

# Delivering Customer Value

Customer Report 2015



## Delivering Customer Value

#### Contents



### **CEO** introduction

I am very pleased to be introducing the Customer Report for 2015, a year which wasn't just a first for me as Chief Executive, but also for some of the most important projects we have been working to deliver for you.

Customer service underpins everything we do at NATS; listening to your feedback and acting on it to deliver the improvements you seek.

Our annual customer survey is really important in helping us get the focus right and I'm delighted that we achieved our highest-ever overall score. Your top scores were for safety, fuel and emissions reduction - and giving you confidence that we are building improvements into our day to day working.

I think this was helped by a number of milestones in 2015 with first steps into operation of tools which will revolutionise our future service delivery.

The first year of Time Based Separation (TBS) at Heathrow has delivered, on average, three additional aircraft per hour in strong headwind conditions. The initial Extended Arrival Management (XMAN) trial was so successful, saving up to a minute's holding time per aircraft, that we implemented it permanently in October. Reduced Lateral Separation (RLat) has halved lateral separation between the core tracks on the North Atlantic.

We moved quietly into a temporary ops room at Swanwick to prepare for the new iTEC (Interoperability Through European Collaboration) platform for SESAR deployment, already in limited use at Prestwick. And we are in the first year of AQUILA operations, our joint venture with Thales, to transform military airfields.

Increasingly our expertise in the UK is being recognised internationally, and it is gratifying to win overseas contracts acknowledging our service strength.

You would like us to work more closely with our airport customers, and improve value and cost efficiency, and operational delay. You also expressed frustration at delays to low-level airspace change over the London TMA, slowed by political discussion and consultation about policy and guidance. We share your concerns about the lack of clear Government support for airspace change.

Notwithstanding that, we delivered

the first phase of the London

Martin Rolfe

Chief Executive Officer

would like to discuss it.

But we do need greater partnership

across the UK industry in persuading

modernise airspace. We are already working with the trade associations

and looking to do more through CAA's

Future Airspace Strategy, and we will

be asking you, our customers, to join

with us to keep the pressure on.

This year's is a streamlined report

which I hope you find useful as a

reminder and reference. And of

course, my door is always open if you

Government of the need to

Airspace Management Programme
(LAMPIA) in February
following the CAA's approval
last year, and we have first
stage of Prestwick Lower
Airspace Systemisation
(PLAS) to look forward to
later this year. Meantime
we continue to address
hotspots and with our
international partners push
on with other cross border
initiatives including free
route airspace.

### What you told us: Customer survey summary

# 8.45/10 Our highest-ever customer satisfaction score

Every year, we ask you to rate us on partnership, performance and progress.

In 2015, we achieved our highestever score, 8.45 out of 10.

We're pleased with what is an overall positive assessment. The survey covers all aspects of our service to you and we ask you for feedback on your priorities and areas where we need improve. Thank you to all who contributed to the survey. It's something we take seriously and follow up on and wanted to share the key findings with you.

#### Strongest scores

#### Safety

Safety is our principal responsibility and underlies everything we do, together. We're pleased you marked us strongest here, from 9 in 2014 to 9.34 last year. Our proactive safety management scored highest, followed by ou response to safety events, providing quarterly statistics and working with you to drive safety improvements.



#### Survey follow-up

Your feedback demonstrated that we are acting on your responses. The second most improved result, with a rise of 0.48 to 8.69, was for the manner in which we absorbed your feedback and put in place measures to increase confidence that improvements were being built in to our day-to-day working.



#### Environment

You also recognised our progress on reducing the environmental impact of what we do. Our work to reduce ATM CO<sub>2</sub> emissions by 10 per cent by 2020 is on course with 4.6 per cent of that achieved by the end of 2015. Our work on fuel-savings and CO<sub>2</sub> emission-reductions through crossborder co-operation was recognised in an improved score this year though we recognise that we still have a lot to do.



































































#### Areas for improvement

#### Operational performance

Operational delays attributable to NATS were reduced year-on-year to an average of 2.4 seconds per flight in 2015. However, your feedback last year reflected the technical failure at Swanwick in 2014 (which took place after that year's survey had closed) and a voice communications issue at Prestwick last October. On this theme, your score was down significantly to 7.7 out of 10. We continue our work to fine-tune operational and communication responses to technical failures and last year we hosted a cross-industry exercise on incident management which provided invaluable customer feedback. It's an area we continue to focus on.



