ANNUAL REPORT 2017

ANS FINLAND

WE MANAGE THE AIR AND SPACE FOR YOU

Air Navigation Services Finland Oy (ANS Finland) is responsible for managing the use of Finnish airspace as well as providing flight route and air navigation services at Finavia's airports and Lappeenranta Airport in Finland. In addition, the company has special tasks relating to air rescue, airspace management and area control. ANS Finland is a state-owned company operating under the ownership steering of the Ministry of Transport and Communications.

CONTENTS

MISSION

We manage the air and space for you

VISION

- We are the most competitive provider of air navigation services in Finland and the most preferred partner in Europe
- We have the world's most environmentally-friendly airspace

OUR VALUES

- Safety is the starting point of everything we do
- We fulfil our customer promise
- Skilled employees are our strength
- A functioning society and healthy environment are important to us

→ We are reliable and punctual

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KEY INDICATORS OF THE COMPANY

Revenue (EUR million)	63.9
Operating profit (EUR million)	9.3
Operating profit/revenue (%)	14.5
Capital expenditure (EUR million)*	4.0
Return on equity (%)**	45.1
Equity ratio (%)**	40.8
Personnel on average (FTE)	402

Financial year 1 April–31 December 2017

ESTABLISHMENT OF ANS FINLAND

In December 2016, the Ministerial Finance Committee of the Government seconded the Ministry of Transport and Communications' proposal for preparing the incorporation of air navigation operations into a separate company independent of Finavia. A request for preparing a new company, so that it will be operational as of 1 April 2017, was made at the beginning of January.

There were several grounds for incorporating the air navigation operations: regulation relating to the international Single European Sky integration, operational transparency, more efficient realisation of development activities through a separate company and enabling competitive tendering to Finavia as an airport operator.

From ANS Finland's point of view, the incorporation provides better opportunities for preparing for the international trend in which airport operators tender out the provision of air navigation services across national boundaries. As a separate company, ANS Finland is better equipped to bring a share of the growing Nordic air navigation services market to Finland.

The new company's objective is to remain profitable while improving its services, increasing the efficiency of operations, operating in close international cooperation and developing new business models and innovations.

The development is part of the Government's strategy aiming to incorporate, at the beginning of 2019, all traffic control functions into a state-owned limited company. The incorporation comprises railway, maritime and road traffic as well as air navigation functions. ANS Finland would be one of the subsidiaries of the special assignment company.

The purpose of establishing the traffic control company is to create better opportunities for new digitalisation projects, provide companies with opportunities to productise new services and increase the possibilities of refining open data. □

YEAR 2017 IN NUMBERS

Revenue (EUR million)

63.9

Operating profit/revenue (%)

14.5

244,832 flights processed by area air traffic control

671 flights processed per day on average

0 minutes of delays attributable to ANS Finland

456 employees at the end of the year

The number of overflights increased by **16.7** %

The traffic volume of Helsinki Airport increased by **6.4** %

FUTURE OUTLOOK

Strong growth in air traffic is likely to continue in 2018. Traffic at Helsinki Airport will increase in particular, but we are still expecting a good year in en-route service. Overflights in Finland's airspace have also developed favourably in recent years, but they also involve uncertainties. The risk of military conflicts between different countries has increased in the Middle East. Any conflicts can influence air traffic flows so that some of the flights between the Middle East and North America will adopt more southern routes across Central Europe.

The financial result expectations of ANS Finland for 2018 also seems to be quite strong. Increased traffic volume combined with strict cost control facilitate profit-making ability. □

CEO'S REVIEW

RAINE LUOJUS

ANS1417

F350

1 April 2017 was a milestone in the development of Finnish air navigation services – it saw the establishment of Air Navigation Services Finland Oy. All of Finavia's air navigation personnel, air navigation training-related personnel at Avia College and financial administration, communications and HR employees, among others, were transferred to the established company.

We are following a European trend in the incorporation, and with it, we can transition to a genuine market situation in air navigation services in Finland as well. The timing for the incorporation was suitable because the efficiency of Finland's air navigation services has been increased for years; practices have been rationalised, head office functions trimmed down and the recruitment policy has been strict.

At the end of 2017, ANS Finland had 456 employees, while only few years earlier, the same duties were taken care of by more than 600 employees. Improved productivity of work can also be seen in the customer fees.

The demerger into a separate company was a demanding task for the entire personnel – every one of them deserves thanks for that. The agreements with all of the partners and preparing the hundreds of documents required by the licence process, for example, demanded lots of work. Finnish Transport Safety Agency (Trafi) and the Ministry of Transport and Communications provided us with valuable support with this task.

OPEN SKY 24/7 WITHOUT DELAYS

In air navigation, safety is the number one priority. The services must be available at all times every day. Finland is open 24/7, and ANS Finland is an important link in this. Our ability to react to incidents is good.

The qualitative objective of the company is to ensure the functioning of the air navigation system so that airlines can operate according to their planned schedules without delays. We have achieved this in several years.

Our objectives are supported by the new strategy confirmed in November 2017. The employees provided their own extensive insights to it.

DEVELOPING INNOVATIVE SOLUTIONS

In accordance with the strategy, we want to grow our business. ANS Finland will develop its current products and sell them more actively. We are investigating the improvement of cost efficiency through a remote air traffic control tower solution, for example.

Technological development also provides others new kinds of business opportunities. An example of this are drones, or unmanned aerial vehicles, and the services provided to them. ANS Finland wants to facilitate new business functions with its activities and create platforms for use by drone aviators.

We also market the opportunities provided by Finland's airspace internationally; by utilising them, airlines can achieve significant cost-savings while reducing emissions into the air from aviation.

THE WORLD'S MOST ENVIRONMENTALLY-FRIENDLY AIRSPACE

We want to provide the world's most environmentally-friendly airspace. To proceed towards that goal, we have to build a dynamic airspace without obstacles to flight planning together with our customers while supporting the needs of the Finnish Defence Forces. We also operate as environmentally efficiently as possible with regard to the approach and take-off methods.

Air traffic and air navigation services are governed by several international regulations. ANS Finland actively takes part in the international development of the industry, and we are involved in several international organisations. Through the cooperation, we increase our own influence.

We are also engaged in international cooperation with Estonia, for example, with the aim of creating a cooperation model that makes it possible to provide air traffic control services across borders.

EFFICIENT AND AGILE

According to the customer survey, ANS Finland's customers are satisfied with our services and considered their quality to be high. We will continue to listen closely to our customers' expectations from us.

The first nine months of ANS Finland in 2017 have been a strong start. In terms of finances, the operations have developed favourably; the growth in air traffic volumes in 2017 also contributed to this. However, the efficiency of operations is continuously improved, and we are guided by the European Commission's goals regarding the increased efficiency of en-route services.

Today, ANS Finland is efficient and agile – skilled employees are definitely ANS Finland's strength. The company has set its eyes strongly forward. □

YEAR 2017

ANS Finland provides aerodrome control and approach control services for 22 airports.

22

KEY EVENTS

- Establishment of the company in January–March
- Commencement of operational activity on 1 April
- Move to new premises in July
- New strategy drawn up during summer and autumn 2017

OULU

KEMI-TORNIO

KUVA: TEEMU PUOLITAVAL

CHANGES AT THE AIRPORTS OF THE NETWORK

PORI

ANS Finland responded to the needs of the Finnish Aviation Academy at Pori Airport. The service need at the airport was at a minimum early in the year, when the airline that operated from Pori discontinued flights in 2016. NextJet began service from Pori as of summer 2017.

TAMPERE-PIRKKALA

When Malmi Airport was closed down at the end of 2016, some of the commercial aviation schools moved their operations to Tampere-Pirkkala. ANS Finland responded to the increased demand with fixed-term employees. More permanent solutions regarding the personnel structure may be made during 2018.

JYVÄSKYLÄ

In connection with the reform of the Finnish Defence Forces in 2014, Air Force operations in Kauhava were discontinued and flight training was moved in its entirety to Jyväskylä. The Air Force's service need in Jyväskylä has become established, and ANS Finland has built its operations to match the demand.

OULU

Oulu Airport was closed to traffic for a month during the summer due to an overhaul of the runway. During it, traffic used Kemi Airport, which was reflected as increased traffic volumes there.

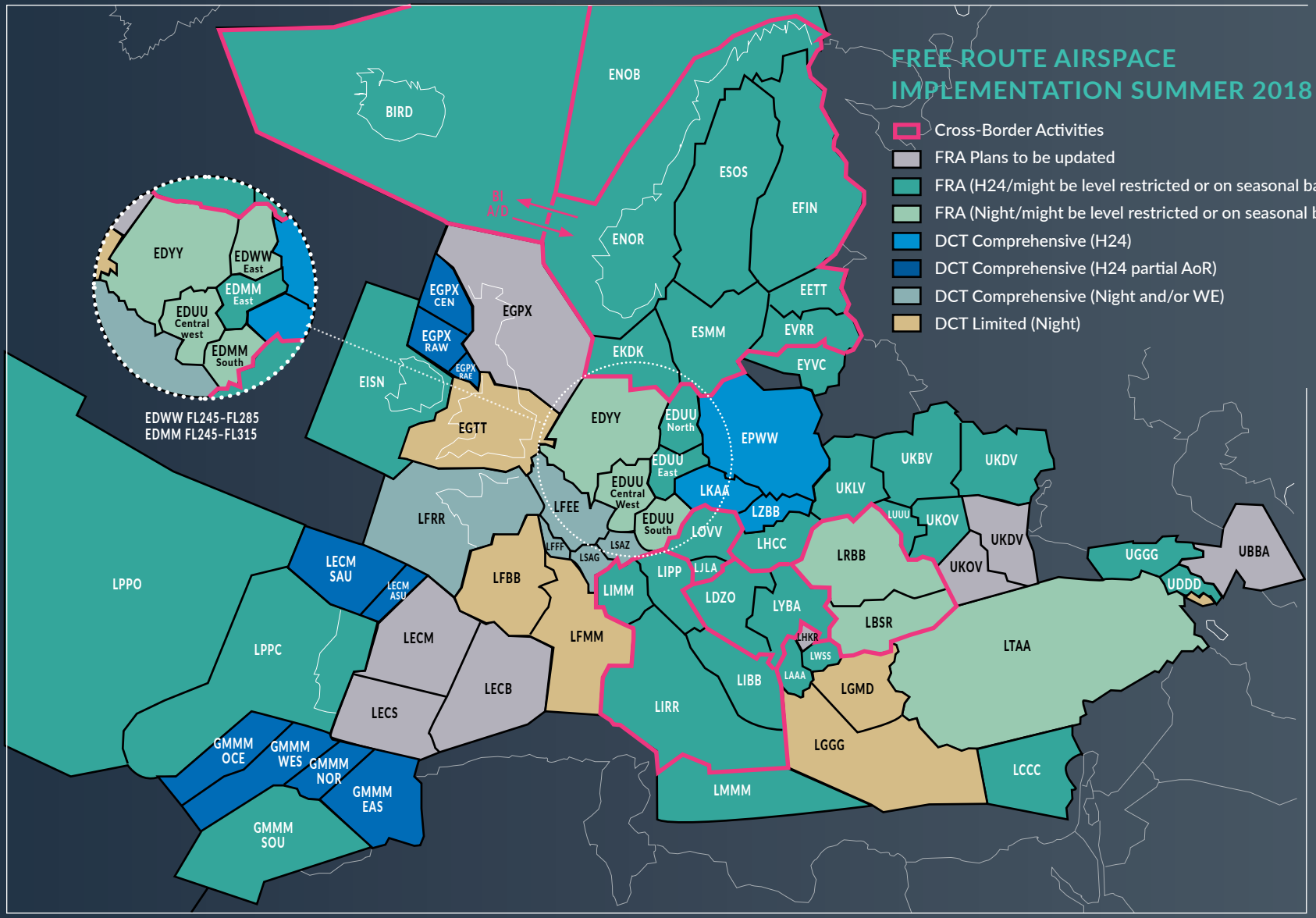
SEASONAL AIRPORTS IN NORTHERN FINLAND

Air traffic volume has increased in the airports in Northern Finland. Instead of Christmas season, one can nowadays talk about the winter season. Because of this, the personnel use and dimensioning of the airports have been revised. The personnel of the major central airports in Northern Finland also work shifts at the seasonal airports.

HELSINKI AIRPORT

When the operations of Malmi Airport were discontinued, the Border Guard operations that were located there were moved to Helsinki Airport. Guidelines on these operations were issued and they were established as part of normal operations during 2017. □

OPERATING ENVIRONMENT



SOURCE: EUROCONTROL

ANS Finland continuously develops the customer orientation of its operations so that it can serve airlines, the state of Finland's aviation and airport operators even better, expand its service offering and grow its customer base.

The most significant airline customer, and thereby also ANS Finland's strategic partner, is Finnair. The companies regularly discuss ways of developing the cooperation.

Another strategic customer is Finnish state aviation, and ANS Finland is also obligated by law to serve it. Contacts with the Finnish Air Force and the Border Guard are regular and aim at the continuous improvement of operations.

Finavia, the company managing Finnish airports, is also a significant customer. ANS Finland provides both air traffic control services and technical services, such as system servicing, maintenance and flight measurements, for it. In addition to the airports managed by Finavia, these services are provided at Lappeenranta, Seinäjoki and Mikkeli airports.

ANS Finland cooperates continuously with the Finnish authorities and contributes to international development by taking part in the activities of several organisations in the sector.

LARGE POTENTIAL IN FINLAND'S AIRSPACE

Airline customers generate a significant share of ANS Finland's revenues, when their aircraft use Finnish airports for landings and take-offs or fly over the country's airspace under the supervision of ANS Finland.

