



OFFICE OF RAIL REGULATION (ORR)

Impact of Business Change on a Firm's Support, Operations,
Maintenance and Renewal Costs

Lot 3 Report | July 2013

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1 INTRODUCTION

Aim of study

- 1.1 A consortium of BDO (formerly PKF) and Cambridge Economic Policy Associates (CEPA) has prepared this report for the Office of Rail Regulation (ORR). It is to help ORR assess the changes in operating costs that Network Rail can make over the next regulatory period, CP5 that is expected to run from 2014/15 to 2018/19.
- 1.2 This report, the Lot 3 report, draws together the findings in Lot 1 and Lot 2 and concludes on how the split of a company's variable and fixed costs can impact on its ability to react to significant business change.
- 1.3 **Lot 1 tasks:** This work is based on a sample of companies with characteristics, which are similar to Network Rail. The study identifies how these firms' costs have been impacted as a result of major changes to their operations; for example from industry change, mergers or acquisition, a reduction / increase in the scale of operations a change in the supply chain or a significant event/accident.
- 1.4 Although ORR was originally interested in disaggregated data, the lack of such data in the public domain meant that ORR revised its original request. Hence our analysis focussed on changes in major components of costs rather than changes in each variable under these costs. Information in the public domain, which was the basis of the Lot 1 report, did not permit a detailed analysis of fixed and variable costs. However we were able to conclude that when organisations are faced with a strong imperative for change like a merger or bankruptcy, no costs can be considered truly fixed.
- 1.5 **Lot 2 tasks:** This task required us to assess the proportion of Network Rail's support function costs which can be considered variable and which can be considered as fixed, and how these compare to firms with similar characteristics. The analysis focussed on the cost drivers of Network Rail's support functions to assess how changes in these costs are a result of changes to Network Rail's business model.
- 1.6 It was agreed with ORR that support functions, maintenance and other operating costs were to be covered by the review. Detailed diagnostics were conducted on Human Resources, Finance, Procurement, Information Management and Business Services, scrutiny of management information on Maintenance, Infrastructure investment/projects, Asset management and engineering, and National Delivery Service, and a review of high level trends in other operating cost categories.
- 1.7 Although ORR was originally interested in a quantification of fixed and variable costs, there were limitations in the data we received from Network Rail which meant we were unable to undertake a quantitative analysis of such costs.
- 1.8 We did however produce a detailed qualitative assessment of the major support functions. We have been able to draw, from our interviews, diagnostic surveys and qualitative assessment of fixed and variable costs, conclusions about cost drivers and how Network Rail manages its cost base and executes changes to its business model, through organisational, people, process and technology reform.
- 1.9 **Lot 3 tasks:** The final element of the project is a study into how the split of a company's variable and fixed costs can impact on its ability to react to a significant business change; for example, a merger or acquisition. Specifically, when faced with a significant change to business operations, how quickly have companies been able to respond by reducing costs.
- 1.10 It should be noted that our review was undertaken in 2012 based on management accounting and forecast information provided by Network Rail which has now been superseded by the finalisation and publication in January 2013 of the Strategic Business Plan for CP5 (SBP). This SBP has not been reviewed as part of our work, nor discussed with Network Rail to understand how it impacts the information provided for our review.

- 1.11 The majority of meetings and discussions between BDO and Network Rail took place during the summer/autumn 2012. Since that time, we understand from Network Rail that considerable change has been taking place within their support functions, particularly in relation to a change programme, called Project Apple, which it is understood is focussing on driving change and cost reduction as part of Network Rail's commitment to Control Period 4 targets in preparation for Control Period 5 obligations.
- 1.12 The report has been discussed at length with ORR. This report has not separately been discussed with Network Rail, they did however have the opportunity to comment on factual matters and figures contained in the final draft document.

How Lots 1 and 2 link to 3

- 1.13 In this Lot 3 report we bring together the comparator information from Lot 1 with the detailed review of Network Rail's performance and scope for opportunity in Lot 2. This analysis has been carried out in the following way:
- Overlaying the data on Network Rail's performance pre and post Hatfield against that of the comparators in Lot 1;
 - Conducting detailed analysis of Network Rail's costs including a qualitative assessment of its fixed and variable costs where possible;
 - Discussion on Network Rail's scope and timeframe for achieving efficiencies in support and operations, and maintenance and renewal expenditure; and
 - Qualitative comparison of the business models and management levers used in by Lot 1 comparator companies and other leading enterprises with those used in Network Rail.

Structure

- 1.14 The remainder of this report is structured as follows:
- Section 2 presents the key findings for the pace of change in support and operations costs across a sample of companies;
 - Section 3 presents the key findings from the review of Network Rail's support functions;
 - Section 4 presents the key findings for the pace of change in maintenance and renewals costs across a sample of companies; and
 - Section 5 compares the findings in Lot 1 with those in Lot 2 and considers the potential pace of change within Network Rail's key areas of support costs.

2 SUPPORT AND OPERATION COSTS

Introduction

- 2.1 In this section we compare Network Rail's support and operations costs to those companies included in the Lot 1 analysis.
- 2.2 Network Rail's support costs include the following cost categories: Human Resources, Information Management, Group Strategy, Finance, Procurement and a range of other Corporate Services including commercial property, asset management and insurance.
- 2.3 Network Rail's operations costs include train control, positioning, optimisation, signalling and customer services.
- 2.4 Our focus is on the main support functions of Human Resources, Information Management, Finance, Procurement, Group Strategy, Business Services and Other Corporate Services. We have not considered areas such as Commercial Property, Asset Management, Pensions, Insurance or Staff Incentives.
- 2.5 We have attempted to match the costs of the comparators to Network Rail's definition of support and operations costs where possible. However, given the diverse range of companies included in our analysis and differences in the way that they group 'support' costs this was not always possible.
- 2.6 In order to control for the changes in support costs in the size or output of the companies we have normalised them on a per unit basis, either by an output measure or by revenue.
- 2.7 We have not made an adjustment for economies of scale in the normalisation as insufficient information is available for a number of these companies. We note that some companies, particularly the infrastructure companies, are likely to benefit from substantial economies of scale as the output (or normalisation factor) increases. This means that for some companies we would expect 'per unit' costs to decrease if there is an increase in the outputs (or normalisation factor).
- 2.8 We picked a range of case studies across a number of sectors so that the analysis was not biased towards a particular industry or technological change. The companies included in this analysis are set out in Table 2.1 below.

Table 2.1: Companies included in the Lot 1 support cost analysis

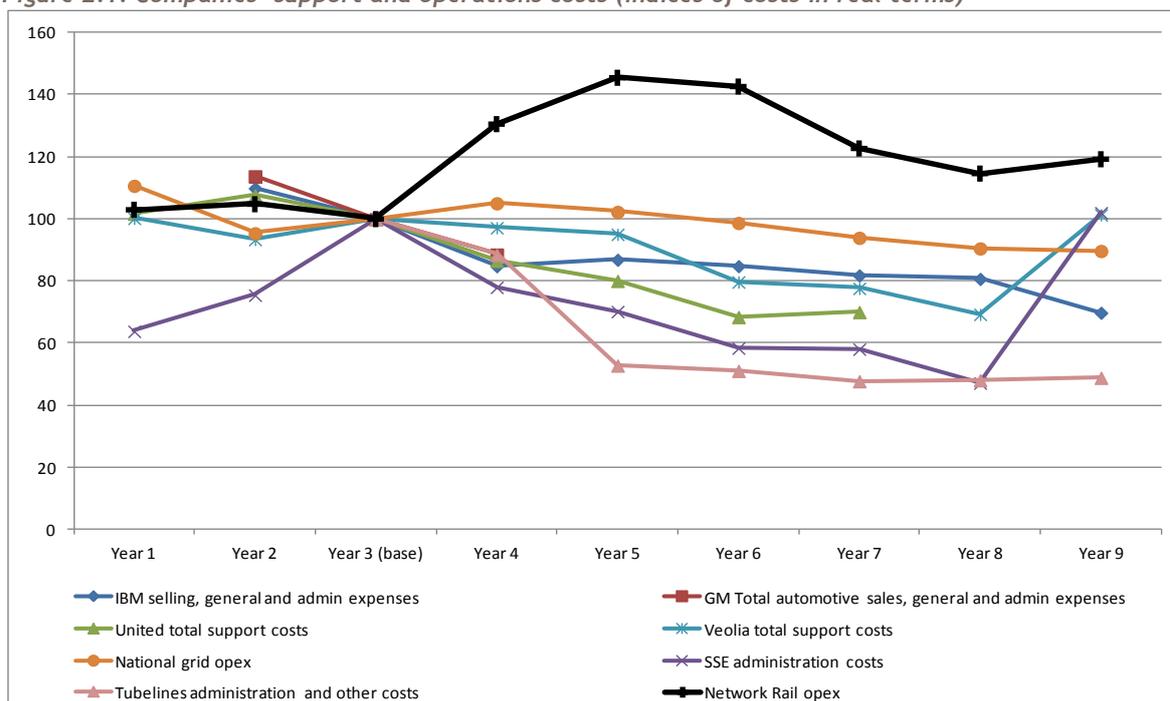
Company/ industry	Change in business	Reason for inclusion
General Motors	Recovery from Chapter 11 re-organisation in 2009	An example of a large unionised transport sector company that changed its support costs in order to remain viable after being bailed out by the U.S. Treasury (UST) in 2009.
IBM	Competition from more efficient, lower priced competitors in the late 1980s and early 1990s. Threat of bankruptcy in early 2000s	Selected for its ability to cut its expenses as a percentage of revenue very significantly and continue to find efficiencies, while strengthening its annual revenue. We focus our analysis more heavily on the early 1990's period which involved significant staff restructuring and centralisation of support functions.
National Grid Gas	Split into distribution licence areas (2005/06)	A large scale utility operator, subject to economic regulation which has forced changes to its structure: change in business

		structure within a network
SSE	Merger in 1998	SSE has undergone two major organisational changes over the last 15 years.
Tube Lines (TLL)	Split of internal structure	As a rail organisation it operates in similar markets and carries out similar work to Network Rail. It operates in a safety critical environment and has a highly unionised workforce.
United Airlines	Filed for bankruptcy in 2002	An example of a large company in the transport sector with unionised labour transforming its cost structure to improve efficiency and compete effectively despite external events having brought it close to bankruptcy.
Veolia Water Central (formerly Three Valleys)	Merger: VWC merged with North Surrey Water in October 2000.	A large scale utility operator, subject to economic regulation. Formed through a number of mergers over the last 20 years.

