



Efficiency and Inflation Monitoring Manual (EIMM)

July 2020



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1 Introduction

In March 2020 the government published its second Road Investment Strategy (RIS), which sets out the long-term programme for our motorways and major A-roads, providing the stable funding required to plan effectively for the Strategic Road Network (SRN).

The RIS sets out the performance requirements of Highways England in the form of Key Performance Indicators (KPIs) and Performance Indicators (PIs), which demonstrate progress towards, and delivery of agreed outcomes.

To demonstrate the outcome of 'Achieving efficient delivery', an efficiency KPI is used, with a target of £2.23bn¹. To meet this KPI, Highways England is required to provide evidence that this target has been met by the end of Road Period 2 (RP2) (31 March 2025). This document is a companion document to the Operational Metrics Manual (OMM), and outlines how efficiency evidence will be monitored and reported in RP2.

The Office of Rail and Road (ORR) monitors Highways England's performance against the Licence, RIS, Strategic Business Plan, Highways England Delivery Plan and the Capital Baseline. It also monitors performance against all KPIs and PIs, and has a specific responsibility to ensure that Highways England's plans are challenging but deliverable. It is also ORR's role to review the evidence of the efficiency generated by Highways England during RP2.

1.1 Purpose of this document

The Efficiency and Inflation Monitoring Manual (EIMM) sets out the approach Highways England will use to define, demonstrate and provide evidence of its delivery of efficiency in RP2. It also sets out how the comparison between forecast (assumed) inflation and actual inflation will be evaluated during the RP.

This document is based on the principles of effectiveness and proportionality and aims to give both the Department for Transport (DfT) and ORR confidence in the processes that Highways England will put in place to capture, report and evidence achievement of the efficiency position set out in the second RIS.

Highways England owns the EIMM, which it has produced in agreement with DfT and ORR. Any material revisions to this manual will need to be agreed by DfT and ORR.

2 An efficient plan for RP2

2.1 Development of the draft Strategic Business Plan (dSBP)

Efficiency is defined as an improvement in the relationship between inputs and outputs (the final product delivered) or outcomes (the measured impact of the output) achieved.

In developing the dSBP for RP2, Highways England aimed to strengthen the link between efficiency and outputs/outcomes by committing to an embedded efficiency approach for parts of the RP2 Business Plan. This embedded efficiency approach relies on the availability of well-defined baseline costs. In some parts of the plan this isn't feasible, and consequently some efficiency is also captured using an approach known as measured efficiency, similar to that used in RP1. The introduction of the embedded efficiency approach has changed the emphasis on reporting efficiency in RP2, creating stronger internal incentives for Highways England to continue to measure efficiency, while managing the administrative burden in the way efficiency is monitored.

¹ Subject to any changes agreed during the Road Period

In other sectors decades of historic data, and/or the existence of comparable companies, has allowed the development of quantitative approaches to measuring efficiency, albeit with significant limitations and mixed results. Work carried out early in RP1 by experienced regulatory experts² identified that Highways England was at an early stage of maturity, and did not have the historical data, nor was it likely to get it in time, to allow a direct benchmarking approach for RP2. In response to this, a series of capability benchmarking studies was used to provide some initial indications of the potential for efficiency in RP2:

- Programme and portfolio management,
- Asset Management,
- Procurement.

In the development of the dSBP, Highways England challenged historic costs and delivery approaches, and then used the capability and benchmarking evaluations to set out efficiency expectations. See [Appendix 1](#) for Highways England RIS2 Efficiency Identification and Development Process diagram.

These expectations were built into the dSBP to create a post-efficient plan for most of the RP2 investment. ORR then carried out an in-depth review, the Efficiency and Deliverability Review, of Highways England's dSBP. This formed the basis of advice to the Secretary of State. As a result, the efficiency value was increased by £130m above the value offered in the dSBP, and a target of £2.254bn was agreed as the efficiency target for RIS2. It was also proposed that the full value would be monitored. On publication of its RIS, DfT further increased the efficiency target to £2.304bn, to reflect the changes to the RIS2 programme and Statement of Funds Available (SoFA). Following the advice and impact resulting from the Smart Motorways Stocktake, DfT have agreed to revise the RIS2 efficiency target to £2.23bn.

2.2 RP2 efficiency monitoring principles

Highways England and ORR agreed a set of high-level principles for monitoring efficiency in RP2. These principles intended to set out an approach that provides sufficient, reasonable quality evidence to allow ORR to determine if the Efficiency KPI has been met at the end of RP2. This evidence gathering should avoid unproductive data collection or administration, and not incur excessive cost or resource demands. This manual is based on these monitoring principles, as documented in [Appendix 2](#).

Although the RP2 plan represents a post-efficient position, the high-level cost/output data is still relatively immature, so an element of active monitoring of the efficiency evidence through RP2 is retained. The significant difference in the monitoring approach between RP1 and RP2 is that embedded efficiency is primarily measured by the delivery of outputs/outcomes, supported by appropriate secondary evidence, where required. This will result in a better, less burdensome, more efficient approach for evidencing efficiency in RP2. The primary evidence for measured efficiency will still be captured through the efficiency register and case study process.

Highways England will develop a suite of internal documentation to outline and communicate how, what and when efficiency will be captured and reported throughout RP2, and the various roles across the organisation.

3 The Efficiency KPI

3.1 Efficiency KPI definition

The Efficiency KPI documented in the RIS Performance Specification is:

² Possible Approaches to the RIS2 Efficiency Review, First Economics 2016

Achieving efficient delivery	
KPI	<p>Total efficiency</p> <p>Target: Evidence the efficiency target of £2.23bn³ capital and operational expenditure is demonstrated by the end of RP2.</p>

Figure 1: RIS2 Efficiency KPI

The efficiency target is set and monitored at the company level. It is an end of Road Period target, i.e. it should be delivered by 31 March 2025.

Successful delivery of the KPI will be achieved through evidencing, in the round, total efficiency of £2.23bn⁴ over the five-year Road Period.

