Appendix B: Customer and passenger consultation

We have continually engaged customers and passengers as we developed plans for NR23. Since early summer 2021, we have hosted 11 consultation meetings at which 26 organisations participated, totalling over 800 hours of engagement. A full list of those who participated can be found below. In addition, during autumn 2021, we held eight focus groups and surveyed over 2,000 participants to gauge the views of passengers.

Regarding customer consultation, we were required to complete the process more quickly than usual, against the backdrop of continuing uncertainty about travel restrictions, economic recovery and the shape of the aviation sector after the pandemic. We also recognised the financial and resource constraints our customers are experiencing.

We responded to these challenges by structuring the consultation in an open accessible manner, enabling customers to engage on their own terms, virtually or in person, and to their own timetable.

The customer consultation process has helped to validate the overall shape and content of our plan, as well as helping us to choose between some of the options we put forward. Consensus was not reached on some topics and options, while others will be subject to updates in 2022, notably in light of latest traffic forecasts and financial market developments.

We welcome the CAA's invitation during the final customer consultation meeting for further feedback from airlines and other stakeholders on our NR23 plan, in the month following its publication on 7 February 2022 to help inform the CAA's initial proposals for NR23 in early June.

Regarding passenger research, we commission two annual market research surveys to provide inputs to our ongoing business development and our work on airspace modernisation. In addition we conducted quantitative and qualitative surveys specifically for NR23, which validated our priorities and choices for this business plan.

Customer consultation process

In preparation for the main consultation, two pre-consultation sessions were held with airlines in early summer 2021 at which we asked customers for their priorities for NR23, and their views on our proposed approach for the customer consultation. This was supported by five Executive-level bilateral meetings.

Through this initial engagement a number of common priorities across multiple customers were identified. These were fed into our initial business planning activities and included:

> safety

> cost efficiency (no cost increases)

> staffing resilience and capacity (around traffic recovery)

> airspace modernisation

> environmental performance

We engaged regularly with the independent airline and NERL co-chairs, and with the CAA through the summer to agree the consultation process, taking account of feedback from the RP3 consultation. The key discussion topics were captured in the Customer Consultation Working Group (CCWG) Terms of Reference.

We agreed with the CAA that we would set out our emerging business plan through a core document that would lay out the key points ahead of the start of consultation. This was supplemented with more focused information on a series of pre-agreed building blocks, usually provided a week in advance of each consultation meeting, with a presentation to summarise the key information to facilitate discussion. We adopted a mixed mode approach (with the option to attend in person or virtually) for the consultation, with play-back provided for those unable to attend. The schedule of consultation meetings is provided below.

Meeting	Topic	Meeting date
Pre	Pre-consultation meeting (airlines)	27 May
Pre	Pre-consultation meeting (airlines)	10 June
Pre	Pre-consultation meeting (airports)	25 June
1	Context and plan outcomes	6 October
2	Service delivery	7 October
3	Investment programme	13 October
4	Oceanic	20 October
5	Airports engagement	2 November
6	Regulatory mechanisms	3 November
7	Consultation close and next steps	11 November
Post	Pensions and WACC	14 December

NR23 customer consultation meetings

We invited 61 airlines to the consultation sessions, with 19 airlines attending the discussions:

> Aer Lingus
> Air Canada
> Air Transat
> American Airlines
> British Airways
> Delta Airlines
> easyJet
> Emirates
> Flybe
> IATA

> Iberia
> Jet2
> KLM
> Lufthansa
> Qatar
> Ryanair
> TUI
> United
> Virgin Atlantic

In addition, two airport engagement sessions were held, providing an opportunity to input, with representatives attending from:

- AGS Group
- Airport Operators Association
- Gatwick
- Heathrow
- Liverpool

- London City
- Manchester
- Manchester Airports Group
- Stansted

Meetings were also attended by representatives from the CAA, NATS Trade Unions (TU), and CAA consultants, Steer Group and Integra, as observers. We are grateful to all our customers and stakeholder representatives who actively participated in our NR23 customer consultation process during summer and autumn 2021.

