



**FINTRAFFIC AIR NAVIGATION SERVICES LTD**

# **Annual Report 2020**

# Fintraffic Air Navigation Services Ltd

Fintraffic ANS provides safe, accurate and competitive air navigation services in Finland, the most environmentally friendly airspace in the world. The aim is for air traffic to support Finland’s success in a comprehensive way.

We are responsible for managing Finland’s airspace and providing en-route and air navigation services at 22 airports in Finland.

We do not only ensure that captains receive their landing permits safely but we are also responsible for the necessary infrastructure, system design and system maintenance in accordance with international standards. Technical air navigation also encompasses the maintenance of radar, navigation equipment and radio equipment in the airport environment.

In addition, we are in charge of special tasks relating to air rescue coordination and territorial surveillance and training and consulting services.

Fintraffic Air Navigation Services Finland Ltd, (Fintraffic ANS) is part of the Traffic Management Company Fintraffic Ltd.

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# CEO's review

Our year was strongly coloured by the coronavirus pandemic and its impact on air traffic. Airports fell silent and the majority of flights were cancelled. In the spring, there were no less than 80–90 per cent fewer flights than in the corresponding period of the previous year, and 12 airports had no traffic at all.

In 2020, our area control centre provided services for about 110,450 flights, of which 24,649 were overflights of Finnish airspace. Helsinki Airport had 75,512 operations last year, with an average of 207 per day.

In spite of the pandemic, we achieved our punctuality targets for 2020. We operated completely without delays, and not a single flight failed to depart for a reason relating to air navigation. Our safety targets were also met. It was only in our financial targets that we fell short, as a result of the collapse in air traffic volumes, which led to significant adjustment measures and a reduction in investments.

We have implemented a large number of measures to optimise air traffic. According to a study conducted by Eurocontrol, the efficiency of our flight routes ranks amongst the highest in Europe. Route planning, continuous descent approaches and close international cooperation are ways of reducing emissions.

We progressed with our spearhead projects as planned during the year. One of these projects is FINEST, which we are implementing in collaboration with Estonian Air Navigation Services (EANS). The project seeks to provide airspace



users with a safe, dynamic, competitive and cost-effective cross-border air navigation service. Operating air traffic in a single airspace without national borders enables airlines to make more efficient – and therefore more environmentally friendly – route choices. We continued to introduce the operating model and are aiming to finish the project in 2022.

Multi-ROT, the remote control concept that we are planning with Finavia, progressed in early 2021 with the signing of a Memorandum of Understanding with Finavia. Introducing air traffic control services which could be flexibly provided from a single workstation to one or more airports.

The proliferation of unmanned aerial vehicles (that is, drones) in the air transport market has increased the need for new kinds of traffic management services. In cooperation with Traficom, we have been preparing a SkyNavX portal for drone operators, where both amateurs and professionals will register. From the beginning of 2021, it will be compulsory for drone operators to register, familiarise themselves with the learning materials and pass an online flying test. The system also supports the digitalisation of general aviation and forms part of the air navigation service. This service will be further developed during the spring, and a situational picture for air traffic will be added to meet the needs of all aviation operators.

One of our most important projects is to increase the sale of air navigation, training and consulting services outside Finland. International demand for Finnish air navigation expertise is growing well. In the spring, for example, we won an international tender to train Luxembourg air traffic controllers in 2020–2021. By being competitive in international markets, we ensure that our expertise is world-class – and as our vision states, we want to provide the world's best airspace management, air navigation services and traffic data.

As a result of the pandemic, our office staff began working remotely in the spring. Both Finnair (our main airline customer) and other airlines cancelled a significant number of their flights, which led to a major reduction in work. We were forced to engage in several codetermination negotiations during the year in order to adjust our operations. We engaged in active dialogue with our personnel on how we could best cope with the challenging changes in our operating environment with minimal damage. Everyone performed well in spite of the crisis. We were forced to implement difficult measures and make some tough decisions concerning personnel. Redundancies were, however, avoided as all of the adjustments were carried out as lay-offs. In spite of the reduction in air traffic, there was still work for air navigation personnel in the form of reporting obligations, projects and cooperation with the

authorities. This work continued as normal.

The sharp fall in air traffic resulting from the coronavirus pandemic and its financial consequences naturally dominated international debate as well. European States decided to postpone the collection of navigation charges for about six months. As a result, we delayed the collection of several million euros in receivables from airlines. Although this helped the airlines to survive a difficult situation, it affected our company's cash position.

In June, I took over as a chair of EC3 in the Civil Air Navigation Services Organisation and I am also member of the CANSO Executive Committee. CANSO is an interest group that repre-

sents service providers, and it plays an important role in discussions with the EU Commission on proposals related to air navigation. With this appointment, I am happy to be able to influence the developments in the sector in Europe.

**Raine Luojus**

**“As our vision states,  
we want to provide the  
world's best airspace  
management, air navigation  
services and traffic data.”**



### Development and international affairs

- EU Regulation 2017/373 entered into force at the beginning of the year, with the requirement to implement new regulatory requirements regarding, for example, ATSEP qualifications, safety and change management, and air traffic controllers' HF requirements.
- The FINEST cooperation programme between Fintraffic ANS and EANS was promoted in all sectors of the company. The goal is to launch a dynamic cross-border air navigation service over the course of 2022.
- Regulatory air navigation development programmes were implemented, and new system investments were made in accordance with the investment plan. The purpose of these measures is to respond to requirements regarding the provision of data link services, the transition to Radio over IP, and the quality of aviation data and aviation communication.
- The reorganisation of international affairs was implemented on schedule during 2020. International affairs were integrated into the development unit.
- The MROT project (Multi Remote Operating Tower) continued with the definition of technical requirements and a Memorandum of Understanding with Finavia.

- The publishing (AIP, SUP, AIC) and map production worked perfectly in a remote manner, which was highly suggested because of the pandemic. During the year, the FAIMS system project was taken forward alongside normal operations.
- In accordance with Traficom's request and the ASM Operations Manual, an annual airspace change process was prepared and implemented.
- A PBN transition plan in accordance with European Commission Implementing Regulation (EU) 2018/1048 was prepared.
- The flight obstruction process in accordance with the Aviation Act was conducted.
- We participated the project in which the construction of a Low Level Network is studied. The project is taken forward under the guidance of the Ministry of Transport and Communications.



### Helsinki Airport and network airports

- As a result of the pandemic, air traffic reduced significantly in almost all airports and several airports were temporarily closed down. Staff were laid off.
- The pandemic only had a minor effect on airports where Finnish Defence Forces have flight training operations.

#### Avia College

- The Avia College air traffic controller training attracted 1,718 applicants in the application period that ended in January 2020. The training started in September 2020.
- We won an international tender for organising basic, further and refresher training for air traffic controllers of Luxemburg at Avia College in Vantaa. The basic training began in September 2020, and the refresher training will start in autumn 2021.

### Marketing and customer relations

- We created a registration portal for drone operators in cooperation with Traficom. Since the beginning of 2021, registering as a drone operator has been mandatory for both professional and amateur drone pilots. Pilots can register in the online services of Fintraffic and Traficom.
- We participated in the preparation of two drone projects: GOF2.0 and DroLo. Both of these projects aim to find out how to ensure the safe and smooth operation of manned and unmanned aircraft in the same airspace.
- We were setting up the MikroWeather Service project, which is funded by the European Space Agency (ESA) and which aims to increase air traffic controllers' awareness of the effects of weather phenomena near the airport.
- We continued the specifications of the digitalisation project and signed a contract with Exponent regarding the Situational Awareness application.
- We signed 8-year contracts with Swedish companies ACR and Aviseq on the maintenance of air traffic safety electronics at five Swedish airports.

### Technical air navigation

- 24/7 Technical Supervisor operations were launched.
- Helsinki Airport and Jyväskylä Airport updated their ILS on schedule.
- Updates to the MSSR (Monopulse Secondary Surveillance Radar) system of Jyväskylä Airport and the PSR (Primary Surveillance Radar) system at Helsinki Airport.
- Updating the EFS (Electronic Flight Strip) system of the aerodrome control services at Helsinki Airport.
- Validations of several satellite-based SBAS LPV approach procedures in flight checking.
- Launching the updated device monitoring system for joint-use airports.
- Deployment of the new internal telecommunications network for air navigation services.

The entire Group went through a brand update process, and as of 2021, the official name of our company is Fintraffic Air Navigation Services Ltd (Fintraffic Lennonvarmistus Oy).

# Year 2020 in numbers

## Key figures

Revenue MEUR

**49.3**

(2019: MEUR 80.2)

Operating profit MEUR

**-16.1**

(2019: MEUR 5.9)

## Personnel (31.12.2020)

Employees

**434**

Permanent

**98%**

Fixed-term

**2%**

Average age of employees (years)

**43.6**

Average duration of employment relationships (years)

**17.7**

## Distribution of locations

<b>Vantaa</b>	<b>303</b>
<b>Northern Finland</b>	<b>41</b>
Enontekiö	1
Ivalo (Inari)	2
Kajaani	4
Kemi	2
Kittilä	2
Kuusamo	3
Oulu	14
Rovaniemi	13
<b>Eastern Finland</b>	<b>36</b>
Joensuu	5
Jyväskylä	11
Halli (Jämsä)	1
Kuopio (Siilinjärvi)	13
Lappeenranta	2
Savonlinna	1
Utti (Kouvola)	3
<b>Western Finland</b>	<b>54</b>
Kokkola (Kruunupyy)	3
Maarianhamina	4
Tampere-Pirkkala	19
Pori	7
Turku	13
Vaasa	8

# Strategy 2020

- Our strategic customers include Finnair, Finavia, Finnish state aviation operations as well as overflights. The customers of ANS Finland expect the operations to stay safe and punctual.
- In spite of the pandemic, we progressed with our strategic projects as planned. In order to ensure the company's future performance, the continuation of spearhead projects is essential.
- One of these strategic projects is FINEST, which we are implementing in collaboration with Estonian Air Navigation Services (EANS). Operating air traffic in a single airspace without national borders enables airlines to make more efficient – and therefore more environmentally friendly – route choices. We continued to introduce the operating model and are aiming to go live in 2022.

