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To explain this further, it is necessary to describe the landscape surrounding delivery of efficiency plans and some of the inherent challenges and risks.

As part of the Strategic Business Planning (SBP) process for CP6, each Network Rail route committed to efficiency savings. Network Rail centre provided a 'fishbone' framework of categories to provide consistency in the articulation of efficiency initiatives. The routes were responsible for forecasting cost savings from each initiative which were either derived as:

1. A 'top-down' estimate. Largely based on asset manager expert engineering adjustment to pre-efficient costs, which were the subject of financial analysis of workbanks, in some cases supported by external expertise and modelling. The estimates may also have been subject to discussion and agreement with the relevant Delivery Agent (IP or Works Delivery).
2. A 'plan-based' estimate. Derived from an early understanding of a delivery and change approach which may be supported by an outline plan and assumptions'.

'Top Down' estimates in the SBP efficiencies plan were therefore effectively 'initiative targets' to be developed subsequently with implementation plans. The initiative targets were then aggregated and apportioned as post-efficient cost targets:

- For capex, to asset groups, initiatives and then deliverer agents based on the amount of work (and work type) they planned for CP6. Delivery Agents subsequently and continue to assign post-efficient cost targets to projects.
- For operational expenditure (opex), where this estimating approach has been used the targets were allocated across departments or units in the organisation structure, which are then effectively the projects that will deliver the efficiencies.

The consequence of the top-down process is that responsibility for efficiency delivery planning moves to 'project level' and, with a very large number of projects to deliver at route level, it is inevitable that this brings additional challenges:

- Each project has to plan for how it will deliver its allocated post efficient savings target. That may require the project to implement multiple different efficiency initiatives, each requiring its own implementation plan, i.e. the number of implementation plans required to deliver the original SBP 'initiative target' has multiplied.



- In contrast to other efficiency initiatives where responsibility stays at a programme/deliverer/delivery unit level that will require one implementation plan to deliver one initiative.
- Efficiencies forecasts are developed at project level on an emergent basis as projects are developed.
- Ongoing reconciliation of project level emergent efficiency forecasts is required with the original 'top down' targets and fishbone categories, in order to reconcile against the Efficiency Tracker and provide assurance that efficiencies will be realised.

The risks to delivering the efficiencies plan are also greater due to:

- The responsibility for delivery of efficiencies has effectively been delegated and distributed across the routes Delivery Agents (IP or Works Delivery) and their project managers, i.e. it is now dependent on more people to achieve.
- A Project Manager could now be responsible for embedding several efficiency initiatives to achieve their overall target cost savings, i.e. their understanding and competence required has now also increased.
- The level of complexity of embedding an initiative into a project varies:
  - **'Simple'** – The efficiency initiative has already been enabled by others and there is minimal activity or change required to implement it in a project.
  - **'Not simple'** – The efficiency is still to be enabled by the team or others and requires explicit activity or change by the project to implement it. For example 'challenge standards', 'change scope' is up to the Project Manager to deliver and enable.
- The efficiency forecasts emergent from developing project efficiency delivery plans may not aggregate up to achieve the overall efficiency targets.

### Efficiency categories

Building on an understanding of the challenges and risks set out above, and for the purpose of setting out our expectations of a proportionate Efficiencies Management System, we have defined the following categories of initiatives:

- (A)** – Capex, minimal (or completed) enabling activity. For example, Contract Rate Reductions.
- (B)** – Capex, requires considerable enabling activity to implement in a project. For example, Possession Utilisation efficiencies.



**(C)** – Opex, minimal enabling and implementation activity. For example, Route Services Supply Chain Operations (SCO) Rate Card efficiencies – Haulage.

**(D)** – Opex, requires considerable implementation effort. For example, Organisation Restructure.

### **Efficiency Management System expectations**

We see routes' Efficiency Management Systems as comprising attributes at three levels:

- 'Project level'. A project is the means by which efficiencies are realised. For example, savings achieved by an individual Oracle Project.
- 'Initiative level'. Where changes necessary to realise efficiencies are designed, developed and change enabling outputs (enablers) are delivered. Projects use enablers to make their changes to realise efficiencies. For example, where an efficiency initiative can be applied to multiple projects such as Optimisation of Access.
- 'Portfolio level'. Where overview, coordination and assurance of multiple projects and initiatives happens.

Our expectation is that the level of planning and management at 'project level' and 'initiative level' is proportionate to the size of the challenge and risk associated with delivering efficiency targets. We defined efficiency Categories A to D above to reflect varying levels of challenge and risk associated with different initiatives. In Table 9 we have defined our expectations of planning and management features at both a 'project level' and 'initiative level' for each of the four Categories A to D. Routes overall efficiency plans will comprise all four categories and therefore we have also defined our expectations of features at 'portfolio level' as common to all four categories. If an initiative is comprised of sub-initiatives, then the category can be applied at the lower level. When we are examining our samples of different efficiencies at a route we will seek evidence of these features and that they are being used appropriately.