Pace of change in other companies

- 2.9 We have assessed the pace of change after an “event” and how costs reduced below the level at which they were at when the event occurred. Figure 2.1 below shows the change in support and operations costs for each of the companies across the period in which the change that we are considering is occurring. In order to better compare the companies we have converted the costs into real terms and indexed them. We have set year 3 as close to the point at which the ‘change’ occurred as possible to illustrate the level of support and operations costs both before the event and after it.
- 2.10 For IBM, GM and United Airlines, the ‘change’ event was bankruptcy filings. For SSE its event was the purchase of the Scotia Gas Networks, and for Veolia it was its formation through a merger of three companies. National Grid’s event was its sale of four gas distribution networks. TLL’s event was its establishment through the PPP transaction with London Underground and Network Rail’s point of change was the Hatfield disaster in 2000.

Figure 2.1: Companies' support and operations costs (indices of costs in real terms)



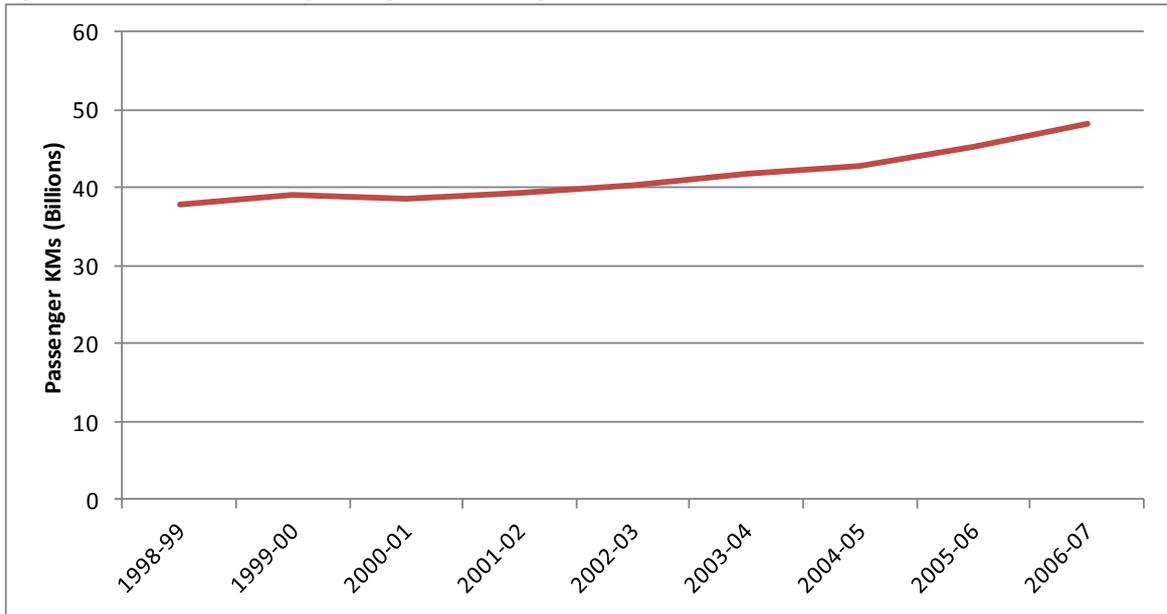
2.11 We can see from the figure above that:

- After the 'change' event there is a general downward trend in costs experienced by all companies in the sample, except for Network Rail;
- Network Rail's costs increased substantially following Hatfield as a result of it having to make substantial improvements. There was a 31% increase in operating cost in the first year (2000/01 to 2001/02) followed by another 11.4% increase from 2001/02 to 2002/03. After 2002/03 Network Rail's costs started trending down until 2006/07;
- Network Rail and National Grid are the only two companies that experienced cost increases following their respective 'events'. National Grid Group (NGG) sold 4 of its distribution licences in 2005 hence the drop in overall costs thereafter;
- Network Rail however is the only company not to reduce operating cost below the pre-event level within four years; and
- We note also that SSE results show a sharp increase in costs in year 9 (2011) resulting from higher administration charges from the SSE group, however we note that the SSE group administration costs increased by only 10%, which does not reflect the doubling in the administration costs charged to the electricity distribution networks.

2.12 In order to control for change in support costs due to changes in the size or level of output for each company we have used a normalising factor. For Network Rail we have normalised costs using passenger kilometres (KMs). Passenger KMs increased relatively steadily from 1998 to 2007 (except for a slight drop from 1999/00 to 2000/01); across the period the total increase was 27.5%. Whilst we would expect economies of scale to apply to passenger KMs, we have not made any adjustment for this, as insufficient information was available for all the companies in the study.¹

¹ Sánchez, P. C., and Villarroya, J. M., *Efficiency, technical change and productivity - In the European Rail sector: A stochastic frontier approach*, *International Journal of Transport Economics*, 2000, estimate elasticity of costs to passenger KMs for 15 European rail operators to range from 0.29 to 0.85, indicating potentially very high economies of scale.

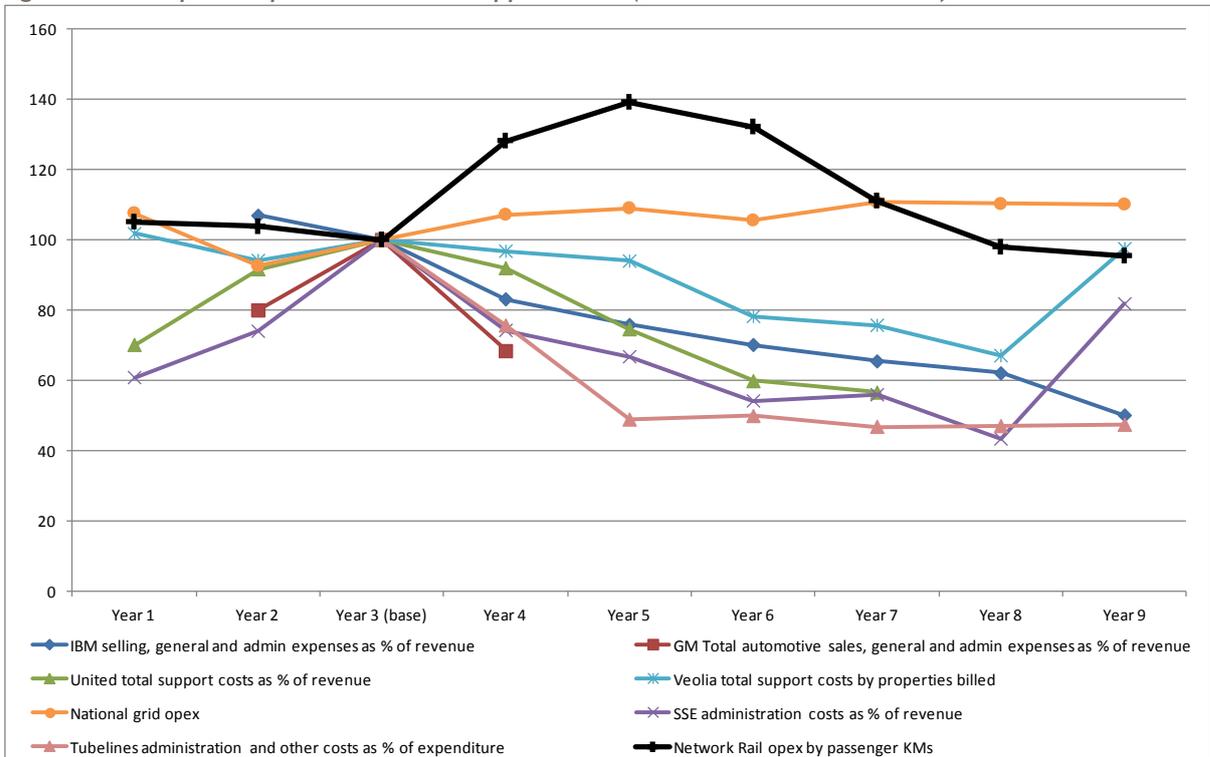
Figure 2.2: Network Rail's passenger KMs changes over time



Source: ORR

2.13 Figure 2.3 below shows the indices for each companies change in support costs per revenue or output.

Figure 2.3: Companies' per unit/revenue support costs (indices costs in real terms)



2.14 We can see from the figure above that:

- Network Rail's normalised costs exhibit the same pace of change pattern as shown by its non-normalised costs. However, as passenger KMs have increased since Hatfield Network Rail's normalised costs decreased much faster and by year 8 (2005/06) its normalised costs are below its pre Hatfield level. Passenger KMs have increased by 25% from the base year (2000/01) to year 9 (2006/07) or by 3.8% per annum;
- Aside from National Grid, all the other comparators achieved costs below their pre-event level within three years of the 'event'. National Grid, the closest comparator in terms of cost changes, has seen an 18% fall in output from the base year (2004/05) to year nine (3.3% per annum fall); and
- It may be noted that there is an increase in SSE and Veolia's operating cost in year 9. We are unsure what has caused these costs increases, however SSE's increase is not reflective of the total administration costs recorded for the SSE group as a whole which only increased 10%. Veolia's costs changes appear to be cyclical with the price control periods set by Ofwat.