- Multi-ROT, the remote control concept that we are planning with Finavia, progressed during the year. Introducing air traffic control services which could be flexibly provided from a single workstation to one or more airports.
- The third strategic project is about U-Space (low-altitude airspace) services. Under the guidance of the Ministry of Transport and Communications, the company, together with state-owned air operators, has investigated the construction of a low-altitude network and satellite-based cloud penetration methods in uncontrolled airspace.
- The proliferation of unmanned aerial vehicles (that is, drones) in the air transport market has increased the need for new kinds of traffic management services. In cooperation with Traficom, we have been preparing a portal for drone operators,

where both amateurs and professionals will register in the future. From the beginning of 2021, it will be compulsory for drone operators to register, familiarise themselves with the learning materials and pass an online flying test. The system also supports the digitalisation of general aviation and forms part of the air navigation service.

- We managed to increase the sale of air navigation, training and consulting services outside Finland. In the spring, we won an international tender to train Luxembourg air traffic controllers in 2020–2021. The training was started with special safety measures at Avia College in September.
- At the beginning of 2021, the company also started as a subcontractor on technical air navigation services at five airports in Sweden (ACR Aviation Resources AB). The length of the contract is eight years.



## Fintraffic ANS

### VISION:

Finland has the safest, smoothest and most environmentally friendly airspace in the world.

### MISSION:

The world's best airspace management, air traffic control and traffic data.

### MOBILITY IS CHANGING

- Climate change is affecting people's mobility choices
- The coronavirus pandemic may cause permanent changes in mobility habits
- Unmanned aircraft are entering the air transport market with new operators; new traffic management services are needed

### OUR GOALS

- Safe and smoothly operating traffic
- Partnerships and new services
- Profitable and efficient operations
- Good governance and capacity for renewal
- Societal effectiveness guides our operations



### OUR SPEARHEAD PROJECTS

1. Air navigation service cooperation with Estonia (FINEST)
2. Remote air traffic control services in Finland and abroad (MROT)
3. U-Space (low-altitude airspace) service provider in Finland and on the international market
4. Boosting sales of air navigation services outside Finland
5. Boosting sales of training and consultation services outside Finland

### WHEN WE SUCCEED, FINLAND THRIVES

- + We maintain safe, on-time and environmentally friendly air traffic
- + We ensure that Finland remains accessible on a 24/7 basis
- + We enable customer-oriented development of the traffic service market with our partners, assuming a pioneering role in the international context in creating new service production models

### OUR WAY OF WORKING

We have the most environmentally friendly airspace in the world. Drawing on the expertise of our professionals, we are building new, data-driven services to benefit customers, citizens and businesses.





# International co-operation

## EU objectives define operations

Air navigation services are strongly regulated, and the terms of Fintraffic ANS license come directly from the EU. This gives the company a chance to offer air navigation services anywhere in Europe. The sector is increasingly opening up to international competition, and Fintraffic ANS is also preparing for this development.

Air navigation operations are getting prepared for the changes in the operating environment caused by, for example, unmanned aerial vehicles, short-range traffic and cybersecurity requirements. The EU leads the European ATM Master Plan.

Single European Sky (SES) is an EU project. SES seeks to harmonise practices in different countries. The SES is based on binding EU regulations and complementary rules on harmonised measures. For example, airlines and aviators benefit from the free routing airspace already in use in Finland, which allows them to choose their preferred route.

EU sets prices for air navigation services and performance targets for service providers in four main areas:

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

Single European Sky network performance plan (RP3 2020-2024) includes strict targets for service providers, and states are expected to improve their air navigation performance in all areas.

For Finland, the targets concerning Fintraffic ANS were drafted by the Ministry of Transport and Communications and the Finnish Transport and Communications Agency Traficom.

## Functional airspace block NEFAB and FINEST

Finland is part of the North European Functional Airspace Block (NEFAB) together with Latvia, Norway and Estonia. NEFAB is one of the nine European Functional Airspace Blocks established in connection with the SES project. Within

the Airspace Blocks, states and service providers, including Fintraffic ANS, cooperate in developing operations.

Fintraffic ANS has an ongoing FINEST project together with the Estonian air navigation service provider EANS. It aims to develop a common air traffic control system in 2020–2022, in which each operator could provide a service on behalf of the other. Eurocontrol acts as the Network Manager in Europe, appointed by the EU.

## Other operations

Fintraffic ANS is part of the Borealis Alliance, a consortium of nine air navigation service providers. Together the members of the Alliance make use of, for example, the free routing airspace on the same principles as in Finland. Fintraffic ANS is also an active member of the association of air navigation service providers, Civil Air Navigation Services Organisation CANSO. CANSO seeks to improve the operating conditions of air navigation service providers and to influence the regulations governing them. Raine Luojus, the CEO of Fintraffic ANS, is part of the CANSO

Executive Committee and the Chair of EC3. Thanks to this position, Finland has good opportunities to influence the development of the industry in Europe.

# Finland's Air Traffic Control Centre, Helsinki Air Traffic Control and the network's ATS services

## 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. In 2020, the area control centre processed 110,450 flights (2019: 272,205 flights), of which 24,649 were overflights (2019: 62,472).

## Helsinki Airport air traffic control

Air traffic control at Helsinki Airport includes both aerodrome and approach control. The hourly maximum operation volumes at Helsinki Airport are 48 arriving and 42 departing aircraft per hour, however without exceeding the total hourly limit of 80 operations. In 2020, Helsinki Airport had 75,512 operations (2019: 190,220). The average number of operations per day was 207 (2019: 521).

## Aerodrome control (TWR)

Aerodrome control is also referred to as "Tower". It manages air traffic in the controlled traffic

region (CTR) of the airport, 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.

## Flight Planning Centre (FPC)

The Flight Planning Centre includes the Air Traffic Services Reporting Office (ARO), International NOTAM office (NOF) Aeronautical telecommunication services (COM) as well as the operational tasks of Helsinki Airport air traffic control and regional air traffic control centre.

The Air Traffic Services Reporting Office (ARO) is a unit established to receive reports con-

cerning air traffic services and flight plans submitted before departure. In 2020, FPC processed 55,527 ATS messages (in 2019: 52,713).

Tasks supporting Helsinki air traffic control and area control include e.g. VFR control and maintenance of air traffic control systems.

Aeronautical telecommunication services (COM): The Flight Planning Centre guides and monitors the use of the telecommunication problems. The centre is known as the aeronautical fixed telecommunications network (AFTN/AMHS) centre.

The international NOTAM Office (NOF) is located at the Flight Planning Centre unit. It is responsible for the drafting and publication of national and international NOTAMs concerning the territory of Finland. In 2020, it prepared 13,725 NOTAM messages (2019: 13,291).

## Airspace Management Cell

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

## Finland's Flow Management

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 co-operation.

## Finland's Air Rescue Coordination Centre (ARCC)

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 centre maintains 24-hour readiness for launching operations. Every year, there are approximately 400 aviation search and rescue alerts, of which on average 5% are emergencies, 35% alarms and 60% uncertainty situations.





**The network’s ATS services**

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

**Aeronautical Information Services (AIS)**

Aeronautical information service takes care of the operation of the international aeronautical information system in Finland. Information system ensures the necessary flow of information for the safe, regular and economic operation of international and domestic air traffic.

The aeronautical information service is regulated by national and international regulations and agreements.

The publication system (Aeronautical information products) produced by the aeronautical information service includes e.g. Finnish Aviation Handbook (AIP Finland), AIP Supplements (AIP SUP), AIC A (Aeronautical Information Circular) and ANC 1: 500,000 map.

The functions are certified in accordance with the ISO 9001: 2015 quality management system.

# Technical air navigation

Technical air navigation comprises equipment, systems and tools used in air traffic service. These include information, radio and radar systems 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) qualification 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 (Traficom) before they can be implemented. Traficom also conducts its own safety assessment on the most significant changes.

Annually, approximately 200 different technical amendments are made. Technology develops continuously, and the employees' professional skills are kept up-to-date through training. Subcontractors are used in addition to Fintraffic ANS inhouse personnel, and factory maintenance contracts have been concluded with the equipment suppliers for the most important systems. In air navigation, safety is always our first priority. Therefore, the technology to be adopted must always be tried and tested in practice. According to the indicators in use, Fintraffic ANS reached the 2020 safety targets. Traficom audits the operations of technical air navigation on an annual basis and tackles the possible shortcomings when needed.

Fintraffic ANS is responsible, on a contractual basis, for civil aviation flight measurements in Finland as well as in Estonia. At the end of 2020, we reached an agreement to provide COM & NAV maintenance services for five Swedish airports (Kalmar, Karlstad, Jönköping, Norrköping, Skellefteå) from the beginning of 2021.

**” In air navigation, safety is always our first priority. Therefore, the technology to be adopted is always tried and tested in practice.”**



# Avia College

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

Avia College provides vocational air traffic controller training. In addition, it offers refresher, conversion, follow-up and specialisation training in various fields of air navigation. The 1.5-year air traffic controller training is very pragmatic and focuses on learning the basic skills. As the training is not equipment-bound, the acquired knowledge gives the students the qualification to work in other countries as well. Students who have completed the training and the on-the-job-training thereof, are ready to work as ATCs and they receive the ATC licence at graduation.

Working as air traffic controller is attractive so there is a lot of interest towards the training. The selection is rigorous and includes several phases. The selection process includes, in addition to written tests, also interviews by the training provider and a psychologist. For the course that started in 2020, there were 1718 applicants. In spite of the pandemic, twelve students started the training in September, including students from the Finnish Air Force.

In the spring, Fintraffic ANS won an international tender for organising basic, further and refresher training for air traffic controllers of Luxembourg. The training will take place in 2020-2021 at Avia College in Vantaa. The basic course began in September 2020.

Over the past few years Avia College has trained air navigation professionals from various countries in Europe; including Sweden, Estonia and Bosnia-Herzegovina, and gained a strong reputation as a high-quality provider of air navigation training services.





# Board of Directors, 31 Dec 2020



**Pertti Korhonen**

b. 1961, M.Sc. (Eng.)  
CEO  
Traffic Management Company Fintraffic Ltd

**Professional experience  
and key positions of trust:**

Traffic Management Company Fintraffic Ltd, CEO 2020– (Acting CEO 2019). Outotec Oyj, CEO 2010–2016. Elektrobitt Oyj, CEO 2006–2009. Nokia Corporation, member of the Board of Directors 2002–2006. Nokia Corporation, CTO 2004–2006. Nokia Mobile Software, SVP 2001–2003. Several executive positions at Nokia Mobile Phones 1990–2001 (production director, logistics director, procurement director, project director, product development director).