Highways England will continue to provide quarterly updates to ORR on progress against the efficiency target. We will publish an annual efficiency report alongside the Performance Monitoring Statements, that provides details of our efficiency delivered for the year against the overall target.

3.2 Efficiency Drivers

The relationship between cost (inputs) and output (or outcome) and efficiency components is shown in figure 2. Here efficiency drivers have been categorised into three components:

- Economy
- Productivity
- Effectiveness

This categorisation and definitions are used to identify, understand and report efficiency. Each component will be influenced by different factors. Viewing efficiency through these categories will provide a basis for understanding and explaining performance against the KPI.

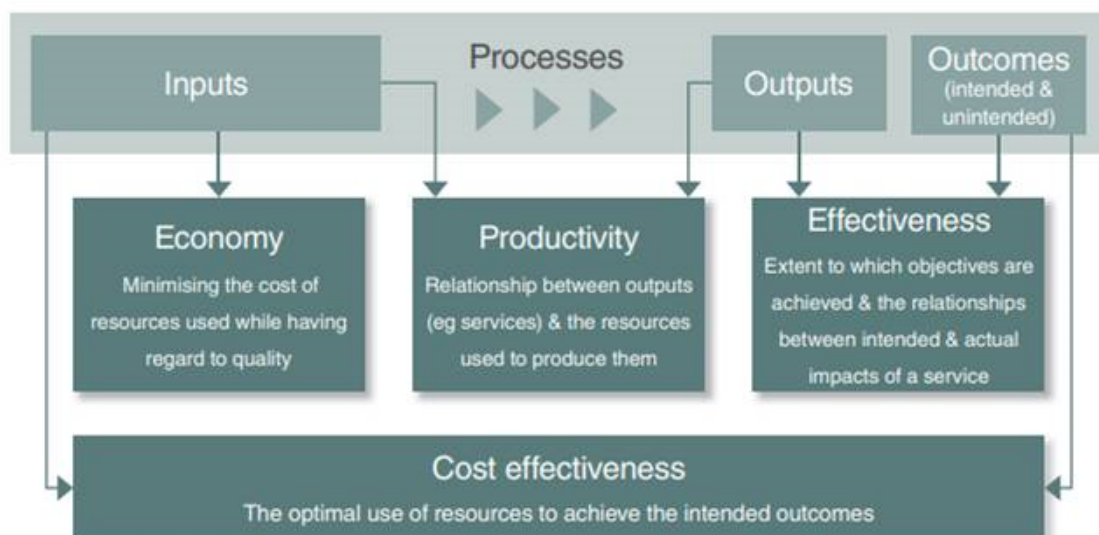


Figure 2. Relationship between inputs and output (or outcome) and efficiency components.

³ Subject to any changes agreed during the Road Period

⁴ Subject to any changes agreed during the Road Period

3.3 Methods to evidence efficiency

Three methods will be utilised to evidence the value of efficiency achieved:

- Performance against funding – where the efficiency is evidenced through the delivery of the outputs/outcomes for the post-efficient funding of £27.4bn.
- Basket of activity metrics – where efficiency is evidenced using the variance between baseline activity and/or costs.
- Detailed register build-up and case studies – efficiencies are recorded on an efficiency register and supported by case studies, with the total value being reported. Thematic programme level case studies will also be used to support embedded efficiency.

The method for demonstrating the primary form of evidence for each category of expenditure and the approach for supporting evidence is detailed in [section 5](#) and [section 6](#) of this manual.

3.4 Delivery profile and opportunity

An indicative profile for the delivery of efficiency over RP2 has been developed based on investment planning assumptions in the dSBP. An efficiency milestone (cumulative RIS efficiency forecast for the following financial year end) will be published annually in the Highways England Delivery Plan and its subsequent updates.

Experience and evidence show that innovation and cost challenge applied at the early stages of the project lifecycle deliver most value. Once design is agreed, substantial efficiency opportunities reduce. This is shown in figure 3.

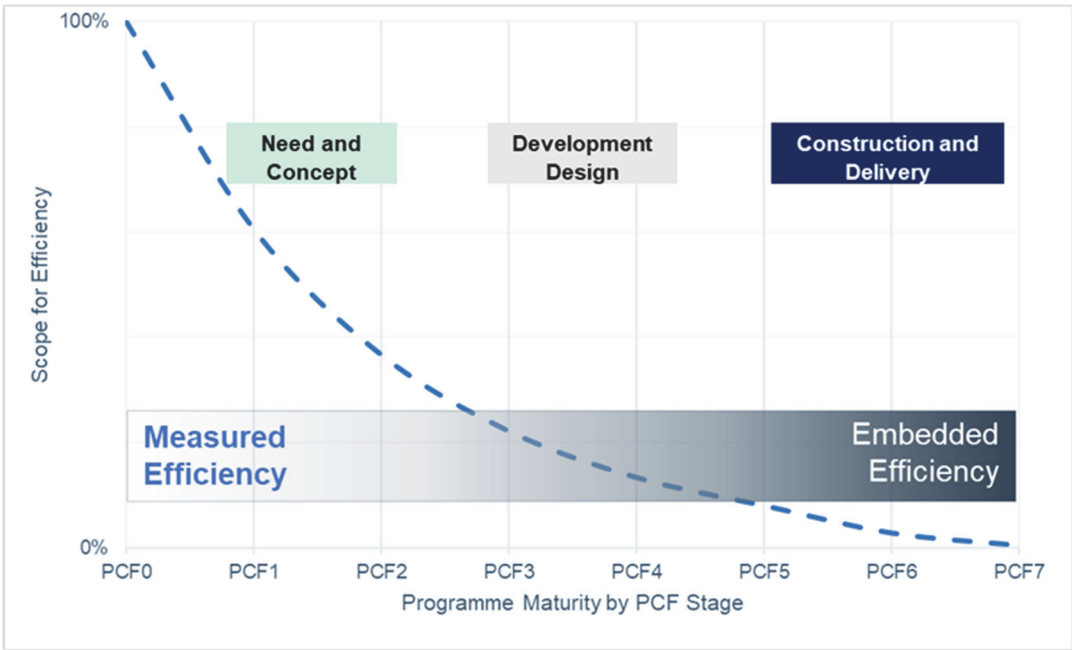


Figure 3: Type of efficiency against project timeline

To maximise our overall opportunity to deliver efficiency, including efficiency driven in the early phase of capital scheme development, RP2 efficiency is divided into two distinctive categories – embedded and measured. The efficiency target will be demonstrated by providing evidence to support the efficiency types which are defined in figure 4. Primary evidence will be provided to monitor all efficiency, secondary evidence will be provided for assurance where needed.