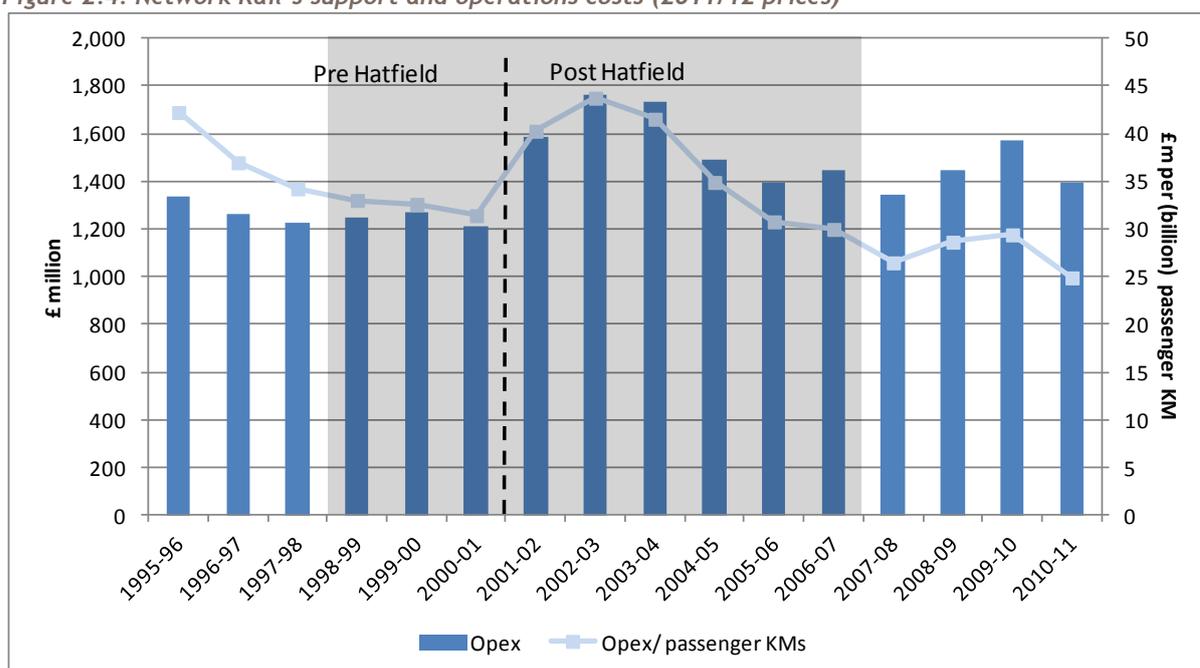
2.15 Table 2.2 below provides the normalised operating cost changes per annum for each of the sample comparator companies. The highlighted cells showing the point at which the company has reduced its normalised operating costs below the level at which it was before the event.

Table 2.2: Movement in normalised operating cost

Company	Year 1/2	Year 2/3	Year 3/4	Year 4/5	Year 5/6	Year 6/7	Year 7/8	Year 8/9
General Motors		25.1%	-31.6%					
IBM		-6.5%	-16.9%	-8.8%	-7.5%	-6.7%	-5.2%	-19.3%
National Grid Gas	-14.0%	8.0%	7.2%	1.7%	-3.2%	4.9%	-0.4%	-0.1%
SSE	21.7%	35.1%	-25.7%	-10.1%	-18.8%	3.2%	-22.5%	88.6%
Tube Lines			-24.3%	-35.4%	2.1%	-6.2%	0.4%	0.8%
United Airlines	30.7%	9.1%	-8.0%	-18.9%	-19.8%	-5.5%		
Veolia Water Central	-7.5%	6.2%	-3.2%	-2.9%	-16.8%	-3.2%	-11.4%	45.4%
Network Rail	-1.2%	-3.6%	28.2%	8.6%	-5.0%	-16%	-11.8%	-2.6%

2.16 The analysis above covers up to six years after the 'change' event. In Network Rail's case this is only out to 2006/07. Figure 2.4 below shows Network Rail's operating cost over a longer time period, 1995 to 2011. This indicates that its non-normalised costs in 2010/11 are still higher than those in 2000/01, however on an operating cost/ passenger KMs basis in 2010/11 Network Rail's per unit costs were below its pre-Hatfield level.

Figure 2.4: Network Rail's support and operations costs (2011/12 prices)



*Note, the shaded area reflects the time series shown on Figure 2.1 and 2.3.

- 2.17 In the Lot 1 analysis we found that the greatest cost savings appear to come from the centralisation of support and operations. This is likely to be in part from economies of scale, when a merger occurs, but also the reduction in the duplication of activities performed in the company.
- 2.18 Network Rail's 'event' was different from most of those experienced by the other companies in our study as it is the result of an accident rather than via acquisition, merger or bankruptcy. However, costs across the company rose markedly post Hatfield and the experience of other companies implies that they could have been brought back down rather more quickly than was actually the case.

Summary

- 2.19 All of the companies considered in our analysis have some level of fixed support costs at least over the short to medium term. However when faced with a change in operations or structure, businesses seem willing to bear a larger short term cost in order to reduce their longer term fixed costs. In other words, they appear to more readily adopt the approach that all costs are variable in the long run and treat inefficient parts of the business as sunk costs. Network Rail appears to adopt the view that much of its overhead cost is fixed. This view is not borne out by our comparators which have been able to tackle both the scale of costs and their nature rapidly when faced by sufficient imperative to do so.
- 2.20 We note that the companies (namely the network companies) included in this comparison need to have a strong focus on safety and, on the basis of the time period covered, the companies that have managed to reduce costs without any obvious reactions in safety or wider impact on quality or performance.

3 NETWORK RAIL'S SUPPORT FUNCTIONS

Introduction

- 3.1 In this section we assess the fixed and variable nature of Network Rail's support function costs and the progress that Network Rail has already made in reducing its costs in this area.
- 3.2 In the Lot 2 report we looked at Human Resources, Finance, Procurement, Group Strategy, Business Services and Other Support costs. These totalled some £269m in 2012 and had a headcount of 2,511.
- 3.3 These functions typically comprise a mix of policy, strategy, planning, change, project and transaction related costs. Many of these areas have a fixed component, for example most businesses plan, but the scope and scale of these activities is, as least to some extent, a matter of choice.
- 3.4 Key to achieving savings is benchmarking and market testing similar support services. Network Rail has started this process through commissioning a Hackett report in 2010, but they have yet to fully submit the support functions to market testing and service level agreements.
- 3.5 Furthermore, our sense is that companies need to design in detail the new shape of support functions in terms of people, process and technology and recognise the shift needed to move away from historic working practices and to adopt and establish new and improved ones.

Pace of change in other companies

- 3.6 From our research undertaken for Lot 1 we identified the following trends;
 - For IBM, the competitive pressures it faced and being on the brink of bankruptcy was the catalyst for its rejuvenation. This forced it into making big reductions in its workforce over a short period of time at a high costs, but this catalyst enabled it to refocus and offset its restructuring costs within a relatively short period (three years). Between 1993 and 2003 the number of Chief Information Officers reduced from 128 to 1, it also reduced its data centres from 155 to 13 and reduced its 31 different networks down to 1. This removed the duplication of support roles and operations across IBM and led to economies of scale being achieved through centralisation; and
 - The story for GM and United Airlines is similar. However, they both ultimately entered bankruptcy as they were unable to implement restructuring efforts fast enough to avoid it once threats to their businesses had been identified. For GM the long restructuring process prior to bankruptcy, is unsurprisingly, driven by the resistance from unions to any significant reduction in staff numbers and working conditions. Both GM and United Airlines reduced their fixed costs by closing/ reducing a number of plants/ routes which were not profitable.
- 3.7 What can be taken from these three examples is that when there is a very strong business imperative, e.g. bankruptcy, it can be the catalyst and even an enabler for significant change in staff terms and conditions. Otherwise we noted that:
 - Both SSE and Veolia achieved per unit cost savings from leveraging economies of scale through their acquisition/ mergers. SSE managed to achieve synergies across its finance department, IT systems and procurement and warehousing, while Veolia was able to restructure its staff relatively quickly following its merger; and
 - TLL managed to reduce its administration costs by circa 51% over six years and were judged to be consistent with best practice in certain areas e.g. finance, accommodation and facilities. In reducing costs:
 - TLL took opportunities such as those offered by a break in the London Underground lease on buildings in Canary Wharf to negotiate improved deals;

- For the first three years of operation TLL's administration and other costs increased as it invested in, for example, IT equipment; and
 - TLL also invested in internal communications which delivered a strong sense of corporate identity - separate from London Underground.
- 3.8 The level of change in support and operations costs experienced by the regulated utilities has not been as marked as for the companies operating in less regulated/more competitive markets. These companies, however, did still manage to reduce their normalised cost below pre-'event' cost within three years.
- 3.9 We believe this in part reflects the type of change experienced by the different groupings, i.e. bankruptcy (or the threat of) versus mergers or separation. The different 'change events' have provided the companies with different levels of impetus to reduce costs. As regulated companies, the utilities (aside from TLL) generally have regulated revenue streams which include allowances for costs levels to rise, while taking into account likely efficiency savings. These approach limits risk and arguably the impetus for change.

Network Rail's experience (2009/10 to 2013/14)

- 3.10 Network Rail's consolidated management accounts for total support functions, excluding Operations and Customer Services (OCS), Asset Management (AM), National Delivery Service (NDS) and Commercial Property (CP), are summarised in Table 3.1.

