

Efficiency Summary

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Version 2.0

CP3 and CP4

The journey from CP3...

We made considerable progress transforming the business in CP3. This progress is continuing in CP4. We are on track to achieve cost reductions of 20% in CP4 alongside continued significant improvement in key outputs including safety, reliability, availability and capacity. The significant CP3 & CP4 initiatives that have contributed to this success are illustrated in the diagram, below. These initiatives have laid the foundations for continued progress in CP5.

CP3

- In-sourced maintenance
- More competitive tendering process
- Rail borne technology for inspections
- Maintenance productivity improvements
- More rigorous investment process (GRIP)
- Reduction in corporate overheads (project violet)
- Reduction in number of track contractors
- Reduction in use of consultants
- Creating shared service centres
- Reduced agency staff

CP4

- Operating route devolution
- Alliancing with train operators
- Renegotiation of pension arrangements
- Maintenance productivity improvements
- New asset policies; reduced track renewal volumes
- More innovation, modular products, techniques
- Reduction in IP overheads (DIME)
- Improved contracting strategy
- Signal box closures

As highlighted in Network Rail's main SBP document, there are three main ways of categorising our progress since CP3, namely: Outputs, Financial Value Added and Efficiency. This document explores each of these in more detail.

Outputs – significant increase in outputs alongside improved efficiency

Efficiency improvements are being delivered while maintaining high levels of safety, performance and investment – and we are determined to keep up this momentum. That task is getting ever harder, as growth and resulting congestion become more challenging to manage. The railway’s popularity is a good thing, and to be welcomed. But neither we nor our train operating company colleagues can afford any complacency, as there are yet more challenging targets ahead.

We have examined in more detail the improvements in train performance, improved asset quality and increased rail usage in [SBPT230 – Performance Plan](#), [SBPT232 – Asset Stewardship Summary](#) and [SBPT231 – Passenger Capacity Summary](#). The following charts demonstrate the key measures we have used in this context.

Figure 1 highlights the increasing use of the rail network. The rail network today carries more trains than ever before, with ten per cent more train kilometres than 2004/05 and three per cent more freight moved over the same period.

Figure 2 shows that at the same time as increasing rail usage, punctuality (PPM) and delay minutes have achieved record levels of performance. We deliver more trains to their destination on time, with punctuality improving from 83.6 per cent in 2004/05 to 91.6 per cent in 2011/12.

Against the back-drop of this growth and continuing punctuality, the rail network delivers improved asset performance with greater reliability and sustainability; for example, broken rails have fallen from 322 in 2004/05 to 125 in 2011/12 (Figure 3).

Figure 1

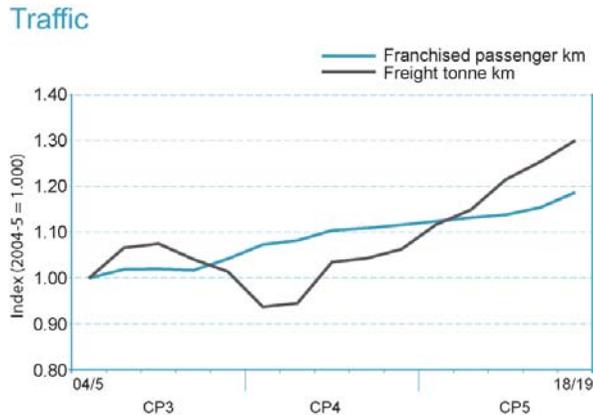


Figure 2

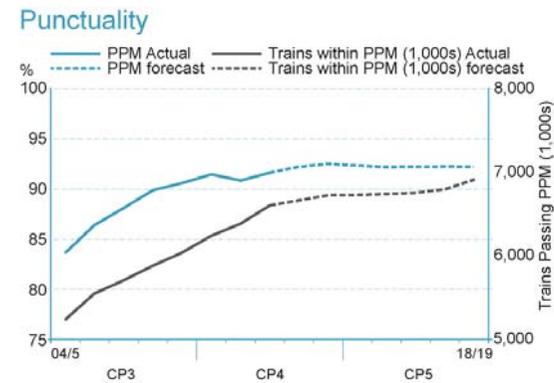
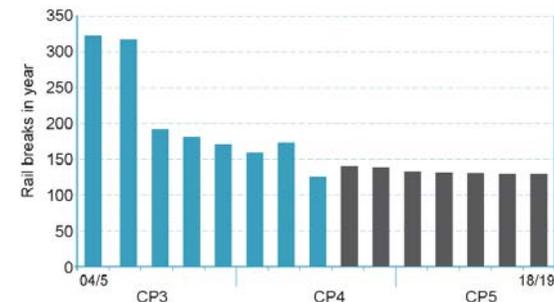


Figure 3

Asset stewardship – rail breaks



Financial value added – forecast to be £1.1bn by the end of CP4

Financial value added is a measure of the extent to which we exceed the financial targets that ORR set us for CP4. We are on track to close the gap between our CP4 Strategic Business Plan and ORR Final Determination of c. £5 billion, and to delivering £1.1bn of financial value added by the end of CP4. The key components of the forecast value added are shown, below.

- **Income:** shows negative FVA largely due to indexation differences;
- **Operating and maintenance costs:** expected to be slightly lower than the CP4 target;
- **Renewal outperformance;**
- **Enhancements projects outperformance;** and
- **Outperformance on net interest payable:** outperformance of £801 million is expected on net interest payable, with most of the benefit coming from lower than expected interest rates.

Efficiency - significant savings achieved during CP3 & CP4

Network Rail's focus on efficiency has been relentless over the last 10 years and the business is on target to deliver a significant reduction in the cost of running the railway by the end of CP4.

Although not a regulatory target, the determination for CP4 was set on the basis of achieving given levels of efficiency on operating, maintenance and renewals expenditure. Due to the difference between the actual CP3 exit rate and that assumed in the determination, this required us to achieve a cost reduction of 23% by the end of the control period. Our current forecast is 20%, due principally to the following:

- Track unit cost reductions are below expectations due to a combination of reduced volumes and increased cost pressures;
- Additional costs incurred on Information Management, Corporate Offices, FTN/GSM-R and track non volume activities; and
- Inclusion of £25m in respect of a potential fine from the ORR in respect of 13/14 Long Distance performance.

Although the above will result in a lower reported value than we hoped for CP4, significant progress has been achieved that results in ongoing savings at the same time as train performance has been on an upward trend, traffic levels have outstripped the assumptions in the determination and asset condition has improved. Actions delivering savings in CP4 include:

- New asset policies; introduced in the early part of CP4, the policies aimed to shift focus towards railway assets on primary or critical routes rather than carrying out excessive work on secondary routes and also revisited criteria for renewal/refurbishment;
- Rationalisation of signalling renewal volumes and closure of signal boxes;
- Introduction of new techniques including modular design;
- Introduction of new technology, such as the new measurement train and high output plant for track replacement;
- Improved work bank planning, with benefits in resource management and contractor engagement;
- Faster payments to suppliers leading to discounts;
- Improved procurement, selecting framework or competitive tendering arrangements to best advantage;
- Renegotiation of pension arrangements;

- Reduction in the overhead associated with capital projects as part of the restructuring of the infrastructure projects delivery organisation; and
- Headcount reductions and productivity improvements, through ways of new working or new technology and/or plant, with significant reductions particularly within the maintenance function.

We measure efficiency using the Real Economic Efficiency Measure (REEM). This reports how the running costs (operating, maintenance and renewal costs) of the railway have decreased. Costs are mostly compared to a 08/09 baseline where possible, adjusted for planned CP4 activity levels, inflation and the originally forecast traffic impact.

REEM does not make allowance for the fact that asset condition has improved, train performance has improved and that traffic levels are higher than planned. Decisions to incur capital expenditure to obtain long term operating or maintenance cost savings result in an apparently higher upfront cost that is represented as inefficiency. The impact of third party actions on the railway - such as cable theft - also show as inefficiency when additional expenditure is incurred to make good the damage. Along the way, we have absorbed items such as the costs to support the Olympics and Paralympics, the increase in National Insurance rates, changes in taxes and levies, penalties and costs relating to incidents that occurred before CP4, changes in standards such as counter terrorism measures, supply chain insolvencies, restricted access to the railway, restrictions on adjacent line working, the cost of pensions auto enrolment and the cost of real time payroll information, while extreme weather events have become more frequent. If a method were found to incorporate these factors then REEM would be significantly higher.

REEM is reported in our Regulatory Financial Statements and is subject to review by Arup as Independent Reporter for the ORR. As part of their review, Arup have documented the positive management actions (including the above) that result in efficiency improvements and the extent to which these are considered robust and sustainable. Their most recent report in respect of 11/12 is published on the ORR website.

Figure 4 illustrates how efficiency has improved since CP2, even as the efficiency challenge gets harder. We delivered a 27 per cent efficiency improvement in CP3 and a further 20 per cent in CP4.

Figure 5 shows that we have reduced our operating cost per train kilometre by 40% between 2004/05 and 2011/12.

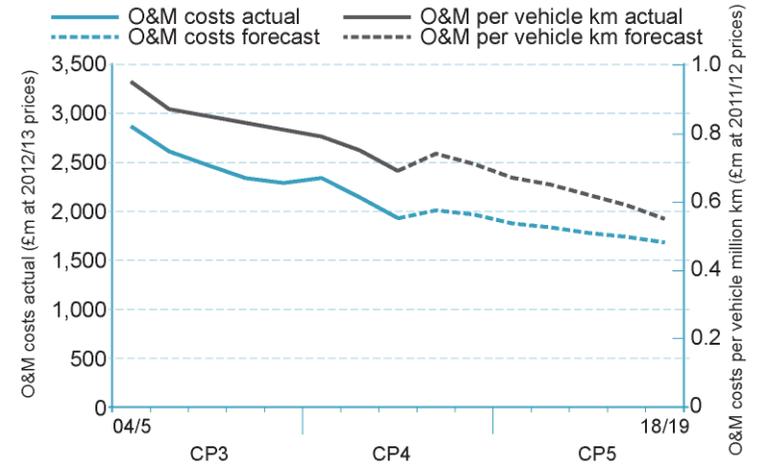
Figure 4

Efficiency



Figure 5

Operating and maintenance unit costs



This record of achievement in efficiency since CP2 in challenging circumstances is a solid one, providing a sustainable base which has underpinned improving outputs over the period.

CP5

Our plans for CP5

We are committed to delivering value for money to passengers and tax-payers. We are committed to deliver 18 per cent headline efficiency over CP5. This includes savings of two per cent as a result of the lower activity volumes that are embedded in our CP5 plans reflecting the improved asset policies. The pace of change over the next control period is the key issue in determining whether this challenging level of efficiency can be achieved. We have undertaken a comprehensive benchmarking programme to inform our view of the opportunities and how we can apply them to Network Rail. The efficiency proposals we have developed represent a challenging step-change in the way we run our business.

In CP5 we are committed to deliver an 18 per cent reduction in real terms in the cost of managing the railway infrastructure in Great Britain. A contribution of 2 per cent to the headline total of 18 per cent is due to embedded efficiencies and resides within our pre-efficient numbers. The remaining 16 per cent compares with 20 per cent in CP4 and 27 per cent in CP3. The ‘slow-down’ in control period-on-control period REEM improvements reflects the diminishing returns to be had, as the business increasingly removes inefficiencies.

Efficiency



The remaining 16 per cent of the headline total is a combination of operating, maintenance and core renewal savings, most of which have been identified through specific initiatives. Table 1 is a breakdown of how this will be accomplished

Table 1 – Breakdown of CP5 savings

£m (12/13 prices)	Current Plan
Controllable Opex	14%
Maintenance	12%
Operate	13%
Support (inc. Property)	19%
Renewals	17%
Total	16%

Basis of calculation

Opex efficiencies are calculated as the difference between the CP4 exit rate (i.e. opex costs in FY13/14) and the CP5 exit rate (i.e. opex costs in FY18/19).