Efficiency Category	Expenditure Category
Embedded	<ul style="list-style-type: none"> Enhancement projects (Tier 1 and Tier 2 projects) with delivery in RP2 Capital Renewals Operational expenditure, Business Costs (Capex & Opex) and existing private finance initiative (PFI) contracts
Measured RP2 Generated	<ul style="list-style-type: none"> Other Investments (including designated funds, RIS3 development) New RIS2 Enhancement schemes Tier 1 projects not included in embedded efficiency and not starting the construction phase in RP1 Whole Life Cost improvements (including resultant from activity which delivers future embedded efficiency) Other efficiencies which deliver benefits beyond RP2 or “off the RP2 bottom line” (i.e. no material effect to RP2 finances).
Measured RP1 Carry over	<ul style="list-style-type: none"> All schemes/programmes where efficiency identified and secured in RP1 is realised in RP2

Figure 4: Efficiency categorised by expenditure category

To ensure the most suitable methodology for measuring efficiency is utilised, the approach to reporting and monitoring efficiency in RP2 will vary depending upon the category of efficiency being evidenced. Distinguishing between embedded and measured efficiency will help to focus delivery at a project level and ensure early life cycle opportunities are incentivised and realised.

Figure 5 shows the high-level approach to reporting for each efficiency category.

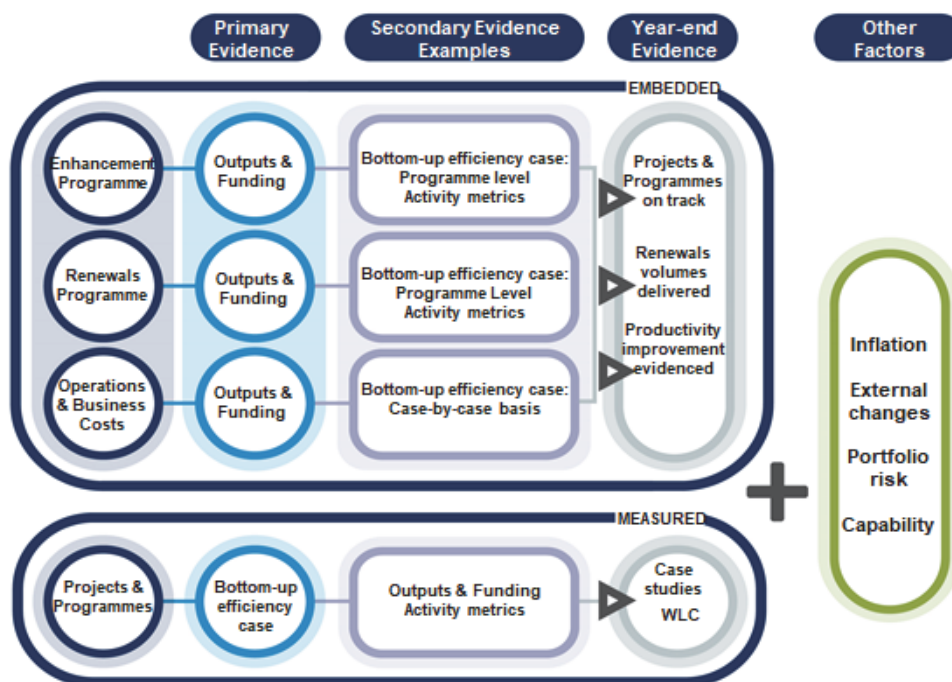


Figure 5. Efficiency evidence and high-level approach to reporting

3.5 Embedded Efficiency

Embedded efficiency reduces the funding required at project level and is already built into the post-efficient business plan. Embedded efficiency applies to projects and programmes of work that had a defined scope and schedule when the dSBP was drafted, or outputs against which

efficiency can be measured and against which post-efficient cost baselines have been set. Post-efficient budgets were set in the dSBP for the following programmes of work:

- Enhancement programme
- Capital renewals
- Operational and business capital expenditure

Performance against the capital baseline will be reported at a portfolio level in the annual efficiency report. Successful delivery of the required outputs and outcomes against this post-efficient baseline (moderated by the impact of agreed changes) will form the primary evidence to demonstrate that efficiency has been achieved. Secondary evidence will be utilised to support primary evidence where needed. Examples of secondary evidence are set out in [section 5](#) and [section 6](#) of this document, but are not exhaustive.

3.6 Measured Efficiency

3.6.1 RP2 Generated

RP2 Generated Efficiency will not reduce the funding required for RP2, but will, in general, benefit later road periods or reduce risk within RP2. This type of efficiency will apply to the areas of the plan which did not include an efficiency challenge in the dSBP and were therefore left as pre-efficient costs. In practice this mainly applies to new RIS2 capital enhancement schemes that are at early stages of development, but also includes the Designated Funds and the RIS3 development programmes. Other efficiencies generated in RP2 which have most of their effect outside of the roads period may include whole life cost benefits, or maturity improvements.

RP2 generated efficiency will be primarily evidenced through efficiency registers. Larger value efficiencies (over £1m) will be validated by the completion of case studies and efficiency guides to provide further detail on benefits and support knowledge sharing. Secondary evidence will be used to provide assurance of primary evidence where needed.