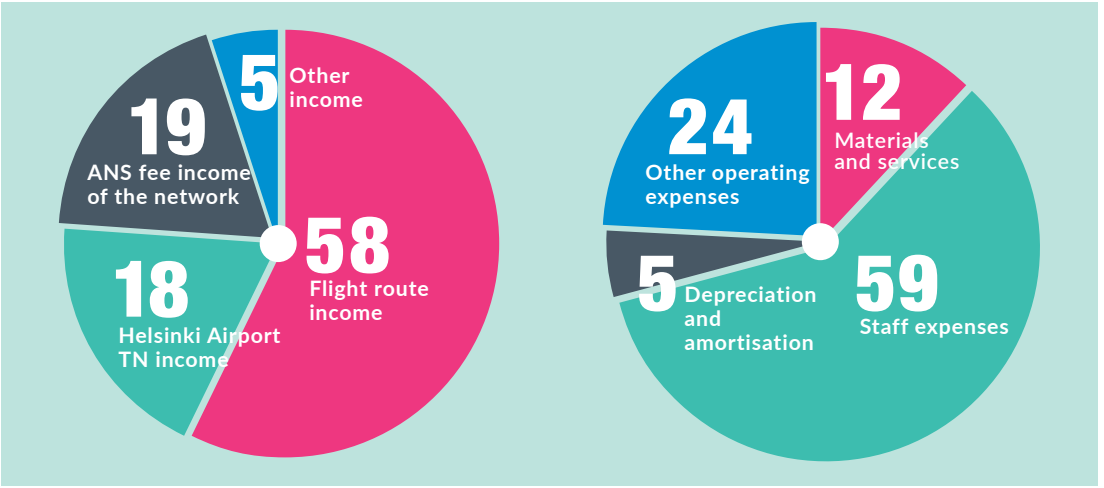
With regard to overflights, the use of Finland's airspace is encouraged by the country's location and the FRA (Free Route Airspace) adopted in phases since 2015. Key routes using Finland's airspace are between Asia and Europe, the Middle East and North America or Russia and North America. In particular, high potential for the use of Finland's airspace is seen in flights between Asia and Europe.

ANS Finland wants to support airline customers so that they can fly in Finland's airspace as efficiently as possible. The company aims to cooperate with the service providers of several countries to develop the airspace and flight routes to serve airlines better.

ANS Finland has marketed the opportunities provided by the free route airspace both through active sales work targeted at airlines and by attending international cooperation and marketing events. Meetings have been arranged with major European and Asian airlines, among others.

Marketing arguments have included, for example, how flying via Finland is low-cost and safe, and how flight operations can be optimised. In the free route airspace, the airline can always choose the route in day-to-day flight planning according to the conditions best serving the airline, taking into consideration weather, cost and ▷

INCOME AND EXPENSES %



crew use optimisation. This way, airline customers can save costs while reducing emissions into the atmosphere.

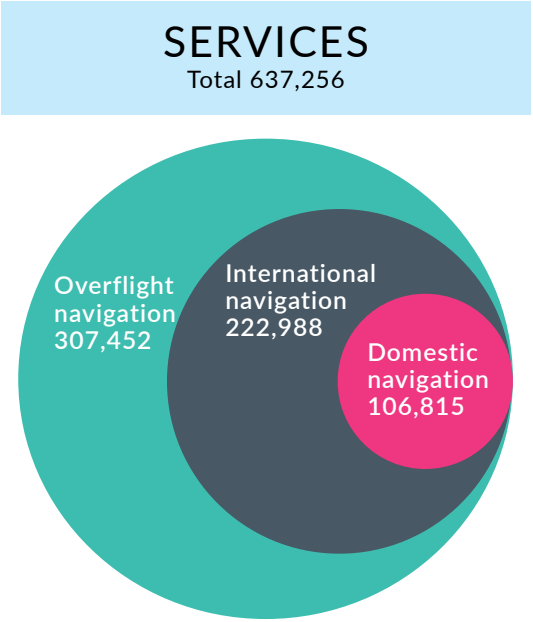
The sales work has provided results. New airlines to fly over Finland include Hainan Airlines, Beijing Capital Airlines and Yangtze River Express. Several European airlines have also updated their flight routes to increasingly use Finland's airspace.

DEVELOPING NEW PRODUCTS

The operating environment of air navigation is evolving rapidly with technological and regulatory development. In addition to the existing service offering, ANS Finland innovates new products. The company actively monitors the development and takes part in Finnish and international development projects. When building new business, ANS Finland is open to new partnerships which allow expertise from diverse fields to be combined into new business.

AVIA TRACKER

The use of the Avia Tracker training and qualification management system began at ANS Finland in May, after which it has been deployed at all network airports. The system is used for managing the trainings of the personnel and qualifications of air traffic controllers and flight information service officers, their validity and continuity. In addition, the system tracks operational hours so that they are adequate for the validity of the qualifications. Avia Tracker is also offered to other companies with similar needs for tracking the qualifications of their personnel.



DRONE-BASED BUSINESS

Unmanned aerial vehicles, or drones, are developing and becoming more common at a rapid rate. The European Commission has a strong strategic intent to facilitate drone business, and also Trafi has the strategic intent to provide the business with regulatory preconditions in Finland.

Very diverse businesses based on the use of drones will probably be developed in the future. ANS Finland wants to be involved in the development and support the new business opportunities by providing platforms and creating operational preconditions with which unmanned aerial vehicles can be better integrated into airspace management.

ANS Finland is currently also investigating the possibility of using drones in flight measurements of precision approach equipment at airports. Their use would considerably improve the cost efficiency of the measurements.

AVIA CONSULTING

For ANS Finland, taking safety aspects into consideration is an integral part of day-to-day operations, and the company has accumulated lots of competence capital on it in recent decades. The company has productised this expertise into the Avia Consulting services for its customers to use.

ANS Finland is also developing a solution for seeing what is happening in the airspace and how the airspace can be used. This platform could be utilised by pilots, airspace enthusiasts and other users in their own business. Users could also develop entirely new business with the opportunities provided by the platform.

ANS Finland has also accumulated a lot of experience and professional skill in airspace planning and in particular safety management tasks. The expertise obtained from these special tasks can also be provided to other parties as commercial services. The services are particularly well suited for companies operating in maritime, road and railway traffic, which also face regulatory requirements for their operations. The services will be developed further into a commercial product that will also be marketed to foreign customers. □

OSMO LIIMATAINEN

Occupation: Key Account Manager, air traffic controller
Job description: management of airline customer accounts, shift supervisor, air traffic controller and airspace management unit specialist
Unit: ANS Development, Marketing and Customer relations

» My work is diverse, challenging and requires swift decisions, but results are also obtained quickly. I like it: there has not been a single day when I would have been thinking about changing jobs. The best things are the great co-workers, the interesting job description and the possibility of proactively innovating something new. I also like the operational work, as it maintains hands-on skills.

In addition to being an air traffic controller and specialist in the airspace management unit, I travel to meet representatives of different countries' airlines. I tell them about the benefits of flying via Finland. There are approximately 80 airline customers. Every company is different and represents a different culture. I find out about their customs, wishes and routes, and look for solutions that would genuinely benefit both parties."

STRENGTHENING INTERNATIONALISATION

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The importance of international cooperation is increasing in air navigation. The EU's aim to promote the free movement of people and goods influences this, among other factors. Creating a common airspace is part of this development.

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NEFAB is one of the nine functional airspace blocks in Europe, established in conjunction with the EU's SES project. Finland is part of the North European Functional Airspace Block (NEFAB) with Latvia, Norway and Estonia. Service providers, including ANS Finland, cooperate in the functional airspace block to develop operations.

The free route airspace benefits airlines and aviators, allowing them to choose the flight route they prefer. ANS Finland has received EU grants for financing air navigation projects aiming to increase free movement, and this will be refunded to customers in the form of lower fees.

The technical possibilities have also increased. Satellite-based navigation and approach systems and modern information networks facilitate effective data transfer, and operations are no longer tied to national borders. This opens up new opportunities for competition and improving cost efficiency through remote tower solutions, for example. The development emphasises the importance of the interoperability of equipment and the standardisation of interfaces.

The airport operator will be able to subject air navigation service providers to tendering in Finland as well. In future, air navigation services can be offered Europe-wide, as long as the national requirements are met. This development opens up new business opportunities for ANS Finland.

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ANS Finland is actively seeking opportunities for international cooperation in airspace management and training, for example. An important part of the work is to influence international EU regulations. ANS Finland aims to exert influence so that they would better also take Finland's local features into account, as the conditions differ significantly in different countries.

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INTERNATIONAL REGULATIONS GUIDE OPERATIONS

The pricing of air navigation services is largely based on EU legislation. The EU confirms the service prices and sets efficiency goals for the service providers. The operations of ANS Finland are guided by several international regulations, such as the performance requirements laid down by SES (Single European Sky) legislation with four main target areas:

- safety and safety management systems must meet the set criteria
- the delays in air traffic must be within the set limits
- flight routes must be as short and unrestricted as possible
- costs must be below the set maximum level

The EU's on-going performance target follow-up period will end in 2019. The next period, 2020–2024, is currently under preparation.

The EU chooses a Network Manager for a term of office of five years, tasked with ensuring the fluency of air traffic by predicting and controlling air traffic flows and eliminating congestion with the help of advance plans. Eurocontrol has been designated for this task until 2019. The Network Manager's cooperation with air navigation service providers in different countries can be expected to increase in future.

The ICAO's regulations are implemented in Finland via Trafi. ANS Finland monitors the development and comments on the proposed amendments to the authority.

PROMOTING FREE MOVEMENT WILL CONTINUE

In 2013, six northern European states launched a programme aiming to facilitate seamless routing between Denmark/Sweden and the Northern Europe functional airspace blocks (FABs). Plans concerning the free route airspace (NEFRA) were started in 2013, and it was deployed in May 2017.

The same operating model is being expanded into the UK and Iceland, and to facilitate this, also ANS Finland has made some changes to the air navigation information system.

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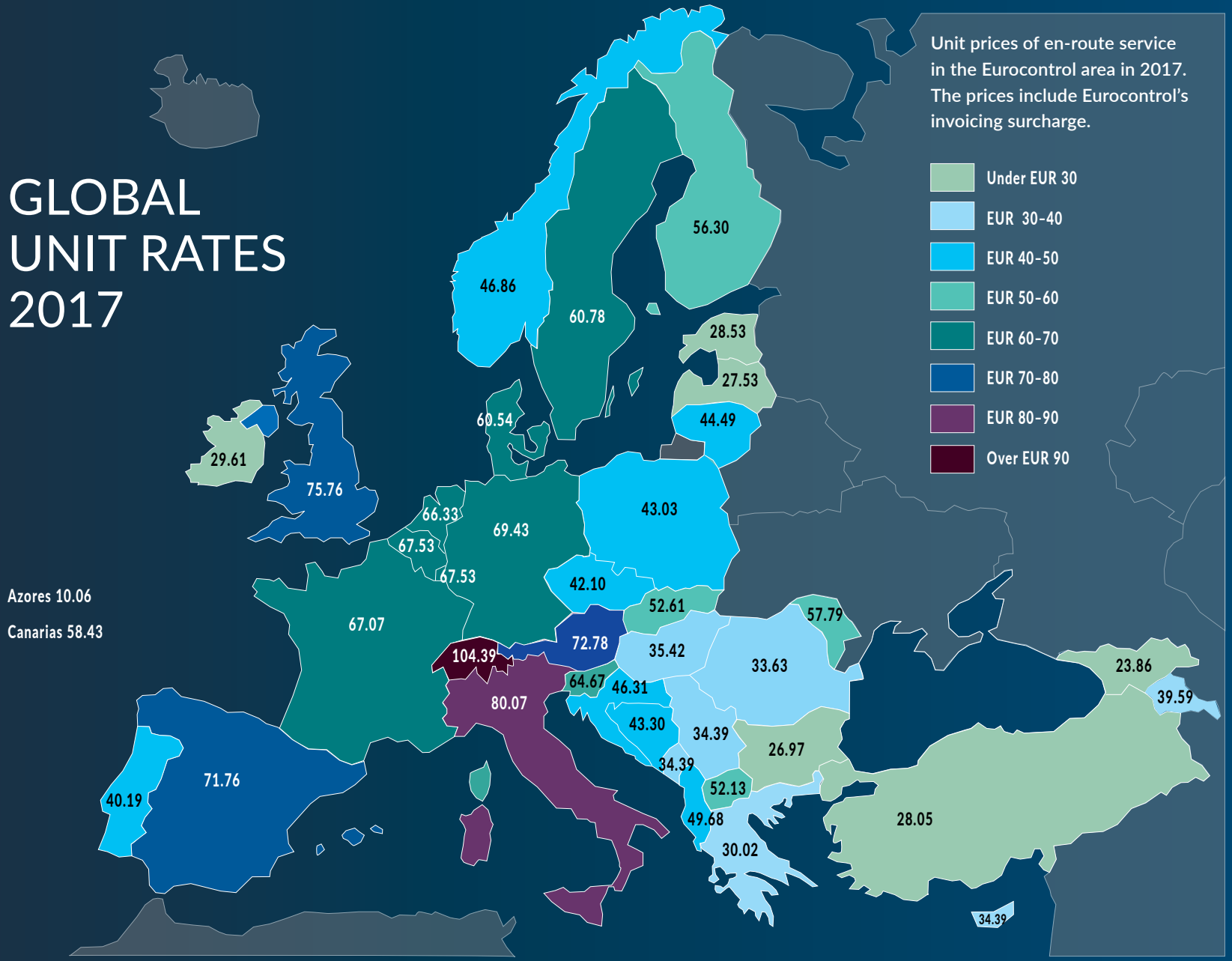
A free route airspace (FRA) was adopted in the North European Functional Airspace Block (NEFAB) based on NEFRA in 2015.

ANS Finland is also a member of the Borealis Alliance comprising nine air navigation service providers.