Renewals (capex) efficiencies are calculated by comparing the pre-efficient allowance in FY18/19 to the forecast expenditure. Only our rail infrastructure assets: track, signaling, civils, building, electrification & fixed plant (EP) and telecoms have been taken into consideration in this efficiency calculation.

Wheeled plant and machinery, information technology, ORBIS, corporate offices and additional investments to deliver future benefits have been excluded from the renewals efficiency calculation. Our plan for these areas of expenditure is based on specific expenditure forecasts rather than underlying volumes and unit costs and measurement of efficiency in these areas is therefore difficult. It will be more appropriate for these items to measure our expenditure compared to planned levels.

CEFA accounting and impact

CEFA (Civil Engineering Framework Agreement) refers to a five year framework contract with Amey OWR Ltd to examine our assets in accordance with our inspection regime. The

work involves inspecting assets such as bridges, tunnels, stations, line side buildings, earthwork cuttings and slopes.

The overall CEFA costs will remain the same over CP4 and CP5 at around £82-84 million but there is a change to how they are accounted for between CP4 and CP5.

For CP5, all CEFA costs will be recognised as Opex costs, while in CP4, CEFA costs have been split between Opex & Renewals. For the CP4 exit year of FY13/14, £49 million are against Renewals and £35 million against Opex.

For CP5, no CEFA costs are included in the Renewals figures for either the pre-efficient baseline or the forecast expenditure. Treating some of the CEFA spend as Renewals would lead to an increase in both the pre-efficient baseline and the forecast expenditure and, therefore, have a negligible negative impact on renewals efficiencies but we would have a significant positive impact on opex efficiencies. If the £49 million Renewals component were to be included in the baseline figures, overall CP5 efficiency would increase from 16 per cent to 17 per cent.

Types of efficiency

We have categorised our efficiencies into two key types:

- Scope efficiencies – sustainable reductions in scope to deliver required outputs through improved asset information, refined asset policies (including those improvements which are already embedded in our CP5 policies and therefore reflected in the pre-efficient spend projections) and other more project-based value engineering
 - For refined asset policies or embedded efficiencies see page 4
 - For Asset Information efficiencies see page 5
- Delivery efficiencies – a lower cost of delivering a unit of activity.

It should be noted that in some cases local issues mean that the size of scope or delivery efficiencies for some routes may be different to the national average. For local (saving specific) efficiencies to a particular route, see [SBPT210-219 Route Plans](#).

Benchmarking

We have conducted an extensive programme of benchmarking exercises – both *bottom-up* via site visits with other railways, and *top-down* analysis of inter-company data – to help us identify what improvements we can make and how much we should be able to save.

The following pages summarise the work we have done to understand our efficiency potential and to generate plans that will put us amongst the most efficient railway infrastructure managers in the world. Reference will be made to a suite of supporting documents that should be consulted for further details on our efficiency plans for CP5:

Bottom-up benchmarking activities

[SBPT3138 – Benchmarking and Efficiency Evidence \(summary by asset/maintenance\)](#)

[SBPT3141-49 – External Benchmarking Reports \(detail by asset/maintenance\)](#)

[SBPT3160-68 – Internal Benchmarking Reports \(detail by asset/maintenance & operations\)](#)

Efficiency plans and initiatives

[SBPT223 – Renewals Expenditure Summary \(summary\)](#)

[SBPT3138 – Benchmarking and Efficiency Evidence \(summary by asset/maintenance\)](#)

[SBPT222 – Maintenance Expenditure Summary \(detail\)](#)

[SBPT3093-3137 – Efficiency Initiatives \(detail by asset/maintenance\)](#)

[SBPT221 – Operations Expenditure Summary \(detail\)](#)

[SBPT226 – Corporate Services Plan \(detail\)](#)

Top-down analysis

[SBPT3138 – Benchmarking and Efficiency Evidence \(detail\)](#)

[SBPT3139 – Frontier Shift and Real Price Effect \(detail\)](#)

[SBPT3091 – Scope for Efficiency Savings in CP5, Evidence from Other Regulated Industries \(detail\)](#)

Embedded efficiencies

Embedded efficiencies are savings that sit within our CP5 asset policies. They reflect reduced scope to deliver the same outputs compared with the scope that would have resulted from the application of our current (CP4) policies. The values of the savings sit within our pre-efficient numbers and are exclusive of those scope and delivery efficiency initiatives that we are implementing in CP5 to reduce further the cost of doing work.

Based on an initial analysis, we estimate our CP5 Renewal pre-efficient expenditure to include a 4% embedded efficiency associated with our CP5 policies. This is equivalent to a **2% reduction in the overall cost** of running our business. A summary of the efficiencies by asset is presented in Table 2.

Table 2 – Efficiency savings embedded within CP5 Renewals policies

Asset	CP5 pre-efficient renewal expenditure £m	Embedded efficiencies	
		£m	%
Track	3,954	–	0%
Signalling	3,943	380	10%
Civils	2,904	–	0%
Buildings	1,328	66	5%
Electrical power & fixed plant	1,071	107	10%
Telecoms	439	22	5%
Renewal Total	13,640	575	4%
OMR	23,485	575	2%

The figures represent a preliminary view and in general are thought to be conservative. They will be refined further as our asset policies continue to be developed into 2013. Where we are not yet in a position to determine what the level of saving is, we have assumed zero embedded efficiency.

Track

We are quoting zero embedded efficiency for our Track asset, on the basis that the Track policy review we completed in 2009/10 has already produced significant scope reductions during CP4. These reductions continue through CP5 and into future control periods and whilst substantial, are not a distinct change from the end of the current period to the next.

Signalling

The application of CP5 Signalling policy will produce £380m of savings for CP5, whilst providing a sustainable framework to achieve a consistent set of outputs. This figure excludes operational efficiencies. The savings are associated with a reduced cost resignalling technology and the introduction of a shift towards a more targeted renewals approach.

Civils

Although our Civils policy has been revised, the elevated level of uncertainty related to this asset makes it impossible at this time for us to assess any level of embedded efficiency that may result from the new asset policies.

Buildings

The application of our CP5 Buildings Policy results in an expenditure reduction in the order of £66m, and is the result of significantly improved asset data and modelling.

Electrical power & fixed plant

For the E&P asset base we are moving from a renewals policy based purely on asset age, to one that considers asset condition, asset and route criticality, and whole life cycle costing. This revised approach has been facilitated by an improvement in asset information and a developing understanding of asset degradation relationships. We estimate that between £107 and £154m will be saved in CP5 due to these advances in our policy approach.

Telecoms

In the region of £22m will be saved by the application of our CP5 telecoms policy. This has been achieved through targeted volume reductions in the area of ancillary structural fittings.

Further information on our policies for CP5 can be found in [SBPT223 – Renewals Expenditure Summary](#) in the first instance, with a greater level of detail provided in [SBPT3010-20 Asset Policies](#).

Asset information efficiencies

The railway has historically relied on a regime of manual asset inspection. Many records are locally held and most condition data is not kept in electronic form. Data is consequently fragmented, hard to access and sometimes incomplete.

ORBIS (Offering Rail Better Information Services) is an Asset Information-led programme that enables improvements in railway efficiency, safety and capacity by changing the way in which we collect, store and utilise asset information. ORBIS's three principal objectives are: to establish a sustainable and trusted information base; align information to business processes, and maintain the linkage between fixed, topological, topographical, document and vehicle information types. ORBIS makes capturing information easier to do, through deployment of handheld devices and advanced train-borne systems, optimises decision-making through provision of integrated information and decision-support tooling, and optimises work management through better exploitation of geospatial information and elimination of paperwork.

The programme focuses on bringing about a step-change in improvements to asset data quality, implementing new tools and business process changes to take advantage of better information, and delivering business change activity required to embed new ways of working in a sustainable manner.

Costs and benefits

ORBIS has a total cost of £327 million, of which £220 million falls in CP5. ORBIS will yield approximately £270 million of asset-management-related benefit in CP5, with an exit rate in the region of £100 million per year.

Work is ongoing within the routes to quantify and maximise the potential of the ORBIS-delivered capabilities.

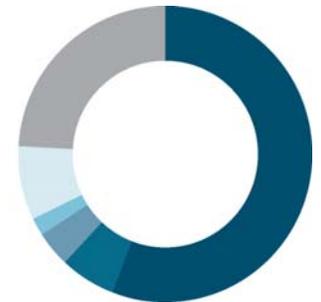
Key outcomes from the programme include:

- Easier data capture
- Better management of safety risk
- Safer working
- Location improvement
- Asset Management policy optimisation
- Improved investment planning for NR and industry partners
- Legislative compliance and industry-wide data sharing
- Improved operational performance

Financial benefits are primarily based on reduction in asset renewal volumes, derived from implementation of lowest-whole-life cost management policy for each asset type. A breakdown of the projected savings is given in Figure 6.

Figure 6 – Breakdown of asset information related efficiency savings

	%
Track	56
Signalling	6
Civils	4
Buildings	2
Electrification and fixed plant	8
Telecoms	0
Maintenance	24



The major benefits that ORBIS will bring in CP5 are related to managing our Track asset. In forecasting our Track activity we have assumed the benefits of the ORBIS programme in enabling us to target work more precisely. The forecast volumes are therefore lower than they would be without the ORBIS technology and associated business changes.

There is also a substantial benefit to our Maintenance activities, with ORBIS allowing the implementation of several specific initiatives.

Further details can be found in:

[SBPT3221 – Asset Information](#)

[SBPT223 – Renewals Expenditure Summary](#)

[SBPT3010 – Track Asset Policy](#)

Benchmarking

We have undertaken an extensive and detailed series of benchmarking studies both internally and with external comparator organisations, establishing mutually beneficial relationships with organisations across 16 countries. Over the last two years we have undertaken 85 visits to understand in detail how we compare and to share best practice.