Meeting slidepacks, recordings, minutes, actions and responses were published to participants via the virtual exhibition in a timely manner. In total we responded to 31 actions with supporting materials published on the virtual exhibition.

NR23 virtual exhibition

To support the consultation process, and as an alternative to the standard webpage view provided, we adapted a virtual exhibition website which had previously been successfully developed to support the London Luton arrivals airspace change consultation.

Our aim was to provide an engaging experience with multiple ways to access the relevant material, including both 3D and standard webpage views. The material included videos and infographics to enrich the engagement experience, and a "*Latest News*" board to highlight updates to the content.

All meeting materials including slide packs, recordings, minutes, actions and their responses were uploaded to the virtual exhibition, alongside the documentation for the 2021 Service and Investment Plan (SIP) consultation. In total, 118 documents and 19 videos were made available through the consultation process. It also allowed customers to raise questions directly, with the responses published for transparency.

Virtual Exhibition room

Standard webpage view

The table below provides an insight to the use customers and stakeholders made of the material shared through the virtual exhibition.

Metric	Statistic
External visitors	34 user accounts from 20 organisations
Views *how many times touchscreens and pages were viewed*	7380
Video views	312
Pdf downloads *slidepacks, minutes, action responses, supporting material*	788 (the prospectus was downloaded 50 times)
Average time spend in the virtual exhibition per visit	Around 10 mins
Total time spent by users in the virtual exhibition	156 hrs 29mins (22.3 working days, 4.5 working weeks)

NR23 Virtual Exhibition statistic (26 September – 17 November 2021)

Customer consultation feedback

The CCWG co-chairs provided an interim progress report, published at the end of October, and a final report which consolidated feedback from the whole consultation, in mid December 2021. The final customer consultation co-chair report recognised the level and knowledge of the airline participants, the participation of the CAA and attendance by a NATS TU observer.

The report detailed areas of broad agreement, areas where there was a lack of support from customers and areas of qualified support. It highlighted that airlines felt they had to reserve their positions on many aspects of the plan and options, pending further detailed information in the full business plan.

Co-chairs acknowledged the necessarily compressed timescales of the business planning and customer consultation processes compared to previous regulatory periods, as well as the very complex and fast-changing situation for the industry. To support the adapted process, the co-chairs proposed mid-process that airlines, NERL and CAA set out what further information was required and how this would be reviewed within the remaining CCWG meetings. We provided additional information in response to action items ahead of the next meeting and additional agenda items were added to the final consultation meeting.

Similar to previous consultations, there are few areas where it has generated concrete feedback for us to consider. Most feedback was under '*areas of qualified support*'. In these instances, we have taken a view which we believe is the right way forward.

The main feedback from the customer consultation co-chair report is summarised into a set of actions in the table on the following pages.

