Business Plan 2016-2020

NAVIAIR

Contents

Positive development continues despite low growth

With the biggest percentage en route price reduction in Europe in 2015 – a drop of 11.3 per cent – Naviair has shown that even in a decade of very low growth in air traffic we are capable of adapting to our customers' current demands. We will be able to reduce our en route price again in 2016.

These price reductions underpin our ambition to be able to meet customers' wishes for low prices. As a provider of aviation infrastructure, we are very conscious that our price is an important parameter for enabling our customers to run an efficient business. At the same time, we are pleased that our customers almost take it for granted that we will supply the best products when it comes to the most important parameters of all: high levels of safety and regularity. These are areas where we refuse to compromise in our continuing efforts to keep a tight rein on expenditure.

We are also continuing our efforts to make it easier, better and cheaper for customers to use the airspace. Among other things, we are involved in increasing the opportunities for airlines' choice of Free Route Airspace. Until now, this has only been possible in Danish-Swedish airspace, but since November 2015 the opportunity has been extended to apply to the entire Nordic area. The aim is to further extend this fuel-saving, environmentally-friendly service from 2018, to cover the whole of the northernmost part of Europe from Finland, Estonia and Latvia in the east to Ireland and Iceland in the west.

In Greenland, too, we are working continuously and with determination to optimise Air Traffic Management (ATM) and the use of airspace.

Through our partnership in the COOPANS Alliance, we are also continuing to develop and standardise our technical systems in seven control centres in five countries. The COOPANS Alliance is the unrivalled leader in Europe where standardisation is concerned. In 2015, COOPANS was also given a place in the A6 Alliance, together with the five largest ANSPs in Europe. This has increased our chances of influencing developments in Europe.

We are also an active partner in Aireon LLC, where we are participating in the development of the operational concepts that will underpin the world's first global aviation surveillance system when it is put into operation in 2018.

Lastly, we are exploring possible ways to develop our service at the airports through a study of the use of new technologies.

This Naviair business plan describes the company's strategy and goals. The plan also includes a description of the initiatives we will be prioritising in the next few years. The business plan also includes a review of the framework for our activities and an overview of the customers we work for. Of course, we will always adapt to current rules and market conditions. The plan is updated annually. This plan marks out the general direction for the period 2016-2020.

Enjoy!

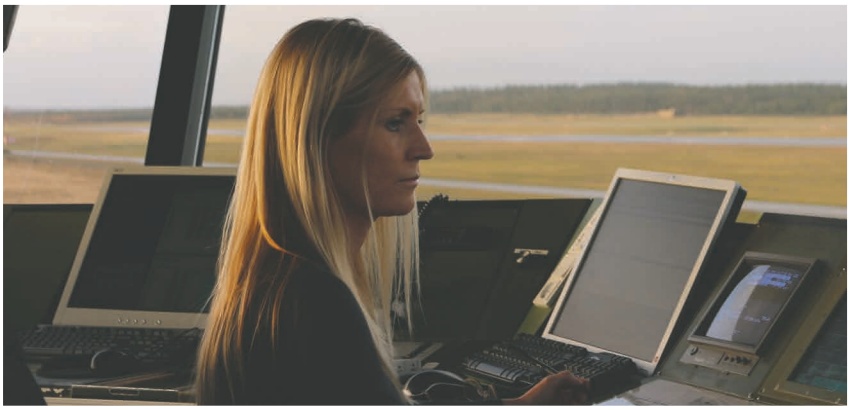
Morten Dambæk
CEO

Anne Birgitte Lundholt
Chairman

Strategic platform

Naviair is a company owned by the Danish state represented by the Ministry of Transport and Building.

To fulfil our mission and achieve our vision, we have drawn up three sub-strategies each of which sets out guidelines on how to meet our objectives in a specific area. To achieve our objectives, we will: create value for society and our customers, continually develop our company, and have competent, committed and motivated employees.



Mission

Naviair contributes to the creation of value and welfare for society and our customers by developing and providing safe and efficient Air Traffic Management (ATM), fulfilling our role as a vital part of the aviation value chain.

Vision

We will always be among the best Air Navigation Service Providers (ANSPs).

We will continually develop our company and secure a strong position with our customers and partners, partly by participating in international partnerships and alliances. At the same time, we will consistently deliver the best products in the industry at competitive prices without compromising on the priority we give to high levels of safety, quality and service.

We will achieve our ambitions through competent, committed and motivated employees who thrive on working in a demanding environment in which targeted employee development and involvement form the basis for maintaining an attractive workplace.

The three sub-strategies

Creating value for society and our customers

Naviair will always focus on supporting customer needs. We will therefore continuously strengthen and develop customer relations through close cooperation focusing on safety, quality and price to ensure that Naviair's services optimally support our customers. In this way, we will secure Naviair's long-term existence.

One way in which we create value is by developing and strengthening NUAC, which operates the Air Traffic Control Centres (ATCCs) in Copenhagen, Malmö and Stockholm on behalf of Naviair and LFV. Through joint coordination of air traffic, we are also securing the basis for environmental and climate improvements.

- We will maintain our high level of safety and at the same time continually develop our capacity level and improve efficiency.
- We are working on providing our services at lower prices measured against current prices.
- We focus on financial responsibility, efficiency and being cost-conscious.
- We are environmentally conscious and continually strive to achieve climate improvements in aviation.
- We support our customers' growth through close cooperation with airlines and airports.

Developing the company

Naviair will develop continually and maintain a strong position with customers and partners by participating in international partnerships and alliances.

Naviair provides air navigation services and technical maintenance. These services must be continuously developed and made attractive to both existing and new customers. We strengthen European cooperation within air navigation services and relations with the Danish Transport and Construction Agency and Danish Defence to provide the basis for our sustained growth and development.

We will cement and develop our market position through international partnerships and alliances such as NUAC, Entry Point North, Aireon and COOPANS. That will give us the strength we need in relation to the other players in the market.

We strengthen our technical and operational development through international cooperation with other ANSPs.

- Modelling our efforts on COOPANS, we will form new alliances with other partners and suppliers, where strategically expedient and positive for our business and the development of our core areas.
- We provide technical and operational services to airports and enter into technical strategic partnerships.
- Based on specific needs analyses, focused tender procedures and tight supply chain management, we will invest in automated and standardised systems.

Competent, committed and motivated employees

Naviair is a workplace that offers good professional and personal development opportunities and is able to both retain and attract competent and committed employees.

Naviair will continuously develop management, organisation and employees.

We implement targeted development of employee culture and skills to ensure that we always focus on safety, capacity and efficiency in our provision of services.