ANS Finland is conducting a survey on tightening the cooperation with the Estonian air navigation service provider EANS. The survey is based on the policy of the states of Finland and Estonia aiming to increase the efficiency and safety of the management of the region's airspace. □

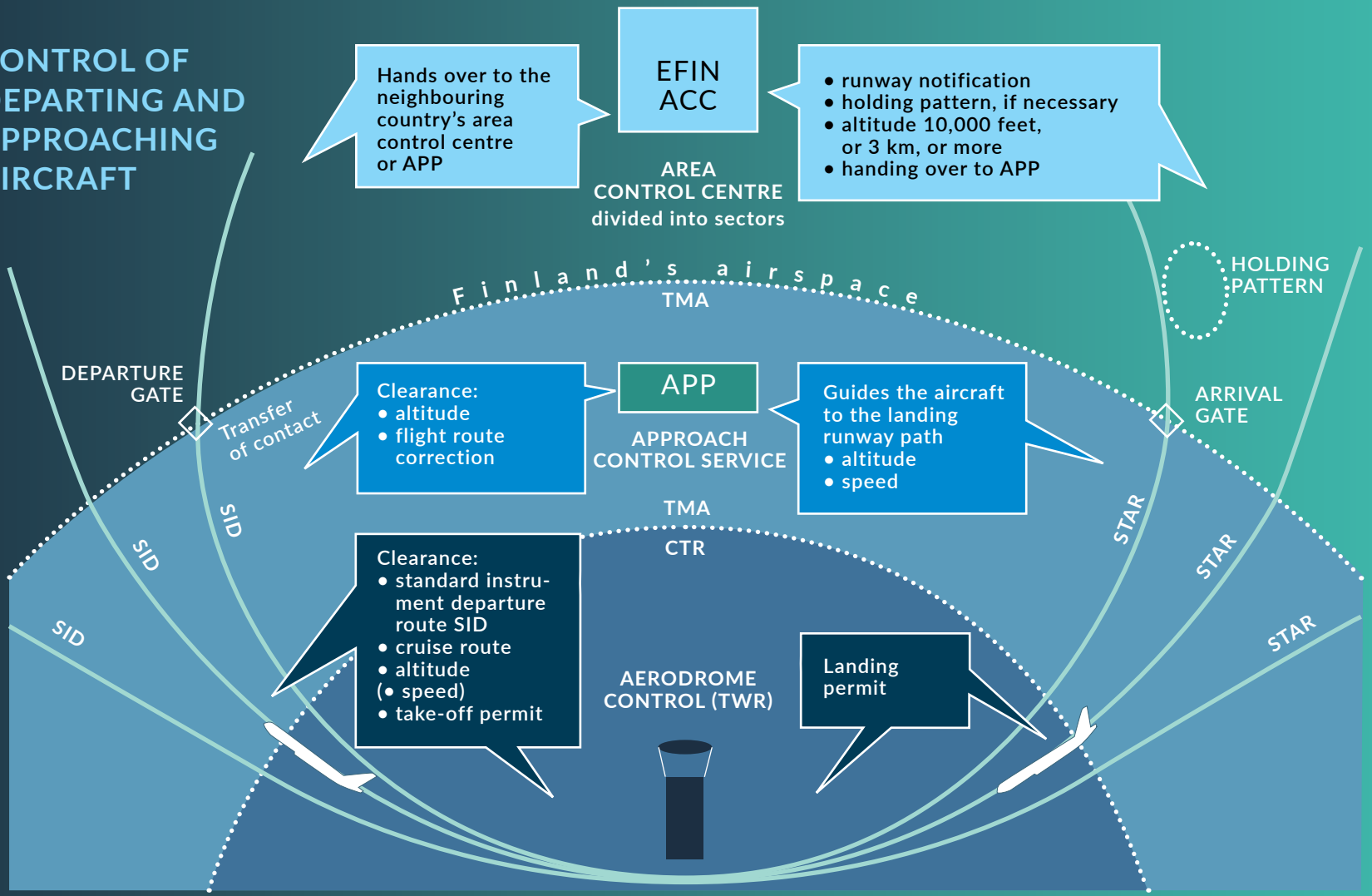
GLOBAL UNIT RATES 2017



SOURCE: EUROCONTROL

FINLAND'S AIR TRAFFIC CONTROL CENTRE AND HELSINKI AIR TRAFFIC CONTROL

CONTROL OF DEPARTING AND APPROACHING AIRCRAFT



The establishment of ANS Finland has clarified the operations of Finland's air traffic control centre. With the establishment of a separate company focusing on air navigation, the big picture is clearer and operations are more agile in many respects.

For example, the situation of the area control centre with regard to income and investments was clarified now that ANS Finland and Finavia, the company managing Finnish airports, operate as separate companies. This way, the boundary between the service provider and customer is clear.

In aerodrome control and approach control services, the majority of the equipment and systems are owned by Finavia, and ANS Finland is their primary user. This sets its own challenges for the development of operations and technology. ANS Finland discusses related investment agreements with Finavia.

The operations of ANS Finland involve qualitative requirements and objectives. The SES Regulation sets objectives for Finland's air navigation regarding delays, efficiency and pricing. The FASP objectives set by the Finnish Transport Safety Agency Trafi are also derived from the same regulation, and they concern delays, pricing and safety. During 2017, ANS Finland met all of the objectives set.

DEMAND FOR AIR NAVIGATION SERVICES IS INCREASING

Air traffic volumes have been growing clearly. For example, the traffic volume of Helsinki Airport increased by approximately 6.4% and the volume of overflights increased by 16.7% year-on-year. ANS Finland has been able to manage the increased traffic volumes with the same number of employees, and no traffic regulation caused by its personnel has occurred.

The company aims to decrease the amount of traffic regulation due to weather. This requires the development of techniques and operating methods, especially in situations caused by poor visibility.

To facilitate growth in traffic volumes, a considerable investment programme is underway at Helsinki Airport. ANS Finland cooperates with Finavia in the Helsinki Airport development coordination group. Here, ANS Finland's role is to ensure that construction or overhaul work will not interfere with the operations of the airport.

Currently, there are three–four peak hours at Helsinki Airport, at other times the traffic volume is clearly lower. The challenges of increasing passenger volumes are related to whether the peak in the demand for air navigation services can be distributed over a longer period or whether the infrastructure and techniques will be built for even higher demand during a short part of the day.

There are continuous talks on this with ANS Finland's airline customers. ANS Finland aims to respond to the needs of the customers' business in cooperation with Finavia and create opportunities for business growth. □

AIR TRAFFIC CONTROL CENTER FINLAND INCLUDES:

AREA CONTROL

Area control manages the entire Finland's Flight Information Region (EFIN). Area control centre service is provided from 13 sectors, managed from 1–5 air traffic control work stations, depending on the traffic situation. The area control centre is located in Helsinki and Tampere. In 2017, the area control centre processed 244,832 flights, of which 45,591 were overflights. The average number of flights managed per day is 671.

HELSINKI AIRPORT AIR TRAFFIC CONTROL

Air traffic control at Helsinki Airport includes both aerodrome and approach control. In 2017, Helsinki Airport had 179,195 operations. The average number of operations per day is 491. The hourly maximum operation volumes at Helsinki Airport are 48 arriving and 42 departing aircraft per hour without exceeding the total hourly limit of 70 operations.

Aerodrome control (TWR)

Aerodrome control is also referred to as "Tower". It manages air traffic in the controlled traffic region (CTR) of the airport (CTR), extending approximately 15 kilometres from the airport. The Tower also manages aircraft taxiing on ground and using runways, as well as vehicles using the traffic area.

Approach control service (APP)

The approach control service is responsible for the terminal manoeuvring area (TMA), extending approximately 50–70 kilometres from the airport. The most important tool of approach control is the radar. Most air traffic controllers work both in the Tower and in approach control.

FINLAND'S FLIGHT PLANNING CENTRE

The FPC provides pilots with pre-flight information service throughout Finland. In 2017, it processed 60,227 ATS messages and prepared 6,573 Finnish NOTAM messages.

AIRSPACE MANAGEMENT CELL

The Airspace Management Cell operating in conjunction with the area control centre coordinates daily airspace reservations.

FINLAND'S FLOW MANAGEMENT POSITION

The task of Finland's Flow Management Position is to regulate how much and where air traffic is permitted in case of military exercises, for example. Flow management is international cooperation.

AIR RESCUE COORDINATION CENTRE

The Aviation Act prescribes Finland's Air Rescue Coordination Centre (ARCC Finland) to take care of aviation search and rescue services in Finland's Search and Rescue Region. This service refers to measures to assist aircraft in an emergency or accident and locate missing aircraft. In addition, the Air Rescue Coordination Centre provides contractual support services to safety authorities. The Air Rescue Coordination Centre maintains 24-hour readiness for launching operations.

In 2017, there were a total of 424 aviation search and rescue alerts, 19 of them emergencies, 146 alarms and 269 uncertainty situations. □

SALLI LEHERVO

Occupation: unit manager
Job description: Managing the Flight Planning Centre unit, including HR management, safety and quality management
Unit: Flight Planning Centre

The FPC functions as part of the Air Traffic Control Centre, and our customers include the flight crews of general and commercial aviation, air traffic control units and European communications centres. Our work is a vital part of every flight, as it includes the preparation of each flight.

When your work involves responsibility for the operations of the entire unit and the work on the whole is part of a bigger safety chain, the work is varying and you will not get bored. The best thing about my work is that each day is different and change keeps your spirits up. The incorporation has brought along a lot of positive things. We are going forward as a single compact team and keeps your spirits up. ANS Finland is its customers' reliable partner that delivers its promises."

THE NETWORK'S ATS SERVICES AND OPERATIONAL PRODUCTION CONTROL

ATS service is a common denominator for air traffic services, which include flight information, alert, air traffic advice and air traffic control service.

The task of operational production control is to guide and develop the service production of ANS Finland. The objective is to harmonise the strictly regulated air navigation working methods through guidelines and thereby guarantee a high-quality, consistent service to customers.

Revising the operating manuals describing the tasks of ANS Finland for the new company was a significant and laborious project in 2017. Noise abatement plans were also taken into consideration in the work. The employees have been trained in the operating models, and the units' electronic workspaces and an electronic log were also adopted during 2017.

The majority of operational production planning tasks are related to approvals, which are a continuous practice in the company. When a change is made in an equipment system or working methods, production control assesses its safety impacts and proposes them to Trafi for approval. Training needs are also assessed at the same time. The tasks also include the coordination of recruitment between different units.

The incorporation of ANS Finland resulted in lots of changes in day-to-day operations. In the new situation, Finavia became ANS Finland's significant customer, and well-functioning communication between the companies has been key to the smoothness of taking care of the tasks.

Long-term tasks include the preparation of airspace reforms, preparation and follow-up of INEA funding, participation in the Deployment programme, NEFAB and Borealis activities and participation in international Network Manager forums supporting operational work. □

OPERATIONAL PRODUCTION CONTROL PROJECTS

REMOTE OPERATING TOWERS (ROT) PREPARATIONS

Remote air traffic control towers aim to enhance the cost efficiency of air navigation services. Some of Finland's airports see little traffic, and ANS Finland is developing the Multi ROT operational concept in which a single air traffic controller is simultaneously responsible for air traffic control at several airports using remote connections. This model, planned to be deployed in the 2020s, is one way of keeping costs under control. In 2017, operational activities under the model were described. The employees were kept up to date with the progress of the project. Changing the service production in phases into harmonised ATS control service is part of the preparation.

ARCTIC CHALLENGE EXERCISE 2017

Arctic Challenge Exercise 2017, a joint exercise of the Finnish, Swedish and Norwegian Air Forces, was organised in May. ACE was one of the biggest in Europe during the year, with over a hundred aircraft taking part. Finland was in charge of leading the exercise for the first time, and the role of ANS Finland was to provide services for the flight operation exercise. In addition to the ACE, the Finnish Defence Forces have had lots of exercise flight activity. ▷

EGNOS SATELLITE SYSTEM

The European EGNOS satellite system and related satellite-based approach techniques (LNAV/VNAV) have been deployed extensively. An add-on was attached to the system in December, making it possible to utilise it better in landing.

ILMARI PROJECT

ANS Finland cooperated with the Finnish Meteorological Institute on launching a new aviation meteorological system. In the Ilmari project, ANS Finland personnel provide meteorological services as subcontractors using the Finnish Meteorological Institute's equipment.

EXCEPTIONAL SITUATION DRILLS

ANS Finland is obligated to prepare for exceptional situations. Instructions were prepared for equipment malfunctions and back-up location procedure during 2017, and there were exercises on exceptional

The task of the aviation information service (AIS) is to see to the functioning of the international aviation information service in Finland. The purpose of the information system is to ensure the flow of information required by safe, regular and economic international and domestic air traffic.

situations in all units. An agreement on exceptional situations has been concluded with the Finnish Air Force.

FINEST PREPARATION WORK

The European Union's requirement for decreasing the costs of air traffic services applies to all Member States. Finland and Estonia have commenced preparations to reduce costs between the air navigation service providers of the countries. They assess the possibility of providing service as a subcontractor in the other country's area.

LARA AIRSPACE MANAGEMENT SYSTEM

Preparation of the deployment of the common European LARA airspace management system has been in progress during 2017, as has the deployment of a new version of the system in Finland as a pioneer project. The estimated deployment of the LARA airspace management system as an administrative system is estimated to take place in spring, and it will enter daily operational use in November 2018.

DRONES, UNMANNED AVIATION

The development of technology provides new challenges and opportunities in aviation as well. Drones are rapidly becoming more common, and new innovative business models based on them are being developed. The development must also be taken into account in airspace management and control.

The proliferation of drones means work for ANS Finland; a reform of the aviation regulation concerning drones is underway. Currently, drones may be flown under regulations up to an altitude of 50 metres at a distance of more than five kilometres from an airport.

Air navigation obstacle statements

The strong increase in wind power and picking up of construction activity can be seen in ANS Finland's operations as an abundance of requests for air navigation obstacle statements. Hoisting cranes in construction sites in the vicinity of airports, for example, require a permit from the air traffic control if they exceed specified heights.

A new simplified procedure for the air navigation obstacle process was adopted in 2017. In accordance with it, in certain situations, a builder no longer needs a permit from the safety authority when other conditions are met. In addition, air navigation obstacle forms were published on ANS Finland's website.

Laser performances

ANS Finland annually issues statements on laser performances with potential danger to aviation to different authorities. □

ELSI KOHO

Occupation: GIS specialist
Job description: Quality Manager for the AIS unit and preparation of spatial analyses
Unit: AIS Aviation information

» Aviation Information Service publishes several maps for the airport area. The airport operator provides us with geographical data covering the vicinity of the airport up to a distance of 15 kilometres. I analyse the data to find out air navigation obstacles to be included in the AOC obstacle map or obstacles to be taken into consideration in flight technique planning. In addition to geographical information analysis, I also prepare aviation maps. In addition, the unit's quality-related matters take up a big share of my working hours.

There are no two identical days at work. There will be a great moment in spring 2018 when updating the quality system to the new ISO 9001: 2015 version, which has been underway for a long time, will be completed. I am proud of it."