Efficiency Management System feature	Capex		Opex	
Category degree of enabling and implementation complexity	(A) Low	(B) High	(C) Low	(D) High
<b>Project level:</b>				
1. Efficiencies delivery plan (note 1)				YES
2. Efficiencies forecast documentation (note 2)	YES	YES	YES	YES
3. Post implementation review of actual efficiencies achieved (benefits realisation)	YES	YES	YES	YES
4. Change management plans (note 5)		YES		YES
<b>Renewals Initiative level:</b>				
5. Initiative delivery plans (note 3)				
6. Initiative forecast plans (note 4)	YES	YES		
7. Initiative change management plans (note 5)		YES		
<b>Portfolio level: (asset group, Delivery Agent, route)</b>				
8. Validation of emergent efficiencies with forecast targets (traceable to fishbone tracker line items)				YES
9. Assurance function to assess project / initiative efficiency level delivery	YES	YES	YES	YES
10. Portfolio Management / Change Management support (note 6)	YES	YES	YES	YES

Table 9: Proportionate planning and management of efficiency delivery by initiative category



Notes on the Table:

1. Efficiency delivery plan for each project, for every initiative should include (as a minimum):
  - Description of efficiency initiative (granular level of business change) and rationale
  - Description of how it will generate efficiency
  - Action plan and implementation plan with milestones and dates for enabling efficiencies
  - Identified risks with corresponding mitigations
2. Efficiency forecast documentation for each project. We would expect to contain forecast calculation with underpinning detail, record of assumptions, rationale and time phasing.
3. Efficiency enabler delivery plan. We would expect to see resources assigned, and should include (as a minimum):
  - Description of efficiency initiative (granular level of business change) and rationale
  - Description of how it will generate efficiency
  - Action plan and implementation plan with milestones and dates for enabling efficiencies
  - Identified risks with corresponding mitigations
4. Initiative forecast plan. We would expect to contain forecast calculation with underpinning detail, assumptions, rationale and time phasing.
5. Feature 7 is required to ensure that all the change management enablers are being delivered at the 'initiative level'. These enablers will be used at project level to underpin their change management plans, Feature 4. Where required, change plans should be supported with adequate resources to assist implementation.
6. Change management support for the project level to implement common changes across their portfolio, including owning and disseminating good practice, organising training and knowledge sharing.



### 3.2 Route review context

To assess the preparedness of the route to deliver efficiency savings in the first two years of CP6, the review considered the routes' latest opex and renewal (capex) efficiency plans. We reviewed the overall quality of these plans, whether the efficiency forecasts appear reasonable based on those plans, and whether they are consistent with the routes' agreed allocation within the £3.1bn total of efficiencies within the ORR's final determination for CP6.

Our review of the Anglia route was undertaken in August 2019. It was led for the route by its Route Financial Director (RFD), DRAM, Principal Sponsor and Financial Controller and evidenced through meetings and documentation from RAMs (for capex efficiencies) and initiative owners (for opex efficiencies). For key reference forecast data, we reviewed the route's Period 4 2019/20 (RF4) efficiency forecast relative to the RF11 baseline efficiencies agreed as a result of the final determination.

### 3.3 Assessment scope

Our review focused on 'material efficiencies' as per the mandate and for consistency of our approach across all routes we adopted the sampling principles of selecting the:

- Top three capex efficiencies by value for years 1 and 2, plus assessing relevant efficiencies identified from our review of renewals described earlier.
- Top three opex efficiencies by value for years 1 and 2.
- Intelligent Infrastructure and Supply Chain Organisation (SCO) efficiencies, where they were included in the route's plan for year 1 or 2. This is to gain a view of how these central initiatives were being managed from within the route.

We also assessed additional efficiency examples provided by the routes for signalling, Plain Line Pattern Recognition (PLPR), and Optimisation of Access.

Table 10 shows our review sample with the efficiency forecasts as at RF4 in year 1 of CP6.



Category	Type	Initiative	Asset	Efficiency (£m)						% of year 1 + 2 opex / capex*
				FY20	FY21	FY22	FY23	FY24	CP6	
A	Capex	Advance workbank remitting, reduction in HO system 6 to 4	Track	5.3	6.8	6.2	6.4	6.5	31.3	12%
B	Capex	Signalling tech innovation, descope recoveries	Signalling	1.6	3.2	2.8	3.4	4.2	15.2	5%
B	Capex	Optimisation of access (use, agreement, planning)	E&FP	2.3	2.3	3.3	3.4	2.8	14.2	4%
B	Capex	Modular assets and emphasis of 'plug and play'	Signalling	1.4	2.9	2.5	3.1	3.9	13.9	4%
A	Capex	Improved contracting strategies	Signalling	1.2	2.5	2.1	2.6	3.2	11.6	3%
B	Capex	Continuous improvement	Signalling	1.0	2.0	1.7	2.0	2.6	9.2	3%
D	Opex	ME (CP5) - PLPR	Maintenance	0.6	0.8	1.2	1.1	1.1	4.7	10%
D	Opex	LEAN (Right First Time delivery, B.E.D, SCI)	Maintenance	1.6	0.6	0.8	1.0	1.1	5.2	16%
D	Opex	Optimisation of access (use, agreement, planning)	Maintenance	0.0	1.1	1.1	2.3	2.4	6.9	8%
C	Opex	SCO Initiatives	Maintenance	1.7	1.1	1.3	1.7	2.1	7.9	20%
D	Opex	NYL and Clacton Re-signalling Projects	Operations	0.0	2.6	2.7	2.8	2.9	11.0	18%
D	Opex	CP6 II - Intelligent Infrastructure	Maintenance	0.3	0.5	3.4	3.7	3.9	11.8	6%

Table 10: Anglia route CP6 P04 efficiency sample

\* The total efficiencies for years 1 and 2, including Activity Scope / Efficiency, for capex is £105m and for opex is £14m



### 3.4 Assessment findings

We have set out our findings using the structure from the mandate:

- a. Quality of the description of business change and how it will generate efficiency
- b. Calculation of the forecast efficiency
- c. Arrangements for monitoring progress in implementing business changes
- d. Approach to risk identification and management
- e. Identification and documentation of limitations in forecasting and lessons learnt in efficiency plans

#### a. Quality of the description of business change and how it will generate efficiency

In assessing the quality of business change descriptions, we took into consideration the proportionality principle recognising that some initiatives rely on business change to realise efficiencies and others do not. For example, a new contract framework (Category A) has minimal reliance on business change compared with implementing new maintenance technology and associated work practices (Category D). However, our review still sought evidence of documentation for all initiatives as to how each will generate efficiencies and what actions are required to enable and release efficiency benefits.

