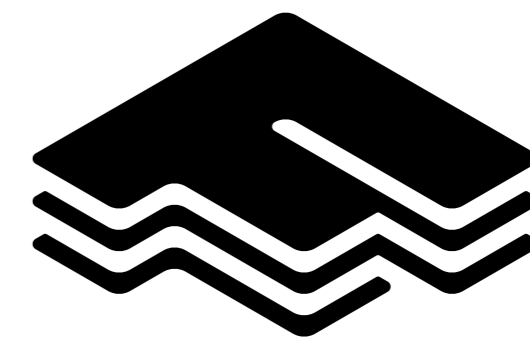


# Annual report 2023



**Fintraffic**



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

We provide and develop 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.

We want to offer an excellent and attractive workplace for top experts.

We employ 1,180 professionals.

## How to read the report package



### Annual Report 2023

Strategy, key events of 2023, and a review of responsibility and sustainability.



### Governance and Remuneration Report 2023

Information about the company's governance and steering system, and the remuneration paid to the CEO and members of the Board of Directors.

[Read the report here.](#)



### Report of the Board of Directors and Financial Statements 2023

A description of the company's operations in 2023 and a summary of its financial results and financial position.

[Read the report here.](#)

### Parent company

Traffic Management Company  
Fintraffic Ltd is responsible for producing ecosystem and group services.

### 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.

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# Five years of world-class traffic management and intelligent traffic services – together

**Fintraffic began its journey five years ago** when Finland was the first country in the world to bring the traffic management of all modes of transport under one roof. Our mission is the safest, smoothest, and most environmentally friendly traffic in the world on the Finnish roads, railways, waterways and in Finland's airspace

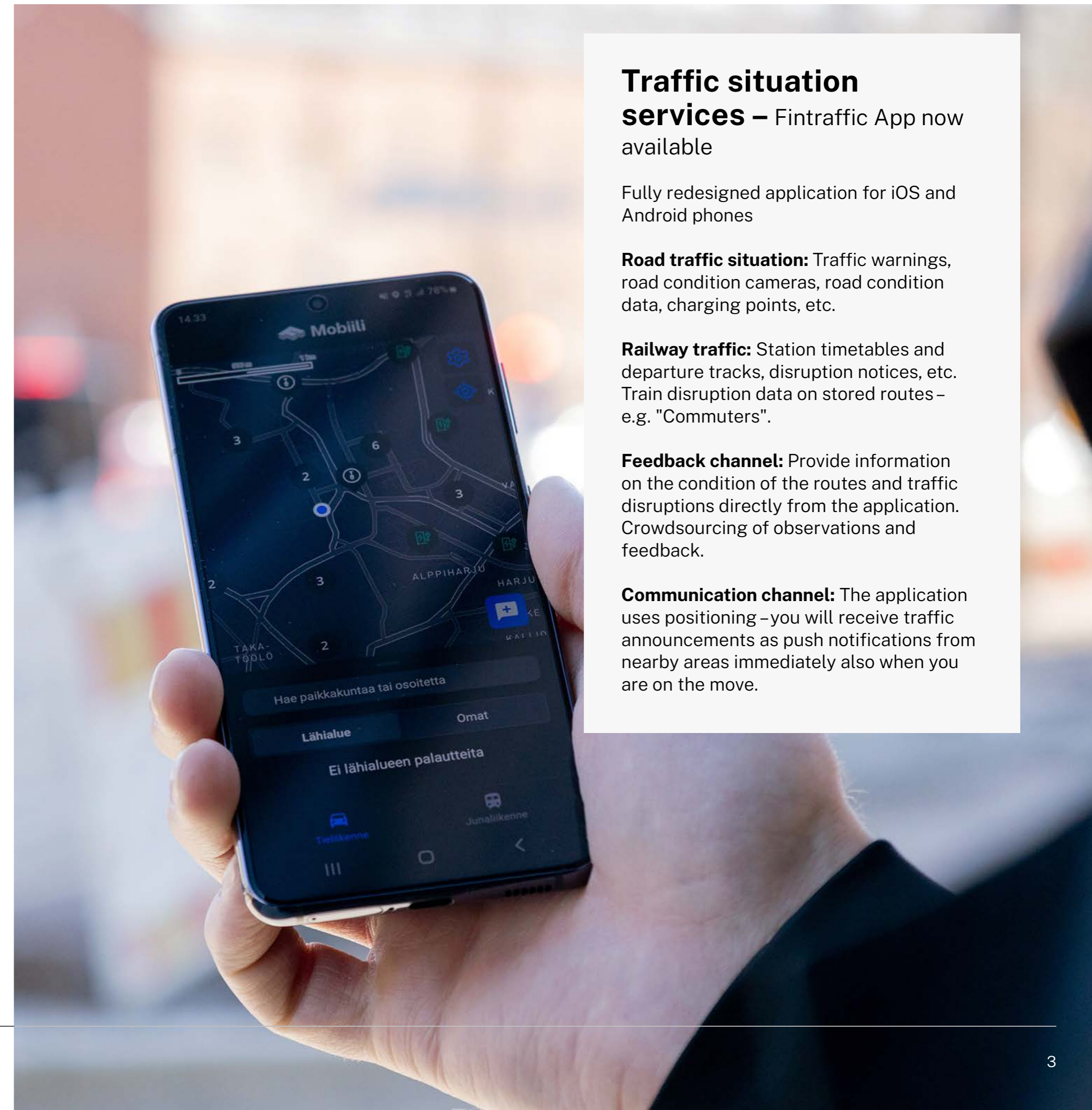
We are a unique operator in our sector and play an important role in ensuring that Finland in its entirety remains functional and competitive. Fintraffic has a superior opportunity to improve the management and mutual cooperation of all modes of transport. This reduces risks, costs and emissions in travel and transport, benefiting citizens, companies and society as a whole.

As a traffic management operator that combines different modes of transport, we have at our disposal a large amount of mobility data that benefits an ever-growing number of users. With the help of open traffic data, data platforms and other digital services, Fintraffic encourages the entire transport

and logistics sector to develop more competitive services of increasingly high quality for households, companies and authorities. This also boosts companies' export efforts.

Integrated and predictive real-time information is needed to ensure undisturbed functioning of transport and logistics systems even in an unstable world situation. Intelligent traffic management services, digital services for companies and consumers and up-to-date traffic information accelerate Finland's development into a pioneer in sustainable transport and logistics.

In five years, our operations have become increasingly welded together. This is reflected in increasingly versatile high-quality services for our customers and in more efficient mode of operation. Fintraffic employees do work that has a meaning for everyone in Finland. With good management, company renewal and a culture that values everyone, we take care of our top experts now and in the future.



## Traffic situation services – Fintraffic App now available

Fully redesigned application for iOS and Android phones

**Road traffic situation:** Traffic warnings, road condition cameras, road condition data, charging points, etc.

**Railway traffic:** Station timetables and departure tracks, disruption notices, etc. Train disruption data on stored routes – e.g. "Commuters".

**Feedback channel:** Provide information on the condition of the routes and traffic disruptions directly from the application. Crowdsourcing of observations and feedback.

**Communication channel:** The application uses positioning – you will receive traffic announcements as push notifications from nearby areas immediately also when you are on the move.



# Year 2023





CEO'S REVIEW

# CEO's Review

Fintraffic's journey as a company that combines different modes of transport began almost five years ago. With our skilled personnel and partners, we have achieved a lot: We have improved traffic safety and reduced traffic disruptions, by means such as our determined efforts to develop the traffic control services and make more comprehensive use of traffic-related data and situational picture. The efficiency of service production in traffic control has improved significantly and traffic emissions have decreased.

**Combining modes of transport** has provided us with an opportunity to examine traffic services as a whole. It allows us to promote the development of travel and transport with an aim to achieve the safest, smoothest, and most environmentally friendly traffic in the world. Thanks to our high-quality traffic management services and world-class experts, we have excellent potential to promote the utilisation of information in the transport sector and to contribute to

increasingly functional travel and transport chains. Our goal is to make Finland a model country for intelligent traffic and logistics while creating new job opportunities, services, and competitiveness.

The implementation of our strategy is crystallised in three areas of operation: the development of traffic control, the construction of productised digital ecosystem services and the promotion of uniform operating practices in Fintraffic.





## Our goal is to make Finland a model country for intelligent traffic and logistics.

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### We continued to develop our traffic control services

The safety situation in traffic control remained at a good level throughout the year, and our services continued to develop.

In **air navigation services**, the traffic volumes fell clearly short of the RP3 performance plan forecasts and, accordingly, no savings were achieved. So, targets were not met in terms of unit cost development in 2023. However, due to the austerity measures taken, the actual costs were below the costs described in the performance plan. The number of flights in Finnish airspace was about one fifth lower than the pre-pandemic volumes of 2019. Strategic projects were systematically promoted, and the preparation of the remote air traffic control project progressed to the tendering phase. Fintraffic maintained its good competitive position as an international air navigation training provider, and Avia College won the tender for training Georgian air traffic controllers.

During the year, **vessel traffic services** potentially prevented 13 vessels from running aground. The reliability of our VTS centres was at a good level. In the previous year, we launched

the project to develop passing areas and passing prohibition areas. The implementation of the project in collaboration with other operators in the maritime transport sector progressed on schedule. We also introduced a new digital Master's Guide service for vessel traffic. It provides ships and other stakeholders arriving in Finnish ports with all important instructions for vessel traffic in one place. The service also improves the route planning and situational awareness of vessels arriving in Finland. We developed digital services with our stakeholders and received recognition for our efforts: NEMO won the global Service Design Award 2023. It was also selected as the most Sustainable Digital Act of the Year.

In **rail traffic management**, we improved the safety level and reliability of rail traffic management services, for example, by increasing the degree of automation and developing preparedness functions. The volume of long-distance train traffic was about 7 per cent lower than in the previous year. The number of commuter trains rose by almost nine per cent, while the number of freight trains fell by about the same percentage. The development and verification phase of the Digirail project was

launched at the turn of the year 2022–2023 when Fintraffic and the Finnish Transport Infrastructure Agency signed the alliance agreement on the implementation of the phase.

In **road traffic management**, we provided nearly 10,000 traffic bulletins about deviations. Traffic in the road network ran relatively smoothly, and large-scale disruptions were avoided. Information flowed between the authorities, such as the police and rescue services, and maintenance contractors. Heavy transport decreased by almost 5%, and passenger car traffic increased slightly by 3%. We were involved in more than 80 different projects to promote the operational and technological development of our services. Our project investments focused especially on improving operational reliability. We carried out lifecycle upgrades in the telecommunications network, road weather stations, and roadside traffic control devices and systems.

### The traffic data ecosystem grew, and cooperation and digital services developed

In addition to its basic traffic management assignment, Fintraffic is tasked with promoting the digitalisation of traffic and logistics in Finland.



This refers to the ability of the entire transport system to produce and utilise data.

We progressed more strongly from conceptualisation to concrete development in both ecosystem cooperation and digital services. In 2023, around 40 actors joined the traffic data ecosystem, currently involving more than 200 organisations. The working groups took several steps forward. We promoted the implementation of the EU eFTI Regulation related to, among other things, digitalisation of transport data. The regulation encourages the digitalisation of freight transport and logistics by reducing administrative costs, improving the authorities' control capacities, and increasing the efficiency and sustainability of transport.