We now know in greater detail the differences between the way we work and how foreign counterparts operate, and have gone on to develop a wide range of initiatives to reduce the cost of doing business – some result in reduced work volumes, some bring down work costs. These initiatives are varied in nature, but tend to follow broad themes:

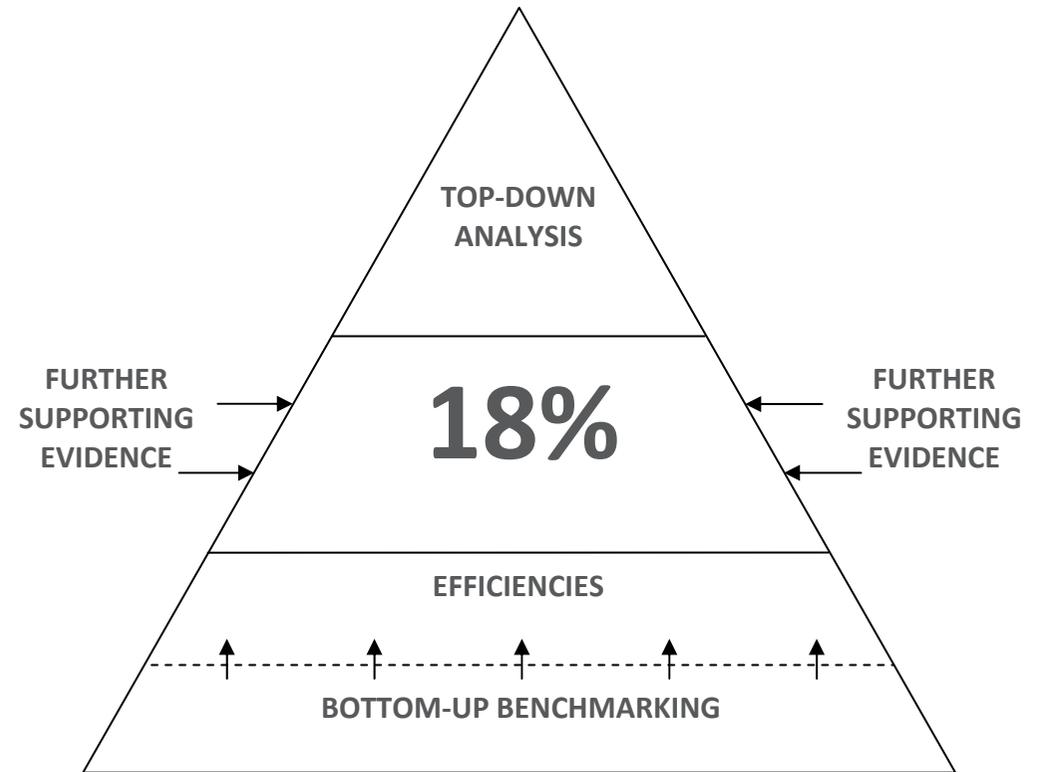
- Scheduling work differently
- Improving staff productivity, e.g. multi-skilling
- Working better with our contracting/supplier base
- Standardisation
- Improving how we access and take possession of the network
- Doing the right work in the first place through having better asset information

The targeted benefits for efficiencies are 18 per cent in CP5. This is based on a series of detailed bottom-up benchmarking studies complemented by top-down analysis (such as econometric modelling based on the European LICB dataset) that provides broad corroborative evidence. The exercise has been a holistic approach which has considered the wider economic environment within which we operate.

We have worked hard to develop ways to run our business more efficiently, including a substantial programme of engagement with other railways around Europe and the world. Whilst the 18 per cent target is challenging and requires us to work very differently, we have set this as a reasonable target. There is however risk with this and further challenges could severely undermine our ability to deliver a high performing and sustainable railway. We will nonetheless continue to look for further opportunities through cross industry work including RDG (see page 29).

In the following pages we summarise the results of our bottom-up benchmarking work, highlighting some of the real world differences between ourselves and our comparators, and showing how we have translated what we learned abroad into initiatives for CP5 that will drive cost from our business

We go on to describe briefly a range of top-down analyses from both the ORR and ourselves which indicate the most likely size of our remaining efficiency gap, together with further supporting evidence to show why our efficiency plans of 18% are appropriate.



Bottom-up benchmarking – external

What we did

Identified suitable comparators (and the disciplines that we should discuss with them):

- Those that appeared to be spending less on maintenance and renewal than we were, either for a particular discipline or overall
- Those known to offer best or better practice in a particular activity
- Those whose network or industry structure is particularly similar to our own
- Those who were prepared to engage with us in a mutually beneficial way

Established relationships and conducted a comprehensive programme of bi-lateral investigations with international railways and other UK organisations.

Work undertaken included:

- 85 boots-on-ballast site visits & meetings
- Activity analysis
- Desk-top follow-up studies and data sharing

Why we did it

- To discover best practices in order to inform our CP5 efficiency potential
- To establish longer term relationships with comparators in order to discover and share better practice for beyond CP5
- To help both Network Rail and ORR understand the differences in spend between ourselves and international best practice
- To understand the structural factors facing our business, so that we know what to challenge about the way we work.

A more detailed summary of our external bottom-up benchmarking work can be found in:

[SBPT3138 – Benchmarking and Efficiency Evidence.](#)

For full details please refer to individual documents:

[SBPT3141-49 – External Benchmarking Reports.](#)

Meetings, visits and discussion with our comparators

Over the past two years we have visited or hosted our key comparators on many occasions so that each party can understand and comment on the practices of the other, with both sides learning in the process. These relationships have all developed to different stages and we intend to grow them further during CP5, both in terms of depth with existing comparators and the breadth of organisations and countries with whom we are working – see Table 3.

Table 3 – Visits undertaken as part of the international benchmarking exercise

Country	Disciplines	No. of visits hosted by comparator	No. of visits we have hosted
Belgium	Buildings & civils, multi-discipline, programme management	3	1
France	Maintenance, track, buildings & civils, multi-discipline, signalling	11	5
Italy	Buildings & civils, track, multi-discipline	2	2
The Netherlands	Signalling, E&P, track (inc worker safety), telecoms	16	1
Norway	Signalling, multi-discipline, telecoms	9	0
Sweden	Maintenance, track, buildings & civils, E&P, multi-discipline, telecoms	8	1
Switzerland	Track, signalling, multi-discipline, telecoms	14	0
USA	Track	1	1
Spain	Track	1	0
Japan	Signalling	0	1
New Zealand	Buildings & civils	2	0
Australia	Buildings & civils	2	0
Hong Kong	Buildings & civils	1	0
Germany	Telecoms	1	0
Denmark	Maintenance	0	1
Portugal	Telecoms	1	0

France

Their network

- One of the largest in Europe, about twice the size or ours.
- Least used of key comparators, and also the least complex (low switch and signal density).
- 3 parts – expensive high speed; conventional intercity/commuter; low quality rural lines.

Industry structure

- RFF – a small body that owns the infrastructure and manages its condition and enhancement.
- SNCF – former integrated railway, operating most services as well as acting as the dominant infrastructure contractor.
- Vertical integration in France is effectively as strong as anywhere in the EU and many of the industry structural barriers facing Network Rail do not apply to France.

Italy

Their network

- The most similar to our own – lacking widespread bi-directional signalling and of similar size and general complexity.
- Whilst their tonnage is high due to a well developed freight service, their passenger usage is only 50% of ours and thus their service quality requirements are lower.

Industry structure

- There is genuine separation of infrastructure from operations and the infrastructure manager, RFI, is directly comparable to Network Rail. It retains its own maintenance workforce and buys in most renewals.

Netherlands

Their network

- One of the most heavily used and complex mixed traffic railways in the world, though with relatively low lines speeds in the range 100-160kph.
- It retains a level of complexity and flexibility far higher than ours, with double the switch and signalling density, universal electrification and almost 100% bi-directional signalling.

Industry structure

- There is genuine separation with ProRail being equivalent to Network Rail, though it contracts out all maintenance and renewal work.
- However, both ProRail and the dominant passenger operator, NS, are owned by the State which has allowed a more integrated approach to be taken and large infrastructure works (such as structures renewals and enhancements) are traditionally accompanied by line closures for weeks or even months.

Switzerland

Their network

- Retaining a dense passenger service and high volumes of transitory freight, it is the most heavily used mixed traffic railway in Europe and probably the world.
- It repeatedly achieves best practice levels of punctuality and is a celebrated innovator having pioneered modular switch and high output renewals methods.
- Similar to the Netherlands, its line speeds are modest at 100-160kph.

Industry structure

- Lying outside the EU, Switzerland is not required to split infrastructure from operations activities.
- SBB owns and operates both track and trains for most of the country. Despite being vertically integrated, SBB contracts out much renewals work and, as we have observed, has developed a firm partnering regime with suppliers.

Sweden

Their network

- A simple but effective system with more than 80% of route km being single line. It has a medium average switch density although most of these are used in passing loops rather than more complex junctions.
- Significant investment was made in the 1980s and early 1990s which allowed the network to function with low renewal rates thereafter. However, in recent years Trafikverket has become aware of a major backlog which it needs to tackle in the future.

Industry structure

- A small infrastructure body, Trafikverket, retains operations and asset management functions but contracts out all maintenance and renewal work.
- A significant difference with Great Britain is that both Trafikverket and the dominant passenger operator, SJ, are owned by the State. This affords significant advantages in the timing and duration of major infrastructure work.
- Trafikverket is a government department responsible for road, rail, aviation and shipping combining the roles of DFT, the old SRA and Network Rail. It operates with considerably lower overheads than any of its British equivalents.

Others

North American railroads

- It has been observed that we operate more cheaply than most passenger services, both commuter and long distance, but are still behind in terms of freight traffic. This in an area that we are seeking to understand further and we are, therefore, developing our relationships with a variety of organisations in North America.

Table 4 – Bottom-up benchmarking work by discipline and countries engaged with.

Discipline	Comparators	Key themes & opportunities identified	Links to efficiencies in CP5
Track	Sweden Switzerland France Italy Spain LUL	Multi-skilled workforce Investment and innovation by supply chain Contractual commitments/dedicated contractor resources/better contractual relationships Safety management Less stringent standards for S&C Standard designs and specifications Quick process for taking possessions/isolations	CP5 plans for Track delivery are heavily informed by benchmarking work, with new procurement models having been built around the best practice and methods of working observed elsewhere. Large cultural change is required to align ourselves with European ways of working, which will continue to drive improvements well into CP6.
Signalling	Netherlands Switzerland Norway Germany France	Cost of possession management – safety and access Complexity of layout required to meet operating requirements Higher starting position in terms of technological base and supplier strategy Work type II CP4 exit rate is 16% more than the European mean unit rate Network Rail at the forefront on many strategic issues (e.g. Whole Life costs adoption and the move to route criticality based approach for maintenance).	Cost gap of circa 16% with opportunities at every stage of signalling work Signalling framework contracts now in place to support the planned reduction of project delivery costs Layout rationalisation being targeted – this is a priority for development and is also related to the technological base and overall supplier strategy
Buildings & Civils	Sweden France Ireland New Zealand Australia NEXUS (Tyne & Wear Passenger Transport Executive) Westpac Bank (buildings comparator)	Fewer inspections – risk/criticality based regime Attitude to risk is different in Europe when the primary rail traffic is freight rather than passenger Age profile and mix of assets – Sweden has mainly concrete bridges and a long term strategy to replace metal bridges with concrete ones as this reduces the consequence of bridge strikes and improves whole life cost. Track Access – found to be the most significant cost driver. Track access regime driven by the contractual relationships between us and the TOCs/FOCs, and the regulatory performance regime. Our designs and work methodologies therefore adapt to meet requirements, to minimise durations and numbers of possession, incurring additional costs. Our Whole Life Cost approach is more robust and developed than in Sweden or France	There is in the region of a 20% initial cost gap to Germany and France. A variety of delivery elements have been identified for improvement. For the GB rail industry there is a trade-off between disruption cost to rail traffic and construction cost. In France and the Netherlands access is provided to support the lowest construction cost. When costs for the typical possession requirements of the Dutch and French are normalised, the relative scheme industry costs are lower in Great Britain.

Discipline	Comparators	Key themes & opportunities identified	Links to efficiencies in CP5
E&P	Sweden Spain Netherlands Italy Ireland USA (New York City Transport) LUL OFGEM UK Power Networks	Much lower project costs for new installation of overhead lines in Sweden Multi-skilled staff Possessions – fewer & more productive Fewer inspections Better contractual relationships Flexible working with plant Standard designs	Sweden has a very efficient design process that makes good use of standardisation to increase speed and reduce complexity. Understanding their processes has given us confidence that our own plans to make more use of standardisation is the right direction in which to go. We also now have a good understanding of the elements in the process to focus upon.
Telecoms	Sweden Switzerland France Netherlands Italy German USA LUL UK utilities	Participation in a European benchmarking group that looks specifically at rail telecoms has provided an extremely detailed understanding of a number of areas, and the opportunities that are present for us in: <ul style="list-style-type: none"> • Incident management • Operation and maintenance • Network alterations • Life cycle costs • Quality assurance 	Along with Sweden and Switzerland, we are amongst the leaders in the telecoms discipline. Involvement with the pan-European benchmarking group has allowed us to understand our technology, systems, processes and policies in great detail and provided a very sound base on which we have developed our plans.
Maintenance	Sweden Switzerland France Netherlands Norway Germany Italy LUL	From other railways, we learned some very positive practice: <ul style="list-style-type: none"> • Inspection regimes less frequent • Smaller indirect organisation • Simpler competence management processes • Integrated asset information • Activity benchmarking And some we do not want to adopt: <ul style="list-style-type: none"> • Working under lookout protection at night • Lower PPE provision • No site lighting • Only doing specified work, at the expense of sustainability 	We identified opportunities for improvement from every comparator visited, which has provided very strong corroborating evidence for our CP5 plans. Due to the inherent differences in accounting practices between countries, activity based benchmarking has been used extensively to understand the potential impact of how we might work differently.