Business Finland, Chairman of the Board 2017–. Fastems Oy, member of the Board of Directors 2016–. Granlund Oy, member of the Board of Directors 2018–. WWF (World Wildlife Foundation) Finland, member of the Supervisory Board 2015–.

Chairman of the Board of Fintraffic Air Navigation 10/2017–.



**Jarmo Lindberg**

b. 1959, General  
Chief of Defence in the Finnish Defence Forces (retd)  
Board professional

**Professional experience  
and key positions of trust:**

Finnish Defence Forces, Chief of Defence 2014–2019. Finnish Air Force, Commander 2008–2012. Finnish Defence Forces, Deputy Chief of Staff, Logistics and Armaments 2012–2014. Finnish Air Force, Commander of Lapland Air Command 2005; Finnish Defence Forces, Defence Command, Assistant Chief of Staff Operations 2005–2008; Deputy Director, Operations Division of Defence Command 2004. Finnish Air Force, Assistant Chief of Staff Operations 1999–2000, Chief of Operations 2001–2003. Finnish Air Force, Satakunta Air Command, Commander of Fighter Squadron 1995–1999. Finnish Air Force, Hornet training group leader 1995. Finnish Air Force, Chief of Pilot Training 1993–1994. Finnish Air Force, Karelia Air Command, Pilot Officer 1982–1989, Flight Commander 1989–1991.

Board member of Fintraffic Air Navigation 03/2020–.



**Kaisa Olkkonen**

b. 1964, M.L.  
Board professional

**Professional experience  
and key positions of trust:**

Board and Audit Committee member at Cargotec Oyj 2016–; board member and chairperson at Enfo Oyj 2016– (chair 2020–); board member at Osuuskunta KPY 2020–. Board member at Kiinteistö Oy Novapolis 2020–; Chair of the Board at Fixably Oy 2020–; board member at John Nurminen Foundation 2017–; CEO at SSH Communications Security Oyj 2017–2020; Chair of the Board at SSH Communications Security Oyj 2016; managerial duties at Nokia Corporation and Nokia Mobile Phones 1998–2016 (incl. Chief Legal Officer, Head of Public Relations); Chair of the Steering Group of the Finnish IPR Strategy 2020–. Investor and advisor for Morelex Oy, 3D Bear Oy and Lulla Me Oy.

Board member of Fintraffic Air Navigation 03/2020–.



**Ilkka Virtanen**

b. 1961, M.Sc. (Econ.)  
CFO  
Traffic Management Company Fintraffic Ltd

**Professional experience  
and key positions of trust:**

CFO, Traffic Management Company Fintraffic Ltd 2019–. Ministry of Transport and Communications, Senior Specialist, Steering Unit/Ministerial Governance Department 2017–2019. Entrepreneur, traffic engineer student, business consultant 2012–2017. VTI Technologies (Murata Electronics), CFO 2007–2010. Outokumpu Technology (Outotec), CFO 2002–2006. Outokumpu Pyrometallurgy, CFO 1999–2002. Outokumpu Technology, VP Project and Trade Finance 1995–1999. Outokumpu Oy, Finance Manager 1990–1995

Board member of Fintraffic Air Navigation 04/2020–.



## Governance

The Board of Directors of Fintraffic ANS 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 longterm 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 **Pertti Korhonen**. The other members of the Board of Directors have been **Teemu Penttilä** (1.1.–31.3.2020), **Asta Sihvonon-Punkka** (1.1.–31.3.2020), **Jarmo Lindberg** (1.4.–31.12.2020), **Kaisa Olkkonen** (1.4.–31.12.2020) and **Ilkka Virtanen**.

The Board of Directors has convened 7 times. The members of the Board of Directors have attended the meetings as follows: Pertti Korhonen 7/7, Ilkka Virtanen 7/7, Jarmo Lindberg 5/5, Kaisa Olkkonen 5/5, Asta Sihvonon-Punkka 2/2 and Teemu Penttilä 2/2.

Remuneration is paid to members outside the Group at EUR 1,500 / month and in addition a meeting fee of EUR 600 / meeting. A total of EUR 44,400 in fees has been paid for the 2020 meetings.

## CEO and management team

The CEO sees to the day-to-day management of the company 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 **Raine Luojus**.

In addition to the CEO (chair), the strategic management team of Fintraffic ANS comprises **Matts-Anders Nyberg, Tapio Nurmela, Jani Suomela, Karri Hannula, Kari Kerke, Pasi Nikama, Stina Andersson, Christer Björkman, Seija Anttila** and **Tarja Hatinen**. The strategic management team convened twice a month basis.

In addition to the members of the strategic management team, the company's management team comprises Director of Safety **Tom Hätinén**, Business Controller **Jarkko Luoma** and, as representative of the personnel, air traffic controller **Vesa Tarvainen**. The management team convened once a quarter.

## Remuneration Schemes

The company's Board of Directors confirmed a remuneration scheme for the company's management and experts in 2020. The employees covered by the remuneration scheme are annually confirmed by the company's Board of Directors. At the end of 2020, the performance bonus scheme covered the management team and other executives, managers and experts. 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.

Fintraffic ANS personnel fund was abolished in August 2020. The personnel of the Fintraffic ANS is now part of the group company Fintraffic's personnel fund. No performance bonuses were paid for 2020.

## 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. 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.

## Auditing

The company's auditor is Ernst & Young.





# Strategic management



**Raine Luojus**

b. 1966  
CEO

**Professional experience  
and key positions of trust:**

Air Navigation Services Finland Oy, CEO 2017. Finavia Oyj, Director, air navigation business 2011–2017. Finavia Oyj, COO, Air Navigation Business 2008–2011. Finnish Civil Aviation Administration/Finavia, Deputy and operational manager for air traffic control at Helsinki Airport 2002–2008. Finnish Civil Aviation Administration, managerial positions and chief instructor of air traffic control at Helsinki Airport 1999–2002, air traffic controller 1991–.

Member of the Board in several projects and organisations, e.g. CANSO, Chairman of the Europe region management group (EC3) 2020– & Vice Chairman 2018–2020. Finnish Meteorological Institute, member of the Advisory Board 2018–. Chairman of the FINEST Management Board 2019–.



**Matts-Anders Nyberg**

b. 1961  
SVP, Support Services, Commercial & Contracts

**Professional experience  
and key positions of trust:**

Air Navigation Services Finland Oy, Chief Administrative Officer, 1 April 2017–. Finavia, Air Navigation Business, Head of Business Innovations, 2012–2017. Finavia, NEAP Programme Office Manager, 2009–2012. CAA Finland/Finavia, Air Navigation Business, Planning Director, 2008. CAA Finland/Finavia, Deputy Department Manager 2001–2008. CAA Finland, Deputy Director 1994–2001. CAA Finland, Air Traffic Control Inspector 1992–1994. CAA Finland, Northern Finland Air Navigation Centre & Rovaniemi Airport, Air Traffic Controller 1983–1993.



**Tapio Nurmela**

b. 1975  
SVP, Network Airports

**Professional experience  
and key positions of trust:**

Air Navigation Services Finland Oy, SVP, Network Airports, 1.12.2019–. Finavia Oyj/ANS Finland Ltd, Area Manager in Northern Finland 2013–4/2019. Finavia Oyj/ANS Finland Ltd, Rovaniemi Airport, Chief of ATC 2010–2/2019. CAA Finland/Finavia, Air Traffic Controller, Rovaniemi 2001–2009.



**Jani Suomela**

b. 1979, Master of Science (M.Sc.)  
SVP, CTO

**Professional experience  
and key positions of trust:**

Fintraffic Air Navigation Services, SVP, CTO 10/2020–. Air Navigation Services Finland Ltd., VP, Head of System Management 2019–2020. Air Navigation Services Finland Ltd., Head of ANS Systems Management 2017–2019. Finavia Oyj, Head of ANS Systems Management 2016–2017. Finavia Oyj, Head of CNS maintenance 2015–2016. Finavia Oyj, Surveillance systems manager 2008–2015. Finavia Oyj, Project manager/System engineer 2006–2008. Helsinki University of Technology, Research scientist, Master’s thesis worker and Research assistant 2002–2006.



**Karri Hannula**

b. 1968  
SVP, ATCC Finland

**Professional experience  
and key positions of trust:**

Air Navigation Services Finland Oy, SVP, ATCC Finland  
1 April 2017–. Finavia Oyj, Director, ATCC Finland 2015–  
2017. Ilmailulaitos/Finavia, Helsinki Airport, Chief of ATC  
2008–2015, chief of ATC training 2004–2008. CAA Finland/  
Finavia, Air Traffic Controller, Helsinki Airport 1995–2015.  
CAA Finland, Pori Airport, Air Traffic Controller, 1992–1995.



**Kari Kerke**

b. 1965  
SVP, Development and Quality

**Professional experience  
and key positions of trust:**

Air Navigation Services Finland Oy, SVP, Development and  
Quality 1.12.2018–. Air Navigation Services Finland Oy,  
PMO, Manager 2017–. Finavia Oyj, Air Navigation Business,  
PMO, Manager 2016. Finavia Oyj, Air Navigation Business,  
Specialist 2012–2016. CAA Finland/Finavia, Air Navigation  
Business, Project Manager/Systems Specialist 2005–2012.  
CAA Finland, EFES, Air Traffic Controller 1988–2005.



**Pasi Nikama**

b. 1968  
SVP, Marketing and Customer Relations

**Professional experience  
and key positions of trust:**

Air Navigation Services Finland Oy, SVP, Marketing and  
Customer Relations, 1 April 2017–. Finavia, Air Navigation  
Business, VP, Marketing and Customer Relations 2015–2017.  
Finavia, Chief of Area Control Centre Finland, Southern Finland  
Air Navigation Centre 2010–2015. Finavia, Oulu Airport, Traffic  
Manager, 2007–2010. Finavia, Avia College, Instructor and  
Chief Instructor, 2002–2007. CAA Finland, Southern Finland  
Air Navigation Centre, Air Traffic Controller, 1997–2002.  
CAA Finland, Ivalo and Halli airport, Air Traffic Controller,  
1995–1997. CAA Finland, Tampere-Pirkkala Airport, Southern  
Finland Air Navigation Centre, Air Traffic Controller Assistant,  
summer 1994, 1991–1992.



