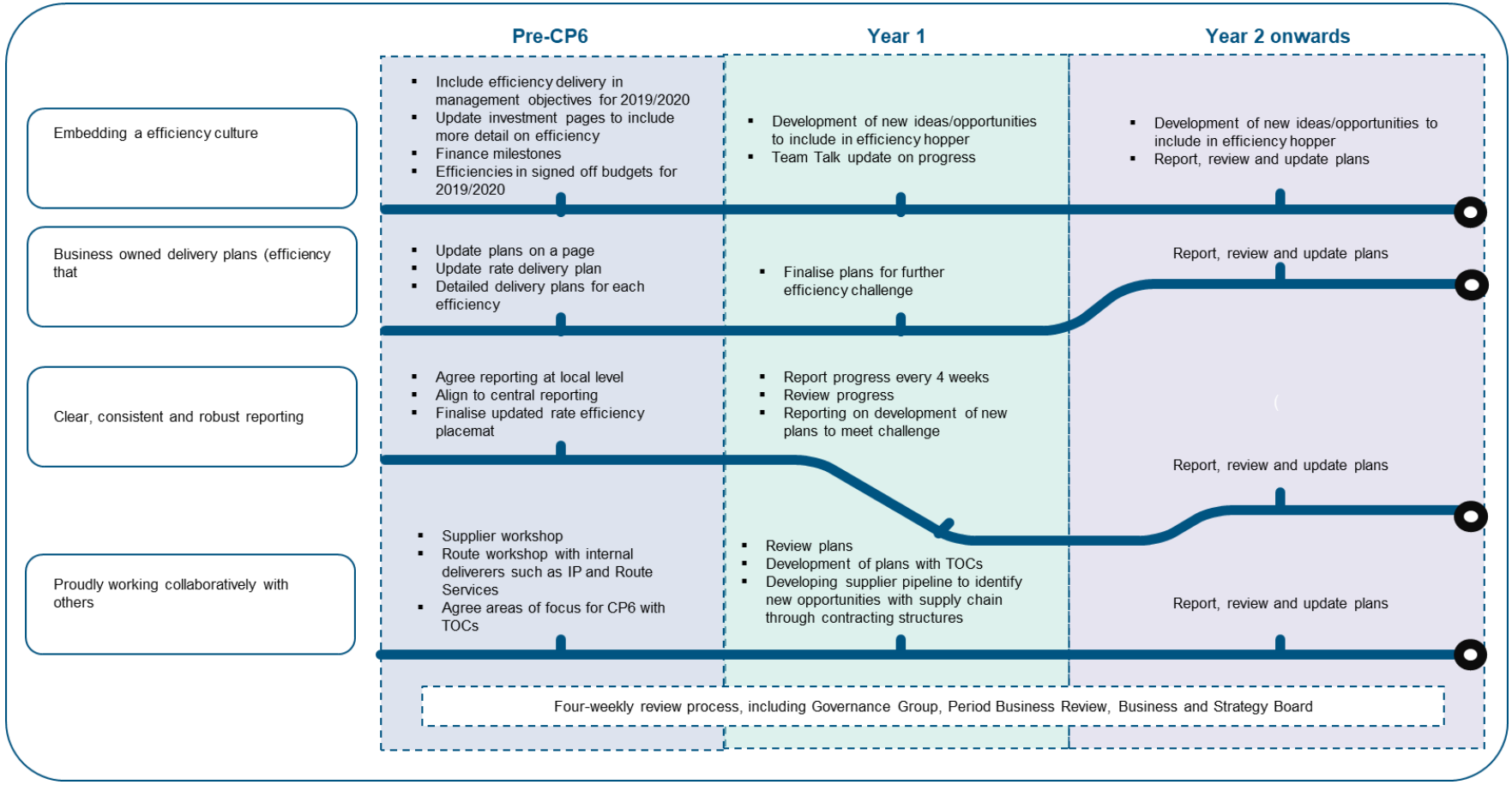
Financial performance will be measured using Financial Performance Measures (FPM) Gross Profit and Loss, and Gross Renewals. The Route Scorecard is described in full in the Executive Summary.

Budgets will have efficiency built into them, so budget holders will be accountable for the delivery of post-efficient outcomes. This will help to drive the ownership of efficiency plans. In addition, detailed plans with milestones will describe how the efficiency will be achieved, with links to other teams/departments/areas of the business that need to support the efficiency.

Targets for changes to each of these measures during CP6 are described in more detail below, with the full Route Scorecard described in full in the Executive Summary:

Financial measures	19/20	20/21	21/22	22/23	23/24
FPM – Gross Profit & Loss	0.0	0.0	0.0	0.0	0.0
FPM – Gross Renewals	0.0	0.0	0.0	0.0	0.0

9.8. Key Milestones



10. A great place to work where people feel valued

A great place to work, where our people feel valued

People are fundamental to our success, and so are the key to better train performance. We value our people's commitment, dedication and efforts. This element of F42 aims to inspire and motivate our people to be 'Better Everyday'. We will deliver on that commitment to create an environment where people feel included, listened to and valued so that they are proud to say they work for the South East Route.

10.1. Context

In 2016, we set on a journey and implemented a new people strategy intended to see the route through to at least the end of CP5. This included a dedicated resourcing team to specifically deliver the number of maintenance operatives the business will need to go into CP6. We also introduced the GEM awards celebrating our people who go above and beyond. We have used these and the content of Framework 42 to improve on that strategy taking on board comments from our people and will use the Network Rail behaviours as the cornerstone of this. We will create an environment where everyone feels included, is listened to and valued, so that we can proudly say we work for Network Rail South East Route.

The strategy comprises a range of work streams covering the full spectrum of people-related activities that enable a strong, capable organisation and where we can bring our whole selves to work.

CP5 was about understanding individual needs in creating a modern railway and putting in place the basics of each of these workstreams. CP6 is about building on that knowledge and delivering top class people programmes that support the Route vision to deliver the UK's most successful metro-style railway. This strategy and the underpinning plans are what enable us to build the organisational capability and deliver the best operations and asset management that we need through CP6 and beyond.

10.2. What we will deliver

There are a number of people-related work streams to be delivered in CP6 in order to achieve our vision. These include:

Platinum recruitment

- A robust strategic workforce plan that enables us to recruit, train and develop a high performing workforce for tomorrow
- A South East Resourcing Strategy to support targeted recruitment
- A South East-specific induction process and tools to support our new joiners
- Ongoing review of the recruitment service provision

Onboarding

We will create a lasting first impression of the Network Rail South East Route by onboarding all new starters with an effective and comprehensive induction programme. We are committed to embedding our behaviours and objectives, which will ensure the effective integration of our new employees through:

- Introduction of new South East induction programme
- A new starter tool kit
- A South East Onboarding tool kit for all line managers
- Trusted leadership and management

We will develop a long-term approach to planning and delivery of all route line manager and leadership development. There will be a consistent approach across our route in assessing all competency and training needs, ensuring all our employees are equipped with the tools and competencies to undertake their roles effectively.

Training

A focus on training will ensure that our teams have the competencies they need to do their best every day.

- A Management Development programme, rolled out to all senior bands, focusing on both their management and leadership skills
- A stronger link between management training and talent and succession planning, so that those identified for the next level and beyond are supported to realise their potential

A more resilient route through better quality performance, development, career conversations and planning for everyone

- Growing and developing the Route's talent programme so that we have talent pipelines in place for both junior and senior roles
- More investment in attracting and recruiting apprentices and graduates, with robust plans for all to increase retention rates

Linking individual objectives to route vision, and making sure that regular performance and development conversations happen

Collaborative industrial relations

- Working in collaboration with our trade union partners to promote informal dialogue as a way of resolving issues: engaging early, encouraging open dialogue and ensuring that everyone has the training and/or education to do this successfully
- Making sure that the right formal forums are in place at all levels to support issue resolution

A culture that enables high performance

- We will celebrate our people through featuring them in visual campaigns through the route explaining why the South East Route is a great place to work.
- Introduction of a quarterly Pulse Survey to monitor our progress and to enable us to respond in a more timely and agile way
- Schemes to recognise those that make a significant difference within the Route as well as joint awards with TOCs

All of these work streams will be governed and monitored by a business-led People Board, which oversees our people plans so that they are business-driven and delivered on time and on budget.

10.3. How we support our people

We are committed to supporting the physical and mental wellbeing of our teams at all levels. There are a number of targeted areas that South East Route will be focusing on in CP6. These are further referenced at 7.6.6 Occupational Health and Wellbeing.

10.3.1. Diversity and inclusion

We will create an inclusive and diverse route in both demographic and ideas, where all our people feel valued. Founded on the fundamental values of respect, equal opportunity and fairness, our aim is to create a route which celebrates difference, meritocracy and embraces change. Through our diversity and inclusion strategy we will build a flexible, innovative and diverse route in which everyone has the opportunity to succeed and be their professional best regardless of their background.

In order to create a supportive and inclusive environment, the South East Route have appointed a dedicated Diversity and Inclusion Manager to navigate and help bring to life the rich culture we have in the South East Route showcasing the diversity of being part of the capital city. Along with embedding the already established national employee groups, we are setting up our own employee networks which will offer a safe space for people to share, network and create action plans to drive our strategy and deliver our goals. Based on feedback from our route, the employee networks being created are a Men's and Women's networks, South East Inspire network and a Working Parents network. Our 'A great Place to Work – We are Network Rail South East' steering group, sponsored by the South East Route executive, whose members are our Diversity and Inclusion champions, will help to drive, implement and lead our Diversity and Inclusion plans.

10.3.2. Flexible working

Within the route, we aim to create an agile and flexible workforce with enhanced safety and performance. Our flexible working strategy centres around education and awareness of flexible working and its benefits, employee support networks and knowledge sharing. The goal of our flexible working strategy is to increase formal flexible working to 20% by the end of CP6, remove any barriers to flexible working and in doing so future proof our organisation.

10.3.3. Fatigue management

In line with the Occupational Health and Wellbeing strategy referred to In

Section 7.6.6, we plan to manage fatigue over CP6. We will focus on working patterns, exercise, sleep, nutrition and stress management. Throughout the development of the fatigue standard and 5 fatigue modules, South East Route will regularly engage with key business representatives to take part in Change Impact Assessments to provide feedback to inform in the creation of the proposed new standard ensuring that their needs are understood and assist in informing training and education throughout the route.

Challenges currently exist around funding for fatigue within South East Route which is predominantly required to fill vacancy gaps as a result of the changes to the standard. The project is currently carrying out analysis across the route to understand the impact on current roster patterns against the new standard. Where we are exceeding the four fatigue triggers, we will educate managers that in the 'new' world fatigue management plans will be required to bring fatigue levels down to appropriate levels.

10.3.4. Accommodation

Over CP5, we have invested £15m across 46 frontline locations. The scope of this investment has ranged from a complete refurbishment - such as Norwood Junction Maintenance Delivery Unit and South East Route HQ - to upgrading the welfare facilities at our single manned signal box locations such as Wateringbury.

The requirements for each location have been developed hand in hand with our front-line user groups and trade unions to check that the location is fit for purpose for staff now and in the future. Where possible we have included disabled access, female welfare facilities and multi faith and reflection rooms to support the needs of all of our teams. Looking into CP6, a programme of works has already started to be identified with our frontline managers to continue to create great places to work for all of our teams.

10.4. Training strategy summary

The South East Route CP6 Training Strategy is centred on linking training directly to performance, with the objective:

"The right training for the right people at the right time"

South East Route will work collaboratively with the Route Services training team to mature the delivery of training to support business objectives. This means our staff will receive the training they need to undertake their roles in a manner that:

- Minimises disruption to their core delivery
- Is supported by the latest technological developments (including simulation, virtual reality etc.)
- Offers value for money

10.4.1. Training maturity

Previously, training was undertaken from the centralised corporate function within Network Rail. The South East Route is progressively maturing towards an Intelligent Delivery Partner role, with a greater emphasis on automating training needs, and using data to inform local training strategy and delivery:

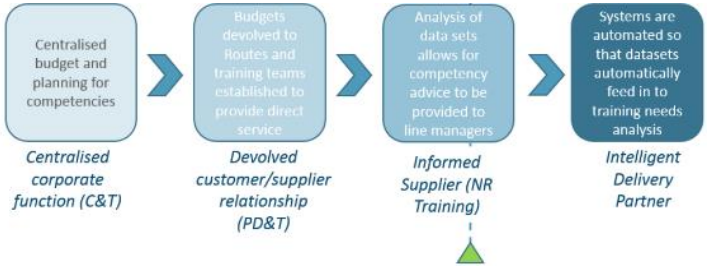


Figure 10.1: South East Route Training Maturity

We expect that economies of scale and expertise will become increasingly important as training effectiveness becomes dominated by the technology used for analysis and design (rather than running training centres). Developments in local and night training are also key to the South East training strategy; 17 training sites are being developed across the Route, with needs confirmed with each delivery unit, and time/motion studies implemented to identify the best mix of delivery.

10.4.2. Training Planning Tool

The 2017 Enhanced Capability Planning (ECP) tool aims to describe what training should be made available to staff, rather than simply what training

could be offered. It does this by assessing training needs based on specific experience, and progressively factors in different data sets to help guide managers as to what training their direct reports and teams need in order to meet their performance requirements.

ECP+ is our core training planning tool for CP6, with base data expected to be captured in early 2019 for rollout throughout CP6.

10.5. Communications Strategy summary

To develop our internal communications strategy, we've used a wide range of inputs including the most recent Your Voice 2017 survey results, interviews with route heads of function and direct feedback from our employees. These insights have enabled us to develop a clear team purpose and communications strategy (see 3.1.5).

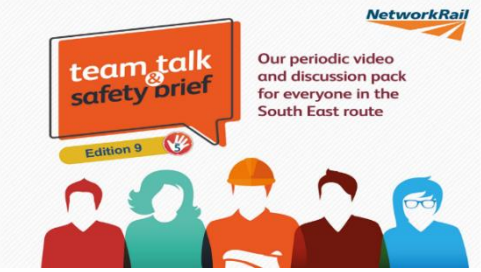
Within this wider communications strategy, and to support the route's objective to create 'A great place to work, where our people feel valued' internal communications has the following objective:

"To support the Route executive team in creating a high performing and engaged workforce who feel valued, proud, informed, listened to and invested in."

10.5.1. High level approach

In advance of CP6, we have set up regular meetings with all route heads of function to discuss communication activity, a large part of which will focus on how to enable the route's vision.