Bottom-up benchmarking – internal

Overview

Purpose

- We consider internal benchmarking to be a critical ‘business as usual’ activity. It helps us understand the variations within our own organisation, identify best practice and drive continual improvement on a daily basis.

Process

- All of our asset disciplines have undertaken a two year exploration of how costs vary between different locations on the network, and between different approaches to delivering solutions of similar capability. This has resulted in a much clearer recognition of how structural factors can affect the costs of individual projects, and this will be reflected in our business plans in both the SBP and on-going planning. However, for the majority of our assets we lack the quantities of historical data that would be necessary for statistical modeling of cost distributions and causal factors. We are putting systems in place that will allow this information to be collected and in time will be able to apply a much greater level of quantification to internal benchmarking.

Results

Buildings

- Building asset policies have been influenced by internal benchmarking, examples of good practice include:
 - polystyrene core platforms
 - coping stones that have tactile pavers as an integral part of the design
 - reductions in our management time where appropriate

Electrification and Plant

- Comparison of projects delivered by our suppliers in CP4 suggest that average efficiencies from the bundling of projects together can deliver savings of 5-10% on construction costs.

Earthworks

- Internal benchmarking has contributed towards our developing new efficiency opportunities in tendering and contract management.

Telecoms

- Comparison with a pilot scheme has shown that bringing designs in-house can lead to significant savings.

Track

- Our annual track budgeting process relies on a comprehensive element of peer review and comparison between worksites. This results in costs being calculated on a consistent basis and internal benchmarking being effectively integrated into business as usual within CP4.

Maintenance

- The area in which internal benchmarking has been most comprehensive due to the level of data available. Statistical techniques have been applied (see “Econometrics” further down), the results of which are used to inform budgetary discussions as well as highlighting best practice across all delivery units.

A more detailed summary of our internal bottom-up benchmarking work can be found in:

[SBPT3138 – Benchmarking and Efficiency Evidence.](#)

For full details please refer to individual documents:

[SBPT3160-68 – Internal Benchmarking Reports.](#)

CP5 Efficiency initiatives and plans

Our ideas for efficiency have come from a number of distinct sources which can be described as:

- Benchmarking – national and international railways, 85 visits to/from 16 countries
- Benchmarking – non-railway domestic comparators
- Benchmarking – internal to Network Rail, continuous improvement activities
- Internal expert judgement
- Industry advice

For CP5, this approach to generating ideas for efficiency is a far more thorough, wide-ranging and evidence based one than that adopted for CP4. In short, it is a considerable improvement.

Our plans for Renewals and Maintenance are heavily influenced by the best practice we have observed in other countries, and constitute significant programmes of change for our business. There are common themes that cut across most of our assets:

Themes – Renewals (Capex)

Scheduling our work differently

- Increased weeknight working
- Smoother workbanks
- Locking down workbanks earlier/longer workbanks

Contracting & supplier base

- Working more closely with contractors
- Letting the contractor choose how best to deliver the work
- Being a better customer through improved processes

Standardisation

- Reduced complexity of project and processes

Multi-skilling

- Fewer people better utilised

Themes – Maintenance (Opex)

Do the right work

- Risk based Maintenance: focus effort where it is most likely needed
- Standardisation
- Asset Policies

Automate to eliminate staff

- Intelligent infrastructure
- Combining workforces for rapid response and scheduled activity
- Reduce non-frontline staff

Improve the productivity of manual tasks through improved working practices

- Increased mechanisation
- Multi-skilling of workforce
- Greater standardisation of tasks

More access to the track

Quicker possessions through automated isolation

Other Opex efficiency

In addition to Renewals and Maintenance, we are planning significant further opex savings in Operations, Asset management Services and Corporate Services functions.

CP5 Renewals (capex)

Introduction

During CP4 the business prioritised the most urgent areas of backlog. Future plans have been developed through an iterative process of “top down” forecasting of long term activities and costs and the development of “bottom up” route-based asset management plans. The top down modelling validates route plans and validates policies and demonstrates plans are sustainable and minimum whole life cost.

The business is committed to deliver an 18% efficiency over CP5 (including embedded efficiency). The pace of change over the next control period is the key issue in determining whether this challenging level of efficiency can be achieved. The comprehensive benchmarking programme underpins the efficiency target.

Table 5 details the efficiencies being delivered within renewals activities.

Track

In CP4, a criticality-based approach to managing track assets was adopted. This has enabled the delivery of the required outputs, together with substantial scope efficiency improvements. For CP5 this approach is further refined. The whole life cost modelling work indicates that the plan for CP5 is affordable and will deliver the required outputs sustainably at reduced cost compared to CP4. The key efficiency initiatives to deliver savings in track are as follows:

- ORBIS will provide improvements in asset data quality and decision support tools
- Multiskilling of key personnel
- Efficient workbank smoothing with midweek working
- A new contracting strategy

Drainage, fencing & other off-track

The management of ‘off track’ activity, including drainage, has tended to be carried out on a reactive basis. The asset policy development programme has produced an integrated drainage policy for the first time, providing a system view across drainage of all assets.

Signalling

The legacy of technological development has resulted in many different signalling types and technologies across the network; however, all follow the original basic principle of Block Section Signalling.

During CP4 ETCS, Modular Signalling and Traffic Management were developed which provide the opportunity to give whole life cost benefits throughout the industry. These will be developed further in CP5 and the plan provides a response to DfT specifications requiring an industry move to ERTMS and which aligns to the HLOS.

Signalling efficiencies will be delivered through recently negotiated signalling framework contracts.

The efficiencies within the framework contracts build upon the circa 24% efficiency being achieved through CP4.

Buildings

Buildings policy is based on asset condition and risk and has been refined to identify intervention thresholds that will achieve lowest whole life cost while maintaining risk. The policy development was informed by work on degradation relationships and intervention strategies with the Buildings Research Establishment. Detailed whole life cycle cost modelling has been carried out to support definition of the intervention thresholds.

Electrification and Fixed Plant

The next control period will see substantial investment in new electrification. Safe operation and maintenance will be embedded into the design of these projects, leveraging learning from recent work on the current isolation processes. New maintenance depots will be built and staff trained to support the efficient maintenance of the new systems.

Structures and Earthworks

There has been under-investment in structures and earthworks. The majority of structures and earthworks assets are well over a century old. They degrade very slowly which, when combined with their longevity, can lead to a perception that the asset is more robust than is actually the case. In the last periodic review, the business did not provide sufficient evidence to persuade ORR that expenditure and activity plans were robust – ORR therefore reduced the plan by around £300m.

In support of this, new policies have been prepared which have been used to determine the levels of activity built into this business plan. They have been developed with considerably improved asset information and modelling and represent a step-change from the single, generic, civils policy that has been used to date.

The business has developed sustainable, lowest whole life cost strategies for both structures and earthworks. For structures, application of policy in one control period would require an undeliverable level of expenditure due to the backlog of work that has developed. We therefore propose to roll out application of the new policy over two control periods to balance risk, affordability and deliverability. For earthworks, the new policy will be fully implemented in CP5.

In order to identify the efficiencies that will be achieved by earthworks and structures across CP5, a review of the end-to-end asset management process was undertaken. This work identified the following five initiatives that will deliver increasing levels of unit cost and volume efficiencies across the control period:

- ADIP and ORBIS programmes delivering improved asset knowledge
- Enhanced business planning and collaboration to maximise productivity
- Enhanced asset management capability ensuring resources are employed more efficiently
- Optimising the asset, commercial and contractual policies
- Achieving unit cost reductions

Telecommunication

Telecoms assets will become increasingly critical to the operation of the network in CP5, with more signalling and electrification controls running over the telecoms network. The policy reflects this, with a clear focus on the required level of service, interventions linked to asset criticality, specified service availability levels and tolerable downtime to meet required system performance. A revised maintenance, failure and renewal intervention regime has been developed to support these service levels. The plan also incorporates NRT being custodian of FTN assets and that some of these were delivered 7-10 yrs ago, they now form part of the CP5 renewals plan.

Table 5 – Renewals efficiency profiles

£m (12/13 prices)	14/15	15/16	16/17	17/18	18/19
Track	8%	11%	13%	16%	19%
Signalling	4%	8%	13%	16%	18%
Civils	5%	7%	9%	11%	14%
Buildings	6%	9%	11%	13%	16%
Electrification & fixed plant	8%	13%	16%	19%	18%
Telecoms	3%	6%	9%	11%	14%
Total	5%	9%	12%	15%	17%

A more comprehensive summary of our Renewals efficiency initiatives can be found in:

[SBPT3138 – Benchmarking and Efficiency Evidence](#)

For full details please refer to individual documents:

[SBPT3093-3125 – Efficiency Initiatives](#)

CP5 – Network Operations (opex)

Network Operations is committed to a series of efficiency initiatives to be implemented across CP5 delivering savings over the ‘CP4 pre-efficient base’ totaling £657 million

Network Operations is the function responsible for the safe operation and maintenance of the railways in England, Scotland and Wales. The creation of the function and the devolution of accountability to Routes was implemented in 2011. Network Operations combines Infrastructure Maintenance, Operations and Customer Services, and route elements of Asset Management.

Figure 7 illustrates how the savings are expected to be delivered and highlights that the routes have confidence in delivering efficiencies of £475 million over the control period.

Figure 7

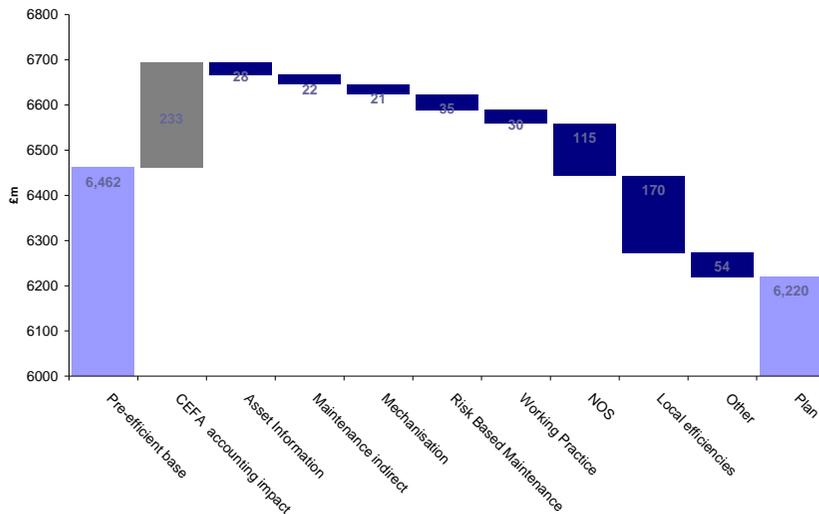
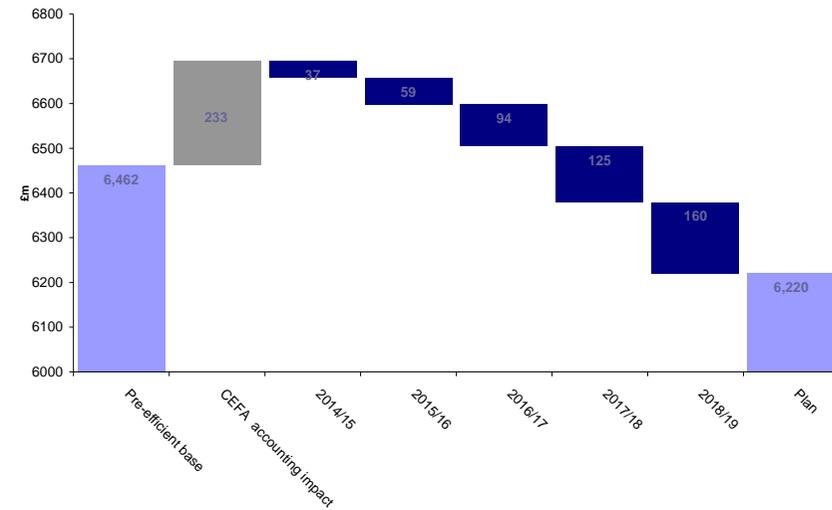


Figure 8 shows how these bottom up initiatives are expected to come on stream throughout the control period; the business will deliver a steady increase in savings of about

£30 million year-on-year in the first half of the control period. The rate of saving increases towards the end of the control period as the initiatives that drive this are implemented more widely across the organisation.