In travel information, we promoted the determination and introduction of uniform standards among the actors involved in all mobility services. With regard to the situational picture, we maintained an active dialogue with various actors to improve the availability of road traffic data. During the year, we also made progress in international cooperation. The international European Mobility Dataspace (EMDS) project, collecting urban mobility data, began. The transport data services export cluster led by Fintraffic was launched with 16 actors.

At the end of the year, we published the Fintraffic App, combining the best functions from the Traffic Situation, Train Departures and Feedback Channel services. Its push messages serve motorists by displaying any road traffic disruptions within a 20 km radius. Everyone using the roads should activate the service!

The information we produce can also be heard on Bauer Media radio channels, where AI voices A.i.no and A.i.mo read real-time traffic announcements. It is great to be involved in pioneering development projects.

### **The importance of traffic data for future transport development**

Our ownership strategy requires us to build a traffic data ecosystem and to enable and develop market-based products and services. I see significant opportunities here. Open traffic data can be utilised to prevent congestion and to make the transport system more efficient. According to EU calculations, by ensuring better utilisation of traffic data in the mobility of people and goods and in the procurement of transport services, Finland could achieve annual benefits of up to hundreds of millions of euros.

Fintraffic plays an important role in building the impact of the traffic ecosystem. According





# The traffic system could not be developed successfully without us all working on it together with committed personnel and partners.

to a study completed last summer, Fintraffic is expected to produce an impact of EUR 10–40 million per year, but our impact potential is estimated to be significantly higher than that. The development of digital ecosystem services aims at maximising the potential of data.

## Corporate responsibility is at the core of our operations

Ensuring traffic safety and preventing accidents is one of Fintraffic's core tasks. We are making determined efforts to significantly reduce emissions throughout the entire transport system in Finland, for example, by optimising routes and speeds, preventing congestion and improving the flow of information between operators to prevent and resolve disruptions.

We have started preparing for the enforcement of more stringent legislation on sustainability reporting (CSRD) in the future. We carried out a double materiality analysis, which involved, in addition to working in workshops, interviewing our key partners and asking our personnel for their views on what they consider as the most important sustainability themes in our activities.

The list of material topics for us includes climate change mitigation, prevention of natural

pollution, good working conditions, equal treatment of our personnel, the impact and accessibility of our services, promoting transport safety and the overall safety of society, and good governance and cost-effective use of tax resources.

## Outlook for the future

As Finland has joined NATO, our international activities and tasks will increase. Security is important to us, and we invest in preparedness, continuity of operations and the development of information and cyber security in all our operations.

We will continue to build the opportunities for utilising digitalisation and data analytics together with stakeholders who utilise traffic data. Artificial intelligence is an important and topical technology. The potential for using it will increase in many knowledge-intensive fields, which makes it an issue of current interest for us as well.

The use of AI requires that we all learn new things. Therefore, we encourage our entire personnel to get acquainted with it and to educate themselves.

Our operations and development would not be possible without our committed employees. As shown by surveys, their satisfaction with their work community has increased over the years,

which I am particularly pleased about. In fact, over 80% of our employees feel that their work is truly meaningful.

I would like to thank our customers and partners as well as the operators involved in the data ecosystem work for their excellent cooperation and approach to development. We operate in such a complex world that the transport system could not be developed successfully without us all working on it together with committed personnel and partners. We have already achieved a great deal, but I dare to promise that we will see more great innovations and leaps in development in the coming years as well.

I took up the position of Group CEO with great enthusiasm in June, and during the autumn I got to learn more about the operations. I would like to extend my warmest thanks to Pertti Korhonen for his strong contribution to building the company. We are currently well positioned to move forward with our competent personnel and the Finnish transport sector towards and even safer, smoother and more environmentally friendly transport system.

**Pia Julin**  
CEO





# Key figures 2023

Turnover

EUR **242.2** million  
(228.9)

Operating profit

EUR **6.3** million  
(7.6)

Average number of personnel

**1,160**  
(1,133)

Supervisory work index

**4.2**  
(4.2)

Number of serious accidents resulting from Fintraffic's operations

**0**  
(0)

Prevented possible groundings of maritime vessels

**13**  
(21)

Operators in the ecosystem approximately

**200**  
(160)

Interface calls made to Digitraffic

**4.7** billion  
(4.25)

Emissions saved in road and air traffic

**94,000** tCO<sub>2</sub>e  
(78,100)



# Said about us

In urban environments, future transport will be based on seamless cooperation between infrastructure solutions and intelligent transport systems, which is guided by information. Acting as a pioneer, the City of Tampere is piloting C-ITS solutions in traffic lights together with Fintraffic. With the help of C-ITS solutions and services, accurate and faster exchange of information is already enhancing the safety, smoothness and predictability of urban transport. C-ITS data will also be used by the automated transport systems and networked vehicles of the future.

— **Mika Kulmala**, Urban Environment Service Area, City of Tampere

The real-time digital management application for shipping and port traffic developed by Fintraffic expands the overall operational management of ports. New tools that improve logistics efficiency and promote the overall picture are constantly being linked to the Port Activity application. It makes me wonder why we didn't invent the app any earlier! Shipowners, ports, agents, pilots, stevedores, forwarding and other actors can all simultaneously obtain the same information and an understanding of what is happening elsewhere and when. It makes all work-related elements more specific and efficient. At Kaskinen port, we have seen how much the app helps us in identifying bottlenecks in logistics chains and minimising their occurrence. It is also worth noting how convenient the app is to use and how well it works visually.

And this is just the beginning. When Port Activity is connected to future Nemo and Master's Guide systems, it will open a new era in maritime and port logistics.

— **Patrik Hellman**, Port of Kaskinen

The Digirail project is a versatile project package that will revolutionise the Finnish railway system at various levels. Cooperation will play a key role in its success.

The participants include actors from many railway organisations that share a common goal: to provide the best for Finland together. With their extensive impacts extending far into the future, the matters being addressed may not be among the easiest ones to solve. In spite of this, cooperation with Fintraffic experts has been close, interactive and constructive. We have found solutions through open and honest dialogue. The perspectives may differ from time to time, but our actions are guided by a common goal. It is important for me that, even in the midst of busy schedules, we remember that we should not compromise any qualitative objectives for the sake of momentary benefits. Every solution must be better than the earlier one, as we will be living with the effects brought about by the project for a long time.

I'm proud that together with Fintraffic experts we have the opportunity to build this unique project that shapes the future of Finnish railways. I believe Digirail to be a success story that will significantly improve the competitiveness, safety and attractiveness of Finnish rail transport.

— **Jonas Eriksson**, Digirail Project Manager, VR

Read more: [www.digirata.fi](http://www.digirata.fi)

## YEAR 2023

## STRATEGY

## BUSINESS

## RESPONSIBILITY

Collaborating with Fintraffic's air navigation services, we tested challenging unmanned Beyond the Visual Line of Sight (BVLOS) drones and related solutions in autumn 2023. The implementation of demanding BVLOS flights requires solutions related to such matters as licensing, airspace management, flight equipment and telecommunications. One of the key testing tools was a flight lane system created specifically for drones. Within the system, the drones used airspace services and operated safely in a controlled airspace together with other aircraft. The flight plans were created and activated and the flights were monitored using UTM tools (app for monitoring unmanned flights). It was operated by an air traffic controller.

Test flights were carried out in Oulu between the archipelago, the city centre and the airport. In terms of distances and destinations, our project was unique, and we gained very positive experiences. When the use of unmanned aircraft becomes more common in the future, especially sparsely populated areas with difficult terrain will certainly be areas where they will be operated.

— **Timo Lind**, Principal Scientist at VTT

Read more: [Fintraffic and VTT tested special solutions for drones on some of the most demanding test flights done in Finland](#)

Bauer Media, the market leader in commercial radio, offers AI-enriched, real-time local traffic announcements to radio listeners in collaboration with Fintraffic. This is a socially significant project the kind of which has not previously been implemented in Finland. Above all, the purpose of the service is to improve road safety by creating a better and preventive traffic information service for listeners of Bauer Media radio channels. The service will benefit especially the transport sector, which is mainly active at night.

The use of artificial intelligence has come to stay in the radio business. The media revolution obliges us, but at the same time also gives us the opportunity to implement these revolutionary reforms that will serve the whole of Finland.

— **Sini Kervinen**, Head of Innovation, Bauer Media

Read more: [Bauer Media to start broadcasting targeted traffic bulletins produced locally using artificial intelligence on the radio](#)



# Business areas in brief

## Air Navigation Services



Revenue MEUR 74.2 (68.5)  
Personnel 420 (423)

### Our services

- managing Finland’s airspace and providing air route services and air navigation services at 22 airports in Finland
- the design and maintenance of air navigation infrastructure and systems in Finland, and technical maintenance services at five airports in Sweden
- special assignments related to air rescue and area surveillance
- training and consulting services

## Vessel Traffic Services



Revenue MEUR 20.0 (19.5)  
Personnel 100 (99)

### Our services

- vessel traffic services
- safety radio operations
- monitoring international waters
- radio navigation services
- maritime situational awareness services for authorities
- digital maritime traffic services for vessels and stakeholders
- expert and consulting services
- maritime traffic notification services for vessels, vessel representatives and authorities
- services and development projects that increase the environmental efficiency of maritime traffic

## Rail Traffic Management



Revenue MEUR 90.1 (82.5)  
Personnel 477 (468)

### Our services

- rail traffic management
- traffic planning to coordinate trackwork and rail traffic
- capacity management
- control centre operations
- passenger information services for train travel
- responsibility for the safety control room and quality control room
- expert and training services

## Road Traffic Management



Revenue MEUR 54.9 (55.0)  
Personnel 91 (87)

### Our services

- road traffic control and management services at Traffic Management Centres
- traffic control systems for tunnels, sections of open road, and border crossings
- control and operating systems for traffic lights, and automatic infrastructure for speed limit control
- road weather equipment, systems and analytics
- traffic measurement and analytics

## Traffic Data Ecosystem



### Our services

- promoting cooperation with traffic sector operators: enabling and coordinating data ecosystem activities
- developing digital traffic infrastructure: a technical data platform, data and basic digital business services
- A digital rulebook: templates, standard contracts, cooperation and data transfer standards
- continuous development of our existing services: Fintraffic App, Digitraffic, Traffic Situation, Feedback Channel Digitransit, Finap



# This way we have succeeded over the past five years

At the beginning of 2019, Finland made history when it became the only country in the world to unite its traffic control on land, at sea, and in the air under a single operator: Fintraffic. In the following, a few examples of what we have accomplished in five years:

**We have improved road safety** and reduced traffic disruptions. This is the result of various developments, such as our determined efforts to develop our traffic control services and make more comprehensive use of traffic-related data and situational pictures.

**Our production process for traffic control services has improved**, allowing us to provide more for the same amount of money spent.

**We have accelerated the development of services related to traffic control and data.** We have also enhanced the ways in which we share the competence gained in different modes of transport.

**We have adopted new solutions in our traffic control services to improve the safety, smoothness, and environmental friendliness of Finnish traffic.** One example of this is the new traffic information displays on Ring Road III, which inform drivers of road deviations or congestion. This service also makes use of the data collected by the Waze service.

**The reputation of Fintraffic among the general public have been steadily growing.** Our services



impact the daily lives of all Finns, and we are seen as experts in the field of traffic and road conditions almost daily, also through the media.

**So far, we have managed to recruit over 200 organisations to the traffic data ecosystem**, the aim of which is to create new operating models for the traffic sector, improve operational efficiency by sharing and utilising data, save costs by sharing development resources, and reduce traffic emissions.