- We ensure that our employees always have the right skills and motivation to support our core business.
- We continually strengthen leadership skills through skills development and supplementary training, mutual sparring and involvement in the strategic development and management of the company.
- We ensure ongoing development in efficiency, management, culture, skills and communications.
- We ensure that our employees bear our strategies in mind and adhere to our values.

Critical success factors

To ensure that we achieve our long-term objectives, we have identified a number of critical success factors. They form the basis for the specific key performance indicators that we have defined to ensure that we remain focused on achieving our strategic objectives.

Safety

At Naviair, we always maintain a high level of flight safety.

Capacity

At Naviair, we ensure that we have adequate capacity and handle air traffic with as few delays as possible.

Efficiency

At Naviair, we are punctual, meet deadlines and make optimum use of resources.

Environmental responsibility

At Naviair, we ensure handling of air traffic that reduces air pollution and minimises noise.

Financial responsibility

At Naviair, we are cost-conscious and we focus on the price of our services.

Development

At Naviair, we constantly strive to develop all our areas of activity via partnerships and alliances, harmonisation and standardisation.

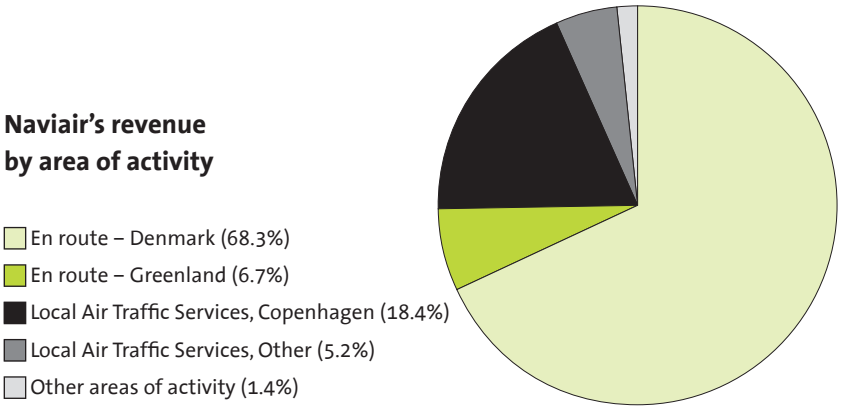
Attractive workplace

At Naviair, we are positive, motivated and well-functioning, and all our employees have the right skills.

Activities

Naviair has been designated by the Danish Transport and Construction Agency to provide aviation infrastructure and is therefore an important player in society. Naviair's core activity is air navigation services. Naviair has activities both in Danish airspace and North Atlantic airspace. The activities cover four areas: En route – Denmark, En route – Greenland, Local Air Traffic Services and Other areas of activity. Expressed in terms of revenue, En route – Denmark is the biggest area of activity.

Naviair's revenue by area of activity



En route – Denmark

Area control services in Danish airspace from:
> ATCC in Copenhagen *

Approach control service to Copenhagen Airport from:
> ATCC in Copenhagen *

Briefing service from:
> ATCC in Copenhagen *

Flight Information Services from:
> ATCC in Copenhagen *

AIS service:
> Aeronautical publications, AIP in Denmark

Technical support and maintenance of ATM/CNS equipment in Denmark:
> ATM equipment
> Navigation and communications systems
> ATS surveillance systems

*) The ATCC in Copenhagen is operated by NUAC on behalf of Naviair.

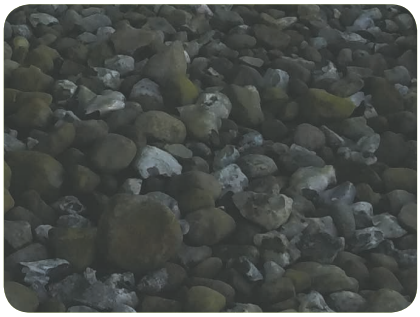
En route – Greenland

Flight Information Services from:
> Flight Information Centre in Nuuk

Technical support and maintenance of CNS equipment in Greenland and the Faroe Islands:
> Navigation and communications systems in Greenland and the Faroe Islands
> Surveillance systems in Greenland and the Faroe Islands
> Radar installations in the Faroe Islands

Briefing service from:
> Flight Information Centre in Nuuk

AIS service:
> Aeronautical publications, AIP in Greenland and the Faroe Islands



Local Air Traffic Services

Aerodrome control service from:
> Tower in Copenhagen
> Tower in Roskilde
> Tower in Billund
> Tower in Aarhus
> Tower in Aalborg
> Tower on Bornholm

Approach control service from:
> Tower in Roskilde
> Tower in Billund
> Tower in Aarhus
> Tower in Aalborg
> Tower on Bornholm

Aerodrome Flight Information Services from:
> Tower on Vágar

Other areas of activity

Sale of technical support and maintenance of ATM and airport CNS equipment from:
> Technical station in Copenhagen
> Technical station in Billund
> Technical station in Aalborg

Sale of technical-operational knowhow

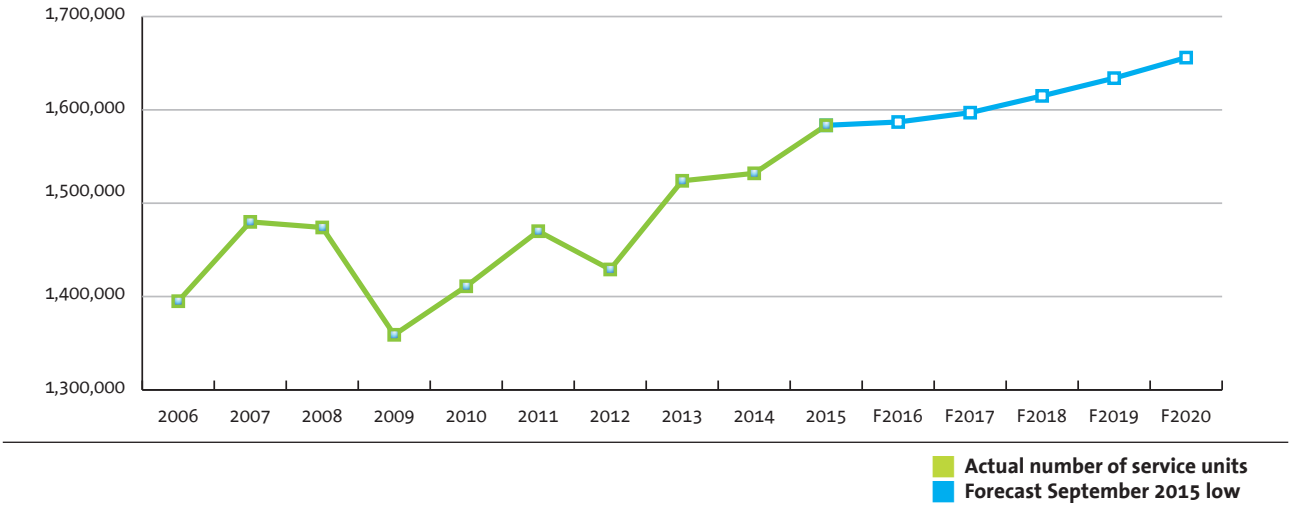
Activities in Danish airspace

En route – Denmark

En route – Denmark comprises area control services in Danish airspace and ATM over Danish airports, including approach control service to Copenhagen Airport. The activities also include briefing and flight information services from the ATCC in Copenhagen. This area of activity also comprises technical support and maintenance of radar installations and communications systems in Denmark. By far the largest portion of Naviair's revenue comes from en route traffic charges in Danish airspace.