Figure 8



Our Maintenance Efficiency Plans

In developing our plans for CP5, we have identified key opportunities to improve efficiency. These will reduce overall costs while improving asset performance and accommodating additional traffic and additional infrastructure.

Our efficiency plans have been informed by a wide range of external benchmarking, particularly with European railways. Improvement strategies are also based on a safety approach that minimises the risk of worker contact with trains.

It should be noted that many of these initiatives may require a culture change internally and across the wider industry involving the adoption of changed working practices and introduction of new technology.

We have developed a number of national efficiency initiatives with centrally located programme teams providing a lead to the routes. These are forecast to deliver savings of £194 million over CP5, with additional local route efficiency schemes delivering a further CP5 saving of £140 million.

We have set a further efficiency challenge over and above the identified programmes for an additional £140 million of savings which we will identify and deliver over CP5.

The McNulty Rail Value for Money report states that “best performing companies in other regulated industries have experienced efficiency gains of around 4 per cent per annum for up to 10 years, with gains continuing at 2-3 per cent per annum in the next 10 years”. It should be noted that we have exceeded these levels of efficiency gains over the 10 years of control periods CP3 and CP4, and have plans in place to achieve 2 per cent year-on-year net efficiencies through CP5.

Summarised in Table 6 are the national initiatives and their estimated savings over CP5. The following sections provide further detail, while each initiative has a supporting business case document.

Further information and context can be found in:

[SBPT222 – Maintenance Expenditure Summary,](#)

[SBPT3138 – Benchmarking and Efficiency Evidence.](#)

For full details please refer to individual documents:

[SBPT3126-3137 – Efficiency Initiatives.](#)

Table 6 – National efficiency initiatives for Maintenance.

Initiative	Total saving CP5 £m		
	E&W	Scotland	GB
Risk-based maintenance	30.2	4.7	34.9
Working practices	26.1	4.1	30.2
Indirect organisation	20.5	1.0	21.5
Mechanisation	17.5	3.6	21.1
Asset information - ORBIS	25.1	2.6	27.7
Intelligent infrastructure	10.9	2.0	12.9
Rapid response	3.6	0.2	3.8
Recycling of materials	6.0	2.3	8.3
Contract strategy	8.8	2.4	11.2
Multi-skilling	11.9	2.7	14.6
Standardisation	6.9	0.8	7.7
Total	167.4	26.4	193.8

Risk based maintenance

We do not currently have a consistent methodology for determining maintenance regimes. They vary between the asset types and in general are more conservative than required.

The solution is to apply an accepted analysis technique to determine maintenance regimes that are tailored to the configuration, condition and location of individual assets. This will reduce unnecessary maintenance expenditure, whilst improving overall train performance and not allowing system safety to deteriorate. Consistent application of this technique will produce maintenance regimes that are demonstrably appropriate to the individual assets and their potential impact on business outputs. This output is known generically as risk based maintenance.

In CP5 we will be building on the work in CP4 by identifying optimum maintenance regimes for assets based on condition and location.

Working practices

There are significant further opportunities to increase the flexibility and productivity of the workforce, including:

- site start - employees paid from the time they arrive on site, rather than booking on in a depot
- permanent night working, in areas of the network where daytime access is ineffective;
- shorter working weeks, or annualised hours contracts;
- increased overlapping competencies;

- payment based on output and performance;
- standardised working arrangements for supervisors and technical staff;
- cross boundary working between routes.

Indirect organisation

Indirect staff are those who support front line maintenance but whose time is not allocated directly to trackside activities. In CP5 we plan improvements to processes and administration reducing activity and headcount including:

- workforce using apps on i-phones / iPads replacing paperwork processes
- improvements to maintenance planning – formation of a high calibre planning community at more central coordinated level rather than section manager and use of technology to automate planning processes and improve productivity
- use of available technology on tampers to check quality of output after completion of work rather than undertake manually via track quality supervisors.

Additionally there are plans to make further national and local organisation changes that consolidate other activities at indirect staff level, such as further delivery unit consolidation and improvements to stores processes.

Mechanisation

Mechanisation is an opportunity to reduce the cost of labour intensive activities via utilisation of innovative heavy plant. In CP4 video inspection – plain line pattern recognition - is being introduced to replace inspection of plain line continuous welded rail track and reduce inspection of switches and crossings in running lines.

Vegetation clearance is a labour intensive and expensive task that offers opportunity to look for a smarter and more efficient approach. As part of our benchmarking activity we have observed how international railways, and highways and utilities, manage their vegetation and have identified suitable specialised plant, the Bushfighter (Germany) and the Bracke (Sweden Forestry), that we will buy in CP4. The benefits of these investments will be realised in CP5 as manual vegetation clearance activity is reduced.

Asset Information

The Network Rail Asset Information strategy is branded “ORBIS” (Offering Rail Better Information Services). It comprises a series of projects that together improve the collection and analysis of data, converting it into useful asset management information and presenting it to the end user as simply as possible.

In addition to targeting work only where it is required e.g. on track plant and helping to identify root cause of symptoms to avoid wasted work, the programme is also designed to accelerate response to infrastructure faults.

Deliverables for CP4 that will lay the foundation for early benefits for CP5 include deployment of a suite of applications to handheld devices, such as iPhones and iPads. These include apps

that assist in positional data, provision of standards, drawings and forms, and the creation of Trackview, a railway version of Google’s ‘Street View’.

Intelligent infrastructure

Intelligent infrastructure, the programme of fitment and use of equipment for remote asset condition monitoring, has been running through CP4 and will continue on CP5. The focus of the activity for CP4 has been to reduce train delays associated with asset failures. Therefore the fitted assets have been determined by either their failure history, or their potential to cause disruption in the event of a failure.

In CP5, installation of intelligent infrastructure will be extended to include other assets where a business case for reducing maintenance expenditure can be demonstrated. Fitting of remote monitoring will also reduce the exposure of staff to the hazards of the live railway, and also provide consistent accurate data to be able to migrate from a frequency-based inspection and servicing regime to one driven by actual asset condition and performance.

Rapid response

Opportunities have been identified to implement good practice, e.g. smaller faulting teams or closer working with mobile operations managers and other shared resources within routes. These can be delivered with minimal additional cost.

Further opportunities have been identified from examination of emergency service providers, where resource requirements are planned using dedicated software tools and tracked in real time to optimise daily deployment.

Recycling of materials

In 2011 a dedicated national recycling facility was opened at Whitemoor. It will process all used track materials, including ballast, rails, sleepers, switches and crossings, and will replace all other small scale facilities around the country. Company standards and working processes are being revised to encourage re-use of materials where appropriate, usually on lower criticality routes.

Contract strategy

For Track, benefits can be gained by using contractors for routine, low skilled, repeatable activities.

While our strategy is generally for skilled maintenance activities to be carried out by permanent staff, in E&P there is some scope for the use of specialist contractors for some low volume, high skilled work.

There is little or no opportunity for contract labour within other disciplines such as signalling and telecoms where work is of a higher technical nature with greater a proportion of work attributed to faulting and diagnostics rather than planned repeatable activity.

Multi-skilling

Opportunity areas for multi-skilling include:

- level crossing inspections - currently undertaken between track, signalling, telecoms, off-track and operations staff;
- switches and crossing maintenance – currently involving track, signalling and E&P staff;
- cable jointing / trackside telephones – currently undertaken by signalling and telecoms staff;
- stores management;
- rapid response by separate disciplines;
- off-track inspections;
- safety management.

Standardisation

The standardisation initiative has been launched to standardise and improve a range of both commonly delivered and complex maintenance tasks, which are currently undertaken in different ways in different areas.

Possession Strategy

We are additionally looking into addressing different aspects of the management of possessions but not savings are currently associated with this initiative at the moment.

It looks to increase the working time available within possessions by:

- changing the process around how possessions are taken;
- introducing technologies to improve this process;
- introducing new technologies to speed up possessions being taken where the route is electrified; and
- improving the management of engineering trains within possessions.

Our Operations and Customer Services (referred to in this document as ‘Operations’) efficiencies

Our Network Operations Strategy

We have developed an operating strategy that will transform the way in which we control and operate the rail network. By centralising operational control and introducing modern control system technology, we will reduce our annual operating costs by £250 million over 15 years and deliver significant improvements in performance, capacity and customer service. This strategy has been informed by benchmarking our approach with other railways.

Our operating strategy is a long term programme which will see us migrating operational control into fourteen modern rail operating centres. This will allow us to reduce our frontline operations workforce from 5,600 to less than 1,500 in the longer term. To date, eight of the new rail operating centres have been built with the remaining six to be completed early in CP5.

During CP4, enabling elements of the operating strategy have been successfully deployed. This will allow us to move forward with an accelerated strategy during the next control period.

Investments of £1,485 million: £876 million in the acceleration of our signalling renewal work above and beyond that due to conditions, together with initiatives such as the rail operating centres and other system development. These investments will enable in CP5 a reduction of our signalling operating cost of about £51 million per annum.

Non-signalling cost activities in the routes include Mobile Operations Managers (MOMs) who are the front line for minimising the impact of incidents on the railway, the managed stations teams running our managed stations, the Performance and Train Delay Attribution teams, the Customer Relations Executives, and the route HQ Management teams.

This non-signaller element of Network Operations has remained relatively static during CP4. Expenditure within non-signaller elements is both critical to maintaining strong relationships with customers and improving performance. Teams are generally small and focused in specific areas, restricting the scope for national adjustment to headcount and team sizes without a major impact on performance.

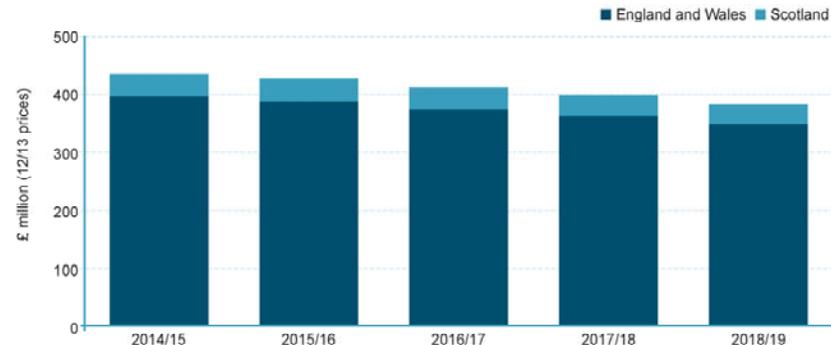
Due to a strong inverse correlation between Mobile Operations Managers (MOMs) numbers and delay minutes, we will not seek to reduce their numbers in CP5. We have also recently agreed a template for our managed stations, and will therefore not reduce our managed stations headcount in CP5.