3.6.2 RP1 Carry Over

Carry over efficiency is defined as efficiency which has been identified and secured in RP1, but is also realised in RP2. Carry over efficiency applies to efficiencies from all RIS1 projects and programmes with expenditure profiles which span the road periods that have been captured, audited and reported using the RP1 detailed register approach and assurance process. These efficiencies have already influenced future expenditure, but are distinct from RP2 embedded efficiencies and are included in the pre-efficient position. To determine the carry over value of RP1 efficiencies, the efficiency claims will be split by road period using earned value principles.

4 Assumptions underlying the RP2 Efficiency submission

Delivery of the efficiency target is based on the assumptions underlying the dSBP. If the Highways England Delivery Plan is significantly different to the dSBP (for example, scope or schedule change) the efficiency assumptions that underpin this target may change, and Highways England's ability to deliver the target level of efficiency may be impacted.

The dSBP was based on the core premise that efficiency, inflation and risk are all connected. Changes in one area may affect other areas and affect our ability to deliver the planned scope. Importantly, the efficiency target value is expressed in nominal terms and therefore, the calculation of an individual efficiency is directly impacted by inflation.

Some change is inevitable. Beneficial and adverse effects will occur over a five-year programme. The nature of embedded efficiency means that changes to the programme will be considered in

the round, as part of the evidence at the end of the road period. A degree of variance should not automatically affect Highways England's ability to meet the KPI target. However, material changes to dSBP assumptions could affect our ability to evidence delivery of the efficiency target. The next section sets out the general principles which will be followed when considering changes against the dSBP efficiency submission.

4.1 Scope, Time and Funding Changes

During RP1 changes to the RIS, scheme scope and start of works (SoW) / open for traffic (OfT) dates were subject to a formal change control process managed by DfT. This policy will continue in RP2. The underlying assumption for efficiency is that Highways England will deliver the schemes and programmes defined in the dSBP (and confirmed in the RIS) and included in the RIS2 Efficiency Review. However, changes which may impact this include, but are not limited to:

- An external change agreed by DfT for a change in the RIS, or change in scope, noting that impacts on efficiency/funding could be positive or negative.
- Rescheduling of work to minimise customer impact.
- A change in delivery date – due to external impacts on a scheme beyond the control of Highways England.
- Delays to agreement or changes to funding commitments which reduce supply chain confidence or ability to plan work. These may have a significant impact on embedded efficiency.

It is recognised that cost efficiency can still be demonstrated by a scheme which is subject to change (e.g. change in scope or project timelines), as project teams can apply additional focus on delivering efficiently.

There is potential for impacts on efficiency to occur which are not subject to the change control process (which has a specific purpose and focus). Such events are expected to be infrequent and will be assessed on a case by case basis (e.g. real price effects).

Any significant impact of change on efficiency will be assessed in the round and recorded in the annual efficiency report alongside supporting evidence. This impact will be cumulatively assessed year on year, and will be taken into account in the final assessment of the efficiency evidence at the end of RP2.

4.2 Risk and Uncertainty

4.2.1 Schemes with defined Scope

For programmes against which there is a defined scope, allowances for project and programme risk have been included within the post-efficient funding requirement.

In line with best practice, a separate post-efficient portfolio risk allowance has been included within the funding model. This covers wider portfolio risks for the enhancement programme. The portfolio risk is part of the overall funding required for delivery of the enhancement programme; it is not a surplus allowance. Unspent portfolio risk allowance at the end of the road period would represent an efficiency. Any draw down of the enhancement portfolio risk allowance for purposes other than the defined schemes represents an additional efficiency challenge, for example reallocation of portfolio risk to support additional outcomes, new schemes or enhanced levels of service.

The portfolio risk will be managed centrally within Highways England, and will be reported through the capital portfolio management reports provided to DfT and ORR. Highways England will

provide visibility to ORR on the impact of the portfolio risk movements on efficiency. This will be documented in the annual efficiency report.

4.2.2 Schemes with undefined Scope

Schemes at an early stage of development inherently have less cost certainty and are managed accordingly. Measured efficiency is used in these cases because it is too early in the development cycle to establish a pre- and post-efficient cost with confidence. Portfolio risk allocation has been defined for a small number of Tier 1 schemes.

4.2.3 Operations, maintenance and renewals (OMR)

The dSBP did not contain a portfolio risk allowance for OMR. Highways England identified a remaining affordability gap, with risk and uncertainty being managed through programme delivery.

Following the Efficiency and Deliverability review, ORR’s advice to the Secretary of State suggested a portfolio risk allocation is created for renewals, business costs, operations and maintenance. However, this portfolio risk does not cover the shortfall identified in the dSBP for a fully funded renewals programme. Therefore, risks arising in these areas can only be managed by reprioritisation of work or scope change. This needs to be taken into account when considering efficiency in these programmes and variance from the Highways England Delivery Plan (outside of agreed tolerances) will be documented in the annual efficiency report.

4.3 Inflation

RP2 funding has been stated in nominal terms. This means that an assumed inflation profile (shown in figure 6) has been applied to the forecast costs to inflate them to the year in which the expenditure is profiled. As the efficiency targets are based upon the same inflated values these are also in nominal terms. To reflect this, all costs included in efficiency calculations should be calculated and reported at the point of delivery of the efficiency. For example, if an efficiency relates to the construction phase of the project then the price base for both the pre- and post-efficient values should be the mid-point of this phase.

	2020-21	2021-22	2022-23	2023-24	2024-25
Capital works	3.41%	3.75%	4.57%	4.25%	3.53%
Operating Costs including Electricity	2.00%	2.00%	2.00%	2.00%	2.00%
Maintenance Contracts	2.76%	2.76%	2.76%	2.76%	2.76%

Figure 6: Inflation profile included in dSBP

Highways England will mitigate against inflation risk. This is primarily done through the contractual terms negotiated with suppliers. As such variation from the assumed profile will be analysed alongside the impact of the contract terms (both positive and negative), and the real impact on the investment programme reported on an annual basis in the efficiency report.