Our outlook for en route traffic is based on forecasts from Eurocontrol (STATFOR). In the latest forecast from September 2015, Eurocontrol raised its expectations for growth in air traffic in the period from 2016-2020, so a moderate increase in traffic is expected in the next few years. Expectations for growth in service units are slightly more upbeat than the expectations for air traffic. For 2016, we expect modest growth in service units compared with 2015.

Development in service units – En route



Naviair continuously strives to optimise airspace – including in the Danish-Swedish airspace block (FAB). With this in mind, in 2015 Naviair and LFV introduced Free Route Airspace in cooperation with the ANSPs in the North European FAB – NEFAB (Norway, Finland, Estonia and Latvia). Free Route Airspace allows the airlines free planning of their flights both through the Danish-Swedish FAB (this option has existed since 2011) and in NEFAB.

The result is shorter routes and reduced flight times, which leads to fuel savings and thus benefits the airlines' finances. Free Route Airspace also results in reduced greenhouse gas emissions, so it has beneficial effects on the environment as well.

The aim is to extend the cooperation still further to include the ANSPs in Ireland, the UK and Iceland. This is being achieved through the Borealis Alliance, and the option of Free Route Airspace will include a single, integrated airspace comprising the Danish-Swedish FAB, NEFAB, the UK-Ireland FAB and Iceland.

Naviair provides AIS service (Aeronautical Information Services) from Copenhagen, comprising aeronautical publications for Denmark, Greenland and the Faroe Islands. We publish AIPs (Aeronautical Information Publications) for all three areas as well as a VFG (Visual Flight Guide) for Denmark. We also publish AICs (Aeronautical Information Circulars), Supplements and Notam. A total of approximately 1,500 customers are subscribing to these publications. The aim is to develop a digital solution in the AIS area.

Local Air Traffic Services

Local air traffic services comprise aerodrome control and approach control at a number of Danish airports.

Our largest customer is Copenhagen Airports A/S. According to Eurocontrol's forecasts (STATFOR), the number of service units at the airport will be largely the same in 2016 as in 2015.

For our second-largest customer, Billund Lufthavn A/S, and for the other airports, we expect the level of air traffic to remain unchanged or to rise slightly.

The Danish airports are very important for the development of aviation in Denmark, so at Naviair we want to promote initiatives that will support aviation in Denmark by ensuring a high level of safety, capacity and efficient service in the towers in which we operate. These initiatives include continuously exploring the possibilities of developing and improving the efficiency of air traffic services, partly through the use of new technology. Naviair also endeavours to minimise the environmental impact from aviation by continuously focusing on optimising operational patterns and procedures.

Other areas of activity

Our other areas of activity in Denmark primarily comprise technical support and maintenance of ATM and CNS airport equipment. These activities mainly comprise CNS equipment owned by third parties, primarily airports.

These activities are excellent supplements to Naviair's core areas and enable us to optimise utilisation of our resources.

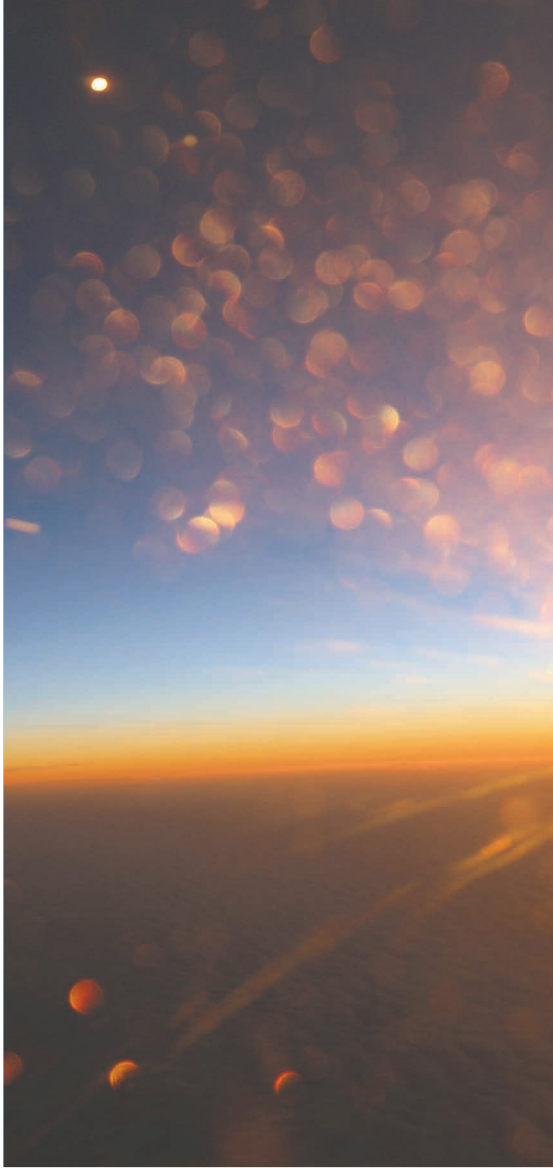
Besides support and maintenance, we provide technical and operational assistance to a number of business partners.

Activities in North Atlantic airspace

En route – Greenland

En route – Greenland comprises briefing and flight information in Søndrestrøm FIR from the Flight Information Centre in Nuuk.

The Søndrestrøm FIR extends from the sea to the south of the southern tip of Greenland all the way to the North Pole. It is one of the world's largest flight information regions and covers the airspace above a total area of approximately 4.2 million square kilometres. Our Flight Information Centre in Nuuk covers flight information services up to FL 195 (flight level 19,500 feet). For the northern part of the Søndrestrøm FIR, Denmark has outsourced air traffic control above this flight level to Iceland and it is provided from Reykjavik, while air traffic control in the southern part has been outsourced to Canada, with the service provided from Gander.



