



NATS (En Route) PLC SIP25 CAPEX Independent Reviewer Report

31 March 2025

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An aerial photograph of an airport, showing a large terminal building with a curved roof, several runways, taxiways, and numerous aircraft parked at gates. The image is partially obscured by a dark blue overlay on the right side.

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Introduction

Introduction and Scope

ROLE OF THE INDEPENDENT REVIEWER

Egis has been commissioned as an Independent Reviewer (IR) by the CAA to, "assess NERL's performance from the perspective of what users of its services expect from meaningful engagement by NERL on its CAPEX plans". Appendix D CAPEX Engagement Incentive of CAP 2597b, sets out guidance for the assessment of NERL's performance in respect of their CAPEX engagement incentives as per Condition 10 of NERL's licence.

The IR will score NERL's engagement with stakeholders relating to its CAPEX programme made through:

- Published Service and Investment Plans (SIPs),
- Interim SIPs (iSIPs) published during the regulatory year/periods,
- Any other meetings, forums or other forms of engagement relating to the development of its CAPEX plan. Eg: the Technical Customer Advisory Board (TCAB) or other meetings or forums of similar purpose.

The IR will perform the exercise of review and scoring twice a year, i.e., after publication of the SIPs and iSIPs during the NR23 period.

This is the 3rd IR report reviewing NERL's SIP25 document and their engagement in addressing stakeholder concerns since the September 2024 IR iSIP24 and April 2024 IR SIP24 review reports. Please note the scope of **this report excludes engagement that took place after the publication of SIP25**, such as at the **TCAB engagement meeting on 27th February 2025**. This engagement will form part of the IR's iSIP25 review.

ASSESSMENT CRITERIA

NERL's quality of engagement on each of its CAPEX programmes/projects is assessed across these four assessment criteria:

- | | |
|---------------------------|--|
| (A) User Focus | (B) Optioneering |
| (C) Responsiveness | (D) Mitigating/Corrective Actions |

SCORING GUIDANCE

NERL's performance for each of its CAPEX programmes/projects will be scored against the above assessment criteria using a points-based scoring system on a scale of 1 to 4, where:

- | | |
|----------------------------------|-------------------------------|
| 1 = Poor | 2 = Below expectations |
| 3 = Baseline expectations | 4 = Excellent |

OVERALL CAPEX ENGAGEMENT SCORE

The average final score for each CAPEX programme/project is calculated using an average of the individual scores under each assessment criterion.

The calculation of the overall CAPEX engagement score takes the average programme/project scores and subsequently weights them according to their forecast CAPEX spend.

The CAA is responsible for making the final decision on NERL's performance, considering the findings of the IR report and representations from stakeholders (including NERL) in forming their assessment.

Scoring Criteria

Scoring guidance is provided in CAP 2597b, repeated in the Annex, and summarised below.

USER FOCUS

Includes timeliness of information, traceability and proportionality. NERL should provide information to users, the IR and the CAA:

- a. In forms, and through mechanisms, that reflect user priorities and resource constraints and that are clear and accessible;
- b. In a timely manner, including through providing early warning and explanation of factors that may put planned delivery timelines at risk;
- c. That enables specific elements of projects or programmes that have moved between programmes (such as the scope, costs, delivery timescales and benefits accruing from those changes, and any impacts on OPEX) to be traced from one consultation to another; and
- d. The level of substantiation NERL provides should reflect the materiality of the change under consideration.

OPTIONEERING

NERL should seek to identify a range of different responses that might be adopted where practicable, explain the need for the programme and the outcomes and benefits it is seeking to deliver, and to provide opportunities for engagement and scrutiny of those options by users and the IR. In addition, NERL should be transparent about the OPEX impacts and delivery risks of different options presented.

RESPONSIVENESS

NERL should respond constructively, meaningfully and in a timely manner to submissions by users, the IR and the CAA, and explain clearly how it has considered and taken account of those submissions.

MITIGATING & CORRECTIVE ACTIONS

NERL's engagement with its customers should include appropriate mitigating and/or corrective actions in the light of submissions by users, the IR and the CAA, and it should communicate those actions to stakeholders in a timely manner.



Overall Findings and Scoring

Overall CAPEX Engagement Assessment (1/4)

CRITERIA	OVERARCHING IR OPINION
<p>User Focus</p>	<ol style="list-style-type: none"> 1. The IR acknowledges and welcomes NERL's increasing efforts to engage with stakeholders, including the organisation of more face-to-face forums, and encourages continued use of formats that enable meaningful discussion and exchange of views. 2. SIP25 is introduced under a new structure that outlines service and investment priorities through four "delivery drivers" [pg3]. While the IR acknowledges that this revised structure provides a more relatable narrative, it is also remains text-heavy and longer than previous SIPs (84 pages compared to 61 pages in iSIP24 and 59 pages in SIP24). 3. The linguistic style used in SIP documentation further builds on improvements from iSIP24, notably in the consistent use of plain English. In addition, new graphics in SIP25 such as Key Highlights [pg4], Service Summary [pg5], Investment Summary [pg6], and the portfolio cost waterfall chart [pg41] help to present information in a clear and concise format. 4. NERL presents the need for an "interim FDP" to replace NAS as part of its Sustainment & Surveillance programme, identifying the ERAM FDP as the recommended option at this stage. The introduction of ERAM is frequently described as an activity "to replace NAS", despite its inclusion in the Sustainment & Surveillance programme. Given the significance of this approach, customer interest, and the potential scale of investment, NERL should provide a more standalone presentation of interim FDP activities in future SIP engagement. This would enhance transparency in tracking milestone delivery and costs. 5. Within the Common Platform programme, the deployment timeline for iTEC SkyNex has been delayed from "during NR28" in iSIP24 to "around 2035" [pg63] in SIP25. This further delay in iTEC delivery and the continued uncertainty surrounding its deployment timeline has led two customers to request details on NATS' evaluation of alternatives to iTEC or potential options to accelerate the project [customer letter 28th Dec 2024], [customer letter 30th Dec 2024]. The IR is awaiting the submission of this assessment. 6. NERL also states that the NAS FDP constrains its ability to deliver the UK Airspace Modernisation Strategy (AMS) and comply with future operational mandates such as Free Route Airspace [pg16]. While it was presented briefly during the consultation, further substantiation on which elements of the AMS can be achieved with NAS, which aspects would be delivered through ERAM, and which would be enabled by the various versions of iTEC would be beneficial. NERL should also clarify how these systems align with the concurrent delivery of airspace user benefits. This request was reinforced by a customer inquiry [customer letter 30th Dec 2024]. 7. NERL has increased the NR23 Sustainment & Surveillance cost forecast by £46m as an "initial cost forecast" to account for ERAM FDP delivery, which is expected to "run through into NR28" [pg29]. While the IR recognises portfolio plans need to remain dynamic to reflect changing circumstances, such an allocation of investment and resource seems misaligned with statements around the maturity of NERL's of plans in this area and the fact that "no firm delivery decision on our approach has yet been taken" [pg17].