**Finland has reached record levels in the use of traffic data**, and its prevalence is more extensive than ever before.

**And all of this has been the handiwork of Fintraffic's dedicated personnel, whose work satisfaction continues to increase year-on-year. In fact, over 80% of our employees feel that their work is truly meaningful.**



# 2023 highlights

## ROAD TRAFFIC

- For the first time, we tested wireless data exchange between intelligent traffic lights and vehicles using European-wide standards.
- Road Traffic Management and Telia joined forces and utilised mobile data to produce national road traffic information. It enables provision of more detailed analyses of road traffic flows.
- The range of traffic data shown to road users by the changing traffic information displays was expanded. It now includes also expected driving times and deviations in them. The data is based on Fintraffic's own traffic data and real-time situational information collected by Waze.



## MARITIME TRAFFIC

- The Port Activity application, providing real-time vessel and port information, was supplemented with a new feature, emission calculation.
- The STM Efficient Flow project made it to the finals in the competition for REGIOSTARS awards. The project aims to improve the efficiency of information exchange and save fuel.
- The Maritime Traffic Notification Service NEMO was crowned champion at the 2023 Global Service Design Awards in the Professional Commercial Category. In addition, NEMO was selected as the most Sustainable Digital Act of the Year.
- The Fintraffic Master's Guide online service was opened for users. It provides ships arriving to ports in Finland and other stakeholders with all the important instructions for vessel traffic through a single service.

## AIR NAVIGATION SERVICES

- Ivalo Airport transitioned to a new ATS system in the provision of air control services. A smoother air traffic control service better enables continuous descents and take-offs. This will bring airlines savings in fuel costs and reduce environmental emissions.
- New records were made in the volume of seasonal traffic operations at Lapland airports in the winter season 2023–2024.
- The tendering process on the remote air traffic control project was launched in December.
- Avia College won a tender for the training of Georgian air traffic controller students.

## RAIL TRAFFIC

- The development and verification phase of the Digirail project started.
- The multi-year Southeast Finland remote control system project (KAKO) was completed.
- The capacity management system was expanded.
- The rail yard traffic control was transferred in its entirety from the Finnish Transport Infrastructure Agency as a service provided by Fintraffic.
- A 15-credit module on the basics, systems and safety of the railway sector was implemented in cooperation with HAMK Häme University of Applied Sciences.



## TRAFFIC DATA ECOSYSTEM

- Around 40 actors joined the traffic data ecosystem, currently involving about 200 organisations.
- We published the Fintraffic App, which provides motorists and train passengers with real-time information on Finnish road and rail traffic.
- We developed the capabilities of route planners to show passengers new kind of information: a travel chain from Finland to Estonia, emissions calculator and information on the occupancy rate of buses.
- SITRA selected Fintraffic's work on the Traffic Data Ecosystem Rulebook on its list of the most interesting data economy solutions.
- We started implementing the EU eFTI Regulation related to digitalisation of transport data.

## PERSONNEL AND SAFETY

- In the HeiaHeia campaign, 394 Fintraffic employees collected exercise points and virtually explored Fintraffic's locations. A total of 34,244 kilometers were covered, and approximately 62 million steps were taken during the campaign.
- The employee benefit of a company bicycle was popular, with over 250 Fintraffic employees using it by the end of the year.
- We increased significantly our own financial investments and increased the number of personnel to elevate the level of information and cyber security throughout the group.
- The sickness absence percentage was excellent and decreased from 2022 (2.4% vs. 3.6%). Mental health-related absences decreased by 30.8%. Sickness absence costs decreased by an estimated €1.7 million (€3.6 million vs. €5.3 million).
- Mapping of strategic competencies commenced with competency definitions.
- The overall index of employee satisfaction surveys was 3.9 (compared to 3.8 the previous year). The eNPS (Employee Net Promoter Score) was 23 (0). Success in key areas of operation was rated at 3.9 (3.7), supervisor work at 4.2 (4.1), and the realization of values in everyday life at 4.0 (3.8).



# Strategy





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

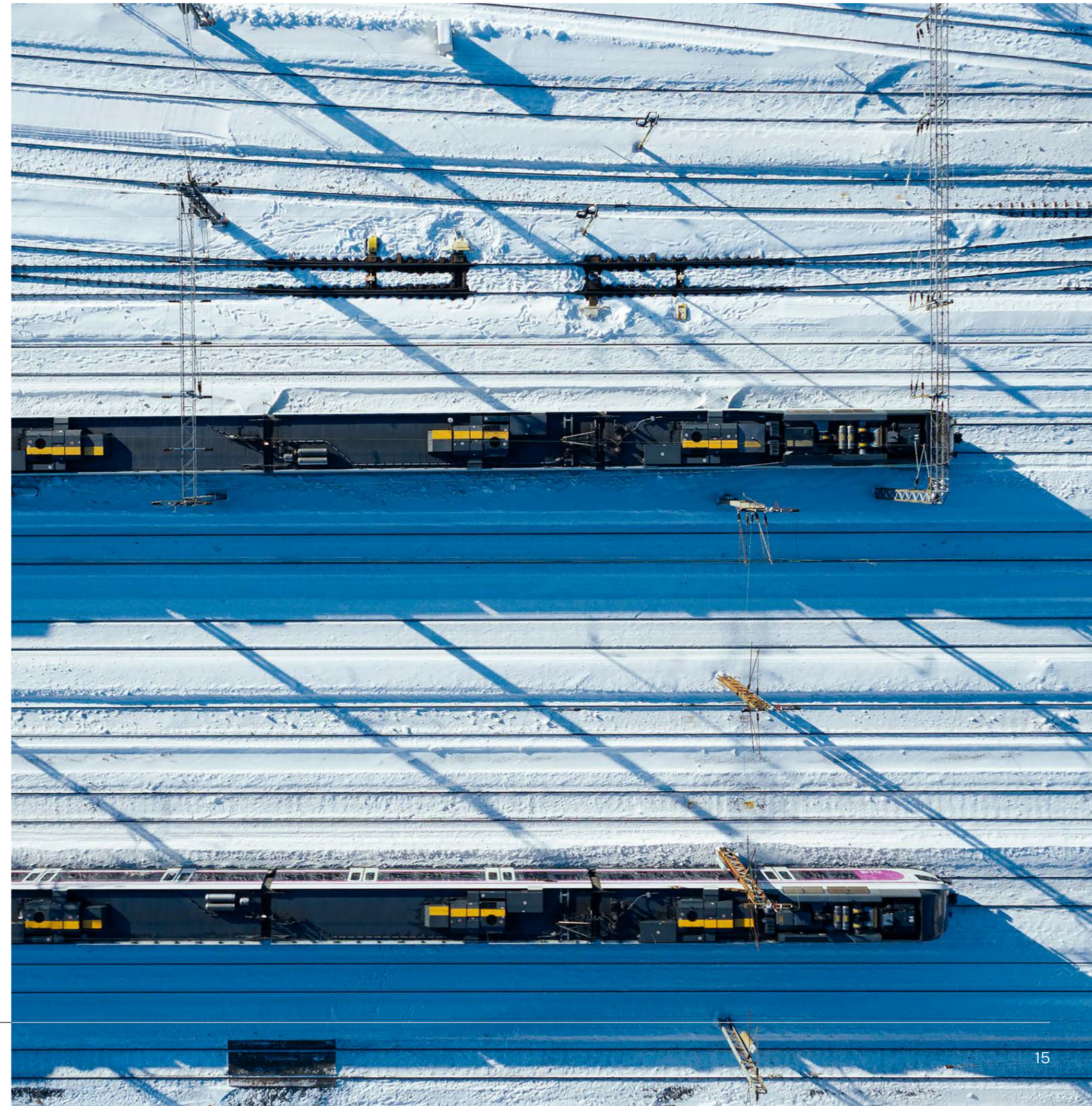
Our goal is for Finland to have the world's safest, smoothest and most environmentally friendly traffic. Responsibly produced world-class services and close cooperation with transport sector operators will accelerate Finland's progress towards becoming a pioneer in sustainable and efficient traffic. This is important with a view to reducing transport emissions and risks and minimising transport costs. The benefits we bring to society are at the heart of our strategy.

**Our strategy is based on** Fintraffic's ownership strategy, which was approved by the Government on 16 October 2019. It defines Fintraffic's duties as follows:

1. To provide and develop the traffic control and management services required by society, commerce and the authorities.
2. To provide and develop traffic control and management services to meet the needs of defence and security authorities.

3. To collect and utilise data related to traffic management and provide it equally to other operators; and to create opportunities for new business based on automation and the broader use of both data and new business models.

**Vision:** The safest, smoothest and most environmentally friendly traffic in the world.





## In 2023, we implemented our strategy through three programmes:

### 1. Productised digital ecosystem services

We develop and offer productised digital services for application developers, companies and end users. We promote cooperation across the sector in the traffic data ecosystem. Thanks to cooperation and high-quality platform services, we are building a digital traffic twin piece by piece and better functioning travel and transport chains.

### 2. Traffic control development

Our goal is to offer the safest, most reliable and most efficient traffic management services in the world.

### 3. A unified Fintraffic

We have a strong unified corporate culture and shared values. We work together and in a uniform manner. We have a high job satisfaction rate.

We have world-class expertise, we point the way in the sector and we are an esteemed operator. Our leadership is human-oriented and respectful. Our management system is efficient and responsible.

## What progress did we make in implementing our strategy in 2023?

1. Traffic management services worked reliably and to a high standard in all modes of transport throughout the year.
2. Progress was made in the development of traffic management systems. The implementation of the information and cyber security development programme continued.
3. The efficiency of service production continued to improve. We aim to enhance the efficiency of the provision of services to the Finnish Transport Infrastructure Agency by EUR 30 million between 2023 and 2027. We have already achieved a cumulative improvement of EUR 30 million in the same services between 2019 and 2022.
4. Approximately 200 companies are already involved in data ecosystem work to promote the digitalisation of traffic.
5. Fintraffic progressed as planned in its development of digital services for companies, authorities, application developers and consumers, and the use of the services increased. For example, we published the free Fintraffic Mobile app.

6. The volume of data we shared was 11 per cent higher than in the previous year. In 2023, 4.7 billion interface calls were made.
7. The creation of a more unified operating model progressed and started to generate clearer benefits, such as:
  - Wellbeing at work in the work community continued to develop positively.
  - Employees feel that our values are realised in daily activities even better than before.
  - Our joint Fintraffic brand became better known and was regarded more attractive among the general public.
  - The joint annual schedule and practices in operational planning created visibility and helped us prioritise resources for the most important joint development activities.





## Operating environment

Well-functioning transport and logistics connections are Finland's lifeblood. This applies to both international connections and mobility and transport within the country.

The world's logistics system has been disrupted by both the coronavirus pandemic and Russia's war of aggression. This has been reflected in higher prices, disruptions in deliveries, and longer delivery times for components, raw materials and daily consumer goods. High energy prices are increasing travel and transport costs for both households and companies.

The war has also turned Finland into the cul-de-sac of Europe, as our position as a hub between Asia and Europe has weakened and we have fewer international connections. Finnish products now have a longer journey to export markets, which increases their carbon footprint and weakens price competitiveness. Markets and customers are placing more and more emphasis on the carbon footprint of products, of which logistics forms a part.

In the future, the ability to utilise data and automation will play a key role in the efficiency and service level of the transport system.