**Stina Andersson**

b. 1975  
VP, Deputy Director, Development and Quality

**Professional experience  
and key positions of trust:**

Air Navigation Services Finland Oy, VP, Deputy Director  
Development 1.12.2018–. Air Navigation Services Finland  
Oy, Area Manager, ATS units in Western Finland 2017–  
2018. Finavia Oyj, Air Navigation business/ANS Finland  
Ltd, Quality Manager, 2016–2018. Finavia Oyj, Risk  
Management, Safety Analyst, 2008–2016 and Analyst  
Manager 2010–2011. CAA Finland/Finavia, Helsinki Airport,  
Air Traffic Controller 1998–2008.



**Christer Björkman**

b. 1968  
VP, Deputy Director,  
Network Airports and International Affairs

**Professional experience  
and key positions of trust:**

Air Navigation Services Finland Oy, VP, Deputy Director, Network 1.12.2018–. Finavia Oyj, Air Navigation Business, Manager, Enroute services, 2008–2018. CAA Finland/Finavia, Air Navigation Business, Planning Manager, 2000–2008. Oy Propilots Ab Ltd, CEO, 1999–2000. CAA Finland, EFES, Chief Instructor, 1996–1998. CAA Finland, EFES, Operations, 1995–1999. CAA Finland, EFES, Air Traffic Controller 1990–1999.



**Seija Anttila**

b. 1977, MBA  
HR Business Partner

**Professional experience  
and key positions of trust:**

Traffic Management Company Fintraffic Ltd., HR Business Partner 1.3.2019–. Air Navigation Services Finland Ltd, HR Specialist 2017–2019. Finavia Oyj, HR Specialist, 2010–2017. Finavia Oyj, Roster Planner, 2006–2010. CAA Finland, EFES, Air Traffic Control Assistant 1997–2006.



**Tarja Hatinen**

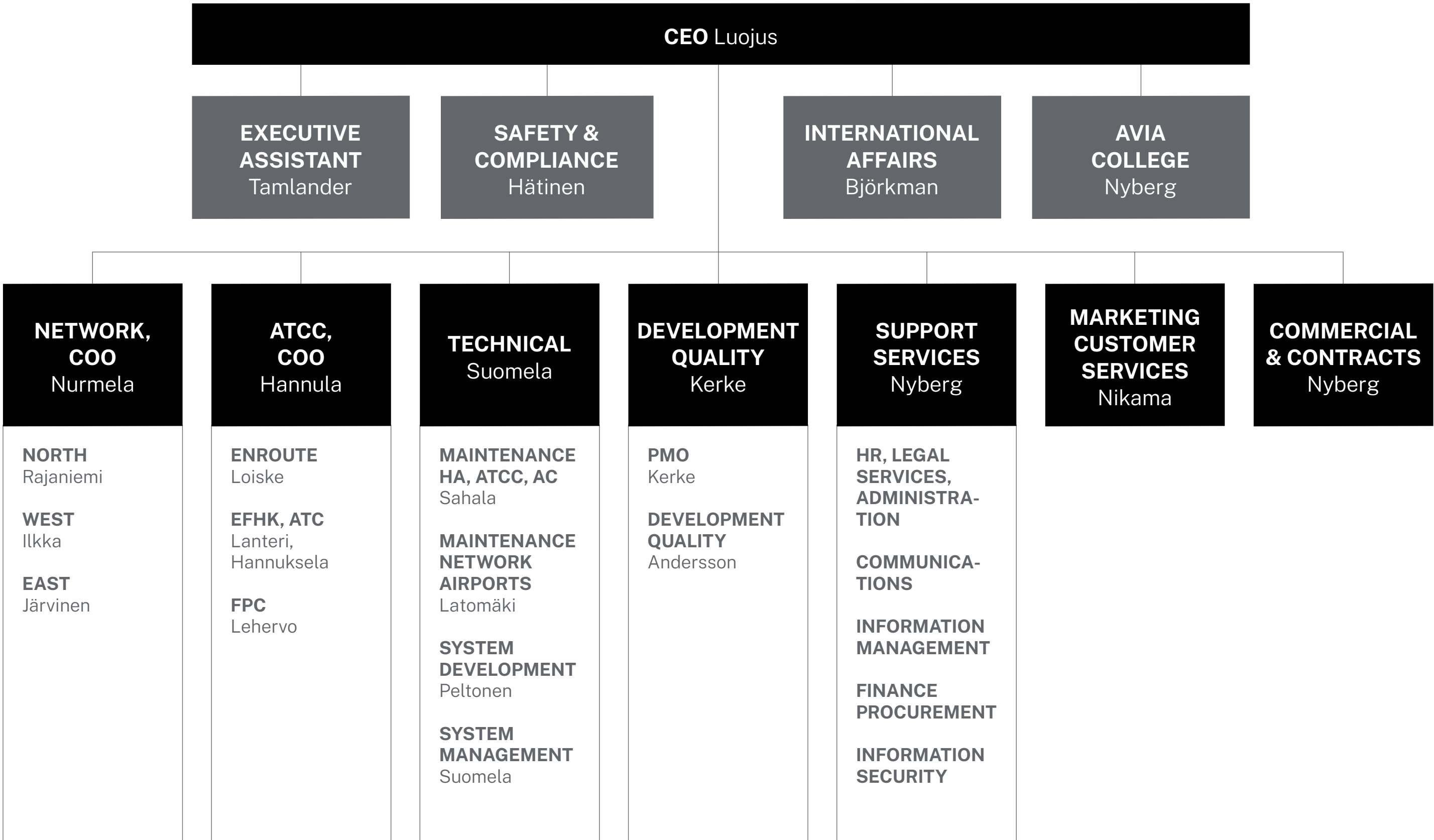
b. 1966  
Chief Financial Officer

**Professional experience  
and key positions of trust:**

Fintraffic Air Navigation Services Ltd, Chief Financial Officer 1.1.2020–. Fintraffic, Group Financial Controller 1.1.2019–. Air Navigation Services Finland Ltd, Business Controller 2017–2019. Finavia Corp, Business Controller, Helsinki Airport / Investment Process 2012–2017. Finavia Corp, Finance Manager, Helsinki Airport 2009–2012. Sanitec, Head of Finance / Financial Controller 2006–2009. KONE, Controller 1997–2006. OP Helsinki, Controller / assistant controller 1990–1997.



Organisation 31.12.2020



Towards the world’s safest, smoothest and most environmentally friendly traffic

Fintraffic Air Navigation Services Ltd (Fintraffic ANS) is part of the Traffic Management Company Fintraffic Ltd. Fintraffic is a wholly state-owned Group with special assignment, operating under the ownership steering of the Ministry of Transport and Communications.

The group provides and develops traffic control and management services for all modes of transport. We help people and goods to arrive safely, smoothly and with respect for the environment. Intelligent traffic control services, digital services for businesses and consumers, and up-to-date traffic data will help Finland become a pioneer in sustainable transport and logistics.

The Fintraffic group employs 1,100 professionals across Finland.

Traffic Management Company Fintraffic Ltd subsidiaries:

- Fintraffic Air Navigation Services Ltd is responsible for air navigation services.
- Fintraffic Vessel Traffic Services Ltd is responsible for vessel traffic services.
- Fintraffic Railway Ltd is responsible for rail traffic control and management.
- Fintraffic Road Ltd is responsible for road traffic control and management

# Safety and responsibility

Safety is for Fintraffic ANS first and foremost value which we will not compromise under any circumstances. Fintraffic ANS continuously develops the safety of its operations and related quality assurance activities. Each employee also carries personal responsibility for safety.

Fintraffic ANS has a licence for providing air navigation service issued by the Finnish Transport Safety Agency. This means that the company continuously proves that it has a well-functioning and effective safety management system (SMS) meeting the common European requirements of the SES regulation. The system's compliance is controlled by inspections, information requests and audits, among others. The authority regularly controls our safety management operations. The SMS is an integral part of Fintraffic ANS management system. This ensures the priority of safety also at the practical level.

## The assessment of safety impacts is part of our daily processes

From the beginning of 2020, new international requirements came into force, targeting e.g. risk assessment process. This changed the risk

assessment principles, which is why the number of assessments is not comparable to the previous year. In 2020, the company conducted a total of 45 more extensive safety impact assessments as part of the change management process. In addition to these, several hundred ex-ante evaluations of the changes were carried out.

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. We also assess the safety impacts of changes that our cooperation partners make, for example in the airport environment, that may have an effect on air navigation.

Good safety and quality management also includes internal audits and an encouraging reporting culture. The number of internal audits in 2020 was 8. In accordance with the audit plan, we audit our own units at least once per three years and larger units once a year. One of the indicators of an encouraging reporting culture and good safety culture is the number of observations, 1567 and incident reports. The number of reports shows that our reporting culture is at an excellent level.

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

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.

## Responsibility

The operations of Fintraffic ANS affect the day-to-day lives of many Finns in one way or another. Fintraffic ANS 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 air-

ports 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.

Fintraffic ANS works to ensure that air traffic supports Finland's success in a comprehensive way. Air traffic allows Finland to stay active 24/7.

For Fintraffic ANS, most important customer promise is the safety of its services which also is the foundation for all its operations. Another key factor is to keep the Finnish airspace open in every day of the year, 24/7. The third success factor is the smoothness of air traffic: there were no delays in 2020 due to Fintraffic ANS en-route services.

Corporate responsibility is a natural part of the operating culture and corporate identity of Fintraffic ANS 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 Fintraffic ANS are guided by several international regulations, such as the performance level





requirements laid down by SES (Single European Sky). 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 minimised, safety level high and costs accurately defined.

### **Responsibility for the environment**

Fintraffic ANS 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.

### **New descent approach decreases CO<sub>2</sub> emissions**

Helsinki Airport adopted new standard arrival routes in April 2019, shortening flights. They also maximise the use of the continuous descent approach, thus reducing fuel consumption and CO<sub>2</sub> emissions as well as noise. The reform has produced excellent results. Thanks to the continuous descend approach, emissions have been reduced by 10–30%.

Fintraffic ANS aims to be the world's most environmentally efficient air navigation company. Helsinki is already the best European metropolis in terms of the share of fuel-saving continuous descent approaches. Operations are developed in cooperation with airline customers and the airport operator.

In 2020, there were 24,274 continuous descent approaches, accounting for 77 per cent of all approaches.



# Stakeholders

Fintraffic ANS key stakeholders include airlines, the country of Finland, state aviation, employees and shareholder. The responsibility for stakeholders is manifested in Fintraffic ANS goals and values.