Note: References on this slide and the following slides state the referenced document "SIP25" followed by the [page number]

Overall CAPEX Engagement Assessment (2/4)

CRITERIA	OVERARCHING IR OPINION
User Focus (cont.)	<ol style="list-style-type: none"> 8. The interdependencies between programmes and milestones are not always described in sufficient detail to allow for visibility on how the materialisation of a risk on one programme could impact another. For example, the delay of AC FOS within the DP En Route programme has caused a consequential delay to cross-boarder FRA within the Airspace programme because “they are dependent on the delivery of iTEC v2” [pg57]. Ongoing reporting of such interdependencies, in proportion to customer benefits, would be beneficial. 9. Similarly, the IR remains concerned about the running level of risk transparency across programmes. For example, while the IR recognises that risk is not static, NERL has only just disclosed that legacy Oceanic hardware is ageing and becoming increasingly difficult to maintain [pg69], whereas previous SIP material referenced only “resourcing challenges”. The IR would expect such a risk arising from predictable system and product life cycles to be evident at an earlier stage. Similarly, the IR notes an absence of any mention of the UK Airspace Design Service (UKADS) proposal in the relevant programme risks. While the proposal was not firm at the time of SIP25’s publication, its scope and implications could pose a risk to NERL’s delivery of airspace change which merits recognition. 10. Although the use of the “RAG status key” [pg44] is said to follow a standardised approach as defined by the Government’s Infrastructure and Projects Authority, it remains subject to a certain degree of subjectivity. Incorporating more quantifiable elements into the framework could support a more consistent application of statuses across programmes. 11. The risks identified in the 'Portfolio Risks' section [pg42] are largely generic in nature, which is understandable at the portfolio level. However, at the programme level, further substantiation would be beneficial, specifically through clear links to affected milestones, deliverables, deployments, customer commitments, or services in the event that a risk materialises. For example, within the Oceanic programme, an “increased level of resilience risk as legacy hardware and old communications protocols are ageing and becoming increasingly difficult to maintain” [pg69] is reported, yet no further detail is provided on the specific impacts or dependencies associated with this risk. 12. The “Project Complexity Rating” introduced in SIP25, taken from the Association for Project Management (APM) Competence Framework [pg44] improves transparency of reporting.

Overall CAPEX Engagement Assessment (3/4)

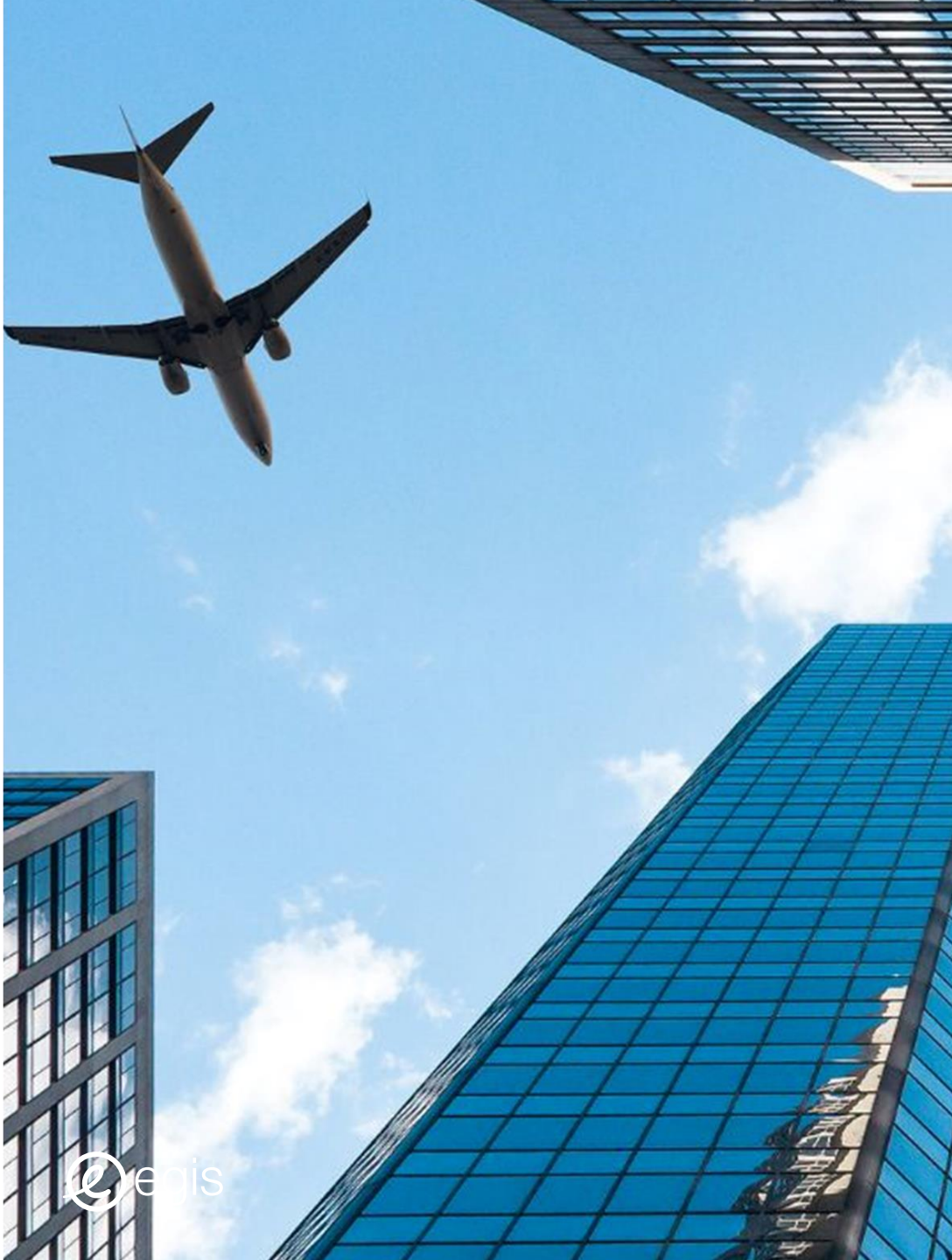
CRITERIA	OVERARCHING IR OPINION
Optioneering	<ol style="list-style-type: none"> 1. NERL's optioneering for the evolution of its FDP lacks sufficient detail to enable a clear assessment. Key information, including actual costs, delivery timescales, resource requirements, dependencies with other programmes, and airspace user benefits for each option, is either absent or inconsistently assessed across the options. While one airport expressed support for the recommended option [stakeholder email, 31 December 2024], and one customer acknowledged the constraints involved, the customer also called for thorough analysis of key aspects, including integration capabilities and cost implications [customer letter, 28 December 2024]. 2. Customers have raised questions relating to the viability of continued investment in the iTEC FDP given the continued shifting of timescales, most recently from "during NR28" [iSIP24, pg51] to a "range centred around 2035" [pg22]. They have urged NERL to conduct a "full assessment of strategic options" on alternatives to iTEC being considered, given there have been significant sunk costs "without achieving the expected returns in service delivery" [customer letter 28th Dec 2024], [customer letter 30th Dec 2024]. The IR expects NERL to demonstrate how alternative options to the iTEC FDP have been considered in future SIP engagement.
Responsiveness	<ol style="list-style-type: none"> 1. Draft SIP25 was published on 28 Nov 2024 for Customer Consultation, which was followed up by a consultation meeting on 5th Dec 2024. NERL set out questions throughout Draft SIP25 to identify "where" and "what" type of additional information customers would like to see [pg7]. The IR recognises this is a proactive initiative to understand customers' needs. 2. During the SIP25 consultation, customers requested further clarity and detail on (a) the approach taken to optioneering for NAS Flight Data Processor (FDP), (b) the causes of delay to Stream 4 (Main Voice Service) in DP En Route and potential impacts to deliveries and (c) the rationale for the change in costs within the Sustainment & Surveillance programme [pg7]. Similar concerns were subsequently raised in customer letters following the release of the Draft SIP25 for Consultation, though NERL has explained such requests may be answered in the TCAB on 27th February 2025.* 3. NERL has reintroduced the "portfolio cost waterfall chart" [pg41] as it was highlighted as being highly appreciated by customers [customer letter 30th Dec 2024]. 4. A review of the evidence pack shows NERL has responded to customers in good time, and customers have mostly appeared content with the extent of engagement. 5. NERL provided the IR with a helpful account of how specific IR opinions on iSIP24 have been considered and actioned ahead of the review.