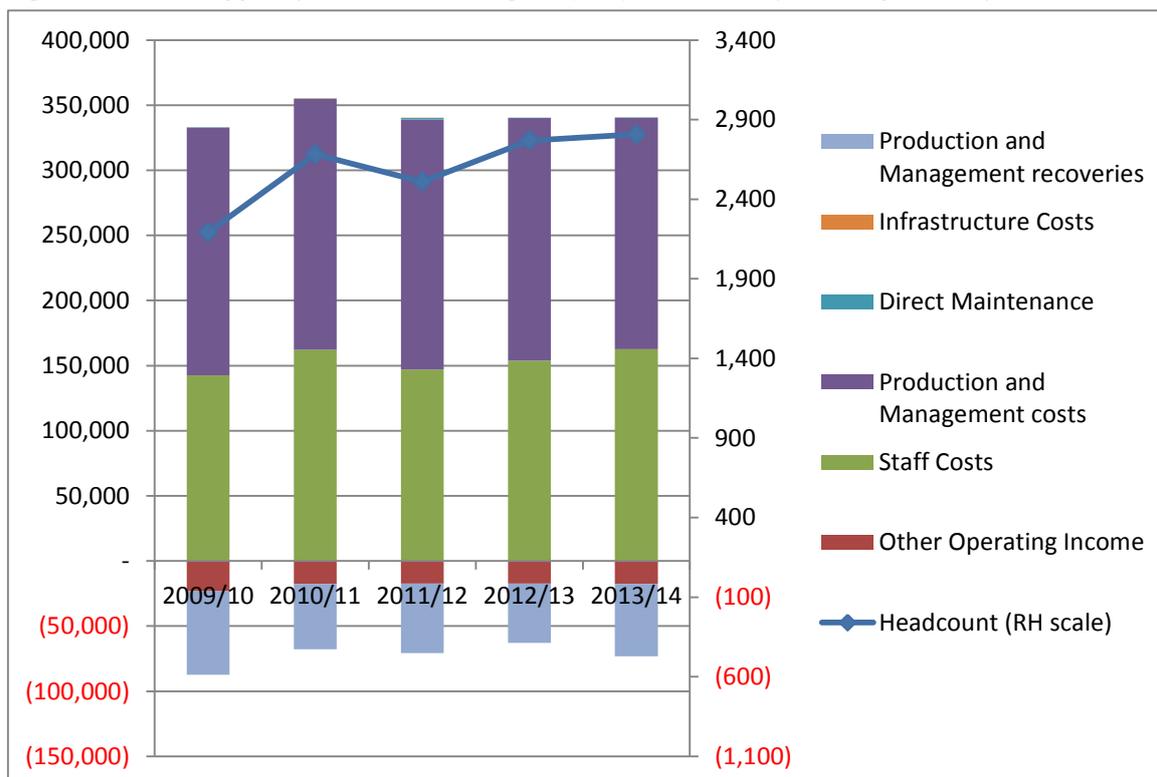
Table 3.1 Total Support Functions

Controllable Costs					
£'000 12/13 prices	Actual	Actual	Actual	Forecast	Forecast
	2009/10	2010/11	2011/12	2012/13	2013/14
Headcount (RH scale)	2,193	2,683	2,511	2,769	2,808
Controllable Costs	245,475	287,176	269,415	277,434	267,236
Other Operating Income	(23,155)	(17,509)	(17,306)	(17,340)	(17,523)
Staff Costs	142,498	162,166	146,991	153,845	162,723
Production and Management costs	190,310	192,629	191,961	186,330	177,607
Production and Management recoveries	(64,206)	(50,309)	(53,432)	(45,629)	(55,681)
Direct Maintenance	28	175	1,179	227	110
Infrastructure Costs	-	26	21	-	-

Source: Network Rail

- 3.11 The figures in Table 3.1 comprise the individual management accounts statements totalling £287m for 2010/11 (in 2012/13 prices) out of a management accounting total of £640m for other controllable costs for 2010/11. 2010/11 Controllable Costs of £287m are for Support Function activities and the balance of costs within the overall controllable cost figure of £640m are costs associated with Commercial Property, Asset Management and National Delivery Services. Analysed graphically, the main trends are as follows as shown in Figure 3.1.

Figure 3.1 Total Support functions excluding OCS, AM, NDS and CP (2012/13 prices £k)



Source: Derived from Network Rail Management Accounts

- 3.12 Our discussions with Network Rail indicated that the main trends over this period were that headcount changes and staff costs have been influenced by increases in Group Strategy and Human Resources headcount offset by reductions in agency staff and consulting costs but with increasing costs of running IT systems.
- 3.13 Although Network Rail has a strategy to improve the efficiency of support and operations, the headcount numbers and cost projections indicate a lack of urgency in the reforms as headcount moves from 2,511 in 2011/12 to 2,808 in 2013/14. This increased staff cost is offset by production cost reductions leaving overall projected Controllable costs largely unchanged from £269.4 million in 2011/12 moving to £267.2 million in 2013/14. Controllable costs peak in 2013/14 with an increase to £277.4 million in 2012/13.
- 3.14 As the Network Rail business model changes, so do the requirements of the support functions. Network Rail argues that current devolution initiatives have required an increase in headcount to support the changes in the business and whilst other areas of support are reducing some areas will require an increase in personnel. These areas requiring a temporary increase in headcount include devolution, business change and centralisation activities.
- 3.15 Looked at by function, the changes in controllable costs may be analysed as follows in Table 3.2. This shows support functions analysed 2009/10 - 2013/14 split between, Human Resources, Information Management, Finance, Procurement, Group Strategy, Business Services, and Other Support Costs.

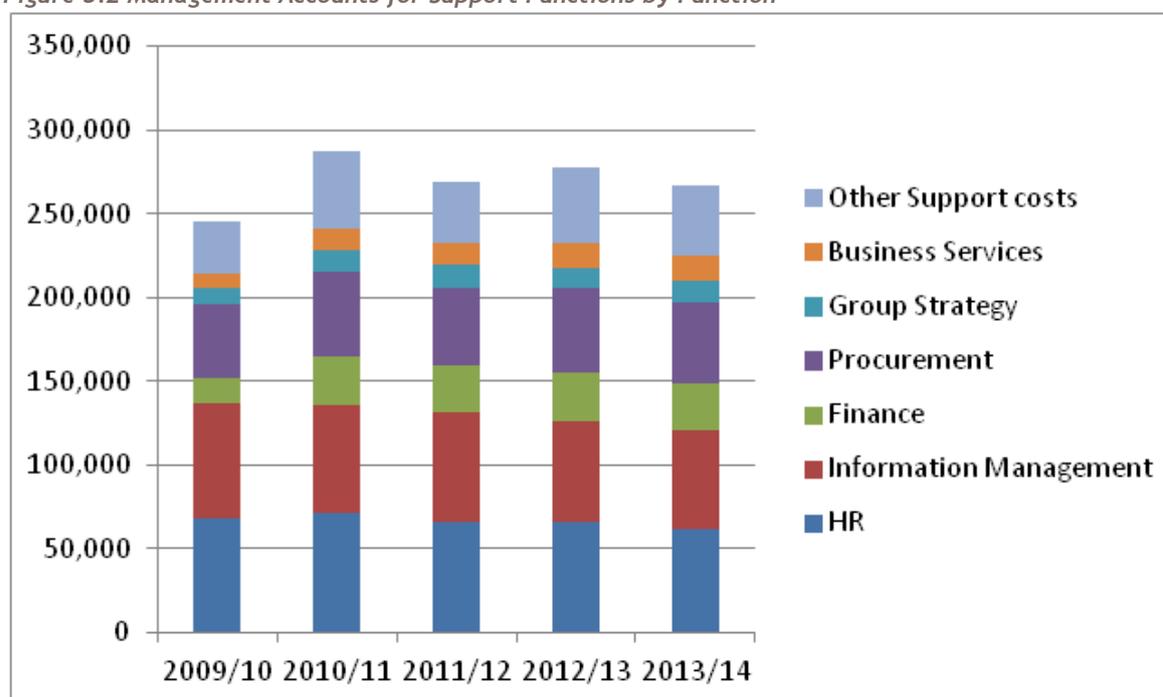
Table 3.2 Management Accounts by Support Function

Controllable Costs					
£'000,000 12/13 prices	Actual	Actual	Actual	Forecast	Forecast
	2009/10	2010/11	2011/12	2012/13	2013/14
HR	68	72	66	66	62
Information Management	69	65	65	61	59
Finance	16	28	28	29	28
Procurement	43	51	46	51	49
Group Strategy	10	14	14	12	13
Business Services	9	13	13	15	15
Other Support costs	31	46	38	45	43
Total	245	287	269	277	267

Source: Network Rail

3.16 This is in turn is shown graphically in Figure 3.2.

Figure 3.2 Management Accounts for Support Functions by Function



Source: Network Rail

3.17 Key trends are as follows:

- Human Resources costs edge upwards to £71.3m due to investment in business partnering, training and apprentices before slowing reducing to £61.9m in 2013/14 as change initiatives ebb and managers become more self sufficient and require less support. In 2010/11 HR costs are also reallocated to Business Services as part of HR shared services;
- Information Management costs are projected to decline from just over £68m in 2009/10 to £59 m in 2013/14 as large IT projects are completed and the function moves towards the Gartner IT Lite model;
- Finance costs jump from 2009/10 to 2010/11 due an anomalous recharge that was previously adjusted through Finance cost line, but is now deducted through central costs. Otherwise, Finance costs are broadly flat;

- Procurement costs show a reduction in 2009/10 but since then cost levels have remained largely static once impact of utility charges of £34m is removed, giving costs of £50.5m in 2010/11 and £48.6m in 2013/14;
- Group Strategy costs have increased. Network Rail indicate that this is due to centralisation of Network development into this function and thereafter costs have increased with the level of project and government planning related work as Government rail strategy has put pressure on this group. These costs sat at £13.3m in 2010/11 and now are £12.6m;
- Business Services support costs have increased steadily from 2010/11 to 2013/14, apparently due to set costs of new systems, and use of consulting and agency staff to cope with increasing work volumes and to undertake change initiatives. In-house staff costs were largely unchanged and total controllable cost figures are £13.7m in 2010/11 and £14.5m in 2013/14; and
- Other Support Costs are largely stable with increases due to internal reorganisation and use of consultancy and agency staff. Costs have moved from £46m in 2009/10 to £42m in 2013/14.