Topic	Our understanding of customer requests for the business plan	Business plan reference
Traffic forecasts	CC01: Use latest (Oct-21) STATFOR forecast as basis for business plan CC02: Show additional granularity for forecast oceanic traffic including differentiating between North Atlantic Tracks and Tango routes	Chapter 3 Appendix C
Business plan scenarios	CC03: Explain how the business can be adjusted in response to actual traffic levels differing from STATFOR forecast in order to be cost effective whilst avoiding delays. The explanation to include sufficient detail that the airlines are not presented with a binary choice, and to explain how both operating costs and capital investments could be adjusted	Appendix Q
Safety	CC04: Safety to remain NERL's number one priority in the business plan CC05: Clearly articulate the safety benefits from planned investments.	Chapter 4 Appendix D Appendix H
Capacity	CC06: If the business plan still proposes to modulate the delay targets, ensure that the calculation is explained clearly and the levels of the targets proposed are justified against previous performance	Chapter 4 Appendix E
Environment	CC07: Continue with current balance of delay to environmental performance incentives CC08: Plan to work with airlines and regulator on how NERL's environmental performance should be measured in the future	Chapter 4 Appendix F
Operational resourcing	CC09: Plan to restart ATCO ab initio training as soon as possible (ahead of NR23) CC10: Include more detail on resourcing in the business plan CC11: Explain the benefits of the proposed investment to improve the operational training capability	Chapter 5 Appendix G Appendix H
Technical resilience	CC12: Maintain a focus on technical resilience CC13: Explain the pathway and timescales for switching off older technology (even if in NR28), and the plan for ensuring resilience in the meantime through both appropriately skilled people and efficient investment	Chapter 6 Appendix H
Capital investment portfolio	CC14: Ensure NR23 plans stay aligned with the EU CC15: Explain how the NR23 settlement, SIP, Technical Customer Advisory Board, and proposed 2+5 mechanism will all operate together CC16: Clearly explain the benefits of the proposed investment portfolio, including the relationship between the investments, operating costs and operational performance CC17: Show how the plans for NR23 have evolved from RP2 and RP3 CC18: Provide an explanation of the benefits of accelerating iTEC V3 by £20m in NR23 *Note: After due consideration the option of accelerating iTEC V3 is not being included in the business plan (see summary of options considered below)*	Chapter 6 Appendix H

Topic	Our understanding of customer requests for the business plan	Business plan reference
Airspace	CC19: Explain how the plans to develop airspace integrate with the rest of the NR23 operating and investment plan CC20: Do not include the cost of integrating and supporting new airspace users in the core plan	Chapter 6 Appendix H
Sustainment	CC21: Benchmark sustainment costs and explain the relationship between sustainment and the balance of the investment portfolio	Appendix H
Sustainment (DVOR programme)	CC22: Consider an option to maintain DVORs into NR23 *Note: Following discussion with airlines, a decision was taken to continue the approach already set out*	Appendix H
DP En-Route (DPER) and Voice	CC23: Explain the benefits already delivered by DPER and Voice, and the additional benefits expected over its lifetime	Appendix H
Capital portfolio benefits and opex implications	No additional action: covered by action CC16	n/a
Capital investment portfolio governance	No additional action: covered by action CC15	n/a
Oceanic (ADS-B)	No additional action: covered by action CC02	n/a
Oceanic (service performance outcomes)	CC24: Plan to improve support for airline requested clearances and to develop metrics for measuring it	Chapter 8
Oceanic (capital investments / costs and prices)	No additional action: covered by action CC16	Chapter 8 Appendix H
Regulatory (determined costs)	CC25: Provide breakdown of costs that contribute to the determined costs for both en route and oceanic	Chapter 7 Appendix I
Regulatory (headcount)	CC26: Explain the plan for operational and non-operational staff showing the requirement for the planned headcount and any opportunities for further optimising	Appendix J
Regulatory (pensions)	CC27: Articulate where further opportunities might be found to reduce pension costs	Appendix K
Regulatory (regulatory return)	No actions	n/a
Regulatory (regulatory depreciation)	CC28: Explain the calculation of depreciation based upon the Regulatory Asset Base, and separately the calculations related to the TRS debtor	Appendix I

Topic	Our understanding of customer requests for the business plan	Business plan reference
Regulatory (single till)	CC29: Include detail on the single till income calculation, including planning assumptions, in the business plan such that airlines can ensure they remain applicable and consistent with RP3	Appendix L
Regulatory (determined costs – summary)	No actions	n/a
Regulatory (Determined Unit Costs)	CC30: Clearly set out the makeup of the forecast costs and calculation of DUC	Chapter 7 Appendix I
Traffic Risk Sharing (TRS)	CC31: Set out worked examples of the effect of the proposed TRS based upon potential out-turn scenarios to illustrate the effect both on subsequent charges and NERL's finances to explain the likely impact. CC32: Explain the need for an oceanic traffic risk sharing mechanism	Chapter 9 Appendix P
Price profiling	CC33: Plan for a flat cost profile through NR23, with recovery of 75% of the TRS in NR23, and the remaining 25% in NR28	Chapter 7 Appendix I
Changing the charging basis	CC34: Plan to work together during NR23 on proposals for charges based on aircraft emissions to increase focus on environmental performance.	Chapter 9

Summary of customer consultation feedback & requests for NR23 business plan

Customer feedback on options

We sought specific customer input on a number of options put forward for discussion. These, together with our summary of customer feedback from the consultation, and their reflection within our NR23 business plan, are set out below.