The ever-decreasing cost of technology, faster data connections, the development of artificial intelligence, and the convergence of transport, energy and communications networks offer new opportunities for improving traffic safety, efficiency and services. When data is utilised more efficiently and in real time, different modes of transport can be combined into functional travel chains. Goods can also move more easily, as waiting times are reduced and fill rates improved.

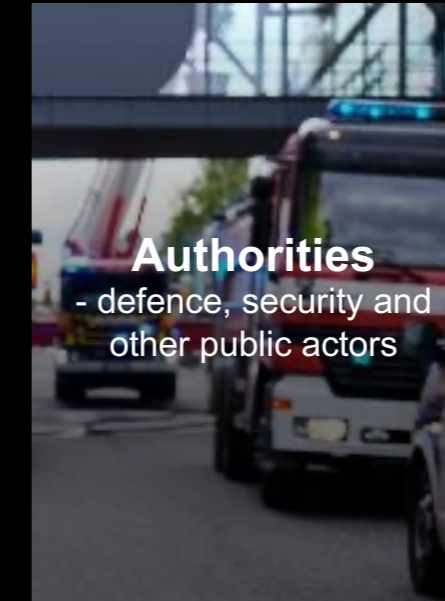
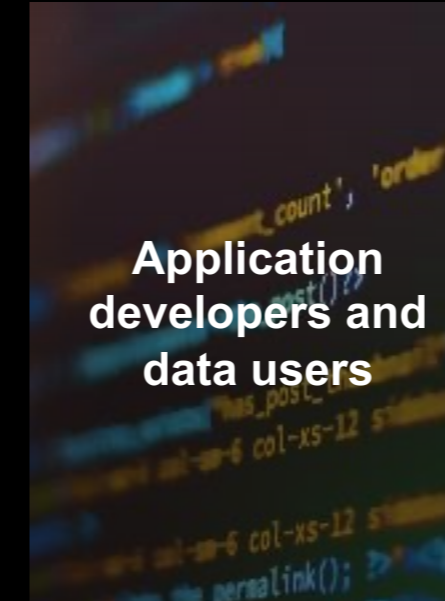
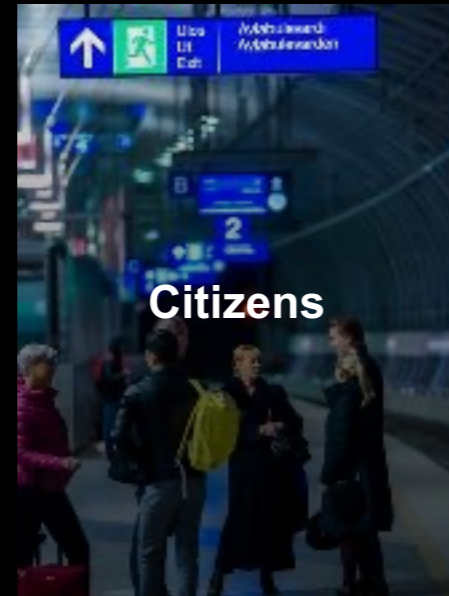
Competitive and low-emission logistics are important for the competitiveness of Finnish companies. This offers unique business opportunities for companies providing traffic digitalisation services in both domestic and export markets.

## Conclusions on the operating environment

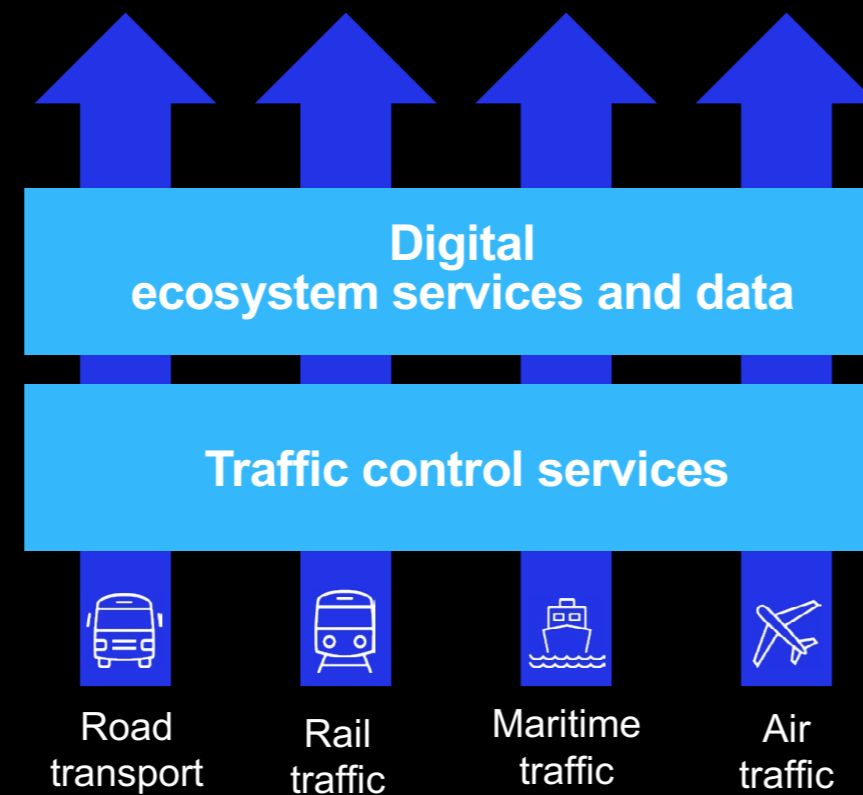
1. There is growing demand for solutions that reduce traffic emissions. The market share of passenger cars remains high.
2. The efficiency of logistics chains must be improved in order to reduce the competitive disadvantage caused by Finland's geographical position.
3. Increasing the digitalisation level of Finland's traffic system holds great potential for improving its efficiency, sustainability and services. Not only State but also cities need support in this matter.
4. The scarcity of public financing, combined with subdued demand for air traffic services, is putting increased pressure on Fintraffic to streamline its operations.
5. Russia's war of aggression has highlighted the importance of reliability, preparedness and information security in Fintraffic's services.
6. Functional and competitive travel chain services are equally important. Accelerating the market requires removing many barriers.
7. The smart transport market is growing, and the transport sector may become one of Finland's economic growth sectors.
8. Legislation on transport and the data economy is changing, offering new opportunities to promote digitalisation.
9. The increasing frequency of extreme weather phenomena, combined with a backlog of infrastructure repairs, will pose challenges for traffic flow while also creating a greater need for traffic management services and higher expectations of them.

# Fintraffic's customers and services

## Customers



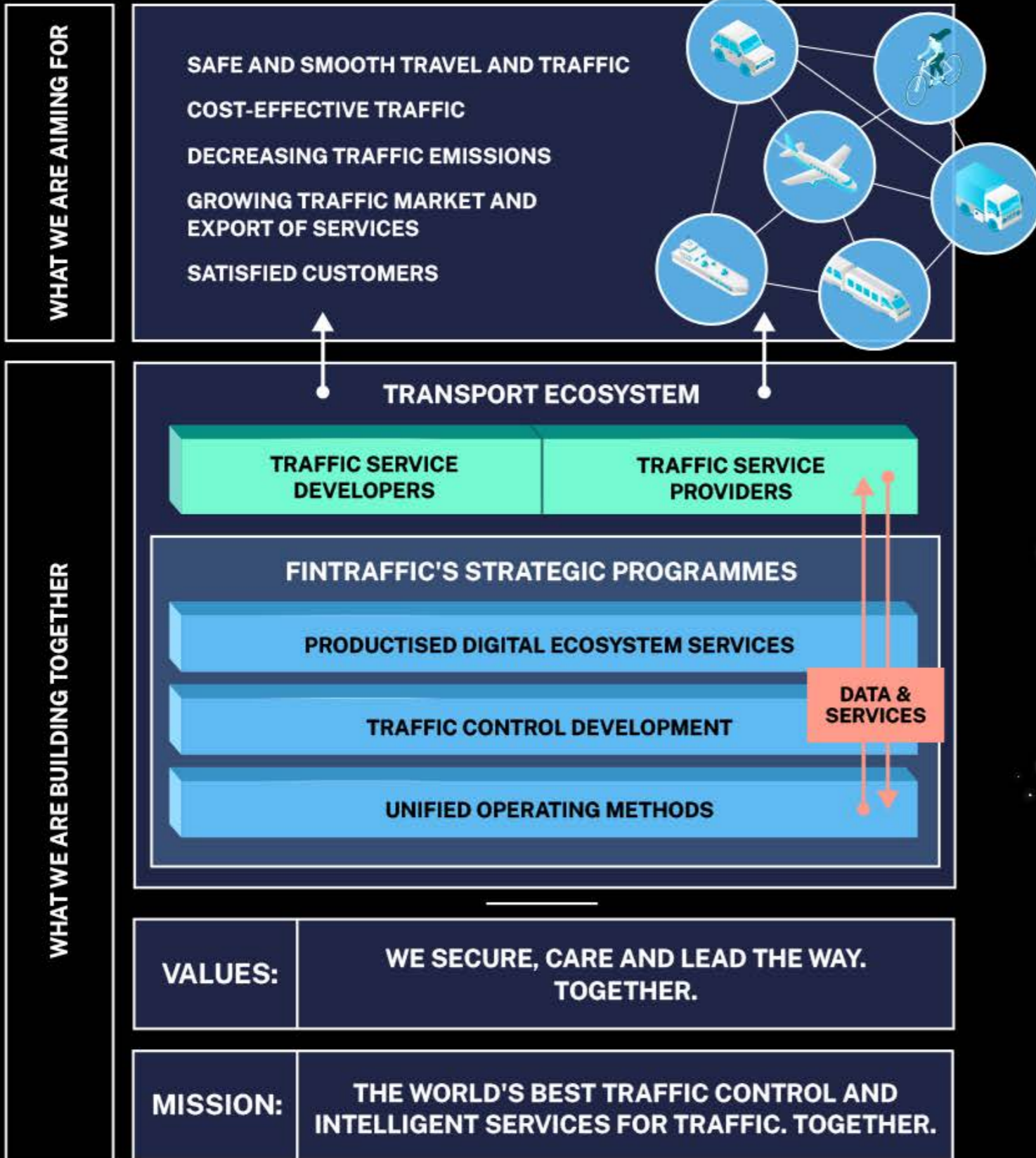
## Services and their continual development



- Digital end-user services: Situational picture of traffic, public transport information services, logistics information services, services for various customer groups
- Traffic data platform services: data collection, processing and sharing, implementation of crowdsourcing and a digital twin
- Promoting a traffic data ecosystem
- Traffic control and management
- Services for the defence and security sectors
- Training and consulting



# FINTRAFFIC STRATEGY 2023-2027





RESPONSIBILITY

# Responsibility at the centre of Fintraffic's core activities

Responsibility has been integrated as a key part of Fintraffic's decision-making. As a state-owned special assignment company, our role in the resilience issues in the transport sector is great.

**On a global scale**, we are an exceptional company, as we are responsible for controlling all modes of transport and providing traffic data and services to a wide range of stakeholders. As a special assignment company of the Finnish government, we play an important role in solving sustainability issues related to transport, such as reducing emissions and improving traffic safety.

We want to meet the expectations placed on state-owned companies, which is why we have integrated responsibility into our decision-making. Our strategy revolves around the financial, social and environmental impacts of our operations, so

that we can be among the forerunners in safety, harnessing digitalisation, caring for people and transport safety.