Headcount

3.18 Headcount figures across support functions are shown below and these reflect the impact of the trends discussed above.

Table 3.3 Support Functions Headcount

Headcount					
	Actual	Actual	Actual	Forecast	Forecast
	2009/10	2010/11	2011/12	2012/13	2013/14
HR	840	709	642	763	758
Information Management	693	625	574	525	506
Finance	500	384	357	361	350
Procurement	160	146	134	177	138
Group Strategy	-	282	218	257	393
Business Services	-	301	356	367	356
Other Support costs	-	236	231	319	307
Total	2,193	2,683	2,512	2,769	2,808

Note: No headcount information provided for Group Strategy, Business Services and Other Support Costs for 2009/10.

Source: Network Rail

3.19 It is noticeable that:

- HR headcount is planned to increase because of the investment in business partnering;
- IM staff numbers are expected to reduce as IT project activity will have abated and there is a shift towards the Gartner Lite model;
- Procurement rises in 2012/13 because of centralisation and then devolution to other units, Headcount is then expected to settle down to previous stable levels thereafter. This is because in 2012/13 there was an investment in the creation of a new category management team;
- Group Strategy increases staff numbers once Network Development is absorbed into this group. Since this analysis network planning roles have been developed to IP;
- Business Services stays at constant levels and covers the core team dealing with finance, human resources and record keeping; and

- Other support costs reflect internal re-organisation and re-allocation of staff to this central group.

Qualitative analysis of fixed and variable

- 3.20 In Lot 2 we examined costs in terms of common or fixed, and short, medium, and long term variable costs. Network Rail maintains that many of these costs are fixed whereas in reality all costs are indeed variable where there is sufficient business imperative as born out in Lot 1.
- 3.21 Based on our qualitative assessment in Lot 2 we were able to understand costs by Support Function in terms of the committed duration and therefore the likely timescale for change and cost reduction as follows:
- Common costs covered planning, policy and statutory work that is needed across the organisation regardless of business activity or rail traffic volumes and were only subject to change should there be a major reorganisation or change in strategic direction. Thus 2-3 years tended to be timescale for radical change in these costs, leaving aside ad hoc efficiency gains;
 - Short term transaction related costs have drivers such as number of training sessions, help desk enquiries, tenders and project appraisals. They are usually headcount or agency staff related and the propensity for change depends on nature of contractual arrangements and the flexibility of working practices. These costs are usually variable over a period of up to 6 months;
 - Medium terms costs are project related and given the nature of IT investment and business partnering from a support function perspective company personnel and contractors are normally committed for approximately 12 months, even the project duration itself may be longer; and
 - Long term costs are those that are driven by the longer term infrastructure investment, devolution and restructuring initiatives. These typically take 1 to 2 years to realise the change in comparable organisations with a strong imperative for change. At Network Rail however rather more protracted timescales are experienced, sometimes taking up a complete review period.
- 3.22 This is summarised in Table 3.4 below which shows by support function the headcount, type of cost, and timescale over which costs are variable.

Table 3.4 Qualitative Assessment of Costs

Function/Cost	Headcount 2011/12	Common Costs	Short term	Medium term	Long term
Timescale		24-36 months	Up to 6 months	12 months	12-24 months
Human Resources	642	Policy, Planning, Industrial Relations	Training	Business Partnering	Devolution
Information Management	574	Strategy and policy	Help desk	IT projects	IT Infrastructure
Finance	357	Statutory Reporting	Analytics	Business partnering	Devolution
Procurement	134	Strategic sourcing	EU tendering	Contracting	Category Management
Group Strategy	218	Strategic planning	Project assessments	Business planning	Devolution
Business Services	356	Core team	Transaction processing	Project assessments	Process reform

Other support costs	231	Board and Company Secretarial	Ad hoc cases and projects	Legal	Restructuring
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Source: *BDO Assessment*

3.23 We acknowledge that at the time we did our analysis Network Rail had not analysed their costs in this way. However we understand that Network Rail are now undertaking such an analysis as part of Project Apple and are producing a detailed service and customer driven set of figures.

3.24 We highlight below some of the key themes arising from our review of Network Rail's fixed and variable costs (costs shown are 2011/12):

- Human Resources (£66m) - There will always be a need for a core set of activities including: resource planning, organisation design, industrial relations, development and policy. Business partnering and training are variable costs. Once devolution is complete and new systems and ways of working are in place, there should a significant reduction in the need for business partnering and industrial relations work relating to disputes and grievances. Nevertheless it is acknowledged that a variety of HR maturity models are needed across the different functions of Network Operations, Infrastructure Projects, Asset Management and Corporate Services. Technical training, though variable in nature, is expected to continue to be required to maintain and improve workforce skills. It is also important to stress too that whilst efficiency of HR is important it must not lose sight of the link with effectiveness and how HR adds value through succession, talent and employee engagement;
- Information Management (£65m) - Network Rail has started to move towards optimising the Gartner IS Lite model and is establishing a core team by reference to an organisation of similar size and complexity. Nevertheless, the pressure must remain on the function to contain variable project costs and support costs for new applications. Additionally, it is important to remove support for out-dated legacy applications and to contain and optimise the remaining IT estate. The most important activity though must be increasing the rate of adoption of appropriate consumer technologies and self-service in the workplace and the use of mobile and converging technologies to run the network. Network Rail are creating a range of mobile devices based on Apple consumer technology for use by maintenance staff and senior executives. On the other hand they are using converging technology to link passenger traffic control monitoring screens to the existing telecom and information provided by BT. More widespread use of technology in the workplace should be tempered by its potential to increase costs in support platforms and lose economies of scale involved in an increased technology footprint;
- Finance (£28m) - Network Rail considers that its Finance costs reflect the relative stability of statutory, regulatory, tax and management reporting work. Nevertheless, much of cost is variable, driven by the need for business partnering and at the moment seems to contain significant resource resulting from a lack of alignment of regulatory and management accounting formats and what appear to be somewhat inflexible data structures and systems for extraction of information. Network Rail should be able to present and reconcile data in whatever format is required. Embedding the reporting and costing work in Business Services should, later on, allow line managers to adopt more of a self-service model and run their own reports without high levels of business partnering support;
- Procurement (£46m) - Organisations like Network Rail will always need a core group of procurement professionals to handle sourcing and supplier management, and necessary but sometimes complex contract work. This is the fixed element of the function's activity and the rest may be considered variable in nature driven by the need to tender under the EU Utilities Directive and the sheer volume of suppliers, orders and contracts. The challenge is to invest the optimal effort in management

and strategy to rationalise the supply base, transform supplier relationships, and help internal customers (for example NRT, AMS, Routes) to develop their business strategies. These changes take time because new behaviours need to be embedded, existing contracts need to unwind, and new contracts need to be tendered and implemented;

- Group Strategy (£14m) - This is a very large group that should distil to a central core once capitalised projects are excluded and planning activities are transferred back to the business units under devolution (for example network planning staff have now transferred to the Infrastructure Projects function). We understand there to be a fixed core of activities, given the need to plan for the Industry and for Network Rail itself;
- Business Services (£13m) - The majority of this function is transaction driven, hence considered to be largely a variable cost. Economies of scale can drive world-beating benchmarks in this area. However, Network Rail has a very large shared service centre and this masks some inherent inefficiencies driven by out-dated working practices (such as manual timesheet submission and pay slips distributed by post). There are also opportunities for collaborative efficiency across the teams, and the chance to centralise more of Network Rail's administration and reporting work. There is also an opportunity to use this unit as an internal consultancy for process reform and automation. The fixed element of cost is the estimate of core management team needed for an operation of this scale; and
- Other Support Costs (£38m) - These are largely fixed activities of the Board, Company Secretarial and Legal work needed in an organisation of this size. Nevertheless there appear to be opportunities to harness technology more and to reduce the dependence on agency staff, consultancy and project work that constitute the variable element. The variable element includes significant media, agency and consultancy costs.

- 3.25 Network Rail acknowledge that our conclusions follow a sensible direction in that we recognise that managers are not self-sufficient and need to mature before Network Rail can remove their central support. Thus, with managers becoming increasingly self-sufficient and self-serving, via better use of technology, the variable element of support costs should reduce and leave a largely common set of core services for HR, Procurement, Information Management and Finance. It is key that Network Rail develops clear and meaningful Service Level Agreements (SLAs) between these support units and the core business.
- 3.26 These SLAs should contain an internal charging mechanism that reflects the common, short, medium and long term variable costs. Hence internal charges should comprise a mix of standing and variable charges that consider the more stable services, project related work and in turn transactional charges.
- 3.27 A key issue for Network Rail is that the pace of change within the organisation is slow when compared externally with our comparator companies. There is some evidence that the company thinks about the achievement of change and cost management in terms of regulatory cycles (e.g. what can be achieved over the 5 year control period) rather than what can be achieved within period. Elsewhere with other organisations, major change has been delivered at a faster pace, in 2-3 years.

Summary

- 3.28 There is more work to be done by Network rail to fully define the future target operating model for support functions in terms of the centralisation of activities, and those being devolved to the routes. As part of this, greater emphasis needs to be put on supporting the newly devolved business units and organising the necessary resources from IT, HR and Procurement, whilst making the most of potential collaborative efficiencies across the different support functions.