TECHNICAL AIR NAVIGATION

Technical air navigation comprises equipment, systems and tools used in air traffic service. These include information and radar system located across the country as well as equipment used by aircraft for navigation and landing.

The most important task of technical air navigation is to maintain the equipment and systems so that operations are safe and efficient and comply with the agreed response times.

In part, safety is ensured by requiring ATSEP (Air Traffic Safety Electronics Personnel) qualifications from everyone entitled to the technical maintenance of the systems. Obtaining it requires passing specified courses. The validity of this qualification is supervised.

The maintenance of equipment and systems takes place as specified in advance, and safety is ensured in many ways. Safety assessments are made of intended changes to air navigation systems, and they are approved by the authority, Trafi, before they can be realised. Annually, some 200 amendments are made.

Technology develops continuously, and the employees' professional skills are kept up to date through training. Subcontractors are used in addition to ANS Finland's in-house personnel, and factory maintenance contracts have been concluded with the equipment suppliers for the most important systems. In air navigation, safety is always number one priority. Therefore, the technology to be adopted must always be tried and tested.

In 2017, ANS Finland's investments amounted to EUR 4 million. Investments often replace obsolete technology or respond to new requirements arising from regulation. Investment needs are also always assessed from a business perspective.

The biggest objective in 2017 was establishing the company and moving into new premises in such a way that the changes would not result in impaired safety or service level. According to the indicators used, this objective was achieved; in addition, Trafi annually audits the operations of technical air navigation service and did not find anything to notify.

Cost efficiency was improved by outsourcing the fault notification receipt and forwarding service (ANS Service Desk), previously an in-house activity, to Cinia Group's 24/7 service centre, among other measures.

ANS Finland won the tender for flight measurements in Estonia. As a result of winning the bidding, ANS Finland will be responsible for Estonia's flight measurements for two years. The next step in increasing the competitiveness of flight measurements will be the deployment of a remote measurement system in spring 2018. With it, both the measured instrument and measurement system on board aircraft can be operated by the same person. □

MAJOR INVESTMENT PROJECTS

WAM SURVEILLANCE SYSTEM

One of the biggest investment projects during the year was the WAM surveillance system (Wide Area Multilateration System) signed in April. This is a nationwide civilian aircraft monitoring system providing enhanced surveillance coverage, extending to ground level, if necessary. The first part of the system, which will be implemented in four phases, will be completed in spring 2019. The entire system will be operational in 2020.

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ANS Finland's investments amounted to EUR 4 million.

AVIATION RADIOS

The replacement of all aviation radios used by Finnish air traffic control services began in 2017. The project, comprising hundreds of radios, will be completed in summer 2018.

TOPSKY – MAIN DATA MANAGEMENT SYSTEM

Updating the TopSky – main data management system – is a continuous investment in technical air navigation services. The 2017 update will increase the efficiency of airspace use. When using advanced state-of-art data processing system air traffic control can assist in optimising flight executions.

PENS NETWORK

ANS Finland has joined in the Pan-European Network Service (PENS) data traffic network. The network utilises IP technology, and it is intended for use by air navigation service providers and aviation.

VOICE COMMUNICATIONS SYSTEM

Preparation for new voice communications system procurement commenced in 2017. The investment is topical because the life cycle of the old system is about to expire and there are also new regulatory requirements to be fulfilled (e.g. Internet Protocol). The procurement will start with the Air Traffic Control Centre at the turn of the year 2017–2018.

SERVICING AND FAULT PROCESSING SYSTEM

A new servicing and fault processing system was deployed in spring 2017. Of its features, fault tickets, servicing and work received in the resource management system are in use. The package will be expanded with an ATSEP qualifications and spare parts management system in spring 2018. □

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TEEMU PUOLITAIVAL

Occupation: CNS specialist

Job description: Maintenance of navigation, communications and radar equipment in the Northern Finland region

Unit: CNS unit (Communication, Navigation and Surveillance)

» My workdays are extremely varying, and I visit different airports as necessary. Each year, I travel 50–110 days. Within a couple of weeks, I might visit Helsinki Airport, Kajaani, Kemi and Oulu, for example.

The best thing about my work is the great team spirit with my co-workers and freedom. Even though many things are strictly controlled by international regulations, I can work independently. I have learned even to fix faults calmly and with focus. Hurrying or slacking is not allowed in my work because my duties are very critical to safety. My own and my unit's work play an essential role from the point of view of air traffic and aviation safety: we ensure the functioning of equipment so that aircraft can safely take off and land at Finland's airports."

AVIA COLLEGE

Avia College has world-class simulators. The TopSky simulator is a copy of the operational TopSky air traffic control system, and it is best suited for the refresher, conversion and follow-up training of personnel already working. The UFA simulator, on the other hand, is best suited for basic training preparing for the job. It, too, can simulate any Finnish airport and its air traffic control.

Avia College is a vocational special educational institution owned and maintained by ANS Finland, providing air navigation training services meeting international standards and recommendations.

The operations of Avia College are based on decrees on vocational education and the pan-European regulations on aviation education.

Avia College was established on 1 January 2001, and it is the only educational institution in Finland to provide vocational air traffic controller education. In addition, it offers refresher, conversion, follow-up and specialisation training in various air navigation areas.

The educational institution provides air traffic controller training on commercial grounds, as well as preparatory instruction and customised refresher and follow-up training for commercial customers. This segment is expected to grow in future years.

Following the incorporation, Avia College was transferred to the new company ANS Finland. At the same time, Finavia cancelled the permit to organise education under its own name, and ANS Finland correspondingly applied for a permit to organise education.

The reform of vocational education was approved by the Parliament of Finland in 2017. With it, the permits, guidance and funding of all specialised vocational education and training institutions were renewed. ANS Finland was granted a permit pursuant to the revised legislation and a decision on funding for future years. A state subsidy of EUR 1.6 million was granted for ANS Finland's education and training operations in 2018. The annual budget of Avia College is approximately EUR 3.5 million.

At the end of 2017, Avia College had 18 employees, half of whom were instructors and the rest support or maintenance personnel, such as simulator team members.

During 2017, there were 9 full-time students studying at Avia College, who had begun their studies during 2016, as well as 9 students since autumn 2017. The training volume was 16,709 hours, or 2,387 days. In addition, 2 students from the Finnish Air Force and 1 student from Estonia took part in the training.

Avia College also organised "reportable training" (classroom or remote training) totalling approximately 22,082 hours, or 3,147 days, for working air navigation personnel.

BASIC EDUCATION IN AIR TRAFFIC CONTROL

The purpose of basic education in air traffic control is to train professionals who master the duties in the air navigation sector and find safety, responsibility, service orientation and cost-awareness important. Other important properties include the ability to cooperate and solve problems.

A new basic training course in air traffic control usually begins once a year and lasts approximately a year and a half. It comprises classroom training, self-studying and simulator training. The education also includes approximately 6 months of hands-on learning. Those who have completed the training are prepared to work as approach controllers, and the graduates can ▷

also attend follow-up training for other duties in the sector.

A person who has passed the basic education and the internship included in it can apply for an air traffic controller permit from the Finnish Transport Safety Agency. Those who have completed the training also have the basic prerequisites for international flight control duties.

INTERNATIONALLY ACKNOWLEDGED, HIGH-QUALITY TRAINING

The growth strategy of ANS Finland includes the commercialisation of training functions, which means both getting customers to be trained in Finland and sending instructors from Finland to other countries.

Both ANS Finland and Avia College are being promoted into a known and preferred business partner in Europe. So far, there have been students from Sweden, Lithuania, Estonia and Russia, among other countries. The Czech Republic and Bosnia and Herzegovina are new partners.

Avia College has modern facilities in the vicinity of Helsinki Airport. It uses UFA and TopSky air traffic control simulators with which air navigation personnel can be trained efficiently and with good results. □

The UFA simulator includes 2 tower simulators and 8 radar workstations for radar training. The TopSky simulator has a total of 16 workstations which can be utilised either as individual workstations or as a large entity in a cooperation exercise.

MARJE MÖLDER

Air traffic controller student at Avia College
Native country: Estonia

» I began air traffic controller training in Finland in September 2017. I appreciate the high quality of the training. It is really important to a student that the instructors are at the top of their field and able to pass their own expertise on to their students. With Avia College's simulators, you get to practise diverse situations which you might face at work after you have graduated as an air traffic controller.

At Avia College, there is something interesting happening every day. The best things are the practical training, nice course mates and the wonderful instructors. In particular, I enjoy each instructor having their own teaching technique. This way, every student is certain to find an instructor whose style suits them and with whom they do well. The instructors are really good – they are friendly, love teaching and are there for you."

AVIA COLLEGE 2017:

Training hours of full-time students
16,709

Training days of full-time students
2,387

Training hours of air navigation personnel
22,028

Training days of air navigation personnel
3,147

CORPORATE SERVICES AND REORGANISATION OF OPERATIONS

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ANS Finland's corporate services include financial and administration functions, IT administration and communications. The company's aim is to operate as efficiently as possible. In accordance with that, the aim is to produce corporate services with minimum in-house resources and use outsourced services where necessary.

In 2017, IT administration services were purchased from Finavia under a service agreement. ANS Finland launched preparations for bringing these functions in-house in autumn 2017. Enfo Oyj was chosen as the new IT service provider towards the end of the year. By the end of March 2018, ICT services, covering workstations, data traffic, servers and data centres, will be transferred to the new service provider.

ANS Finland also procures Security Management, i.e. facilities security, access control and personnel security functions, from Finavia as an outsourced service. The company leases its premises from LAK Real Estate Oyj, a real estate company owned by Finavia.

The dependence on Finavia's services will decrease during 2018; in future, the majority of ANS Finland's corporate services will be outsourced or managed in-house. Dismantling the commercial connections between Finavia and ANS Finland eliminates obstacles to tendering.

In the development of corporate services, ANS Finland takes into consideration the possible incorporation of Finnish traffic control companies. It has been planned that the group's subsidiaries will be operationally independent company's while certain corporate services could partially be shared. □

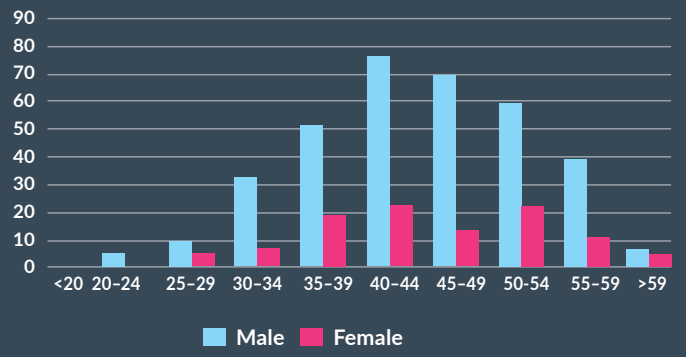
PERSONNEL

OCCUPATIONAL GROUP BREAKDOWN

OPERATIONS:	
Air traffic controllers, flight information officers and managers	256
Air traffic control operators, flight data assistants	32
Technical personnel	59
MANAGEMENT, PRODUCTION CONTROL AND SUPPORT SERVICES	
Management	6
Headquarters and centralised services	14
Training tasks	8*
Safety	4
Aviation information	16
Specialists	38

*) + 23 pseudo pilots (summoned to work as necessary)

AGE AND GENDER DISTRIBUTION



Average age of employees

44.7 years

Average duration of employment relationships

16.7 years

Absence due to sickness rate

3.08

3 workdays lost due to occupational accident

DISTRIBUTION OF LOCATIONS

Vantaa	272
Northern Finland	41
Enontekiö	1
Ivalo (Inari)	3
Kajaani	4
Kemi	3
Kittilä	2
Kuusamo	3
Oulu	13
Rovaniemi	12
Eastern Finland	36
Joensuu	4
Jyväskylä	12
Halli (Jämsä)	1
Utti (Kouvola)	4
Savonlinna	2
Kuopio (Siilinjärvi)	13
Western Finland	107
Kokkola (Kruunupyy)	5
Maarianhamina	4
Tampere (Area Traffic Control Centre)	51
Tampere-Pirkkala	18
Pori	7
Turku	14
Vaasa	8
Total	456

Expert and skilled employees are ANS Finland's biggest asset. At the end of 2017, the company employed a total of 456 professionals from different fields, of whom approximately 288 work in air traffic control duties. In addition to administrative and air traffic control personnel, the company employs technical air navigation, safety and risk management professionals in 22 production units across Finland.

The average age of employees is 44.7 years and the average duration of employment relationships is 16.7 years. Of the employment relationships, 87 per cent are permanent and 13 per cent are fixed-term.

The employees established ANS Finland's personnel fund on 8 December 2017. If the company accrues profit bonuses to be paid to the personnel in the future, they will be paid to the personnel fund. Three performance bonus criteria were set: the company's financial position, good air traffic safety result (no hazardous situations or accidents attributable to the company's operations) and development of customer satisfaction.

TRAINING OF EMPLOYEES

ANS Finland maintains and continuously develops the competence of its personnel. This is also a precondition for all operations, as air navigation work is strictly controlled by international regulation.

In all, 63 per cent of ANS Finland employees work in air navigation duties. Responsible work requires continuous refreshing of skills, training and learning new things. The qualifications of ANS Finland's air traffic control employees are regulated by, among others, the regulations of the European Commission, and with regard to the personnel in technical duties, the national qualification and refreshment trainings of the ATSEP (Specification for Air Traffic Safety Electronics Personnel) training system required by Eurocontrol.

Refresher training to maintain the professional skills of operational personnel was carried out in accordance with the annual plan as either local training or as refresher or conversion training at Avia College. It included the training of the personnel of the Air Traffic Control Centre Finland and air traffic control units elsewhere in Finland. The trainings were realised in accordance with international regulation.

Technical personnel completed refresher or conversion training required by regulation at their workplaces alongside their own work. The refresher training of the personnel of the Flight Planning Centre has been realised at the workplace using the eAvia electronic training platform.

The JET and supervisor trainings and social media ambassador trainings launched already before the incorporation were continued and completed in 2017 according to plan.

In 2017, the company also launched the development of new employee onboarding.