This has helped us to understand the specific functional requirements of the route executive and their teams, which will make sure our communications plan and activities are clearly aligned to business outcomes as well as delivering the communications objectives.



Team Talk (pictured below) is our flagship video briefing channel and was created to increase staff engagement. With the supporting slide pack it is a proven vehicle to drive engagement among our people and is a key part of our strategy in CP6.

10.5.2. Detailed approach

We are putting in place a robust process to deliver improved internal communications throughout CP6. The components include:

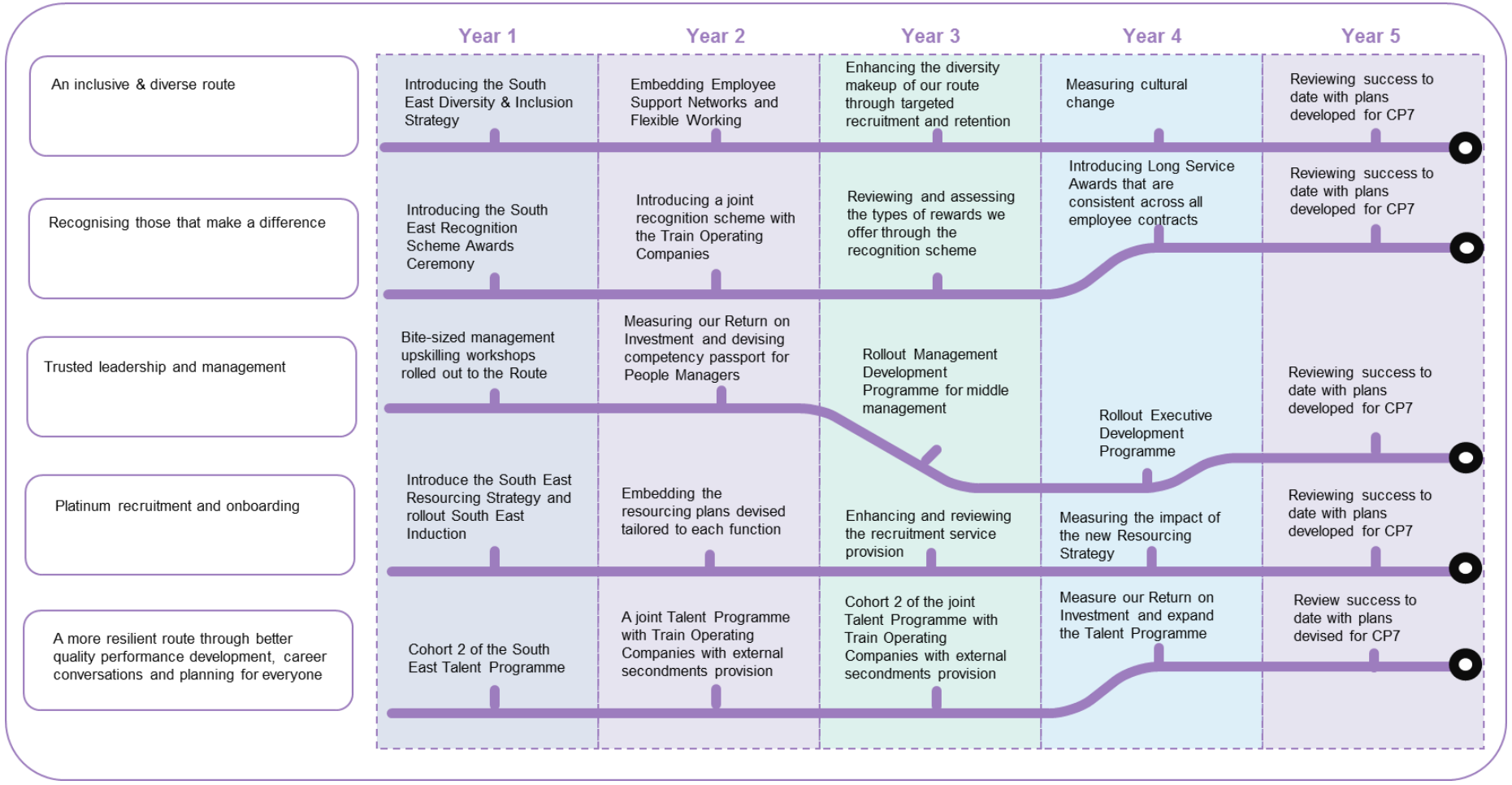
- Segmenting our workforce to better understand their needs
- Using a wide range of channels to reach our staff, particularly frontline teams, and constantly assessing these channels to maximise reach and delivery effectiveness
- Using creative tools and core narratives to make sure that we have clear objectives, core messages and evaluation criteria for each campaign
- Creating compelling stories, which our people can engage with and relate to

10.6. How we will measure success

Performance will be measured using a number of people-related metrics. We expect that our work to support the people element of CP6 will lead to:

- Substantial improvements in our key HR metrics following the wider rollout of the Management Development programme, including
  - Retention of graduates and apprentices
  - Sickness/absence rates
  - Grievance numbers
  - Time taken to address employee relations issues
- The overall Route Scorecard is described in full in the Executive Summary

10.7. Key Milestones



11. Sign-off

This document and accompanying templates are owned by the Route Managing Director (RMD).

Submission of this document indicates confirmation that:

- all appropriate level 1 assurance activities have been undertaken (see separate advice on definition of level 1 assurance);
- the signatories are satisfied that the plan has been assessed as deliverable, subject to the assumptions articulated in Appendix B.

Authorised by:

John Halsall
Route Managing Director

Sam Chessex
Route Programme Director (Change)

Paul Devoy
Route Delivery Director, Infrastructure Projects South East

Ian Hanson
Route Stations Director

Paul Harwood
Director, Route Business Development and Sponsorship

Louise Kavanagh
Finance Director, Route Services

Mark Killick
Chief Operating Officer

Simon Morgan
Director, Route Health, Safety Quality and Environment

Mark Morris
Director, Route Asset Management:

Duncan Rimmer
Route Financial Director

Mark Smith
Head of Human Resources

Mike Smith
Head of Strategic Planning, South East Route

Gill Stevens
Head of Route Communications

Chris Watson
Property Services Manager

Appendix

Appendix A Stakeholder engagement

Scope and Methods of Engagement

Who are our stakeholders?

The performance of South East Route impacts a diverse range of stakeholders. Primarily this is the passengers who travel on our railway and the 3500 employees who work tirelessly to keep the railway running, however we are also part of day to day life of the businesses that operate in our stations, those who live near the Route's infrastructure and many others. It is therefore of prime importance that we consider the priorities and concerns of these stakeholders in the development of our plans. Our objective is to understand their views, where possible addressing their needs and leveraging their expertise within our plans.

The main stakeholders we consulted in developing our plan are:

- County and local council;
- Freight customer organisations
- Freight Operating Companies (FOCs)
- Local Enterprise Partnerships
- Rail Delivery Group
- Rail industry bodies
- Southeast Route employees
- The wider Network Rail community
- Transport for London (TfL)
- Transport user groups
- Train Operating Companies (TOCs)

How have we engaged with our stakeholders?

In the process of developing our CP6 plans we consulted extensively across these groups, contacting and gathering information from 88 external organisations alongside engagement internal to Network Rail. In particular we have worked collaboratively with both GTR and Southeastern throughout the process of analysing and formulating the CP5 exit position for train performance, and the CP6 trajectory. They understand the position Network Rail has reached and the reasoning behind it but, from a customer perspective this does not align with TOC or passenger aspirations for performance in the future.

How stakeholders were engaged to develop the plan - including the method of engagement, the stakeholders involved and the frequency and purpose of engagement – is summarised in the table on the following pages.

Activity	Stakeholder	Date
In lead up to January 2018 submission		
Issue of questionnaire Questionnaire issued (paper version and online) asking for requirements and priorities.	All 88 identified stakeholders and customers	December 2016
Activity	**Stakeholder**	**Date**
Kick-off meeting with Southeastern Initial meeting with key Southeastern staff to begin collecting requirements and priorities. First discussions around the South East Route vision, CP6 planning process and agreement of key contacts for ongoing planning.	Southeastern	January 2017
Kick-off meeting with GTR Initial meeting with key GTR staff to begin collecting requirements and priorities. First discussions around the vision, CP6 planning process and agreement of key contacts for ongoing planning.	GTR	January 2017
Kick-off meeting with FOCs Initial meeting with Freight Operating Companies (FOCs), freight customers and Freight and National Passenger Operators (FNPO) (following February workshops) to collect specific requirements and priorities.	FOCs	March 2017
February workshop 1 (Southeastern) Interactive workshop focused on Southeastern routes, with attendees from TOCs (not just Southeastern), FOCs, local councils, other transport bodies (ORR, RDG, TfL, HS1), DfT, Transport Focus and London TravelWatch. This provided the first opportunity for South East Route to set out the CP6 development process and begin gathering input from wider stakeholders. Questionnaires were issued following the event to gather additional feedback and views on how the engagement was received.	Southeastern	February 2017
February workshop 2 (GTR) Interactive workshop focussed on GTR routes, with attendees from TOCs (not just GTR), FOCs, local councils, other transport bodies (ORR, RDG, TfL, HS1), DfT, Transport Focus and London TravelWatch. This provided the first	GTR	February 2017

Activity	Stakeholder	Date
opportunity for South East Route to set out the CP6 development process and begin gathering input from wider stakeholders relevant to this area. Questionnaires were issued following the event to gather additional feedback and views on how the engagement was received.		
April drop-in session Exhibition-style event held to which all key stakeholders and customers were invited (all who attended the February workshops and any organisations who had responded to the initial questionnaire). This event allowed the South East Route to present progress, demonstrate how requirements and priorities gathered from stakeholders had been used to develop the plan and vision, and gather feedback about how those in attendance felt their views had been accounted for and reflected to date.	All identified stakeholders and customers	April 2017
Presentations at RIRG Updates given at Route Investment Review Group (RIRG) - a meeting attended by TOCs, FOCs, TfL and RDG. This included a specific two-hour session on CP6 planning in August, which was also attended by bidders for the South East franchise. This process has also provided the opportunity for gathering further priorities and requirements and feedback on the plans.	TOCs, FOCs, TfL and RDG	Various
Regular meetings with Southeastern, GTR and Transport Focus Regular (fortnightly) meetings have been held with Southeastern and GTR to keep TOCs appraised of progress and gather any feedback. Other 'milestone' meetings have been held after important Route Strategic Plan iterations, with key documentation shared when appropriate. Meetings have also been held (once every two or three months) with Transport Focus for the same purpose.	Southeastern, GTR and Transport Focus	Various
Transport Focus Sustainability Study South East Route has funded a study by Transport Focus to research and assess passengers' views on the importance of sustainability. This followed responses from the above workshops and meetings where the requirement for a sustainable railway system was not frequently raised, yet a large portion of the CP6 Capex plan was focussed on sustainability. The results of the study, gathered through focus groups and station intercepts, demonstrated that passengers do consider sustainability to be important, but that it doesn't immediately spring to mind (i.e. with some prompting, passengers recognised and valued the requirement for a sustainable asset). This further supported the content of South East Route's CP6 plan and the sustainability metric of the vision. Transport Focus published the results of the study in	Various	September 2017

Activity	Stakeholder	Date
January 2018, and as a result of this work, a deliverability group has been set up with Southeastern, GTR, London Travel Watch, Network Rail South East Route and Transport Focus in order to deliver the recommendations from the study.		
Follow up from January 2018 to 31st March 2019		
Update meeting with GTR Discussion on CP6 status with senior GTR staff	GTR	May 2018
Southeastern Partnership Board Update focussed on CP6 train performance	Southeastern	June 2018
Southeastern Board Update focussed on CP6 interface with Southeastern	Southeastern	June 2018
Local plan delivery session Board General update on South East Route CP6 plan	Rail Delivery Group	June 2018
Head of Performance update meeting Briefing with heads of performance from both TOCs to explain the ORR's challenge to Network Rail in the Draft Determination	GTR and Southeastern	July 2018
Briefing meeting with GTR Session with the GTR Head of Performance and Head of Strategic Risk to explain changes following on from the Draft Determination	GTR	July 2018
Briefing meeting with Southeastern Session with Southeastern Head of Performance to explain changes made following on from the Draft Determination	Southeastern	July 2018
Briefing meeting with GTR Session with the GTR Deputy COO to explain changes made and reasoning	GTR	July 2018
Southeastern Partnership Board Update focussed on CP6 train performance	Southeastern	July 2018

Activity	Stakeholder	Date
Focus group with Southeastern Focus on operational issues	Southeastern	July 2018
Southeastern Partnership Board Update focussed on CP6 train performance	Southeastern	August 2018
Focus group with Southeastern Focus on finance and engagement	Southeastern	August 2018
Focus group with Southeastern Focus on facilities and infrastructure	Southeastern	August 2018
Stakeholder conference - Sussex Event to update stakeholders on our plans for the year ahead, opportunities for joint working and generating inward investment to the railway.	GTR, Southeastern, ARL	November 2018
Stakeholder conference – Kent Events to update stakeholders on our plans for the year ahead, opportunities for joint working and generating inward investment to the railway.	Various	November 2018
Suppliers Conference A conference for suppliers to set the scene for CP6 and explore how we work together to deliver the efficiencies required	Various	February 2019

Outcomes of engagement

During the engagement period our stakeholders told us clearly that reliability and performance is a priority. This, alongside the other issues highlighted below has been a key consideration in prioritising the investment included in our CP6 plan as can be seen in our approach, which is outlined in Section 3: Highly regarded by our customers and stakeholders. The themes are also reflected in our plans in the following ways:

Theme	Impact on scorecard	Impact on plans
Reliability and performance	All performance metrics included on the Route's scorecard show an improvement over the course of CP6, facilitated by investment in maintaining asset condition and improving maintenance effectiveness.	We have increased maintenance investment to manage train performance in the short term, and have invested in our operational strategy, aligned with major signalling renewals in the Victoria area.
Improved planning and delivery	Investment in these areas will support delivery of all scorecard targets.	We have invested in developing our approach to planning with an expanded and more strategically focussed team which is working with operational teams to lock down plans earlier and improve communication with stakeholders. We have also finalised renewals workbanks ahead of commencement of CP6 and set up a Portfolio Management Office to drive forward delivery of renewals work.
Improved communication (to passengers and other organisations)	The success of our passenger communication will be measured through the National Rail Passenger Survey (NRPS) which is a key metric on the Route's scorecard.	Our plans to continue to communicate and engage with our passengers and other organisations are summarised in Section 5: Improving passenger experience.
More integration	Although our scorecard is Network Rail South East, it is reviewed and agreed with our two main train operators – GTR and Southeastern and contains local measures agreed with them.	With input from our operators, we can work together to optimise our plans for the passengers' benefit.
Improved stakeholder engagement	Through engagement with our stakeholders – including industry partners, passengers and wider stakeholders - we are better able to understand their priorities and align this with our overarching scorecard.	Our plans to continue to communicate and engage with our passengers and other organisations are summarised in Section 3: Highly regarded by our customers and stakeholders, and Section 5: Improving passenger experience
Station facilities/car parks	Although not specifically included in the Route's scorecard, we will monitor the outcomes of the NRPS and communication from passengers via social media, complaints procedures and day to day engagement with staff to establish the success of improvements.	This requires working in conjunction with our TOC colleagues to respond on local needs.