- 3.29 The challenge is to re-characterise support functions as strategic partners, providing insights and perspectives, and designing and executing strategies - rather than providing routine day to day and low level support for managers; increasing management self-sufficiency is critical.
- 3.30 Finally, timescales and target setting need to relate to the reasonable duration of the activity covered, the nature of the costs concerned, and service level arrangements, taking account of known comparator benchmarks and execution plans. With advances in technology, transitioning organisations or even setting them up from scratch can be achieved in 18- 24 months, depending on the complexity of change.
- 3.31 In summary:
- Network Rail has managed some incremental reductions in support function costs but is yet to make the step change to a fully devolved model with a core common set of central costs;
 - Other companies (in Lot 1) have made much more dramatic cost savings in the face of the extreme pressures of mergers, takeovers and bankruptcies;
 - Network Rail has yet to fully analyse and design its business in terms of common, short, medium and long term costs; we understand that this analysis is being undertaken as part of Project Apple but has yet to be completed;
 - Network Rail needs to act on all the levers of change including building a much more holistic strategy for change, designing and calculating the target headcount and cost structures of the envisaged centralised and devolved functions;
 - Network Rail needs to examine whether it can adjust the skills mix of its resources and their terms and conditions of employment, looking hard at the mix of part-time and full-time staff, and the flexibility that gives;
 - Process reform and technology enablement in Network Rail is key and studies on best practices need to be converted to actionable plans that enable real changes in behaviours and working practices. This plan needs to set challenging timescales that are the norm elsewhere;
 - Performance management needs to target not only service standards through Service Level Agreements but also market test them against external providers and have both appropriate timescale and cost targets in them; and
 - These moves would help Network Rail encourage a sense of urgency in reform and the timescale for achieving changes in working practices and cost structures.

4 MAINTENANCE AND RENEWAL EXPENDITURE

Introduction

- 4.1 Like support costs, many companies do not separately categorise maintenance and renewal costs and hence we have used our own judgement to allocate costs under maintenance and renewal, based upon the definitions used by Network Rail.
- 4.2 While most companies will carry out some common support and operations costs across the business, maintenance and renewal costs is more industry specific and driven by the level of output and the utilisation of the assets.² Hence, even comparing maintenance and renewals to companies that carry out the same type of activities is difficult and the comparisons that are conducted generally focus on unit costs.
- 4.3 The comparator companies included in our analysis are set out in Table 4.1 below. As with support costs, we have maintained a mix of companies operating in competitive markets and those which are regulated. However, identifying maintenance and renewal costs for the former is difficult and we have been restricted to only including two companies operating in competitive markets. The regulated companies are all large utilities and as such will have similar large and widely distributed asset bases although the specific activities undertaken in maintenance and renewal will differ. We were, however, unable to separately identify renewal costs for all the utilities.

Table 4.1: Companies included in the maintenance and renewals analysis

Company/ industry	Change in business	Reason for inclusion
BP	2005 Texas City explosion	As a result of the Texas City explosion (and other incidents), BP has come under pressure to ensure that it is not cutting maintenance costs (i.e. pursuing profit) at the expense of other important objectives such as employee safety and environmental sustainability.
Infrabel	Devolution of Belgian rail operator which led to the creation of Infrabel and the rail accident in 2010	Infrabel is Network Rail's counterpart in Belgium and hence a direct comparator. It operates on a similar large network as Network Rail and it too has a strong unionised labour force. Infrabel was involved in a major rail accident in early 2010.
National Grid Gas	Split into distribution licence areas (2005/06)	A large scale utility operator, subject to economic regulation which has forced changes to its structure: change in business structure within a network
SSE	Merger in 1998	SSE has undergone two major organisational changes over the last 15 years.
Tube Lines (TLL)	Split of internal structure	As a rail organisation TLL operates in similar markets to Network Rail and carries out similar work. It operates in a safety critical environment and has a highly unionised workforce.

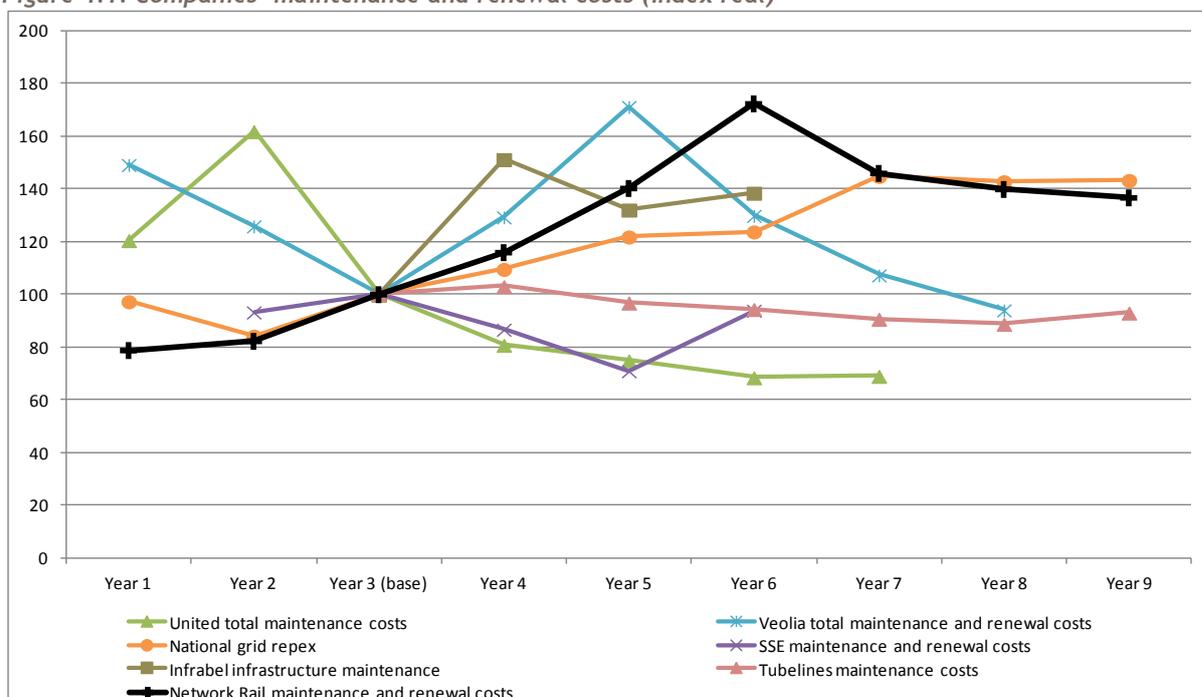
² Maintenance and renewals used to be driven by the age of the asset, but asset managers are generally moving to a risk based approach.

United Airlines	Filed for bankruptcy in 2002	An example of a large company in the transport sector with unionised labour transforming its cost structure to improve efficiency and compete effectively despite external events having brought it close to bankruptcy.
Veolia Water Central (formerly Three Valleys Water)	Merger: VWC merged with North Surrey Water in October 2000.	A large scale utility operator, subject to economic regulation. VWC has been formed through a number of mergers over the last 20 years.

Pace of change in other companies

4.4 Figure 4.1 below shows the change in maintenance and renewals costs across the companies for the time period over which the change in each company is occurring. For BP³ the 'change' event was the Texas Oil Refinery fire in 2005 and Infrabel's event was an accident in Bulzingen in 2010.

Figure 4.1: Companies' maintenance and renewal costs (index real)



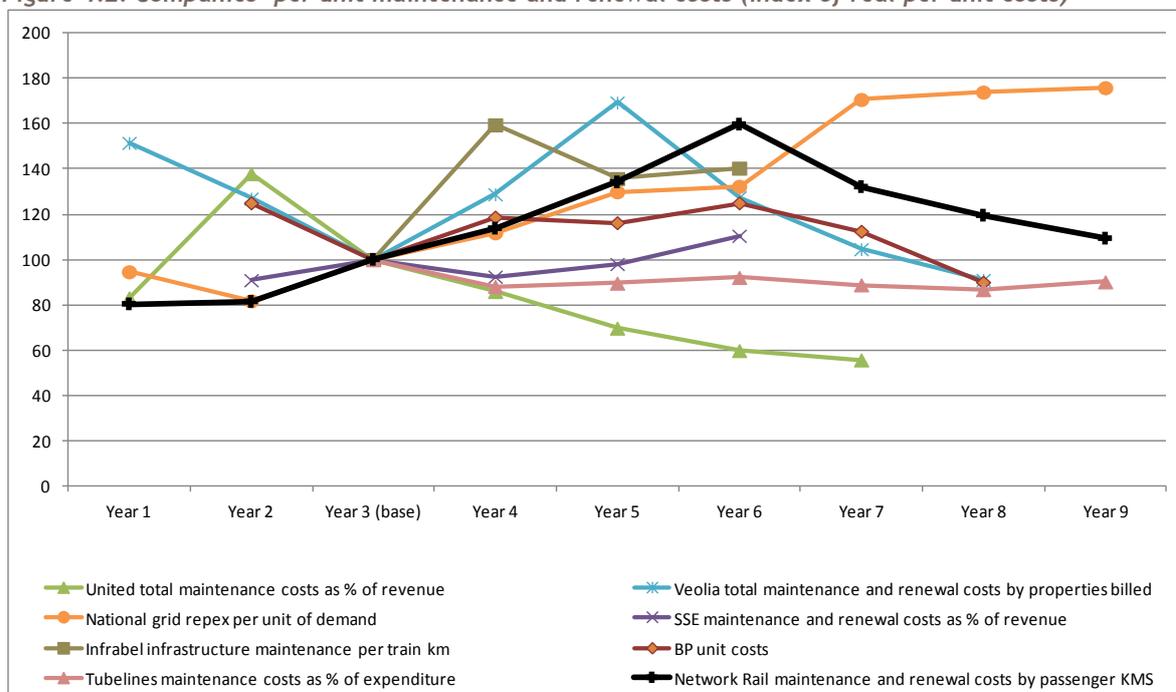
4.5 We have indexed the costs and set the change (base) in year 3 as this allows for an easier comparison of the changes achieved by each company. We can see from the figure that:

- Network Rail had a sharp increase in maintenance and renewal costs from year 2 (1999/2000) out until year 6 (2003/04); and
- While Network Rail's maintenance and renewal costs fall following their peak in year 6, they do not retreat to a level below that pre-Hatfield.