In our selected sample of efficiencies for this route there were four Category B and five Category D initiatives which require, or potentially require, business change and therefore need descriptions of that business change and how it will generate efficiency. For other initiatives within our sample that do not rely on business change (Category A or C), we looked at the quality of the project level Efficiencies Delivery Plans ('what activity' and 'how it will generate efficiency').

We have considered evidence in terms of the capex and opex efficiencies that we assessed within the Anglia route.

#### Capex efficiencies:

**The quality and level of detail of the description of capex business changes and how they will generate efficiency is not comprehensive.** Our expectation was that this evidence would comprise a proportionate level of detail, with more information for large value, complex or longer-term Category B initiatives, versus lesser information for smaller and simpler Category A initiatives or those with well-defined enabling activity to secure efficiency benefits. While evidence indicated that the rationale for capex efficiency initiatives was well founded, we did not find sufficient granular information for the larger, complex



(typically capex) efficiencies, detailing for example the 'what' and 'how' of each in granular terms, with proportionate plans to support each initiative.

The route has utilised Efficiency Plans on a Page (EPOP) and Project Efficiency Forms to document their bottom-up efficiency plans for three projects, which are targeted to deliver efficiencies in year 1 and 2 of CP6, and are forecast to deliver over £100m total capex efficiencies across CP6<sup>4</sup>. These projects are the Cambridge Re-signalling project which will deliver efficiencies in years 2 to 5 of CP6, the Clacton Re-signalling project which will deliver efficiencies in years 1 and 2, and the OLE Mid-Life Refurbishment project which will deliver efficiencies in years 1 to 5.

The quality of the plans and how they will generate efficiencies are very high-level and lack detail proportionate to the scale of efficiency anticipated. For example:

**Cambridge Inner project EPOP.** This project is at GRIP stage 3 and includes a breakdown of 60 different Category A and Category B efficiency initiatives spanning all fishbone categories, which aim to deliver £47m of efficiencies towards a stated efficiency target of £52m. This target represents over 40% of the assumed pre-efficient cost. The initiatives contain limited information on what activity will be undertaken and how the efficiencies targeted will be realised to give confidence that they are developed, realistic and deliverable. Examples of this include:

- A Category A/B £4.5m efficiency initiative for 'production of a clear and robust scope for ITT, to minimise post contract change', described as 'the application of Value Engineering and production of a robust CRT to ensure value for money', delivered by undertaking 'Value management and engineering workshop at GRIP 3, 4 and 5'.
- A Category A/B £6.2m efficiency initiative for 'Contracting Strategy across GRIP stages', described as 'Ensuring consistent use of contractors between GRIP stages (especially GRIP 4; 5 and 6); this may be effected by the procurement of the new major framework', delivered by 'Set up procurement workshop to discuss' and generated by reducing rework and thus saving prelims.

**Clacton Re-signalling EPOP.** This project is at GRIP stage 5 and includes a breakdown of over 30 different Category A and Category B efficiency initiatives spanning all fishbone categories, which aim to deliver £23m efficiencies towards a stated efficiency target of £17m. This target represents over 40% of the assumed pre-efficient cost. Similarly, these contain high level information on what activity will be undertaken and how the efficiencies targeted will be realised. Examples of this include:

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<sup>4</sup> The fishbone categories within the EPOPs and the Project Efficiency Form are not mapped back to the Efficiency Tracker and therefore may not align fully with the sample, and are not profiled per year to give visibility of the capex efficiency totals for years 1 and 2.



- A Category B £7.5m efficiency initiative for 'Challenge Standards', described as 'There is an opportunity to challenge some standards', delivered by requesting 'RAM support for derogations that lead to significant cost reductions without affecting safety and/or performance, i.e. non-compliant platform standard leading to platform extensions and S&C shifts towards London'.
- A Category B £1.5m efficiency initiative for 'The early engagement of all RAMs to secure their buy in for the agreed scope of work', described as 'Obtain signed DRRD from all affected discipline RAMs and Ops to avoid late change'.

It is noted that this EPOP was developed in summer 2019 when the project was already at GRIP stage 4, so it is possible (but not clear) that this plan may be articulating activity that may or may not have been undertaken, although there is no evidence of this or of the activity and efficiency values involved.

**OLE Mid-Life Refurbishment Project Efficiency Form.** This contains 20 different Category A and B efficiency initiatives which span across multiple fishbone categories. The form was then in the early stages of development and did not have associated forecasts for the initiatives, but had a started target of £37m during CP6. Again the detail regarding business change and how it will generate efficiencies is very limited. For example:

- An unpriced Category B initiative for 'Access and Advanced Materials' is described as 'early definition of the project access strategy to enable disruptive access to be secured as early as possible and at the lowest possible cost', delivered by identifying 'sequence of works and align design programme to suit the delivery strategy'. It is noted that this efficiency is due to be delivered by October 2019.
- An unpriced Category B initiative for 'Workbank stability and development' is described as 'Establish a rolling design programme for the wider Mk 1 Scope in Anglia to support a rolling delivery programme over CP6, CP7 and CP8', delivered by securing 'the design resources to support a rolling design programme'.

