

NATS (En Route) plc SIP 2018

Independent Reviewer Report

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19 July 2018

NOTE

This document has been produced for the CAA as part of Condition 10 to the NATS (En Route) [NERL] Licence and is based on ongoing observations and research by the CAA Independent Reviewer Grant Bremer.

This report summarises the author's findings and opinions and represents a snapshot of the situation as of 19 July 2018.

Background

Condition 10 of the NATS (En Route) plc [NERL] Air Traffic Services Licence dated 29 June 2016 requires NERL to prepare a Service and Investment Plan (SIP) that refers to the most recent business plan and the related airspace and technology programmes each year. Condition 10 (3b) requires NERL to provide an Interim SIP that, by reference to the most recent business plan and technology and airspace plans, updates NERL’s investment plans, delivery against programme milestones and any material change in NERL’s expectations regarding the level and quality of the provided services. The Interim SIP is required no later than 30 June each year from January 2017.

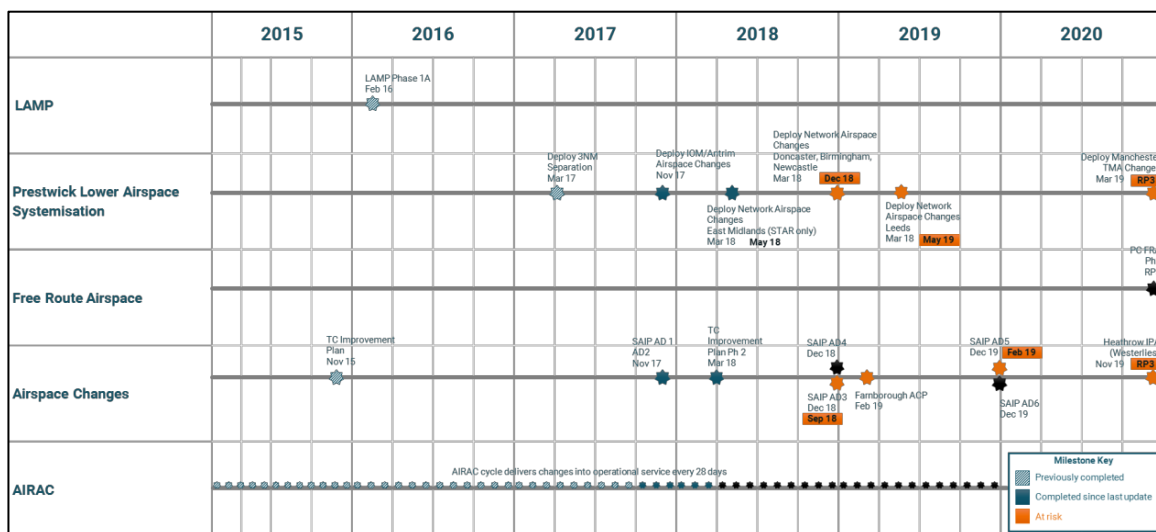
Condition 10(6) requires NERL to provide, and publish, an outline technology programme for the period January 2020 to December 2024. Furthermore, Condition 10(8) requires NERL to provide, and publish, an outline of options for implementing lower level airspace changes in the London terminal and related airspace redesign area for the period January 2020 to December 2024.

NERL submitted its Interim SIP 18 and Airspace and Technology programmes to the CAA on 29 June 2018 in accordance with these requirements of Condition 10.

INTERIM SIP 18

Airspace Plan

The Airspace update in the Interim SIP18 indicates that limited progress has been made in the areas under NERL’s control. Moreover, several milestones in the agreed plan that depend upon airports have slipped. The updated milestone report¹ is shown as:



NERL has stated² that “Many of the low level airspace projects within the Airspace Programme are being negatively impacted by external dependencies, notably airports, making it difficult to keep the programme on track to deliver planned outcomes and benefits”. Specific Airspace Plan slippages reported by NERL are:

- Independent Parallel Approaches (IPA) for Heathrow Airport has been delayed until RP3 due to the need to de-conflict Heathrow’s planned IPA consultation from the Department for Transport’s (DfT) second consultation on the Airports National Policy Statement (NPS);
- Network deployment, changing the SIDs & STARs into East Midlands, Doncaster,

1. Page 13 of 42, Update on RP2 Capital Investment Plan (2015- 2019) for Condition 10 – June 2018.

2. Ibid.

Birmingham, Newcastle and Leeds Airports, is undergoing some minor re- planning to align the revised dates each airport is targeting for their own changes;

- Manchester TMA (MTMA) consultation process now making it impossible for the airports to meet the requirement to make airspace change in RP2. NERL has currently paused work on this deployment pending final requirement definition and scope confirmation;
- Swanwick Airspace Improvement Project (SAIP) has successfully implemented many aspects of the plan, with delays to West airspace (AD5) due to the increased timescales for consultation necessitated by the introduction of CAP 1616 causing slippage of deployment from March 2019 to December 2019.