Suitable indices will be used for inflation analysis relating to the Efficiency KPI performance. These include:

- Capital works – Highways England’s Bespoke Cost Indices
- Operating Costs – Consumer Price Index
- Maintenance Contracts – adjusted Consumer Price Index

Suitable indices will be used when reporting the initial variances between actual inflation values and the assumptions from the funding model. They will also be used to inflate efficiency values to the point of delivery.

5 Embedded efficiency evidence

5.1 Overview

When an efficiency saving has been removed from the estimate for a project or activity before being included in the dSBP, it is referred to as an 'embedded efficiency'. These elements of the investment plan are deemed to be post efficient and have pre- and post-efficient baselines that can be used to assess efficient delivery. The dSBP was subject to the Efficiency and Deliverability Review by ORR, which assessed these embedded efficiency assumptions. Following advice from ORR, DfT increased the overall embedded efficiency expectation prior to finalising the RIS. The total value of the post-efficient RP2 plan is £27.4bn, including portfolio risk. Portfolio risk is an essential cost directly associated with the delivery of the investment programme, in particular the enhancement programme, and is therefore part of the post efficient cost at the company level.

Figure 7 below sets out the investment lines in the plan which have embedded efficiency.

Efficiency Category	Expenditure Category
Embedded	<ul style="list-style-type: none"> • Enhancement projects (Tier 1 and Tier 2 projects) with delivery in RP2 • Capital Renewals • Operational expenditure, Business Costs (Capex & Opex) and existing Private Finance Initiatives (PFIs)

Figure 7. Expenditure categories which have embedded efficiency.

The primary evidence for demonstrating embedded efficiency is the delivery of the output or outcomes for the funding provided. For example, in the case of the enhancement programme a defined output could be a scheme; in the case of business or operational costs a defined output could be maintaining business effectiveness. Secondary evidence will be provided to support this assumption and to give additional assurance, where required. Embedded efficiency applies to very different types of activity and expenditure. As such, the principles and approach for providing secondary evidence differs by expenditure category. In each case a baseline is defined, and a level of performance or outcome determined. Whole life cost efficiencies may also be provided as secondary evidence for embedded efficiencies. These are described in more detail in [section 6.3](#).

5.2 Capital Enhancements

5.2.1 Scope

Schemes included in this category include existing RIS1 schemes in the Regional Investment Programme (RIP), Smart Motorways Programme (SMP) and Complex Investment Programme (CIP) that are scheduled to either be open to traffic in RP2 or to have substantially progressed through development and into construction. Although efficiency will be managed at a project level, it will be reported at a programme level and monitored at a company level.

5.2.2 Baseline and Change

The capital baseline against which changes are assessed, includes the high-level scope as set out in the RIS, and the proposed scheduled delivery dates. The baselines for pre-efficient costs were agreed as part of the dSBP. Therefore, any significant changes from the dSBP baseline to Capital Baseline at the start of the RIS will be subject to the change control process. This will include an assessment on the impact of, or risks to delivering the efficiency target. All future changes will be managed through the change control process. Any significant impact on efficiency will be assessed in the round and recorded in the annual efficiency report alongside supporting evidence. This impact will be cumulatively assessed year on year, and will be taken into account in the final assessment of the efficiency evidence at the end of RP2.

5.2.3 Evidence

Each capital enhancement programme of work will have a post-efficient baseline, which includes an allowance for portfolio risk. Delivery of the outputs/outcomes within the post-efficient funding envelope (moderated by the impact of agreed changes) is the primary evidence of efficiency.

This primary evidence will be assured after the scheme milestone 'OfT' is achieved. The efficiency position will be tracked internally from the start of the road period, but will not contribute to the evidence position until the outputs are assured. This will avoid overestimation of final delivered efficiency, but will result in a time lag in the evidence reporting.

Schemes scheduled to achieve OfT in RP2, but delayed until RP3 for reasons outside Highways England's control, will be managed by change control. This will recognise the impact of the

change on the efficiency position. Schemes delayed for other reasons will be reviewed with ORR on a case by case basis, to agree the appropriate value of efficiency to be reported in RP2.

At publication of RIS2 a number of schemes were included in the embedded efficiency programme that are not likely to complete construction in RP2. The Capital Baseline will define the expected stage and expenditure for these schemes at the end of RP2, against which RP2 efficiency will be assessed and reported.

Secondary evidence will not cover the total value of efficiency delivered, but will provide assurance of the primary evidence where required. The secondary evidence is expected to be a combination of narrative, explaining progress in delivering efficiency, and quantitative evidence such as activity metrics where relevant. Case studies will be provided to detail major programme level initiatives (over £5m), and will be subject to Highways England's assurance process.

5.2.4 Reporting

The current and forecast efficiency position will be reported annually, noting the lag between efficiency planning and the final assured position. In addition, quarterly progress updates will be provided to ORR, alongside information of scheme delivery as reported in RP1.

ORR will have visibility of the list of enhancement schemes against which embedded efficiency is calculated as part of the reporting process. Where case studies are provided as supporting evidence for embedded efficiency these will be provided to ORR on a regular basis and their themes summarised in the annual efficiency report.

5.3 Renewals

5.3.1 Scope

Renewals covers renovation and renewal of SRN assets. The renewals investment programme is built up using nine investment areas, which have a forecast plan by asset type. This may vary during the road period as risks emerge.

5.3.2 Baseline and Change

The baseline against which change is measured is based on funding agreed, total volumes against five key areas defined in the Delivery Plan and the performance of the network. Highways England prioritises renewals expenditure based on service and investment needs and management of emerging risks and issues. In addition to the five monitored asset areas, Highways England will develop an annual renewals plan which sets out planned volumes and activity for the year ahead. This will be published in the Highways England Delivery Plan Annex and its subsequent updates.

External changes to KPI measurements or targets will constitute a change to delivery and will be formalised through change control. Any significant impact on efficiency will be assessed in the round and recorded in the annual efficiency report alongside supporting evidence. This impact will be cumulatively assessed year on year, and will be taken into account in the final assessment of the efficiency evidence at the end of RP2.