The lack of detail for these three major project capex efficiency plans is a risk to preparedness for and delivery of efficiencies in year 1 and 2 and more significantly in subsequent years given the scale of total efficiencies they are aiming to deliver.

**The route acknowledged that further work is required to develop its capex efficiency plans as a priority in year 1.** In addition to addressing issues with the three plans set out above, its goal is as follows:

- Efficiency 'trackers' (i.e. plans) to be rolled out across all projects with explicitly identified efficiencies by RF8 (autumn 2019), together with workshops with the delivery teams.



- Efficiency 'trackers' (i.e. plans) to be rolled out across all other capex projects by RF11 (early 2020).

**Track capex efficiency initiatives are based on achieving reduced unit costs and calculated using national programme models developed by IP Track (Category A).** Track efficiencies have been calculated in detail, linked to delivery of relevant renewals workbank projects and programmes to the post-efficient unit costs that result; and it is assumed that if the work is delivered to the post-efficient budget, then the efficiency will have been achieved. These efficiencies are forecast at approximately £50m spread over CP6, but including significant benefits in years 1 and 2 linked to the route's planned High Output campaigns. As the efficiencies are contractualised there is good confidence in their delivery and lesser need for detailed documentation on plans and implementation and monitoring activity.

**The route has the tools to develop further detail to describe its plans, business changes and implementation plans.** The standard EPOP (avoiding the complexity included in the initial tranche of three reported above) and Project Efficiency Forms are a good basis for capturing detail to support and assure the route's efficiency plans, albeit that they do not currently capture implementation plans or risks. The route acknowledge that the application of these can be broadened to other initiatives and the contents enhanced to more fully document the changes, implementation plans and calculations to a broadly consistent base level of information.

#### **Opex efficiencies:**

**Opex efficiency initiatives show good examples of detailed efficiency plans to describe the business changes required to achieve the forecast efficiencies.** The route has established a dedicated Change Management Office (CMO) to plan the opex efficiencies as a programme of change projects. Opex efficiency initiative owners and their respective teams showed clear ownership and detailed knowledge of efficiency plans, explaining how these are being embedded within working practice. Detailed plans were provided as evidence. For example:

- **PLPR (Category D).** A robust efficiency description is provided within the Quarterly Efficiency Report to describe what the technology does and how it will generate benefits, from both a safety and efficiency perspective.
- **Optimisation of access (Category D).** A detailed description of the access planning review has been provided outlining the things the route has done or is preparing to do differently to generate savings by extending the productivity of standard possession and midweek cyclical maintenance opportunities.
- **NYL and Clacton Re-signalling projects (Category D).** Centralise signalling control enables a reduction in operational costs, creating an efficiency. This initiative is accompanied by a milestone plan and supported closely by the human resources team recognising the dependency on organisational and Industrial Relations matters.



## b. Calculation of the forecast efficiency

We assessed the calculation of forecast efficiencies for our sample of initiatives, including the definition and justification of inputs to estimates, assumptions, methods and, where appropriate, the consistency of these with the approach agreed by Network Rail's cost benefit working group. Consideration of the uncertainty and risk within these forecasts and their delivery is covered in section (d) on 'approach to risk identification and management'.

As discussed earlier the responsibility for forecasting efficiencies is undertaken at 'project level' on a project by project basis where the SBP efficiency was derived 'top down' and at 'initiative level' if it was 'plan based'.

We have considered forecast calculations for the capex and opex efficiencies we assessed within the route.

### Capex efficiencies:

**Calculations for capex efficiency forecasts are being developed to respond to top-down targets set as part of the baseline plan.** For example, within signalling, targets are based on outperforming pre-efficient (CP5) costs that are used to set top-down targets and benchmark Signalling Equivalent Unit (SEU)s rates. The route provided evidence setting out how these post efficient targets were defined based on its CP5 costs. The efficiency targets were set via a combination of engineering judgment, subject matter expert experience, detailed knowledge of workbanks and priority or opportunity areas; and also Network Rail centre advice and data.

**There is limited detail provided on capex efficiency calculations to justify the forecasts provided.** We expected the calculations underpinning efficiency forecasts to vary depending on the scope, scale, maturity and complexity of each efficiency. In this respect, we did not see evidence to justify forecast savings in many of the larger value items, with little detail on calculations, particularly for capex efficiencies in year 2 where they are not structured and broken down as defined activities with corresponding bottom-up estimates.

**There was a lack of robust calculations to support capex efficiency forecasts.** Within signalling, the EPOPs for Cambridge and Clacton Re-signalling contained some calculations for larger value initiatives, whilst others are not detailed. Within our sample for E&P there were no supporting calculations. There is also no detail to support the phasing of efficiencies per annum. Examples where there was a lack of detailed calculations, for items where proportionate detail is required for larger items, include:



- **Cambridge Inner project EPOP (targeting £52m efficiencies).** A £4.5m initiative for ‘production of a clear and robust scope for ITT, to minimise post contract change’, is calculated based on an estimate of value engineering 40 signals at a saving of £75k for each in addition to a £1.5m prelims savings. There is no information to justify the source of inputs, or the rationale for calculation assumptions.
- **Clacton Re-signalling EPOP (targeting £17m efficiencies).** A £7.5m initiative to ‘Challenge Standards’ is based on estimates to complete throat remodelling, including ‘Track remodelling towards London of £3.0m and OLE work of £2.0m’. There is no underpinning detail to support these estimates.
- **Clacton Re-signalling EPOP.** A £1.5m efficiency initiative for the ‘early engagement of all RAMs to secure their buy in for the agreed scope of work’ is not supported by a calculation.
- **OLE Mid-Life Refurbishment (targeting £37m efficiencies).** None of the efficiency initiatives are supported by forecast calculations, for this project that is now at GRIP stage 3.