Option	Description	Our understanding of feedback	Status in NR23 plan
Increase focus on providing efficient routes	Increased financial incentive against 3Di performance, with rebalanced incentives across other metrics	No support - airlines priority is equally capacity (therefore limited appetite for increasing incentive on 3Di)	Removed following feedback: Not included in our plan
Improve operational training capability	Around £15m investment to reduce training lead times and improve agility in resource planning	Broad support for the concept, but clarity on business case/benefits required	Added following feedback: included in our plan, further details in Appendix G
Integration of new airspace users	Around £30m investment to support the safe integration of new airspace users such as drones and space flights	No support, on grounds that "user pays" principle should apply, CAA and industry must try their best to create charging regime for NERL new user activity by NR23	Removed following feedback: not included in our plan, further details in Chapter 9 and Appendix P
Enhancements to the capital investment portfolio	Changes to the mix and scope of NR23 capital investment portfolio	Support, subject to further consultation on costs, benefits at SIP	Removed following feedback: not included in our plan, to be implemented via the SIP
Smaller capital investment portfolio	Reduce investment in technology transformation and airspace modernisation by £50m	No support, contrary to strategic goals for airspace and technology	Removed following feedback: not included in our plan
2+5 approach to planning	Build on extent of customer engagement by planning 2 years in detail with a joint strategic lookahead	Support, subject to further definition of process including Licence interaction	Added following feedback: included in our plan, mechanism and governance to be developed via SIP forums, feeding into and/or drawing from CAA guidance. Further details in Appendix H
Adjusted traffic risk sharing mechanism	Modified mechanism to spread the financial impact for customers of charge increases arising from any future major traffic downturns	En route TRS spreading support (even though continued objection to concept overall); oceanic new TRS: further information sought by airlines	Added following feedback: included in our plan, further details in Chapter 9 and Appendix P
Cost / price profiling between NR23 & NR28	Reduced prices in NR23 to support customer recovery	Support for deferring TRS revenue recovery into NR28, but less so for depreciation deferral	Changed following feedback: plan defers 25% TRS recovery to NR28, depreciation deferral not included in plan, further details in Chapter 7 and Appendix I
Price profiling within NR23	Reduced prices at the start of NR23 to support customer recovery	Mixed feedback: some prefer to avoid rising price at end of NR23, others want low start price for affordability	Changed following feedback: plan offers flat real prices in NR23, further details in Chapter 7 and Appendix I
Changing the charging basis	Proposal to work together in NR23 on charges based on aircraft emissions to increase focus on environmental performance	Support further work to explore practicable options, subject to concerns about impact on emissions vs effort and managing unintended consequences	Added following feedback: included in plan, working group with airlines and CAA to be established

Summary of how options have been accounted for in NR23 business plan

Passenger research

In its guidance for NR23 business planning and consumer engagement, the CAA asked us to demonstrate how we have taken consumers into account in developing our business plan, by means of a survey and seeking the advice of the CAA Consumer Panel.

Since 2018, we have commissioned two annual market research surveys to gauge the travelling public's views on issues affecting air traffic control (ATC) in the UK. These findings are produced for NATS by market researchers Ipsos MORI and Savanta ComRes. The former is published as NATS' Aviation Index[1] and reflected in our strategic planning. To that extent, passengers' views are systematically incorporated as one of the inputs into our business planning. The other survey has also helped inform our work on airspace modernisation.