Air traffic control above FL 195 is based on agreements which Denmark concluded with Canada in 1963 and with Iceland in 1975 and these agreements have not been reviewed since they were set up. Naviair provides the technical equipment in Greenland that is used by Nav Canada and ISAVIA.

Local Air Traffic Services

In the North Atlantic, we operate aerodrome flight information in the Faroe Islands from the tower on Vágar.

Other areas of activity

Other areas of activity in Greenland include operation of technical equipment. We own and maintain the technical equipment for ATM and CNS services in Greenland. We operate the national COM centre in Nuuk, from where we monitor international and national ATS (Air Traffic Services) networks.

Moreover, in cooperation with a group of other ANSPs, we are improving the efficiency of ATM over the North Atlantic by using satellite-based aviation surveillance technology. We do this through our partnership in Aireon LLC.

Outsourcing

We have opted to outsource some non-core activities. We assess each case individually when deciding which activities are appropriate for outsourcing. Cleaning, canteen operation, security and reception service, printing of AIM material, maintenance of building services, maintenance of green spaces and technical maintenance in Greenland are currently outsourced.

Customer base

We strive to provide the best service to our customers at all times. We maintain both a high level of safety and provide the requested capacity at a price level that is optimum in relation to the high, requested standard of service.

Airlines

In Danish airspace, we service a number of Danish and foreign airlines with more than 600,000 flights annually. We provide these services both from our ATCC in Copenhagen and from the towers at the airports at which we operate.

En route traffic in 2015 was slightly ahead of 2014.

Air traffic trends have been highly volatile for a number of years. At the same time, the continuing forecasts according to which we have adapted our operations have been uncertain and fluctuating. Seven years after the beginning of the latest financial crisis, all the signs are that air traffic across most of Europe will grow marginally, at most, for a number of years to come. The same applies to Denmark, where we expect air traffic to grow marginally only.

Airports

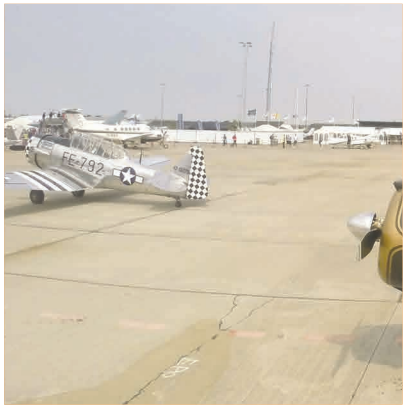
Our largest airport customer is Copenhagen Airports A/S. We are very conscious of the airport's important role as a North European hub and of the social significance of having a Danish airport of high international status. We are very aware that we have a great deal of influence on the level of service provided to international aviation. We therefore focus strongly on always ensuring that traffic is managed safely and efficiently, so that Copenhagen Airport appears attractive compared with the large competitor airports in neighbouring countries. For one thing, we have operated ATM for a number of years, without contributing to – or causing – any form of delay worth mentioning. At the same time, our efficient, direct ATM means that Copenhagen Airport is seen as a low-fuel – and therefore CO_2-saving – choice for airlines. This benefits both the airlines' finances and the environment.

The other airports in Denmark play a key role both to the development of aviation in Denmark and to the sustained efficiency of domestic aviation. It is important that the Danish airports continue to be able to attract air traffic in competition with other modes of transport and in competition with nearby airports in our neighbouring countries. As a provider to these airports, we therefore focus both on delivering the most efficient air traffic services and on keeping the price of our services at the lowest possible level. For example, we continuously explore the possibilities of developing air traffic services still further through the use of new technology.

Danish Defence

Danish Defence carries out training flights and deals with a number of national tasks in Danish airspace, including air policing, search and rescue flights and maritime surveillance. Naviair is in close contact with Danish Defence in order to provide the best possible support for military needs.

The ongoing planning of military and civil airspace activities is handled by Airspace Management Cell (AMC) Denmark, which is run jointly by Naviair and ESK 515 in Kastrup. Current civil and military traffic management is integrated and run by the ATCOs in the control centre in Copenhagen under the leadership of Naviair.



ATCOs from Danish Defence are part of the integrated traffic management.

Military training needs are met by military training areas, which can be allotted according to current requirements.

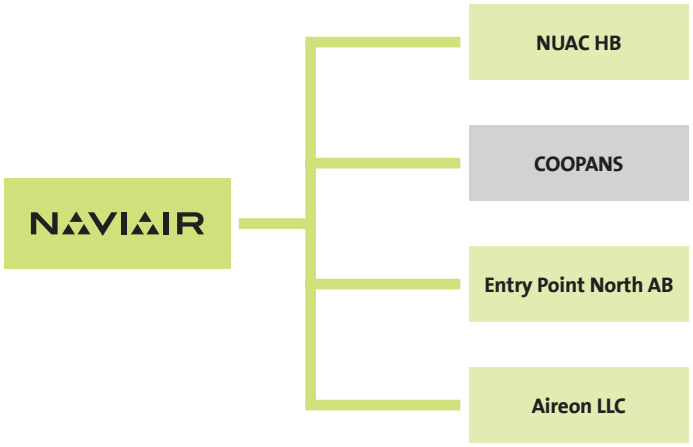
- The most demanding training flights take place in areas that are reserved the previous day, which ensures that civil air traffic is informed at the planning stage of the best achievable route around the areas, irrespective of whether they choose to fly along a specified ATS route or use Free Route Airspace.
- Less demanding training flights can also be carried out in training areas that can be allotted immediately. In this case, it is the ATCOs in the control centre who adapt the extent of the training area to civil air traffic in the area, so that aviation as a whole runs smoothly and efficiently.

Danish Defence flights outside the military training areas are supported in the control centre based on current needs. Flights are managed in accordance with the rules laid down by the Danish Transport and Construction Agency for the relevant airspace.

In the North Atlantic, Naviair has a close working relationship with the Arctic Command, and we rent premises from the Arctic Command in Nuuk in Greenland. Here, our Flight Information Centre is part of Joint Rescue Coordination Centre Greenland. The close coordination of search and rescue missions for aviation in Greenland ensures an optimum level of service.

International partnerships and alliances

To achieve our vision and the objective of always being among the best in our industry, Naviair's business model is based on strong involvement in four international partnerships and alliances.



Partly-owned enterprises
International partnership (Naviair, Irish Aviation Authority, LFV, Austro Control & Croatia Control)

NUAC HB

Owners: Naviair (Denmark), LFV (Sweden)

NUAC was established in 2009 as the first – and still the only – integrated operating company in Europe that is responsible for en route ATM in a joint functional airspace block (FAB). NUAC operates the three ATCCs in Copenhagen, Malmö and Stockholm as a subcontractor on behalf of Naviair and LFV.