We support Finland's goal of being carbon neutral by 2035 and the Paris Agreement's objective to limit climate change to 1.5 degrees. We are committed to promoting the Sustainable Development Goals of the United Nations (Agenda 2030). Through our operations, we aim to both promote the achievement of the goals and reduce the negative impacts against them. We have identified six SDG goals which play a key role in our activities and for our stakeholders and

which we can specifically influence. The goals are 3, health and well-being, 4, good training, 5, gender equality, 8, decent work and economic growth, 9, sustainable industry, innovation and infrastructure and 13, climate action.

We have identified the impacts of climate change on our business and the impacts our operations have on the climate, the environment and biodiversity. Enhancing the efficiency of transport and logistics will make a significant contribution to achieving Finland's climate targets.

Operating in the transport sector makes it vital for Fintraffic to ensure safety. Our core task is to ensure overall traffic safety. Russia's war of aggression in Ukraine and Finland's membership in NATO have increased the need for measures to develop management of information and cybersecurity risks and preparedness.

In recent years, Fintraffic has invested heavily in accelerating information security management methods. In addition, the construction of an ISO 27001-compliant management system and ensuring compliance with the NIS2 Directive in all modes of transport is under way. Fintraffic has been subjected to denial-of-service attacks, but their impacts have been limited thanks to information security development.

## Our focus areas in the fight against climate change are:

- prepare for extreme weather phenomena
- improve transport efficiency (fuel and emissions savings)
- promote low-emission modes of transport
- energy and material efficiency and emission reductions in our own operations
- reduce the environmental impact of procurement.



**Our core task is to ensure overall traffic safety.**



STRATEGY AND IMPACT

# Benefits for the whole of Finland: developing services with less disruptions and emissions, and shorter waiting times

Fintraffic’s services and open data have an extensive impact on the functionality and safety of the traffic system, the accessibility of Finland and its different regions, the daily lives of households, the operations of companies, and the Finnish society as a whole.

**Together with our partners**, we aim to help the transport system generate benefits for society in areas such as:

1. Safe and smooth travel and transport
2. Cost-effective transport
3. Reduced transport emissions
4. A growing transport market and service exports
5. Satisfied customers

Traffic management services, digital services for companies and consumers and up-to-date traffic

information accelerate Finland’s development into a pioneer in sustainable transport and logistics.

There is enormous potential for improving the efficiency of the traffic system: in 2022, the logistics costs of Finnish companies averaged 13.8 per cent of the turnover (Logistics Report 2023, University of Turku). In 2022, Finnish households spent 13.5 per cent of their disposable income on travel (Statistics Finland 2023).

If travel and transport chains were five per cent more efficient, through shorter waiting times, for example, households’ travel costs would decrease

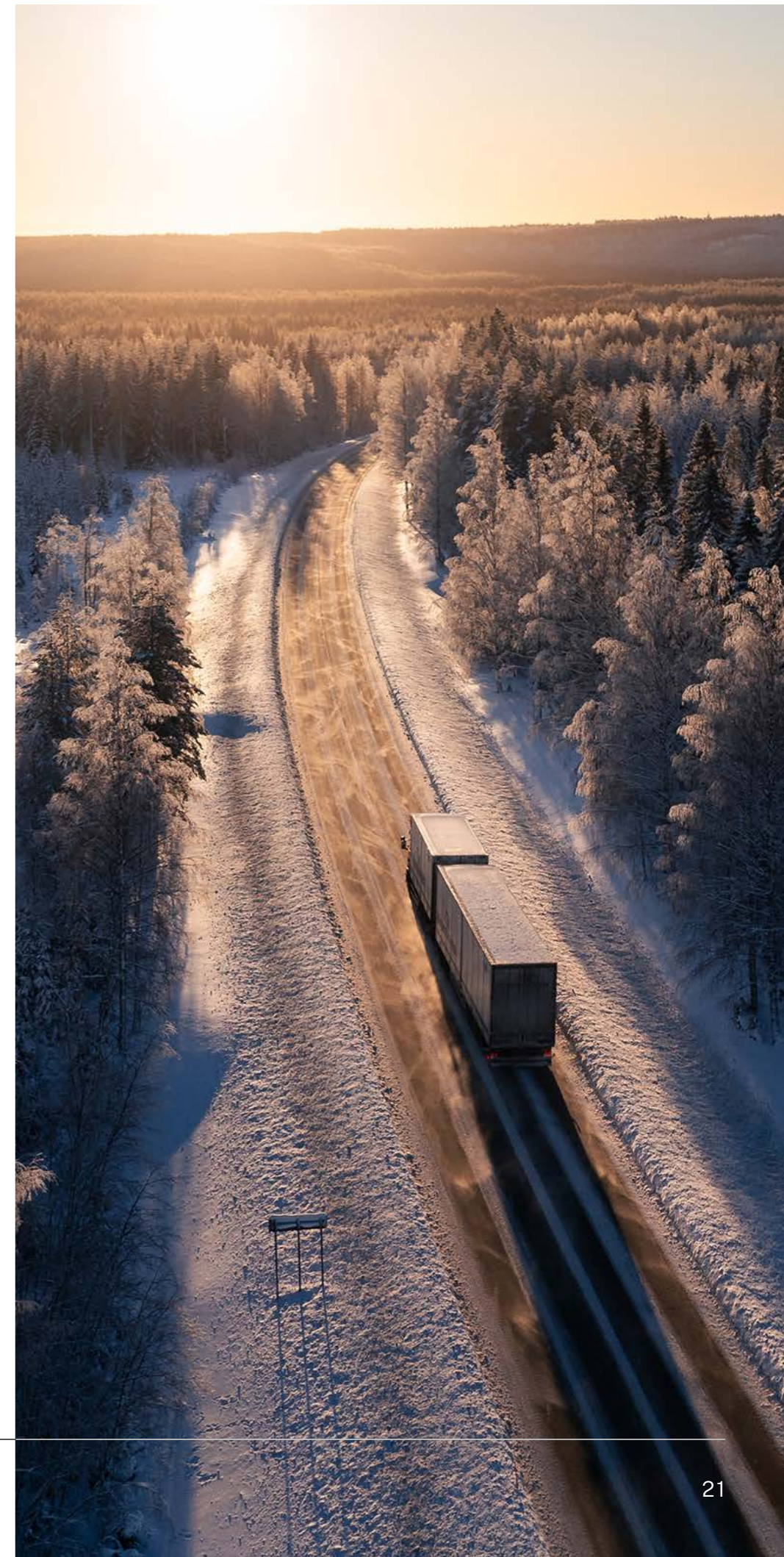
by approximately EUR 700 million and companies’ costs by EUR 2.5 billion. Increased efficiency would also do a great deal to reduce emissions from traffic.

Fintraffic’s services reduce climate emissions from transport by more than their production causes. Our carbon handprint is therefore considerably larger than our footprint.

## How we make an impact

This is how we generate benefits for Finland:

- Accelerating the development of new travel and logistics services with the aid of digitalisation and a common set of rules and practices for the sector
- Maintaining and sharing a real-time situational picture of traffic, open data
- Optimising routes and speeds to combat congestion and reduce emissions through traffic management services
- Improving the flow of information between operators to prevent and resolve disruptions
- Increased efficiency through automation
- Making investments in traffic routes and using data to optimise their use and maintenance





	Proportion of continuous descent approaches (main airport)	Air route efficiency	Unit price for air route services
Finland	63%	96.68%*	€44
Sweden	46%	98.26%	€74
Norway	58%	98.70%	€46
Denmark	46%	98.55%	€60

Source: Eurocontrol

\* Air route efficiency is being affected by sanctions on Russian airlines and the use of international waters

- Increasing the attractiveness of public transport, for example, by reducing the impacts of disruptions and building more uniform datasets for the use of public transport operators
- Sharing data and providing traffic management services to support effective action by the authorities

Read more about the means of traffic management to generate benefits for the transport system and society in the sections on each business area on pp. [25–43](#).

### The data economy already creates hundreds of millions of euros in value for transport

In addition to transport mode-specific traffic management services, Fintraffic impacts society by promoting the interoperability of transport modes and the operation of the transport system as a whole in many ways.

We are working with a variety of other operators to build a data ecosystem that is open to everyone in the traffic sector. Enhanced utilisation of data within this ecosystem will help to promote the development of new services. The traffic data ecosystem coordinated by Fintraffic aims to provide competitive and scalable transport and mobility services for both Finnish and international markets – solutions that will enable

safe, low-emission and user-oriented travel and logistics chains that combine different modes of transport.

Based on EU Commission reports, the data economy already generates value counted in hundreds of millions of euros in the transport sector in Finland. According to a study conducted by Fintraffic and the consulting firm FLOU in 2023, Fintraffic's share of the transport data economy is approximately EUR 40 million.

The data ecosystem generates direct benefits for the business operations of companies operating in the transport sector, but also indirect impacts at the societal level. Traffic data has helped develop services for different actors that have benefited companies and increased people's wellbeing. For examples, see p. [40](#) (the section on traffic ecosystem).

### The digitalisation of traffic creates new opportunities

By making information openly available and combining real-time data, it is possible to optimise the mobility of people and goods to a new level. The port app developed by Fintraffic is a good example of a digital service that promotes traffic functionality. Information is sent to a variety of operators, who can then use it to optimise

the speeds of ships and trucks. And all this accumulated efficiency has a major impact.

Data can be collected and processed from Fintraffic's own sources and its partner network, but things also work the other way around. Through crowdsourcing, we can also harness the data produced by transport users and increasingly intelligent vehicles.

In rail traffic, track capacity can be significantly increased with the aid of new train control systems (the Digirail project), which is a good example of the possibilities afforded by digitalisation in rail traffic. Several digitalisation-based development projects are also underway in other modes of transport, and they will pave the way for optimising the entire transport ecosystem. They include improving information exchange in road traffic control, creating a situational picture of Finland's lower airspace, introducing digital consignment notes, and providing a maritime traffic notification service.