NERL asserts that *“whilst these changes affect the benefit profile, they don’t impact the final benefit delivered nor delivery of the technology programme”*.

NERL has reported costs for the Airspace Plan to be³:

£m outturn prices	RP2				RP3				
	C10 Baseline	Moved to RP3	New Scope	Savings	C10 2018	Moved to RP3	Increased Cost	RP3 Impact	Included in IBP
LAMP	6				6				n/a
PLAS	6	(1)	1		6	1	1	2	Yes
FRA	13	(2)			11	2		2	Yes
Airspace Changes	21	(3)	1	(2)	17	3	1	4	Yes
AIRAC	11			(2)	9				n/a
Airspace Total	57	(6)	2	(4)	49	6	2	8	

The key changes to the airspace programme lie in the following:

- **PLAS:** In RP2 additional scope of £1m was added for the ScTMA deployment and £1m was moved into RP3 at increased cost due to the Manchester TMA consultation delay;
- **FRA:** This project will deliver in RP3 after DP En Route and the optimum plan for delivery has meant that £2m of scope was reduced in RP2 and transferred to RP3 and included in the existing plan for RP3;
- **Airspace Changes:** As part of ongoing continuous improvement programme activity in airspace change (SAOP and SAIP) was merge and rationalise resulting in a £2m saving in RP2. An early assessment of the requirements for future airspace change indicated the need for a revised capability for airspace design that includes a high level of automation. The Automated Airspace Design project has developed from that scoping and needs to be completed in RP2 in order to be ready for use in RP3; this scope change has caused cost growth of £1m. The Heathrow consultation date change has caused the movement of £3m for IPA plus increased cost of £1m due to the delay into RP3;
- **AIRAC:** £2m saved through the additional efficiencies and collaboration with linked technology projects to deliver a saving in RP2.

NERL also stated⁴ that *“the airspace programme has moved £6m of activity from RP2 to RP3. However, this should be offset by the additional scope incorporated into RP2 resulting in savings of £4m delivered within RP2”*.

Technology Plan

The Interim SIP 18 shows that demonstrable progress has been made but that there has also been considerable change to the overall programme.

3. Page 8 of 42, Update on RP2 Capital Investment Plan (2015- 2019) for Condition 10 – June 2018.

4. Ibid.

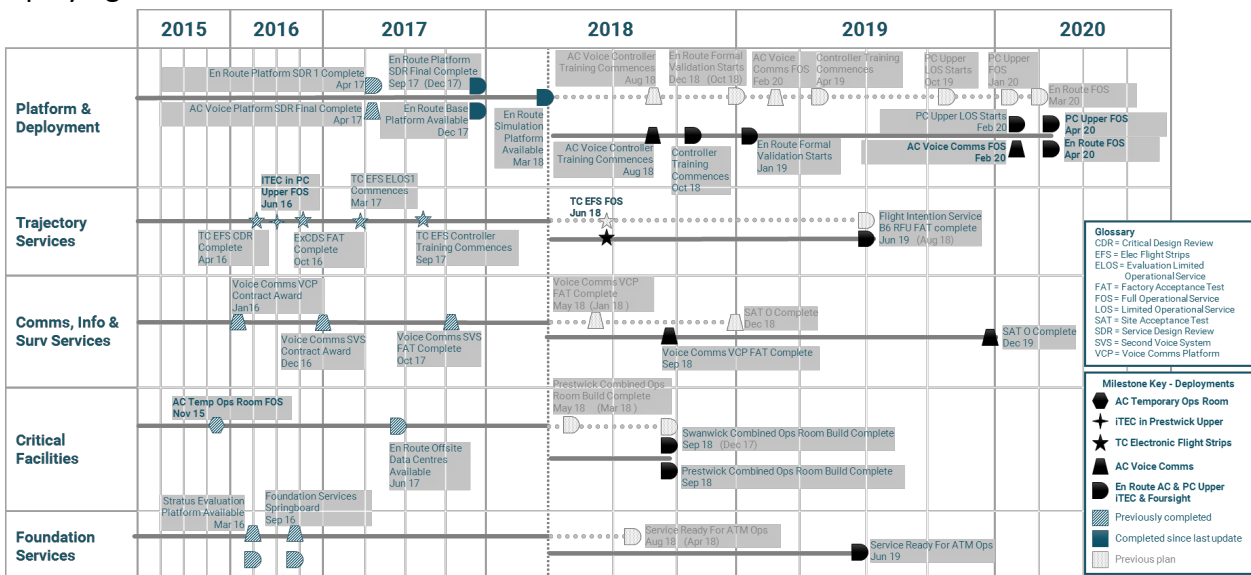
DSESAR

NERL report⁵ that at the end of 2017 “a number of ‘early warning’ alarms and risks became visible” These included:

- Possible delays to the core infrastructure from their supplier;
- Concerns with the voice system supplier’s ability to complete FAT on the main voice system (MVS) on time;
- Recommendations from the Service Design Review (SDR);
- Lessons learnt from ExCDs; and
- The need to ensure adequate time was made available for NERL engineers to gain experience with the technology before ‘go-live’.