The impact of refranchising

As part of our CP6 stakeholder engagement we deepened our understanding of the risks and opportunities that may emerge from changes to our stakeholder landscape. The expiry of the Southeastern franchise in 2019 is the biggest of these at present and we are working closely with the DfT and all bidders to monitor the position, including actively looking at potential alliances to continue delivering improvements for passengers. We have been maintaining our regular meetings with the current franchisee.

Managing cross-route complications

We work alongside other Routes where projects and processes are being rolled out nationally, where our activities and those of another Route directly impact on each other and where sharing knowledge and learnings is beneficial. Formal interaction is primarily managed in the following ways:

- Participation in national working groups, for example attendance at national de-confliction meetings of the annual possession plan and project meetings that affect cross-Route access such as Kings Cross redevelopment;
- Attendance at regular London Airline Consultative Committee (LACC) de-confliction meetings (multi-Route meeting around possessions affecting cross route boundaries in the London area) and regular meetings with Wessex and TfL as our closest neighbouring area;
- Benchmarking our performance through monthly assessment of the volume of TOC and FOC access disputes outstanding at all stages of the formal planning process and the timescales to resolve these.

In addition, our teams are encouraged to engage at an informal level with their counterparts in other routes to progress their work and harness best practice from other parts of Network Rail.

Ongoing engagement

Alongside the formal engagement listed above, over the course of CP5 we have seen significant improvements in our engagement with the TOCs, in particular with outcomes that benefit our passengers. These include:

- Appointing joint Heads of Performance with GTR, tying South East Route and the TOCs more closely to delivering improvements in performance for our passengers
- Negotiating works closures, allowing work to be completed in short bursts and facilitating communication of closures to passengers far in advance

In order to build on this success, we have formalised our engagement strategy for the delivery of the CP6 plan. Staff in all parts of the route are making extensive efforts to build and maintain good relationships with stakeholders and we need to better coordinate this, making sure that we leverage good practice and offer this to all stakeholders. We also hope to engage more closely with political stakeholders regarding our delivery against our CP6 plan and to provide more accessible information to demonstrate the breadth of our activities and the benefits they deliver for local people and communities. We operate in a complex and dynamic landscape and need the support and engagement of our stakeholders in order to succeed.

Alongside these formal channels we are also committed to open and honest communication with stakeholders throughout CP6 when things change. Examples of the engagement coming up include the follow

Forum	Stakeholders	Frequency	Purpose	Expected outcomes
Alliance Board	GTR	Four-weekly	Regular forum to update on developments and address concerns	Ongoing engagement with GTR, facilitating effective resolution of any issues emerging during the remainder of CP5 and into CP6 and identifying opportunities for closer and more effective working
Partnership Board	Southeastern	Four-weekly	Regular forum to update on developments and address concerns	Ongoing engagement with Southeastern, facilitating effective resolution of any issues emerging during the remainder of CP5 and into CP6 and identifying opportunities for closer and more effective working
MP newsletters – Kent and Sussex	MPs	Four-weekly	Keep MPs informed re: train performance, network improvements and other areas of interest including skills, safety, environment	Improved understanding of and advocacy for our plan and rebuilding trust in Network Rail
Future stakeholder conferences (Kent and Sussex)	All	Annual	To update stakeholders on our plans for the year ahead, opportunities for joint working and generating inward investment to the railway	Improved understanding of and advocacy for our plan
Safety workshops	Network Rail operational staff	6 monthly	Brief staff on key safety themes and gather feedback on safety maturity	Monitor effectiveness of delivery of CP6 safety strategy from the point of view of our staff

APPGs (All Party Parliamentary Group)	Southern Rail	As invited	To scrutinise the operation and performance of the Southern Rail franchise with a view to ensuring service improvement by the franchise. The group will act for the best interests of passengers by providing challenge to all organisations, including the government, which have a bearing on operational performance.	Increased understanding of joint working between Network Rail South East and GTR to improve performance for passengers.

Other opportunities will be identified as we continue to develop our Engagement Strategy.

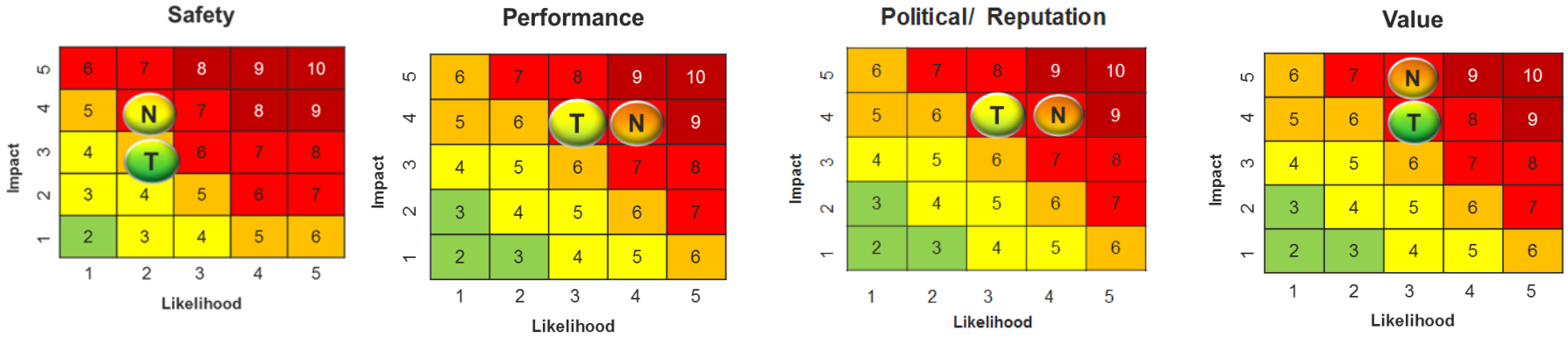
Appendix B Key assumptions and risks

Ref no.	Topic	Assumption	Areas of spend impacted (e.g. all Opex, track renewals, all spend etc.)
1	Route Boundary	The South East CP6 plan is based on the South East Route boundary as at 31st March 2019. Any future boundary change will need to be accompanied with appropriate funding adjustment to account for the transfer of assets and operational responsibilities.	All
2	Organisation	No externally required change to route structure or organisation (other than the impact of Thameslink). Any future externally required change (e.g. area boundary change) will be reflected in an equivalent change in costs and budget. External here refers to external to the route.	All
3	Digital Railway	Operating costs for incremental Digital Rail commitments, including training will be covered by the additional funding in CP6. This is not included in the route CP6 OMR plan. The performance impact of DR will reflect the current assessment by the Central Economics Analysis team. Any changes will result in a change to our CP6 performance trajectory.	Opex
4	Weather resilience and climate change	Projects due to extreme weather events are not included in our plan.	Asset renewals, Maintenance
5	Access	Delivery of our planned efficiencies relies on the availability of additional access in CP6. In maintenance it is assumed cyclical maintenance access will be agreed so that heavy and mechanised maintenance (e.g., tamping and grinding) are delivered that minimise degradation.	Asset renewals
6	3rd Party consents	It is assumed that third party consents and permissions can be obtained for works with similar constraints / costs currently being experienced in CP5. e.g. – access across lands, river bridge span closures, highway closures etc.	Renewals

Ref no.	Topic	Assumption	Areas of spend impacted (e.g. all Opex, track renewals, all spend etc.)
7	Maintenance - arches	Cost of tenanted arches cladding removal is covered up to £55m in Route plan.	Structures maintenance
8	Rolling stock	There are no unanticipated additional costs from the introduction of new rolling stock or new technology on board.	All
9	Refranchising	The plan is based on existing franchises and commitments, with no funding allowance for changes to timetables, rolling stock, and infrastructure that could be specified.	All
10	Electrical Safety Delivery Funding	£85m funding will be provided to South East Route by STE for improving electrical safety delivery; this includes £76.5m allocated to NSCDs.	All
11	Thameslink Implementation - Timetable	Initial GTR timetable change in May 2018, with 18 trains per hour (tph)-based service operating from December 2018. The step up to 20tph is scheduled for May 2019 with stages beyond that, ultimately to 24tph, being phased over subsequent timetable changes, with the exact timing still in development. The GTR weekend timetable will also step up across the six monthly industry change points, with the next significant step up also scheduled for May 2019.	Performance and maintenance
12	Thameslink Implementation - Opex	Additional costs incurred due to the implementation of Thameslink e.g. systems support costs will be in line with the costs currently within our plan.	Opex
13	Traffic Growth	The CP6 performance forecast is based on the traffic growth figures (file dated 11th September 2017) provided to the central performance team by the central Asset Management team[18].	Performance

[18]Traff_v41Feb16_420_Pass_Forecast_xCTS_xSG_xYr_Perf_SCR summary.xlsx, Author: Robert Bauling, Date: 11 Sept 2017

Risks are presented in accordance with Network Rail's Corporate Risk Assessment Matrix methodology. 'N' represents the position at the end of CP5, 'T' represents the Target risk outcomes to be delivered by our plan at the end of CP6.

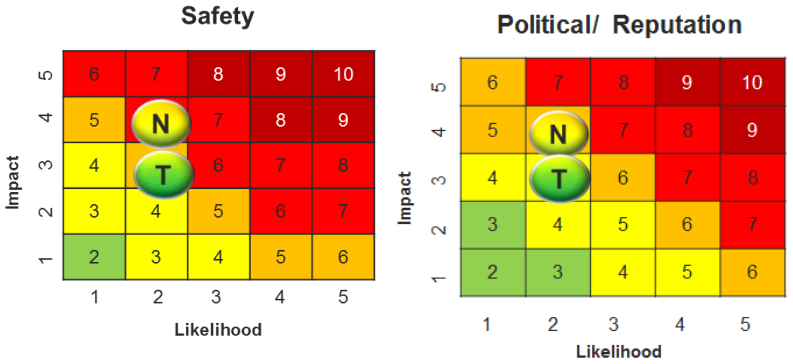


Safety Risk

We are targeting a service with the lowest possible risk of injury to passengers, members of the public, and the railway industry workforce. Those using the railway will do so with the confidence that their personal safety is guaranteed, demonstrated by further reductions to Train Accident Risk and the Lost Time Injury Frequency Rate. Those working on the railway will be safer than ever before, and the public's safety will also be improved by minimising level crossing safety risk.

No.	Key constraints, risks and opportunities	What we plan to do	Owner	Timescale
1	R: Risk of incidents occurring at Level crossings due to numerous causes which could result in material damage to infrastructure or third party assets, or result in injury /fatality to public and/or workforce.	i. The plan is to achieve a 28% FWI reduction at level crossings in CP5 and a further 6% in CP6. ii. Undertake risk mitigation work such as closures/upgrades of level crossing as a result of periodic operational risk assessment in accordance with Network Rail operations manual, subject to local authority support and public consultation. iii. Continue to carry out inspections to Network Rail standards and support the national audit programme to monitor compliance to standards and identify actions to address non-compliance iv. Condition led renewals and refurbishment in CP6, which will introduce modern technology bringing safety benefit	DRAM	Ongoing through CP5 and CP6
2	R: Risk of a Train Accident due to failure to manage asset condition and operations processes, resulting in injury/fatality to the public or workforce	i. Reduce the risk of a train derailment and/or collision through renewals, predict and prevent approach, and the operations & maintenance strategy (better asset information & remote condition monitoring) ii. Improve workforce competency through training and safety frameworks/standards	DRAM	Ongoing through CP5 and CP6
3a 3b 3c	R: RIisk that the LTIFR rate continues to be above the Network Rail norm due to factors including levels of safety competence that are below our ideal and poor fleet vehicle driving resulting in RTAs, injuries and/or fatalities O: Further reduction in injury and operational risk to the workforce C: Funding for full roll out of NSCDs is constrained	**For RTAs:** i. Improve road driving behaviour via telematics and annual checks, reducing breaches of Life Saving Rules ii. Providing driver training and having improved fleet safety specification. iii. All driving Life Saving Rules breaches to be investigated using fair culture process and outcomes to be widely communicated **For all causes**: i. Implement and embed re-issued 019 standard for planning and delivering safe work. ii. Support to the roll out the National Home Safe plan alongside key local initiatives. iii. Drive a step change in safety culture and leadership through safety workshops, behavioural program and continued engagement with the frontline, trade union and executive safety board. iv. Utilise new technologies and procedures to reduce the need for 'boots on ballast' as far as possible through extended usage of mobile maintenance trains and roll-out of Negative Short Circuiting Devices (NSCDs). Further reductions in LTIFR are envisaged in our "Improving Safety" vision scheme	COO/ DRHSQE /RMD/ DRAM	Ongoing through CP5 and CP6

4	O: Improve Workforce Health and Wellbeing	i. Reduce occupation induced ill-health through initiatives such as HAVs meters, fatigue management and mental health awareness training. ii. ii. Improvements in on site welfare facilities.	COO/ DRHSQE	Start CP5, into CP6
5	O: Safety Leadership, Cultures and Behaviours	i. Programme to support the senior leadership of the organisation to take safety performance to a new level of excellence and a supervisor and front line worker programme which engages individuals to take personal safety responsibility.	COO/ DRHSQE	Start CP5, into CP6



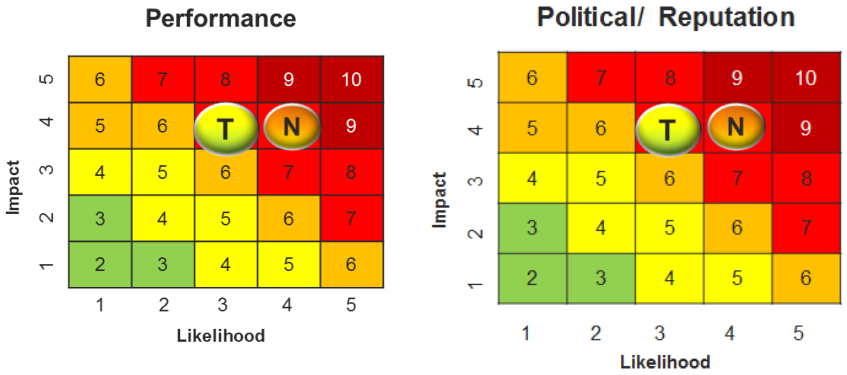
Summary of risk outcome
We anticipate achieving improved compliance to current standards and significant improvements in accident performance (LTIFR) and employee health and wellbeing as well as improvements in train accident and public accident risk.
Operational close calls with staff remains a concern and our CP6 plan involves a focus on planning to enable safe and effective cyclic maintenance and significant investment in additional protection technology. Level Crossing risk reduction is also a priority with the installation of RLSE at AHBs, interlocked MSLs at UWCs and national strategy for meerkat installation.