As stated previously in part (a), the route acknowledged that its capex efficiency calculations are not yet mature and plans to roll out developed trackers across all projects by RF11.

#### Opex efficiencies:

**We saw evidence of robust calculations for opex efficiencies.** The CMO has established the scope of work for opex efficiencies, and has developed bottom-up forecasts with clear calculations and associated assumptions. Examples include PLPR and Optimisation of access. Both of these initiatives have been modelled and calculated using Activity Based Planning (ABP) data which is refreshed each rolling forecast. For example:

- **PLPR (Category D).** Each Maintenance Delivery Unit calculated the number of Basic Visual Inspections (BVI) that will be removed through moving to PLPR. The ABP tool was used to calculate the financial efficiency generated on an annual basis.
- **Access planning (Category D).** The ABP tool was used to calculate the financial efficiency generated from a 1% improvement in Non-Time on Tools (NTOT). This would be enabled by increase in the productive hours on shifts where the route are using Rules of the Route and cyclical access. The route has taken a prudent approach to forecasting this initiative as many of the benefits are not forecast to be delivered until the latter part of CP6.



- **'Lean' opex efficiencies are based on a top-down target.** We reviewed the opex lean efficiency initiative in the context of years 1 and 2 targets, noting that there is a total forecast efficiency of £5.2m assumed within CP6. This target was set based on the benefits achieved from Lean efficiencies achieved in the last 2 years of CP5 and by applying an efficiency 'stretch' target to later years in CP6. The route's strategy is also to overplan its Lean initiatives to mitigate the risk that other efficiencies are not achieved in full.
- **Efficiency calculations relating to SCO efficiency initiatives have been assessed by the route.** At the time of the SBP/RF11 baseline, the route was provided an efficiency forecast by Route Services for the SCO efficiency initiatives that we have considered across all phase 2 routes. Following a validation exercise the route retained this (albeit a small reduction of £0.1m), taking a view that stocking-point efficiencies would not be realised as the route have already implemented some of these improvements. This is evidence of the route assessing and validating forecasts. The route is working closely with Route Services to review the latest SCO forecasts, which are anticipated to be revised at RF8 following a review of national volumes.

**The route adopted Intelligent Infrastructure efficiency forecasts but has yet to verify them.** At the time of the RF11 baseline, the route was provided an efficiency forecast by the National Programme Team for Intelligent Infrastructure efficiency initiatives. The route adopted this £11.8m figure for planning purposes and are currently working with the Intelligent Infrastructure Benefits Manager and its Delivery Units via working and steering groups, to validate the benefits of the six Intelligent Infrastructure initiatives the route is planning to adopt in CP6. Following this exercise the route intends to review the forecast and update as necessary.

### c. Arrangements for monitoring progress in implementing business changes

We assessed the arrangements for monitoring progress in implementing efficiency plans and business changes, to confirm if there is a clearly documented evidence of appropriate governance and senior oversight.

**The route has a robust governance structure to provide senior oversight of efficiencies.** The route has a number of well-established meetings, which provide assurance and senior project oversight of projects and efficiency initiatives, including Periodic Delivery Reviews, Anglia Route Change Portfolio Board and Deep Dive rolling forecast reviews. Further assurance is provided by attendance at the Benefits Calculation Working Group (BCWG) and the IP Southern Efficiencies Working Group.





### Capex efficiencies:

**Monitoring of capex efficiencies is primarily by tracking post-efficient project costs.** As stated previously, projects are driving to their post-efficient budgets, assuming that if a project delivers to its post-efficient budget, then its efficiencies will also be delivered. In line with this approach, financial monitoring is via tracking the project post-efficient AFC with efficiencies accrued in line with Cost of Work Done (COWD). However, the reasons whereby a project cost evolves above or below its AFC will be due to a number of factors (for example, scope and schedule change, risk) so while this provides some monitoring assurance, this is not comprehensive. Additionally, it does not enable lessons learnt on efficiencies to be derived which could be applied to the benefit of projects later in CP6. With this as context, we note that Anglia reports confidence in the delivery of efficiency targets for its two major re-signalling schemes (Cambridge and Clacton) on the basis that their AFCs at GRIP stage 3 and stage 5 respectively are currently tracking close to target<sup>5</sup>.

**There is no significant documented evidence of monitoring of capex efficiency initiatives at granular level.** There are brief actions included for some efficiency initiatives within the EPOPs and Project Efficiency Forms, however these do not set out in SMART<sup>6</sup> terms the action plans for enabling activity and for delivery, most notably for the high value and complex, change initiatives. The route are currently managing to post-efficient budgets with planning, delivering and monitoring activity undertaken as part of the workbank project governance process rather than explicitly managing the implementation of business change to realise expected efficiency benefits. There is little evidence of EPOPs being used to track benefits realisation.

**There is no clear line of sight from the project plans to the Efficiency Tracker.** It is not possible to identify and trace individual business changes and their respective implementation plans to the Efficiency Tracker. It is only possible to track forecast values against high-level initiative descriptions.

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<sup>5</sup> Cambridge and Clacton projects are currently forecasting AFCs which are less than the post-efficient target AFCs, by £2m on Clacton and £4m on the combined Cambridge Inner/Outer project.

<sup>6</sup> SMART: Specific, Measurable, Attainable, Relevant and Time-bound.