NUAC only has approximately ten direct employees, while the remaining approximately 650 employees are on secondment to NUAC from Naviair and LFV. The three ATCCs and other equipment used by NUAC are owned by Naviair and LFV, but made available to NUAC.

Through our co-ownership of NUAC, we are implementing a part of our ambition to contribute to the harmonisation of ATM in Europe. Through NUAC, we also ensure continued improvement of the efficiency of ATM.

COOPANS

Partners: Naviair (Denmark), Austro Control (Austria), Croatia Control (Croatia), Irish Aviation Authority (Ireland), LFV (Sweden)

COOPANS is an international partnership consisting of Naviair, Austro Control, Croatia Control, the Irish Aviation Authority and LFV.

Since COOPANS was set up in 2006, the partners have cooperated on the joint development, upgrading and harmonisation of their ATM systems. The systems now use common software and the maintenance processes have been harmonised. As a result, seven control centres in Denmark, Sweden, Ireland, Austria and Croatia have now been harmonised and undergo synchronised upgrading twice a year. In 2015, these upgrades took place over a two-week period per upgrade without any delays or other inconvenience to air traffic. We also expect periodical future system upgrades to be implemented without any form of negative impact on air traffic. This is a unique development in European ATM, where the ANSPs in the other countries are still running their control centres with individual, technically very diverse systems.

In addition, in COOPANS we harmonise operational and technical procedures in order to limit specific and individual functionalities at the various ANSPs.

We estimate that we cut our system development costs compared with the costs each partner would incur if we had to develop the technology independently. To this should be added our considerable savings in operating expenses as a result of joint work concepts and exchange of experience.

In 2015, the COOPANS cooperation was extended, becoming the COOPANS Alliance, which, besides technical-operational cooperation, now also includes a common approach to and participation in SESAR 2020, SESAR Deployment Manager, EU funding projects, and the A6 Alliance in which COOPANS Alliance participates on an equal footing with the five largest ANSPs in Europe. Through these alliances, we are making our mark on the development in Europe. Further information on SESAR 2020, SESAR Deployment Manager and A6 can be found in the section European framework.

The COOPANS Alliance has enabled the five partners to take the lead in the matter of implementing EU requirements for the harmonisation of ATM.

Entry Point North

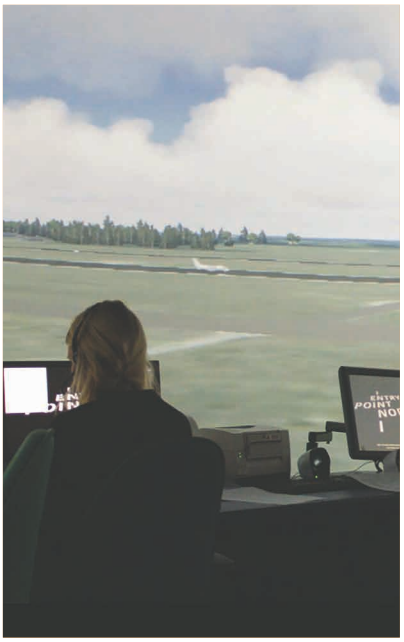
Owners: Naviair (Denmark), Avinor (Norway), Irish Aviation Authority (Ireland), LFV (Sweden)

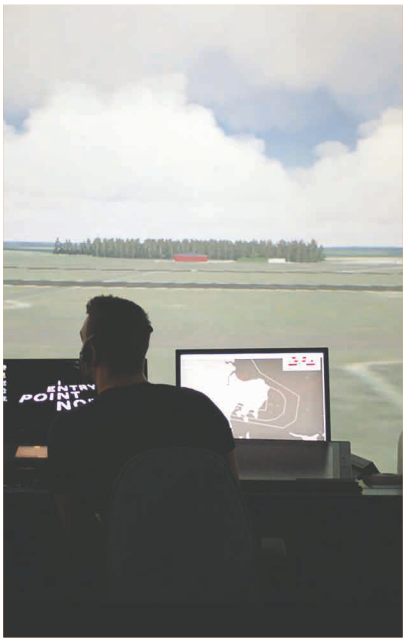
The ATS training academy Entry Point North is situated at Malmö Airport and is jointly owned by Naviair, Avinor, the Irish Aviation Authority and LFV. The academy was established in 2006 as the first transnationally owned academy offering ATM training, and the Irish Aviation Authority became co-owner of the academy in 2013.

The services provided by Entry Point North include Recruitment services, Initial training, Conversion training, Refresher training and Development training. In line with the ambition in SES, the primary aim of Entry Point North is to provide standardised and harmonised training for ATCO trainees and ATCOs.

The academy is the course provider for all ATM training, including English aviation training and tests, Safety Management System, Accident investigation, supervisor courses, ATSEP courses and the training of technical staff who carry out the maintenance of the ATM and CNS equipment.

Besides providing ATS training to its four owners, Entry Point North services ANSPs worldwide by selling training courses tailored to customer requirements that are held either at Entry Point North in Sturup or on-site at the customer. Entry Point North has more than 40 customers in more than 20 countries.





Aireon

Owners: Naviair (Denmark), ENAV (Italy), Irish Aviation Authority (Ireland), Iridium (USA), Nav Canada (Canada)

Aireon is a joint venture formed by a number of companies that will set up the world's first satellite-based global aviation surveillance system in the coming years. Once the new system is operational as expected in 2018, it will be possible to collect data all over the world on all aircraft fitted with ADS-B equipment. The great majority of commercial aircraft already have this equipment, but at present less than 30 per cent of the area of the globe is covered by the existing surveillance equipment. There is currently no surveillance in the remaining – often remote – areas, so at present ATM is based on the pilots' own radio reports on their position, altitude, course and speed.

Aireon LLC is headquartered in Virginia, USA. Besides Naviair (with an expected 6% ownership interest in 2018), the other joint venture partners are the US telecommunications company Iridium Communications Inc. (24.5%) and the ANSPs Nav Canada (51%), ENAV (12.5%) and the Irish Aviation Authority (6%).