³ We were unable to source non-normalised costs for BP. Normalised costs are provided in Figure 4.2.

4.6 Figure 4.2 below provides the normalised costs for the companies. We have used passenger KM again as the normalisation factor for consistency with the support and operations analysis. While we consider that the passenger KMs is a reasonable normalisation factor to use for renewals (and the best one readily available), we note that it does not reflect the changes in renewals which are driven by the asset life profiles and asset management approach adopted.

Figure 4.2: Companies' per unit maintenance and renewal costs (index of real per unit costs)

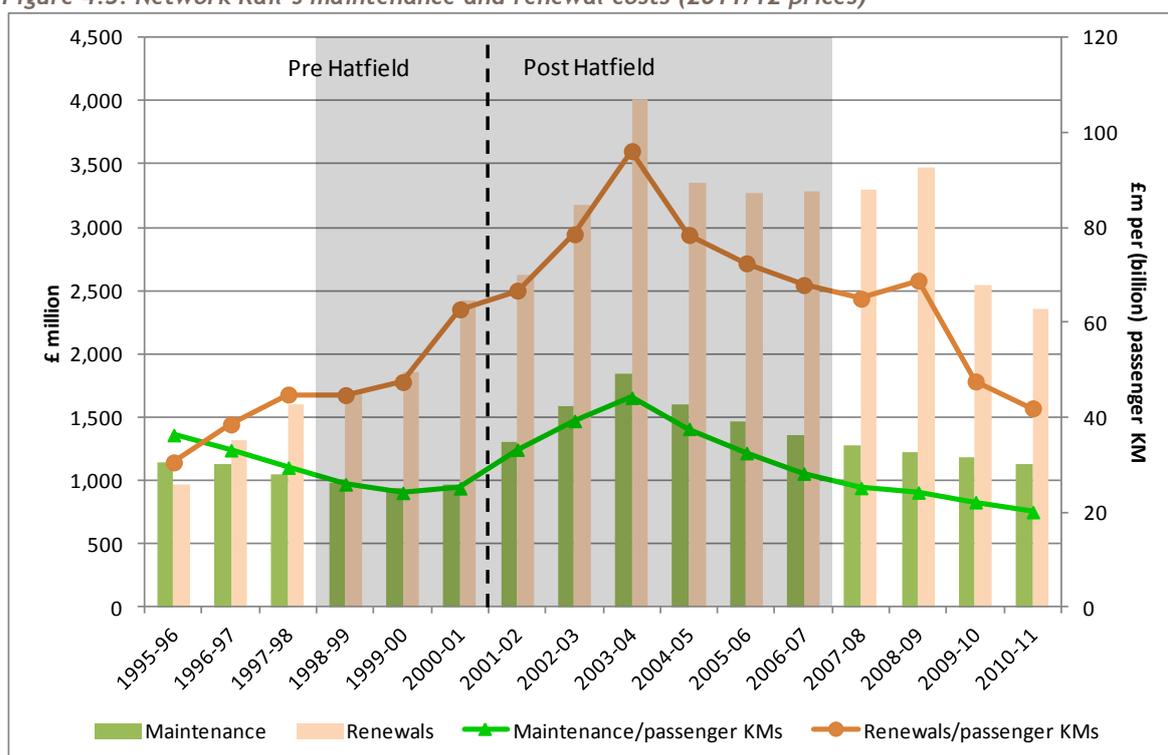


4.7 We can see from the figure that:

- Network Rail's normalised costs show a sharp increase (almost 60%) from year 3 to year 6, before decreasing. This replicates the pattern shown for non-normalised costs, although with lower increases and larger falls as a result of the increasing passenger KMs; and
- Network Rail's normalised costs do not fall below pre-Hatfield costs in the time period covered by the figure.

4.8 In Figure 4.3 below we have separated out Network Rail's maintenance and renewals, and provided a longer time series than shown in the figures above. We can see that both maintenance and renewals increased out until 2003/04 from 2000/01 before decreasing through until 2010/11

Figure 4.3: Network Rail's maintenance and renewal costs (2011/12 prices)



*Note, the shaded area reflects the time series shown on Figure 4.1 and 4.2.

4.9 In Table 4.2 below we have tried to align each company's cost categories with Network Rail's maintenance and renewal. For some companies only high level information was available. While we have been able to align the companies' cost categories with Network Rail's caution needs to be taken when comparing the rates of change for these categories, particularly renewals, as the companies face different asset depreciation profiles. The scale of cost reductions achieved in maintenance and renewals is for most comparator companies more pronounced than is the case with Network Rail.

Table 4.2: Companies' maintenance and renewals cost reductions related to Network Rail's cost categories (real)

Company	Maintenance	Renewals
BP	8% reduction in Refineries and Marketing division costs achieved over five years (1.5% per annum reduction).	8% reduction in costs achieved over five years 1.5% per annum.
Infrabel	30% increase in infrastructure maintenance costs over three years (7% per annum increase)	
National Grid Gas		43% increase in replacement expenditure over six years (6.2% per annum increase).
SSE	5% reduction in costs over six years (0.9% per annum reduction)	25% increase in renewals over three years (7.7% per annum).
Tube Lines	30% reduction in track maintenance over three years (11.2% per annum reduction)	

United Airlines	31% reduction in maintenance over four years (8.8% per annum reduction)	
Veolia Water Central		6% reduction in infrastructure renewals over four years (1.2% per annum reduction)
Network Rail	16% increase in maintenance costs from 2000/01 to 2010/11 (1.5% per annum increase)	3% decrease in renewal costs from 2000/01 to 2010/11 (0.3% per annum decrease).

- 4.10 Network Rail and Infrabel are the only two companies to show increases in maintenance costs based on the data available. Both companies' 'event' was an accident which resulted in a loss of life. Infrabel's costs increased by 30% over three years following its incident while Network Rail's increased by 90% in the three years following Hatfield.
- 4.11 Looking at Network Rail's renewal expenditure is less informative in comparison to others, as renewal expenditure is specific to the asset base. However movements to best practise asset management techniques should result in savings over time. Of those companies that reduced costs, and on the limited data available, Network Rail had the slowest rate of change.

Network Rail's experience

- 4.12 While a significant volume of information was made available for review, the scale of organisational change, the volatile nature of cost recharging including capitalisation, the fact that forecasts are subject to change during the preparation for the next control period, and the lack of detailed explanation from Network Rail has prevented us from drawing clear conclusions on maintenance costs.
- 4.13 Network Rail is continuing to reduce costs but ORR has raised concerns about Network Rail's ability to demonstrate that cost reductions in the maintenance organisation have not affected the robustness and serviceability of the network.
- 4.14 Compelling events like Hatfield and Ladbroke Grove can drive up short-term maintenance costs. Thereafter this means that reducing cost must be done not only in a safe way but also in a sustainable way.
- 4.15 Network Rail has managed to progressively reduce Maintenance costs in recent years. Though it is observed that it is precisely that, a gradual reduction, and not a step change.

Summary

- 4.16 Network Rail's maintenance and renewals expenditure peaked three years after Hatfield with maintenance expenditure increasing by 90% and renewals increasing by 65%. It is more difficult to draw conclusions about efficiency in maintenance and renewals given the complex set of issues that underpin the choices that companies make about their approach to these activities.
- 4.17 The simple normalisation of companies' expenditure data does not provide a clear indication of the volume of maintenance work carried out or renewal requirements. This makes comparisons less robust, however we make some observations below:
- Network Rail has reduced its maintenance costs per passenger KM, however its pace of change has been below that of the other comparators companies;
 - Network Rail's renewals costs remain much higher than pre-Hatfield levels and while passenger KM have increased the length of track and volume of assets are unlikely to have changed to a similar extent. Renewals should be driven on a needs basis and

sharp increases can be delivered; best practise approaches to asset management should help to minimise fluctuations and achieve efficiencies;

- The companies operating in competitive markets seem to be able to reduce their costs at a faster rate than Network Rail. Some companies within our sample demonstrate that relatively rapid change in maintenance costs can be achieved - United Airlines delivered significant savings in a period of two years and Tube Lines was also able to deliver significant savings in certain asset groups within a 4-5 year period; and
- All companies covered in this analysis have to have a strong regard for safety as failures in maintenance or renewal activities could have fatal consequences. We note that companies that have managed to reduce costs, United, SSE, and TLL, have done so without any obvious reduction in safety or wider impact on quality or performance. However, we note that significant cost pressure at BP may have contributed to the Texas City refinery explosion. In contrast the Belzingen disaster has not had a very marked long term impact on Infrabel's cost base despite its scale and the pan European concerns that were raised in relation to interoperability issues resulting from liberalisation of the rail market in Europe in the aftermath of the accident.

4.18 These observations lead us to conclude that more effective comparisons to Network Rail would be delivered through unit cost benchmarking and we understand that ORR is carrying out work in this field. It might be instructive to widen these comparisons to include private sector organisation since companies in the private sector appear to deliver greater efficiency. This would probably mean extending analyses outside of rail since most rail companies operate within the public sector.

5 THE POTENTIAL FOR CHANGE

Introduction

- 5.1 In this section we set out: a summary of the key points that can be drawn from the comparative companies' performance; the possible levers for Network Rail to achieve a faster pace of change; and our overall conclusions.