Fintraffic's share of the transport data economy is approximately EUR

**40**  
million.



# Direct impact of Fintraffic's services 2023

## Air navigation services

1. No accidents or serious incidents resulting from air navigation **0**
2. The lack of delays in Finnish airspace saved **351,000 flight minutes** (= EUR 35 million) and reduced **CO<sub>2</sub> emissions by 58,500 t** vs the EU average\*
3. The optimisation of Finnish air routes has reduced **CO<sub>2</sub> emissions by 2,400 tonnes** vs the EU average
4. Continuous descent approaches reduced **CO<sub>2</sub> emissions by 15,500 tonnes** vs the EU average\*
5. Efficient air navigation services for Finnish air traffic – low service charges saved EUR **8,4 million** vs the EU average\*

\* Calculations are based on Eurocontrol values

## Rail traffic management

1. No accidents resulting from traffic control **0**
2. Rail passenger safety was ranked **1/29** in the EU.
3. Rail traffic reduced **calculated emissions by 350,000 tonnes\*** of CO<sub>2</sub>, which is equivalent to the annual emissions from more than 380,000 passenger cars
4. The punctuality of Finnish rail traffic: **83.6%** (Sweden 71%)
5. Stakeholder satisfaction with traffic management services as a whole: **3.83**

\* Assumes that rail traffic replaces road traffic in passenger traffic

## Road traffic management

1. Road traffic management services led to a reduction in accidents resulting in personal injury, about **200** per year\*
2. Travel time saved: **16,000 vehicle hours** per year\*
3. A reduction in CO<sub>2</sub> emissions from road traffic: **18,000 tonnes** per year\*
4. Services generated economic benefits for society worth **EUR 90 million** per year\*

\* Based on a calculated estimate. Impact compared to a situation in which no traffic management services were produced

Source: Fintraffic Road Analysis, based on VTT NEXT-ITS 2 Evaluation

## Vessel traffic services

1. **20** possible incidents prevented in vessel traffic, of which **13** were vessels prevented from running aground
2. Real-time ETAs for ships (port call schedules) streamline operations at ports, leading to a **5%** increase in satisfaction among stakeholders (4.45/5)
3. Maritime traffic control proactively intervened about **11,000 times** to ensure safe and smooth vessel traffic\*

\* Intervention = information, guidance and warnings

## Ecosystem development

1. Operators committed to the data ecosystem: **200** operators
2. Overall perceived benefit of the ecosystem (scale 1–5, Survey Dec/2023)
  - score for the ecosystem's activities in general (**4.02**)
  - benefits for ecosystem operators' own business (**3.95**)
3. **11%** growth in the volume of data shared in Fintraffic's ecosystem
4. Number of interface calls to the Digitraffic open data service: **4.7 billion**
5. The value created by Fintraffic for the transportation data economy is approximately **40 million euros**
6. Number of companies offering travel chain brokerage and combination services: **60** (**50** in 2019, Traficom: Transport Market Review)



HOW WE CREATE VALUE FOR SOCIETY

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

## THIS IS WHAT WE DO:

### Value creating traffic ecosystem



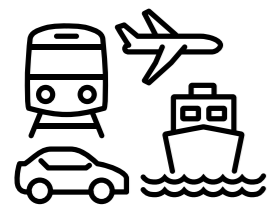
- Streamlining transport and logistics chains
- Exchanging, harnessing, and enriching real time traffic data
- Speeding up the traffic industry service development
- Driving cooperation of traffic industry operators and consolidation of operations

### Productised digital ecosystem services and open data



- Situational picture of traffic and the sharing of it
- Services for companies and end-users
- Open sharing of data in API's

### Traffic control on land, at sea and in the air



- Ensuring safety and flow of traffic
- Optimising routes, stages and speeds, countering congestion
- Strengthening the traffic system with automation

## BENEFITS CREATED TOGETHER WITH OUR PARTNERS:

<b>Safetraffic</b>	<b>0</b> incidents caused by traffic control in air and rail traffic	More than <b>200</b> fewer casualties in road traffic due to the Fintraffic services*	<b>13</b> prevented groundings in vessel traffic (2022: 21)
<b>Efficient transport</b>	Over <b>351,000</b> flight minutes saved due to lack of delay (= EUR 35 million) and CO <sub>2</sub> emissions <b>58,500</b> tonnes vs the EU average*	<b>16,000 h</b> of travel time saved in road traffic	Real-time ETAs for ships (port call schedules) streamline operations at ports, leading to a <b>5%</b> increase in satisfaction among stakeholders (4.45/5)
<b>Climate change mitigating traffic</b>	<b>15,500 tCO<sub>2</sub>e</b> less emissions due to Continuous Descent Approach (CDA)	Rail traffic reduced calculated CO <sub>2</sub> emissions by approximately <b>350,000</b> tonnes*, which is equivalent to the annual emissions from more than 380,000 passenger cars	Approximately <b>18 000 tCO<sub>2</sub>e</b> emissions saved in road traffic
<b>Cooperation in data ecosystem</b>	<b>200</b> significant partners (2022: 162)	Increased benefits of cooperation (1-5) <ul style="list-style-type: none"> <li>• functioning of the ecosystem <b>4.02</b></li> <li>• usefulness for own operations <b>3.95</b></li> </ul>	

\* Calculation based on the NEXT-ITS2 project





# Business





# Air navigation

Finland boasts world-class air navigation expertise. Safety is always our number-one priority. And we do not compromise on punctuality or environmental efficiency either.

**We are responsible** for managing Finland's airspace and providing air route services and air navigation services at 22 airports in Finland. We also provide services for drone pilots and technical maintenance services at five airports in Sweden. We train air navigation professionals to meet the needs of many different countries. In addition to airports, our main customers are airlines, technical air navigation operators, and airspace users.

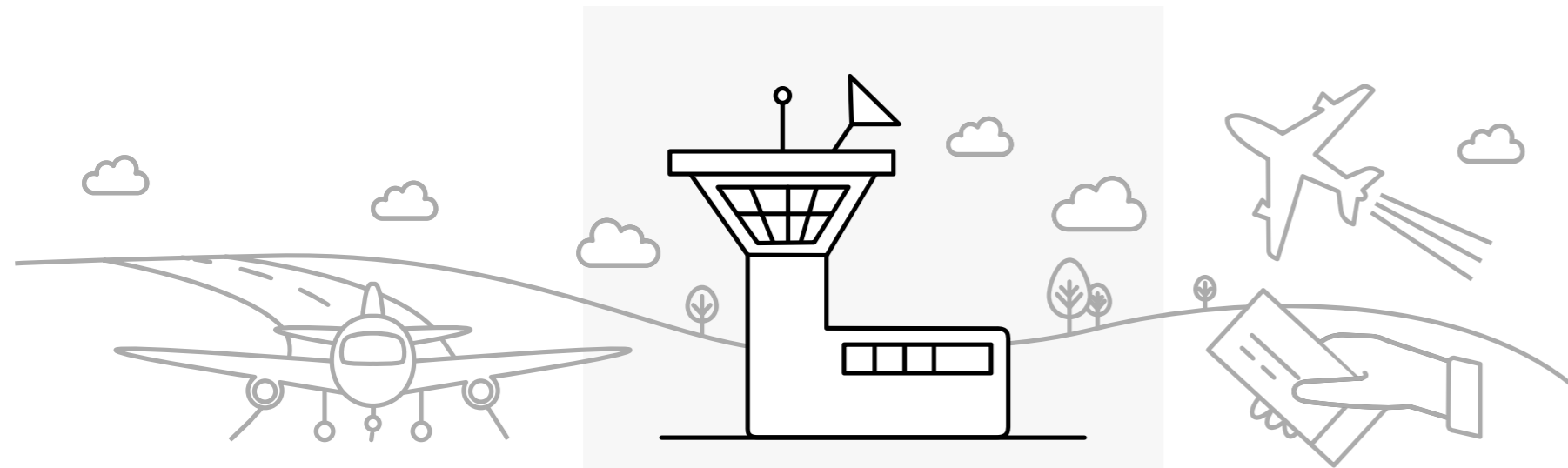
Air navigation services are provided to about 225,000 flights per year by the Area Control Centre and to about 144,000 take-offs and landings per year at Helsinki-Vantaa Airport. We are at the forefront of Europe in achieving the safety, efficiency and emission-reduction targets set by the EU Commission.

In 2023, our operations were characterised by adjusting our service production to meet the decrease in air traffic. In the summer of 2023, the layoffs of personnel ended almost completely.





## Responsibilities in air traffic



### AIRPORT OPERATOR

- Airport network
- The condition of runways and other airport infrastructure
- Airport security and rescue services
- Announcements at airports

### FINTRAFFIC

- Air traffic control on land in the traffic area and in airspace, technical air navigation infrastructure and airspace management in its designated area of responsibility in airspace above Finland and over international waters
- Management and distribution of information needed by air traffic
- Airspace reservation management
- Part of the design of the airspace structure and flight procedures

### AIRSPACE USERS

- Airlines are responsible for passenger services and ticket sales
- Airlines, private aviators, operators of model aircraft (incl. drones) are responsible for aircraft movements

The war in Ukraine continued to reduce overflights in the Finnish airspace. Sanctions prevent Russian and Western airlines from overflying each other's airspace, and air traffic between Europe and Asia is forced to circumvent Russia. Wide-body aircraft flying over Finland are mainly operated by Chinese airlines.

Compared to 2019, there was about one fifth less flights in the Finnish airspace. The traffic volumes fell clearly short of the RP3 performance plan forecasts and, accordingly, no savings were achieved. So, targets were not met in terms of unit cost development in 2023. However, due to the austerity measures taken, the actual costs were below the costs described in the performance plan. In 2023, traffic volumes for air route services (service unit) stood at about 65 per cent of the last pre-pandemic year (2019). Charter traffic picked up at the turn of the year in the north, where earlier records in traffic volumes were broken.

The full-year volume of international air traffic in 2023 stood at 79 per cent of the 2019 levels, although it reached 96 per cent towards the end of the year thanks to, for instance, favourable trends in Christmas flights to Lapland. In 2023, the full-year volume of domestic traffic was 66 per cent of the 2019 levels but reached almost 80 per cent towards the end of the

year. In overflight traffic, the traffic volume for the whole year was 54 per cent and in December 62 per cent of the corresponding levels in 2019.

### Progress in strategic projects

We design and maintain air navigation infrastructure and systems in accordance with international requirements. Cooperation at EU level reduces the environmental impact of aviation and increases safety and cost-effectiveness. Single European Sky (SES) – that is, a joint European airspace – aims to digitalise air navigation services in order to centrally manage and share aeronautical information.

Fintraffic continued to prepare a cross-border air navigation service in collaboration with Estonian Air Navigation Services (EANS). To enable the project, a new FINEST treaty is being drafted between Finland and Estonia.

Introducing Multi Remote Operating Tower (MROT) could be a way to promote cost-efficiency, more flexible air navigation services and safety in the air navigation sector. It would enable a flexible provision of air traffic control services for several airports from a single workstation. This would improve both airport service levels and preparedness in air traffic control. It would also enable us to provide air traffic services at



## How we make an impact in air traffic

Air traffic enables both Finland as a whole and its various regions to remain easily accessible. Due to the high standard of our air navigation services, Finnish airspace is safe and cost-effective, its air routes are direct, and planes landing at Helsinki Airport use continuous descent approaches significantly more often than on average in the EU. This substantially reduces both climate emissions and noise pollution, and lowers the cost of flying.

a lower cost. Fintraffic Air Navigation Services launched the change negotiations concerning the MROT project in June. It decided to continue planning the MROT project and to start preparing the tendering process. The decision to start the tendering process was made in December.

### Training and service development in the field

The air navigation training provider Avia College won the tender for training 15 Georgian air traffic controller students. The training will begin in January 2024. Fintraffic Air Navigation Services will also be responsible for testing the applicants and selecting the students. The basic and refresher courses in on-the-job training and basic and refresher courses in competence assessment for Norwegian Avinor continued throughout the year. In spring 2023, 33 local control air traffic controllers from Luxembourg attended refresher training. In August 2023, 8 new air traffic controllers graduated from the air controller course, and 10 new students began the course.

The Aviation Act regulation concerning the U-space entered into force in February 2023. As a result, the Finnish Transport and Communications Agency Traficom can establish a U-space airspace in which unmanned aircraft

### CASE

## Ivalo's radar-based air traffic control service saves fuel and reduces emissions

**The upgraded air traffic control service also meets the growing needs of seasonal traffic in Lapland.**

At the beginning of October, the air traffic control at Ivalo Airport transitioned from a procedural Air Traffic Service (ATS) system to a radar-based ATS system. The transition ensures a smoother air control service for airlines and other airspace users.

It modernises the working methods used for ATS at Ivalo airport. Now all the information required about a flight can be verified on the air traffic control tower's radar screen without separate verification by radio. Thanks to the radar-based ATS, the airport is now better equipped to enable continuous descents and take-offs. This will bring airlines savings in fuel costs and reduce environmental emissions.