Overall CAPEX Engagement Assessment (4/4)

CRITERIA	OVERARCHING IR OPINION
Mitigating & Corrective Actions	<ol style="list-style-type: none">1. Customers continue to make requests for the presentation of a multi-year view of the RAB, and contributions that each investment project makes to the RAB [customer letter, 1st Jul 2024] [customer letter 28th Dec 2024, SIP25 pg7]. The inclusion of the RAB for increased transparency is expected to be made in iSIP25, as promised [pg8].2. NERL's responses to customers and revisions made between the Draft SIP25 for Consultation and the final SIP25 do not appear to fully address requests for (a) optioneering relating to the consideration of alternatives to the iTEC long-term strategy, and (b) detailed justification to be provided to explain cost increase in Sustainment and Surveillance programme. Though explanations for the £21m increase are provided [pg40], the further £46m increase relating to the interim FDP requires further substantiation.3. NERL has made some welcome amendments to SIP25 following specific IR opinions on iSIP24.

SIP25 CAPEX Engagement Score

Programme	CAPEX value (weight)	User Focus	Optioneering	Responsiveness	Mitigating & corrective actions	Overall score
Sustainment & Surveillance	£231m	2	1.5	3	2.5	2.31
DP En Route & Voice	£186m	3	-	3	2.5	2.83
Airspace & Operations Enhancements	£80m	2.5	2.5	-	3	2.67
Information Solutions	£56m	3	-	-	3	2.88
Common platform	£31m	2	-	3	2	2.33
Property & Facilities Management	£19m	3	-	3	3	3
Oceanic	£24m	2	-	3	2.5	2.58
ATC Training Transformation*	£8m	3	-	2.5	2.5	2.67
CAPEX ENGAGEMENT SCORE						2.58



Individual Programme Assessment

Sustainment & Surveillance (1/4)

SIP25 contents

LTIP dashboard

- The LTIP dashboard [pg27] shows that the programme remains at amber status. NR23 forecast spend has increased to £300m (£233m in iSIP24, £231m in SIP24), over the NR23 baseline figure of £231m. Two out of six milestones are on track (three out of six in iSIP24 and two out of eight in SIP24).

Description

- The section highlights that a robust investment and maintenance strategy is needed for NERL's numerous highly complex and interdependent sub-systems and services, that are part of the UK's critical national infrastructure. The investment focus remains on "maintaining safety and resilience in operation and ensuring that future resilience risks are avoided or mitigated in good time" [pg45].
- NERL has included the introduction of an "interim FDP" to replace NAS under its Sustainment & Surveillance programme. This activity includes the identification of the ERAM FDP as NERL's favoured option at this stage [pg17].
- The increase in Sustainment & Surveillance CAPEX for NR23 includes a "transfer of £12m from the funding set aside within the Common Platform programme for NAS FDP resilience" [pg16].
- In the context of the need to sustain and replace NAS, NERL describes that the "NAS FDP's software architecture also constrains our ability to deliver the UK Airspace Modernisation Strategy (AMS) and comply with future operational mandates such as Free Route Airspace and other initiatives." [pg16].
- NERL presents four options to evolve its current FDP capability before the iTEC SkyNex product is ready for deployment [pg17].
- In relation to CAPEX increases for the ERAM FDP, NERL states that they "are aware that the scale of this investment is likely to be significant and we have set an initial forecast cost of £46m for the interim FDP in NR23 which remains an early estimate of the effort required in NR23; this will run through into NR28" [pg29].
- Under Sustainment & Surveillance investment, NERL states "We subsequently provided a further update in SIP24 (where we first explained we were undertaking a proof of concept) and in iSIP24 on the need to consider a range of options to maintain an appropriate FDP capability" [pg16].

Sustainment & Surveillance (2/4)

SIP25 contents (cont.)

Benefits

- NERL claim the benefits of “proactive investment” in this programme will minimise the risk of technical failures and thereby ensure the continued provision of safe and resilient services to customers. They also highlight how investment will enable regulatory and legislative compliance and contribute to reducing greenhouse gas emissions.
- NERL state that they are developing a new set of “resilience measures” to include various indicators of risk and service performance, aimed at improving investment decisions within the sustainment and surveillance programme [pg45]. They had intended to share the model in SIP25, however this appears to be delayed to roll out in the coming months” [pg37].