#### Customer engagement

The survey score for our customer engagement was lower than 2014. You highlighted that this isn't our day-to-day contact with you but more about the long-term plans to update airspace in the UK. Judging by feedback in the survey, frustration at delays to low level airspace change over London and the wider political debate over government airspace policy influenced the score. We continue to work across the aviation industry through the Future Airspace Strategy forums. It is an area where we need to work together to influence policy and public perception of the need for change.



#### Customer value

We acknowledge your scoring on this, we have taken and continue to take demonstrable steps to reduce costs in both regulated and non-regulated markets. We are aiming to deliver against the target of 21% price reduction in real terms by 2019 which will significantly out-perform the European Commission's cost-efficiency target for the RP2 period. Your message is clear that a continued focus on cost efficiency is one of your top priorities.



#### Airport understanding

We've re-focused the airports' customer survey to help us understand more closely what's important to you and in a way that we can respond more effectively to your feedback.

While this takes in airport customer satisfaction and safety, service and communications as a matter of course, we also want to be sure we're focusing on activities which are part of driving success for your business.

You have told us that operationally NATS provide an excellent safe and resilient service but you'd like us to improve how we respond to you from a business perspective. Your feedback underlined our continuing experience that airports want to work alongside us much more so that we can help with broader airport solutions.

This includes enhancing ATM efficiency across airports, such as the introduction of smarter processes, enhanced automation and making the most of ATC staff expertise.

As examples we are rolling out improved Meteorological Observations technology, providing automated weather readings. And when conditions permit us to do so safely, we're combining radar and aerodrome positions within the tower which provides further resilience, improves efficiency and the ability to meet changing demands of schedules without an increased cost to airport ATC operations. Looking to the future we will be deploying Remote Tower to support airport operations where needed.

## Operations update

### Safety examined and assured

In 2015, no category A or B Airproxes<sup>+</sup> - those that were risk-bearing - were recorded which were attributable to NATS. There was however an increase in the low level Airprox events – category C and D events which were the result of drones or RPAS (Remotely Piloted Airborne Systems), which increased from 41 to 66 events in NATS Airspace between 2014 and 2015. These numbers are characteristic of the rise in RPAS activity in the UK. This use of RPAS will continue to evolve and grow and NATS is ensuring it, too, develops effective relationships and procedures to enable it to operate safely as part of an ever-more complex air traffic network.

More broadly, following 10 years of continuous improvement in operational safety performance, 2015 was not quite as good. In line with our RP2 commitment to reduce safety risk per flight in line with traffic growth, we are undertaking tactical activities and strategy improvements to meet this target.

As part of our improvement activities we have introduced the new Risk Analysis Tool (RAT) methodology – mandated across all European States as of January 2015. The RAT has enabled us to examine all operational losses of separation from a different perspective and gaining a great understanding of the factors driving our performance.

There was also much to be positive about in the area of technological advancement. By way of demonstration, our controllers managed the first flight by an unmanned aircraft in civil, controlled airspace in September, paving the way for safe integration of RPAS.

<sup>†</sup> Airprox — A situation in which, in the opinion of a Pilot or Controller, the distance between aircraft as well as their relative position and speed, have been such that the safety of the aircraft involved may have been compromised.

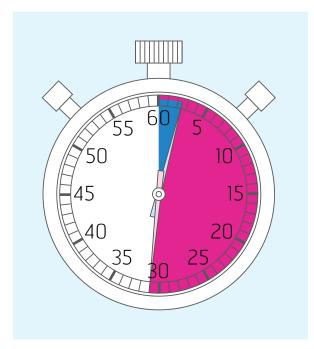
#### Delay stays down

Safety apart, the critical measurement of how well we manage the air traffic network is the delay to flights which can be attributed to us.

The graphic to the right is a snapshot of what that looks like in practice. Against an agreed target of 10.2 seconds per flight, our teams achieved 2.4 seconds. The number of flights rose from 2.22 million to 2.38 million in 2015.