Train performance risks

Our vision for the South East Route is a dependable, punctual and frequent service. This relies on continued improvement in asset reliability, better management of the network and quicker response and recovery. In the constrained base plan scenario, passenger growth and other reliability factors broadly offset the performance improvements from traffic management, enhanced maintenance and response, meaning performance remains unacceptable.

No	Key constraints, risks and opportunities	What we plan to do	Owner	Customers impacted	Timescale
1	R: Risk that the resilience of the operational performance plans is undermined by a large amounts of sub threshold delay which could result in not achieving performance targets.	i. An independent study into sub-threshold delay will be completed in CP5, the results of this study will be addressed during the end of CP5 and the beginning of CP6 ii. Work with operators to draw up joint action plans to help manage the causes of sub-threshold delays iii. Strengthen our planning processes to ensure that future delays are minimised iv. Continued investment in Digital Railway to improve operational performance	RPM	GTR, Se, ARL	CP6
2	C: There is a large portion of un-attributed delay	i. Implement Joint Performance teams with GTR and Southeastern (Se) - complete. ii. Provide additional Delay Attribution and Delay Resolution staff iii. Implementation of ARS technology. Streamlined and clarified processes for route measurement team	RPM	GTR, Se	CP6
3	R: Risk that the running of 24 trains per hour through the Thameslink core is unachievable by the planned date due to the difficulties in reaching this level of service and the condition of assets outside of the core. This risk could have a significant impact on national performance (PPM) and lead to loss of corporate reputation O: Thameslink Resilience programme (TRP) and CP6 plan improves ability to meet this challenge	i. Implement the Thameslink Readiness Programme, tactically aligning with other industry partners. ii. Develop and deliver the Thameslink Resilience Programme to improve performance to the required level to support 24 tph (north and south of the core), through targeted interventions to address reliability hot spots in the feeder routes, eg, Balcombe Tunnel. Sustain this capability going into CP6 iii. Additional support and integration across SE & LNE teams taking place, to ensure alignment with GTR as programme moves to output based, phased implementation of readiness	RMD / T'link Dir.	GTR, Se	End CP5 and into CP6
4	R: Risk that asset reliability is worse than expected due to poor condition, increased asset wear & failure rates due to increased tonnage (15.5% higher than 17/18 levels) which could result in not achieving performance targets.	i. Part of the Southern Performance Picture (asset Resilience) - Route Asset Management plans to provide a framework for asset management to maintain and improve asset reliability ii. Shift to preventative maintenance and deliver targeted asset renewals to reduce number of incidents. iii. Increased maintenance to restore and sustain compliance, reducing defect rectification timescales and hence temporary speed restrictions iv. Increasing maintenance in second order assets affecting performance, eg, Drainage and	HoMD	GTR, Se, ARL	End CP5 and into CP6

		Vegetation. v. Increase Grinding in the Core Thameslink section to mitigate Rail Defects resulting from Automatic Train Operation and increased tonnage			
5	C: Not enough dedicated response teams in place / Lineside Spares. Delay per incident on the route is increasing and negating the impact of improved asset reliability.	i. Provide additional response teams, particularly S&T, Plant & Distribution and new Telecoms capability. ii. localised lineside stores to improve response and fix times. iii. Implement joint control at TBROC to improve service recovery – complete.	HoMD	GTR, Se, ARL	End CP5 and into CP6
6	O: Traffic Management and further improvements through Digital Railway technology present a real opportunity to sustainably improve performance on the Route.	i. Deploy TM in the core and across a significant proportion of the wider Thameslink network, including future C-DAS and TM roll-out. ii. Use Incident Management System to aid workflow and mobilisation during incident response.	T'link Dir	GTR, Se, ARL	End CP5 Ongoing CP6
7	O: Move to a data driven decision making and preventative maintenance	i. Improve collection, management and analysis of asset condition and performance data to enable better decision making and targeted preventative maintenance. ii. Exploit further Remote Condition Monitoring, using alarms to address defects pre service affecting failures, earlier mobilisation of response and to identify /mitigate locations with repeat failure counts.	RPM HoMD	GTR, Se, ARL	End CP5 Ongoing CP6
8	R: Risk that the poor performance in CP5 due to continued passenger growth could continue in CP6, resulting in an inability to meet customer expectations, increased boarding and alighting times (resulting in not achieving performance targets) and/or increased costs/financial penalties	i. The Thameslink programme will enable increased train capacity on many routes. ii. Support TOCs in their rolling stock solutions to increase capacity iii. Support SO to investigate and develop enhancement schemes to accommodate growth. iv. Potential collaboration with TfL on increasing the capacity of the East London Line..	T'link RMD	GTR, Se	End CP5 Ongoing CP6
9	C: Performance is constrained by operational complexity	i. Work to ensure a high performing timetable. Collaborate with the TOC to tackle operational complexity in train/crew resourcing and with the SO to develop proposals for solving network constraints e.g. grade separation at key flat junctions, notably in the Croydon area.	RPM SO	GTR, ARL	Ongoing CP6 and CP7



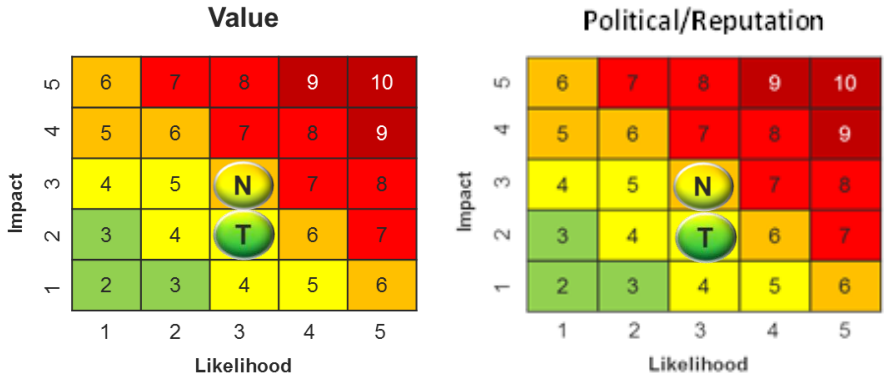
Summary of risk outcome
As our performance improvement plans implemented late in CP5 come to fruition and with the plans we have for CP6 we anticipate that management of this risk will improve. However, performance risk will remain high, with an ongoing potential for high impact, low frequency events, with direct implication for political and reputation risk.

Sustainability and Asset Management Capability Risk

Our objective is a safe and sustainable asset plan that slows the degradation of asset life and condition over CP6 and enables a return to CP4 exit levels of sustainability during CP7/8. Within this we will prioritise investment in critical assets and lines of route to underpin performance and invest in our maintenance and operations strategies and safety improvements. To support this we will continue to strengthen our asset management competencies, building capabilities in data analytics, data driven decision making, improve our planning capability and transition to predict and prevent maintenance regimes.

	Key constraints, risks and opportunities	What we plan to do	Owner	Timescale
1	R: Risk that the access required to deliver our renewals and maintenance plans is not available due to new timetables, inability to gain TOC agreement and/or existing access agreements, resulting in additional schedule 4 costs or under-delivery. O: Renewals planning and contracting strategy	i. Create a workbank that is stable and deliverable, planning in much greater detail, further ahead, to understand access demands. ii. Develop and embed technology to visualise and integrate the asset workbanks. iii. Work closely with the train operators to agree access. iv. Seek opportunities to improve our delivery strategy to bring the route deliverers and supply chain closer together, to align objectives and enable efficiencies.	RMD / DRAM	CP5 and ongoing into CP6
2	R: Risk that we are unable to recruit and train sufficient technical resource for the increased core maintenance and response due to the expansion of the Thameslink service, resulting in an inability to maintain the asset effectively during the Control Period (with the consequential impact on performance etc)	i. The organisation is in the process of being right-sized and a recruitment plan is in place. ii. A specific Project team has been set up within the Thameslink Resilience Programme covering both SE & LNE Routes to drive the recruitment programme, support by the Heads of Maintenance. This team has developed a plan that is looking at alternative approaches to recruit in the scarce skills areas and accelerate training and competence assurance process, targeting translatable skills from other industries. Contract staff are being used to enable early mobilisation where appropriate.	COO / DRAM	Now – CP6
3	R: Risk of an extended period of operational difficulties due to unexpected asset failure and/or asset not performing as designed and/or design issues following introduction of new ATO/ETCS/Traffic Management technology. This may result in reputational damage, poor performance and/or additional costs in the interim whilst the issues are resolved.	i. The programme is undertaking significant pre use testing and the ATO/ETCS/TM are planned for early implementation, allowing some contingency time to fix emerging issues. ii. 2nd & 3rd line support requirements are being developed with the key systems suppliers.	DRS	2018 - 2019
4	R: Risk that funding needs to be diverted from planned renewals to repair significant damage to the network due Extreme Weather events which would result in loss of renewals volumes and could result in loss of asset sustainability and/or performance.	i. Network Rail has insurance for large scale Extreme Weather events which the route will be able to draw upon ii. Creation of headroom at route and portfolio level.	DRAM/ RFD	CP6
5	R: Risk of increased asset failure due to planned renewals volumes not being at 'sustainable' levels and lower minimum levels (STE) which may result in reputational damage, poor performance and/or additional costs.	i. Our base plan includes increased maintenance and response capability to provide short term mitigation on our most critical routes. This will continue our investment in increased maintenance through the Thameslink Resilience Programme.	DRAM	Now – CP6

	Key constraints, risks and opportunities	What we plan to do	Owner	Timescale
6	R: Risk of suboptimal asset interventions due to unreliable and untimely data, leading to reduced benefits and increased costs. O: Move towards a 'predict and prevent' approach for maintenance C: Funding constraint limits investment in RCM and train monitoring technology	i. Identify and monitor quality of ellipse data, increase the frequency of condition data and manage the quality of asset data capture while on site. ii. Expand use of existing remote condition monitoring technology and work with train operators to develop train-based monitoring. Use enhanced data analytics to intervene at the optimum time iii. More engineering support into delivery unit teams to manage risk and design solutions for recurring faults/failures. iv. Drive innovation to identify more efficient interventions (eg, Rail milling to address moderate rolling contact fatigue instead of needing to re-rail)	DRAM /COO	Now- CP6
7	R: Risk that we are unable to recruit and train sufficient technical resource for the increased core maintenance and response due to the expansion of the Thameslink service, resulting in an inability to maintain the asset effectively during the Control Period (with the consequential impact on performance etc)	i. Identify competency gaps across all route roles involved in planning and delivery of the asset lifecycle and implement training where required. ii. In CP6 we will achieve ISO55001 accreditation and continue to implement and build on this, ensuring line of sight from corporate objectives and organisational accountability.	DRAM	Now-CP6
8	R : Risk the requirements to improve the commercial approach of Network Rail will not happen due to lack of skilled focus leading to efficiencies in CP6 not been delivered	i. Recruit additional skilled route commercial (procurement) manager ii. Improve the visibility and interaction with the central procurement team and move to a category procurement approach iii Upskill the Route commercial capability in contract management	DRAM RFD	Now-CP6



Summary of risk outcome

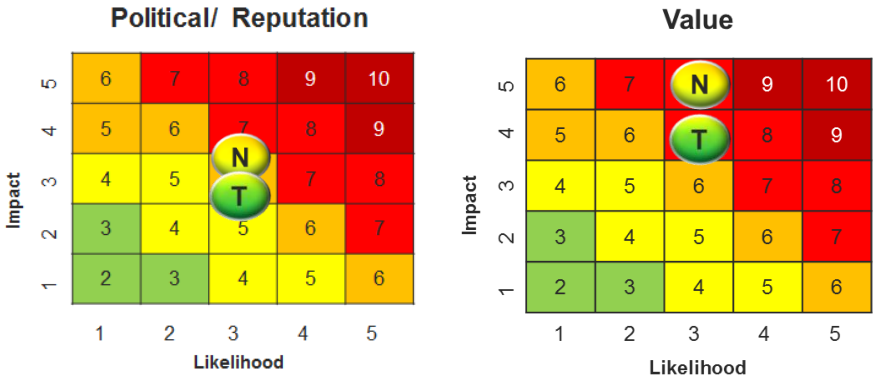
Our approach to asset management will focus on delivering our sustainability target while managing safety and performance risks. We will prioritise our asset interventions on the lines of routes and the assets that are critical to timetable operation, to uphold safety and minimise asset incidents and performance risk as far as possible within the funding available. To support this we will build capabilities in data analytics and data driven decision making, improve our planning capability and transition to predict and prevent maintenance regimes.

Financial Performance Risk

We will have a robust understanding of costs with clear headwind mitigation and efficiency plans. This is underpinned by a bottom up set of validated unit rate and a deliverability assessment. We will deliver efficiencies across our organisation, increasing productivity and ensuring we deliver value for money through: maximising time on tools, better planning (both workbank and access) and optimising our contracting and procurement strategy. We will also use new and existing technologies to deliver efficiencies. However, our ability to achieve long term efficiencies are limited by funding constraints.