Milestones

- SIP25 reports 5 milestones: Node Core Replacement FOS (T13), Dry Air Coolers (DACs) and Chillers Deployment 1 (T3), Prestwick UPS Replacement (T1), Tiree DVOR Replacement (T14), and Dry Air Coolers (DACs) Deployment 2 (T9) as being complete [pg45,46].
- Milestones of GDF radome replacement (T15), Tiree Radome Replacement (T2), Surveillance Deployment 1 (T5), Surveillance Deployment 2 (T10), Surveillance Deployment 3 (T12) have all slipped in comparison to iSIP24, with explanations provided under Sustainment & Surveillance Current Progress section [pg46,47].

Risks

- NERL highlights an inherent risk of reduced service quality due to unexpected critical asset failures or diversion of effort to rectify emergent issues with critical assets. Mitigation strategies include proactive monitoring, planning for potential failures, and increasing operational technical resources [pg47].
- An additional risk is identified around “delivery capacity across a small number of niche skill areas”, which could potentially lead to schedule delays if resources are unavailable. Mitigation efforts include recruiting additional specialists and managing supplier cost increases through robust negotiations [pg47].

Sustainment & Surveillance (3/4)

IR opinion

User focus

1. The presentation of the proposed introduction of ERAM is unclear, with it often described as an activity “to replace NAS”, despite being included under the Sustainment & Surveillance programme. The presentation of the interim FDP separately from NERL’s sustainment activities in future SIP/iSIP documentation would facilitate tracking of milestone delivery and costs.
2. The ERAM FDP has been described as an “FDP module” in previous engagement, but more as an “interim FDP” in SIP25 [pg16,21,29,40]. Future consistent use of terminology in relation to ERAM would provide greater clarity to non-technical audiences.
3. NERL’s explanation of the increase in Sustainment & Surveillance CAPEX is beneficial for tracking programme costs [pg40,47], although it is unclear why budget for NAS FDP resilience was contained within the Common Platform programme from the outset, given the scope of this programme is to deliver the iTEC SkyNex product and not to sustain NAS.
4. NERL should provide further detail on which parts of the AMS can be achieved with NAS, could be achieved with ERAM, and could be achieved with the various versions of iTEC (v1, v2, SkyNex (v3)) as well as the impact on the delivery of airspace user benefits. This was supported by a customer request, with regards to the sustainment of NAS and the iTEC strategy, for NERL to set forward in detail the “impact to airspace modernisation projects and future ACPs including London TMA modernisation” [customer letter 30th Dec 2024].
5. The suggestion that early indication that iTEC SkyNex would not meet the timescales to replace NAS was given in SIP24 [pg16] is misleading. NERL simply stated “Until the strategic iTEC SkyNex product is ready, we will need to maintain our FDP and other systems. In parallel to the iTEC SkyNex development activities, we have worked with suppliers to prepare Proof of Concept options to evolve and increase the resilience of our current FDP service” [SIP24, pg31].

Optioneering

6. NERL’s optioneering relating to the evolution of its NAS FDP lacks a clear assessment matrix, with details such as costs, delivery timescales and airspace user benefits for each option. The assessment criteria also does not appear to be applied consistently across the options (e.g. cost/expense is only mentioned as a factor under option 2) [pg17] and allows for limited discussion around points identified as relevant for optioneering in CAP 2597b.

Sustainment & Surveillance (4/4)

IR opinion (cont.)

Optioneering (cont.)

7. In reference to Option 1 (Port/Translate Software) NERL states that “following three independent reports, this option has been considered technically infeasible” [pg17]. Given the scale of the new NAS replacement approach, NERL could provide these reports to stakeholders for the sake of transparency.
8. Option 3 (ERAM) is presented as the “recommended” [pg17] option out of the four options presented as opposed to ‘preferred’, which creates the impression that this option has been formally endorsed. If this is the case, then additional evidence should have been provided to demonstrate this.
9. Given NERL was able to make some sort of initial assessment of the scale of costs to account for the £46m increase to NR23 CAPEX, it is unclear why nothing was included in the assessment of the costs in its optioneering [pg16,17].

Responsiveness

10. Two customers requested additional detail behind the cost increase of above the baseline forecast for Sustainment & Surveillance included in SIP25 Draft for Customer Consultation. NERL responded in a timely manner, with additional information, which was subsequently added to the final SIP25.

Mitigating & corrective actions

11. NERL provided additional detail explaining the increase in cost of £21m (between iSIP24 and Draft SIP25 for Consultation) [pg40] citing (a) £14m for cost pressures in the supply chain related to the long-range radar replacement project, (b) £4m accelerated from NR28 for remote towers, (c) £2m for additional Flight Data Services upgrades to Prestwick systems and (d) £1m for Support Informational Retrieval System upgrade.
12. However, a subsequent further increase of £46m (between the Draft and Final SIP25) as an “early adjustment” for the interim FDP to replace the current NAS FDP is presented as an “estimate of the effort required in NR23” [pg29,40] necessitates further proportionate detail and justification. Furthermore, the statement seems misaligned with messaging around the maturity of NERL’s plans in this area (e.g. “no firm delivery decision on our approach has yet been taken” [pg17] and the work stated to still be in the “identify” phase [pg18]).
13. The IR welcomes work on “resilience measures” and hopes to see customer benefits presented in future engagement material.

DP En Route & Voice (1/2)

SIP25 contents

LTIP dashboard

- The LTIP dashboard [pg27] shows that the programme remains at red status. NR23 forecast spend has reduced to £142m (£196m in iSIP24, £186 in SIP24), below the NR23 baseline figure of £186m. None of the three milestones are on track (one out of three in iSIP24 and one out of three in SIP24).

Description

- The section continues to highlight NERL's commitment to "replacing ageing infrastructure (systems) and providing new technology to meet the needs of customers and wider industry stakeholders" [pg49]. The new technologies will bring "greater consistency, flexibility and resilience to meet future capacity and enable efficiencies" [pg49]. The programme continues to be reported under smaller independent streams: Stream 1, Stream 2, Stream 3, Stream 4 and Stream X.
- The outcome of the formal review of the validation of Stream 1 is expected to be complete by early Q2 2025 [pg21]
- NERL has indicated that it is "very unlikely" to deliver Stream 1 PCUA FOS, AC FOS, and an interim FDP concurrently due to constrained delivery capacity. As a result, NERL has deferred AC FOS (along with its associated forecast of £54m) to NR28 to prioritise the delivery of an interim FDP [pg30].

Benefits

- The benefits of the DP En Route & Voice programme are expected to include enhanced resilience, greater interoperability, expansion of free-route airspace, and efficient service delivery. However, these benefits are being reviewed and refreshed to "ensure outcomes and measures are up to date and checked for alignment with the strategic narrative" [pg75].