One of the milestones at risk is the delivery of STRATUS (the new virtualised technology platform all the applications will run on) which is critical to delivery of both DP En Route and DP Voice Programmes. To minimise the impact to the delivery schedule of DP En Route, DP Voice has been re-planned and is now closely aligned with En Route. Additionally this is likely to reduce the overall rate of scale and change experienced by controllers at the units; this is a considerable upside to the change. The original plan estimated a significant training requirement for the delivery of the components of DP Voice. This was one of the factors that determined a separate deployment point distinct from DP En Route for the new voice systems. As the voice systems and interfaces have been developed, an opportunity has arisen to reduce the scale of the training required thereby enabling the compression of its deployment in conjunction with DP En Route.

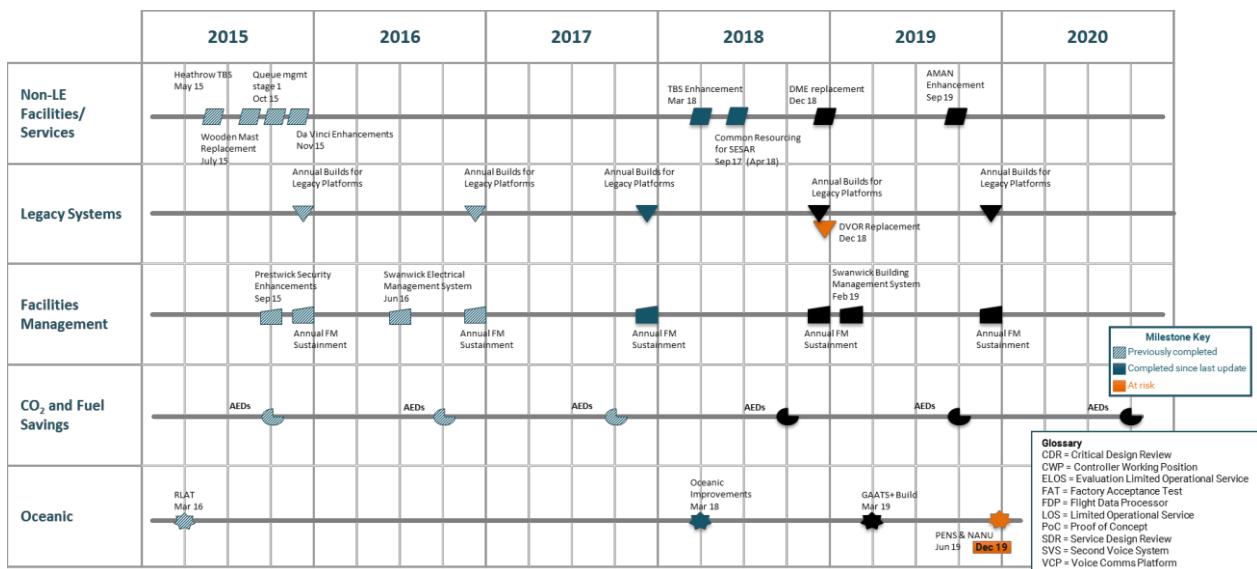
NERL has worked with its DSESAR suppliers and its internal stakeholders in order to establish the most viable delivery plan and agreed that the revised DP Voice O Date milestone will be February 2020 and the revised DP En Route O Date milestone will be April 2020. The milestone update for Deploying SESAR⁶ is:



Current Systems

The Current Systems programme is reported to be broadly on plan with some minor slippages. The summary milestone report for Current Systems⁷ is:

5. Page 16 of 42, Update on RP2 Capital Investment Plan (2015- 2019) for Condition 10 – June 2018.
 6. Page 18 of 42, Update on RP2 Capital Investment Plan (2015- 2019) for Condition 10 – June 2018.
 7. Page 22 of 42, Update on RP2 Capital Investment Plan (2015- 2019) for Condition 10 – June 2018.