No.	Key constraints, risks and opportunities	What we plan to do	Owner	Timescale
1	C: Ability to deliver long-term efficiencies through minimising whole life cost has been reduced due to financial constraints	i. We have proposed a constrained base plan that has been developed to minimise the route's overall risk position within the funding envelope and we will maximise possible efficiencies within this funding envelope.	DRAM/ FD	CP6
2	R: Risk that the scope of the CP6 plan has not been accurately developed due to poor planning, asset knowledge and other issues leading to an inability to achieve the desired outcomes with the funding available	i. Our CP6 plan has been developed bottom-up by the RAMs and DUs using the ABP Model (for Maintenance). These organisations have a detailed understanding of scope requirements and lessons learned from CP5 plan development and delivery. ii. We will regularly monitor progress and manage scope changes to ensure we are able to minimise the financial consequences of changes to the plan	RAMs/ DUs	CP5 (i.e. during the preparation of CP6)
3	R: Risk that CP6 costs have not been accurately estimated through poor planning, workbank knowledge and optimism bias, leading to cost overruns impacting financial performance	i. We have developed CP6 unit rates by basing them on current delivery, before applying headwinds and efficiencies to generate robust, deliverable post-efficient unit rates. Our RAMs have confidence in the robustness of the rates we have used to estimate our CP6 costs. ii. We will regularly monitor our financial performance and ensure that budget holders have accountability for spend and differences from the rates used during the planning of CP6	RAMs	CP5 (i.e. during the preparation of CP6)
4	R: Risk that the CP6 plan is not deliverable due to poor planning of projects, insufficient resources or poor integration of other routes works etc resulting in cash flow and delivery constraints – impacting on costs and volumes delivered	i. We will work with our delivery partners to further develop the CP6 plan and procurement and contracting strategies. This will consider lessons learned from CP5 and agree how best to address other factors affecting availability of the labour market and access to new technologies and equipment.	DRAM/ FD	CP5 and continuing into CP6
5	O: Costs on projects and Opex spend are reduced through tighter controls and better contract management	i. We have started work on improving our controls in CP5 and will continue to improve management of this throughout CP6. ii. There will be a closer working relationship between RAMs, IP and deliverers to ensure contracts are better managed.	FD/RAMs	CP5 and into CP6
6	R: Risk that asset condition is either substantially worse than expected, or deteriorates faster than expected due to poor asset information resulting in a need for a greater number of expensive interventions.	i. The shift to preventative maintenance should help mitigate the chance of asset condition being worse than expected ii. Through right-sizing our organisation we will ensure that we are flexible enough to react to any changes to priorities iii. We will to continue to use and invest in technology to improve our asset knowledge and to	RAMs/ COO	CP5 and continuing into CP6

		ensure that we can plan for changes to reduce the cost of interventions.		
7	R: Risk that the forecast performance trajectory is not met due to Network Rail related 'failures', resulting in an increase in Schedule 8 payments and reputational damage	i. Our plan has been developed to invest in increased maintenance and response capacity and capability to address system resilience and minimise Schedule 8 payments in CP6. The decision to increase maintenance relative to Capex in CP6 is required as we are changing the operating model with a focus on response, critical asset maintenance and the significant issue in both ops and maintenance due to the change of scope because of TLP and managing the impact of CP5 deferrals. Capex in the short term does not deliver the required enhancement in performance given it improves a smaller % of assets each year, as compared to maintenance.	COO	CP6
8	R: Risk that the operation and maintenance of Thameslink assets is substantially more expensive than budgeted due to poor planning and/or poor asset information, resulting in a requirement for additional funding to sustain the Thameslink assets and a reduction in the available funds to maintain asset condition elsewhere on the network	i. The Thameslink Resilience Programme implemented at the end of CP5 should mitigate some of the risk of excessive cost overruns for Thameslink. ii. The provision of response teams and preventative maintenance should help avoid expensive remedial action. iii. We will work closely with all stakeholders to ensure the handover is smooth and that we are proactively tackling potential issues	COO	CP5 and into CP6
9	R: Risk that staff costs are significantly higher than expected due to policies such as Fatigue Management, resulting in a reduction in delivery and consequent impact on CP6 outputs.	i. Headwinds have been included in the submission to cover some of the impact of Fatigue Management standards. ii. We will work with staff representatives to ensure that any solution works for both sides iii. We will ensure that we hold consultations with the unions when we implement a change that may affect staff and employee terms and conditions	FD/ COO	CP5 and into CP6
10	R: Risk that Schedule 4 compensation exceeds the supplemental charge due to poor planning, resulting in additional costs and/or a reduction in delivery and consequent impact on CP6 outputs.	i. Through working with TOCs as well as better access and workbank planning we will mitigate the chance of Schedule 4 compensation exceeding the supplemental access charge ii. We will utilise our access windows more efficiently to mitigate avoidable costs	DRAM/ FD/ COO	CP5 and into CP6
11	O: Headwinds do not materialise and we are able to gain efficiencies through an improved overall contracting strategy, increased time on tools and a stable, well scoped workbank	i. We will be involved in the contract renewal process to make sure that it provides benefits to the route. We will use new technologies and lessons learned from CP5 to manage the workbanks effectively; ii. New technologies such as NSCDs, alongside improved working methods, will also be used to increase time on tools	IP/ RAMs/ COO	CP6



Summary of risk outcome
Financial performance is currently outside corporate risk appetite as we have had numerous challenges with cost overruns and under delivery of volumes in CP5. This situation is improving and we anticipate being able to continue to improve financial performance in CP6 through tightening controls and implementing lessons learned in key areas such as procurement strategy and responding to emergent work. There continues to be significant risk around schedule 8 and schedule 4 payments due to the inherent volatility of the regimes, risks associated with access planning and uncertainty linked to performance albeit there are mitigation initiatives in the plan.

There continue to be risks associated with both the scope of the asset renewal workbank and our ability to deliver at the rates we have planned including the financial implications associated with potential asset failure and need for costly intervention or increased maintenance e.g. earthworks and major structures as condition deteriorates. Our ability to deliver long term efficiencies through

Appendix C Scenario Planning

Contingent renewals

This section describes the benefits of additional investment in the route which will be enabled should risks fail to materialise (as funded through the Contingent Asset Management Fund). All financial figures provided are in 17/18 price base.

Package ID	Package title	Description	Capex (£m)	Opex (£m)	Justification for spend
SEA02-A	Charing Cross Hungerford Bridge Package A	Investment to repair and repaint the four river spans and address severe corrosion of the structure.	27.0	0.0	Improvement in asset sustainability, train performance, reliability/resilience and economic/financial.
SEA03-A	Metallic Structures Sustainability Package A	Investment to undertake proactive interventions on primary route metallic underbridges covering Victoria/London Bridge to Brighton Mainline (VTB) and Charing Cross to Dover (XTD).	4.8	0.0	Improvement in asset sustainability, train performance, reliability/resilience and economic/financial.
SEA01- A & B	Track Sustainability Package A & B	This includes: • High Output Track Renewal Systems (TRS), additional units S&C renewal and additional wheel timbers; • Heavy PL Refurb; • CAT2 Re Railing.	48.1	0.0	Improvement in asset sustainability, train performance, reliability/resilience and economic/financial.
SEA04	E&P Sustainability	Renewal of an additional: • Oil filled HV cable; • HV oil-filled switchgear; • Units of LV DC switchgear. Over the volume contained in the based plan.	33.0	0.0	Improvement in asset sustainability, train performance, reliability/resilience and economic/financial.
SEA03-B	Metallic Structures Sustainability Package B	Investment to undertake proactive interventions on primary route metallic underbridges covering Victoria/London Bridge to Brighton Mainline (VTB) and Charing Cross to Dover (XTD).	11.0	0.0	Improvement in asset sustainability, train performance, reliability/resilience and economic/financial.

Package ID	Package title	Description	Capex (£m)	Opex (£m)	Justification for spend
SEA06-A	Improving Safety and Compliance Package A	Five additional safety improvement schemes: • Level Crossings (red light safety cameras, advance warning devices, minor works, conductor rail cutbacks); • Trespass and Suicide Mitigation initiatives (platform end gates, hotspot management, safety films, etc.); • Compliance: Electricity at Work Act - Stations: re-wiring; • Passenger Safety (platform defects); • Workforce Safety (walking route, access points, lighting and provision of handling equipment.	23.1	0.0	Improvement in asset sustainability, train performance, safety, reliability/resilience and economic/financial.

Investment options

This section describes the benefits of additional investment in the route which will be enabled should risks fail to materialise (as funded through the Route Risk Fund).

Package ID	Package title	Description	Capex (£m)	Opex (£m)	Justification for spend
SEA06-B	Improving Safety and Compliance Package B	Remaining investment from original package, including: • Level Crossings (red light safety cameras, advance warning devices, minor works, conductor rail cutbacks); • Trespass and Suicide Mitigation initiatives (platform end gates, hotspot management, safety films, etc.); • Compliance: Electricity at Work Act - Stations: re-wiring; • Passenger Safety (platform defects); • Workforce Safety (walking route, access points, lighting and provision of handling equipment.	40.4	0.0	Further improvement in asset sustainability, train performance, safety, reliability/resilience and economic/financial.

Package ID	Package title	Description	Capex (£m)	Opex (£m)	Justification for spend
SEA01-C	Track Sustainability Package C	This includes: • High Output TRS, additional units S&C renewal and additional wheel timbers; • CAT2 Re Railing.	8.8	0.0	Improvement in asset sustainability, train performance, reliability/resilience and economic/financial.
SEA02-B	Charing Cross Hungerford Bridge Package B	Undertake preventative works to reinstate the condition of the two land spans.	14.0	0.0	Improvement in asset sustainability, train performance, reliability / resilience and economic / financial.

Decrease in total remaining expenditure for CP6

This section describes the impact of £30m decrease in expenditure in each of the asset types across CP6, based on all risk funding has been exhausted.

	Risk of curtailing expenditure				
Asset	**Safety**	**Performance**	**Sustainability**	**Reputation**	**Comments**
Track					Increasing levels of risk in CP6 and beyond. Compromising the performance of S&C assets as condition deteriorates.
Signalling					Will compromise delivery of route Operations Strategy and Digital Railway.
Structures					The reduction will result in all areas going into red due to the high proportion of poor condition metallic underbridges and the fact that over the last 12 months, urgent/ emergency repairs have had to be carried out on 5 underbridges to avoid speed or load restriction being imposed.
Geotech					The current earthworks CP6 renewals volume is well below STE's modelled volumes for our route. Any removal of budget will result in significant degradation of asset condition and equivalent increase of earthwork failure risk (a lot of earthwork failures, possible train derailments and more TSRs).

	Risk of curtailing expenditure				
Asset	**Safety**	**Performance**	**Sustainability**	**Reputation**	**Comments**
E&P					NSCDs are current policy and a key efficiency enabler. Removing these will greatly reduce the safety benefits for staff, and the Route/TOC will not benefit from the increased access time on track, potentially resulting in performance and deliverability (with the new timetable) issues. Removing the HV oil filled cables will increase the sustainability deficit for the assets. The CP6 renewals are only part renewals targeting the worst asset condition, there is a high risk to performance including potential signalling issues and environmental risks.
Drainage					The Drainage workbank value is £60m so a removal of £30m would just wipe out almost all the track drainage and tunnel drainage funding for CP6. This would be unacceptable and lead to increased safety incidents, more TSRs and closures of the line due to flooding, more wetbeds, deterioration of track quality as a result and unacceptable safety, performance and reputational risks.
Buildings					Platform PTI/Cross Fall Improvements are not driven by asset condition (sustainability) but are driven by passenger safety. 47% of passenger fatality risk and 46% of all passenger injuries are at the PTI.

Key to risk colours

Green: no additional risk. Amber: some additional risk Red: considerable additional risk

Appendix D Activities & expenditure

Cost and volume summary

This plan is predicated on the key assumptions laid out in Appendix B, and will be impacted as these assumptions change.

RENEWALS COSTS (post headwinds and efficiencies in cash prices)

	Unit of Measure	Funded by	CP5 (£m)	CP6 (£m)						CP7 (£m)	
			18/19	19/20	20/21	21/22	22/23	23/24	CP6	24/25	25/26
Track	£m	Renewals	87	129	106	126	117	109	588	138	138
Conventional Signalling	£m	Renewals	90	105	71	96	113	139	523	122	122
Structures	£m	Renewals	26	36	80	66	73	52	306	77	77
Earthworks	£m	Renewals	7	12	28	25	20	7	92	26	26
Drainage	£m	Renewals	6	11	17	13	9	10	60	8	8
Buildings	£m	Renewals	11	38	38	34	33	29	173	62	62
Electrification & Fixed Plant	£m	Renewals	29	28	53	78	81	47	287	81	81
Other	£m	Renewals	0	0	0	0	0	0	0	0	0
Total Renewals	**£m**	**Renewals**	**256**	**359**	**393**	**438**	**447**	**393**	**2,030**	**514**	**514**

KEY VOLUMES

	Unit of Measure	Funded by	CP5	CP6						CP7	
			18/19	19/20	20/21	21/22	22/23	23/24	CP6	24/25	25/26
Plain Line	Linear track km	Renewals	91	129	141	161	117	114	662	TBC	TBC
S&C	Point ends	Renewals	143	152	170	177	194	184	877	TBC	TBC
Conventional Signalling	SEU	Renewals	154	88	98	105	269	116	675	TBC	TBC
Earthworks	5 Chain Lengths	Renewals	45	115	386	257	191	74	1,023	TBC	TBC
Underbridges	m2	Renewals	2,480	1,454	8,412	8,900	7,063	3,583	29,412	TBC	TBC
Underbridges	No of Interventions	Renewals	N/A	20	42	51	36	23	172	TBC	TBC
Conductor Rail Renewal	Km	Renewals	5	1	11	11	5	5	34	TBC	TBC

OPEX COSTS (post headwinds and efficiencies in cash prices)