5.3.3 Evidence

Renewals programme efficiency will primarily be demonstrated through:

- Evidence of delivering the high-level annual and five-year renewals programme outputs within the post-efficient funding envelope (moderated by the impact of agreed changes).
- Delivering the appropriate KPIs where there is a clear link to efficiency

- Meeting the post-efficient funding budget
- Demonstrating appropriate asset stewardship

Secondary evidence will not cover the total value of efficiency delivered, but will provide assurance of the primary evidence where required. The secondary evidence is expected to be a combination of narrative, explaining progress in delivering efficiency and quantitative evidence such as activity metrics where relevant.

Case studies will be provided to detail major programme level initiatives (over £5m) and will be subject to Highways England's assurance process. Highways England will also continue to develop activity-based cost intelligence with the aim of tracking changes in activity metrics for the largest expenditure areas of the renewals programme. Highways England may also develop other metrics which demonstrate efficiency gains or improvements in ways of working. Following implementation of internal change programmes, these will be developed over RP2 as the data is gathered.

Where data is available, the secondary evidence will use a 'bottom-up' efficiency baseline of August 2018. This assumes initiatives carried out prior to this date will become business as usual in RP2 unless it is demonstrated that the change:

- was being piloted in RP1 with the intention to roll-out in RP2
- had not been deployed fully across all regions.

Highways England will provide an annual commentary showing the line of sight between the original high-level plan and the activity delivered in year, and any reasons for variance. Efficiency monitoring will be against five asset types representing the largest expenditure as per the Highways England Delivery Plan. This will be included in the annual efficiency report.

A narrative will also be included in the annual efficiency report to explain the activities and processes we have put in place to demonstrate asset stewardship.

Where case studies are provided as supporting evidence for embedded efficiency these will be provided to ORR on a regular basis and their themes summarised in the annual efficiency report.

Planned renewals activity will be included in the Highways England Delivery Plan and its subsequent updates and performance will be reported annually. The activity metrics will be reported as data emerges during RP2.

For assurance purposes, prior to the start of RP2 ORR will be provided with:

- Pen portraits for the five key asset areas, including description of output delivery, indicative profile of outputs over RP2 and indicative anticipated spend against each area over RP2. This information will not be used for unit cost analysis.
- Pen portraits for secondary asset areas, which describes what output delivery entails.

5.4 Operations, Business costs and PFI

Investment in operations, business costs and existing PFI contracts supports and enables Highways England to operate the SRN, maintain the c.£120bn asset base and provide service functions to the operations and delivery aspects of the business. This investment stream also includes business capital, incorporating expenditure on vehicles, offices and IT.

5.4.1 Baseline and Change

The baseline against which change is measured is the post-efficient business plan for RP2 as submitted in January 2019. Highways England manages the prioritisation of the business expenditure based on investment need and its process to manage emerging risks and issues.

Foreseeable changes that could affect the delivery of the efficiency in this area are financial: for example, VAT and capitalisation policies, or externally driven requirements for software or IT and information. If these impacts occur, they will be recorded either by formal change control, or by letter to DfT. Any significant impact on efficiency will be assessed in the round and recorded in the annual efficiency report alongside supporting evidence. This impact will be cumulatively assessed year on year, and will be taken into account in the final assessment of the efficiency evidence at the end of RP2.

5.4.2 Evidence

The operational budget is tightly controlled and there is very limited flexibility around delivery of outputs. Delivery of the outputs/outcomes within the post-efficient funding envelope (moderated by the impact of agreed changes) is the primary evidence of efficiency.

Secondary evidence will not cover the total value of efficiency delivered, but will provide assurance of the primary evidence where required. The secondary evidence is expected to be a combination of narrative, explaining progress in delivering efficiency and quantitative evidence such as activity metrics where relevant.

Case studies will be provided to detail major programme level initiatives (over £5m) and will be subject to Highways England's assurance process.

Where the delivery of specific outputs or outcomes is explicitly stated in the baseline plan, reasonable evidence and explanation of delivery will be provided through the Annual Report and Accounts process and/or annual efficiency report.

Activity metrics may be considered as secondary evidence where relevant. The definition of the pre-efficient costs for efficiency cases and post-efficient comparison, will be considered on a case by case basis. The pre-efficient position may be, but not limited to, the following:

- Historic outputs at the end of RP1 compared to RP2 e.g. capital /support cost ratios
- Typical procured costs in RP1 compared to RP2 procured costs e.g. for vehicles
- Cost trend line e.g. cost movements against outputs over time
- Lower whole life cost decisions e.g. counterfactual statement on current approach compared to historic in terms of decisions on maintenance (e.g. asset renewals)

Existing PFI contracts include efficiencies which have been built into them through the funding model underlying the contract. Over the road period there may be occasional opportunities to revisit these. Where opportunities exist, such as refinancing, full advantage will be taken to ensure value for money and an efficiency case will be developed as evidence.

5.4.3 Reporting

Highways England will provide a commentary in the annual efficiency report showing alignment between the original plan and the activity delivered in year and any reasons for variance. In addition, quarterly progress updates will be provided to ORR.

Where case studies are provided as supporting evidence for embedded efficiency these will be provided to ORR on a regular basis, and their themes summarised in the annual efficiency report.

6 Measured efficiency evidence

6.1 Overview

Measured efficiency is split into two distinct types of efficiency as shown in Figure 8. Measured efficiency will not reduce the funding for RP2 but will, in general, benefit later road periods or reduce risk within RP2. This includes whole life cost efficiency cases. It also ensures that efficiencies generated at the design stage for early stage schemes are identified and recorded.

Efficiency Category	Expenditure Category
Measured RP2 Generated	<ul style="list-style-type: none"> • Other Investments (including designated funds, RIS3 development) • New RIS2 Enhancement schemes • Tier 1 projects not included in embedded efficiency and not starting the construction phase in RP1 • Whole Life Cost improvements (including resultant from activity which delivers future embedded efficiency) • Other efficiencies which deliver benefits beyond RP2 or “off the RP2 bottom line” (i.e. no material effect to RP2 finances).
Measured RP1 Carry over	All schemes/programmes where efficiency identified and secured in RP1 is realised in RP2

Figure 8. Expenditure categories which have measured efficiency.