In the future, air navigation will be able to respond better to the growing needs of seasonal traffic in Lapland. Outside the high season, Ivalo Airport operates between 50 and 100 flights per month, but during the winter season, like in December, there may be more than 500 flights per month. During the winter season, air traffic controllers are kept busy not only by more frequent flight traffic but also by challenging winter conditions. They require the full attention of air traffic controllers to ensure that anti-skid and winter maintenance operators can move safely in the airfield area and on the runways.

The transition was completed in cooperation between various parties, including Fintraffic Air Navigation's Technology and Development Units, Aeronautical Information Unit and the vocational special education institution Avia College.



systems (UAS), or drones, could be operated more safely. However, the Ministry of Transport and Communications outlined that no Common Information Service (CIS) implementation model will be selected for U-space airspaces in Finland at this stage.

Also in the pipeline are an aviation situational awareness application, which Fintraffic will launch in 2024, and a digital flight preparation app for general aviation. We continued to develop our digital situational picture for air navigation and our other services by, for example, doing preparatory work for aeronautical information services for airspace users.

According to the results of our 2023 customer satisfaction survey, our strengths are: compliance with safety requirements, the experience of a high overall standard of services, the operations of the Airspace Management Cell (AMC) and high-quality air control services. Our cooperation with the State and military aviation is also at an excellent level. Despite the challenging years, our overall score has remained at a good level. To improve the standard of our operations, we also consult our customers on the areas that could be improved.

Read more at: [www.fintraffic.fi/ans](http://www.fintraffic.fi/ans)





# Vessel traffic services

Finland lives off shipping. Our vessel traffic service centres monitor the passage of passenger ships and cargo vessels through Finland's coastal waters 24/7, every day of the year. Work to ensure safe shipping is at the heart of everything we do.

**The operational reliability** of our vessel traffic service centres was at a good level in 2023, and basic traffic management remained of a high standard and in line with agreements. We informed vessels about other traffic in the area and anything else that may affect their passage, such as weather and ice conditions or safety equipment failures. We also directed traffic and maintained safety radio operations.

During the year, we potentially prevented 13 vessels from running aground. We also assisted vessels with navigation, and prevented near-misses from evolving into accidents, thereby also protecting fragile marine environments.

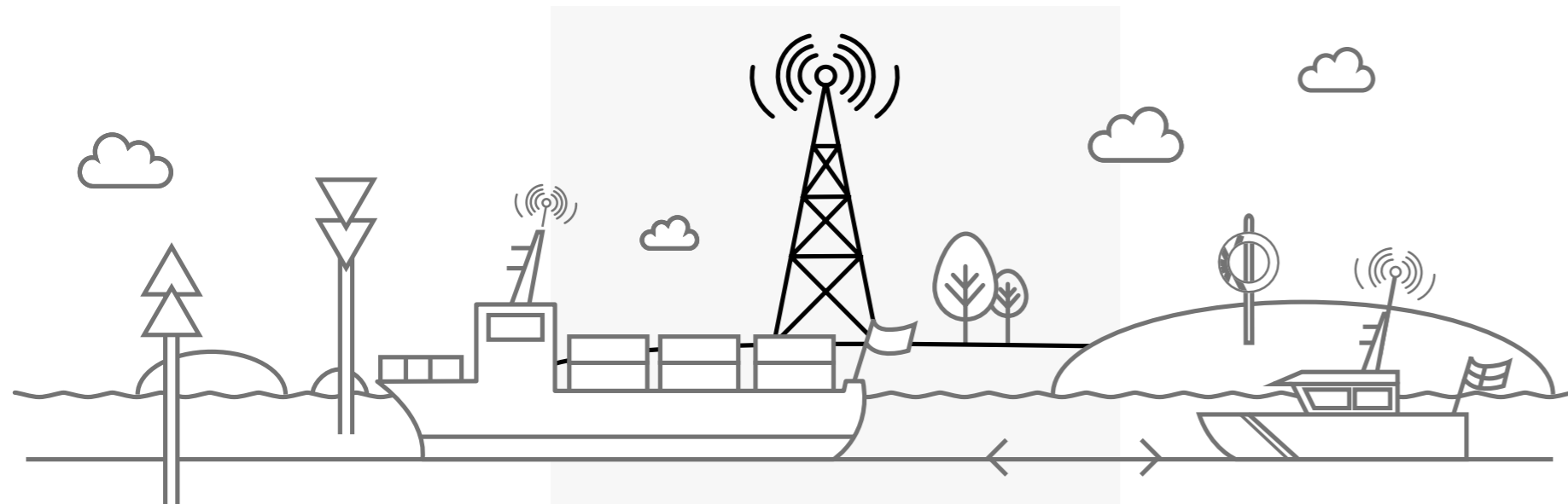
The project to develop passing areas and passing prohibition areas launched in 2022 progressed on schedule. This project reviewed all of Finland's current passing areas and passing

prohibition areas in cooperation with stakeholders and examined the need for new areas. The project deepened the shared understanding of the risks related to passing and overtaking as the actors shared information from their own perspectives.

We also introduced a new Master's Guide service for vessel traffic. It provides ships arriving in Finnish ports and other stakeholders with all important instructions for vessel traffic in one place, while improving the route planning and situational awareness of ships arriving in Finland. The leap to a modern data platform also makes the Master's Guide internationally interesting, as traffic arriving to Finland can be provided a harmonised user experience regardless of the port they are using.



## Responsibilities on waterways



### THE FINNISH TRANSPORT INFRASTRUCTURE AGENCY (IN ITS PORT AREAS)

- Organisation of vessel traffic services
- Waterways
- Maritime traffic safety devices and water traffic signs
- Icebreaking

### FINTRAFFIC

- Provision of Vessel Traffic Services (VTS)
- Maritime safety radio service and emergency radio traffic in the Saimaa region
- Receiving notifications of faults by maritime safety equipment
- Reference station network services for the Automatic Identification System (AIS)
- Differential Global Positioning System (DGPS) service for maritime traffic

### TRAFICOM

- Responsibilities of a competent authority in Vessel Traffic Services
- Maritime safety activities
- Maritime mapping
- Port call information service (NSW/Portnet)
- Competencies, permits and waterway decisions

## How we make an impact in vessel traffic

Our vessel traffic services and safety radio operations ensure safe and smooth vessel traffic along the Finnish coast and in Lake Saimaa, the Gulf of Finland and the Sea of Åland. With these services, we promote not only Finnish foreign trade but also safe shipping and the protection of marine environments.

In addition to controlling traffic and providing vessels with information, our round-the-clock monitoring, high-quality and extensive service offering and professional vessel traffic controllers prevent a variety of dangerous situations, such as the potential of ships running aground.

By enhancing the sharing of port call schedules in 2023, we were able to improve the operations both at ports and throughout the entire logistics chain.

Sharing real-time vessel ETAs more effectively with a variety of operators helps shipping companies to optimise the speed of their ships in the Baltic Sea, which in turn has an impact on Finland's logistics costs and emissions. During 2023, we examined the benefits of sharing ETA information in a research project with the Turku School of Economics and promoted the sharing of departure times. The study found many direct benefits the sharing of data brings for ports. The port call schedule service promotes efficiency and safety, enables cost savings, and supports the improvement of situational awareness and optimal use of resources. A port call schedule service is a key tool for promoting the sustainable development of shipping. It has strengthened its position in maritime transport management. The rating given to the port call schedule service in the customer satisfaction survey was 4.45 (on a scale from one to five).



## NEMO won the global Service Design Award 2023.

### Major steps in project development – the journey towards a common situational picture continues

We are also doing vital work to digitalise maritime traffic: in addition to developing vessel traffic services, we are developing traffic data exchange platforms, smart data services and a situational picture in which data flows efficiently and in real time between ships, ports and a variety of port operators. Thanks to all this, maritime traffic in Finland will be even smoother and more efficient than before.

Together with our stakeholders, we developed new digital services that both speed up and boost the efficiency of transport chains, thereby enabling port operators to save costs. We continued our strong development efforts, especially in the implementation of the national Single Windows Maritime Traffic Notification Service (NEMO

information management system). It also seeks to enhance national competitiveness by promoting smoother industrial and commercial transports. In 2023, the service was also recognised in international and national competitions: for example, NEMO won the global Service Design Award 2023 and was selected as the most Sustainable Digital Act of the Year at the national level.

We have also continued to invest heavily in other data-based information services for maritime and port logistics, such as the continuously expanding Port Activity app, aimed to make port traffic and port operations more efficient.

### Continuous development of competence

Our goal is to have world-class expertise in maritime traffic management and traffic ecosystems. We continued the Tuu messiin! (Get Involved!) HR programme, developing our expertise, and supervisor coaching. In 2023, we maintained and strengthened our competence, for example, through regular simulation exercises linked to the operational training module, which test skills needed in exceptional situations.

Read more at: [www.fintraffic.fi/en/vts](http://www.fintraffic.fi/en/vts)

### CASE

## Special instructions for vessel traffic service, “Master’s Guides”, were digitalised – Finland acting as a pioneer

**Technological development that enables the safety and smooth flow of vessel traffic constitutes the core of the development of Vessel Traffic Services. Development work is carried out especially in traffic control and management, of which the new Master’s Guide service serves as an example.**

The Master’s Guide is a completely new service that was opened to users in November 2023. The understanding of the needs and wishes of stakeholders was placed at the core of the development work. The content of the service was designed from the outset in a user-oriented manner in cooperation with Finnish maritime stakeholders and the deck officers of vessel traffic to Finland.

The final result is a modern and flexible data platform that supports the communication of maritime transport operators and safe and smooth traffic in VTS areas. In addition, the service improves the route planning and situational awareness of vessels arriving to Finland by providing information pertinent for the journey tailored on the basis of the destination port. The long-term vision is to develop the service further so that vessels will receive targeted information related to their own journey.

At the publication stage, the Master’s Guide service contained 10 Finnish ports, but it will be expanded to cover all Finnish ports. Through the service that ports can use for free, they can communicate on any topical issues specific to the port that they perceive as essential for seafarers.