To complement these regular surveys, we commissioned Blue Marble, an independent market and social research agency, to undertake additional bespoke passenger research to provide more up to date and focused insights relevant to the development of the NR23 business plan. Blue Marble used a mixture of surveys of over 2,000 individuals and eight focus groups across three phases to:

> Identify the issues that matter most to passengers, and whether these vary between different groups of passengers

> Explore passengers' informed perspectives on key trade-offs, for example between cost and resilience

The CCWG co-chairs, airlines and CAA Consumer Panel were asked to review documents and contribute at key stages in the process, and were kept informed of progress. Emerging findings from the passenger research report were used to inform business planning throughout September and October 2021.

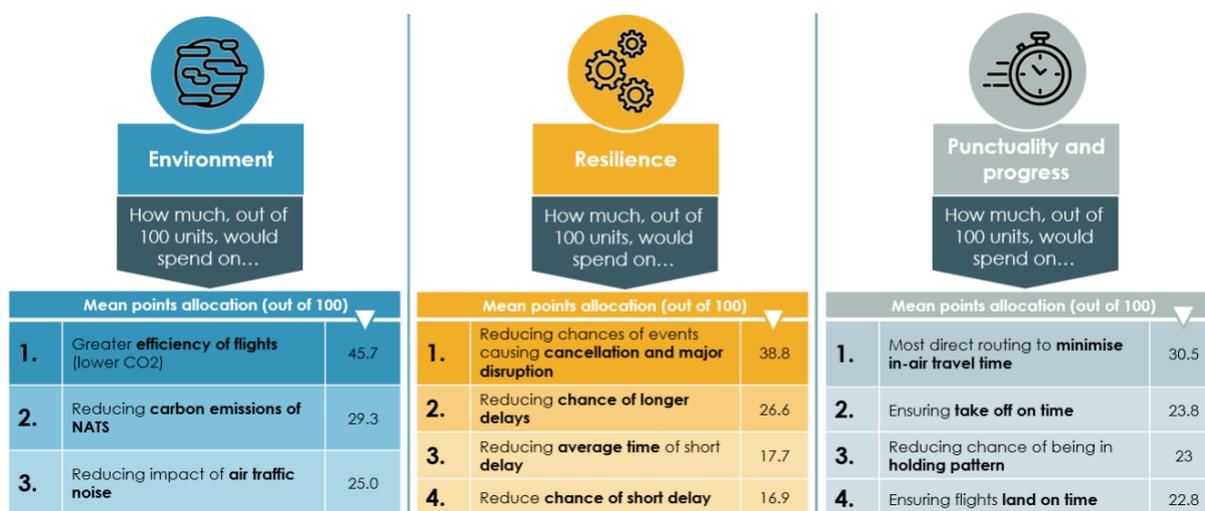A summary of the research findings is provided below.

Main findings

Passengers largely expect air travel to deliver a safe service, and safety was clearly their number one priority. Before being provided with information about the work of ATC, punctuality ranked second behind safety in passengers' priorities for ATC. Results showed that satisfaction with ATC is good and trust high, with but few respondents having any concerns.

To understand informed priorities, information was provided about ATC with a list of potential future priorities before carrying out a series of trade off exercises. Safety was removed as a variable during this process. In this context, passengers' two highest priority areas were environment and resilience, followed by punctuality. Priorities within each trade off area were further explored using the framework shown below.

Keeping costs low is, by some distance, the lowest passenger priority for ATC. Our NR23 plan to ensure enhanced resilience and safety during the pandemic recovery period, even at additional marginal cost, is therefore aligned with the priorities of consumers.

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[1] NATS, Aviation Index 2021

Environment		Resilience		Punctuality and progress	
How much, out of 100 units, would spend on…		How much, out of 100 units, would spend on…		How much, out of 100 units, would spend on…	
Mean points allocation (out of 100)		**Mean points allocation (out of 100)**		**Mean points allocation (out of 100)**	
1.	Greater **efficiency of flights** (lower CO2)	45.7	Reducing chances of events causing **cancellation and major disruption**	38.8	Most direct routing to **minimise in-air travel time**	30.5
2.	Reducing **carbon emissions of NATS**	29.3	Reducing **chance of longer delays**	26.6	Ensuring **take off on time**	23.8
3.	Reducing impact of **air traffic noise**	25.0	Reducing **average time** of short delay	17.7	Reducing chance of being in **holding pattern**	23
4.			Reduce **chance of short delay**	16.9	Ensuring flights **land on time**	22.8

Framework to explore passenger trade offs

Following the request of the CAA Consumer Panel in November 2021, we set out below how this passenger research has influenced the development of our NR23 plan, including areas where airlines and passenger views are similar, and where they diverge.