Programme Cost Update

NERL report whilst overall programme costs remain within the agreed cost envelope, there has been re-profiling and rationalisation of activities, as well as use of the agreed contingency funding. The latest summary of costs⁸ is:

	Actual 2015	Actual 2016	Actual 2017	Forecast 2018	Forecast 2019	Forecast RP2	C10 Baseline RP2	Delta RP2
Airspace	10	5	8	8	18	49	57	(8)
Platform & Deployment	3	21	30	34	25	113	100	13
Trajectory Services	50	51	47	39	21	208	214	(6)
Comms Info & Surv Services	2	15	14	19	8	58	60	(2)
Critical Facilities	8	1	12	15	3	39	35	4
Foundation Services	5	20	33	32	12	102	72	30
DSESAR Forecast Total	68	108	136	139	69	520	481	39
Non-LE Facilities/Services	22	15	19	18	7	81	83	(2)
Legacy Systems	25	13	12	7	5	62	74	(12)
Facilities Management	7	5	3	4	2	21	21	
CO2 and Fuel Saving				1		1	5	(4)
Oceanic	3	4	4	6	1	18	18	
Current Systems Total	57	37	38	36	15	183	201	(18)
Total NERL Forecast	135	150	182	183	102	752	739	13
Military	6	1		3	3	13	11	2
Total Forecast	141	151	182	186	105	765*	750	15
Contingency					17	17	30	(13)
Total Forecast including Contingency	141	151	182	186	122	782*	780	2

Service Performance

The Interim SIP18 notes that Service Performance is not on track and offers insight into the underlying reasons, plus an assertion that all delays and impact targets will be delivered at the end of 2018, although there is limited discussion on how this will be achieved. NERL report that the summary of Service Quality⁹ is:

8. Page 39 of 42, Update on RP2 Capital Investment Plan (2015- 2019) for Condition 10 – June 2018.

9. Pages 9 and 10 of 17, NERL 2018 Interim Service & Investment Plan, June 2018.

RP2 Service Quality Term	2018 RP2 Regulatory Target	As at end May 2018
C1 Service: Average Delay per flight at the NATS/IAA FAB level (s) ⁴	13.8	18.7
C2 Service: Average Delay per flight (s)	10.8	13.7
C3 Service: Impact Score (Mitigated - weighted seconds per flight) ⁵	23.8	32.9
C4 Service: Variability Score (Mitigated - weighted seconds per flight) ⁶	2,000	196.6
KEA: Horizontal Inefficiency Score at FAB level ⁷	3.09%	3.51%
E1 Flight Efficiency: 3Di Score ⁸	28.1	29.8

Figure 6: Year To Date Performance Outcomes to 31/05/2018.

Key	Exceeds target & outside dead-band (where exists)	Achieving target or within dead-band
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Benefits

The Interim SIP 18 does not reflect any significant change in the Benefits area although the Safety and Fuel Savings targets are reported as being missed.

The Interim SIP 18 once again describes NERL's approach to Benefits Management through RP2 in and the use of Benefits Delivery Panels provides a process that NERL believe will ensure that the business and customers will achieve the agreed benefits. The NERL process focuses on monitoring and forecasting benefits through RP2 but is silent on how those benefits will be continued after the RP2 period or what action might be needed to manage activity in order to optimise and drive benefit delivery.

Risks

The Interim SIP 18 update notes delivery and portfolio risks¹⁰ as being:

Delivery Risks:

Risk Name	Description	Impact of Risks	Probability Rating	Impact Rating	Mitigation Actions
Requirements Management	With any new system, the capturing of good quality requirements is key to project success. There is a risk that in such a large scale programme, the complexity of the requirements also increases, which could ultimately affect how clearly scope is defined, which contributes directly to project success.	Re-design of service solutions would extend the projects schedule and increase costs.	Remote	Moderate	In order to mitigate this, there are dedicated requirements capture teams appointed to each programme. The teams undertake modelling of requirements and assessing maturity and completeness prior to significant contract awards. Gate reviews and Deep Dives are also undertaken by independent representatives to verify completeness of requirements throughout project lifecycles.
Resourcing/Training	The traffic growth in RP2 has been far greater than expected and continues to develop. There is a risk that this makes the NERL operations increasingly busy which may limit the ability to take staff out of the operation to evaluate the software and undertake training. This has a direct impact on project success as evaluation timelines extend, and staff may not be able to use new tools when they are implemented. Achievement of benefits is delayed.	An extended training programme would extend the projects schedule and increase costs.	Unlikely	Moderate	Detailed work packages and plans are produced for all RP2 projects, identifying all required resources, effort and dates to deliver all tasks and deliverables. A high profile "people" programme has been created to challenge all resource requirements and identify solutions to solve resource gaps. Strategic Resource Boards are also held monthly to make priority decisions on operation versus programme resource demands.
Managing change/transition	There is a risk that, given the safety critical nature of the operations and the scale of this transformation, coupled with the 24/7 operation, the management of the changes and transition to the new system could be compromised. This is critical to the success of the outcome.	An extended transition period may impact the services available to customers. An extended transition programme would also extend the projects schedule and increase costs.	Remote	Moderate	Detailed transition strategies have been agreed and detailed tactical transition plans will be produced and agreed by internal and external stakeholders. Multiple validation, shadowing and Limited Operational Service (LOS) activities will also be undertaken prior to any final transitions; to ensure all services perform as expected.
Supplier performance	NERL is reliant on the performance of suppliers rather than internal staff for the development of the core system and to support integration into a single platform. There is a risk that, given the unique nature of what NATS does, there are limited suppliers who can provide services to the company. There is also little competition between suppliers, which could lead to complacency.	Poor supplier performances would extend the programme schedule; as corrective actions would be required to be undertaken by the suppliers.	Unlikely	Major	Tender evaluations and detailed contracts have been agreed to ensure selected suppliers deliver on all requirements. Weekly/Monthly reviews are undertaken between NATS and suppliers to monitor and control against the contract baseline targets.
Airspace consultation	Delivery of the programme will rely on successful consultation of proposed airspace changes by NERL and other stakeholders. There is a risk that this process could be delayed if alignment on airspace changes is not reached, which would delay project delivery and deliver benefits late.	Delayed airspace consultations would extend the projects schedule, increase costs and delay benefits to airlines.	Almost Certain	Major	Establishment of the Airspace Change Delivery Group (Chaired by NATS) and the FAS Exec (Chaired by DfT) to seek alignment behind airspace changes during RP2 and RP3. Working with the airports to develop and agree plans for airspace changes.
Complexity of Change	There is a risk that, due to the complexity of the new architecture and capabilities to be delivered, managing the delivery of these will be complicated and challenging. This can be mitigated by developing new approaches to assurance by both NATS and CAA.	Inadequate assurance would extend the projects schedule and increase costs.	Unlikely	Moderate	Regular meetings between NATS and SARG to ensure both organisations have clear awareness of project scope, solutions, assurance plans, tasks and dependencies between both organisations. Workshops to be held between NATS and SARG to gain an understanding of the different approaches to be undertaken for delivering the required assurance.


10. Page 36 and 37 of 42, Update on RP2 Capital Investment Plan (2015- 2019) for Condition 10 – June 2018.

Portfolio Risks:

Risk Name	Description	Impact of Risks	Probability Rating	Impact Rating	Mitigation Actions
Benefit and Delivery	As a result of scope change, technical difficulties, supplier and other delays, or other project related issues, there is a risk that NATS is unable to deliver the full benefits (including Safety, Service and Value) associated with the change Portfolio.	The impact of this would be financial penalties and Opex increases beyond the target value. In addition, safety is considered a key company priority, and should this materialise, our reputation would be adversely affected.	Unlikely	Moderate	Benefit panels have been established to monitor benefit delivery and provide early visibility of issues enabling corrective changes to be made to the Portfolio.
Technical (Risk of System Failure)	NATS continuing to operate on ageing operational technologies and platforms which are becoming increasingly difficult to maintain and support. Whilst currently stable, there is a risk that resources required to support these will no longer be available, and the systems may fail.	Failure within the core NATS operating technologies or platforms could prove detrimental to both the service and safety offered to our customers, depending on time taken to resolve any issues. This will impact the company's reputation, and ultimately the ability to operate.	Unlikely	Major	Asset Sustainment projects have been initiated to mitigate these risks. Additionally, NATS has a Sustainment budget to maintain and support current systems until such time they are replaced by new technology.
Legacy Escape Delay	As a result of a delay to the delivery of system solutions (e.g. DP/voice DP Enroute, etc) to replace ageing equipment sets, there is a risk that additional time, funding and extended maintenance support would be required.	This would lead to increased RP2 and RP3 capital funding plus extended OPEX costs.	Likely	Major	The DSESAR programme is a key step to provide legacy escape. The programme is managed and tracked monthly against key milestones to enable a timely delivery.
Supplier Performance	As a result of NERL being reliant on the performance of suppliers rather than internal staff for the development of core systems, and integration support onto a single platform, there is a risk that these initiatives could suffer delivery delays. In addition, given the unique nature of what NATS does, there are limited suppliers who can provide services to the company.	The impact of this would be delays to delivery of core systems and increased supplier costs.	Unlikely	Major	Tender evaluations and detailed contracts have been agreed to ensure selected suppliers deliver on all requirements. Weekly/Monthly reviews are undertaken between NATS and suppliers to monitor and control against the contract baseline targets.
Regulatory Requirements / Changes	As a result of political and environmental changes, there is a risk that additional scope may be required to be delivered within the reference period to maintain compliance and meet licence obligations. There is additional risk that work currently being undertaken to maintain compliance will not be necessary in the new environment.	Increased costs in order to deliver the additional scope or wasted effort and funds if changes are not required.	Likely	Moderate	Continue to work closely with the CAA, and EU to have early warning on potential changes to regulations which would impact the NATS change portfolio.
Airspace Consultation Delay	As a result of airport operators and/or the regulator taking longer than envisaged to reach a decision on consultation requests, or the request being rejected, there is a risk that airspace initiatives seeking approval to proceed would be delayed.	This would lead to delay of airspace change and associated benefits plus potentially and increase in cost to re-work the airspace design.	Almost Certain	Major	Continue to work closely with the CAA, local councils and Airports when designing new airspace solutions to ensure minimal impact on external parties (i.e., local residents). Utilise the Automated Airspace Design tool (when ready) to minimise the impact on NATS resources