Network Operations HQ activities include operational planning (responsible for timetable management), performance management, a small business change team, fund management, and customer relationship management for freight, stations and depots.

Our industry access and possession improvement plan will enable efficiency savings of around £4 million within Network Operations HQ.

Our Operations glide path

The graph below shows a relatively steady build-up of savings across the control period with a reduction in expenditure as compared to the final year of CP4 of £56m, an exit to exit efficiency of 12.7 per cent.



Operations Headcount

At the end of CP4 the headcount in Operations is forecasted to be 8,592, by the end of CP5 this will have reduced by around 1,400 (16 per cent) to 7,197. The table below shows the headcount in each staff category in Operations at the end of CP4 and the end of CP5. It also shows the ratio of signaller to non-signaller staff at the end of each control period.

Table 7 – Breakdown of Operations headcount

	CP4 exit	CP5 exit	Change Heads	Change %
Signallers	4,528	3,251	(1,276)	(28%)
Shift Signalling Managers	191	177	(14)	(7%)
Local Operations Managers (Ops)	211	188	(23)	(11%)
Control	423	413	(10)	(2%)
Electrical Control Room	139	163	24	17%
Mobile Operations Managers (Ops)	525	509	(16)	(3%)
Performance	286	274	(12)	(4%)
Route Enhancement Managers (Ops)	58	58	0	0%
Managed Stations (Ops)	600	602	2	0%
Customer Relationship Executives (Ops)	62	61	(1)	(2%)
Other Ops Staff	1,199	1,129	(70)	(6%)
Operations Delivery	371	371	0	0%
Total	8,592	7,197	(1,395)	(16%)
Signaller	5,492	4,194	(1,298)	(24%)
Non-Signaller	3,101	3,003	(98)	(3%)
Ratio of Non Signaller to Signaller Staff	1 to 1.77	1 to 1.4		

The fall in the ratio of signallers to non signallers is driven by the large reduction in signaller headcount delivered by the Operating Strategy; savings here would not generally be expected to reduce heads in non-signaller categories. The increase in Electrical Control Room staff is driven in part by HLOS electrification programmes.

The table below shows the financial impact of the headcount reductions discussed above on expenditure in each of the staff categories. As before, we see the largest reductions in signaller staff types, due to the effect of the Operating Strategy with the ratio of signaller to non-signaller costs falling across the control period.

Table 8 – Financial impact of headcount reduction

£m	CP4 exit	CP5 exit	Change £m	Change %
Signallers	230.8	181.1	(49.73)	(22%)
Shift Signalling Managers	13.3	11.7	(1.59)	(12%)
Local Operations Managers (Ops)	12.9	11.6	(1.29)	(10%)
Control	38.5	38.3	(.25)	(1%)
Electrical Control Room	9.2	10.6	1.5	16%
Mobile Operations Managers (Ops)	31.8	30.5	(1.24)	(4%)
Performance	17.7	17.0	(.76)	(4%)
Route Enhancement Managers (Ops)	0.1	0.1	(.00)	0%
Managed Stations (Ops)	37.8	37.5	(.32)	(1%)
Customer Relationship Executives (Ops)	3.8	4.0	0.2	6%
Other Ops Staff	42.5	40.4	(2.09)	(5%)
Operations Delivery	(0.0)	(0.0)	0.0	0%
Total	438.4	382.8	(55.57)	(13%)
Signaller	304.7	253.3	(51.38)	(17%)
Non-Signaller	133.7	129.5	(4.19)	(3%)
Ratio of Non-Signaller to Signaller Staff	1 to 2.28	1 to 1.96		

Whilst the headcount reduction in Signallers is shown as 28 per cent, the financial impact of this is not fully reflected in the chart below, with a 22 per cent reduction in Signaller costs shown. This discrepancy is explained by two factors; firstly, the full financial saving associated with heads removed in the final year of CP5 will not be felt until the first year of CP6, secondly, the Operating Strategy programme generally replaces lower grade signallers with fewer, more highly skilled staff, leading to a general increase in average signaller salaries over the control period from £51k to £56k

Further details on our operations efficiencies can be found in:

[SBPT221 – Operations Expenditure Summary](#)

CP5 – Asset Management Services (opex)

Figure 9

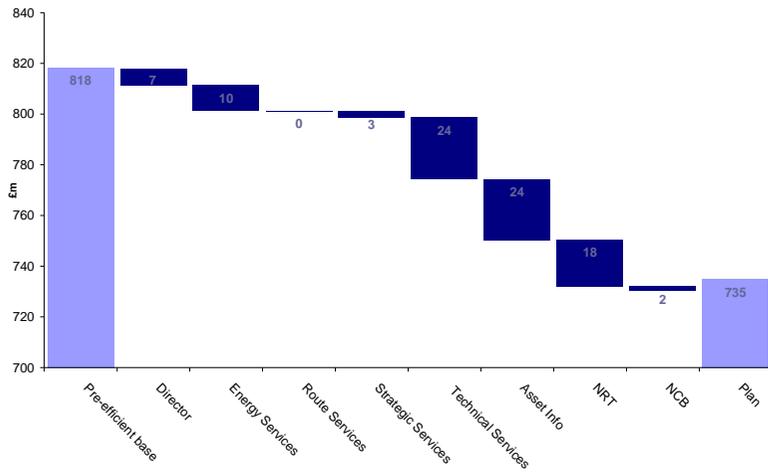
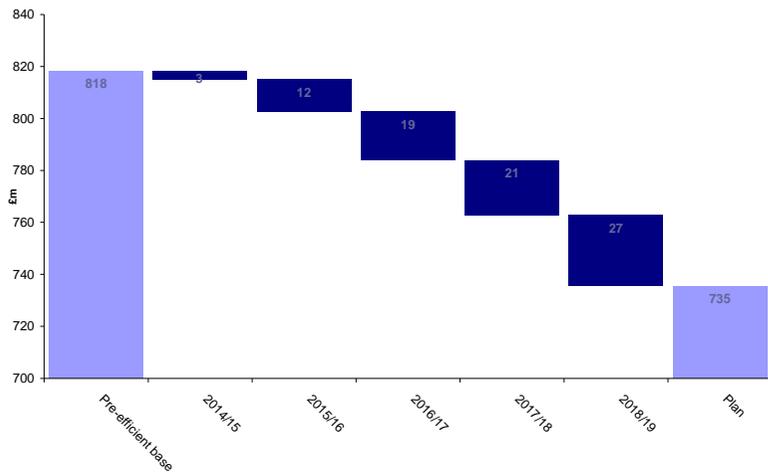


Figure 10



Asset Management Services (AMS) exists to set asset policies and provide assurance; to provide essential services to the Routes (information, energy, telecoms); and to support internal and external customers in achieving optimum performance from the rail infrastructure. AMS has committed to an overall efficiency of 17% exit to exit equating to an average net opex run rate efficiency of £16.6m.

Telecoms efficiencies are derived from a shift from external network reliance and associated lease costs to our internal national network infrastructure. This will provide benefits for both voice, fixed and mobile data services and is anticipated to generate significant savings on migration of the FTNx. Specific initiatives include migration to reduce reliance and usage on operational circuits from legacy onto new NR networks enabling significant BT/L3 savings. The Voice strategy will reduce reliance for 'End Telephone Devices' and DPNSS channels for voice telephony services from Level 3, and will be driving a reduction in BT Managed service and leases for corporate LAN-Wan networks where possible.

The AMS reorganisation programme 'Olympus' represents the second primary driver by realising savings to Network Rail in operation costs through a more efficient and effective approach to service delivery by transforming the central AMS organisation into a customer focused service delivery function. A key enabler of efficiency is a step change in resource utilisation within Technical Services, achieved by effective alignment of internal and external resource to delivery of agreed remits against a pull driven rolling workbank.

This provides a clear framework for performance measurement within Technical Services and an environment to realise a step change in productivity and value for money to both internal and external customers by designing and operating a materially leaner organization with the optimum balance of flexibility and capability to meet ongoing demand. The operating model is anticipated to deliver an average saving of £5mp/a (24% exit to exit), and is in addition to the £2m saving anticipated before the end of CP4.

Asset Information is operating within a tight financial control environment as it populates to optimum establishment and is anticipated to realise £6m rate and £10m headcount efficiencies across CP5. In addition a targeted work-stream to reduce Maintenance contracts is anticipated to realize savings of up to 40% (exit to exit). Specific initiatives include renegotiation of supplier contracts with agreed metrics and KPIs, signing long term supplier contracts with appropriate break clauses, in addition to migration from signing separate contracts to signing fully fledged BPO contracts, removing supplier inefficiencies and bringing greater accountability to suppliers to support the delivery of the committed efficiency targets.

Further details can be found in:

[SBPT225 – Asset Management Services Plan.](#)

CP5 – Corporate Services (opex)

The main purpose of the Corporate Service functions is to support the achievement of the corporate and business objectives whilst enabling the company to fulfill its legal, statutory and governance requirements. The functions provide services to business units, where, through economies of scale or centres of excellence, it can do these more efficiently or effectively.

In order to improve service delivery and develop a more customer services orientation, a new operating model is being established (Project Apple). The main principles that will underpin this new operating model will support the transformation of the central functions as they align themselves to this progressive cultural shift and support the routes and IP as decision-making and transparency is brought closer to them.

This is being supported by the improvement of the corporate internal charging mechanism that will enable corporate services to drive value for money and facilitate comparisons with external market rates and encourage competition. Our vision is a cross-functional organisation focused on putting the customer at the heart of its services. Such an organisation will enable the removal of duplication of roles and increase collaboration across traditional functional boundaries.

Table 9 – Breakdown of Corporate Services expenditure

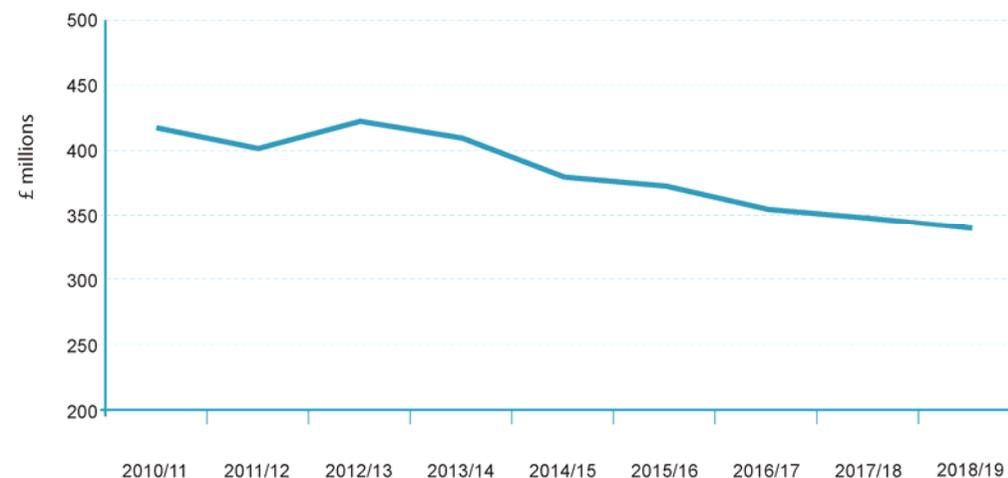
Function	Total CP5 Spend (£m)
National Delivery Service	370
Property	346
Safety & Sustainable Development	39
Information Management	324
Human Resources	273
Business Services	66
Finance	129
Contracts & Procurement	44
Government & Corporate Affairs	86
Board	16
Business Change	16
Legal	30
Group Strategy	53
Group	182
Total	1973

External independent benchmarking studies have demonstrated that the Corporate Service functions operate at world class efficiency levels in many areas with benchmarking studies being conducted on over 80% of all operating expenditure (please see individual function plans for a detailed description of the studies). All of our costs have received detailed bottom-up analysis and have been through a review process at executive level.