#### Opex efficiencies:

**We saw good evidence of opex initiatives being supported, tracked and monitored at a granular level.** For example:

- **PLPR (Category D).** This efficiency initiative is supported by Route Programme Board, Assurance structure, and the track RAM. Various meetings are held with stakeholders to track, monitor and manage the initiative including periodic PDR meetings, PLPR Reviews, PLPR Workshops and coaching sessions. Within the Quarterly Efficiency Report the route has identified the key milestones required to achieve the efficiency, which is supported by a forward plan.
- **NYL and Clacton Re-signalling Projects (Category D).** This efficiency initiative, which is linked to the renewals project, is supported by a resource milestone plan leading up to the 'go live' date. Evidence provided confirmed that this initiative is well supported, and managed by the human resources and project delivery teams.
- **Opex efficiency plans are collated into an integrated plan for the years 1 and 2 which is tracked and monitored.** The CMO have produced an integrated plan which combines strategic level milestones for each opex efficiency to provide a holistic view of the route's change projects. This is a key tool for providing senior visibility and oversight at the Anglia Route Change Panel, highlighting where key resources will be required and where changes may impact on future milestone and therefore efficiency delivery.
- **Dedicated route resources in the CMO are responsible for efficiency planning and monitoring.** Based on the meetings held with the route and the additional evidence provided, it is apparent that the opex efficiencies have benefitted from dedicated CMO resource who has helped to define, develop, plan and execute the efficiency initiatives.

#### d. Approach to risk identification and management

We looked for evidence of the route's approach to the management of risks to its efficiencies plans, including its assessment of uncertainty in forecast savings.

**We did not see significant evidence of quantification of risks to capex and opex efficiency forecasts.**

For example, in identifying and applying risk-adjusted, range estimated and probabilised impacts on benefits of larger value items. Consideration of cost risk to efficiencies is implicit in forecasts as these are estimated by initiative owners and teams based on experience and engineering judgement as a 'most likely' assessment of benefits, although it is not possible to verify this from evidence or to quantify the degree of certainty or uncertainty embedded within these values.



**The route holds an overall risk provision of £165m for CP6 which is to address risks to its renewals, enhancements and efficiencies portfolios.** This figure is not currently disaggregated to provide visibility of its allocation to and management of efficiency risk. The route advise this will be assessed and confirmed at RF8.

#### **Capex efficiencies:**

**There is a lack of documented evidence of the management of risks to capex efficiencies.** We saw evidence that the route's efficiency governance and assurance forums provide some oversight of risks to efficiencies. There is also good evidence that RAM/Sponsor renewals governance group, described in the renewals section of this route report, also provide oversight of risks to delivery against post efficient cost budgets, albeit these are focused on project development and delivery factors. This emphasis on cost and delivery risk provides some level of assurance on risks to efficiencies. However, managing risks to post-efficient budgets does not provide sufficient management of risks to efficiencies, and is not well documented in the evidence provided. For example, it does not manage risks to key enablers being ready to support delivery of the more complex capex efficiencies by projects, Category B.

Where capex efficiency initiatives have been described as being 'opportunities', this appears as ideas that have not yet been validated. There are a number of examples of this within signalling EPOPs. As such, and without a documented understanding of risks it is difficult to ascertain whether these efficiencies are deliverable.

#### **Opex efficiencies:**

**There is good evidence of risk management for opex initiatives.** This included risk logs containing descriptions, exposure and mitigations, and initiative plans on a page with identified top risks with mitigating actions, owners and RAG (Red, Amber, Green) status. For example, for PLPR, the top three risks are included within the Quarterly Efficiency Report and documented in a risk register. A similar risk log has been developed for each opex initiative, which are then combined to produce a risk heat map visualisation of the key opex efficiency project risks across the route, highlighting areas requiring attention.

**The route has established a 'hopper' for new opex efficiency initiatives.** Recognising that the route may not achieve all planned efficiencies, as set out in the RF11 baseline, the route has established an efficiency 'hopper' within its Lean initiative. This is led by the route Finance team who are encouraging new ideas to be brought forward.



**e. Identification and documentation of any limitations with the approach for forecasting efficiency, how lessons learnt have been incorporated into efficiency plans and whether ORR and Network Rail are considering the right factors in providing assurance that Network Rail is on track to deliver its efficiency plans**

**Forecast limitations**

We have found that the forecasting of efficiencies is largely financially focused, deriving data into the fishbone tracker, with less emphasis on activity planning and implementation activity. At the time of the review, many efficiencies were tracking post-efficient targets, based on COWD, not efficiency forecasts.

**Lessons learnt**

We saw limited explicit evidence that the route has a defined and documented approach to incorporating lessons learnt within its efficiency plans. We noted the following where lessons learnt have been included:

- Anglia has developed a detailed cost model for its CP5 'baseline' costs which appears to be good practice to potentially measure improvements or efficiency at a more granular activity level.
- The route incorporated lessons learnt from CP5 in order to develop its CP6 targets, including the use of national calculators, the Infrastructure Cost Model (ICM) and the ABP models. The route also cited lessons learnt from Asset Working Groups where cross route learning has been shared.
- The route acknowledged that it could have done more to capture, document and share work done and learning to-date to generate efficiencies, for example on a key signalling project that is at GRIP stage 5, rather than developing an ex-post "efficiency plan" or EPOP for this.
- The route regularly attends the BCWG to learn from and provide feedback on the use of efficiency calculators.
- The route acknowledged the need for additional resources during the review based on the Reporter's emerging findings, and was considering addressing this as a priority.