Milestones

- Delivery of SVS FOS (AC & Mil) (D6) is the only milestone reported as complete under the DP En Route & Voice programme.
- The re-deployment of PCUA FOS (D2) following a validation failure is still reported as "TBC". Challenges with Stream 4 Main Voice System (D8) have seen its delivery slip to Q4 2027 (Q4 2025 in iSIP24). Further, AC FOS (D4) and MVS & SVS FOS at Prestwick (D5) are now forecast for "Post NR23" [pg50].

Risks

- Risks include limited internal delivery capacity, supplier risks relating to quality and timeliness, and the inherent complexity of the programme.

DP En Route & Voice (2/2)

IR opinion

User focus

1. Reasonable descriptions are provided under the DP En Route & Voice Current Progress [pg50], and Project Update [pg52] sections.
2. It is unclear if the previously reported benefits were in alignment with NERL's "strategic narrative", given NERL is now reviewing them.
3. Given the time elapsed since the failed PCUS FOS (D2) validation, it would be beneficial to see growing detail on timescales beyond those provided in iSIP24 to demonstrate progress on the recovery plan.

Optioneering

4. NERL had limited opportunities to demonstrate optioneering for this programme in SIP25.

Responsiveness

5. NERL has responded to customer requests for more detail relating to the causes of delay to Stream 4 (Main Voice Service) and its potential impacts on the stream and other deliveries [pg21,22], noting that the "change to MVS FOS (D8) means the delivery of MVS & SVS FOS in Prestwick (D5) will need to be rephased to follow-on in NR28".

Mitigating & corrective actions

6. NERL has taken account of IR opinions on iSIP24 and has provided additional detail on the specific risks and benefits associated with this programme [pg51, 53]. However, the risk descriptions remain generic.

Airspace & Operations Enhancements (1/3)

SIP25 contents

LTIP dashboard

- The LTIP dashboard [pg27] shows that the programme remains at amber status. NR23 forecast spend has reduced to £74m (£75m in iSIP24, £80m in SIP24), below the NR23 baseline figure of £80m. The number of milestones on track is five out of seven (five out of seven in iSIP24 and four out of eight in SIP24).

Description

- The long-term goal remains the ambitious re-design of UK terminal airspace and the delivery of Cross-Border Free Route Airspace across the UK's high-level sectors.
- The explanatory text at the beginning of the programme section, under the benefits and risks sections, appears to have been largely carried forward from previous SIP24 and iSIP24 with a few minor updates [pg54].
- iSIP24 presented three recovery options for the re-deployment of the AMAN Headbranch (A21), SIP25 reports this project is to complete planning for re-deployment once specialist resources used for TBS deliveries are available. The "high-level planning assumption for the redeployment of AMAN Headbranch (A21) is Q1-26" [pg57].

Benefits

- This section highlights the contributions made by NERL's airspace plan towards the UK's Airspace Modernisation Strategy, and its role in delivering customers' priorities of increased network capacity, enhanced safety, improved environmental performance and reduced fuel burn.
- Benefits are presented in Appendix B with the quantified benefits across safety, reduced service delay and environment presented per milestone [pg74].

Risks

- The risks relating to this programme are largely carried forward from previous SIP24 and iSIP24. Covering the risks of public misunderstandings owing to the complexity of planned future airspace change proposals, and as a result of the CAP1616 airspace change process, interdependencies with other sponsors. Noting these risks to be outside of NERL's control, they are mitigated through collaboration with FASI sponsors and ACOG.

Airspace & Operations Enhancements (2/3)

SIP25 contents (cont.)

Milestones

- OSEP Deployment 10 (A30) was successfully delivered in November 2024. Heathrow TBS Pairwise (A4) was successfully delivered on 10 Dec 2024.
- ScTMA (A13), London Airspace South (LAS) (A17.1), and MTMA (A18) were delayed due to partner airports having to rework various parts of their CAP1616 submissions [pg57]. TBS Gatwick (A7) is still facing several challenges but is on track for March 2025 deployment.
- The delivery of all milestones relating to cross-border Free Route Airspace, is delayed for an undefined time period due to their dependency on the “delivery of iTEC v2 through PCUA FOS (D2) and AC FOS (D4)” [pg57]. NERL is exploring an opportunity to deliver an incremental expansion of internal Free Route Airspace in the remainder of non-FRA Scottish sectors (FRA D3) though it is not technically dependent on iTEC v2, schedule deconfliction needs to be fully understood before committing to the change [pg57].
- Only four milestones; AMAN Headbranch (A21), Gatwick TBS Advanced Mixed Mode (A7), Operational Service Enhancements Project (OSEP) Deployment 11 (A31) and Interim XMAN HMI (A6) are forecasting delivery by the end of CY2027 (end of NR23).

Airspace & Operations Enhancements (3/3)

IR opinion

User focus

1. Only four milestones; AMAN Headbranch (A21), Gatwick TBS Advanced Mixed Mode (A7), Operational Service Enhancements Project (OSEP) Deployment 11 (A31) and Interim XMAN HMI (A6) are forecasting delivery by the end of CY2027 [pg43,44]. The majority of project milestones are now reporting forecasts beyond NR23, without detailed explanation of impacts on customers.
2. The IR is concerned by the undefined length of delay to Cross-Boarder FRA milestones due to delays on the DP En Route programme. While NERL identified the need to deploy AC FOS and PCUA FOS to deliver full Cross-Boarder FRA benefits in previous material, the risk to the airspace and operational enhancements programme was not clear. NERL should ensure that significant cross-programme interdependencies and risks are adequately signposted in future SIP material.
3. While the UK Airspace Design Service (UKADS) consultation is referred to in the portfolio risks [pg42], the specific risks for the programme are not identified. The IR would expect to see such risk assessment considering the potential significant impact the proposal for a UKADS could have on NERL's delivery of airspace change.

Optioneering

4. SIP24 stated there was an opportunity to explore earlier delivery of XMAN HMI. Subsequently, iSIP24 stated the costs of faster delivery would have been comparatively more expensive. SIP25 claims interim cost-efficient options continue to be explored, though resources are currently prioritised on TBS and AMAN deliveries [pg57]. It is unclear when these options for delivery will be presented to customers.
5. It is unclear how options relative to the re-deployment of the AMAN Headbranch (A21) set out in iSIP24 [iSIP24 pg44] have been transposed in SIP25 and how customer engagement and feedback was used in the process.

Responsiveness

6. NERL had limited opportunities to demonstrate responsiveness for this programme in SIP25.

Mitigating & corrective actions

7. NERL has taken account of IR opinions on iSIP24 and has provided additional detail on the nature benefits associated with this programme [pg54].