	CP5 (£m)	CP6 (£m)						CP7 (£m)	
	18/19	19/20	20/21	21/22	22/23	23/24	CP6	24/25	25/26
Track	63	74	78	80	81	84	396	97	100
Off track	8	13	11	11	10	10	54	12	12
S&T	29	35	38	39	40	41	193	47	49
E&P	14	16	18	19	19	20	92	23	24
DU HQ	13	14	14	14	15	15	73	18	18
DU/WD Maintenance excl. B&C	127	152	158	163	166	170	808	197	203
Non DU Maintenance	20	31	36	38	41	43	190	46	48
Civils: Buildings Maintenance	15	22	23	24	24	25	117	29	29
Civils: Structures Maintenance	6	10	16	16	17	17	76	20	21
Civils: Earthworks Maintenance	3	6	6	7	8	8	35	9	10
Total Maintenance Costs	**171**	**220**	**240**	**248**	**255**	**264**	**1227**	**301**	**310**
Operations	112	121	120	122	124	127	614	144	148
Support	36	32	30	29	30	34	155	42	43
Operations & Support Costs	**148**	**153**	**149**	**151**	**154**	**161**	**769**	**186**	**191**
Total Controllable Costs	**319**	**374**	**389**	**399**	**409**	**425**	**1,996**	**487**	**502**
Non-Controllable Costs	0	1	1	1	1	1	7	1	1
Route Risk Fund	0	0	26	27	34	49	136	0	0
Contingent Renewals	0	0	33	34	41	62	169	0	0
Headcount									
Permanent	3,582	3511	3719	3772	3822	3858	3858	3858	3858
Agency	21	11	11	9	9	9	9	9	9

NB all CP5 Costs and Headcounts do not include Thameslink Resilience Programme

ENHANCEMENTS

In contrast to previous Control Periods, in CP6 Enhancements can be introduced at any time. As noted in Section 3: Highly regarded by our customers and stakeholders a DfT funded Enhancement is required to go through the three key stages of the Investment Decision Framework before it can progress to the delivery phase. These stages are:

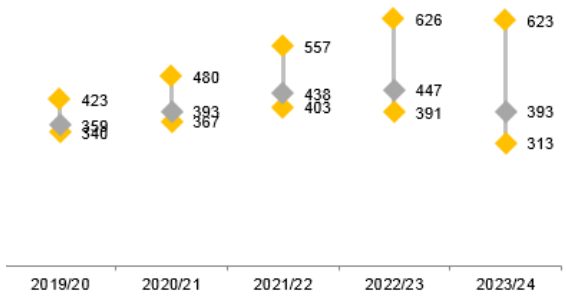
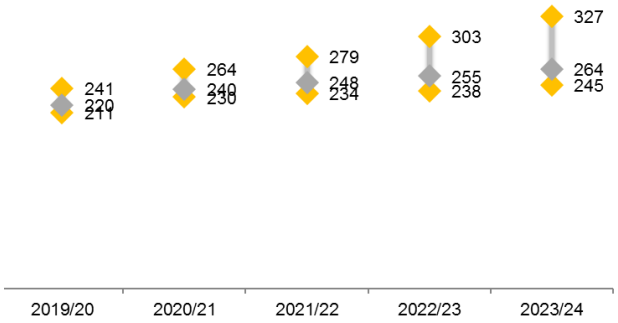
- Decision to Develop
- Decision to Design
- Final Investment Decision (FID)

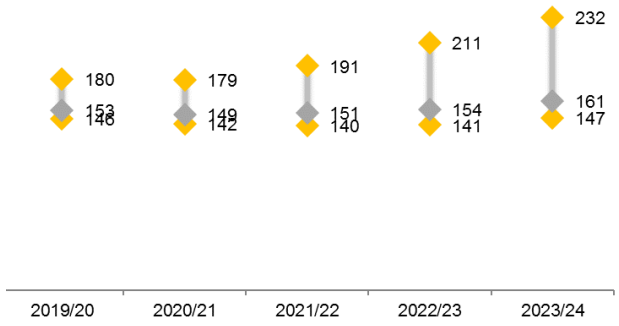
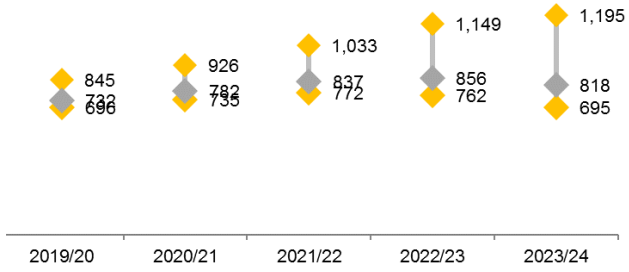
Significant enhancements that are funded from other sources are expected to follow the same process. Only enhancements that have passed the Final Investment Decision point, or have delivery funding confirmed if 3rd party funded, are included in this plan.

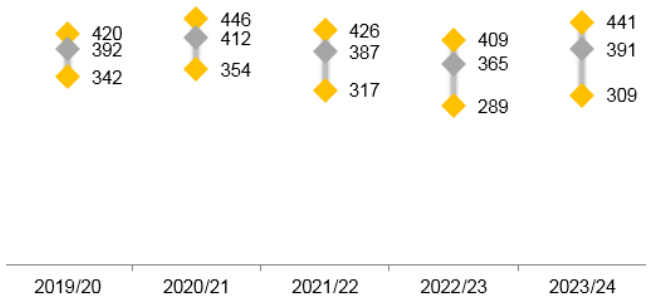
South East Route has three DfT funded enhancement projects; two of them, London South Power Supply Upgrade (New Cross Grid) and Sussex Traction Power Supply are solely within the Route's geography. The third, Thameslink, South East Route take the lead on, on behalf of LNE and Anglia Routes as it crosses route boundaries.

Appendix E Uncertainty in the plan

This section sets out our estimate of the degree of financial uncertainty within our plan.

Area	Potential range (low – spot – high)	Summary of key drivers of the uncertainty range	% of range	
		Driver of range	Lower %	Upper %
Renewals		All Assets – Scope. Uncertainty around the ability to get the required access or resources to deliver the renewals and the potential for the additional renewals.	-18%	+29%
		All Assets – Cost. The risk that the supply market is unable to provide the necessary resources or that the cost of those resources will be higher than forecast.	-22%	+18%
		Track & Signalling. Uncertainty related to the requirement for different technological solutions to those planned.	-17%	+18%
		Track asset deteriorates at a different rate to expectations, through unforeseen changes in traffic and or the impact of new delivery technologies.	-9%	+6%
		Uncertainty related to impact of changes in working practices or standards due, for example, to increased safety requirements.	-5%	+12%
Maintenance		Uncertainty over the medium-term impact of recent and planned significant changes in traffic due, primarily, to the Thameslink timetable changes and general uncertainty over the rate of deterioration in asset condition.	-72%	+70%
		Supplier and or contractor cost increases.	0%	6%
		Uncertainty around the cost of staff due to the new fatigue management standard, the inability to influence existing employee terms and conditions, and the potential new employment terms and conditions.	0%	5%
		Unforeseen costs of maintaining new assets and systems.	0%	2%
		Availability of Access is less than required to maintain the railway at the rates assumed in the plan.	0%	1%

Area	Potential range (low – spot – high)	Summary of key drivers of the uncertainty range	% of range	
		Driver of range	Lower %	Upper %
Support and operations		Uncertainty over the medium-term impact of recent and planned significant changes in traffic and operational requirements due, primarily, to the Thameslink timetable changes.	-69%	+72%
		Uncertainty around the cost of staff due to the new fatigue management standard, the inability to influence existing employee terms and conditions and the potential new employment terms and conditions.	0%	16%
		Supplier and or contractor cost increases.	0%	1%
Total expenditure				

Area	Potential range (low – spot – high)	Summary of key drivers of the uncertainty range	% of range	
		Driver of range	Lower %	Upper %
Income		Risks related to train performance factors within Network Rail control and / or to changes in traffic levels lead to uncertainty in Schedule 8 payments to or receipts from TOCs.	-72%	+73%
		Risks around the quantity of track access required or available and the planning timescales achieved for agreeing access leading to uncertainty in Schedule 4 payments.	-3%	+5%
		Uncertainty over track access income due to risks in timing of timetable changes and train performance.	-9%	+3%
		Final agreement to the TOC contribution to the operation of Network Rail Managed stations may be less than included in the plan.	-7%	0%

Appendix F CP6 income and expenditure

This section sets out our latest forecast of expenditure and income for CP6, and also how our forecasts compare to the assumptions ORR made in calculating our CP6 route funding settlement. Consistent with ORR's PR18 final determination, the tables in this section include route-incurred, and allocated, expenditure and income.

CP6 expenditure forecast

In Table 1, below, we provide our latest CP6 forecast of expenditure. The forecast, will act as the baseline against which ORR measures financial performance in CP6.

£m in cash prices	19/20	20/21	21/22	22/23	23/24	Total	Other*	CP6
Support	32	30	29	30	34	**155**	300	**456**
Operations	121	120	122	124	127	**614**	-29	**585**
Maintenance	220	240	248	255	264	**1,227**	49	**1,275**
Renewals	359	393	438	447	393	**2,030**	621	**2,651**
Schedule 4 & 8	51	37	42	40	35	**205**	42	**246**
EC4T, industry costs and rates	1	1	1	1	1	**7**	848	**855**
System Operator	0	0	0	0	0	**0**	60	**60**
GPF: route	0	26	27	34	49	**136**	0	**136**
GPF: contingent asset management	0	33	34	41	62	**169**	0	**169**
GPF: centrally-held	0	0	0	0	0	**0**	157	**157**
Total costs	**784**	**879**	**941**	**973**	**965**	4,542	2,048	6,589

Table 1: CP6 expenditure forecast

**Other represents the route allocation of national function costs.*

In calculating the route funding settlement for CP6, ORR made assumptions about our costs. Table 2 below, compares our CP6 business plan expenditure forecasts with ORR's PR18 final determination assumptions.

£m in cash prices	CP6 Business Plan			Final Determination			Variance		
	Route	Other*	CP6	Route	Other*	CP6	Route	Other*	CP6
Support	155	300	**456**	75	274	**349**	-80	-26	**-107**
Operations	614	-29	**585**	742	10	**752**	128	39	**167**
Maintenance	1,227	49	**1,275**	1,153	38	**1,191**	-74	-11	**-85**
Renewals	2,030	621	**2,651**	2,048	610	**2,658**	18	-12	**7**
Schedule 4 & 8	205	42	**246**	264	0	**264**	59	-42	**17**
EC4T, industry costs and rates	7	848	**855**	0	917	**917**	-7	69	**62**
System Operator	0	60	**60**	0	51	**51**	0	-8	**-8**
GPF: route	136	0	**136**	117	0	**117**	-18	0	**-18**
GPF: contingent asset management	169	0	**169**	168	0	**168**	-0	0	**-0**
GPF: centrally-held	0	157	**157**	0	168	**168**	0	11	**11**
Total costs	**4,542**	**2,048**	6,589	**4,567**	**2,067**	6,635	**25**	**20**	45

Table 2 Business Plan vs. Final Determination expenditure

***Please note**: ORR's PR18 final determination did not separately identify the costs allocated to routes from route-incurred costs. However, the table, above, identifies allocated costs based on underlying information from ORR's analysis.*

CP6 income forecast

The expenditure in Table 1 needs to be paid for. In Table 3, below, we provide our latest CP6 income forecast. Our charging income forecast reflects our latest forecast of CP6 traffic levels and is consistent with final CP6 price lists.

£m in cash prices	19/20	20/21	21/22	22/23	23/24	Route	Other*	CP6
Variable charges (VUC, EAUC)	-35	-36	-37	-38	-39	-184	0	-184
Stations LTC	-51	-52	-53	-54	-55	-263	0	-263
EC4T	0	0	0	0	0	0	-689	-689
Schedule 4 ACS	-74	-63	-60	-49	-47	-293	36	-257
FTAC	-219	-233	-212	-195	-215	-1,072	204	-869
Network Grant (SOMR)	0	0	0	0	0	0	-3,477	-3,477
Income from FNPO	0	0	0	0	0	0	-213	-213
Other single till income	-64	-66	-68	-70	-72	-339	-347	-686
Income within scope of PR18	-442	-449	-429	-405	-427	-2,152	-4,487	-6,639

Table 3 CP6 income forecast

***Please note**: Government grants for corporation tax, financing costs, BT Police costs and enhancements were not agreed as part of ORR's final determination so we have not included them in our forecast of income for completeness.*

**Other represents the route allocation of national function income.*

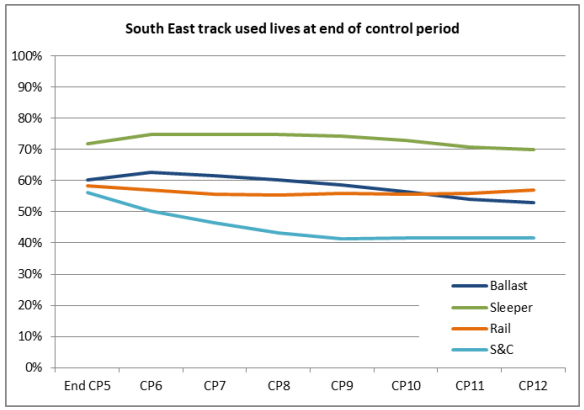
In calculating the route funding settlement for CP6, ORR made assumptions about the amount of income we will receive from charges and other income. **Table 4** below, compares our CP6 business plan income forecasts with ORR's PR18 final determination assumptions.

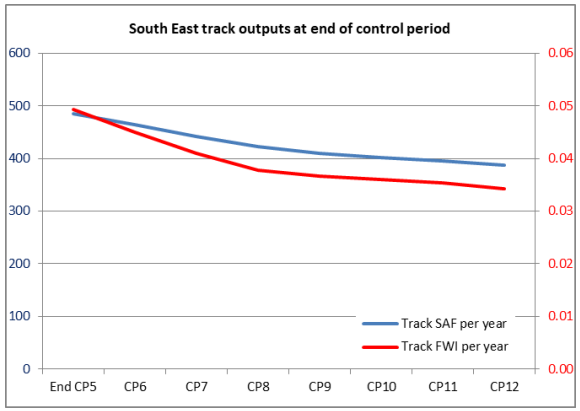
£m in cash prices	CP6 Business Plan			Final Determination			Variance		
	Route	Other*	CP6	Route	Other*	CP6	Route	Other*	CP6
Variable charges (VUC, EAUC)	-184	0	-184	-202	0	-202	-18	0	-18
Stations LTC	-263	0	-263	-260	0	-260	3	0	3
EC4T	0	-689	-689	0	-723	-723	0	-34	-34
Schedule 4 ACS	-293	36	-257	-264	0	-264	29	-36	-6
FTAC	-1,072	204	-869	-871	0	-871	201	-204	-2
Network Grant (SOMR)	0	-3,477	-3,477	0	-3,479	-3,479	0	-2	-2
Income from FNPO	0	-213	-213	0	-213	-213	0	0	0
Other single till income	-339	-347	-686	-299	-322	-622	40	24	64
Income within scope of PR18	-2,152	-4,487	-6,639	-1,897	-4,738	-6,635	255	-251	4

Table 4 Business Plan vs. Final Determination income assumptions

Appendix G Asset by asset long term forecast

Track condition trajectory





NB: SAF = Signals and Points Failures

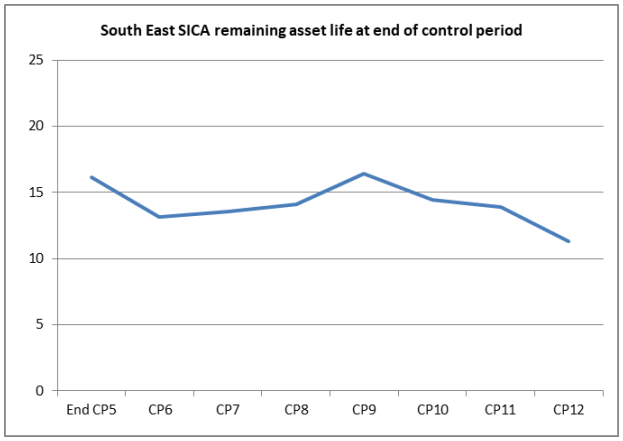
NB: FWI = Fatality Weighted Injuries/Index

Increased preventative maintenance in CP6 is expected to improve track sustainability and performance, but exacerbates the bow wave of renewals that will need to be delivered in CP7 and beyond. Prioritisation has been given to renewals with track criticality 1 and 2 routes, with refurbishment and maintenance interventions planned on track criticality 3, 4 and 5.