## Customer hearings

Customer hearings In 2020 Fintraffic ANS has consulted its customers in several joint and customer-specific meetings. The official customer consultations of 2020 were:

- the Finnish Border Guard consultation on September 29.
- the Finnish Airforce consultation on September 10.
- airlines consultation on September 10.

Fintraffic ANS is engaged in continuous and open dialogue with its stakeholders to develop its operations and the entire industry in an increasingly sustainable direction. Fintraffic ANS 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 Fintraffic ANS. Fintraffic ANS provides both air traffic control services and technical services, such as system servicing, maintenance and flight measurements, for it.

## Airline customers

A customer satisfaction survey was carried out at the end of 2020. The respondents assessed the different functions on a scale of 1–5 (5=very good, 1=very poor). The company's operations were ranked competent, reliable, professional and safe. The overall rating was 4.2.

The results show a clear positive development in almost all areas of the results. The respondents are very satisfied with Fintraffic's air navigation operations and service and our experience of safety is excellent.

## 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 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. Fintraffic ANS 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 element of Fintraffic ANS strategy. Fintraffic ANS looks after the equal and fair treatment of its employees. An equality and fairness plan was drawn up together with the personnel in 2018, and it has been updated regularly. Fintraffic ANS has signed a cooperation agreement with the health-care service company Terveystalo to promote occupational health and well-being of employees according to a plan.

## Interaction with employees

Fintraffic ANS uses a harmonised performance appraisal model. The development discussions

pursuant to it are carried out with all employees on an annual basis. The personnel is kept up-to-date on company issues by monthly reviews via email and by communicating on the intranet. The company has a Cooperation Council and a Central Committee for occupational health and Safety.

The organisation has prepared an occupational health and safety action plan for the company.



# Financial statements

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# Fintraffic Air Navigation Services Ltd's Board of Directors' report 2020

## Mission and group relationship

Fintraffic Air Navigation Services Ltd (operating under the name Air Navigation Services Finland, ANS Finland, until the end of 2020) is responsible for special tasks relating to air navigation, such as airspace management, area control, services for the state aviation, and aeronautical rescue services. In addition, the company is responsible for en-route services in the Finnish airspace and air navigation services at Finavia-owned airports and Lappeenranta Airport. Fintraffic Air Navigation Services Ltd is also responsible for the design and maintenance of the infrastructure and systems required for air navigation in compliance with international requirements.

Fintraffic Air Navigation Services Ltd's customers include commercial aviation operators, airports, the Finnish state aviation operations including military aviation, general aviation and pilot training schools.

Fintraffic Air Navigation Services Ltd's parent company Traffic Management Finland Ltd changed its name to Traffic Management

Company Fintraffic Ltd at the end of 2020. Fintraffic Air Navigation Services Ltd is part of the Fintraffic Group.

## Key events in the financial year

From the traffic point of view, the year started well: still in February, traffic volumes exceeded those of the corresponding period in previous years. In February, a virus that was given the name COVID-19 spread from Wuhan, China, to the entire world and caused a pandemic. Its spread made states and airlines interrupt nearly all air traffic for April and May. The virus has turned out to be highly contagious and a cause of a serious, even lethal, disease to some of the population. At the time of the writing of this report, in January 2021, it has caused nearly 700 deaths in Finland and more than 2 million globally. Consequently, many countries have imposed restrictions on movement and travelling, which has reduced the volume of air traffic drastically.

In the early stages, it was assumed that the virus would subside by the summer. However,

this did not happen and air traffic remained very scarce due to the pandemic until the end of 2020. Later that year, traffic volumes in area control were approximately 35% and at Helsinki Airport roughly 21% of the 2019 level.

Military aviation at network airports has continued as usual throughout 2020 so military airports and combined civil and military airports have operated almost normally. At all other airports, traffic volumes have been extremely low and some airports have been completely closed during the year.

To respond to the steep decline of air traffic volumes and the dramatic decrease in revenue (approximately EUR 3–4 million per month), the company launched extensive cost-cutting measures. During 2020, the entire personnel has been subject to temporary layoffs, partial or until further notice depending on their job. The company made cost cuts in all operating cost categories and either postponed or cancelled investments. Adjustments have been made to the largest extent possible while making sure that air

traffic safety was ensured and the company's statutory and service agreement tasks that are based on the European Union's legislation were carried out according to agreements and official regulations.

At the beginning of 2020, the company's cash position was good thanks to the good development in traffic volumes in 2018 and 2019. However, a significant portion of the company's cash was reserved to returns according to the SES legislation (such as the traffic risk mechanism and inflation adjustment), which were realised as unit price reductions in 2020 and 2021. Due to the reduced traffic volumes, the cash position has also been impaired by the en-route charge payment term extension granted to airlines with the Eurocontrol countries' joint decision. Due to the collapse of revenue, the company's cash reserves have decreased by approximately EUR 24 million. The company operates as part of the Fintraffic Group and relies on the Group's financing arrangements to ensure operational continuity.



Despite the pandemic, the company has advanced its strategic projects. To ensure the company’s future performance, it is absolutely necessary to continue the company’s key strategic projects in spite of the exceptional circumstances. One strategic objective is the FINEST project established jointly with the Estonian air navigation services provider, which progressed significantly during 2020. The project surveys possibilities of offering air navigation services across national borders.

Preparatory work for the remote air traffic control concept, Multi-ROT, continued in 2020. Fintraffic Air Navigation Services and Finavia are jointly planning to acquire a remote control system for selected airports in Finland, as defined separately by Finavia. If the service is introduced, it would mean that a single air traffic controller could provide air navigation services for more than one airport via remote connections.

A third strategic project is associated with U-space and unmanned aviation services. Under the steering of the Ministry of Transport and Communications and together with national aviation operators, the company has investigated the building of a U-space network and satellite-based cloudbreak procedures in uncontrolled airspace.

The proliferation of unmanned aerial vehicles (that is, drones) in the air transport market has increased the need for new kinds of traffic man-

agement services. An online service for drone operators was prepared in 2020 in cooperation with Traficom and deployed at the beginning of 2021. The system also supports the digitalisation of general aviation and forms part of the air navigation service.

Commercial projects proceeded as well. The company’s training centre, Avia College, won the competitive tendering for the training of Luxembourg air traffic controllers. The training could be started with special protective measures in Avia College in September. The company also participated in a competitive tendering for air traffic control services for 12 airports in Spain but placed third. At the beginning of 2021, the company also started operating as a subcontractor for ACR Aviation Capacity Resources AB at five airports in Sweden, being in charge of technical air navigation services for the airports. The value of the agreement is approximately EUR 300,000 per year and its duration is eight years.

### Revenue and profit

In 2020, the company’s revenue was EUR 49.3 (80.2) million and the operating result was EUR -16.1 (+5.9) million. Year on year, revenue decreased by 38.5%. This was mainly due to the decrease in traffic as a result of the coronavirus pandemic but also due to price reductions in accordance with the EU legislation. EUR +5.0 million was taken into account in revenue as a

regulation adjustment due to the EU legislation because regulation debt, accumulated from the good development in traffic volumes in previous years, for instance, was reduced by decreasing traffic charges. No new regulation debt or receivables have been recorded for 2020 since the preparation of the Performance Scheme (RP3) for 2020–2024 is still going on in the European Commission due to the exceptional circumstances.

The company made significant operational adjustment measures during the financial year. Operating costs in 2020 were EUR 5.7 million lower than in the previous year. The most significant savings were achieved in staff expenses through temporary layoffs and not paying holiday or performance bonuses. On the other hand, costs increased due to higher weather service expenses, the Eurocontrol membership fee and

credit losses recorded for traffic charges.

The company’s operating result (EUR -16.1 million) was EUR 21.9 million lower than in the previous year. The company’s cash reserves decreased significantly during 2020 due to lower traffic income. The cash position was also impaired by the en-route charge payment term extension granted to airlines by various countries. The State of Finland supported the company’s operations by paying Finland’s Eurocontrol membership fee (EUR 2.9 million).

### Traffic

The year 2020 was exceptionally poor as far as traffic volumes were concerned. In January–February, the traffic volumes (service units) increased slightly year on year but starting from March, traffic decreased due to the spread of the coronavirus

Key indicators	2020	2019	2018	2017*
Revenue (EUR million)	49.3	80.2	81.5	63.9
Operating profit (EUR million)	-16.1	5.9	6.8	9.3
Operating profit/revenue (%)	-32.6	7.3	8.4	14.5
Investments (EUR million)	1.9	5.3	2.1	4.0
Return on equity (%)	-107.6	14.5	31.2	45.1**
Equity ratio (%)	22.6	36.1	37.0	40.8
Personnel on average (FTE)***	355	405	408	402

\* operations began on 1 April 2017  
\*\* calculated on the balance sheet values at the closing date  
\*\*\* temporary layoffs reduce the FTE value for 2020

pandemic and travelling restrictions so much that in April, the traffic volume in the en-route service was only 20% and at Helsinki Airport only 11% of the previous year's level. After April, traffic recovered somewhat but in December, the en-route service volume was still only 35% and the Helsinki Airport traffic volume only 21% of the previous year's level. In the en-route service, the impacts of the coronavirus pandemic were clearest in international traffic (-64%) but volumes decreased significantly also in domestic traffic (-56%) and over-flight traffic (-46%). At Helsinki Airport, traffic reduced by 65% year on year. International traffic at Helsinki Airport decreased slightly more (-66%) than domestic traffic (-60%).

### Assessment of key operational risks and uncertainties

The company's risk management is comprised of two parts. The risk management unit deals with cases involving the safety of air traffic, in addition to which the company manages other risks associated with financial, IT, investment, cash flow, revenue and insurance risks, among others. The risk management plan is updated on a regular basis.

The most significant financial risk is associated with low air traffic volumes in the next few years. The pandemic is likely to change people's travelling habits, even permanently, especially when it comes to business travel, so the recovery of traffic to the pre-pandemic level may take up to

ten years. The European Performance Scheme for the coming years, related to the objectives of air navigation services, is also still incomplete and there is no certainty about how the losses suffered by air navigation service providers during the pandemic will be compensated for.

### Personnel, training and wages

At the end of 2020, the company employed a total of 434 (438) professionals of different fields, with 289 of them working in air traffic control. In addition to air traffic control personnel, the company employs technical air navigation, administration, safety and risk management professionals in 22 units across Finland. Salaries paid during the financial year amounted to EUR 30.9 (37.0) million.