Information Solutions (1/2)

SIP25 contents

LTIP dashboard

- The LTIP dashboard [pg27] shows that the programme remains at amber status. NR23 forecast spend has reduced to £39m (£43m in iSIP24, £39m in SIP24), below the NR23 baseline figure of £56m. The number of milestones on track is one out of two (the same in iSIP24 and zero out of two in SIP24).

Description

- This section captures the importance of NERL's IT solutions in ensuring business resilience through non-operational information systems. NERL highlights how the cloud-first approach enables efficient IS service provision, allowing the workforce to work from various locations and reduce demands for office space [pg60].
- The forecast for the Information Solutions programme was reduced by £4m reflecting "realistic supplier capacity and refined business needs" [pg61].

Benefits

- The benefits of the programme "remain as stated in SIP23". This programme aims to reduce risks to NERL's business continuity and resilience by ensuring the availability of IS services; whilst remaining compliant with commercial, legal, and regulatory obligations; and managing any cyber-security threats.
- Two milestones IS1 and IS4 are presented in Appendix B, with "estimated resilience" benefits [pg78].

Milestones

- Two milestones IS3 and IS2 have been completed in July 2023 and September 2024 [pg60], respectively. An additional milestone, MS Windows 11 Upgrade (IS4) has been introduced in SIP25 [pg29].
- The delivery of the previously reported milestone of SAP Core Upgraded (IS1) remains on track as forecasted for Q4 2025. However, the project remains as Amber owing to defects identified during Trial Data Migration and Scenario Testing, and the costs remain within budget [pg61].

Risks

- NERL states there is an emergent risk of tasking, which could require additional or diversion of funding to implement resolutions in the case of an occurrence of a significant cyber event. These are managed by maintaining close links with the National Cyber Security Centre and balancing resource demand at the portfolio level utilising internal governance priorities and agreements with specialists and recruitment consultants [pg61].
- NERL mentions the "demand for enterprise IT investment may exceed the allocated financial envelope" [pg61].

Information Solutions (2/2)

IR opinion

User focus

1. Reasonable information seems to have been provided relative to the programme's size and importance.
2. The Information Solutions programme and its associated milestones are primarily internal to NERL, with limited articulation of how resilience benefits translate to customers beyond a general statement that they ensure the availability of services [pg60]. The reported benefits appear more focused on enhancing NERL's non-operational business resilience rather than improving resilience in customer service delivery.

Optioneering

3. NERL had limited opportunities to demonstrate optioneering for this programme in SIP25.

Responsiveness

4. NERL had limited opportunities to demonstrate responsiveness for this programme in SIP25.

Mitigating & corrective actions

5. NERL has taken account of IR opinions on iSIP24 and has provided additional detail on individual milestone benefits in Appendix B [pg78].

Common Platform (1/2)

SIP25 contents

LTIP dashboard

- The LTIP dashboard [pg27] does not report any RAG status for the programme. NR23 forecast spend has reduced to £19m (£31m in iSIP24 and SIP24), below the NR23 baseline figure of £31m. No milestones are reported as part of this programme.

Description

- The programme re-iterates NERL's confidence in "SESAR concepts implemented with the iTEC Flight Data Processor (FDP)", as the "right solution for the overall transformation of NERL's upper and lower operations, enabling capabilities such as trajectory-based operations (developed through SESAR)" [pg63].
- The Common Platform does not report a programme RAG status as it is currently "not a live capital programme" [pg27]. The CAPEX reported under this programme mainly relates to investments being made within the iTEC Collaboration for the development of the iTEC SkyNex product (next-generation Flight Data Processor (FDP) and Controller Working Position (CWP)) [pg63].
- The deployment timeline for iTEC SkyNex has been delayed from "during NR28" in iSIP24 to "in the region of 2035" [pg63] in SIP25.
- There has been a transfer of £12m funding set aside within the Common Platform for NAS FDP resilience to the Sustainment & Surveillance programme [pg16, 29, 40, 64].

Benefits

- Reported benefits include a modernised technical architecture, modular applications across operations, cost efficiencies, greater service resilience, reduced workload, improved safety and service, environmental benefits through trajectory-based operations and free route airspace [pg63].

Risks

- Risks continue to relate to ensuring sufficient ATC resourcing to ensure NATS's active participation and influence in the iTEC collaboration, along with balancing the service delivery and operational demands of NERL. However, these risks are not explained in extensive detail as was the case previously.

Milestones:

- Cycle 1 contract agreements have been signed by iTEC SkyNex partner ANSPs, transitioning from the Definition Phase to the Cycle 1 Build Phase, with a final Factory Acceptance Test planned in Q4-26 (which will be tracked as a SIP milestone for customers to have visibility of progress [pg64]).

Common Platform (2/2)

IR opinion

User focus

1. It remains unclear why this programme is reported differently and is not considered a “live capital programme managed by NERL” despite ongoing CAPEX expenditure and its critical role in delivering the future architecture.
2. The IR is concerned that the £12m of CAPEX transferred from Common Platform into the Sustainment & Surveillance programme was contained within the Common Platform programme from the outset, given NERL describe that it was allocated for “NAS FDP Resilience” [pg3, 22, 45, 63], which is outside of the programme scope.

Optioneering

3. Given the further delay revealed in SIP25 to the iTEC SkyNex delivery and the ongoing uncertainty expressed relating to its deployment timelines (i.e. 2035+), two customers have requested NERL’s assessment of the alternatives to iTEC SkyNex or options to accelerate the project forward given the further delay to the iTEC SkyNex product [customer letter 28th Dec], [customer letter 30th Dec 2024]. The IR expects this to be addressed in future SIP engagement.

Responsiveness

4. NERL has responded to customer queries specifically relating to Common Platform and iTEC, as evidenced in NERL’s response to stakeholder letters.

Mitigating & corrective actions

5. The optioneering assessment requested in customer letters relating to the continued pursuit of the iTEC collaboration strategy was not present in either NERL’s responses to those letters or added to SIP25 between the Draft for Consultation and Final versions. The IR awaits the provision of this assessment.

Property & Facilities Management (1/2)

SIP25 contents

LTIP dashboard

- The LTIP dashboard [pg27] shows that the programme changed to green RAG status. NR23 forecast spend has remained at £38m (£38m in iSIP24, £27m in SIP24), over the NR23 baseline figure of £19m. The one pending milestone was reported as completed in iSIP24.

Description

- NERL highlights how they continue to progress the 'right-sizing' of their estate following the adoption of agile working practices and upgrade/replacement of accommodation, security, logistics and catering systems at Swanwick and Prestwick.
- NERL describe how the decision to install solar panels through its facilities management partner instead of buying green electricity or using a third party, was due to high distribution costs and the critical nature of their infrastructure. NERL acknowledged they could have consulted more closely on environmental options before proceeding with the solar panels project [pg66].
- A study informing the next tranche of environmental initiatives, including environmental modeling, was conducted, whose outputs will be used to inform plans and priorities for investment into NR28, these will be consulted with customers and the regulator in due course [pg66].