The trainings are reported to the Finnish National Agency for Education. □

GOVERNANCE

BOARD OF DIRECTORS

ASTA SIHVONEN-PUNKKA
Director, Electricity Market
Fingrid Oyj
Member of ANS Finland's Board of Directors as of 17 March 2017

PERTTI KORHONEN
Chairman of ANS Finland's Board of Directors
as of 10 October 2017

TEEMU PENTTILÄ
Director of Department
Ministry of Defence
Member of ANS Finland's Board of Directors as of 17 March 2017

The Board of Directors of ANS Finland sees to the administration of the company and the appropriate organisation of the company's operations. In addition, the Board of Directors ensures that the company's accounts and asset management are appropriately organised. The Board of Directors complies with the Articles of Association, governance policy, agreement on authorisations, Limited Liability Companies Act and other valid legislation.

The Board of Directors has ratified a Board Charter, specifying the key tasks of the Board of Directors and the key procedures associated with Board work. In addition to the duties set forth in the Limited Liability Companies Act, the Board of Directors' duties include approving and monitoring the long-term strategy, confirming the annual objectives and budget and monitoring their realisation, approving the essential organisation structure, approving significant investments, establishing the investment policy, approving the principles of risk management and other similar key control systems, appointing the CEO and confirming the appointment of management team members, confirming the remuneration paid to the senior management and approving the company's performance bonus schemes.

The Board of Directors has no separate committees. The Board of Directors assesses its operations regularly itself and, if necessary, using an external auditor. The company's Board of Directors is elected by the general meeting of shareholders in accordance with the provisions of the Limited Liability Companies Act.

The chairman of the Board of Directors was **Kimmo Mäki** on 17 March–9 October 2017 and as of 10 October 2017 **Pertti Korhonen**. The other members of the Board of Directors have been **Asta Sihvonen-Punkka** and **Teemu Penttilä** as of 17 March 2017.

The chairman of the Board of Directors is paid EUR 2,300 per month and members EUR 1,500 per month. In addition, Board members are paid a meeting fee of EUR 600 per meeting.

The amount of remuneration and meeting fees paid to the Board of Directors in 2017 is reported in the notes to the financial statements.

The Board of Directors has convened 9 times. The members of the Board of Directors have attended the meetings as follows: Kimmo Mäki 6/6, Pertti Korhonen 3/3, Asta Sihvonen-Punkka 9/9 and Teemu Penttilä 9/9.

CEO AND MANAGEMENT TEAM

The CEO sees to the day-to-day management of the group in accordance with the instructions and orders issued by the Board of Directors. The CEO is appointed and the CEO's remuneration and other terms of employment are confirmed by the Board of Directors.

The company's CEO has been **Raimo Luojus** as of 1 April 2017. In addition to the CEO (chair), the operational management team of ANS Finland comprises Chief Administrative Officer **Matts-Anders Nyberg**, Chief Operations Officer **Heikki Isomaa**, Air Navigation Services Chief Technical Officer **Jukka Piilola**, Director ATCC Finland **Karri Hannula** and SVP, development, marketing and customer relations **Pasi Nikama**. The six-member operational management team convened on a weekly basis.

In addition to the members of the operational management team, the company's nine-member management team comprises Safety Manager **Tom Hätinen**, Business Controller **Jarkko Luoma** and, as representative of the personnel, air traffic controller **Vesa Tarvainen**. The management team convened five times.

The salary and performance bonuses paid to the CEO and management team in 2017 are disclosed in the notes to the financial statements concerning the management. The company has no additional pension schemes in use.

REMUNERATION SCHEMES

The company's Board of Directors confirmed a remuneration scheme for the company's management and experts in 2017.

The employees covered by the remuneration scheme are annually confirmed by the company's Board of Directors. At the end of 2017, the performance bonus scheme covered the management team and other executives, managers and experts, totalling 37 people. The purpose of the performance bonus scheme is to encourage the executives and management to perform above ▷

average and commit them to the company. The CEO has a personal employment contract and remuneration scheme, while other members of the management have their own personal objectives and bonus schemes.

The guidelines on remuneration in state-owned companies ratified by the Government are complied with in terms of remuneration.

The performance bonus scheme confirmed by the Board of Directors specifies its key provisions, such as the grounds of determination and measurement of objectives, possible maximum bonuses and the entry and exit rules of the scheme. The company's Board of Directors decides on the payment of performance bonuses at the management team level after the adoption of the financial statements. The Board of Directors can amend the rules of the system or decide not to pay performance bonuses.

Challenging and measurable objectives are set for everyone in the performance bonus scheme. The objectives are based on the company's strategic themes: safety, improving operational efficiency, growth, customer satisfaction, management of personnel and management of operations/implementation of projects. The weightings of the objectives vary by position and role.

The annual combined total amount of remuneration variable based on objectives is a maximum of 15 per cent of the bonus earner's fixed annual salary. If the performance of the company and the bonus earner is exceptionally good, the total maximum amount of bonuses paid can be a maximum of 30 per cent of fixed salary.

In addition to the management and specialists, all permanent employees are covered by a separate performance bonus scheme. It is not possible to be included in the scope of two different systems at the same time. The company's personnel founded ANS Finland's personnel fund at the end of 2017.

RISK MANAGEMENT

The company's risk management comprises two parts. In addition to safety and compliance, the company addresses risk management relating to financial, IT, investment, cash flow, income and insurance risks, for example. A risk management plan was prepared when the company began operations, and it is updated on a regular basis.

© MANNE KOPONEN

ACO (Aircraft co-ordinator) training with the Border Guard.

Risk management is an integral part of the internal control system and safety and quality management. The company aims to analyse and identify predictively the impacts of diverse changes on en-route service and area traffic control operations.

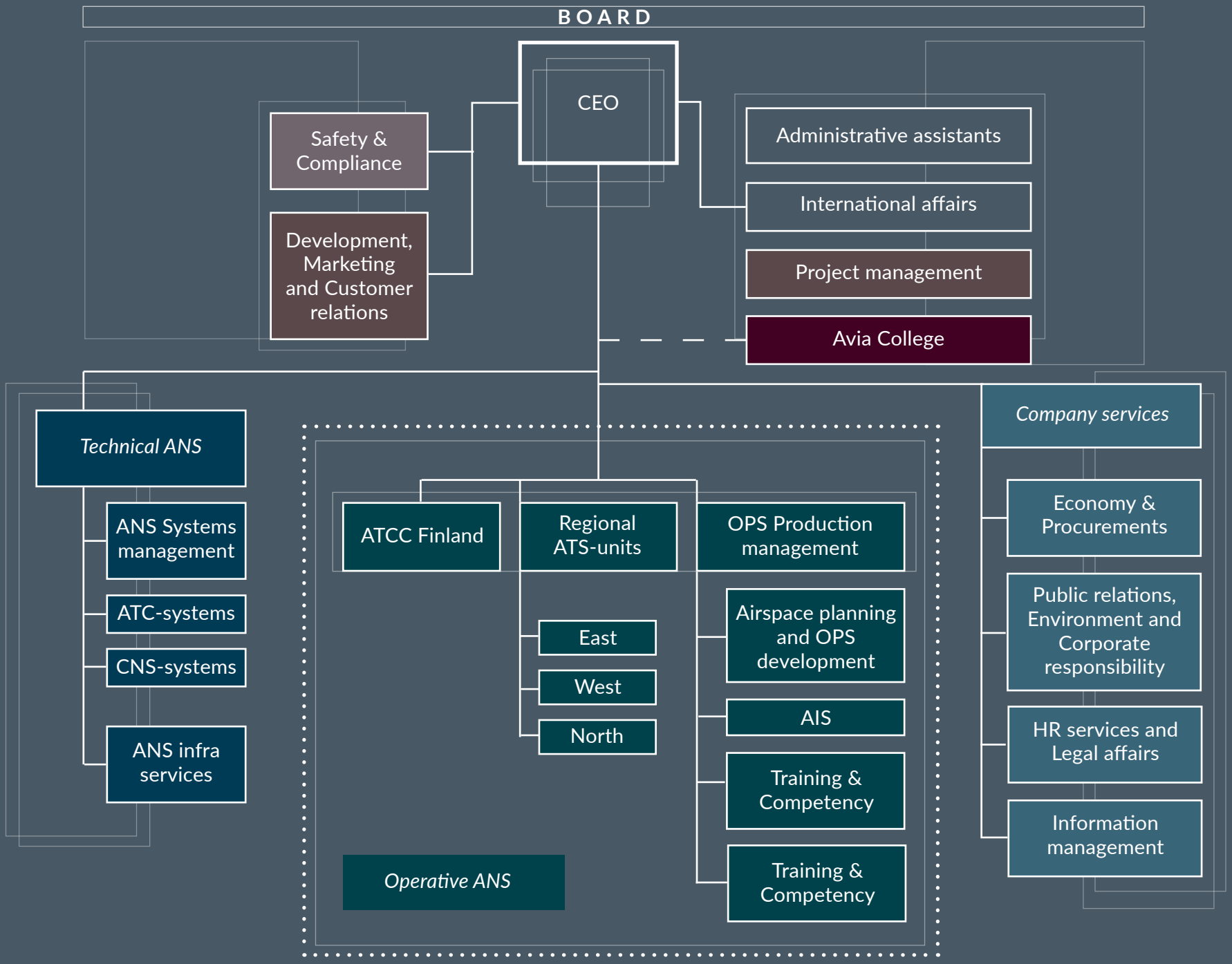
Rapidly increased drone activity places new challenges on ANS Finland. The company has to consider ways for best managing the effects of drones on its own service. ANS Finland actively cooperates with the authorities, supporting the flow of information by reporting and considering technical and operational means for minimising the negative impacts together with the authorities.

In 2017, a key objective has been to safeguard operations in exceptional situations. For this, situations in which operations are compromised due to technical or other reasons in the normal premises are practised in evasion exercises.

During 2017, the operations of Helsinki Airport air traffic control were taken to a back-up location twice in exercises. It is located in the immediate vicinity of Helsinki Airport, and it features the technical resources required for operations. The Flight Planning Centre has also conducted emergency exercises. They have proved that service production can also be ensured in the back-up premises.

AUDITING

The company's auditor is Ernst & Young. □


BOARD
CEO
Safety & Compliance
Development, Marketing and Customer relations
Administrative assistants
International affairs
Project management
Avia College
Technical ANS
ANS Systems management
ATC-systems
CNS-systems
ANS infra services
ATCC Finland
Regional ATS-units
OPS Production management
East
West
North
Airspace planning and OPS development
AIS
Training & Competency
Training & Competency
Operative ANS
Company services
Economy & Procurements
Public relations, Environment and Corporate responsibility
HR services and Legal affairs
Information management

OPERATIONAL MANAGEMENT TEAM

RAINE LUOJUS
CEO

PASI NIKAMA
Development, marketing and customer relations

MATTS-ANDERS NYBERG
Company Services

KARRI HANNULA
ATCC Finland

HEIKKI ISOMAA
Operational Production Control

JUKKA PIILOLA
Technical Air Navigation

RAINE LUOJUS, CEO

B. 1966, air traffic controller

KEY PROFESSIONAL EXPERIENCE

- Finavia, director of air navigation business 2011–2017
- Finavia, COO, air navigation business 2008–2011
- Finnish Civil Aviation Administration/Finavia, Helsinki Airport air traffic control deputy and operations manager 2002–2008,
- Finnish Civil Aviation Administration, Helsinki Airport supervisory air traffic control positions 1999–2002, air traffic controller at Helsinki Airport, Kuopio and Oulu, among others 1991–1999

POSITIONS OF TRUST

- North European Functional Airspace (NEFAB) ANSP CEO board, chairman 2015-2017
- NEFAB ANSP CEO board, member 2012-
- Civil Air Navigation Services Organisation (CANSO) EC3, member 2011-
- Borealis Alliance CEO board, chairman 2014-2015
- Borealis Alliance CEO board, member 2013-
- NEFAB ANSP management board, member 2009-2011
- Noracon Governing Body, member 2011-
- Eurocontrol: Air Navigation Services Board, member 2014–2017, Operations Consultation Group, Stakeholders Consultation Group, Aerodrome Terminal Area Working Group

MATTS-ANDERS NYBERG, senior vice president

b.1961, air traffic controller

KEY PROFESSIONAL EXPERIENCE

- ANS Finland Chief Administrative Officer 1 April 2017–
- Finavia, Head of Business Innovations 2012–2017
- Finnish Civil Aviation Administration/Finavia, NEAP Programme Office Manager 2009–2012
- Finnish Civil Aviation Administration/Finavia, Director, planning, air navigation business 2008
- Finnish Civil Aviation Administration/Finavia, Deputy Department Manager 2001–2008
- Finnish Civil Aviation Administration, Deputy Director 1994–2001
- Finnish Civil Aviation Administration, air traffic control inspector 1992–1994
- Finnish Civil Aviation Administration, air traffic controller 1983–1993: Northern Finland air navigation centre, Rovaniemi airport

HEIKKI ISOMAA, senior vice president

b.1959, air traffic controller

KEY PROFESSIONAL EXPERIENCE

- ANS Finland Chief Operations Officer 1 April 2017–
- Finavia, Vice President, Operations 2014–2017
- Manager, Finavia's operational production control unit 2011–201
- Finnish Civil Aviation Administration/Finavia Group administration, planner 2005–2011
- Finnish Civil Aviation Administration, Group administration, air traffic controller/FATMI training coordinator 2002–2005
- Finnish Civil Aviation Administration, Group administration, planner 1999–2002
- Lapland Air Command, pilot officer 1998–1999, 1983–1998
- Finnish Defence Forces 1983–1999: warrant officer
- Finnish Defence Forces warrant officer, Air Force Academy, pilot officer 1981–1983

JUKKA PIILOLA, senior vice president

b.1959, engineer

KEY PROFESSIONAL EXPERIENCE

- ANS Finland, Senior Vice President, Technical air navigation 1 April 2017–
- Finavia, Air Navigation Services Chief Technical Officer 2016–2017
- Finnish Civil Aviation Administration/Finavia technical production control manager 2008–2016
- Finnish Civil Aviation Administration, Air navigation technique unit manager 2005–2008
- Finnish Civil Aviation Administration, engineer 1999–2005
- Finnish Civil Aviation Administration, sector manager 1998–1999
- Finnish Civil Aviation Administration, navigation engineer 1996–1998
- Finnish Civil Aviation Administration, service manager and message engineer (NAV team supervisor) 1989–1996

KARRI HANNULA, senior vice president

b.1968, air traffic controller

KEY PROFESSIONAL EXPERIENCE

- ANS Finland, Vice President, ATCC Finland 1 April 2017–
- Finavia, Director, ATCC Finland 2015–2017
- Finavia, Helsinki Airport chief of ATC 2008–2015
- Finavia, Helsinki Airport chief of ATC 2008–2015, chief of ATC training 2004–2008
- Finnish Civil Aviation Administration/Finavia air traffic controller Helsinki Airport 1995–2015
- Finnish Civil Aviation Administration, air traffic controller at Pori airport 1992–1995

PASI NIKAMA, senior vice president

s.1968, lennonjohtaja

KEY PROFESSIONAL EXPERIENCE

- ANS Finland, Senior Vice President, Development, marketing and customer relations 1 April 2017–
- Finavia, Vice President, ANS marketing and customer relations 2015–2017
- Finavia, Chief of Area Control Centre Finland
- Southern Finland air navigation centre 2010–2015
- Finavia, traffic manager Oulu airport 2007–2010
- Finavia, instructor and chief instructor Avia College 2002–2007
- Finnish Civil Aviation Administration, air traffic controller Southern Finland air navigation centre 1997–2002
- Finnish Civil Aviation Administration, air traffic controller Ivalo and Halli airport 1995–1997
- Finnish Civil Aviation Administration, air traffic controller assistant summer 1994, 1991–1992: Tampere-Pirkkala airport, Southern Finland air navigation centre

CORPORATE RESPONSIBILITY

RESPONSIBILITY FOR THE ENTIRE FINNISH AIRSPACE
WE MANAGE THE AIR AND SPACE FOR YOU

The operations of ANS Finland affect the day-to-day lives of many Finns in one way or another. ANS Finland provides en-route service and aerodrome control and approach control services for airports. In practice, the company ensures smooth take-offs and landings at Finnish airports and that crossing the Finnish airspace is smooth and safe.