In summary, only 0.2 per cent of flights were delayed as a result of our operation. We always strive to improve but 99.8 per cent of flights not affected by delay attributable to NATS is a strong result. Setting it against the average European ATM delay — ten times higher – is a further positive indicator.

#### 2015 NATS and Non-UK EnRoute ATC delay







\* Eurocontrol Network Management Area.

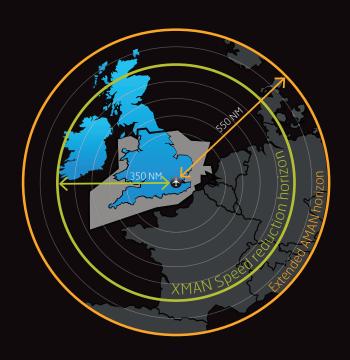
## Saving fuel, cutting emissions

At the start of last year, we announced we were ahead of our projected target of 4 per cent at 4.3 per cent to reach a reduction of 10 per cent in ATM  $\rm CO_2$  by 2020. By the end of 2015 this figure was at 4.6 per cent.

Over 1.1 million tonnes of aviation-related  $CO_2$  is now being saved each year. The reduction equates to more than £109m in enabled fuel savings.

Working directly with you through the Flight Efficiency Partnership has also brought benefits. Together, we've been able to make incremental adjustments to improve the fuel efficiency of selected procedures. A combination of procedural and tactical improvements like this helped save 10,600 tonnes of fuel in 2015.

+ Based on an average fuel price of £315 per tonne for 2015-16.



#### ATC across borders

Our collaboration with fellow air navigation service providers (ANSPs) on Extended Arrival Manager (XMAN) has continued to streamline the flow of aircraft into Heathrow. Working with controllers in France, Belgium, the Netherlands and Ireland, aeroplanes can be slowed before they are near UK airspace.

What began as a trial has been so successful that it entered permanent operational service last October.

This procedure can now begin 350 miles from London. Previously, controllers could only influence aircraft speed once it was in the NATS network, only 80 miles from the airport, limiting the ability to manage inbound traffic flows.

Heathrow operates at 98 per cent capacity and relies on holding stacks to ensure the runways are used as efficiently as possible. XMAN cut by up to a minute the time spent holding, saving fuel and reducing noise for nearby communities.

Co-ordinating with other ANSPs to manage aircraft speed across each stage of their journey — slowing or accelerating depending on the type of delay – will ultimately deliver significant efficiency improvements.

XMAN is a key concept of the Single European Sky initiative, which will require 24 airports across Europe to deploy XMAN procedures by 2024, ensuring the benefits are felt more widely.

## Operations update

continued



The introduction of Time Based Separation marks a significant milestone for Heathrow, NATS, Lockheed Martin and British Airways. It has brought real benefits to our customers through reducing delays in high winds and has been a great example of the benefits of collaborative working. We look forward to building upon this great work to see what additional benefits can be reaped in the future.



Andy Lord British Airways' Director of Operations

WINNER
SINGLE
EUROPEAN
SKY
AWARDS

WINNER
IHS JANE'S ATC
AWARDS 2016

RUNWAY CATEGORY

#### TBS improves ETA

Time-Based Separation (TBS) won two prestigious awards this year, further recognition of the benefits it delivers for airlines and airports.

Together with project partners
Lockheed Martin, Heathrow Airport
and Eurocontrol, the innovation
was named winner in the European
Commission's debut Single European
Sky award. The awards celebrate the
best examples of collaborative working
within air traffic management to make
Single European Sky a reality.

This success came after the team won the IHS Jane's ATC Runway Award.

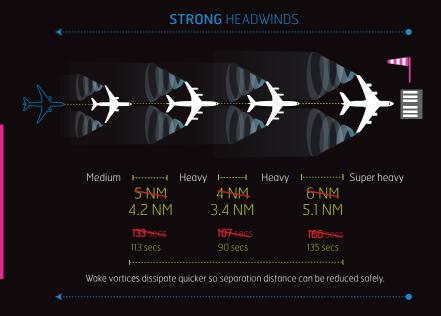
Time-Based Separation (TBS) allows us to manage dynamically the separation between arriving aircraft based on the prevailing wind conditions at Heathrow.