Benefits

- The environmental benefits of installing solar panels at Swanwick and Prestwick and their surrounding areas, alongside 15 freehold remote CNS sites, are estimated to generate 7m kWh of renewable energy per annum, equivalent to 1.7 kT of carbon savings [pg65]. NERL estimate this to translate into an OPEX savings of around £1.4m annually when all solar panels are fully installed and operating by the end of 2026.

Risks

- The most significant risk of this programme is related to cost increases, owing to general and construction cost inflation, and significant supply chain challenges. For example, between 2019 and 2023 the cumulative increase has been 28% on construction costs [pg66].

Milestones

- Milestone P1 Atlantic House Technical Design was completed in line with its forecast in Sep 2024.
- Two new milestones of Prestwick New Support Building Construction Complete (P5) and Solar Panel Installations Complete (P4) have been introduced with forecast dates of Q3 2025 and Q2 2026, respectively.

Property & Facilities Management (2/2)

IR opinion

User focus

1. The IR commends the translation of energy saving benefits into OPEX, which helps customers understand the extent of benefits to them.
2. Whilst NERL specifies the risk of cost increases owing to general inflation and construction cost inflation, the programme risk section remains largely generic with limited detail on how risks have matured and evolved since the last SIP/iSIP updates.

Optioneering

4. NERL had limited opportunities to demonstrate optioneering for this programme in SIP25.

Responsiveness

5. NERL has adequately responded to the IR's comment requesting justification for a previous £8m uplift relating to the Property and FM forecast contained in iSIP24 [pg66].

Mitigating & corrective actions

6. NERL has implemented a translation of environmental benefits into customer benefits [pg65] following IR's comment.

Oceanic (1/3)

SIP25 contents

LTIP dashboard

- The LTIP dashboard [pg27] shows that the programme changed to red RAG status. NR23 forecast spend remains at £24m (also £24m in iSIP24 and SIP24), which is equivalent to the NR23 baseline figure. Neither of the two milestones are back on track in SIP25 (having been reported as “on track” in SIP24).

Description

- Investments in this programme remain “focused on transforming information infrastructure for the North Atlantic service with strategic partners NAV Canada and Aireon to deliver the ICAO NAT Vision” [pg68].
- A shared roadmap of sustainment and enhancement activities (service and technical upgrades) with NAV Canada is expected to be available as a proposal “early this year”, this will then be refined during 2025 and form the “new Oceanic Service delivery roadmap” [pg68].
- NERL identifies an “increased level of resilience risk as legacy hardware and old communications protocols are ageing and becoming increasingly difficult to maintain” [pg69].
- The initiative to modernise MECS will be re-phased to coincide with the re-platforming of the FDP for the Oceanic service, whilst core sustainment will continue to “provide a new hardware and software baseline adding resilience” [pg68].

Benefits

- The benefits reported include maintaining safe and resilient North-Atlantic services such that both Shanwick and Gander have a single shared view of air traffic. The removal of oceanic clearances will harmonise procedures across the North Atlantic, saving time and money spent on training.
- Environmental benefits have been achieved through the introduction of reduced separation standards resulting in CO2 savings. New tools will increase opportunities for the best NAT profile for customers with potential fuel savings and allow ATC resource balancing for more efficient use of staff.
- Appendix B [pg79] only presents “resilience” benefits for the Oceanic programme.

Milestones

- Several issues during the final stages before deployment prevented the Oceanic Clearance Removal (OCR) (O1) transition planned for December 2024. This was previously moved forward by two quarters to Q4 2024 due to system issues at NAV Canada.
- Updates of hardware and software for the oceanic system continue to progress for the deployment of the new operational user workstation (O3) (Q4 2026).

Oceanic (2/3)

SIP25 contents (cont.)

Milestones (cont.)

- Milestones of Message Extraction and Correction System (MECS) modernisation (O4) and Traffic and Workload management tools (O2) are being re-phased beyond the NR23 and into the NR28 period because of capacity limitations at NERL and with strategic partners. This also sees the FDP modernisation (O5) milestone delayed.

Risks

- Risks surrounding resourcing challenges continue to persist, to be mitigated through efficient allocation of resources, balancing supply and demand, and targeted recruitment.
- There is increased resilience and technical risk, as the “legacy hardware and old communications protocols are ageing and becoming increasingly difficult to maintain” [pg69].

Oceanic (3/3)

IR opinion

User focus

1. The IR is concerned to see NERL disclosing a risk that legacy hardware is ageing and becoming increasingly difficult to maintain for the first time in SIP25 as previous risk sections of the Oceanic programme [SIP24 pg33 and iSIP pg56] only reported on “resourcing challenges”.
2. It is unclear to users if the CAPEX costs associated with the milestones of MECS Upgrade (O4), re-platforming of the FDP for the Oceanic service (O5), and New Traffic and workload management tools (O2) have been moved from NR23 to NR28, as the Oceanic programme continues to report an unchanged forecast of £24m for the NR23 period [pg27].
3. The benefits presented in Appendix B are all reported as being “resilience”, which is inconsistent with the programme description [pg68] referring to cost and environmental benefits (realised through oceanic clearance removal, reduced separation standards and best NAT profiles).
4. No clear timeframe is provided for the re-introduction of Removal of Oceanic Clearance (O1) following an unsuccessful transition in December 2024. Stating, “We will revise and issue a new date at the right time” [pg69]. The IR acknowledges that this is a recent development and notes that NERL has maintained ongoing engagement on the issue, but expects updates on a recovery plan to be provided in a timely manner.
5. NERL could make available the “shared roadmap of sustainment and enhancement activities with NAV CANADA” and the “refined new Oceanic Service delivery roadmap” to avoid any ambiguity around expectations.

Optioneering

6. NERL had limited opportunities to demonstrate optioneering actions for this programme in SIP25.

Responsiveness

7. NERL acknowledged the IR’s comment relating to an adjustment to Oceanic CAPEX forecasts for NR23, following the re-phasing of milestones into NR28, stating they will be updated in iSIP25 [pg69].

Mitigating & corrective actions

8. It is unclear to the IR why it was not possible to make the aforementioned adjustments in SIP25.

ATC Training Transformation (1/2)

SIP25 contents

LTIP dashboard

- The LTIP dashboard [pg27] does not report a RAG status for the ATC Training Transformation programme. NR23 forecast spend has reduced to £0m (£8m in iSIP24 and £8m in SIP24), below the NR23 baseline figure of £8m. There are no milestones reported as part of this programme.