Air traffic enables the global citizenship of Finns. It allows tourism and business to thrive and provides employment to tens of thousands of Finnish people. ANS Finland works to ensure that air traffic supports Finland's success in a comprehensive way. Air traffic allows Finland to stay active 24/7.

Corporate responsibility is a natural part of the operating culture and corporate identity of ANS Finland even by the nature of the company's operations. The concrete guidelines on corporate responsibility are derived from the company's values, strategy, risk management policy, government guidance and international regulation on the air navigation sector.

The operations of ANS Finland are guided by several international regulations, such as the performance requirements laid down by SES (Single European Sky) legislation for 2015–2019 and the subsequent five-year period. Finnish air traffic control is expected to operate more efficiently year by year. In practice, this means that flight routes must be as short and unrestricted as possible, delays minimized, safety level must be high and costs accurately defined. □

ANS FINLAND'S RESPONSIBILITY THEMES

- Air traffic safety guides everything we do
- We do things well and sharp
- Skilled employees are our asset
- The well-being of society and the environment is important to us
- We fulfil our promise to the customer

SAFETY

Safety is ANS Finland's first and foremost value which we will not compromise under any circumstances. Even though the company is a new one, its employees have solid traditions and skills in implementing safety in day-to-day work. ANS Finland continuously develops the safety of its operations and related quality assurance activities. Each employee also carries personal responsibility for safety.

KUVA: ISTOCK

ANS Finland has a licence for providing air navigation service granted by the Finnish Transport Safety Agency. This means that even before its operational activities commenced, the company has proved comprehensively and with documentation, in accordance with the licence process, that it has a safety management system (SMS) meeting the common European requirements of the SES regulation.

The SMS is an integral part of ANS Finland's management system. This ensures the priority of safety also at the practical level.

The authority has also conducted an audit of the safety management function after the launch of the company's operations, and the company passed it without any remarks.

The company conducted a total of 248 assessments of safety impacts related to changes during 2017. Even the smallest changes are assessed so that the company can ensure that the changes are managed and adequate safety can be ensured in conjunction with them.

Good safety and quality management also includes internal audits and an encouraging reporting culture. Six internal audits were carried out. One of the indicators of an encouraging reporting culture and good safety culture is the number of observations and incident reports.

PERFORMANCE GOALS AND SAFETY

The Performance Scheme set by the European Commission sets stringent goals for Finland regarding the punctuality, safety, environmental efficiency and charges collected in air traffic.

The Performance Scheme of air navigation services prepared as part of European airspace development is binding on the state of Finland and the air navigation service provided by ANS Finland, and it steers the development of air navigation services. The obligations under the Performance Scheme have been set by the Finnish Transport Safety Agency.

In addition, safety goals are set in the Finnish Aviation Safety Programme (FASP). It requires aviation organisations to conduct a survey of risk factors and set separate target levels for the risks and regularly monitor them.

AIRSPACE BLOCK NEFAB PERFORMANCE PLAN

Finland is part of the functional airspace block comprising the NEFAB countries. The purpose of the NEFAB area is to lower the costs of European airspace and thereby improve Europe's competitiveness.

In 2015, the European Commission approved the Reference Period 2 (RP2) of the NEFAB area's Performance Scheme for the reference period 2015–2019 among the first functional airspace blocks (FABs). The Performance Scheme for the NEFAB area, therefore, complies with the Europe-wide goals set by the European Commission. □

REPORTING ACTIVITY IN 2017
(AS OF 1 APRIL 2017)

Incident and observation reports by the personnel	**1,371**
Technical notifications	1,808

PERFORMANCE TARGETS SET FOR ANS FINLAND

TARGET		IMPLEMENTATION 2017
Capacity	Declining trend in delays due to the regulation of en-route services	Achieved
Safety	Efficiency of the safety management system	Achieved
Risk analysis tool (RAT) use	Achieved	
Just Culture	Achieved	
Cost efficiency	Declining en-route service unit cost	Not achieved
Environment	Average deviation from optimum route	Achieved

ANS FINLAND'S OWN SAFETY TARGETS

TARGET	IMPLEMENTATION 2017
1. Indicators monitored in accordance with the Finnish Aviation Safety Programme (FASP) FASP level 2 indicators, totalling 12 indicators	The target was achieved with regard to 11 indicators. The target was not achieved with regard to one indicator.
2. Runway deviations occurred due to ANS Finland's activities Target: Declining trend in the number of incidents	The target was achieved
3. Losses of minimum separation due to ANS Finland's activities Target: Declining trend in the number of incidents	The target was achieved

1. There are several FASP safety indicators. Level 1 and 2 indicators are retrospective, measuring what has already taken place. Level 3 indicators are most commonly events that could predict a trend in something. However, they have not caused dangerous situations. Over 30 level 3 incidents were reported in our operations, providing valuable information to support our safety work. The FASP target was not reached with regard to one area of follow-up, as there was a runway incident classified as severe. The incident did not result in an immediate risk of collision between an aircraft using the runway and a vehicle, but the nature of the incident warranted its classification as severe. With regard to the other eleven indicators, the target was reached.

2. There was one runway incident attributable to ANS Finland's operations. With regard to runway safety, ANS Finland's goal was set to be a declining trend compared to the previous year. Compared to the five incidents the previous year, ANS Finland achieved the set safety goal.

3. Losses of minimum separation refer to cases in which aircraft are closer than the specified minimum separation to each other as a result of the actions of air traffic control. This does not automatically mean that there is a risk of a collision, but each case is nevertheless reported as an incident in accordance with the principles of good safety culture. Loss of separation could be, for example, a situation in which the distance between two aircraft should have been 9 kilometres but it was 8 kilometres. A total of 16 cases of loss of separation were reported, compared to 20 cases in 2016. A declining trend in losses of separation was set as a safety goal. The safety goal was met.

DATA SECURITY AND DATA PROTECTION

As the world becomes digital and functions are made electronic, the importance of cybersecurity is emphasised. Good cybersecurity is exceptionally important in activities of national significance regulated strictly by international regulations and which also directly involve people's safety, such as air navigation services. ANS Finland pays particular attention to the operational reliability and data security of its ICT services and processes.

The ANS-SEC operating model for air navigation services created by ANS Finland was completed in 2017, and it is based on the company's best data security practices. It compiles different functions and prepares for upcoming new regulations, and it includes the techniques, processes and diverse tests associated with implementing the data security practice, for example.

The European Aviation Safety Agency EASA has paid increasing attention to cybersecurity, and it aims to build a common cybersecurity operating model for Europe. ANS Finland actively cooperates with the authorities, aviation operators, international aviation organisations and other data security parties to strengthen cybersecurity.

CONTINUITY AND PREPARATION

ANS Finland designs its services and implements its systems by taking aspects of preparation and continuity into account in detail in addition to security. The use of back-up systems and procedures in incidents plays a key role in terms of the uninterrupted use of services.

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ANS Finland's risk assessment plan guides the actions. Even though the company uses modern data security controls, preparation and procedure planned in advance play a key role. Technology alone is not enough; each of the company's employees must have the sufficient expertise and awareness of data security.

Practising for acting in abnormal situations and incidents in advance is an important part of data security. Reacting, flow of information and communication are regularly trained together with strategic partners.

In addition, the company organises continuous training, such as national qualification and refreshment training in the ATSEP (Specification for Air Traffic Safety Electronics Personnel) training system required by Eurocontrol. During 2017, ANS Finland's representatives took part in Eurocontrol's data security training, and also other training relating to cybersecurity/data security was organised for the personnel.

HIGH LEVEL OF DATA SECURITY

ANS Finland follows a high level of data security in all its operations. Key themes include ensuring the confidentiality of communication, protection of individuals' privacy and online security.

ANS Finland has conducted a preliminary GDPR survey, based on which the company will carry out measures relating to the General Data Protection Regulation by the deadline. In addition, employees and partners are continuously trained in matters pertaining to data protection and security. □

KUVA: ISTOCK

FINANCIAL RESPONSIBILITY

ANS Finland's financial responsibility refers to the creation of financial added value to the company's shareholder and other stakeholders, and thereby also indirectly to Finnish society.

ANS Finland's financial responsibility is guided by the business strategy completed in November 2017. It defines operational efficiency, development of services and appropriately reacting to international regulation as the company's key targets, among others.

ANS Finland is subject to the EU's requirement for increasing the efficiency of the regulated service, i.e. the area traffic control service and Helsinki air traffic control service by three per cent each year. Targets have been set for the five-year reference period 2015–2019.

ANS Finland's result for 2017 exceeded expectations. The good result will reduce the service charges of ANS Finland's customers. The unit price of the en-route charge was decreased by 2.6% for 2018.

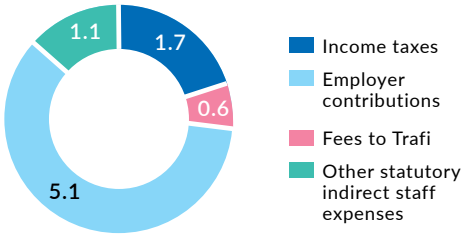
The financial administration unit takes care of ANS Finland's tax affairs centrally. The company also has a ratified financial policy specifying the taxation-related processes. Operations are additionally supervised by an audit firm.

ANS Finland pays 100% of its taxes in Finland.

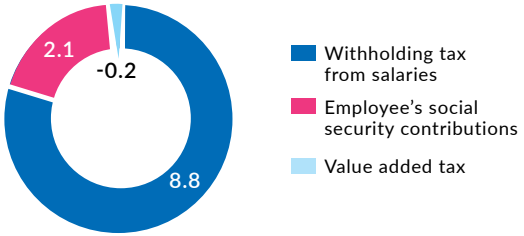
EFFICIENCY OF IN-HOUSE OPERATIONS

The company moved into new office premises in summer 2017. The floor area in use per person was decreased significantly by moving into open-plan and multi-use premises. In production premises, i.e. air traffic control and technology premises, the safety, technicality and functionality from the point of view of fluency and safety of operational work are more crucial than floor area. □

TAXES AND TAX-LIKE LEVIES PAID, EUR MILLION



TAXES PAID, EUR MILLION



FINANCIAL ADDED VALUE TO STAKEHOLDERS, EUR MILLION

GENERATION OF ADDED VALUE		
Customers	Revenue, other operating income and financial income	64.0
Generated added value		**64.0**
DISTRIBUTION OF ADDED VALUE		
Providers of services and goods	Purchased materials and services, other operating expenses	23.0
Personnel	Salaries and bonuses, pension expenses, voluntary staff expenses	32.1
Public sector	Indirect staff expenses, income tax, value added tax	2.5
Investors	Interest and other financial expenses	0.1
Owners	Dividends	0.0
Organisations	Donations	0.0
Distributed added value		**57.7**
Carried over for the development of business operations		6.3

ANS Finland ensures smooth take-offs and landings at Finnish airports and that crossing the Finnish airspace is smooth and safe. Therefore, ANS Finland's operations do not only have effects on the functioning of the Finnish society but also the smoothness and safety of international air traffic.

KUVA: ISTOCK

RESPONSIBILITY FOR STAKEHOLDERS

ANS Finland's important stakeholders include airlines, Finavia, the state aviation, employees and shareholder. The responsibility for stakeholders is manifested in ANS Finland's goals and values.

ANS Finland is engaged in continuous and open dialogue with its stakeholders to develop its operations and the entire industry in an increasingly sustainable direction. ANS Finland operates with an emphasis on safety, in a customer-oriented way and in accordance with the Code of Ethics.

Finavia, the company operating Finnish airports, is a significant customer for ANS Finland. ANS Finland provides both air traffic control services and technical services, such as system servicing, maintenance and flight measurements, for it. Our strategic intent is to grow together with Finavia.

AIRLINE CUSTOMERS

A customer satisfaction survey was carried out in 2017, and the overall grade was excellent. A total of 17 airline customers responded to the survey within the deadline. The company's operations were ranked expert, reliable, professional and safe.

The company was hoped to develop in particular with regard to the development of services relating to FRA (Free Route Airspace) and reporting on them. According to the preliminary results, the score for operational success (on a scale of 1–5, 5=very good and 1=very poor) was 4.

ANS Finland's cooperation discussions with customers were praised in particular. From the point of view of airline customers, they were exceptionally good customer relationship management. The quality of service will be developed continuously based on the feedback received.