**Factors for providing assurance that Network Rail is on track to deliver its efficiency plans**

We consider that an increased focus on monitoring of change management plans, initiative enabling activities, forecasting, monitoring and risk are appropriate for planning and delivery of what is a very significant efficiency programme. We have also suggested taking a proportional approach to focus on the Category B and D initiatives which are the most challenging and higher risk of achieving their forecasts.



## Conclusions and recommendations

This section draws together our conclusions of our review of efficiencies and provides specific recommendations for ORR and Network Rail to consider.

The areas addressed as per the reporter's mandate are:

- Quality of efficiency plans
- Reasonableness of savings forecasts, based on efficiency plans
- Consistency of total efficiencies with final determination

### Conclusions – Quality of efficiency plans

We defined our expectations of planning within the context of an overall Efficiencies Management System which is described in our assessment methodology at the start of this section. In answering this question, we have sought to consider proportionately and seek evidence of quality in efficiency planning where we believe it is most needed. For example, in our categorisation of efficiencies it is Category B (capex) and D (opex).

Our conclusions and recommendations from our review of a sample of initiatives are:

#### Capex efficiency plans are not sufficiently mature

The quality of the route's efficiency plans are not mature, or in many cases not established, which makes it difficult to provide assurance that the efficiency targets can be met and that there is clear visibility of how they have been met, beyond monitoring achievement of post-efficient AFCs. The route has focussed on developing bottom-up forecasts for three of their main CP6 renewals projects, which aim to deliver over £100m efficiencies. The level of detail within the EPOPs and Project Efficiency plan is not comprehensive and is either not supported by SMART implementation plans or not supported by any forecast efficiency plans or calculations.

The route has acknowledged that its capex efficiency plans are not mature and is planning to develop these as a priority area now and throughout autumn 2019. We consider that this is prudent as action needs to be taken now to improve the level and quality of capex efficiency planning.

By contrast, opex efficiency plans are much more mature, in most cases supported by proportionate, detailed implementation plans. This is driven by a dedicated CMO team who have developed tools to assist in the overall management and monitoring of these efficiencies.



### **The quality of capex efficiency documentation is insufficient**

Consistent with Conclusion E1, efficiency plans have only been captured for three projects, of which their quality varies. Given the status of the three projects and others in CP6, we conclude that action needs to be taken as a priority to improve the level and quality of capex efficiency documentation.

By contrast, opex efficiency documentation is more mature, in most cases supported by detailed implementation plans and risk registers. This is driven by a dedicated CMO team who have developed tools to assist in the overall management and monitoring of these efficiencies.

### **Additional dedicated resource would assist in developing the efficiency plans**

Opex efficiencies have benefited from having dedicated resources to help drive the efficiencies programme. Given the current quality of the capex efficiency plans, additional resource may also help to enhance the focus on capex efficiency plans.

### **The route operates efficiencies governance and assurance arrangements**

The route has a number of well-established meetings, which provide assurance and senior project oversight of projects and efficiency initiatives. Many efficiency initiatives are currently being tracked and monitored by their AFC against the efficiency target, which does not give sufficient visibility of the factors, including efficiencies, which underpin the AFC forecast.

### **Efficiency reporting is lacking line of sight assurance**

The Efficiency Tracker is not currently linked to and does not provide visibility of individual business changes. This lack of visibility makes it difficult to track and monitor business changes and their respective implementation plans, as opposed to forecast values only.

## **Conclusions – Reasonableness of savings forecasts, based on efficiency plans**

### **Capex efficiency forecasts are not sufficiently detailed**

Based on the capex efficiency plans evidenced in this review, there was not sufficient detail to support the forecast calculations in order to determine that the capex efficiency forecast is reasonable. We consider that this is a priority area for the route to focus on as detailed, validated calculations, which support the efficiency initiatives, will provide additional route assurance, beyond tracking AFCs.

Opex efficiency calculations are more comprehensive. There was evidence of underpinning detail including inputs, sources and assumptions. The route is continuing to work with the National Programme Teams to ensure that the forecast calculations for Intelligent Infrastructure and SCO are robust and achievable.

## Conclusions – Consistency of total efficiencies with final determination

The route has set out plans that are consistent with its agreed share of Network Rail's target for CP6

This is summarised in Table 11. Anglia's baseline commitment for CP6 was for £357m of capex efficiencies and £57m of opex efficiencies, totalling £414m. At RF4 the route increased its total CP6 capex forecast to £366m, a 3% increase, and maintained its total CP6 opex forecast. The route also reprofiled efficiencies to reduce years 1 and 2 targets and increase these in later years, reflecting its confidence in deliverability.

	FY20	FY21	FY22	FY23	FY24	CP6
<b>RF11 £m</b>	<b>48.3</b>	<b>79.6</b>	<b>91.0</b>	<b>114.4</b>	<b>81.1</b>	<b>414.4</b>
Capex	43.1	70.3	80.5	98.7	64.5	357.1
Opex	5.2	9.3	10.5	15.7	16.5	57.3

<b>RF4</b>	<b>44.4</b>	<b>74.7</b>	<b>97.0</b>	<b>107.0</b>	<b>100.6</b>	<b>423.7</b>
Capex	39.2	66.0	84.3	92.0	84.7	366.2
Opex	5.2	8.8	12.7	14.9	15.9	57.5

<b>% Change</b>	<b>-8%</b>	<b>-6%</b>	<b>7%</b>	<b>-6%</b>	<b>24%</b>	<b>2%</b>
Capex	-9%	-6%	5%	-7%	31%	3%
Opex	0%	-6%	21%	-5%	-4%	0%

<b>RF4 Yearly Profile</b>	10%	18%	23%	25%	24%	100%
Capex	11%	18%	23%	25%	23%	100%
Opex	9%	15%	22%	26%	28%	100%

Table 11: Comparison of RF11 and RF4 route efficiencies\*  
\*This data is inclusive of Efficiencies and Activity/Scope Efficiencies



The changes from RF11 to RF4 have been summarised by the route as follows:

**Increase in capex efficiency forecast of (£9m)** – This is due to additional planned rail milling.

**Reprofiling of capex efficiencies** – These were profiled based on total asset spend at RF11. They are now profiled based on estimated forecast COWD on the projects delivering the efficiencies. This has reduced year 1 and 2 capex forecasts from £113m to £105m.