6.1.1 RP2 Generated efficiency

RP2 Generated efficiency will primarily apply to early stage capital enhancement schemes, and activities for which the scope or output cannot be defined with confidence. As such, no post-efficient cost baselines can be established. It will be evidenced through detailed efficiency claims built up from efficiency registers. In these cases, the counterfactual cost is calculated and compared to the actual delivered cost. In a similar manner to RP1, these registers will be complemented by the completion of case studies and efficiency guides to provide further detail on large value claims (over £1m). Where there is evidence of efficiencies in other investment areas these will also be presented as efficiency cases with the counterfactual and actual costs set out.

6.1.2 RP1 Carry Over efficiency

RP1 Carry Over efficiency is a sub-set of measured efficiency, and recognises the work done in RP1 to drive project efficiencies that are realised in different road periods. It only applies to efficiency cases which have been identified and secured in RP1 (by 31st March 2020), but where the value has not been fully realised in the road period due to the earned value reporting principle. Bottom up efficiency cases meeting this criterion will be claimed as carry over in RP2.

6.2 Baseline and Change

The RP2 generated efficiency proposal was based on the assumption of a pipeline of schemes in development, a small contribution from the designated funds programme, new RIS2 enhancement schemes and the relevant Tier 1 schemes (not subject to embedded efficiency).

Projects or programmes in the early stages of development (which will deliver measured efficiency) will not have a post-efficient funding baseline. The baseline for the counterfactual costs will reflect the point at which the RP2 efficiency target was defined in August 2018.

If the funding levels included in RIS2 for these relevant projects and programmes changes from the dSBP, then the impact on efficiency from this change will be recognised through formal change control. Any significant impact on efficiency will be assessed in the round and recorded in the annual efficiency report alongside supporting evidence. This impact will be cumulatively assessed year on year and will be taken into account in the final assessment of the efficiency evidence at the end of RP2.

The baseline for RP1 carry over efficiency will remain consistent with RP1 to ensure continuity in reporting.

6.3 Evidence

Efficiency will be identified through individual initiatives at a project level recorded on efficiency registers. The detailed compilation of efficiencies on registers, referred to as 'bottom-up' reporting, will be the primary method for demonstrating measured efficiency.

Efficiencies, opportunities and benefits for each project or workstream will be captured in an efficiency register. This is a standard document which records the detail supporting the efficiency, as well as the reporting information, value, evidence and approval information. The register will record all identified interventions leading to an efficiency saving and categorise them as follows:

- **Economy** - minimising the input cost of resources used. Valued as the difference in cost charged spread across the inputs used.
- **Productivity** – improving the relationship between the output from goods or services and the inputs required to produce them. Valued as the difference in input cost per output produced.
- **Effectiveness** - the relationship between expenditure and the output or outcome achieved. Valuing effectiveness is about understanding what it would have cost to deliver the final output or outcome using the methods of working which were originally in place.

When investment decisions are taken on a whole life cost basis, efficiency may also be a result of saving future capital or resource spend (e.g. renewals or maintenance). The efficiency calculation considers the impact of an intervention on all costs and subsequent benefits over the life of the asset. Increased expenditure in the short term may generate efficiency where a higher quality of asset, outcome or service is / will be delivered compared to the baseline. For example, a reduction in future maintenance interventions, or enterprise wide business change could both result in long-term cost reductions. Where efficiencies have been generated in this manner, the net position will be calculated and may be provided as secondary evidence for embedded efficiencies. Whole life cost efficiencies can be claimed on all areas of the business. In these cases, evidence will be demonstrated in a specific whole life cost efficiency case, and the value of this case will be appropriately recognised in the annual efficiency report.

Large value, assured case studies and/or efficiency guides will be presented as evidence for all types of efficiency claimed in this category, and will be subject to independent assurance by Highways England's Audit and Assurance team. Large value efficiencies (over £1m for RP2 generated and £750k for RP1 carry over) will be supported by individual case studies or grouped together to form efficiency guides offering more detail on the initiative. Small value efficiencies will be subject to a sample audit to ensure compliance.

Secondary evidence will be utilised to support primary evidence where needed and may include activity metrics.

6.4 Reporting and Assurance

Individual efficiencies will generally be reported against the KPI following an earned value approach over the same time period through which the benefit of the efficiency is delivered. For example, where an efficiency reduces the capital cost of a project/scheme, the recognition of that efficiency should be in line with the forecast expenditure profile for that project/scheme.

The exceptions to this are where efficiency can be shown to have been fully delivered within a specific period, and whole life cost efficiencies, taking into account the value created and other business process/lever improvements. In the first instance the dates between which the efficiency applies will be recorded in the register and evidenced. The value of the efficiency will then be equally apportioned using these dates. Whole life cost efficiencies will be claimed at the time of the capital spend required to create the efficiency.

Where an element of efficiency sits outside of the current road period, only the element generated in the current period will be reported against the KPI. Exceptions to this include where evidence that the cost reduction, as a result of the efficiency, has been built into the forecast and signed off by an appropriate authority. Examples include where efficiencies in design have led to quantifiable reductions in estimates which then have a clear line of sight to sign off at Highways England Investment Decision Committee (IDC) or DfT Investment, Portfolio and Delivery Committee (IPDC). In this case a prudent approach will be taken, and a factor included to represent the risk that the actual delivered cost for that element will not be known for some time. The remaining balance will be separately reported and fed into the next and subsequent road periods as applicable.