People Plan

NERL has provided greater insight into its People Plan in the Interim SIP 18. The People Plan has 3 major work packages¹¹:

	Outcome
 <p>Transforming Conversion Training</p>	Optimising training for Deploying SESAR both in terms of content and approach to minimise resource requirement and increase effectiveness of training.
Reducing Operational Resource Gap	Created a consolidated view of the ATC resource demands across the RP2 deployments and to identify potential solutions to satisfy that demand.
Building Change Capability	Developing and delivering approaches that support our people through change and equipping operational managers to effectively engage their teams during transformation.

Interim SIP 18 Analysis

The Interim SIP18 has provided confirmation that NERL's investment programme is moving ahead and is successfully delivering many of the required upgrades and new technology. The Interim SIP 18 also provides commentary on a range of issues that have impacted the overall programme. The Interim SIP18 was submitted as a formal document, rather than a presentation pack and this greatly aided readability and ease of reference of the various parts of the submission. However, there is still some inconsistency and reference to subordinate milestones (e.g. STRATUS), and also Deployment Points that are used by NERL but not specified in the submitted Interim SIP 18, that could be better explained.

The Airspace programme is clearly delayed and much of the cause for delay lies with the airport community. This emphasises the point made in previous Independent Reviewer Reports that whilst airports may not be NERL's customers in the same way as the airlines, they require a

11. Page 23 of 42, Update on RP2 Capital Investment Plan (2015- 2019) for Condition 10 – June 2018.

consistent and well-integrated approach if they are not going to negatively impact NERL's ability to deliver airspace change.

The Technical Programme has suffered slippages that NERL currently assert will not significantly impact the final delivery in 2020. However, when SIP 18 was submitted there were a total of 30 months slippage declared which was a combination of multiple shorter slippages of intermediate milestones, at the time not impacting the overall top-level milestones. In the subsequent 6 months there has been further slippage of intermediate milestones which has now led to a re-planning of the DP Voice milestone and a planned delay of 1 month to the important DP En Route milestone. Whilst NERL assert that this slippage is now under control and has re-planned a range of programme areas to accommodate these problems, there must remain a risk of further slippage, as might be expected with a programme of this scale and complexity. However, this latest slippage does not provide confidence that the issues are fully under control. In some ways this might not matter, but the compression of delivery milestones towards the end of RP2, and some into RP3, does provide cause for concern on the basis for RP3 planning. NERL should confirm what parts of the RP2 delivery are pre-requisites for RP3.

It is commendable that during the period ExCDS, NERL's first major Deployment Point, was successfully delivered into TC on plan. This is the first technology implementation into the complex TC operations for a considerable time and has been considered a success, albeit at an early stage, by the airlines.

The cost profile declared by NERL reflects these slippages and changes, and some contingency spending has been committed to maintain the overall cost for RP2 within the £750-780m envelope previously presented to customers and the CAA in SIP17. However, since the overall delivery in RP2 is now less than previously envisaged and agreed, the overall cost of the SIP must be clarified. Recognising that risks have arisen which have increased costs, to deliver less than the original plans but at the same or increased cost, needs further explanation. Whilst noting that further scope has also been added into RP2 that was not originally envisaged, such as more advanced Cyber investments and additional airspace change, it is not clear on what basis this scope change was decided. Additionally, the transfer of work from RP2 into RP3 and the associated costs must be better explained. NERL are still forecasting the overall DSESAR costs across RP2 and RP3 will remain in the range previously stated although how this will happen has not been explained.

Risk management is clearly an active aspect of NERL's approach. However, noting that NERL has cited supplier failure to deliver as a primary cause for some delays, to have the Delivery and Portfolio Risk Registers reporting that Supplier Performance is an "Unlikely" risk to materialise does seem unrealistic and NERL should review the status of this particular risk as well as its approach to strategic risk.

Benefits management remains a monitoring function but as the programme moves towards the end of RP2 there should be greater consideration of active management of benefits through the remainder of the programme and into the post-RP2 period. Monitoring benefits is a passive activity whereas managing benefits realisation should be an active one and NERL have agreed to present more evidence of their active benefits management through future SIP reports.