**Reprofiling of opex efficiencies** – Intelligent Infrastructure benefits have been brought forward from years 4 and 5 of CP6 to year 3 based on the delivery programme for remote condition monitoring early in CP6.

## Recommendations

### Recommendation E1 – Enhance and develop efficiency plans

The route should develop and enhance their existing efficiencies plans to include further detail articulating, in SMART terms, each:

**Business change** – Defined plans for a programme of activity to deliver efficiencies and details of things the route has done or is preparing to do differently (enablers) to generate efficiencies.

**Forecast** – Key inputs, sources, calculation method, assumptions, and any risk adjustment and basis for profiling realisation of benefits.

**Implementation plan** – Key activity, actions required, owners, resources, schedule and key milestones.

**Risk** – Identification of key risks to achieving the forecast efficiency and mitigations.

When the route implements this recommendation we suggest it:

- Ensures that the level of planning and documented detail should be proportionate to the scale and complexity of the efficiency. i.e. more for the Category B and D initiatives and less for Category A and C.
- Provides guidance using templates, and completed examples to help illustrate the appropriate level of documentation required.
- Maintains a clear log of the version and change control, status and maturity of each plan and to define and quantify its alignment with the route's Efficiency Tracker.





**Recommendation E2 – Enhance and utilise existing templates to improve consistency of efficiencies documentation at the project level across the route**

The route should enhance their existing EPOP and Project Efficiency Forms to capture a sufficient level of detail on plans for, delivery of and quantification of all capex efficiency plans.

**Recommendation E3 – Engage additional dedicated resources**

Given the current lack of maturity of capex efficiency plans and the status of the projects which deliver a very large proportion of these, the route should consider engaging additional dedicated resource to improve the detail and quality of plans as soon as possible. Resources to focus on year 2 efficiencies as well as material plans in year 1 and 2 that are essential to forecasts for later years.

**Recommendation E4 – Strengthen focus on efficiency enabler implementation plans at the initiative level**

The route should strengthen their assurance and monitoring focus on implementation plans for enabling activities and change management products required to deliver efficiencies at the project level. This will provide more visibility on the progress of key efficiency enablers and allow for early intervention and action.

**Recommendation E5 – Provide greater line of sight from granular efficiency initiatives to the Efficiency Tracker**

For each efficiency initiative as identified in the route Efficiency Tracker, the route should log their sub-initiatives with their corresponding values, profiles and project, portfolio or programme ID in a master schedule, to provide traceability on how they contribute to the route Efficiency Tracker and a more granular breakdown of efficiencies.



## Summary

We have provided below a summary of the routes preparedness to deliver its efficiency plans against headings requested at the mandate Steering Group.

### Programme

Anglia's capex efficiencies programme is not sufficiently developed. It has started to develop plans for three major projects, targeting approximately £100m of efficiencies in total. These plans are not at a sufficient level of quality, with further granular detail on implementation needed. There is a high degree of dependency on these projects within the route's overall efficiency target. There is insufficient evidence to conclude that the route is prepared to deliver its efficiency plans.

The route has not yet developed a programme for the remainder of its capex efficiencies, but has set out a goal to develop this for all remaining capex efficiency plans before the end of year 1. The risk to the route's achieving its efficiency commitments for CP6 from year 2 onwards will grow until the capex efficiency programme is fully developed. Anglia has acknowledged that additional resources are needed to strengthen its capex efficiency programme plans, and is considering this as an immediate priority.

Anglia's opex efficiencies programme is more robust, and is benefitting from dedicated resources.

### Forecast

The majority of Anglia's capex efficiencies were based on post-efficient targets. While bottom-up targets have been set out for some projects, there was insufficient detail to evidence of efficiency calculations that would provide assurance that forecast benefits will be achieved, although there are calculations for £50m of track efficiencies that is supported by detailed analysis.

There are not yet forecasts for the unplanned elements of the programme that are being developed in the remainder of year 1.

Some confidence is provided by the route's cost and delivery focus on the major renewals projects that have large efficiency targets, where these are forecasting to cost in line with their post-efficient budgets. This is not definitive, however, as project costs can and will vary for many reasons during development and delivery, and hence robust efficiency calculations that correspond to project-specific plans are needed.



Anglia's opex efficiency calculations are more comprehensive, with underpinning detail including inputs, sources and assumptions. The route is continuing to work with the National Programme teams to ensure that the forecast calculations for Intelligent Infrastructure and SCO are robust and achievable.

### **Documentation**

The quality of documentation for capex efficiencies is not sufficient. The route has started to develop documentation for its three pilot capex projects and programmes, which needs to be developed with more detail on efficiency and activity implementation plans.

Anglia's opex efficiency documentation is more robust, in most cases supported by implementation plans, and developing tools and processes to assist in the management and monitoring of efficiencies.