In the short term, priority has been given to plain line track renewals for CP6, Switches & Crossings (S&C) renewals, high output track renewals (not including ballast cleaning) and re-railing in order to contain performance and sustainability impact within CP6 – e.g. S&C sustainability is planned to improve to 49%.

These interventions mean that asset failures (measured in SAF and FWI) are expected to continue to increase during CP6 and beyond.

Signalling condition trajectory



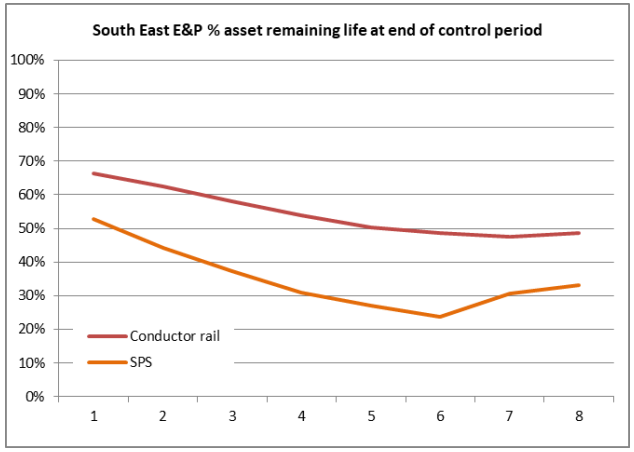
NB: SICA = Signalling Infrastructure Condition Assessments

With partial targeted renewals in CP6, we expect that Asset Remaining Life (ARL) will continue to decrease between CP6 and CP8, before improving in CP9. We will be investing in more full renewals, which will improve ARL and whole life cost in the medium term.

Access and resource constrain the amount of signalling renewals work that can be delivered within any Control Period; the decline in ARL between CP5 and CP6 reflects a lower renewals spend while access was limited during Thameslink programme construction (although the enhancements benefits from this work have been modelled in ARL).

Digital Railway investment in CP6 introduces new traffic management systems, and so does not contribute to ARL.

E&P condition trajectory



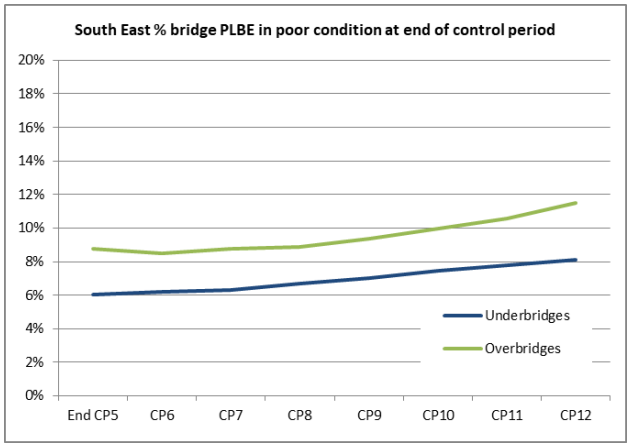
NB: SPS = Signalling Power Supplies

Sustainability continues to decline due to historic underfunding and the level of safety improvements prioritised in CP6. Renewal volumes continue to be lower than steady state in CP6 as a result, with risk of failure increasing. A reactive fund has been included to provide for fix on failure.

Signalling Power supplies show improvement in remaining life following increased Opex and renewal funding, together with improved systems and standards that started in CP5.

Sussex shows the biggest improvement as funding will be prioritised for route criticality, condition and obsolescence. Expenditure peaks for both SPS and Conductor Rail in CP7 to manage the obsolescence risk and to address assets beyond their technical life.

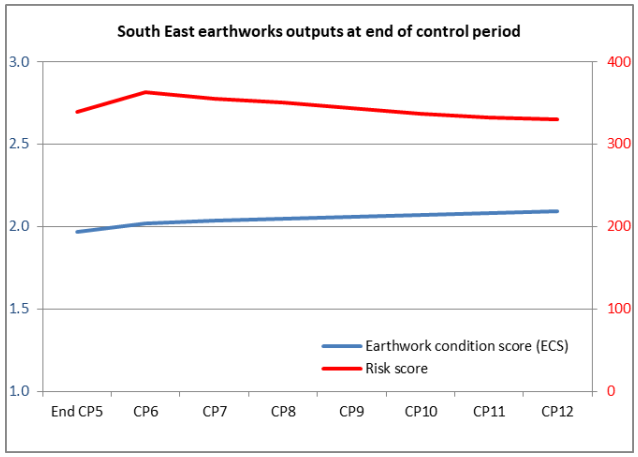
Structures condition trajectory



NB: PLBE = Principal Load Bearing Element

The condition of bridge structures will decline under current plans, as assets are not being managed at steady state. Our asset plans give priority to the metallic underline bridge stock, replacing or strengthening weak bridges and repairing and refurbishing poor condition structures where possible, or renewal where not. Overall asset condition will continue to deteriorate through CP6, but network capability will be maintained (with the exception of short term restrictions).

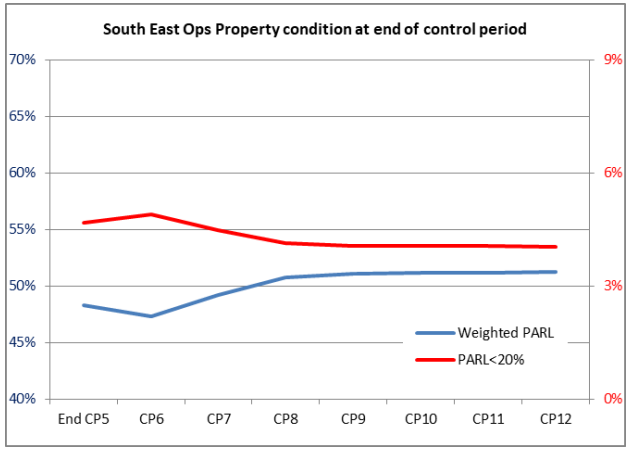
Earthworks condition trajectory



During CP5 and CP6, funding has been directed to a high volume of smaller interventions focused on immediate safety and performance risk following poor weather in previous Control Periods.

A small increase in drainage expenditure is forecast beyond CP6, and the true extent of this will be understood once condition surveys have been completed. The rate of decline in condition scores slows and remains above CP5 levels; risk will be managed through targeted renewals, refurbishment and maintenance alongside increased monitoring regimes.

Operational property condition trajectory



NB: PARL = Percentage Asset Remaining Life

There will be a peak in expenditure during CP6 and CP7 to address renewals for poor condition assets that were not funded in previous Control Periods; as a result, the number of poor condition assets (where PARL is less than 20%) is reduced, and weighted asset remaining life increases above 50%.

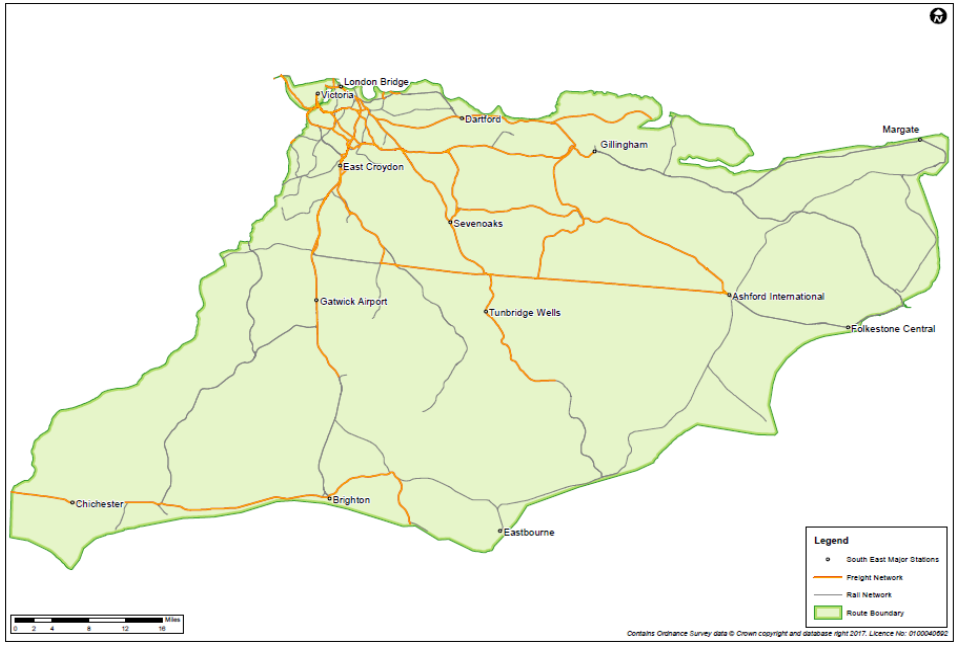
Appendix H Freight and national passenger operators route plan

The following document has been created by the FNPO function.

South East Route and Freight & National Passenger Operators (FNPO)

This summary sets out how the South East and FNPO routes will work together to deliver the Route Strategic Plan for South East. It outlines existing FNPO activity, and then describes the impact of the plans and aspirations of FNPO customers to grow and develop their businesses. It summarises what Network Rail needs to do to deliver these strategies and how, in doing so, efficiencies can be identified and realised.

It should be noted that, unless stated otherwise, no funding is included in the South East Route Plan for any works stated in this document. The 'What we plan to do' section of the table below refers to the FNPO activities, although South East Route, working with all industry partners (including all other TOCs and FOCs), will support FNPO as far as possible.



National Passenger Operators:

No National Passenger Operators use South East Route infrastructure.

Charter trains operate across South East Route, especially at weekends, to a variety of leisure destinations being hauled by both standard and heritage steam and diesel locomotives. This leisure market is expected to grow during CP6.

Challenges and Opportunities

No	Key Challenges, Risks and Opportunities	What we plan to do
1	**Aggregate Growth** O: Volume growth from locations off South East Route to end terminals on the route. R: Capacity and capability. Infrastructure not able to cope with traffic demand.	• Explore opportunities for longer and heavier trains maximising loco capability; • Support introduction of new wagons that maximise payload/length ratio; • Support Terminal and Yard developments – e.g. Peak Forest and other locations required for sector growth; • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading; • Explore opportunities for new capacity – e.g. including trial longer trains.
2	**Gauge establishment** C: Establishment of recognised diversionary routes for gauge critical traffic	• Explore gauge clearance on key corridors, e.g. (Ashford/Maidstone East/Sevenoaks Line, West London Line and North Kent), and provision of diversionary capability; • Explore funding opportunities, including Third Party; • Documented diversionary routes for core intermodal flows • Review of RT3973 provision to more closely align with traffic flows – reduced duplication.
3	**Other Commodity Traffic Growth** O: Steel & other scrap metals O: Automotive O: Forest Products O: Bulk O: Aviation Fuel & other Petro-chemicals O: Intermodal	• Work with customers to maximise opportunities for longer and heavier trains maximising loco capability; • Support Terminal / Yard developments to facilitate growth. Eg Howbury Park, Plumstead, Thamesport; • Support introduction of 'pop-up' terminals, bringing out of use infrastructure back into use and increased use of lineside loading. Promotion of and assisting customers to set up new automotive, Steel or aggregate flows from Sheerness and Queenborough on the Isle of Sheppey and growing traffic from Angerstein, Thamesport, Northfleet, Cliffe, Grain and Channel Tunnel traffic from Dollands Moor; • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity and capability,or bring out of use infrastructure back into use including Newhaven Marine and Salfords on the Brighton Main Line.
4	**Franchise changes / Crossrail** R: Refranchising of Southeastern seeks greater capacity on shared lines.	• Retain adequate capacity, capability and flexibility for existing and forecast freight; • Review Impact on possession strategy from new flows; • Review stabling plans for new rolling stock / change of locations including the introduction of a potential new depot for Southeastern in the inner London area.