During strong headwinds, aircraft fly more slowly over the ground which has traditionally resulted in extra time between arrivals and consequently delays to arriving flights. However, TBS has allowed us to maintain the landing rate in headwinds by safely reducing the distance between arrivals.

In November 2015 alone, we estimate TBS saved 25,000 minutes of delay, despite winds of up to 60 knots on final approach. On 10 November, despite a 40 knot headwind, we had no flow regulations in place at all, something that would have been unthinkable before.

On average TBS has allowed us to land 2.9 additional aircraft an hour on strong wind days and cut Air Traffic Flow Management delays caused by headwinds by up to 60 per cent. Importantly, this has all been achieved without any increase in reported wake vortex encounters or go-arounds.







At Heathrow Airport we have a challenging decade ahead. By bringing together the knowledge, experience and resources of our combined organisations we will be better placed to meet the demands of our airfield and customers going forward.



Derek Provan Heathrow Airport Operations Strategy Director

## Tracking Ocean improvement

Over the North Atlantic, we have successfully introduced RLat or reduced lateral separation. By working with our colleagues in NavCanada, we have reduced separation side-by-side with other aircraft from one degree of latitude to half a degree.

This reduced lateral distance is set to become the standard separation minimum across the organised track structure later this year.

Customers have also been experiencing the benefits of the tools we introduced for our Oceanic controllers at the end of 2014. The latest technology monitors pilots' requests for more efficient flight levels and speeds and advises controllers when these become available. If flight crews are too busy to make the request, the tools can automatically look for opportunities for aircraft to climb which the controllers can offer to the crews if it is safe to do so. It's estimated that Oceanic improvements will save 30,000 tonnes of fuel a year because of the extra capacity created.

## Airport relationships redefined

Over the last year, we have been working very closely with Heathrow to drive forward our strategic partnership. Like our work with other airport colleagues, we have built up an intimate knowledge of Heathrow's day-to-day and strategic operation. In 2015, our Heathrow General Manager began a secondment as the airport's Director Airside Operations and this will continue in 2016. Both our organisations have benefited from the partnership, and this way of working we will be progressing with other airports this year.

Elsewhere, the market to manage air traffic control at individual airports continues to become more competitive. We were delighted to renew our contracts for tower operations with Belfast International, Sumburgh Approach Services and East Shetland Basin ATC services. Most recently we successful won the competition to provide tower and approach services to Belfast City Airport, that we will transition during 2016.

Evidence, if it were needed, of growing competition was seen at Gatwick. A new operator has now taken over tower and engineering services. We are very proud of our track record at Gatwick, which is, by a large margin, the busiest and most efficient single runway in the world.

Last summer, we delivered a record 934 movements in a single day. We have worked closely with the airport to ensure a safe and professional transition, including seconding 24 employees to support the new Gatwick ANSP whilst they train their own team.





## Operations update

continued





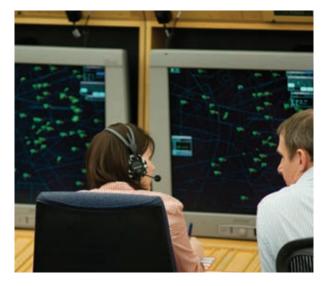
## London airspace change: first phase live

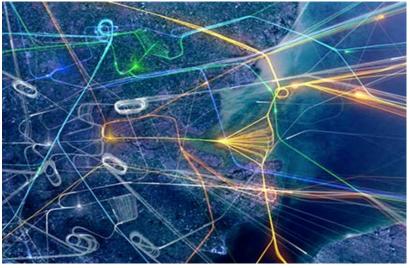
The airspace change proposal for the first phase of London Airspace Management Programme (LAMPIA) was approved by the Civil Aviation Authority last November and was implemented in February this year.

The changes clear the way for wider modernisation of airspace to deliver more efficient flights, saving fuel and reducing  $\mathrm{CO}_2$  emissions, and reducing noise, keeping aircraft higher for longer and minimising areas regularly overflown.

The changes include:

- A "Point Merge" arrival system for London City Airport, which is over the sea and will replace conventional routes which are over land
- New alignments for some London City departure routes with other existing routes at the airport replicated to RNAV standard, enabling aircraft to climb to higher altitudes more quickly
- Re-aligned routes for daytime traffic departing Stansted which allows aircraft to climb higher more quickly
- High level changes, at 7,000ft and above, affecting Bournemouth, Southampton and TAG Farnborough airports meaning fewer flights over land.