MILITARY AND STATE AVIATION

We support the mission of the Finnish Defence Forces by providing the required airspace reservations and monitor the airspace of the Gulf of Finland in cooperation with the Finnish Air Force.

We are obligated to serve the Finnish state aviation also by law. Contacts with the Finnish Air Force and the Border Guard are regular and aim at the continuous improvement of operations.

PERSONNEL IN A KEY ROLE

In an area of special expertise such as air navigation, skilled and competent employees play a central role. ANS Finland is a responsible employer. The company takes care of the well-being, health, competence and safety of its employees by providing good managerial work and training and by complying with collective labour agreements and labour legislation. Good management of personnel is a key aspect of ANS Finland's strategy.

ANS Finland looks after the equal and fair treatment of its employees. Preparation of an equality plan commenced in 2017.

In 2017, ANS Finland signed a cooperation agreement with Terveystalo, promoting the occupational health and well-being of employees according to a plan. Preventive campaigns were adopted as a means to influence employees' absence due to sickness and working capacity. In addition, preparations have been made for diverse corrective measures, such as restoring the working capacity of chronically ill employees.

In 2017, the number of workdays lost due to occupational accident numbered 3.

In 2017, the absence due to sickness rate was 3.08.

INTERACTION WITH EMPLOYEES

ANS Finland uses a harmonised performance appraisal model. The development discussions pursuant to it will begin in 2018, and they will be carried out with all employees.

Work on the strategy commenced in summer 2017 and continued during the autumn. The personnel took part in preparing the strategy so that the company's management acted as a steering group and the content planning team was comprised of representatives of employee groups from the managerial level to the shift supervisor level. The employee representatives were selected so that there was a comprehensive representation of different geographical regions. Attention was also paid to involving people of different ages and genders.

Employees are regularly kept up to date on the company's matters by arranging regular personnel information events and communicating on the intranet.

An occupational safety and health manager was appointed and assumed the position on 1 January 2018. A cooperation negotiation board has also been established and begun operation. An occupational safety and health organisation also began its work in 2017, and occupational safety and health delegates were appointed to it. □

RESPONSIBILITY FOR THE ENVIRONMENT

ANS Finland cooperates with international industry organisations and parties to reduce the negative environmental impacts of air traffic. The most important means of influence in this work include planning as short as possible flight routes, taking advantage of weather conditions, using efficient flight techniques, keeping delays to a minimum and using the entire European airspace as efficiently as possible.

KUVA: ISTOCK

The most important individual factor with regard to ANS Finland's environmental responsibility is efficient airspace management. Finland's large and well-managed airspace makes it possible for aircraft to smoothly descend and ascend, which reduces fuel consumption and noise. ANS Finland's short-term goal is to maintain the current good situation but take development measures over time to make Finland's airspace management the most environmentally-friendly in the world.

Air traffic control and flight techniques are continuously optimised in an increasingly environmentally-friendly direction together with international industry parties.

The EU wants to promote the free movement of people and goods. Creating a common airspace is part of this development. Previously, the flight route network was built according to a ground-based navigation device network. Modern satellite-based navigation makes it possible to fly along the straightest route possible, provided that there are no military zones or other restrictions along it.

Airspace is a system that also includes the systematic usage of runways in different weather and traffic situations. It is an entity that must be planned to work also under unfavourable circumstances and in case of diverse incidents.

The system entity aims to guarantee safety in all situations. Safety margins are dimensioned according to the worst-case scenario so that it is not always mandatory to precisely follow the routes in a normal situation. Air traffic control can issue aircraft flexible clearances that shorten the route and may also have a positive impact on environmental effects (lower emissions as the route is shorter, guiding aircraft to less populated areas). Such clearances are issued considering other traffic in the airspace.

ANS Finland aims to mitigate aircraft noise at the Helsinki Airport by using a primary runway system according to which take-off and landing directions with the smallest population are primarily used. During parallel use, the priority applies to the operating direction of parallel runways.

SHARE OF GREEN LANDINGS (CDO) OF ALL LANDINGS AT HELSINKI AIRPORT

2013	59%
2014	66%
2015	68%
2016	70%
2017	71%

SOURCE: FINAVIA

The priority order emphasises both the population in the take-off and landing sector of each runway and the safe use of different runways in proportion to each other. The aim is to use the best possible runways from the point of noise management, taking the traffic situation and air safety comprehensively into account. The use of runways is limited during nighttime so that runway 15 is not used for take-offs or runway 33 for landings during nighttime unless required by air traffic safety.

As a means of reducing approach noise, the airport has aimed to increase the continuous descent operations (CDO) technique where possible. In the descent phase, the ground noise of the aircraft is reduced if the approach takes place through continuous descent without a horizontal flight phase before landing. The structure of the airspace and operations of the air traffic control allow continuous descent in most cases. In practice, however, the pilot is responsible for realising it.

EFFICIENT WORK

ANS Finland aims at the efficient use of working time. Remote technologies and tele- and video-conferences are utilised for meetings whenever possible.

ANS Finland's production and company car choices aim at environmentally-friendly alternatives. □

ANS
FINLAND

BOARD OF DIRECTORS' REPORT AND FINANCIAL STATEMENTS 2017

CONTENTS:

BOARD OF DIRECTORS' REPORT

MISSION

Air Navigation Services Finland Oy (ANS Finland) commenced operations on 1 April 2017. Finavia's air navigation services operations personnel, Avia College's air navigation training employees and, for example, the financial, communications, risk management and HR personnel were transferred to ANS Finland.

ANS Finland is a wholly state-owned special assignment company steered by the Ministry of Transport and Communications.

ANS Finland is responsible for special tasks relating to air navigation, such as airspace management, area control, services for the state aviation and aeronautical rescue services. Moreover, the company is responsible for en-route services in the Finnish airspace and air navigation services at Finavia-owned airports and Lappeenranta. ANS Finland is also responsible for the design and maintenance of the infrastructure and systems required for air navigation in compliance with international requirements.

ANS Finland's customers include airports, the commercial aviation industry, the Finnish state aviation operations including military aviation, general aviation and pilot training schools.

KEY EVENTS DURING THE FINANCIAL YEAR

Operational and technical services have been produced in the same way as before ANS Finland was established. A key task during the financial year has been to develop and establish support processes required for providing the services, such as safety, financial and personnel procedures and follow-up methods, as part of day-to-day operations. The company's management and Board of Directors have prepared operational and financial indicators as well as a reporting system for monitoring operations.

Other key issues reviewed by the Board of Directors during 2017 included the approval of the investment framework, preparing the company's incentive scheme for the personnel, approving the management's short-term incentive scheme, approving other employee benefits, launching and approving ANS Finland's strategy process and reviewing key business risks.

Other matters discussed included tendering the company's information management, operational planning and setting of objectives for 2018 as well as preparing the Board of Directors' annual plan for 2018.

The company's management reports to the Board of Directors on investments, the FinEst project and data security projects.

REVENUE AND PROFIT

ANS Finland's revenue for the financial year amounted to EUR 63.9 million and operating profit to EUR 9.3 million. The revenue was higher than expected due to favourable development of traffic volumes. The operating profit margin was 14.5%. The company's profit for the financial year amounted to EUR 6.8 million.

KEY INDICATORS

Revenue (EUR million)	63.9
Operating profit (EUR million)	9.3
Operating profit margin %	14.5
Capital expenditure (EUR million)*	4.0
Return on equity (%)**	45.1
Equity ratio (%)**	40.8
Personnel on average (FTE)	402

* excludes the fixed assets transferred in the acquisition of business operations
** the closing balance of the balance sheet items have been used in calculations

TRAFFIC

The traffic volumes of the en-route service and air navigation service in Helsinki Airport developed favourably in 2017. The biggest growth was in overflights, the volume of which (service units) increased by 16.7% year-on-year. With regard to en-route service, volumes also increased in international traffic (+7.6%) and domestic traffic (+4.3%). The traffic volume of Helsinki Airport (tn units) increased by a total of 6.4% in 2017. International traffic (+7.1%) outgrew domestic traffic (+3.1%) in Helsinki Airport.

EU LEGISLATION

As a Member State of the European Union, Finland is subject to the Single European Sky (SES) legislation regulating aviation in Europe. With regard to air navigation fees, the regulations on performance and the common charging scheme are essential SES legislation. In Finland, the current regulations apply to to en-route service and air navigation service in Helsinki Airport.

The EU regulation on performance for air navigation services requires each functional airspace block (Finland belongs to the North European Functional Airspace Block NEFAB with Norway, Estonia and Latvia) has a five-year performance plan approved by the Commission. The current performance plan is for 2015–2019. It sets the goals regarding safety, capacity, environment and cost efficiency. The cost-efficiency goals have a direct impact on the level of air navigation charges.

The performance plan expects the cost efficiency of Finland's en-route service to improve by 3.5% annually and the air navigation service at Helsinki Airport by 2.2%. The calculation of cost efficiency and unit prices takes into consideration specified expenses, predicted traffic volume and inflation, among other factors. The determination bases of unit prices are stipulated in detail by the regulation on charges.

OPERATIONAL UNCERTAINTIES AND ASSESSMENT OF KEY RISKS

The company's risk management comprises two parts. The risk management unit deals with cases relating to the safety of air traffic, in addition to which the company addresses other risk management matters relating to financial, IT, investment, cash flow, income and insurance risks, for example. A risk management was prepared when the company began operations, and it is updated on a regular basis.

Air traffic is expected to increase further in the next few years. The most significant financial risk is associated with overflight traffic. Traffic between the Middle East and North America uses Finland's airspace every day because the route over Finland is the shortest between these locations. Should changes regarding safety or availability take place in the airspace of a country along this route, this could significantly alter the routes chosen by airlines, which may also have an effect on the number of overflights operated by ANS Finland. ANS Finland expects the risk to be approximately EUR 4 million at the annual level.

EXPECTATIONS FOR 2018

Strong growth in traffic volumes is expected to continue, especially in Helsinki Airport. The growth figures seen in 2017 might not be reached, but overflight traffic is estimated to increase by more than 2%. Even though the unit price of the en-route charge was decreased by 2.6% for 2018, revenue is expected to see slight growth compared to 2017.

At the core of operations in 2018 will be launching the strategy approved in 2017, focusing on good control of the profitability and operational efficiency of core business operations. Moreover, ANS Finland aims to find new business areas and develop digital services not only to customers, but society as well. Another aim is to grow in cooperation with strategic customers.

ANS Finland's investments are expected to amount to approximately EUR 10 million. The most significant investments will be the control system project started in 2017 and the procurement of new radio and voice connection systems. The company will also prepare for launching the FinEst project, aiming to create an air traffic control service model transcending national borders, allowing the Estonian air navigation company EANS to provide service in the southern sectors of Finland's airspace as necessary, while ANS Finland could provide services in the Estonian flight information region, especially during nighttime. The project would address the EU-level performance requirements and the objectives of the Single European Sky programme.

ANS Finland's future plans include a remote tower solution in which aerodrome control and approach control services would be provided from a central air traffic control centre using remote connections. The project aims to achieve cost-savings compared to the current operating model. Corporate services will deploy an information management service model agreed with an external service provider during the summer.

ANS Finland will be extensively involved in a Ministry of Transport and Communications project in which it is proposed to establish a state-owned traffic control company. The company would be engaged in controlling and managing of maritime, railway and road traffic and related information collection, management and utilisation. ANS Finland would also be included in the group planned to be established during 2019 as the company responsible for air traffic control.

PERSONNEL AND SALARIES

At the end of the financial year, ANS Finland had 456 employees, of whom 288 worked in air traffic control duties. The salaries paid to the personnel during the financial year totalled EUR 26.3 million. Of the employees, 87% were permanent employees. ANS Finland's personnel structure remained unchanged during the year.

The employees established ANS Finland's personnel fund on 8 December 2017. Establishing the personnel fund makes it possible to transfer Finavia's personnel fund participations to the new fund with regard to ANS Finland's employees. Similarly, establishing the fund makes it possible to pay ANS Finland's incentive bonus for 2017 to the established fund.

AIR TRAFFIC SAFETY

Air traffic safety remained at a high level during the financial year. With regard to runway safety, ANS Finland's goal was set to be a declining trend compared to the previous year. There was one runway incident attributable to the company's operations. Compared to the five incidents the previous year, ANS Finland achieved the set safety goal.

Losses of minimum separation refer to cases in which aircraft are closer than the specified minimum separation to each other as the result of activities by air traffic control. This does not automatically mean that there is a risk of a collision, but each case is nevertheless reported as an incident in accordance with the principles of good safety culture. Loss of separation could be, for example, a situation in which the distance between two aircraft should have been 9 kilometres but it was 8 kilometres. A total of 16 cases of loss of separation were reported, while the previous year, they totalled 20. The number of losses was not abnormal compared to international benchmarks. A declining trend in losses of separation was set as a safety goal. In this respect, the safety goal was met.

ENVIRONMENT

ANS Finland cooperates closely with Finavia in Finland and internationally with industry organisations and parties to reduce the negative environmental impacts of air traffic. The most important means of influence in this work include planning flight routes which are as short as possible and make use of weather conditions, using efficient flight methods around airports,

keeping delays to a minimum and using the entire European airspace as efficiently as possible.

ANS Finland aims to mitigate aircraft noise and emissions at the Helsinki Airport by using a primary runway use system according to which take-off and landing directions with the smallest population are primarily used. During parallel use, the priority applies to the operating direction of parallel runways. Similar development work has been and will be carried out at other airports in cooperation with Finavia; flight methods with maximum efficiency make it possible to minimise the environmental burden.

The priority order of the Helsinki Airport emphasises both the population in the take-off and landing sector of each runway and the safe use of different runways in proportion to each other. The aim is to use the best possible runways from the point of view of noise management, taking the traffic situation and air safety comprehensively into account. The use of runways is limited during nighttime so that runway 15 is not used for take-offs or runway 33 for landings during nighttime unless required by air traffic safety. As a means of reducing approach noise, the airport has aimed to increase the continuous descent operations (CDO) technique where possible.

MANAGEMENT AND AUDITING

During 2017, the chairmen of the Board of Directors of ANS Finland were Kimmo Mäki (until 9 October) and as of 10 October, Pertti Korhonen. Asta Sihvonen-Punkka and Teemu Penttilä were members of the Board of Directors. The Board of Directors convened 9 times during the 2017 financial year. The Board members were paid a total of EUR 71,500 in compensation.