Measured efficiency cases will be subject to three levels of assurance:

- Level 1 – assurance by the project team
- Level 2 – assurance by the Commercial Services team
- Level 3 – assurance by the Highways England Audit team

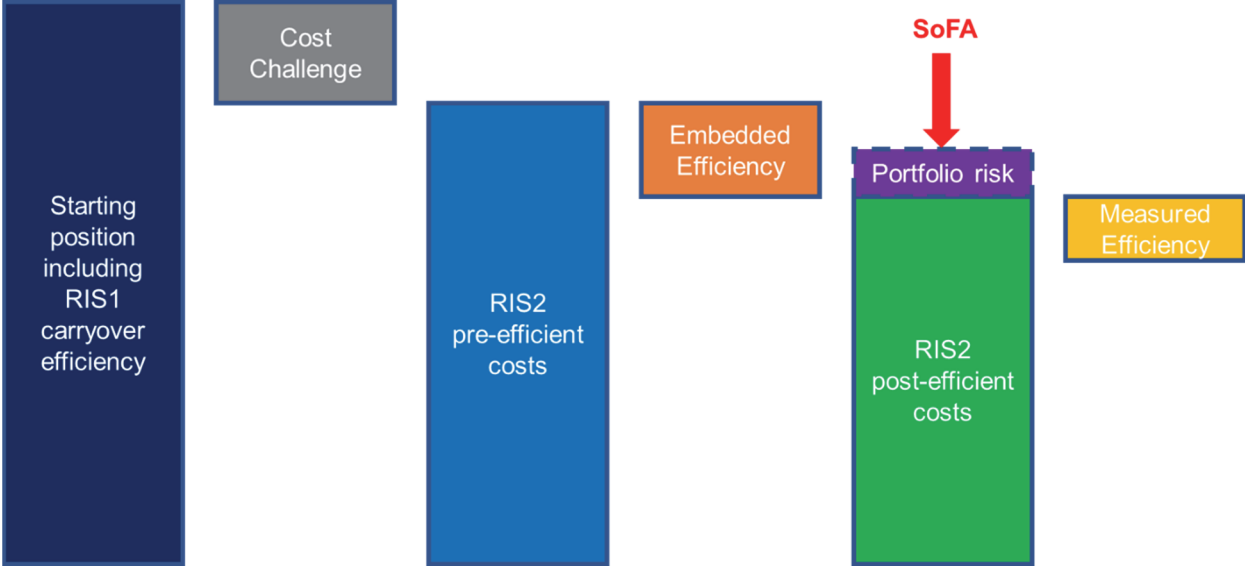
Following internal assurance, case studies will be provided to ORR for review on a regular basis. The efficiency value will be deemed to have been accepted once the case has received full assurance. The cumulative value of assured efficiencies included on the registers will be reported in the quarterly progress updates to ORR. To highlight new initiatives, this will be supported by case studies and efficiency guides completed in the previous three months. The annual efficiency report will summarise case study themes and provide the final reported position for each 12-month period.

7 Change control to EIMM

This section notes changes to the EIMM, with the version on 13 July 2020 as the baseline position – all details within this document should refer to the latest metric definition.

Date	Change	Comment
13 July 2020	N/A	Final Version to align with Delivery Plan

Appendix 1 Highways England RIS2 Efficiency Identification and Development Process



Appendix 2 Key principles of our efficiency monitoring approach as agreed with ORR (August 2019)

1. A baseline position for resource and capital will be established, including cost, schedule and scope information for each of the programmes and major projects.
 - The cost funding baseline will be related to the post-efficient position in the SBP.
 - Progress against the baseline will be reported through the quarterly progress reports and monthly corporate pack.
 - As far as possible, top level reporting for cost and efficiency will be part of the normal reporting cycle as in RP1.
 - Changes to the baseline will be formally managed by Highways England and communicated.
 - Change control for RIS scope and Delivery plan will managed as RP 1 through change control processes.
2. Efficiency is an end of RP target. An expected profile will be provided for reporting against but not monitoring.
3. The efficiency target is set and monitored at the company level (that is, Highways England may realise the target level by delivering a different mix of efficiency than assumed in the SBP). Highways England will report efficiency to ORR disaggregated by [programme]/swimlane through its annual efficiency report.
4. An Efficiency Delivery Plan will set out Highways England's high-level programme of expected efficiency initiatives and profile of efficiency delivery by swimlane. Delivery against the plan will be reviewed to understand progress.
5. The Efficiency Delivery Plan will provide confidence to ORR of HE's planning and delivery of efficiency, but does not represent a baseline to monitor against.
6. Efficiency should be visible and evidenced top-down.
7. Highways England's SBP is set out (and funded) with the efficiency target included (that is, it is post-efficient).
8. Highways England should evidence that RIS outcomes / outputs have been delivered for the funding committed.
 - Changes to funding and outcomes / outputs should be agreed through change control and should be considered when evidencing efficiency.
9. Highways England should agree a basket of productivity metrics with ORR and report on these. These should include high-level measures of costs of output delivery over time for operations, maintenance, renewals and enhancements building on work developed during RIS1.
 - Agreed measures may be at differing levels of disaggregation depending on data quality/accessibility and the swimlane's contribution to reported efficiency
10. Bottom-up evidence should be provided to support reported efficiency. but it is not expected to cover all efficiency or to reconcile to top-down figures. Bottom-up case studies will cover significant efficiency initiatives represented in the Efficiency Delivery Plan or SBP– for example procurement efficiencies from SMP alliancing and Regional Delivery Framework. The exception is for capex where there is not a clearly defined scope or output, where the approach should be similar to RIS1. These areas are defined at a swimlane level as KPI measured efficiency in the dSBP and will be confirmed in the Efficiency Delivery plan.
11. The risk allowance [for major schemes] (portfolio, programme and project) is managed separately from efficiency, and reported on as part of the monthly / quarterly reporting process.
12. Efficiency and inflation are inter-linked. Highways England will provide a quantitative analysis of how outturn inflation has impacted its reported efficiency and provide a comparison to SBP assumptions.
13. Noting that the embedded and Measured Efficiency are considered as separate, and any change to these sub targets would be by change control or specific Tripartite Agreement.

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Highways England creative job number GFD20_0057

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Registered office Bridge House, 1 Walnut Tree Close, Guildford GU1 4LZ

Highways England Company Limited registered in England and Wales number 09346363