Comparator companies

- 5.2 Drawing from Lot 1 we stress the key practices deployed by comparator companies. As noted in our Lot 1 report, we were constrained by the level of data that was publically available. The key points that we draw out of our analysis are therefore at a high level.
- 5.3 Three companies which exhibit high levels of change in their support and operations functions were all companies acting in competitive markets and had either entered, or faced the prospect of entering, bankruptcy. These three companies were IBM, GM and United. All three companies managed to reduce costs over a very short time. IBM removed the duplication of support roles and operations through centralised functions, but still allowed sales units a level of autonomy in meeting their clients' needs. Identification of issues soon after they materialised allowed IBM to avoid bankruptcy.
- 5.4 GM and United Airlines had a long history of trying to restructure, however unsurprisingly resistance from unions limited progress. For both companies, bankruptcy acted as a catalyst for change and gave the companies the ability to more strongly negotiate with their unions in order to save both the company and the associated jobs. Both GM and United Airlines reduced their fixed costs by closing/reducing a number of plants/routes which were not profitable and by changing out of market staff terms and conditions.
- 5.5 All three companies exhibited a willingness to bear a larger short term cost in order to reduce longer term fixed costs. In other words, they appear to more readily adopt the approach that all costs are variable in the long-run and treat inefficient parts of the business as sunk costs.
- 5.6 The level of change in support and operations costs experienced by the regulated utilities was not quite as marked as for the companies operating in competitive markets; however these companies do still reduce their normalised cost below pre-'event' cost within three years. We believe this in part reflects the type of change experienced by the different groupings, i.e. bankruptcy (or the threat of) versus mergers or separation. The different 'change events' have provided the companies with different levels of impetus to reduce costs. As regulated companies, the utilities (aside from TLL) generally have regulated revenue streams which often include allowances for inflation, while taking into account likely efficiency savings. These allowances, and the plausibly lower risk of bankruptcy, are likely to prove more restrictive when it comes to employee negotiations.
- 5.7 In summary we believe the key points that can be drawn from this analysis are:
- Businesses can and do manage large scale change that impacts many aspects of their business simultaneously;
 - Major change within an organisation can often be seen first in support costs, with significant cost reductions achievable within two to four years. However, sustaining this in the long term is potentially more difficult;
 - Where there is a significant business imperative, e.g., potential bankruptcy, the pace of change is at its most rapid and most extensive encompassing significant changes to employment arrangements including the bringing of staff terms and conditions more in line with market norms;
 - Where there is a strong business imperative the type of cost i.e. whether it is considered fixed or variable appears not to be a determining factor. All costs become subject to change;

- Those businesses which deliver the fastest pace of change seem ready to adopt the view that higher short term costs are a necessary factor in achieving their overall strategic objectives; and
- Price controls in regulated businesses attempt to mimic these imperatives for change, but it is quite often not until towards the end of the control period that the impetus for changes and resulting cost reductions are achieved.

Business model and building blocks of change

- 5.8 Network Rail has articulated strategies about devolution, but in our review covering CP4 it had not fully designed and costed its end state organisation models. It has made progress on implementing new systems but has yet to achieve the necessary process reform. Performance measures were not on the basis of fully market tested SLAs and timescales were appeared to be geared around control periods rather than suitable elapsed times.
- 5.9 This section considers what Network Rail might do to achieve its devolved model i.e. what further changes it needs to make. There are a number of schools of practice around change levers. The levers of organisation change that we have adopted are as follows in Table 5.1.

Table 5.1 Components of organisation design

Components	Definition
Strategy	What the leaders believe is the central purpose of the organisation - its function. What practices and values are encouraged and the leadership style
Organisation	Design, structure and execution of new centralised and devolved structures. The roles and responsibilities, layers of management , and costing and delivery of new structures
People	The motivation, skill, and the working practices and style of staff and managers and how change is managed
Process	The arrangements for policy, procedures, workflow and sequencing, and automation of activities
Technology	How legacy applications are managed, infrastructure assets optimised and new and converging and consumer technology adopted and capitalised
Performance	How targets are set, service level agreements managed and costs and timescales leveraged to advantage

- 5.10 Network Rail demonstrates both positive progress and challenges against each lever as explained in Table 5.2. The Red, Amber, Green (RAG) status is used to reflect in qualitative terms and based on Lot 2 findings, the strength or otherwise of performance against the particular lever, based on our assessment of the CP4 returns.
- 5.11 The positives reflect areas where in BDO's view Network Rail is making progress and the challenges are areas where Network Rail seems to be struggling to make the necessary changes. The RAG status is Green where on balance the positives outweigh the challenges and clear progress is being made. The status is Amber where the challenges mitigate against capitalising on the positives, and is Red where limited progress is being made and/or the positives are outweighed by the challenges.

Table 5.2: Network's Rail's performance against levers of change

Elements	Positives	Challenges	Rating
Strategy	Detailed and thought through strategy	Link with execution plan and holistic model of change	
Organisation	Concept models in development	Detailed roles and costing outstanding	
People	Energetic and positive management including move to Milton Keynes. Shift to Gartner Lite Model in IT	Working practices still a challenges and managers still need extensive central support	
Process	Process design has been done in Business Services and Procurement	Implementation and technology enablement particularly in Procurement and Finance	
Technology	Leading edge thinking in IT recognised by industry peers	Still further to go to achieve Gartner Lite model and change ways of working in wider business	
Performance	Slow and incremental change and cost reduction	Timescales and rigour of market test of SLAs	

5.12 This needs action on each dimension of business change:

- Strategy - It needs to be recognised that 'the end of CP5' is not the default end point for all change initiatives. Most of the restructuring, business partnering and technology initiatives in comparable organisations have a natural duration of 18 to 24 months and certainly 2 to 4 years is the outlier performance; and
- Organisation - The move to the devolved structure in the routes could be accelerated not just in terms of structure but also working practices. More effort is needed on realising different business models. For example:
 - Infrastructure Projects and Business Services both have an internal and external market potential that needs to be tested and used;
 - Group Strategy has an Industry and Government facing business model as well as internal Network Rail one;
 - In Business Services, there is potential for a new internal consultancy unit tackling process reform and technology adoption, and indeed could provide services to other industry players;
 - In HR, the Training centre is another business model that might benefit from market testing and even being considered as an external generator of income. To improve utilisation of the asset; and
 - In Information Management the direction is towards optimising the Gartner IS Lite model which uses cloud as appropriate and commodity based services such as those of a data centre are appropriately scored, plus uses contractors and agency staff to support IT systems applications development.

- 5.13 All these business models need underpinning by Service Level Agreement and activity based targets and costs.
- People - A move towards managerial self-sufficiency, changing more historical rule based work practices (whilst absolutely retaining safety priorities) and driving more flexible initiatives, based on behavioural change in the organisation may all offer benefits;
 - Process - Our discussions in all areas revealed the opportunity for process reform and automation, particularly around reporting, self-services, payroll and contract management. To do this requires increased professionalism with deeper skills in analytics and process change;
 - Technology - The IT function is innovating and improving but the challenge is: decommissioning legacy applications, moving the workforce onto new mobile technologies, and putting much more effort into technology adoption and working through others to obtain results; and
 - Performance Management - the key here is to adopt more time-bound targets, not only on project delivery but also benefits realisation and behavioural change these changes are likely to require linking into the performance management, competency assessments, and balanced scorecards of individual business units, and changes in working practice.
- 5.14 Overall, support functions could see less effort going into change management, as change projects reduce and managers become increasingly self-sufficient. Business support services should fully absorb project accounting and performance management and seek out other opportunities for centralisation. Once this further centralisation is achieved and the step change in management practices has been established, then costs should settle down to a set of largely common services. These common services provide organisation wide support and their costs are open for further reduction as business processes are streamlined and more use is made of technology based automation.
- 5.15 There is, from our conversations at Network Rail, a definite sense of inertia in terms of executing change compared to other organisations that have been driven by compelling events to execute change and reduce costs and complexity much more quickly than Network Rail.
- 5.16 Network Rail appears to operate silos with and between the various support units of Network Rail, which appear to be driving their own agendas whilst struggling with resistance to adoption of new technologies and outdated working practices.
- 5.17 In relation to change projects the key issue is how fast they can be absorbed into 'business as usual', how fast behavioural change can be executed, and the ability or otherwise of managers to lead and execute their own change projects.
- 5.18 Lastly, our sense is that there are further cost efficiencies available, as: the new models are fully embedded; the high volume of project work reduces; more use is made of automation; the Business services unit absorbs more of the administration burden; and the remaining processes and working practices are refined. We would support setting significant cost reduction targets on support functions.
- 5.19 Similar themes emerge in our analysis of maintenance and renewals. The pace of change appears comparatively slow and cost levels remain high in relation to the event that triggered their peak. However there are limits on the analysis that we can undertake given available data.
- 5.20 There would indeed be benefit in adopting a holistic model for change overall and function-by-function to manage the transition from moving away from historic working practices and adopting and establishing new and improved ones. Arguably Information Management and HR are in the forefront of change with Procurement, Finance and Group Strategy further behind.

Summary

- 5.21 In summary, further action is needed by Network Rail on all six levers of change to achieve a level of transformation of service and costs reduction that would make it comparable to its peers. The trigger for change in the comparator companies has often been a strong external imperative:
- The fastest pace of change achieved by comparator companies was when there appeared to be a willingness to treat 'fixed' costs as variable and bear a higher short term loss in order to reduce these;
 - Rapid change is made to organisation structures, roles and terms and conditions of employment, office locations and working environments, and multiple large change projects can be run at the same time;
 - Comparator organisations design new structures and processes in detail, purposefully cost them, and rigorously drive them forward; and
 - Our experience is that monitoring and targeting via SLAs with appropriate charging mechanism, and tracking of behavioural change are critical.
- 5.22 Our analysis implies that Network Rail should be able to accelerate its efforts to adopt new working practices, strategy and technology, whilst at the same time finding ways to help the business to become more self-sufficient.
- 5.23 Network Rail need to improve its understanding of its cost structures and use this knowledge to streamline and enhance working practices. It also needs to make greater use of technology, move more quickly to establish managerial self-sufficiency and target business change with more challenging timescales.



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