Notwithstanding this, there is still scope for overall efficiency to be made and a target has been set that will reduce the total corporate services costs from 5% (of total OMRE) to 4% over the control period. The overall cost of corporate services will reduce by 26% over the control period, providing improved value for money for customers.

The corporate services functions (including Property and NDS, but excluding Group) have committed to an overall efficiency of 17% through CP5, equating to a 10 year CP4 and CP5 efficiency of 28%. The CP5 efficiency will be achieved by delivering an underlying efficiency of 2% per annum with additional efficiency initiatives being realised through the control period.

Figure 11 – Evolution of Corporate Services expenditure
Corporate Services (excluding group) CP4 and CP5 Operating Expenditure



Business Change

CP4 Exit		£3.6m
CP5 Exit	24%	£2.8m

- Efficiency drives will be: improve the strategic management of our change portfolio; develop internal Business Change capability to remove dependency on consultants thus retaining and developing knowledge within the business.
- Risk: Embedding of existing business change does not take place and capabilities are not improved.
- Evidence: Deloitte.

Business Services

CP4 Exit		£15.8m
CP5 Exit	21%	£12.5m

- Efficiency drives will be: develop Business Services further operations to create efficiencies across the business.
- Risk: competition from external providers, robust IT support and legislative changes.
- Evidence: Hackett, UK Records Management.

Contracts & Procurement

CP4 Exit		£10.8m
CP5 Exit	28%	£7.8m

- Efficiency drives will be: improved processes, information and people (through development of both technical and soft skills); adoption of more efficient processes and enabling technology; close consultation with our customers in the development of category strategies and clear communication of our forward work load to the supply chain.
- Risk: devolution, alliancing and DIME result in increased demand; category management approach not endorsed.
- Evidence: Hackett, CIPS, Corven Consulting.

Finance

CP4 Exit		£29.1m
CP5 Exit	16%	£24.4m

- Efficiency drives will be: centralisation of management accounting; up-skilling business partnering organisation to remove central activities in years 3 and 4; increasing automation.
- Risk: Devolution, alliancing and DIME may bring a lack of standardisation and resulting cost increases.
- Evidence: Hackett.

Government & Corporate Affairs

CP4 Exit		£19.7m
CP5 Exit	16%	£16.5m

- Efficiency drives will be: reduction in centrally held cost of project communications; reduction in contact and communities costs through advances in social media and technology; more targeted and aligned marketing whilst continuing to communicate our strategic narrative.
- Risk: proliferation of communications ownership resulting in inconsistent and mixed messaging; cost of additional promotion of success.
- Evidence: Business Leaders in Communications Study.

Group Strategy

CP4 Exit		£13.1m
CP5 Exit	21%	£10.3m

- Efficiency drives will be: ongoing organisational efficiencies following the recent re-organisation.
- Risk: changes in the industry agenda will impact cost drivers, such as wider reform agenda and the approach to long-term planning.
- Evidence: detailed bottom-up analysis by service cost line.

Human Resources

CP4 Exit		£62.9m
CP5 Exit	22%	£48.7m

- Efficiency drives will be: rationalisation of Human Resources support in line with company headcount reduction; culture transformation and improved manager capability to reduce grievances, disciplinary issues and tribunals; reduction in apprentice recruitment in 2016; rationalisation of standards and competences which drive the training needs of the workforce and a reduction in training volumes.
- Risk: multi-skilling requirements not off-set by rationalisation of training to maintain competence; line manager capability improvements not achieved; choice of service from devolution and alliancing has potential to impact economies of scale.
- Evidence: Hackett.

Legal

CP4 Exit		£6.1m
CP5 Exit	5%	£5.8m

- Efficiency drives will be: develop the right structure, competency and behaviours to support commercial/business awareness and an effective governance structure.
- Risk: higher than anticipated volume requests; additional costs if brought under Freedom of Information Act.
- Evidence: Lawrence Simons 2012

Board

CP4 Exit		£3.5m
CP5 Exit	9%	£3.2m

- Efficiency drives will be: the removal of one executive and PA will reduce the costs in year 1.

Information Management

OPEX CP4 Exit		£59.0m
OPEX CP5 Exit	From IM of £291.9m + Traffic Management of £32.1m	£65.1m
CAPEX CP4		£453m
CAPEX CP5	From IM of £544.5m + Traffic Management of £68.1m	£612.6m

- Efficiency drives will be: transition into the 'IT Engine Room' servicing the rail industry including improved efficiency, effectiveness and agility levels (as seen in CP3 and CP4); further develop innovative business models and technologies.
- Risk: decentralisation of IS to routes increasing overall cost; increasing and unknown future demand from current and future major programmes.
- Evidence: Hackett, Gartner.

National Delivery Service

OPEX CP4 Exit		£82.5m
OPEX CP5 Exit	15%	£70.2m
CAPEX CP4		£367.1m
CAPEX CP5	7.5%	£597.6m

- Efficiency drives will be: full year benefits from materials distribution centre; insourcing; fleet investment; review of organisation design; review of contracting strategies.

- Risk: devolution impacts on economies of scale; input price fluctuations; workload impact of the renewals submission; failure to implement an integrated system solution to manage transactions.

- Evidence: ARUP.

Property (Commercial)

CP4	Net Commercial profit	£715.6m
CP5	Net Commercial profit 41%	£1,079.4m

- Efficiency in terms of the ratio of commercial operating costs to income improves from CP4 exit rate of 15% to 11% by the end of CP5. This is achieved by holding operating costs at their CP4 exit rate whilst growing income by 28% over CP5 resulting in a net commercial profit of 41%.
- Risk: further economic turmoil impacting the Development and Property markets.
- Evidence: British Retail Consortium, Workspace Group.

Property (Workplace Management)

OPEX CP4 Exit		£89.6m
OPEX CP5 Exit	28%	£64.4m
CAPEX CP4 (Total CP)		£73.8m
CAPEX CP5 (Total CP)		£89.1m

- Efficiency drives will be: delivery of London Estate Strategy; agile working programme; increase the portfolio to include operational estate.
- Risk: routes receive mandate to 'own' property may result in non-compliance, service disruption; cost increases; reduction in optimal portfolio.
- Evidence: IPD, Leesman Index.

Safety & Sustainable Development

CP4 Exit		£13.3m
CP5 Exit	48%	£6.9m

- Efficiency drives will be: management of our safety, health & wellbeing and sustainability risks; supporting programme of behavioural and cultural change; standards and guidance framework; a coordinated programme of risk-based assurance activities; a revised corporate governance structure.
- Risk: vision and strategy not embedded; mandated regulatory requirements driving sub-optimal actions and behaviours.
- Evidence: detailed bottom-up analysis by service cost line.

Group

CP4 Exit		£102.9m
CP5 Exit	62%	£39.02

- Efficiency drives will be: removal of a potential ORR fine for breaching train performance targets; the inclusion of contingency amounts in 2013/14 as part of the normal budgetary process; reduced redundancy; the removal of HLOS and 7 day railway operating costs.
- Risk: insurance costs could increase if market trends change; fines.

Detailed information, analysis and benchmarking on each function can be found in their functional plans as part of the supporting documentation:

Summary

[SBPT226 – Corporate Services Plan](#)

Detail

- [SBPT3190 – Insurance](#)
- [SBPT3191 – Group Costs](#)
- [SBPT3192 – Industry Costs](#)
- [SBPT3193 – Legal services](#)
- [SBPT3194 – HR](#)
- [SBPT3195 – IM](#)
- [SBPT3196 – Business Services](#)
- [SBPT3197 – Contracts & Procurement](#)
- [SBPT3198 – Business Change](#)
- [SBPT3199 – Safety & Sustainable Development](#)
- [SBPT3200 – G&CA](#)
- [SBPT3201 – Group Strategy](#)
- [SBPT3203 – NDS](#)
- [SBPT3204 – Property Strategy Plan](#)
- [SBPT3205 – Property Opex Plan](#)
- [SBPT3207 – Finance Plan](#)

Top-down analysis – the LICB dataset & econometric modelling

A key element of ORR's assessment of our efficiency potential in PR08 was founded upon an econometric analysis based on the LICB dataset. Both the data and the analysis face issues that raise serious concerns as to the assessment made at PR08. We have worked hard to understand the issues and to develop alternative approaches and analyses that we believe are more robust.

Background

The "Lasting Infrastructure Cost Benchmarking (LICB)" is an international benchmarking project established by the Infrastructure Commission of the International Union of Railways (IUC). Originally, 14 European infrastructure managers participated in the working group.

Currently, 10 countries remain in the project: Austria, Belgium, Finland, France (re-joining), Italy, Netherlands, Norway, Sweden, Switzerland and Great Britain.

The original purpose of the LICB working group was to establish a European benchmarking club where countries would be able to compare high-level expenditures, thus allowing them to identify areas where further discussions between participants would be useful. It is noted that the LICB dataset was never designed to facilitate the sort of quantitative analysis required by econometrics.

Efficiency estimates from ORR's Econometric model

ORR constructed an econometric model based upon the LICB dataset which it used to inform our efficiency catch-up at the last determination.

- In 2010, ORR published the first update of its work on our cost efficiency compared to international peers, it determined an efficiency catch-up of **34% for 2008**.
- In 2011, ORR's second annual update of its econometric analysis found the efficiency catch-up had changed to **17% for 2009**.
- We have recently updated the model, and the preliminary results suggest that the efficiency catch-up has changed to **12% for 2010**.

ORR's econometric benchmarking using a regional international dataset

ORR has gone to construct a further top-down econometric model, this time using a regional international dataset. Data was sourced by ORR and ITS and comprises values from seven infrastructure managers. It is split at regional/sub-company level, with between 4 and 23 regions per country and a varying number of valid years of data.

The resulting "dual-level" inefficiency model attempts to distinguish between inefficiency due to systematic differences between countries (external inefficiency) and inefficiency due to variation in performance at regional level (internal inefficiency).

A review of this work forms part of our SBP submission.

The use of econometrics

We believe that econometrics is an important and powerful tool, and one that can help us understand our true efficiency potential. However, it is critical that both the data and the analytical methods employed are robust if valid conclusions are to be drawn from them.

Over the last two years, we have been developing a better understanding of the benchmarking and econometric analysis used by ORR at PR08. This has identified issues in establishing the actual efficiency gap between us and our comparators, and we have serious concerns about both the data and the model.

Problems we have identified with the LICB data

Statistical techniques such as econometric modeling can be very sensitive to the data used, with inconsistencies or systematic bias leading to erroneous results:

Data collection

The dataset is compiled annually, however, there is no audit of the data submitted by the collaborating companies, and no process to identify missing or inconsistent data.

Data completeness

Key information on the characteristics, condition and performance of the network is missing. The dataset also exhibits a number of data anomalies where certain years' values are either missing or very volatile.

Cost definition

Although the data reported is determined by standardised definitions, no check from the participating countries is carried out as to whether this happens on a consistent basis.

From our bilateral visits, we found out that countries are submitting their costs differently, e.g. for signalling, countries account for Renewals & Enhancements in a variety of ways.