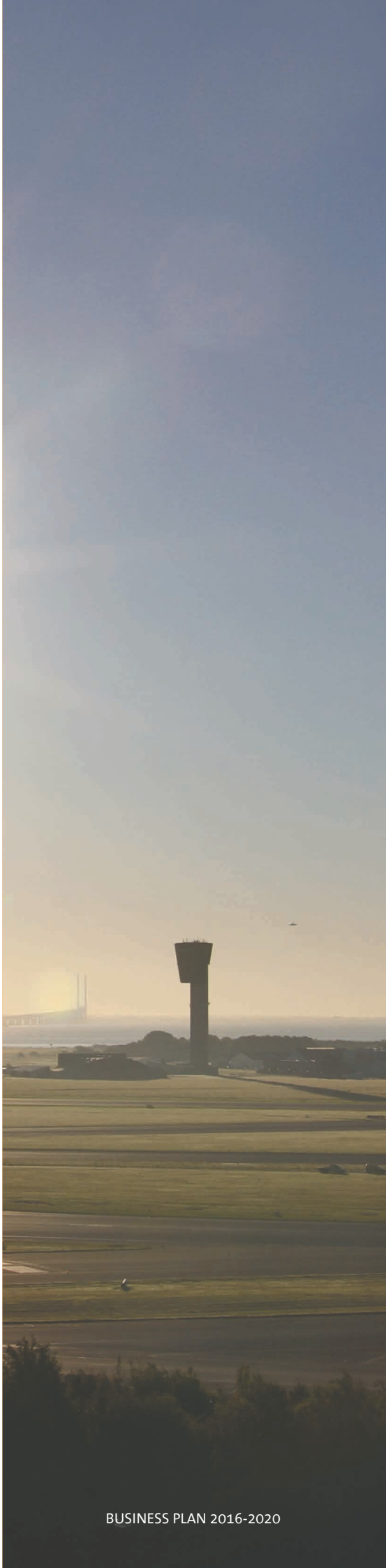
The new system comprises 66 satellites and a further number of back-up satellites, which Iridium will be putting into orbit around the earth during the period 2016-2017. The system also includes a number of receiving stations positioned in various locations on earth and a new satellite control centre, which is being set up in Virginia.

Aireon's business strategy is based on the sale of traffic surveillance data, mainly to the ANSPs but also to others, including airlines and flight handling companies. Aireon has already concluded provisional agreements on data sales to the US, Curaçao, the UK, South Africa, Singapore, New Zealand and other countries.

Naviair is contributing actively to Aireon's sale of services and the development of operational concepts that underpin Aireon's business strategy.

Through its special service, Aireon ALERT, Aireon plans to supply the first global emergency surveillance service, whereby data on lost and missing aircraft will be made available free of charge to rescue services and other relevant services. This free service will considerably strengthen global preparedness for aircraft emergencies.

This improved surveillance will constitute a major advance for ATM. In addition to the safety benefits, the system will also provide an opportunity for the ANSPs to use airspace much more efficiently than today. This in turn will enable the airlines to save fuel and flying time and save the environment from considerable quantities of greenhouse gases.



Environmental and climate initiatives

Like all other forms of transport, aviation affects both the environment and the climate. Aviation's share of global air pollution is between 2 and 3 per cent. The transport sector as a whole accounts for approximately 20 per cent. The biggest polluter in this sector is road transport, which accounts for 14 per cent of overall pollution globally.

Regardless of the fact that aviation consequently only accounts for a small proportion of the global environmental and climate impact, it is naturally always a challenge to ensure the biggest possible reduction in pollution. Aircraft and aircraft engines undergo constant development to ensure that they pollute less and less, generation by generation. At Naviair, we are also working hard to reduce the impact on the environment and the climate in our part of the aviation value chain. We are constantly seeking ways to reduce this impact by using airspace optimally, managing air traffic as efficiently as possible, and cooperating on the development of new technical solutions.

Emissions of CO_2 and other greenhouse gases from aviation

We are striving to optimise our infrastructure systems and make ATM more efficient, so that our activities can help to reduce the impact of aviation on the environment and the climate as far as possible. Insofar as this is possible – and where deemed safe – we give aircraft direct routes between their destinations and ensure that the airlines are allocated the altitudes and speeds they request so that the individual types of aircraft use the least possible fuel. We also ensure that the aircraft take off, land and taxi at airports in a way that allows fuel consumption to be kept as low as possible.

Flight safety is naturally always given top priority in ATM. Even with the highest level of safety, we are always working to optimise ATM and at the same time focusing our attention on any opportunity to implement new initiatives aimed at improving the climate and the environment.
We do this by prioritising a service-oriented culture, in which we endeavour to meet airlines' and pilots' requests for routes, speeds and altitudes. At the same time, we focus on developing the most efficient traffic concepts and ensuring the most flexible use of airspace. Our work is, of course, also guided by the recommendations of the European aviation organisations.

In all the focus areas involving the highest fuel consumption, we have made good headway on the development of climate-friendly traffic concepts. This applies to Free Route Airspace, Continuous Climb Operations, Continuous Descent Operations and Required Navigation Performance. Among many other concepts, we are also exploring the possibility of Extended Arrival Management.

Together with LFV, we have been practising Free Route Airspace in Danish-Swedish airspace since 2011. This allows the airlines free planning of the shortest possible, most direct flight through our airspace. The airlines can then calculate very precisely the amount of fuel an aircraft has to carry in order to complete a flight and thus reduce the aircraft's take-off weight as far as possible, so fuel is saved both by flying with lighter aircraft and the shortest possible distance. Eurocontrol has calculated that Free Route Airspace reduces CO_2 emissions in Danish-Swedish airspace by altogether 40,000 tonnes per year.

In November 2015, Free Route Airspace was extended to cover the whole of the Nordic area – Denmark, Sweden, Norway, Finland, Estonia and Latvia. In cooperation with a number of other ANSPs in the Borealis Alliance, from 2018 the area will be extended further to include Ireland, the UK and Iceland. This will pave the way for further major environmental and climate improvements in the years ahead.

Extensive use of Continuous Climb Operations for departing aircraft at Copenhagen Airport allows us to save the environment from annual emissions of approximately 32,000 tonnes of CO_2. At the same time, the airlines save a total of approximately 10,000 tonnes of fuel per year. These savings are documented in a Eurocontrol analysis. Using Continuous Climb Operations, the aircraft taking off are allowed to depart from the so-called Standard Instrument Departure procedure, which requires them to remain at different altitudes in graduated steps several times during departure. Instead, the aircraft are given permission to climb directly to their desired cruising level, and at the same time turn directly towards their destination as quickly as possible.

Continuous Descent Operations enable pilots to plan the most fuel-efficient and climate-friendly approach to airports from the aircraft's cruising level to landing. This enables the pilot to optimise the use of engine power during the last part of the flight. At airports with a high traffic density, it may be difficult to implement Continuous Descent Operations and at the same time maintain high capacity with optimum density between departing and arriving aircraft. But during periods of low traffic intensity, it is possible to use the concept – without Continuous Descent Operations hampering the possibility of maintaining the high proportion of Continuous Climb Operations.