The average age of employees is 43.6 years and the average duration of employment relationships is 17.7 years. Of the employment relationships, 98 per cent are permanent and 2 per cent are fixed-term.

In 2020, two of the collective labour agreements used in Fintraffic Air Navigation Services expired: the special branches collective labour agreement of Service Sector Employers Palta as well as the collective labour agreement of Ilmailutietekniset (ILTT), a union for IT personnel in aviation. Negotiations to renew both collective labour agreements were conducted during the year but no conclusion has been reached yet. At

the end of 2020, Palta terminated the collective labour agreement with the Finnish Air Traffic Controllers Association to end on 31 March 2021. Negotiations on a new collective labour agreement will start at the beginning of February 2021.

A Group-wide HR survey was carried out in Fintraffic Air Navigation Services in early autumn 2020. The company has advanced in many important operational fields when compared to the corresponding survey conducted one year earlier. However, according to the survey respondents, the company's future seems, quite understandably, less clear due to the coronavirus pandemic. The special theme of the 2020 survey was management and supervisory work as they are among the spearhead themes of Fintraffic group's new strategy. On the basis of the survey, three company-level priority actions were selected to be highlighted in 2020. The survey included separate questions regarding the challenges caused by the coronavirus pandemic and remote work. In mid-March, a Group-wide remote work recommendation was issued, recommending remote work to the extent that it was possible taking the employee's work duties into account. This recommendation was extended throughout the entire year 2020.

The statutory employer-employee advisory boards of the Group's subsidiaries merged in 2020 and became a Group-wide employer-employee cooperation group, while the occupational

health and safety committee still continued to operate at the company level. ANS Finland's personnel fund was dissolved on its financial statements closing date 31 August 2020 and the company's employees became members of Traffic Management Finland Group's bonus fund. For 2020, there are no performance bonuses payable to the company's personnel as the company's result showed a major loss due to the coronavirus pandemic.

During 2020, the company had four statutory employer-employee negotiations due to the decrease in the demand for its services, caused by the coronavirus pandemic. Thus far, redundancies have been avoided as it has been possible to carry out all the adjustments as temporary layoffs. The entire personnel of the company was included within the scope of the statutory employer-employee negotiations and temporary layoffs have been – and continue to be – either fixed-term or until further notice depending on the job of the employee in question.

Refresher training to maintain the professional skills of operational personnel was carried out in accordance with the annual plan as either local training, remote 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 training was carried out to maintain existing ATSEP qualifications and to develop professional competence in accordance with international regulation. Furthermore, the extensive training courses required for ATSEP qualifications of new employees who started at the beginning of the year were carried out during the first half of the year.

Regarding occupational health and safety at the workplace, the company focused on measures that promote and maintain safe and healthy working environments and working conditions as well as the personnel's physical and mental ability to work. To improve the working environments and conditions, the employer and the employees prevented or removed work-related hazards. The aim was to minimise occupational health and safety risks to ensure that no accidents at the workplace occur. Disability due to occupational disease or occupational accidents as well as close calls were also minimised.

Due the exceptional nature of the year, active occupational health and safety work was realised as unit-specific health and safety measures and Group-level coronavirus guidelines that were put into practice to control the coronavirus pandemic. There were no work-related coronavirus infections at the workplaces of the air navigation company.

In 2020, there were two occupational accidents and two commuting accidents in the com-

pany. Two of these resulted in an absence of at least one day. It seems that the highest physical risk for occupational and commuting accidents of the company's personnel is caused by slipping and tripping at work or on the way to or from work. Three occupational safety observations were made. They were related to noise at the workplace and safety of the working environment.

In 2020, the absence due to sickness rate of the company's personnel was 2.4% and accident rate 2.26 (*annual number of accidents per million working hours*).

**Air traffic safety**

Safety is the first and foremost value for Fintraffic Air Navigation Services. The company works to continuously improve the safety of its operations and the related quality assurance according to safety management requirements also during exceptional aviation circumstances.

The year 2020 was characterised by the drastic consequences of the coronavirus epidemic in aviation and air navigation. Despite exceptional circumstances, it must be possible to ensure the safety of operations even in situations in which services need to be limited due to declining demand, for instance. In some units, traffic stopped entirely, while in others, the volume of traffic remained nearly normal. A provider of air navigation services must also make sure that challenges posed by low traffic volumes can be resolved and a controlled

return to normal traffic can be secured and handled in a well-managed manner. In this context, we rely on the international RNO (Recovery to Normal Operations) model, which identifies risks created by exceptional circumstances and ensure a controlled ramp-up of services when the time is right. In the recovery to normal operations, the "safety comes first" principle will be applied, in other words: if necessary, traffic is regulated so that the personnel can achieve an adequate level of routine as traffic volumes are again increasing and returning to normal.

Risk assessment is part of the company's day-to-day operations. Risk management was improved significantly by introducing a new comprehensive change management procedure running on a digital platform. In this procedure, the management of change-related risks is integrated into a more extensive case management system. The renewal will considerably improve processing speed, reliability and the level of documentation as well as traceability.

At the beginning of 2020, new international requirements associated with the risk assessment process, among other things, entered into force. This changed the principles of change risk assessment and as a result, the number of assessments made is not comparable with the previous year. In 2020, the company conducted a total of 45 more extensive safety impact assessments related to changes as part of the change management process. In addition, several hundreds of advance assessments related to changes were conducted. This reflects the strong commitment of the employees to assurance of safety. All changes that have or may have an impact on the safety of operations are assessed. The company also assesses the safety impacts of changes that partners make in the joint operating environment and that may affect air navigation.

We continued our close cooperation in the safety sector with regard to the joint project of Finnish and Estonian air navigation service providers (FINEST). In addition, we created new pro-

Reporting activity, internal control and safety assurance of changes in 2020

Incident and observation reports by the personnel	1,567
Technical notifications related to the operation of equipment or technical systems	3,069
Risk assessments related to changes	45
Internal audits	8

Performance targets set for Fintraffic Air Navigation Services Ltd

TARGET	IMPLEMENTATION IN 2020
Safety	
Efficiency of the safety management system	The target was achieved (see Note 2)
Just Culture	The target was achieved

In addition to the Performance Scheme, Fintraffic Air Navigation Services Ltd has specified its own safety targets:

TARGET	IMPLEMENTATION IN 2020
1) No accidents attributable to Fintraffic Air Navigation Services Ltd	The target was achieved. No accidents.
2) No serious hazardous incidents attributable to Fintraffic Air Navigation Services Ltd	The target was achieved. No serious hazardous incidents.
3) Targets pursuant to the Finnish Aviation Safety Programme (FASP) Measures/Reaction and acceptability levels in accordance with the Risk classification (a total of 23 indicators)	The target was achieved with regard to 22 of 23 indicators. One deviation exceeded the reaction level.
4) Incidents related to airspace reservations Number of serious incidents decreased	The target was achieved. There were no serious airspace reservation incidents.
5) Runway incursions due to Fintraffic Air Navigation Services Ltd's activities Target: A declining trend in the number of incursions compared to previous years	The target was achieved (see Note 1)
6) Losses of minimum separation due to Fintraffic Air Navigation Services Ltd's activities Target: A declining trend in the number of incidents	The target was achieved (see Note 1)

Note 1) When setting targets for 2020, the starting point was that traffic volumes remain normal. Due to the unpredictable collapse in traffic volumes due to the pandemic, trend-based figures are not directly comparable. Considering the decrease in air traffic in relation to the number of deviations, it can be noted that their number is proportionally nearly at the same level as in previous years. When it comes to airspace reservation incidents, their proportional number is higher but there were no high-risk incidents.

Note 2) As far as the efficiency of the safety management system is concerned, the final result will be confirmed later but the preliminary view is that we will achieve the maturity targets set.

cedures for the process among our new commercial partners to ensure safety-related information exchange and reporting also in situations involving subcontracting.

Good safety and quality management also includes internal control and an encouraging reporting culture. Eight internal audits were conducted during the year. No serious deviations were recorded in them. One of the indicators of an encouraging reporting culture and good safety culture is the number of observations and incident reports. The fact that the number of reports has remained high shows that issues are reported openly and actively.

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 the company and it steers the development of air navigation services.

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

Airspace block NEFAB performance plan

Together with Norway, Estonia and Latvia, 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.

Deviation from the targets and related measures

The safety targets set by the company for itself play a significant role in the continuous improvement of operations. In order to ensure development, it is justified to also set targets that can be challenging to achieve and it is not always taken for granted that they are achieved.

With regard to the targets of the Finnish Aviation Safety Programme, there was one incident identified in which the target was not achieved because the incident exceeded the reaction level set by the company for operations. This requires that the incident and the necessity of corrective actions be assessed. The incident took place in late 2020 and in connection with it, the need for changes to the guidelines was analysed together with the airport operator. It was noted that the guidelines are appropriate and consequently, measures were targeted at the local practices of the unit in question. The processing of the incident is still partly ongoing.



## Environment

In 2020, the company cooperated closely with Finavia in Finland and internationally with industry organisations and parties to reduce the negative environmental impacts of air traffic. In this work, significant means of influence 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 single European airspace as efficiently as possible.

## Significant events after the financial year

In January 2021, a register of drone operators was introduced in Finland, in cooperation with Traficom. The register itself belongs to the authority, but Fintraffic Air Navigation Services Ltd has developed a user interface for the drone registrations. From the beginning of 2021, it will be compulsory for drone operators to register, familiarise themselves with the learning materials and successfully complete an online drone flying test.

Preparatory work for Fintraffic Air Navigation Services' remote air traffic control concept, Multi-ROT, progressed in early 2021 with the signing of a Memorandum of Understanding with Finavia. The next target is to work with Finavia to plan the most sensible way of organising the service production. If the service is introduced,

it would mean that a single air traffic controller could provide air navigation services for more than one airport, as defined separately by Finavia, via remote connections.

The company is finalising an extension agreement with Luxembourg on the refresher training of air traffic controllers in Avia College in autumn 2021.

The company has negotiated with the Ministry of Transport and Communications on the possibility of government purchases relating to Aeronautical Information Services, airspace management, air rescue services as well as services for the State's aviation operations at combined civil and military airports, among other services. The company must provide these services for the benefit of the State although the company currently has no income financing (due to the scarcity of income from en-route charges) for providing them.