The company's auditor was Ernst & Young Oy, with Mikko Rytilahti as the auditor in charge.

SHARES AND SHARE CAPITAL

The shares in ANS Finland are held by the State of Finland. The Ministry of Transport and Communications is responsible for ownership steering. The company's share capital is comprised of 330 shares of equal value. The share capital amounts to EUR 3,300. The company does not hold any treasury shares.

EVENTS AFTER THE FINANCIAL YEAR

ANS Finland initiated employee cooperation negotiations on the closing down of the Aitovuori Area Control Centre in Tampere at the beginning of 2018. The cooperation negotiations regarding area control services in air traffic, including supportive services, were completed on 5 February. Based on the negotiations, ANS Finland will discontinue its operations in Aitovuori, Tampere, on 1 June 2018. As of said date, area control services will only be provided at Helsinki Airport.

The cooperation negotiations covered 37 ANS Finland employees working at the Aitovuori centre in Tampere; all of them will be offered work at the company's other locations.

BOARD OF DIRECTORS' PROPOSAL FOR THE DISTRIBUTION OF PROFITS

The company's distributable assets in the financial statements of 31 December 2017 amounted to EUR 15,101,571.47. The Board of Directors proposes to the annual general meeting that no dividends be distributed and that the profit for the financial year, EUR 6,801,966.57, be carried over in retained earnings. □

INCOME STATEMENT

		1 January–31 December 2017		27 May–31 December 2016
REVENUE		63,884,508.67		0.00
Other operating income		107,197.08		-395.10
Materials and services				
Materials and supplies				
Purchases during the financial year	978,980.64		0.00	
External services	5,502,005.87	6,480,986.51	0.00	0.00
Staff expenses				
Salaries and bonuses	26,218,969.41		0.00	
Indirect staff expenses				
Pension expenses	5,003,385.73		0.00	
Other indirect staff expenses	1,030,428.64	32,252,783.78	0.00	0.00
Depreciation, amortisation and impairment				
According to plan		2,597,536.21		0.00
Other operating expenses		13,384,422.28		0.00
OPERATING PROFIT (LOSS)		9,275,976.97		-395.10
Financial income and expenses				
Other interest and financial income	7,813.56		0.00	
Interest expenses and other financial expenses	-73,998.97	-66,185.41	0.00	0.00
PROFIT (LOSS) BEFORE APPROPRIATIONS AND TAXES		9,209,791.56		-395.10
Appropriations				
Increase (–) or decrease (+) in depreciation difference		-758,310.07		0.00
Income taxes		1,649,514.92		0.00
PROFIT (LOSS) FOR THE FINANCIAL YEAR		6,801,966.57		-395.10

BALANCE SHEET

Assets		31.12.2017		31.12.2016
NON-CURRENT ASSETS				
Intangible assets				
Intangible rights	10,795,539.86		0,00	
Other capitalised long-term expenditure	1,960,192.75	12,755,732.61	0.00	0.00
Tangible assets				
Machinery and equipment		4,386,552.02		0.00
Advance payments and construction in progress				
Purchases of machinery and equipment	3,225,279.71		0.00	
Purchases of licences and software	98,971.36	3,324,251.07	0.00	0.00
CURRENT ASSETS				
Receivables				
Current receivables				
Accounts receivable	7,091,176.21		0.00	
Other receivables	159,956.82		0.00	
Accrued income	4,474,762.63	11,725,895.66	0.00	0.00
Cash and cash equivalents		6,450,695.49		2,904.90
TOTAL ASSETS		**38,643,126.85**		**2,904.90**
Equity and liabilities				
EQUITY				
Share capital	3,300.00		3,300.00	
Reserve for invested unrestricted equity	8,300,000.00		0.00	
Retained earnings	-395.10		0.00	
Profit (loss) for the financial year	6,801,966.57	15,104,871.47	-395.10	2,904.90
Cumulative appropriations				
Depreciation difference		758,310.07		0.00
Statutory provisions				
Other statutory provisions		1,009,061.08		0.00
LIABILITIES				
Non-current liabilities				
Loans from credit institutions		5,001,895.83	0.00	
Current liabilities				
Advances received	1,586,049.67		0.00	
Accounts payable	2,055,379.43		0.00	
Other liabilities	1,601,589.19		0.00	
Accrued liabilities	11,525,970.11	16,768,988.40	0.00	0.00
TOTAL LIABILITIES		**38,643,126.85**		**2,904.90**

CASH FLOW STATEMENT

	2017	2016
CASH FLOW FROM OPERATING ACTIVITIES		
Cash receipts from customers	61,561,040.02	-395.10
Cash paid for operating expenses	-50,782,223.19	0.00
Cash flow from operating activities before financial items and taxes	10,778,816.83	-395.10
Interest and other financial expenses paid	-67,818.41	0.00
Interest received	7,813.56	0.00
Income taxes paid	-1,392,920.97	0.00
Cash flow from operating activities	9,325,891.01	-395.10
CASH FLOW FROM INVESTING ACTIVITIES		
Investments in tangible and intangible assets	-4,003,689.54	0.00
Proceeds from sale of tangible and intangible assets	53,287.43	0.00
Acquisition of business operations 1 April 2017	-3,929,594.14	
Loans granted	0.00	0.00
Proceeds from repayment of loans	0.00	0.00
Cash flow from investing activities	-7,879,996.25	0.00
CASH FLOW FROM FINANCING ACTIVITIES		
Withdrawal of long-term loan	10,000,000.00	0.00
Short-term loans	1,895.83	0.00
Repayment of long-term loans	-5,000,000.00	0.00
Cash flow from financing activities	5,001,895.83	0.00
NET INCREASE (+)/ DECREASE (–) IN CASH AND CASH EQUIVALENTS	6,447,790.59	-395.10
Cash and cash equivalents 1 January	2,904.90	3,300.00
Cash and cash equivalents 31 December	6,450,695.49	2,904.90
	6,447,790.59	-395.10

NOTES TO THE INCOME STATEMENT AND BALANCE SHEET

The company's operations commenced on 1 April 2017. The figures for the comparison period concern the administrative company established on 27 May 2016.

VALUATION PRINCIPLES

Valuation of fixed assets

Fixed assets are measured at cost less depreciation according to plan. Depreciation according to plan is calculated based on the economic useful life of the assets as follows:

Computer software	straight-line depreciation	5 years
Other long-term expenditure	straight-line depreciation	5–10 years
Machinery and equipment	straight-line depreciation	5–15 years

	2017	2016
Staff expenses		
Salaries and bonuses	26,218,969.41	0.00
Fringe benefits	91,590.33	0.00
	26,310,559.74	0.00
Indirect staff expenses		
Pension expenses	5,003,385.73	0.00
Other indirect staff expenses	1,030,428.64	0.00
Total	6,033,814.37	0.00
Average number of personnel during the financial year (full time equivalent)	402	0
Personnel at the end of the year		
Permanent	403	0
Temporary	53	0
Total	456	0
Salaries and bonuses of the CEO and Board of Directors	239,836.00	0.00
Depreciation, amortisation and impairment		
According to plan		
Computer software	1,951,754.04	0.00
Other long-term expenditure	194,678.26	0.00
Machinery and equipment	451,103.91	0.00
	2,597,536.21	0.00
Other operating expenses		
Other staff expenses	143,923.05	0.00
Travel expenses	703,864.93	0.00
Rents	6,446,937.71	0.00
Supplies and fixtures	168,196.75	0.00
Other operating expenses	5,907,905.69	0.00
	13,370,828.13	0.00
Auditor's fees		
Audit fee	10,000.00	0.00

NOTES TO THE INCOME STATEMENT AND BALANCE SHEET

	2017	2016
Financial income and expenses		
Interest income	7,813.56	0.00
Interest expenses	-73,998.97	0.00
Total financial income and expenses	-66,185.41	0.00
Intangible assets		
Intangible rights		
Computer software		
Acquisition cost 1 January	0.00	0.00
Increase during the financial year	12,748,767.65	0.00
Decrease during the financial year	-1,473.75	0.00
Acquisition cost 31 December	12,747,293.90	0.00
Accumulated depreciation according to plan 1 January	0.00	0.00
Accumulated depreciation on decrease	0.00	0.00
Depreciation according to plan during the financial year	-1,951,754.04	0.00
Book value 31 December	10,795,539.86	0.00
Other long-term expenditure		
Acquisition cost 1 January	0.00	0.00
Increase during the financial year	2,154,871.01	0.00
Decrease during the financial year	0.00	0.00
Acquisition cost 31 December	2,154,871.01	0.00
Accumulated depreciation according to plan 1 January	0.00	0.00
Accumulated depreciation on decrease	0.00	0.00
Depreciation according to plan during the financial year	-194,678.26	0.00
Book value 31 December	1,960,192.75	0.00
Tangible assets		
Machinery and equipment		
Acquisition cost 1 January	0.00	0.00
Increase during the financial year	4,843,550.93	0.00
Decrease during the financial year	-5,895.00	0.00
Acquisition cost 31 December	4,837,655.93	0.00
Accumulated depreciation according to plan 1 January	0.00	0.00
Accumulated depreciation on decrease	0.00	0.00
Depreciation according to plan during the financial year	-451,103.91	0.00
Book value 31 December	4,386,552.02	0.00
Advance payments and construction in progress		
Other work and purchases in progress		
Acquisition cost 1 January	0.00	0.00
Increase during the financial year	5,994,262.04	0.00
Decrease during the financial year	-2,670,010.97	0.00
Acquisition cost 31 December	3,324,251.07	0.00
Material items contained in accrued income		
Other accrued income	4,243,655.06	0.00
Receivables from occupational health care	71,150.75	0.00
VAT receivables	159,956.82	0.00
Total	4,474,762.63	0.00

NOTES TO THE INCOME STATEMENT AND BALANCE SHEET

	2017	2016
Restricted equity		
Share capital 1 January	3,300.00	3,300.00
Share capital 31 December	3,300.00	3,300.00
Restricted equity total	3,300.00	3,300.00
Unrestricted equity		
Reserve for invested unrestricted equity 1 January	0.00	0.00
Reserve for invested unrestricted equity 31 December	8,300,000.00	0.00
Retained earnings 1 January	-395.10	0.00
Distribution of dividend	0.00	0.00
Retained earnings 31 December	-395.10	0.00
Profit (loss) for the financial year	6,801,966.57	-395.10
Unrestricted equity total	15,101,571.47	-395.10
Total equity	15,104,871.47	2,904.90
Distributable equity on 31 December		
Retained earnings	-395.10	0.00
Profit for the financial year	6,801,966.57	-395.10
Reserve for invested unrestricted equity	8,300,000.00	0.00
	15,101,571.47	-395.10
Statutory provisions		
Other statutory provisions	1,009,061.08	0.00

A provision amounting to EUR 1,099,727.75 was transferred to the company in an acquisition to fulfil the commitments relating to the transfer of the operations of Tampere Area Traffic Control Centre. During the 2017 financial year, EUR 90,666.67 of the provision was used.

Non-current liabilities		
Loans from credit institutions		
Balance at the beginning of the financial year	0.00	0.00
Increase during the financial year	10,000,000.00	0.00
Decrease during the financial year	-5,000,000.00	0.00
Balance at the end of the financial year	5,000,000.00	0.00
Loans maturing later than within five years		
Bank loan	0.00	0.00

The secured loans involve covenants effective from 1 January 2018. The agreed special terms and conditions concern the company's solvency and liquidity. Breaching the covenants may increase the costs of financing or result in the termination of the loans. According to the company's management, the terms of the covenants have been met and they are regularly monitored.

NOTES TO THE INCOME STATEMENT AND BALANCE SHEET

	2017	2016
Current liabilities		
Other liabilities		
Withholding tax liability	910,483.52	0.00
Social security contribution liability	29,161.52	0.00
Other	661,944.15	0.00
Total	1,601,589.19	0.00
Material items included in accrued liabilities		
Salary and social security expense accruals	1,253,823.86	0.00
Holiday pay liabilities including social security contributions	7,873,573.64	0.00
Tax liability	259,593.95	0.00
Other accrued liabilities	2,138,978.66	0.00
Total	11,525,970.11	0.00
Commitments and contingent liabilities		
Lease liabilities		
Due during the next financial year	129,016.03	0.00
Due during subsequent financial years	361,618.91	0.00
Total	490,634.94	0.00
Lease liabilities are presented at gross amounts (inclusive of VAT)		
Other contingent liabilities		
Due during the next financial year	1,052,686.00	0.00
Due during subsequent financial years	1,098,715.00	0.00
Total	2,151,401.00	0.00
Total commitments and contingent liabilities	2,642,035.94	0.00

The company has a 15-year long-term lease on its business premises. The lease period commenced on 1 July 2017 and expires on 30 June 2032. The monthly rent is EUR 82,705.52. The company's lease liability caused by this agreement in the financial statements dated 31 December 2017 totals EUR 14,390,760.00.

The company is involved in a few minor disputes relating to the company's business operations, the outcomes of which will not have any material impact on the company's financial position.

SIGNATURES

Signatures of the financial statements and Board of Directors' report

Vantaa, 9 March 2018

Pertti Korhonen
Chairman of the Board of Directors

Teemu Penttilä
Member of the Board of Directors

Asta Sihvonen-Punkka
Member of the Board of Directors

Raine Luojus
CEO

Auditor's note:
A statement on the audit performed has been issued today.

Vantaa, 9 March 2018

Ernst & Young Oy
Authorised Public Accountants

Mikko Rytilahti
APA, CPFA

LIST

List of accounting ledgers and document types used

List of accounting ledgers used

Cash journal and nominal ledger	Computer printout
Fixed assets accounting	Computer printout
Accounts payable ledger	Computer printout
Accounts receivable ledger	Computer printout
Payroll accounting	Computer printout
Journal	Electronically archived
General ledger	Electronically archived
Balance sheet book	Bound book
Balance sheet specifications	Bound book

List of document types used

Purchase invoices	Electronically archived
Sales invoices	Paper documents
Purchase invoice payment transactions	Computer printout
Payments of sales invoices	Computer printout
Cash transactions	Computer printout
Bank transactions	Computer printout
Accrual documents	Paper documents
Memorandum documents	Paper documents

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