PPP analysis

The Purchase Power Parity (PPP) value used to normalise expenditure in different countries is currently based on GDP. As most of our maintenance and renewal activities can be related to the construction industry, we believe that the Construction PPP is an appropriate alternative, and should be used to test the sensitivity of any analysis based on the LICB dataset.

Countries leaving the LICB working group

Since the group was established, a number of countries have left: Denmark (2010), Germany, Ireland, Luxembourg (2009) and Portugal (2008).

We strongly believe that confidence in the use of the LICB data and the reliance placed upon any associated analysis must be reflective of the uncertainties surrounding the data set.

Problems we have identified with ORR's econometric model

Whilst we are working with UIC and the LICB group to address the definitional differences with the dataset, we have also identified substantive issues with the form of the econometric model itself, including:

- steady state adjustment
- elasticity of the structural factors considered
- the time dimension in the model
- some of the omitted variables

We will continue to work with ORR and its advisors on the development of the econometric models used.

Steady state adjustment

The issue of how to adjust for countries being at different stages of their asset lifecycle has exposed some critical points:

- Percentage of rail renewed in a year is used as a proxy for total track and signalling renewal, and it is evident that countries have greatly varying levels of activity.
- We have been working with the LICB members to develop a common adjustment approach to account for these differences. For example, higher tonnage might imply the need for higher renewal rates.
- Even after adjustment, it is quite clear that some countries have been under or over renewing and that most have networks that are far from being at steady state. This raises serious questions as to the fundamental comparability of the LICB data and its use in econometric analysis.
- Some countries have been building up a backlog of work – just as Great Britain did in the 1980s and 1990s, a backlog that Network Rail has spent the last decade trying to clear. These countries have appeared artificially efficient in recent years when compared to ourselves.
- Norway doubled its renewals expenditure in 2009, and Sweden recently announced a 25% increase in its maintenance and renewals budget.

Further econometric approaches

Both the dataset and the model used by the ORR at PR08 contain structural and systematic errors, and we have explored a range of methods to try and correct these problems by developing ORR's methodology, or avoid them altogether through the use of consistent data sourced solely within our business.

Developing ORR's econometric model

In order to address some of the issues identified with ORR's econometric model and the LICB dataset, we have constructed a number of alternative configurations. Depending on the structural form and adjustments employed, the results mostly suggest that the efficiency catch-up (for 2009) should be in the range of 0-20%. The most plausible versions of the model put the value in the range **10-12%**.

Internal cost efficiency benchmarking

We have developed and tested a first version of a cost model and produced efficiency estimates and rankings for our maintenance and renewal activities. Currently this is across nine routes (excluding Wales), and the first three years of CP4 (2009/10-11/12).

Preliminary results suggest that our catch-up efficiency (weighted by route expenditure) is in the region of 9%. Taking into account our projected efficiency improvements for the remainder of CP4, this gives an efficiency potential of 6% in CP5 that could be derived from cross-route comparison. This potential is incorporated in our overall 18% headline efficiency.

Whilst these are preliminary results only, the work promises further developments in 2013 that we believe will provide useful comparative information.

Delivery unit regression analysis

We have undertaken work to improve our understanding of the drivers of variation in maintenance unit costs across the business, identifying structural factors and the potential to improve efficiency. This exercise formed the maintenance element of our internal benchmarking programme (see below).

Much of the benefit from this work has been implemented during CP4 as we have striven for continuous improvement in our maintenance activities, leaving relatively modest further improvements to be made from cross-unit comparison.

Key structural factors in delivery unit spend explain almost all the variation seen, with some potential for further improvement in management information and standardisation. Both of these areas are already covered in our CP5 plans.

The available evidence from a variety of econometric approaches points towards a catch-up efficiency somewhere in the range 0-20%, with the most likely value being around 12% during the latter half of CP4.

The wider economic context

Having established the likely efficiency gap during CP4, we need to account for how the value moves forward in time, including: the price of goods, how the industry frontier moves forward and how far we will have progressed during the remainder of CP4.

Input prices – changes in the costs of goods and services that we purchase

How the price of goods and services that we purchase might behave in future, and particularly in relation to RPI (the real price effect) is a complex topic.

Renewals – evidence from the construction industry suggests that, on the balance of probabilities, our input prices for renewals will increase at a faster rate than RPI during CP5.

Maintenance & operations – we believe that input prices for these functions may well increase faster than RPI during CP5, however, we believe that we can accommodate such increases within our existing efficiency plans.

Frontier shift – how the industry moves forward

Frontier shift efficiency measures the extent to which companies that already at the efficiency frontier in their industrial or commercial sector can continue to become more efficient. We have assessed the potential for frontier shift in our renewals spend on the historical experiences of the construction industry in the UK.

Table 10 – Combined impact of Frontier Shift and Real Price Effect

Function	Cumulative CP5 frontier shift	Cumulative CP5 frontier shift after real price effects
Company total (weighted)	-0.88%	0.74%
Operations & Support	-1.00%	-1.00%
Maintenance	-1.98%	-1.98%
Renewals	-0.50%	2.17%

This indicates that over the course of CP5 we should expect our efficiency frontier to increase by approximately 1%.

CP4 efficiency

The econometric assessments are all based on historical data, and help inform where we were in the recent past, up until about 2011-12. As discussed earlier in this document, by the start of CP5 we will have improved our efficiency by a further 3% which must be accounted for when setting a future efficiency target.

Total efficiency catch-up

Combining the best estimates available:

12% econometric analysis (most likely from within the range 0-20%)

+1% combined price effect and frontier shift

-3% progression in remainder of CP4

= 10% suggested catch-up efficiency for CP5

Whilst any view of catch up efficiency is subject to considerable uncertainty, we believe this top down analysis demonstrates that our overall target of 18 per cent is challenging, and that further challenges could severely undermine our ability to deliver a high performing and sustainable railway.

Further Supporting Evidence

A variety of further supporting evidence gives us confidence that we have thorough and appropriate plans in place for CP5, such as assessments of our capabilities (by ourselves and ORR’s advisors).

Asset management capability

Since 2006, together with ORR and the Independent Reporter for Asset Management (AMCL), we have assessed our capabilities using the Asset Management Excellence Model (AMEM).

The 2011 assessment showed improvement in all priority areas relative to the 2006 study. It indicates that we are already at best practice when compared to European railways and other UK utilities in terms of our strategic planning, the delivery of projects & maintenance, and the way we work with our suppliers.

We are working hard to progress our capability further in a range of areas and disciplines, but our current good degree of maturity in asset management techniques and approaches gives us strong confidence that our plans for CP5 and beyond have been well thought through and developed appropriately. Further information can be found in [SBPT205 – Asset Management Capability](#).

Other capability & comparative studies

We have worked with ORR’s advisors in a number of areas to understand our capabilities:

- Supply chain management
 - Our transformation programmes such as Project Dime are very positive
 - Our progress in relationships with suppliers is a constructive change
 - We have positive engagement at top management level

- Our contracts & procurement function and NDS are advanced and have relatively little potential for savings in themselves
- Possession management
 - An assessment by Lloyds suggested a range of better practice measures that were already included within our CP5 plans.
 - They went on to find that two of ORR's chosen high level spend comparators – Holland and Denmark – were not as efficient as us in this area.
- Material cost benchmarking
 - In general we buy materials more cheaply than almost every comparator, with only very modest further savings that might be achieved.
- Salary benchmarking for white collar staff
 - We have compared our salary levels for white collar workers in maintenance, renewals and operations to other industries and found that we pay appropriate market rates for our staff.

Alternatives to LICB: EIM working group

The European Infrastructure Managers Asset Management working group was set up in 2010 to share best practice in asset related activities:

- Qualitative: identifying and sharing good practice,
- Quantitative: comparing member asset management output.

Initial results from the group look promising, but different accounting practices may still mean that countries are not submitting the same expenditures. We will continue to actively participate in the EIM initiative, work in 2013 is already planned.

Further information on the top-down analysis we have conducted to inform our CP5 plans can be found in:

[SBPT3138 – Benchmarking and Efficiency Evidence](#)

[SBPT3139 – Frontier Shift and real Price Effect](#)

[SBPT3091 – Scope for Efficiency Savings in CP5, Evidence from Other regulated Industries](#)

Rail Delivery Group

The Rail Delivery Group (RDG) was formed in 2011 to bring together the owners of Britain's Train Operating Companies, Freight Operating Companies and Network Rail to provide leadership to Britain's rail industry. Network Rail strongly supports RDG's work and considers that it has an important role in bringing together key industry stakeholders. Our CP5 plans reflect RDG's work to date to identify cross industry savings. We are grateful for the input provided by RDG and their work to examine the opportunities to deliver cost savings in specific areas. RDG will be key to unlocking some of the efficiencies we have projected. RDG's work has provided us with greater confidence that we can deliver the headline 16 per cent efficiency in CP5.

RDG has, to date, focused its work in a number of specific areas. RDG decided that its priorities should be:

- Providing leadership to the industry;
- Contractual and regulatory reform;
- Train utilisation;
- Asset, programme and supply chain management;
- Technology, innovation and working practices;
- Whole system approach; and
- Industry planning.

RDG recognises that each of the areas it is tackling is complex and that solutions have evaded many that have tried before. RDG also considers that finding and implementing solutions will take time.

Asset, programme and supply chain management

Considerable work has been carried out by an RDG working group to consider asset, programme and supply chain management. RDG considered that these areas offered the best opportunity to unlock cost savings. This working group has been focussing on enabling and delivering efficiencies in the following areas:

- Access Planning;
- Route-based Workbank Optimisation;
- Cost of Contingency; and
- Network Optimisation.

Summary

There is evidence to suggest that a significant amount of the benefits identified by the RDG working group are already either directly included within our route SBP plans, or assumed within them. For example track delivery relying on more midweek access, and better work bank planning with regard to civils and signaling interventions. With regards to the working group's views on network optimisation, we agree that additional savings are possible over and above what our route plans have assumed. However, we consider that there are significant cost implications to unlock these benefits during CP5 which have not been sufficiently worked up by the working group.

CP5 Flexibility

We are grateful for the work that the RDG working group has so far done. We are supportive of it and are keen that it is worked up more fully. We consider that to the extent that cost savings can be identified by RDG that are not included in our SBP plans, the regulatory framework should support their implementation during CP5. This could be affected, for example, through the Network Rail self-financing investments mechanism. This should allow us to invest additional funds during CP5 to unlock cost savings over and above those assumed at the time of the periodic review determination. Such investments would be funded through future charges by way of RAB additions.

As part of PR13 we have called upon ORR to improve the way that the self-financing scheme operates in CP5. To date the framework has not proved to be appropriate for Network Rail promoted cost saving schemes even though this category of scheme is covered by the original investment framework. An example of this type of scheme is our investment to construct the new national centre in Milton Keynes which was not considered appropriate to be RAB financed even though the cost savings associated with its introduction were compelling.

Summary

Significant savings have been achieved in CP3 and CP4, whilst improving output and performance.

Our CP5 headline efficiency target is 18%, including embedded savings due to enhanced asset policy, and the benefits of improved asset information.

We have conducted an extensive international benchmarking programme – 85 visits with 16 countries – which has led to initiatives that will cut costs from nearly every part of our business.

Our targeted efficiencies of 18 per cent over the period are challenging. They are supported by specific bottom up plans and assumptions but there is significant risk associated with their delivery. The best available benchmarking evidence needs to be interpreted with caution but it supports the view that these plans are challenging. We are, however, determined to look for further opportunities and in particular we intend to work closely with suppliers, operators and RDG to identify the scope for any further savings associated with the RDG work to date.

The drive for efficiency in CP5 will require the business to undergo substantial change, and the factor limiting our progress is likely to be the pace at which the entire industry can evolve to meet the challenge of ever cheaper costs.