## Strategic update

## Airspace change and challenge

As you may have just read in the operations update, we successfully brought in the first phase of airspace change (LAMP1A) in February this year.

However, planned consultation with the public on airspace change and the UK Government policies including the treatment of noise, unprecedented public reaction to change in noise patterns and an impending government decision on runways in the south-east now colour the landscape against which low-level airspace change is set.

Public reaction over uncertainty about runway expansion, in particular, has fed into airports reconsidering the second phase of low level airspace changes proposed over London (LAMP2). These were scheduled for full implementation by 2019 but are now planned to take place in the next five-year regulatory charging period, RP3, which begins in 2020, by when aviation policy should be set.

In the meantime we are continuing our work to implement the higher level changes to the London terminal airspace from the original LAMP design. We're also working with airports to redesign the airspace in the Scottish Terminal Manoeuvring and Northern Terminal Control Areas in a coordinated approach. This is expected to enable fuel savings of between 32,000 to 42,000 tonnes per year.

Juliet Kennedy, NATS Operations
Director commented. "Without
meaningful and widespread airspace
modernisation, the UK faces the
prospect of delays many times what
they are today, something that will
cost airlines many millions of pounds
each year and our wider economy
an awful lot more. In reality the
breakdown in connectivity would likely
mean the erosion of our aviation
industry with airlines taking their
business elsewhere.

The challenge with airspace change, as with every other big infrastructure project, is that there are always winners and losers and it therefore requires political determination to help deliver. But the stakes are high and as an island nation that relies on aviation, we can't afford to lose."

## Room with a view to the future

Rare is the customer report which features a major project with no impact whatsoever on its customers. But that's what happened when we moved our Area operation out of its control room at Swanwick to a new home, next to the Terminal Control teams.

The transition to new space in the centre was completed with no interruption to your flight operations. Business-as-usual despite a significant transition.

The impetus behind this major project is to ensure we are deploying the technology needed for future air traffic requirements in a single, combined Area and Terminal Control room.

Known as iTEC, it will form the new flight data processing system across our network. It's already been introduced, entering limited operational service in early 2016 for upper airspace controlled from Prestwick.

It includes a range of tools to help reduce air traffic controller workload, increase airspace capacity and improve safety by automatically detecting potential aircraft conflicts ahead of time. It will enhance interoperability between control centres in Europe and will also make it possible for aircraft to optimise their routes as it is an enabler for Free Route Airspace (FRA).

Part of a strategy to speed the deployment of new technology designed to harmonise air traffic controller input, iTEC is in service of our Any Controller, Any Workstation, Any Centre, Any Customer strategy.

## Strategic update

#### continued

## Northern Lights: green light for free route

Our part in the effort to create a single area of Free Route Airspace (FRA) covering nine North European Countries by 2021 was recognised by the European Commission in its first-ever Single European Sky Awards ceremony.

The Free Route Airspace will extend from the eastern boundary of the North Atlantic to the western boundary of Russian airspace in northern Europe. It will enable airspace users to plan and take the most costeffective, fuel-efficient and timely routes across the entire airspace managed by Borealis members rather than following pre-defined 'routes' within each member country's airspace, saving time, money and fuel. This will provide significant savings in fuel and CO<sub>2</sub> emissions to customers.

We took our first step towards FRA with Direct Route Airspace in portions of Scottish airspace last year and we'll be introducing FRA itself into areas of Scottish airspace before extending more widely across the UK.



#### Free route airspace (FRA) programme





#### borealis ALLIANCE



INCREMENTAL STEPS TO JOIN EXISTING FRA

## Special delivery: Single European Sky update

The work we're doing to install and introduce into service iTEC aligns with the SESAR programme to harmonise air traffic management across Europe.

SESAR, Single European Sky ATM Research programme, is now in deployment phase. Having gone through concept of operations, its various elements are now being rolled out ahead of entering normal service.