Passenger research – implications for NR23 plan

Passengers strongly supported the service we currently provide, and demonstrated a high degree of trust in NERL to deliver a safe, reliable operation. This endorses the evolutionary approach of our NR23 business plan, continuing to deliver improving outcomes for airlines and passengers through operational resourcing scaled to meet the recovery in demand and continuing investment in the new generation of ATC technology platforms.

Where passengers were informed about the potential trade-offs facing NERL, they showed a strong preference to prioritise improvements in environmental performance of flights and to continue to minimise risks of major disruptions due to ATC shortfalls in capacity or system failures. These findings support the continued significant investment in airspace modernisation throughout NR23, and ongoing funding for the Airspace Change Coordinating Group (ACOG), as the means to deliver airspace structures and procedures which enable airlines to achieve more efficient flight paths. They also support our proposed targets for incremental improvement in flightpath efficiency (as measured by the 3Di metric), which is consistent with the longer term goal of ATC contributing 4.4% to aviation's net zero target.

Passengers' views on the balance between funding resilient operations, sustaining existing ATC systems and investing in new technology tended towards investment that helped maintain resilience or delivered incremental service improvements, notably for environmental performance. The majority favoured this approach vs an incremental reduction in ATC charges which might be passed back to passengers via airline ticket prices. This finding supports our proposed approach to operational resourcing and our recommended capital investment programme for the period.

When informed about the safety, service performance and cost implications of the ADS-B service for oceanic flights, passengers expressed strong support for continuing to pay for the safety and environmental benefits which ADS-B could deliver. This supports our oceanic service plan in NR23, which relies upon continued use of ADS-B.

Comparison of customer and passenger feedback

There is notably clear alignment between airlines, airports and passengers on safety, which is the highest priority for all stakeholders. However, there are a few specific areas where priorities diverge.

On resilience, the clear priority for passengers is reducing the potential for events that could cause cancellation and major disruption, followed by reducing the chance of long delays. Reducing average length of short delays, and the likelihood of having short delays, were less important to passengers who indicated that relatively frequent shorter delays, up to 15-40 mins depending on short or long-haul flight, are considered tolerable. Airline feedback, however, emphasised the importance of minimising all types of delay, with specific focus on ensuring delays remain at an appropriate level during major system transitions and on ensuring that the operation can respond to changes in demand.

Environment scored the highest in the passenger trade-off exercise and there is a clear indication from passengers that they place importance on spending to increase flight path efficiency and reducing flight CO_2 emissions. Although environment appears high on airlines' priority list, feedback on our proposed option to increase the focus on providing efficient routes through stronger financial incentives was not supported. There was, however, agreement from airlines to explore options with NERL and CAA to increase focus on environmental performance through charges based on aircraft emissions.

Although airlines have voiced some concern over the cost-benefit of ADS-B, passengers overall considered it a worthwhile investment, specifically as it offers a means to materially improve safety over the Atlantic. Passengers' views will be a valuable addition to the cost benefit analysis of ADS-B to be undertaken in due course.

In contrast to airlines' priority for no cost increases, passengers gave this the lowest score in the trade-off exercise although a significant minority want to see low costs as the priority; this was mainly among the younger age groups and often due to the high satisfaction with the current service ATC provides. Passengers considered it important to implement new technology so that air travel remains safe but also so that it is as efficient and cost effective as possible. It is well understood that there is a need for investment in this area and it is accepted that part of their ticket price will go towards this investment.