At Copenhagen Airport, we are also cooperating closely with the airport, the airlines and other relevant players to reduce particle emissions through efficient management of aircraft while they are taxiing at the airport.

Noise

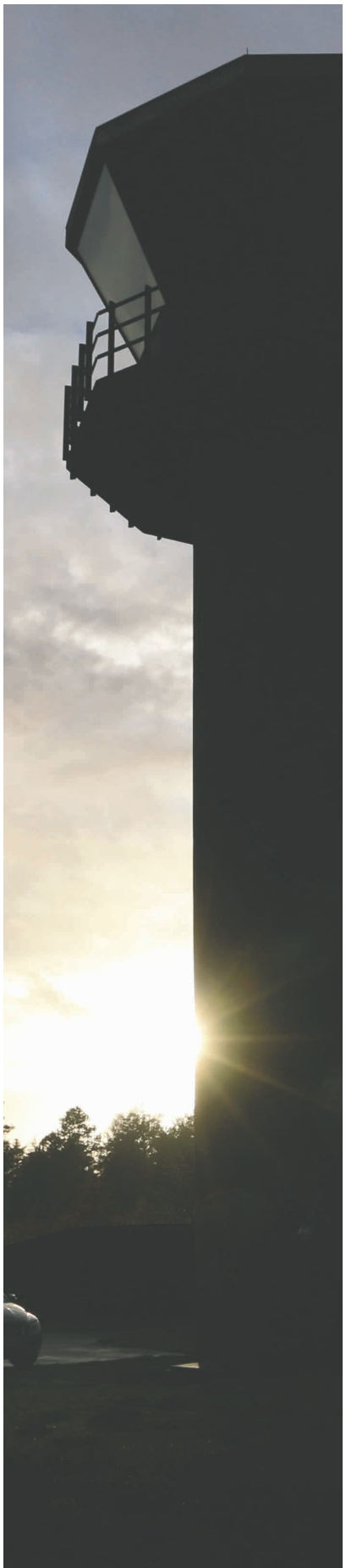
At all airports where Naviair manages traffic, clear noise restrictions are in place that safeguard the surrounding areas against unnecessary noise inconvenience from aviation. We of course adhere scrupulously to these restrictions and in addition we contribute actively to reducing noise at and around the airports by applying the most efficient traffic procedures. We therefore only experience very few cases of infringement of noise limits where Naviair shares responsibility.

Environmental and climate initiatives in our buildings and technical installations

Naviair operates 24/7, 365 days a year and our technical installations need a great deal of energy for both operation and cooling. Energy consumption for both our buildings and our technical installations is therefore considerable.

Our energy consumption for cooling is substantial and we are currently in the process of building new cooling plants in Copenhagen, with cooling installations adapted to groundwater cooling and new cooling machinery installed. We expect the new plant to go into service in 2017. The plant is expected to lead to an annual saving in energy costs for cooling of up to DKK 1.5 million and at the same time to reduce our CO_2 emissions by approximately 275 tonnes per year. Total investment in the new plant is expected to amount to DKK 34 million.

In addition, we have also implemented a number of other minor initiatives, including the ongoing replacement of light fittings with LED fittings, and our total energy consumption has been falling over the last few years.



Climate strategy

We are constantly working towards taking every opportunity to contribute to a positive effect on the climate. This work is being carried out in continuous consultation and cooperation with our customers, and we participate in environmental and climate work in a number of initiatives, including SES, SESAR, NUAC and COOPANS.

Using Eurocontrol's and IATA's joint Flight Efficiency Plan as a starting point, we continue to develop and ensure flexible utilisation of airspace by means of:

- Short routes, direct routes to destinations and fuel-efficient altitudes.
- The option of fuel-efficient approaches to airports where Naviair is providing tower service.
- Minimal ground delays with engines idling through efficient ATM at airports.
- Continuous Climb Operations wherever possible – with direct routes and climbs to cruising level.
- Participation in cooperation on the development of satellite-based global surveillance of air traffic, with the opportunities this kind of system will offer for optimising the use of airspace and reducing fuel burn.

European framework

The EU framework for ATM has a major impact on the way Naviair has to run its operations. The EU Member States and a number of other European countries have jointly committed to harmonising and integrating ATM in Europe into a single airspace (Single European Sky). This will mean that ATM across Europe will be subject to the same framework and performance targets. The aim is to achieve uniform ATM for both civil and military airspace users with a view to creating safe, efficient and economical ATM throughout Europe and at the same time reducing the environmental impact.

Single European Sky – SES

The EU targets are set out in the Single European Sky (SES) legislative package from 2004 and various amendments to it, which can be found in an SES II legislative package from 2009.

In accordance with the SES framework, the many geographical areas based on state boundaries were combined to form functional airspace blocks with effect from December 2012. Denmark is part of an airspace block with Sweden – the Danish-Swedish FAB. With SES, performance targets have been introduced (see section on Performance scheme). Powers and responsibilities relating to safety in the ATM area have been transferred to the European Aviation Safety Agency (EASA), and Eurocontrol takes care of the pan-European coordination via its role as Network Manager. Furthermore, environmental rules and regulations have been introduced to curb pollution.

Performance scheme

Naviair has been complying with the European performance scheme since 2012. The performance scheme is the result of the Single European Sky legislation through which the EU aims to ensure both more efficient utilisation of European airspace and sufficient airspace capacity to accommodate the growing level of air traffic. Another objective is to cut CO_2 emissions and the costs of air navigation services.

The performance scheme is legally binding on EU Member States. ANSPs are measured on their performance. ANSPs that do not satisfy the performance requirements may be subject to corrective action in the form of the imposition of a future rate reduction. Any corrective action will be formulated and initiated by the national authorities.

The performance improvements will be achieved through EU-wide, FAB-wide and nationwide performance targets. The performance scheme comprises the en route area, terminals and airports.

The EU-wide performance targets are adopted by the European Commission and used to prepare a performance plan for each national airspace (nationwide performance targets) or for the Functional Airspace Block (FAB) of which the national airspace is a part (FAB-wide performance targets).

Naviair is comprised by the performance plan for the Danish-Swedish FAB. Performance targets have been set in the following four areas: Safety, Capacity, Environment and Cost efficiency.

Single European Sky ATM Research – SESAR

SESAR is an offshoot of SES, which runs over the period 2009-2014 (extended to 2016), and is the EU's research programme for the development of the new generation of an integrated European ATM system. This means that SESAR is the technological approach to testing and finding solutions that can achieve the SES targets.