Through the A6 Alliance of ANSPs, alongside the A4 airlines and the SESAR-related Deployment Airport Operators Group (SDAG), we're part of the SESAR Deployment Manager that is co-ordinating this phase for the first set of SESAR solutions to be in place across Europe by 2024. This will bring shorter flight times, increased predictability on arrivals and departures, fewer cancellations and delays, and a reduction in CO<sub>2</sub> emissions in spite of increased traffic. It will also bring economic growth and employment and maintain Europe's global leadership in air transport and aviation.

Much of the innovation you'll have seen across this report; from TBS and Borealis and much more besides, falls within the overall SESAR programme. We look forward to posting further updates on progress and its benefits.

## Picture this: images over the Atlantic

We're building on our innovative DataLink trials that are successfully reducing longitudinal and lateral separation standards in the North Atlantic and delivering safety and environmental performance improvements.

Customer consultation on our next innovation, further reductions in these standards through the introduction of surveillance data, is underway. In airspace with no terrestrial

surveillance, we're proposing to use space-based ADS-B surveillance, alongside our existing satellite based communications and navigational tools, to provide controllers with new tools and processes to safely control traffic.

Expected in 2018, this proposal is expected to improve safety, save fuel and emissions and improve the predictability of North Atlantic operations. It will also offer some mitigation for airlines unable to meet key technical challenges of the NAT DataLink mandate





# Solutions and regional activities

We are established as one of the leading commercial air navigation service providers through our corporate structure and business ethos. NATS operates in air traffic control markets both in the UK and abroad.

## Concentration on capacity

Our Airport Capacity Management (ACM) tool was instrumental in creating Heathrow's first new early morning arrival runway slot in nearly 20 years.

Vietnam Airlines filled the gap, broadening still further the range of destinations served by the airport and choice of operators; benefiting the passenger experience, increasing revenues for both airport and airlines and, based upon the secondary trading value of airport slots at constrained airports like Heathrow, valuable assets for airlines.

ACM now means simulations which used to take several days to post a result now take seconds. By using these results together with data analysis, it supports effective decision–making about runway capacity, scheduling and planned infrastructure changes.

The tool can also be applied to a wide range of other airports to support measures to understand their individual operating challenges and to support measures to improve capacity.

## A more Intelligent Approach

While ACM is delivering benefits, the success of Time-Based Separation spurred NATS and Lockheed Martin to explore how advanced software could further help airports build resilience and create capacity in all weather conditions

The Intelligent Approach suite of tools, based on a common, fully portable/compatible platform, is designed to help all airports do this at a fraction of the cost of adding taxiways and runways. It offers solutions around enhanced safe separation of aircraft (delivering greater consistency of spacing), improves operations in strong headwinds, fog or low visibility and can also assist controllers managing intersecting runways when it is safe to clear flights for departure as it analyses interacting aircraft movements.

## FerroNATS manages rising Spanish air traffic

Air traffic movement increases ranged from six to ten per cent at the nine Spanish airports under the ATC management of FerroNATS, a company formed with Spanish infrastructure provider Ferrovial, in 2011. Alicante and Ibiza enjoyed good summer operations with reductions in delays and taxi times.

## Project Marshall progress

We completed our first year of successful service delivery at the biggest centralised operational Army airfield in the UK, Wattisham Flying Station, as part of Project Marshall.

Our work there is part of our joint venture with Thales, called AQUILA, to deliver the MOD programme to transform terminal air traffic management at military airfields. The contract is valued at around £1.5bn over the course of its 22-year-lifespan. It will modernise ATM at over 100 MOD locations, in the UK and overseas, including more than 60 airfields and ranges. From April 2016 we will also provide the ATC service at Middle Wallop and Netheravon as part of that same contract.





#### Asia-Pacific update

We opened our office in Singapore last year to enable us to support our clients both there and in Hong Kong, where a third runway is planned for Chep Lap Kok. Demand is growing for air travel in the region as prosperity rises and budget airlines expand to serve over half the global population. The experience we can share of decades of managing some of the world's busiest airspace in the UK means we can offer practical support to help solve challenges across the air traffic management spectrum. As a result, we are working closely with colleagues in Indonesia and the Philippines and continue to build on more established relationships in Australia, Japan and India. In Thailand, too, we are in talks to advise on enhancing ATM infrastructure and optimising performance.

#### Middle East update

The key capacity and congestion challenges facing this region are echoed in our experience of managing the ATM network over the UK. The air traffic network for the Middle-East is, effectively, the world's aviation crossroads.