## Estimate of probable future development

According to current estimates, flight cancellations caused by the coronavirus will have a significant impact on the revenue of Fintraffic Air Navigation Services Ltd, at least in the first half of the year. It is assumed that during the second half of the year, air traffic will pick up as COVID-19 vaccinations gradually progress to cover the entire population of Europe. However, the total traffic vol-

umes in 2021 will remain at the 2020 level, which is approximately 50% of the 2019 level. Due to the difficult financial situation, the company will continue adjustment measures this year, too.

Fintraffic Air Navigation Services Ltd's key development project with the Estonian air navigation company EANS to create a joint airspace and increase the efficiency of working methods (FINEST) will proceed on schedule. According to the plan, in the last deployment phase during the second quarter of 2022, the companies' regional air traffic control centres will operate as a single virtual operator and en-route services can be provided from Finland or Estonia in the airspaces of both countries. In relation with the FINEST project, negotiations pursuant to Chapter 6 of the Act on Co-operation within Undertakings will also be started at the beginning of 2021.

## Management and auditing

Pertti Korhonen continued as the Chairman of the Board of Directors of Fintraffic Air Navigation Services Ltd and Ilkka Virtanen as a member of the Board of Directors throughout the year. In the Annual General Meeting held on 19 March 2021, Asta Sihvonon-Punkka and Teemu Penttilä, who had been Board members since the incorporation of the company, left the Board of Directors. The Annual General Meeting elected Jarmo Lindberg and Kaisa Olkkonen

as new Board members. The Board of Directors convened nine times during the financial year. The Board members who do not belong to the Group's personnel were paid a total of EUR 44,400 in compensation.

The CEO of the company is Raine Luojus. The company's auditor was Ernst & Young Oy, with Mikko Rytilahti as the auditor in charge.

## Shares and share capital

The State of Finland transferred the shares of ANS Finland (now Fintraffic Air Navigation Services Ltd) to Traffic Management Finland Ltd (now Traffic Management Company Fintraffic Ltd) on 1 January 2019. 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.

## Board of Directors' proposal for the distribution of profits

The company's distributable assets in the financial statements of 31 December 2020 amounted to EUR 8,337,895.63. The Board of Directors proposes that no dividends be distributed and that the result for the financial year, EUR -13,270,605.21, be carried over in retained earnings.

## Income statement

euro	1.1.–31.12.2020		1.1.–31.12.2019	
<b>Revenue</b>	49,303,445.43		80,178,759.95	
Other operating revenue	3,640,786.23		436,890.91	
<b>Materials and services</b>				
Materials and supplies				
Purchases during the financial year	569,252.32		565,408.24	
External services	7,681,970.88	8,251,223.20	7,098,865.96	7,664,274.20
<b>Staff expenses</b>				
Salaries and bonuses	30,903,170.08		36,965,883.80	
Indirect staff expenses				
Pension expenses	4,921,792.30		6,385,594.47	
Other indirect staff expenses	1,172,628.46	36,997,590.84	1,266,195.96	44,617,674.23
<b>Depreciation, amortisation and impairment</b>				
According to plan	3,704,231.52		3,697,145.43	
<b>Other operating expenses</b>	20,053,761.32		18,770,123.52	
<b>OPERATING PROFIT / LOSS</b>	<b>-16,062,575.22</b>		<b>5,866,433.48</b>	
<b>Financial income and expenses</b>				
Other interest and financial income	16,171.90		13,150.08	
Interest expenses and other financial expenses	-71,118.88	-54,946.98	-19,616.90	-6,466.82
<b>PROFIT / LOSS BEFORE APPROPRIATIONS AND TAXES</b>	<b>-16,117,522.20</b>		<b>5,859,966.66</b>	
<b>APPROPRIATIONS</b>				
Increase (-) or decrease (+) in depreciation difference	676,916.99		-75,301.31	
Group contribution	2,170,000.00		0.00	
Income taxes	0.00		2,931,589.41	
<b>PROFIT / LOSS FOR THE FINANCIAL YEAR</b>	<b>-13,270,605.21</b>		<b>2,853,075.94</b>	



## Balance sheet

euro	31.12.2020		31.12.2019	
<b>Assets</b>				
<b>NON-CURRENT ASSETS</b>				
<b>Intangible assets</b>				
Intangible rights	3,750,295.11		6,048,789.12	
Other capitalised long-term expenditure	1,181,479.73	4,931,774.84	1,441,050.73	7,489,839.85
<b>Tangible assets</b>				
Machinery and equipment		4,351,606.97		3,607,446.78
<b>Advance payments and construction in progress</b>				
Purchases of machinery and equipment	3,870,967.94		4,231,870.51	
Purchases of licences and software	2,678,454.54	6,549,422.48	1,577,967.64	5,809,838.15
<b>CURRENT ASSETS</b>				
<b>Receivables</b>				
<b>Long-term receivables</b>				
Prepayments and accrued income		3,071,471.63		3,632,765.51
<b>Short-term receivables</b>				
Accounts receivable	6,916,638.84		7,729,971.71	
Receivables from Group companies	4,979,414.50		26,166,937.68	
Other receivables	447,614.08		71,392.28	
Accrued income	5,684,155.67	18,027,823.09	5,331,401.38	39,299,703.05
<b>Cash and cash equivalents</b>		0.00		0.00
<b>Total assets</b>	<b>36,932,099.01</b>		<b>59,839,593.34</b>	

## Balance sheet

euro	31.12.2020		31.12.2019	
<b>Equity and liabilities</b>				
<b>EQUITY</b>				
Share capital	3,300.00		3,300.00	
Reserve for invested unrestricted equity	8,300,000.00		8,300,000.00	
Retained earnings	13,308,500.84		10,455,424.90	
Profit / loss for the financial year	-13,270,605.21	8,341,195.63	2,853,075.94	21,611,800.84
<b>Cumulative appropriations</b>				
Depreciation difference		446,012.63		1,122,929.62
<b>Statutory provisions</b>				
Other statutory provisions		6,666.66		130,390.99
<b>LIABILITIES</b>				
<b>Non-current liabilities</b>				
Loans from credit institutions	0.00		0.00	
Liabilities for regulatory over-recoveries	4,160,130.65	4,160,130.65	12,722,959.00	12,722,959.00
<b>Current liabilities</b>				
Accounts payable	2,372,138.52		2,107,460.56	
Liabilities to Group companies	881,389.67		1,855,897.43	
Other liabilities	1,531,805.88		2,040,324.23	
Accrued liabilities	19,192,759.37	23,978,093.44	18,247,830.67	24,251,512.89
<b>Total equity and liabilities</b>	<b>36,932,099.01</b>		<b>59,839,593.34</b>	



## Cash flow statement

euro	2020	2019
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>		
Cash receipts from customers	49,484,129.79	89,588,243.43
Cash paid for operating expenses	-69,735,498.15	-69,326,633.99
Cash flow from operating activities before financial items and taxes	-20,251,368.36	20,261,609.44
Interest and other financial expenses paid	-16,068.88	-23,853.01
Interest received	16,171.90	13,150.08
Transfer of the bank accounts into the cash pool of the Group 1 January	0.00	18,572,305.65
Other financing items from operating activities	23,000,708.83	-25,783,034.51
Income taxes paid	-876,999.99	-2,707,639.53
<b>Cash flow from operating activities</b>	<b>1,872,443.50</b>	<b>10,332,538.12</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>		
Investments in tangible and intangible assets	-1,872,443.50	-5,349,092.71
Proceeds from sale of tangible and intangible assets	0.00	18,450.42
<b>Cash flow from investing activities</b>	<b>-1,872,443.50</b>	<b>-5,330,642.29</b>
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>		
Cash flow from financing activities		-5,001,895.83
<b>Repayment of long-term loans</b>	<b>0.00</b>	<b>-5,001,895.83</b>
<b>NET INCREASE (+)/DECREASE (-) IN CASH AND CASH EQUIVALENTS</b>	<b>0.00</b>	<b>0.00</b>
Cash and cash equivalents 1 January	0.00	18,572,305.65
Transfer of the bank accounts into the cash pool of the Group 1 January	0.00	-18,572,305.65
Cash and cash equivalents 31 December	0.00	0.00
	<b>0.00</b>	<b>0.00</b>

## Notes to the financial statements

Air Navigation Services Finland Oy is part of the Traffic Management Finland Group. The parent company is Traffic Management Finland Oy (business ID 2942108-7), domicile in Helsinki.

A copy of the consolidated financial statements of Traffic Management Finland is available at Palkkatilanportti 1, Helsinki.

### 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

#### REVENUE

During the financial year 2020, net sales was improved by a regulatory adjustment of EUR 4,983,218.35. The debt accrued in 2018 based on EU legislation was paid off as lower route charges and Helsinki-Vantaa air navigation fees.

The adjustment takes into account e.g. the following items based on legislation: traffic risk mechanism, inflation adjustment, capacity incentives, and recovery of EU subsidies. Items that may arise from 2020 have not been taken into account as the RP3 performance plan is still under consideration. In the financial year 2019, the regulatory adjustment reduced net sales by EUR 9,100,952.