No	Key Challenges, Risks and Opportunities	What we plan to do
5	**Infrastructure enhancements / electrification** R: Loss of Capacity following timetable change. Southeastern on the South East Route.	• Support Route forums (RSPG etc.) to influence scope and secure freight benefit following scheme delivery; • FNPO, FOCs and Freight End Users to provide appropriate input into the decision making process; • Work with Route Business development team to identify potential Third Party funding sources.
6	**Construction projects / HS2** O: Opportunity for spoil and waste out and aggregate and other commodities in to support construction. R: Capacity for new aggregate and spoil flows in the Southeast from HS2 project.	• Work with DfT, HS2 Ltd, FOCs and End-customers to offer solutions to demands of major projects; • Work with customers to manage the impact of major projects on their business (HS2); • Terminal / Yard developments ('pop-up' terminals / lineside loading potential); • Work with FOCs and Freight End Users to deliver new network connections and necessary capacity, or bring out of use infrastructure back into use.
7	**SRFI Terminal Development** O: SRFI terminal development supports intermodal growth especially addressing demand for inland terminals C: Securing of sufficient capacity to support SRFI developments through planning and into use	• Work with Developers to understand SRFI proposals progression through planning; • Offer Network Rail support to proposals when adequate strategic fit and capacity; • Work with System Operator to support funded early stage timetable work for SRFI developers. Southeast Route is hoping to see the establishment and development of Howbury Park as a major intermodal logistics hub.
8	**End User-customer service** O: Closer working with FEU's enables greater understanding of customer priorities for future (e.g. Tarmac, Aggregate Industries, Brett, Days Group, Hanson)	• Work with end user -customers to develop business growth and support modal shift to rail; • Work with end user -customers to strengthen service delivery and support.
9	**Review of redundant and unused assets:** O: Following traffic changes in CP5, opportunity exists to review size and organisation of non-passenger network R: FOC objection to supporting Network Changes	• Identify opportunities to reduce maintenance costs and remove unneeded infrastructure; • Regularise the status of freight assets and other assets including gauge, S&C (actual v published capability); • Explore potential to transfer ownership of redundant lines / assets to secure better opportunities for redevelopment.
10	**Yards and sidings infrastructure** R: Yard and Siding Infrastructure asset condition is critical to avoid derailment events and customer LTI's	• Working with Routes and customers to review asset condition on regular basis. Keeping up emphasis on maintaining and enhancing major terminal infrastructure including Angerstein and Battersea Pier and Crawley New Yard; • Working with Routes and customers to establish and benchmark walking route use and

No	Key Challenges, Risks and Opportunities	What we plan to do
		condition.
11	**Timetable Review** O/R: Timetable Improvements to closely reflect capability of trains and capacity of network required on busier network	• Continuation of CP5 work to review path usage and remove unused paths and agree strategic capacity; • Work with FOC's to more closely align Train Slots in the Timetable with Access Rights in the TAC, and remove unused rights where there is no corresponding Train Slot; • Work with the Route, System Operator and FOC's/TOCs where in upcoming major timetable re-casts the available capacity may be less than contracted rights, the new Thameslink/GTR and Southeastern timetables for the Southeast Route; • Work with System Operator and customers to review opportunities to improve average speed origin-destination; • Review with System Operator and customers suitability of current systems to capture network constraints and traction capability (Loads Book, Timing Loads, Lengths).
12	**Digital Railway** O: Successful introduction of Digital Railway offers potential for growth on busiest corridors	• Act as internal client on behalf of Freight to build sympathetic capability for freight traffic needs.
13	**Upgrades and Disruptive Possessions** R: Major upgrade and S&C renewals including High Output will require significant disruptive access	• Champion requirements of FOCs and Freight End Users so that services can operate as required during disruptive possessions including availability of diversionary routes and timely provision of capacity studies to identify train service capability.

CP6 Plan

Section	Key Themes	Strategy	Specifics	Owner	Timescale
Safety	Lost Time Incidents	Reduce LTIs through concentration on Network Rail yard infrastructure, connecting sidings and	• Published rolling programme of joint health and safety visits with customers (FOCs/TOCs) to agreed sites; • Complete review of authorised walking routes/crew change locations per customer; • Subject to funding, a programme of improvements will be specified and implemented;	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6

Section	Key Themes	Strategy	Specifics	Owner	Timescale
		walking routes conditions.	• 'Go Look See' with customer within two weeks of any reportable customer LTI event on network infrastructure.		
	Freight Train derailments	Reduce freight train derailments through concentration on Network Rail yard and sidings infrastructure.	• Published rolling programme of joint health and safety visits with customers to agreed sites; • End Customer Forum to be implemented to share issues of concern around connection points and maintenance either side of boundary point; • Subject to funding, a programme of improvements will be specified and implemented.	FNPO Operations and Safety Manager/ SRFM	Initial Programme to be published March 2018 then annually during CP6
	FNPO SPADs	Reduce freight SPADS by collaborative working	• SPAD Forum to be implemented with FOCs to share learning and best practice.	FNPO Operations and Safety Manager	Creation of Forum by April 2018. Meeting regularity proposed quarterly
Performance	Right time departure performance at key hubs and terminals	Use Strategic Freight Corridors to focus delivery Measuring Right Time Departures from terminals at the start of the journey	• Local Working Groups (e.g. SE Freight Performance Improvement Group); • Use of Control Rooms and Visualisation at major sites; • Re-brief Freight Strategy – 'Freight Delivery Matters' and linkage between RTD and FDM delivery.	SRFM/ FNPO Performance Manager	Existing Working Groups to continue into CP6. Quarterly FNPO review of terminal engagement
	Measuring FDM and FDM-R	Focus on defined key routes: • Asset Performance; • Asset Resilience; • Effective contingency plans.	• Target FDM-R Route target for end CP6 of 89.3%; • Input to Route CP's for consistent application of freight contingency arrangements; • FSDM input to incident recovery real-time to build consistency; • Asset Reviews with Route Asset teams to share traffic forecasts and asset challenges with SRFM; • Influence at RSPG to define future asset strategy in terms of renewals to support freight growth.	SRFM/FNPO Performance Manager	Annual target setting during CP6. Periodic review of FDM-R delivery and key influencers
	Joint Freight Performance	Agreed joint strategy with each FOC including details of	• Complete plan annually with each FOC concentrating on primary delay categories; • Agreed industry information share;	FNPO Performance Manager/CRE	Joint Strategy Plan per Operator to be published

Section	Key Themes	Strategy	Specifics	Owner	Timescale
	Improvement Strategies	plans to reduce each delay area	• Regular reviews against plan with each Route and FOC customer;		annually during CP6 and reviewed quarterly
Capacity & Capability	Identifying future capacity and capability needs.	Bring together all freight capacity plans: • Route Studies; • SFN; • Customer specific.	• All future project specifications to include a specific output level for freight services, reflecting the SFN specifications and forecast future traffic requirements; • Future Capability needs assessment to be undertaken – RA, Gauge, HAW – future plans for improvement to meet capacity requirements; • Interactive maps for Gauge, RA to be created and maintained; • Continued support for longer, heavier trains programme.	Project Sponsor/SRFM FNPO Head of Strategic Capability/ FNPO Head of Network Management	Future capability programme definition by April 2018 and delivery per strategic route
	Review existing capability constraints	Undertake Capability Review	• Improved gauge and operational flexibility on key freight corridors; • Robust gauge cleared diversionary routes; • Transparent network capability per route for customers.	SRFM/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Existing capability constraints review definition by April 2018 and delivery per strategic route
	Freight Train Average Speed	Undertake Average Speed Review	• Establish framework for average speed measurement and improvement; • Work with Stakeholders to target specific flows and services; • Annual plan in connection with annual timetable change.	FNPO Head of Performance/ FNPO Head of Strategic Capability/ FNPO Head of Network Management	Measurement framework to be agreed by industry May 2018. Flows to be agreed for Dec 2018 TT change and annually thereafter
	Connections to new terminals and SRFIs	Facilitate connections to the network and associated capacity	• Work with FOC's, Freight End Users and Developers to identify potential new connections, including development of SRFI's; • Information share of prospective sites via RSPG; • Facilitate new network connections e.g. (Route TBC); • Identify potential sites (new connections, bringing out of use infrastructure back into use and increased use of lineside	SRFM/ FNPO Business Development Managers	Forward programme of FEU and Developer engagement to be agreed annually during CP6. Freight Developments Register to be held by

Section	Key Themes	Strategy	Specifics	Owner	Timescale
			loading) to facilitate growth, e.g. (Route TBC) for aggregates; • Advice to System Operator of future sites and flows to understand timetable and capacity impact; • Timetable studies for major terminal developments, e.g. SRFI's.		SRFM for review at RSPG quarterly.
	Delivery of agreed CP6 freight enhancement programme	Continuation of Strategic Freight Network funding and industry governance group	• Promotion of potential freight projects and enhancement schemes; • Prioritise funding to best meet demand and facilitate growth; • Align SFN proposals with Route and National proposals to deliver a coherent forward strategy which best meets overall requirements.	FNPO Head of Freight Development/ System Operator	Ongoing
	Consideration of incremental freight improvements in all schemes	Structured review process with Route planners and Sponsors	• Work with FOC's and System Operator to identify opportunities for incremental freight enhancements as part of the development of enhancement and renewals proposals, e.g. faster entrance/exit speeds into loops and through crossovers; • Defined and consistent engagement process to be agreed with Route Planning team and Sponsors.	SRFM/ System Operator	Defined engagement process and inputs to be in place with Route Strategy by April 2018
Network Availability	Engineering plans that meet both FNPO customer and Route needs.	Regular and co-ordinated freight input into • Engineering Access Statements; • Access Planning Requests.	• Engineering plans that are; • Transparent; • co-ordinated; • consistent across Routes; • planned well in advance; • take into consideration contingency arrangements for long distance services.	SRFM/ FNPO Capability and Planning Manager	Annual review of process/requirements between FNPO and Engineering Planning from March 2018 incorporating end to end Engineering Access process
Freight Asset Management Plans	Effective asset management arrangements for yards and sidings infrastructure	Create a joint understanding of maintenance responsibility, traffic level changes and asset condition	• Enable Asset Management and Engineering teams to plan the targeted maintenance and renewals requirement of each site; • Make sure appropriate standards are used at each location.	SRFM/ Route COO/ RAM	Biannual review of yard and sidings maintenance priorities / traffic flows commencing 2018

Section	Key Themes	Strategy	Specifics	Owner	Timescale
	Review of Locomotive and Heavy Axle Weight (HAW) track and structure restrictions	Establish potential/cost for removal of restrictions	• Input into track/structures renewals and maintenance plans.	SRFM/ Route COO/ RAM	Review definition and programme issued by April 2018. Delivery per strategic route to be programmed
	Review Freight Only lines and other infrastructure	Understand the potential to reduce Operations Maintenance & Renewals costs	• Review based on existing & predicted future use; • Input into track/structures/maintenance plans; • Outputs to be agreed with customers/ORR. •	SRFM/ Route COO/ RAM	Delivery of initial opportunities report by July 2018. Agreed Action Plan through CP6 per Route
	Removal of TSRs / PSRs in timely fashion	Establish removal plan recognising freight impact	• Work with the Route teams to identify the impact of speed restrictions on freight services and work collaboratively to remove them.	SRFM/ Route COO/ RAM	Ongoing periodic review of performance impact of TSRs to be agreed per Route

Appendix I List of Supporting Annexes

Annex 1: Change log

Annex 2: Long term scorecard

Annex 3: Asset Strategies

Annex 4: ABP models

Annex 5: South East efficiency plan

Annex 6: Financial uncertainty template

Annex 7: Deliverability L1 Assurance

Annex 8: South East Route's Strategic Plan to Delivery Plan template mapping

Appendix J Glossary of Terms

ABP	Activity Based Planning	FPM	Financial Performance Measure	RFD	Route Financial Director
ADB	Assurable Database	FTN	Fixed Telecoms Network	RLSE	Red Light Safety Equipment
AFC	Anticipated Final Cost	FWI	Fatality Weighted Injuries	RM3	Risk Management Maturity Model (3)
AHB	Automated Half Barrier	GRIP	Governance of Railway Investment Projects	RMD	Route Managing Director
ARL	Arriva Rail London	GSM-R	Global System for Mobile comms - Railways	ROC	Rail Operating Centre
ARS	Automatic Route Setting	GTR	Govia Thameslink Railway	RPM	Route Performance Manager
ASC	Area Signalling Centre	HAVS	Hand Arm Vibration Syndrome	RRP	Responsible Railway Plan
ATO	Automatic Train Operation	HS1	High Speed 1	RS	Route Services
BTP	British Transport Police	HV	High Voltage	RSP	Route Strategic Plan
C-DAS	Connected-Driver Advisory System	IECC	Integrated Electronic Control Centre	RTL	Road Traffic Lights
Capex	Capital Expenditure	ICM	Infrastructure Cost Model	S&C	Switches and Crossings
CCTV	Closed Circuit Television	IMS	Incident Management System	S&T	Signalling & Telecoms
CIS	Customer Information System	IP	Infrastructure Projects	SatWaS	Satellite-based Warning System
CMSP	Continual Modular Strategic Planning	KPI	Key Performance Indicator	SDG	Sustainable Development Goals
CNI	Critical National Infrastructure	KVL	Key Volume Line	S-DAS	Standalone-Driver's Advisory System
COO	Chief Operating Officer	LED	Light Emitting Diode	SIN	Safety Improvement Notice
CP	Control Period	LEP	Local Enterprise Partnership	SICA	Signalling Infrastructure Condition Assessment
CRAM	Corporate Risk Assessment Matrix	LEWIS	Lineside Early Warning System	SO	System Operator
CRI	Composite Reliability Index	LTIFR	Lost Time Injury Frequency Rate	SOBC	Strategic Outline Business Case
CRM-P	Consistent Route Measure - Performance	MMT	Mobile Maintenance Train	SoFA	Statements of Funds Available
CSI	Composite Sustainability Index	MSL	Miniature Stop Lights	SPAD	Signals Passed at Danger
DC	Direct Current	NPIF	National Productivity Investment Fund	STE	Safety, Technical and Engineering
DfT	Department for Transport	NRPS	National Rail Passenger Survey	TBROC	Three Bridges Rail Operating Centre
DOO	Driver Only Operation	NRT	Network Rail Telecoms	TfL	Transport for London
DPI	Delay Per Incident	NSCD	Negative Short Circuiting Device	T'link	Thameslink
DR	Digital Railway	NSIP	National Stations Improvement Programme	TM	Traffic Management
DRAM	Director, Route Asset Management	O&M	Operations & Maintenance	TRP	Thameslink Resilience Programme
DRHSQE	Director, Route Health, Safety, Quality and Environment	OD	Obstacle Detection	tph	Trains per hour
DU	Delivery Unit	Opex	Operational Expenditure	TPR	Timetable Planning Rules
EAUC	Electricity Access Usage Charge	ORR	Office of Rail and Road	TOC	Train Operating Company
E&P	Electrification & Plant	PAVA	Public Address and Voice Alarm	TSR	Temporary Speed Restriction
EMGPTA	Equivalent Million Gross Tonnes Per Annum	PPE	Personal Protective Equipment	UWC	User Worked Crossing
ETCS	European Train Control System	PPM	Public Performance Measure	VfM	Value for Money
FDM	Freight Delivery Metric	RAM	Route Asset Manager	VTAC	Variable Track Access Charge
F42	Framework 42	RCM	Remote Condition Monitoring	WD	Works Delivery
FOC	Freight Operating Company	RCM	Remote Condition Monitoring		
PO	Freight and National Passenger Operators	RDG	Rail Delivery Group		