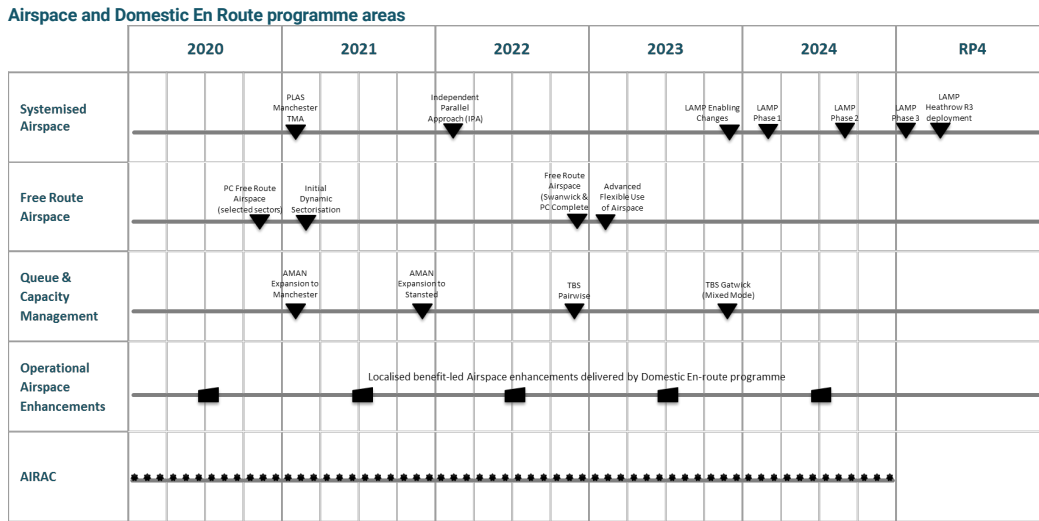
While good progress has been made in delivery, the further delivery slippage declared in the Interim SIP 18, just 6 months after the last slippages, does not maintain confidence in NERL's ability to successfully deliver the entirety of the RP2 SIP. Whilst the decision to re-profile many

parts of the programme were “agreed” it is not clear with whom they were agreed. It appears that the changes were decided in-house and customers were then informed as part of the consultation process rather than beforehand.

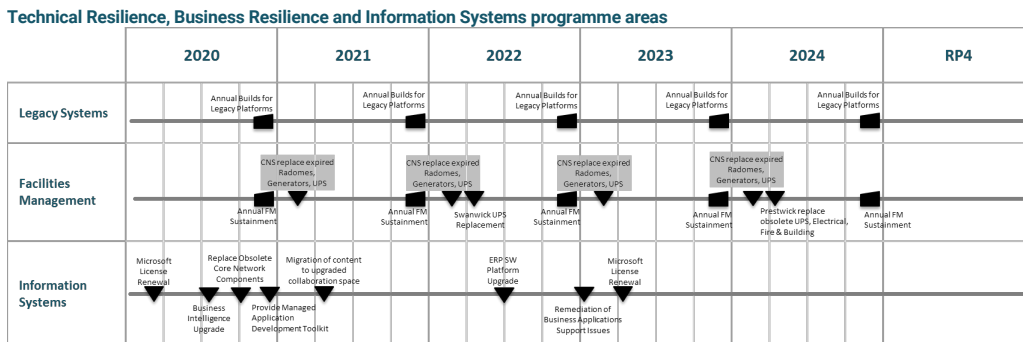
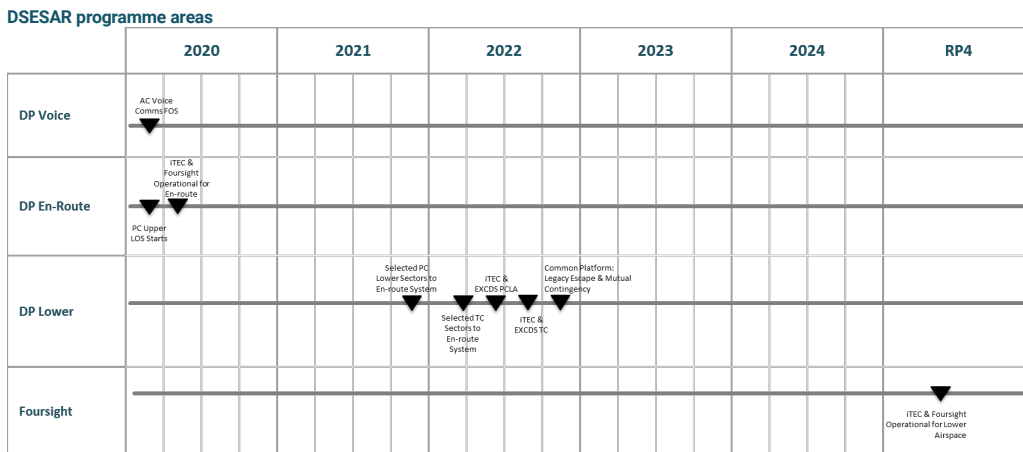
TECHNOLOGY AND AIRSPACE PLANS 2020-2024

NERLs’ initial Business Plans (iBP) for RP3 contain outline Airspace and Technology plans and these have been submitted to CAA as part of NERL’s C10 obligations.