The programme combines technology with operational, financial and legislative aspects.
In 2014, the EU decided to extend the work of SESAR with a new programme called SESAR 2020, which will be operational during the period 2015-2020. SESAR 2020 builds on the experience gained from SESAR and focuses its efforts on fewer areas and more operational needs. Accordingly, the SESAR 2020 programme is now divided into 40 work packages instead of the original approximately 200.

In 2007, the EU established a joint undertaking structured as a public-private partnership, the SESAR Joint Undertaking (SJU). The purpose of the SJU is to manage and develop SESAR. The members are: the European Commission, Eurocontrol and the aviation sector (including a number of ANSPs). Each member has one third of the seats and bears one third of the costs. In 2013, the European Council of Ministers extended the SJU to cover the period up to 2024.

So far, Naviair has been participating in the work of the SJU through NORACON – NORth European and Austrian CONsortium, but this cooperation will come to an end in 2016. Naviair has been participating in the SJU together with its partners in the COOPANS Alliance since 2015.

SESAR Deployment Manager

SESAR's work has led to a number of proposals for areas in which common rules should be issued. Against that background, the European Commission introduced new legislation in 2014 featuring six sets of rules collectively designated Pilot Common Projects. These – and future – rules will be launched in the Member States through a governing body, Deployment Manager. Together with the other COOPANS partners, Naviair has been appointed by the European Commission to help operate the Deployment Manager entity. The Deployment Manager entity is operated by the following groups: A6, an alliance of ANSPs; A4, an alliance of airlines; and SDAG (SESAR Deployment Alliance Group), a consortium of airports.

In 2015, the SESAR Deployment Manager (SDM) drew up a Deployment Programme that is subdivided into six sets of rules and 44 initiatives (Families). In order for the Pilot Common Projects legislation to be considered to have been implemented, the Deployment Programme must have been implemented. The 44 initiatives also form the basis for applications for EU funding under the Pilot Common Projects, which are also coordinated and handled by the SDM before being submitted in one package to the EU funding agency, INEA.

A6

Naviair participates in the A6 Alliance through the COOPANS Alliance. A6 is an alliance of the largest ANSPs in Europe from countries such as France, Germany, the UK, Spain and Italy. Its aim is to help modernisation of the European ATM network within the SESAR programme for the benefit of customers. Its role is to create synergies between the ANSP members of the SJU, to maximise customer and network benefits, and to provide leadership at a European level in technical and strategic areas.

The A6 members are bound by a Memorandum of Cooperation and are full members of SESAR.

Partnerships and alliances with other ANSPs

Members: Naviair (Denmark), Avinor (Norway), EANS (Estonia), Finavia (Finland), Irish Aviation Authority (Ireland), ISAVIA (Iceland), LFV (Sweden), LSG (Latvia), NATS (England)

To help implement EU rules and develop as safe, efficient and cost-effective ATM as possible, Naviair has formed partnerships and alliances with other North European ANSPs. Besides NUAC and COOPANS, one such cooperative alliance is Borealis, which comprises the ANSPs in Denmark, Sweden, Norway, Finland, Estonia, Latvia, the UK, Ireland and Iceland.

Another cooperative relationship (NEFRA) is between the Danish-Swedish FAB and the airspace block in which Latvia, Finland, Norway and Estonia participate (NEFAB), on the establishment of Free Route Airspace across the entire Nordic area. In 2015, Free Route Airspace was introduced above FL 285 (flight level 28,500 feet)

Members: Naviair (Denmark), Austro Control (Austria), Avinor (Norway), EANS (Estonia), Finavia (Finland), Irish Aviation Authority (Ireland), ISAVIA (Iceland), LFV (Sweden), Swedavia (Sweden)

in NEFAB. From June 2016, Free Route Airspace will have been introduced across the entire controlled airspace. From 2018, the aim is to extend the single, integrated airspace featuring Free Route Airspace to include the UK, Ireland and Iceland.

The COOPANS Alliance and DSNA, the French ANSP, have jointly decided to launch the so-called CODACAS programme. The programme aims at commissioning a common build of their ATM systems from 2025 onwards. Combining COOPANS' and DSNA's experience and expertise will create synergy to meet SES' (Single European Sky) challenges for the next fifteen years.

Industry associations

CANSO

Naviair is a member of the Civil Air Navigation Services Organisation CANSO, which represents its members' views to the aviation industry's other stakeholders.

Naviair has a seat on CANSO's Executive Committee.

Confederation of Danish Industry (DI)

Through its associate membership of DI, Naviair is a member of the industry association Dansk Luftfart (Danish Aviation). The association's aim is to secure the Danish aviation industry a central role in future growth and development.

Naviair's stand at the Danish Ministry of Transport and Building during Copenhagen Culture Night on 9 October 2015.

Abbreviations and designations

A4: Alliance of airlines

A6: Alliance of ANSPs

ADS-B: Automatic Dependent Surveillance-Broadcast

AIC: Aeronautical Information Circular

AIP: Aeronautical Information Publication

AIS: Aeronautical Information Services

ANSP: Air Navigation Service Provider

ATM: Air Traffic Management

ATS: Air Traffic Services

Austro Control: ANSP Austria

Avinor: ANSP Norway

CNS: Communications, Navigation and Surveillance

COM centre: Communications centre for the processing and distribution of communications in aviation and meteorology

COOPANS: CO-OPeration of Air Navigation Service providers

Croatia Control: ANSP Croatia

DSNA: ANSP France

EASA: European Aviation Safety Agency

ENAV: ANSP Italy

Eurocontrol: European Organisation for the Safety of Air Navigation

FAB: Functional Airspace Block

Finavia: ANSP Finland

IATA: The International Air Transport Association

ISAVIA: ANSP Iceland

Irish Aviation Authority: ANSP Ireland

LFV: ANSP Sweden

Nav Canada: ANSP Canada

NATS: ANSP UK

NEFAB: North European Functional Airspace Block (consists of Norway, Finland, Estonia and Latvia)

NEFRA: North European Free Route Airspace

NORACON: NORth European and Austrian CONsortium (North European technical cooperation)

NUAC: Nordic Unified Air traffic Control (NUAC is a jointly owned Swedish general partnership under Naviair and LFV that has been responsible for the operation of the three ATCCs in Copenhagen, Malmö and Stockholm since 2012).

Service unit (En route): The charge for an aircraft with a maximum take-off weight of 50 tonnes flying 100 kilometres.

SES: Single European Sky (EU initiative to unify European airspace)

SESAR: Single European Sky ATM Research programme (EU programme on development of the new generation of an integrated European ATM system)

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Business Plan 2016-2020, *published February 2016.*

Photo on front cover:
An Emirates Airbus 380 making its first ever landing at Copenhagen Airport.
All photos by: Jan Eliassen

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Business Plan 2016-2020

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