Description

- NERL no longer report on the ATC Training Transformation Programme as a separate programme [pg71].
- In iSIP24 NERL state that they “have no capital implementation projects in this programme to be reported on. The intent is to set out the CAPEX scope by SIP25” [iSIP24 pg57].
- In SIP25 NERL state “as noted in SIP25 DfCC, we concluded that there is no significant CAPEX investment that could be effectively made within the next two years at least and we remain focused on operating expenditure initiatives (i.e. through “run the business” opportunities) to improve outcomes” [pg25].

Benefits

- There are no benefits reported for the ATC Training Transformation Programme.

Milestones

- There are no milestones reported for the ATC Training Transformation Programme.

Risks

- There are no risks reported for the ATC Training Transformation Programme.

ATC Training Transformation (2/2)

IR opinion

User focus

NERL have stopped reporting on the ATC Training Transformation Programme.

Optioneering

1. Customers are content with NERL's proposed approach to consult with them should viable options arise that necessitate substantial capital investment to be reintroduced into this programme [customer letter 28th Dec], [customer letter 30th Dec 2024]. The IR agrees with the proposed approach and expects relevant disclosures to be made promptly if such opportunities arise.

Responsiveness

NERL have stopped reporting on the ATC Training Transformation Programme.

Mitigating & corrective actions

NERL have stopped reporting on the ATC Training Transformation Programme.



Annex: Scoring Guidance

Scoring Guidance (1/3)

	POOR (1)	BELOW EXPECTATIONS (2)	BASELINE EXPECTATIONS (3)	EXCELLENT (4)
USER FOCUS	<p>Some delay in providing information to at least some stakeholders, limited early warning of factors that may affect delivery.</p> <p>Unclear, inaccessible or perfunctory provision of information on the CAPEX proposed (and other details, including where practicable what is proposed, cost, delivery timescales and benefits, and any impacts on OPEX) with limited regard for user priorities and resource constraints.</p> <p>Limited additional information provided for material changes to the CAPEX plan and unclear on traceability of changes back to previous plans.</p>	<p>Information provided in a timely but not proactive manner to some/all stakeholders, reasonable early warning of factors that may affect delivery.</p> <p>Reasonably clear, accessible and meaningful information provided on the CAPEX proposed (and other details, including where practicable what is proposed, cost, delivery timescales and benefits, and any impacts on OPEX) with reasonable regard for user priorities and resource constraints.</p> <p>The level of substantiation provided reasonably reflects the materiality of the change under consideration but does not allow users systematically to trace changes to the plan to previous plans.</p>	<p>Information provided to all stakeholders proactively and promptly, early warning and (where relevant) explanation of factors that may affect delivery.</p> <p>Clear, accessible and meaningful information on the CAPEX proposed, including where practicable what is proposed, cost, delivery timescales and benefits, and any impacts on OPEX, with good regard for user priorities and resource constraints.</p> <p>Comprehensive substantiation for all material changes to the CAPEX plan under consideration, including clear traceability of all material changes from previous plans.</p>	<p>Information provided to all stakeholders proactively and promptly, excellent quality early warning and (where relevant) explanation of factors that may affect delivery.</p> <p>Extremely clear, accessible and meaningful information on the CAPEX proposed, including where practicable what is proposed, cost, delivery timescales and benefits, and any impacts on OPEX, with excellent consideration of user priorities and resource constraints.</p> <p>Excellent substantiation for all material changes to the CAPEX plan under consideration and comprehensive traceability of all changes from previous plans.</p>

Scoring Guidance (2/3)

	POOR (1)	BELOW EXPECTATIONS (2)	BASELINE EXPECTATIONS (3)	EXCELLENT (4)
OPTIONEERING	<p>Poor information on the overall approach to optioneering adopted (including the need for the programme or the outcomes and benefits that NERL is seeking to deliver).</p> <p>Limited information on alternative options presented (including limited discussion of costs, risks, timing, how benefits would be delivered, OPEX interactions, delivery risks and service quality), limited opportunity for meaningful scrutiny of relative merits of different options by users and IR.</p>	<p>Limited information on the overall approach to optioneering adopted (including the need for the programme or the outcomes and benefits that NERL is seeking to deliver).</p> <p>A range of different options identified where possible (including costs, risks, timing, how benefits would be delivered and explicit consideration of OPEX interactions, delivery risks and service quality), reasonable opportunities for meaningful user and IR engagement and scrutiny.</p>	<p>Good information on the overall approach to optioneering adopted (including the need for the programme and the outcomes and benefits that NERL is seeking to deliver).</p> <p>Good information provided on a range of alternative options where possible (including costs, risks, timing, how benefits would be delivered and explicit consideration of OPEX interactions, delivery risks and service quality), good opportunities for meaningful user and IR engagement and scrutiny.</p>	<p>Excellent information on the overall approach to optioneering adopted (including the need for the programme and the outcomes and benefits that NERL is seeking to deliver).</p> <p>Excellent information provided on alternative options where possible (including costs, risks, timing, how benefits would be delivered and explicit consideration of OPEX interactions, delivery risks and service quality), extensive opportunities for meaningful user and IR engagement and scrutiny.</p>

Scoring Guidance (3/3)

	POOR (1)	BELOW EXPECTATIONS (2)	BASELINE EXPECTATIONS (3)	EXCELLENT (4)
RESPONSIVENESS	<p>Perfunctory response to at least some user and IR submissions, insufficiently clear or untimely explanation how these submissions have been accounted for.</p>	<p>Generally constructive response to user and IR submissions, reasonably clear and timely explanation to some/all stakeholders of how these submissions have been accounted for.</p>	<p>Engaged and constructive response to user and IR submissions, clear and timely explanation to all stakeholders of how these submissions have been meaningfully accounted for.</p>	<p>Engaged and highly constructive response to user and IR submissions, very clear and timely evidence to all stakeholders that submissions have been meaningfully accounted for after substantial consideration.</p>
MITIGATING AND CORRECTIVE ACTIONS	<p>Limited evidence of mitigating and/or corrective actions, where appropriate, following user and IR submissions. Actions not communicated to at least some stakeholders in a timely manner.</p>	<p>In most cases reasonable mitigating and/or corrective actions taken, where appropriate, following user and IR submissions. Actions communicated to some/all stakeholders in a timely manner.</p>	<p>In almost all cases appropriate mitigating and/or corrective actions taken promptly, where appropriate, following user and IR submissions. Actions clearly explained to all stakeholders in a timely manner.</p>	<p>In all cases appropriate mitigating and/or corrective actions taken promptly and proactively, where appropriate, following user and IR submissions. Actions very clearly explained to all stakeholders in a timely manner.</p>



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