The submitted Airspace Plan¹² is:



The submitted Technology Programme¹³ is:



12. Page 10 of 26, Airspace and Technology Plan 2020 to 2024 for Condition 10 – June 2018.

13. Page 10 of 26, Airspace and Technology Plan 2020 to 2024 for Condition 10 – June 2018.

The supporting documents for these programmes outline a range of considerations and work packages relating to both programmes. NERL also include reference to a People Plan which will be a major factor in successful delivery. There is commentary on how NERL plan to manage dependencies, risks and benefits using the same approach as in RP2.

The financial profile offered by NERL for its RP3 Airspace and Technology programmes¹⁴ is:

Programme capex (2017 prices)	2020 £m	2021 £m	2022 £m	2023 £m	2024 £m	RP3 £m
Airspace	16	33	30	20	12	110
Delivering capability (DSESAR)	113	83	15	18	64	294
Technical resilience	26	27	35	31	26	145
Domestic en route service improvement	9	7	9	8	5	38
Business resilience	23	18	17	17	13	88
Oceanic [*]	4	2	5	1	3	15
Total NERL forecast	191	170	111	94	123	690
Military [*]	2	2	2	2	2	8
Total forecast	193	172	113	96	125	698
Contingency		2	7	9	12	30
Total forecast including contingency	193	173	120	105	137	728
Accelerated to RP2						23
Total including RP2 acceleration						751

* Oceanic programme subject to Oceanic specific customer consultation
* Military programme subject to agreement with MOD under FMARS contract

Technology and Airspace Plans 2020-2024: Analysis

It is understood that while NERL has created outline plans for Technology and Airspace for 2020-24, further development of these will be undertaken as part of the RP3 development and agreement.

However, whilst recognising that there is still some way to go before NERL’s plans will be fully mature, these outline plans offer an insight into how NERL plans to finish delivering its DSESAR and associated programmes.

In the outline plans there are some implied cross-programme dependencies and a section discussing how NERL will manage those dependencies, but until these dependencies are fully mapped out and shared with CAA and customers then they cannot see this fully integrated programme approach. The development of the RP3 agreement will hopefully resolve this issue.

As the RP2 SIP has matured benefits have been monitored and previous discussion involved the aspiration that RP3 would foresee a benefits-led programme design. However, it appears that the proposed programmes will remain with a passive benefits management approach. If this is not the case, then in the final version of the plan it would be helpful to see more evidence of the benefits-led approach. Similarly, NERL’s Risk Management approach appears to be unchanged from its RP2 approach. The postulated risks are generic rather than specific. Whilst NERL has actively managed programme/project risks through RP2, the portfolio risk approach remains an area for development. Given the emergence and maturation of risks through RP2 it would possibly have been helpful if NERL had taken the opportunity to provide evidence of a more proactive portfolio risk approach.

Whilst it is understandable that the details of the 2020-24 programmes are still in development, it is hard to assess the proposed cost profile without further detail on the actual work that will be completed. Without that clarity on the various elements, the detail on the work packages and how the RP2 work will link to RP3 it is difficult to assess the basis on which the cost profile has been developed and thus it cannot be currently viewed as a credible cost model. Hopefully as RP3 matures, the plans and cost model will be refined and agreed.

CONCLUSION

In accordance with these requirements of Condition 10 of its Licence from CAA NERL submitted its Interim SIP 18 and Airspace and Technology programmes to the CAA on 29 June 2018.

The Interim SIP18 provides an appropriate level of detail for readers to assess and understand progress and re-planning but does not provide the same clarity in the management of financial aspects of the update for the RP2 period and across the RP2/RP3 boundary. Nor does it provide clarity on how NERL will prevent further slippage of the delivery programme.

With regard to the outline plans for 2020-24, there is currently insufficient detail to be able to fully assess the validity of the plans or the financial model. Both of these should become clearer as RP3 develops, but until that time they can only be regarded as outline plans. Furthermore, the link between RP2 and RP3, and in particular the pre-requisite parts of the RP2 programme that underpin the RP3 proposal, should be clarified to better understand the proposed 2020-24 programmes.