#### CALCULATION PRINCIPLES OF THE CASH FLOW STATEMENT

The cash flow statement is based on the guidelines of the Accounting Board (KILA). The cash flow from operating activities is presented using the direct method. The company's balance in the cash pool accounts of the Group EUR 2,782,325.68 is presented in the cash flow from operating activities.

euro	2020	2019
<strong>Staff expenses</strong>		
Salaries and bonuses	30,903,170.08	36,965,883.80
Fringe benefits	232,295.98	152,637.04
Total	31,135,466.06	37,118,520.84
Indirect staff expenses		
Pension expenses	4,921,792.30	6,385,594.47
Other indirect staff expenses	1,172,628.46	1,266,195.96
Total	6,094,420.76	7,651,790.43
Average number of personnel during the financial year	355	405
Personnel at the end of the year		
Permanent	424	403
Temporary	10	35
Total	434	438
Salaries and bonuses of the CEO and Board of Directors		
Chief Executive Officer	274,715.20	288,912.48
Members of the Board of Directors	44,400.00	52,500.00
	319,115.20	341,412.48
<strong>Depreciation, amortisation and impairment</strong>		
Accorting to plan		
Computer software	2,767,743.54	2,684,703.29
Other long-term expenditure	259,571.00	259,571.01
Machinery and equipment	676,916.98	752,871.13
	3,704,231.52	3,697,145.43
<strong>Other operating expenses</strong>		
Other staff expenses	1,093,960.45	1,289,930.96
Travel expenses	300,470.40	805,046.83
Rents	6,519,551.02	6,426,480.69
Supplies and fixtures	315,516.96	301,535.66
Other operating expenses	11,824,262.49	9,947,129.38
	20,053,761.32	18,770,123.52



## Notes to the financial statements

euro	2020	2019
<b>Auditor's fees</b>		
Audit fee	30,215.00	38,328.00
<b>Financial income and expenses</b>		
Interest income	16,171.90	13,150.08
Interest expenses	-71,118.88	-19,616.90
Total financial income and expenses	-54,946.98	-6,466.82
<b>Intangible assets</b>		
Computer software		
Acquisition cost 1 January	13,362,628.96	13,238,101.48
Increase during the financial year	469,249.54	124,527.48
Decrease during the financial year	0.00	0.00
Acquisition cost 31 December	13,831,878.50	13,362,628.96
Accumulated depreciation according to plan 1 January	-7,313,839.84	-4,629,136.55
Accumulated depreciation on decrease	0.00	0.00
Depreciation according to plan during the financial year	-2,767,743.54	-2,684,703.29
Book value 31 December	3,750,295.12	6,048,789.12
<b>Other long-term expenditure</b>		
Other capitalized long-term expenditure		
Acquisition cost 1 January	2,154,871.01	2,154,871.01
Increase during the financial year	0.00	0.00
Decrease during the financial year	0.00	0.00
Acquisition cost 31 December	2,154,871.01	2,154,871.01
Accumulated depreciation according to plan 1 January	-713,820.28	-454,249.27
Accumulated depreciation on decrease	0.00	0.00
Depreciation according to plan during the financial year	-259,571.00	-259,571.01
Book value 31 December	1,181,479.73	1,441,050.73

euro	2020	2019
<b>Tangible assets</b>		
Machinery and equipment		
Acquisition cost 1 January	5,482,293.31	5,072,918.82
Increase during the financial year	1,421,077.17	469,374.49
Decrease during the financial year	0.00	-60,000.00
Acquisition cost 31 December	6,903,370.48	5,482,293.31
Accumulated depreciation according to plan 1 January	-1,874,846.52	-1,121,975.40
Accumulated depreciation on decrease	0.00	0.00
Depreciation according to plan during the financial year	-676,916.98	-752,871.12
Book value 31 December	4,351,606.98	3,607,446.79
<b>Advance payments and construction in progress</b>		
Other work and purchases in progress		
Acquisition cost 1 January	5,809,838.15	4,438,570.30
Increase during the financial year	2,629,911.04	1,965,169.82
Decrease during the financial year	-1,890,326.71	-593,901.97
Acquisition cost 31 December	6,549,422.48	5,809,838.15
<b>Short-term receivables</b>		
Receivables from Group companies		
Accounts receivable	27,088.82	383,903.17
Other receivables	4,952,325.68	25,783,034.51
	4,979,414.50	26,166,937.68
The company's balance in the cash pool accounts of the Group EUR 2,782,325.68 is presented in Other receivables from Group companies		
Receivables from others		
VAT receivables	439,428.38	71,392.28

## Notes to the financial statements

euro	2020	2019
<b>Material items contained in accrued income</b>		
Accrued income from Eurocontrol	1,353,485.00	4,449,321.00
Accrued income from EU grants	6,569,452.20	3,631,844.73
Other accrued income	588,028.05	629,481.13
Income taxes	28,410.53	0.00
Receivables from occupational health care	216,251.52	253,520.03
<b>Total</b>	<b>8,755,627.30</b>	<b>8,964,166.89</b>
Accrued income, long-term	3,071,471.63	3,632,765.51
Accrued income, short-term	5,684,155.67	5,331,401.38
<b>Total accrued income</b>	<b>8,755,627.30</b>	<b>8,964,166.89</b>
<b>Restricted equity</b>		
Share capital 1 January	3,300.00	3,300.00
Share capital 31 December	3,300.00	3,300.00
<b>Restricted equity total</b>	<b>3,300.00</b>	<b>3,300.00</b>
<b>Unrestricted equity</b>		
Reserve for invested unrestricted equity 1 January	8,300,000.00	8,300,000.00
Reserve for invested unrestricted equity 31 December	8,300,000.00	8,300,000.00
Retained earnings 1 January	13,308,500.84	10,455,424.90
Distribution of dividend	0.00	0.00
Retained earnings 31 December	13,308,500.84	10,455,424.90
Profit / loss for the financial year	-13,270,605.21	2,853,075.94
<b>Unrestricted equity total</b>	<b>8,337,895.63</b>	<b>21,608,500.84</b>
<b>Total equity</b>	<b>8,341,195.63</b>	<b>21,611,800.84</b>
<b>Distributable equity on 31 December</b>		
Retained earnings	13,308,500.84	10,455,424.90
Profit for the financial year	-13,270,605.21	2,853,075.94
Reserve for invested unrestricted equity	8,300,000.00	8,300,000.00
	<b>8,337,895.63</b>	<b>21,608,500.84</b>
<b>Statutory provisions</b>		
Other statutory provisions	6,666.66	130,390.99

euro	2020	2019
<b>Non-current liabilities</b>		
<b>Loans from credit institutions</b>		
Balance in the beginning of the financial year	0.00	5,000,000.00
Increase during the financial year	0.00	0.00
Decrease during the financial year	0.00	-5,000,000.00
<b>Balance at the end of the financial year</b>	<b>0.00</b>	<b>0.00</b>
<b>Provisions for regulatory over-recoveries</b>		
Balance in the beginning of the financial year	17,706,177.00	8,605,225.00
Decrease during the financial year	-4,983,218.35	-4,462,828.00
Increase during the financial year	0.00	13,563,780.00
Transfer to current liabilities	-8,562,828.00	-4,983,218.00
<b>Balance at the end of the financial year</b>	<b>4,160,130.65</b>	<b>12,722,959.00</b>
The regulatory adjustment includes liabilities of EUR 17,423,123 and receivables of EUR 4,700,160.		
<b>Loans maturing later than within five years</b>		
Bank loan	0.00	0.00
Provisions for regulatory over-recoveries	4,200,000.00	4,300,000.00

The portion of the regulatory over-recoveries maturing after five years is related to customer refunds of EU grants for investments.

A provision amounting to EUR 1,099,727.75 was transferred to the company in the aquisition of business operations in April 2017 to fulfill the commitments relating to the transfer of the operations of Tampere Area Traffic Control Centre. In the beginning of the year the provision amounted to EUR 130,390.99 and during the financial year EUR 66,666.61 of the provision was used and EUR 57,057.72 was written down.



## Notes to the financial statement

euro	2020	2019
<b>Current liabilities</b>		
Liabilities to Group companies		
Accounts payable	55,050.00	21,847.43
Accrued expenses	826,339.67	1,834,050.00
	881,389.67	1,855,897.43
Payables to others		
VAT liability	23,000.00	0.00
Withholding tax liability	698,168.13	1,034,394.76
Social security contribution liability	30,748.74	22,374.75
Other	2,311,694.89	983,554.72
	3,063,611.76	2,040,324.23
<b>Material items included in accrued liabilities</b>		
Salary and social security expense accruals	340,772.40	1,756,597.45
Holiday pay liabilities including social security contributions	7,920,059.27	7,944,345.10
Tax liability	0.00	811,925.74
Regulation liability	8,562,828.00	4,983,218.00
Other accrued liabilities	2,369,099.70	2,751,744.38
	19,192,759.37	18,247,830.67
<b>Commitments and contingent liabilities</b>		
<b>Lease liabilities</b>		
Payable during the next financial year	587,323.48	795,435.62
Payable in later years	844,172.82	1,048,215.17
Total	1,431,496.30	1,843,650.79
<b>Other contingent liabilities</b>		
Due during the next financial year	3,904,741.45	6,196,252.87
Due in later years	5,003,499.69	3,541,455.83
Total	8,908,241.14	9,737,708.70
<b>Total commitments and contingent liabilities</b>	<b>10,339,737.44</b>	<b>11,581,359.49</b>

The company has long-term lease on its business premises expiring 30 June 2032.

In the financial statements dated 31 December 2020 the company's lease liability from this agreement totals EUR 9,995,775.61.

### TRANSACTIONS WITH RELATED PARTIES

The operating expenses include several transactions between the company and its related parties that have similar terms than the transactions with other parties.

# Signatures of the financial statements and Board of Directors' report

Vantaa, March 2, 2021

Pertti Korhonen  
Chairman of the Board of Directors

Jarmo Lindberg  
Member of the Board of Directors

Kaisa Olkkonen  
Member of the Board of Directors

Ilkka Virtanen  
Member of the Board of Directors

Raine Luojus  
CEO

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

Helsinki, March 5, 2021  
  
Ernst & Young Oy  
Authorised Public Accountants

Mikko Rytilahti,  
APA, CPFA



# AUDITOR'S REPORT (Translation of the Finnish original)

TO THE ANNUAL GENERAL MEETING OF FINTRAFFIC AIR NAVIGATION SERVICES LTD

## Report on the Audit of the Financial Statements

### Opinion

We have audited the financial statements of Fintraffic Air Navigation Services Ltd (business identity code 2767840-1) (former Air Navigation Services Finland Ltd) for the year ended 31 December, 2020. The financial statements comprise the balance sheet, income statement, cash flow statement and notes.

In our opinion, the financial statements give a true and fair view of the company's financial performance and financial position in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements.

### Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the company in accordance with the ethical requirements

that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director are responsible for the preparation of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the company's

ability to continue as going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the company or cease operations, or there is no realistic alternative but to do so.

### Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance on whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with good auditing practice will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Other reporting requirements

Other information

The Board of Directors and the Managing Director are responsible for the other information. The other information that we have obtained prior to the date of this auditor's report is the report of the Board of Directors.

Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to the report of the Board of Directors, our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion, the information in the report of the Board of Directors is consistent with the information in the financial statements and the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Other opinions

We support that the financial statements should be adopted. The proposal by the Board of Directors regarding the use of the profit shown in the balance sheet is in compliance with the Limited Liability Companies Act. We support that the members of the Board of Directors and the Managing Director should be discharged from liability for the financial period audited by us.

Helsinki 5.3.2021

Ernst & Young Oy  
Authorized Public Accountant Firm

Mikko Rytilahti  
Authorized Public Accountant,  
Chartered Public Finance Auditor