More flights and significant investment in airports has created more demand on the air traffic network, which is critical to serving present and future demand for air travel safely and efficiently.

We brought together the aviation industry from across the region for a symposium in Qatar in April to inform the debate on future development.

Delegates from the RAF and LOCOG, which organised the London Olympics in 2012, were among those who shared their experience as Qatar prepares to host the World Cup in 2022.

The NATS team also commissioned research by Oxford Economics on the economic benefits to improved air traffic control.

Our teams are working with the Kuwaiti Directorate of Civil Aviation to oversee the installation of engineering equipment to support airport expansion. In Oman, we are supporting the Public Authority of Civil Aviation by carrying out the safety assurance at its new ATC centre. Here, and in the UAE, we also delivered engineering training contracts.



## Customer forums

We believe in working in partnership to understand more closely your concerns and increase the likelihood of delivering solutions. Over the years, we've evolved this approach to create a range of customer forums to ensure our business aims are as aligned as much as possible with yours.

#### Working with us: our forums

#### Operational Partnership Agreement

We focus on operational priorities for the next 12-18 months to smooth demand v capacity issues and manage short-term projects while agreeing on operational performance targets.

#### Flight Efficiency Partnership

Quick-wins and tactical improvements to flight profiles characterise our work here. We also look at ways to improve flight efficiency with trial projects.

#### Safety Partnership Agreement

Working in partnership with you and others across the industry to identify and resolve specific safety issues.

#### NATS and Business Jet Forum

By reviewing the previous period's business jet activity, we can identify more accurately the forthcoming peaks and how to manage them effectively.

### Lead Operator Working Group and Carrier Panel

Working collaboratively with customers on the technical aspects of airspace design with the aim of agreeing concept and design at an earlier stage, and supporting efficient delivery of NATS airspace programme.

### Service and Investment Plan Consultation

We consult with you on proposed investment and our performance against our targets to deliver safety, service and value. This is done on a collective and one-to-one basis.

#### Future Airspace Strategy Industry Implementation Group

The CAA's Future Airspace Strategy (FAS) considers the modernisation of the UK's Air Traffic Management (ATM) System, including the structure of UK airspace, the routes flown and technology used to separate safely aircraft and expedite the flow of traffic. Here, a broad range of aviation stakeholders are represented.



### Jargon buster



#### 3Di

3 dimensional inefficiency score

#### **ACM**

Airport Capacity Management

#### ADS-B

Automatic Dependent Surveillance -Broadcast

#### **AMAN**

Arrival Management

#### **ANSP**

Air Navigation Service Provider

#### **ATICCC**

Air Traffic Incident Communication and Coordination Cell

#### **ATC**

Air Traffic Control

#### **ATM**

Air Traffic Management

#### CAA

Civil Aviation Authority

#### FAS

Future Airspace Strategy

#### **FASIIG**

Future Airspace Strategy Industry Implementation Group

#### **FEP**

Flight Efficiency Partnership

#### FRA

Free Route Airspace

#### LAMP

London Airspace Management Programme

#### **ITEC**

Interoperability Through European Collaboration

#### LOCOG

London Organising Committee of the Olympic and Paralympic Games

#### MOD

Ministry of Defence

#### **OPA**

Operational Partnership Agreement

#### RAT

Risk Analysis Tool

#### RAF

Royal Air Force

#### RLat

Reduced Lateral Separation Minima

#### RP

Reference Period

#### SDM

SESAR Deployment Manager

#### **SESAR**

Single European Sky ATM Research

#### SPA

Safety Partnership Agreement

#### TA

Transition Altitude

#### TC

**Terminal Control** 

#### **TBS**

Time Based Separation

#### **TMA**

Terminal Manoeuvring Area

#### UAE

United Arab Emirates

#### **XMAN**

Extended Arrival Management



#### Talk to us

If you'd like to find out more about any of the information in this report, please talk to us:

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#### Customer website

Our dedicated customers website www.customer.nats.co.uk provides the latest news, operational information, meeting details, contacts and links to other resources. Customers are also able to register for updates from ATICCC our Air Traffic Incident Communication and Coordination Cell which is activated during any periods of significant network disruption.