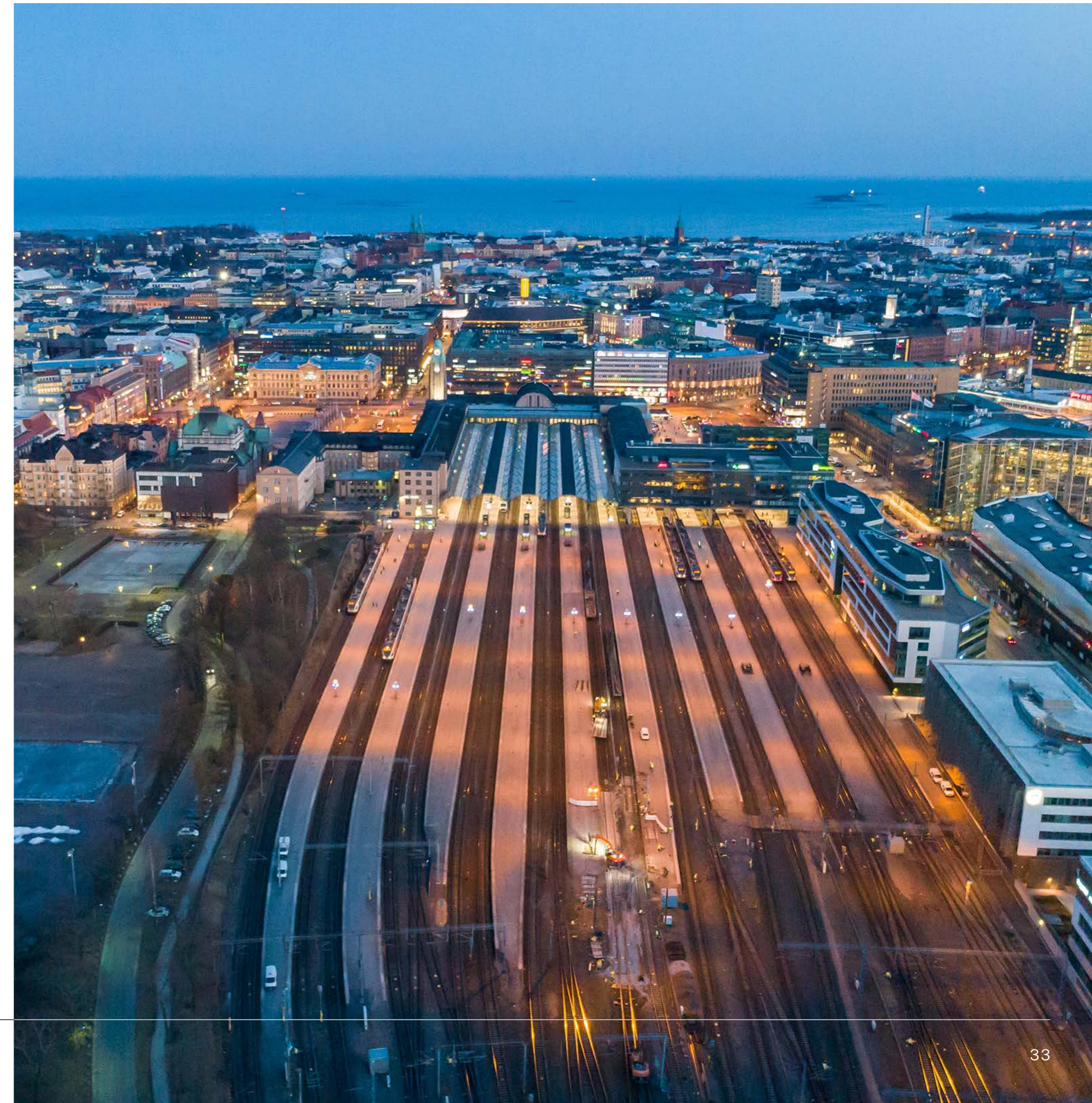


# Rail traffic management

Collaborating closely with our partners, it is our task to ensure that people can travel and transport goods on Finland's railways in a safe, smooth and environmentally friendly manner. Our work is significant for the country as a whole, as half a million trains and tens of millions of passengers travel in the Finnish rail network every year.

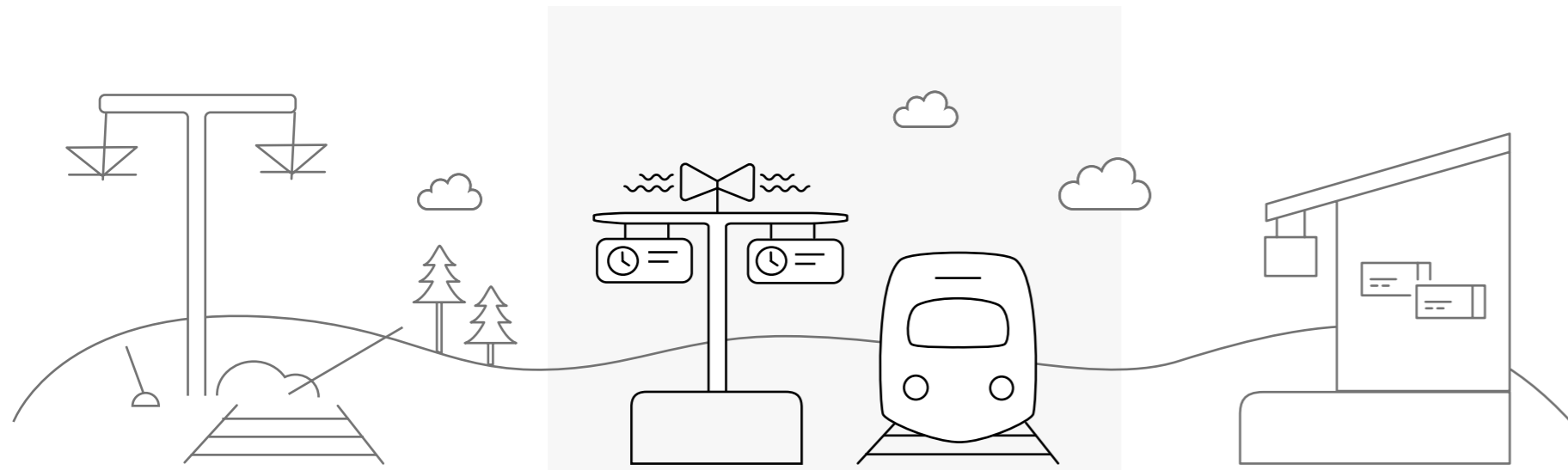
**Our services include** railway traffic control, capacity management and traffic planning to coordinate track work and train traffic. We also provide information services for rail passengers, and our operating centres are responsible for the monitoring and operation of electric tracks. Our rail traffic control centre maintains a nationwide situational picture of the railways, and our Situation Coordinator service provides expert assistance in the event of incidents or accidents. In addition, we provide security control room and traffic quality control room services. We are responsible for realising the development and verification phase of the Digirail project, aimed at reforming the train control system.

Last year, more than 500,000 trains were operated on the railway network. Their operation was secured and their capacity granted by our experts. In total, there was an approximately seven per cent reduction in long-distance train traffic compared to 2021. The number of commuter trains rose by almost nine per cent on the previous year, while the number of freight trains fell by about the same percentage. Our services guarantee safe and smooth mobility and working for both our customers and our stakeholders. The year 2023 was very busy in terms of traffic planning, as more than 160 00 track works were carried out with us securing the work site. During the year, our operating centre arranged 8,000 power cuts of the electric track during track work. More





### Vastuut rataverkolla



#### THE FINNISH TRANSPORT INFRASTRUCTURE AGENCY

- The rail network
- Infrastructure maintenance
- Platform areas

#### FINTRAFFIC IS RESPONSIBLE FOR

- Infrastructure capacity management (traffic, track work)
- Traffic control
- Electrical track management
- Passenger information in the station area
- Camera surveillance, security control room
- Incident management, situational coordination

#### RAILWAY UNDERTAKINGS

- Passenger and freight transport
- Announcements on trains
- Ticket sales

than 1.7 million calls were made to traffic control, and its accessibility rate was almost 100%. Traffic control records all train traffic incidents and the related reason codes. Last year, we passed on 16,000 detected faults to different operators and, as a result, recorded more than 250,000 reason entries.

#### Our services became safer and more reliable

We further enhanced the good safety level and reliability of rail traffic control from the previous level by, for example, increasing the degree of automation and by investing more in developing our preparedness. There were no railway accidents deriving from Fintraffic’s operations during the year. We introduced the Group’s common Security Service Channel (TUPA) for managing safety reports, risks and audits. We started to build an ISO 27001-compliant information security management system and aim is to implement the system by the end of 2024. In terms of preparedness and continuity, we organised an internal incident management exercise and participated in several external exercises to improve our readiness to act in exceptional incident situations.

By developing remote control systems, we are building a safer, more modern and more reliable system. In Southeast Finland, we were able to

complete a challenging long-term project when the new remote control system (KAKO) was deployed at the end of the year. The remote control system upgrades in Northern and Central Finland also progressed in terms of, for example, deployments. The remote control system for Southern Finland was upgraded to the same version as KAKO. The technical reliability of the Tampere remote control system (TAKO) was enhanced. Improvements were also made to the reliability of the passenger information system RAMI, and the reliability of the electric track operating centre was improved.

#### We expanded our operations

We provide the Situation Coordinator service from the control centres of Helsinki and Tampere 24 hours a day, every day of the year. The most important task of the Situation Coordinator is to act as a link between railway operators and authorities in the event of accidents and disruptions and also to support traffic control in these situations. The service is provided throughout the Finnish railway network. The Situation Coordinator service is an operative service commissioned by the Finnish Transport Infrastructure Agency. Until now, it was operated under fixed-term contracts. From the beginning



# ” Succeeding and working in a security-critical and rapidly evolving environment requires special expertise.

of 2024, the service will be transferred as part of the partnership agreement between Fintraffic and the Finnish Transport Infrastructure Agency.

Capacity management focuses on the allocation of railway yard track capacity in certain railway yards. Our capacity management service has been used in Kouvola and some of the Helsinki Metropolitan Area traffic operating points.

In autumn 2023, the Kouvola Control Centre ran a successful pilot in its control area on how the capacity management service works alongside the traffic controller’s work.

In 2024, the capacity management service will expand to cover more than 30 new traffic

operating points. The aim is to expand the service to include the remaining traffic operating points by the end of 2025. With the expansion of the capacity management service, a new capacity management information system SAAGA will be deployed at traffic operating points. The system was deployed in the traffic operating points of Kotka, Kuusankoski and Lauritsala in December 2023. The expansion of the capacity management service contributes to generating significant societal benefits, as it constitutes one part of the package that can be used to provide different operators with an equal opportunity to operate on the Finnish railway network. A level and fair operating environment for railway operators is one of the preconditions for opening rail traffic to competition.

During the year, the Rail Yard Traffic Management Service (RLO) was expanded to include Kuusankoski and Kotka traffic operating points.

We initiated broader ecosystem cooperation in rail traffic. In cooperation with actors in the sector, we identified challenges related to rail traffic data and communication, and development and cooperation needs. Customer and business needs were identified as a basis for the development of ecosystem services, for example, by examining the functionality of rail freight traffic

communications and customer and development needs related to open rail traffic data. We also studied the use of artificial intelligence in the provision of rail traffic data and the development of the functionality of commuter rail traffic through analytics.

## The year of concrete steps in Digirail development

The development and verification phase of the Digirail project aimed at upgrading the Finnish train control system in accordance with the European ETCS model began at the turn of 2023–2024 with the signing of the alliance agreement on the implementation of the phase between Fintraffic and the Finnish Transport Infrastructure Agency. The agreement extends until 2027.

Digirail published a report on the suitability of commercial network connections for the needs of train control. According to the report, the results of measurements carried out on the Finnish railway network show that the coverage of commercial networks is sufficient for the needs of railway traffic control. By utilising existing network connections, Finland would not need to build a separate radio network when the European Union gives up the current national train control

systems. Finland has been advocating this message strongly within the EU.

Significant steps were taken in testing. The Digirail Sr1 test locomotive is the first locomotive equipped with a modern radio network-based ETCS train control device. It is being driven on an ETCS test track where the functionality of both on-board and trackside equipment and traffic control systems is tested. The preparation of the system and equipment procurements for the test laboratory is in its final stages, and procurements related to construction will begin in 2024. The most significant step in 2023 was the acquisition of safety equipment on the EKA line section. The aim is to have the agreement signed in the early months of 2024.

## Our corporate culture is changing

Succeeding and working in a security-critical and rapidly evolving environment requires special expertise and attention. We coached both experts and supervisors in the implementation of the transition and worked together to build a novel way of working. During the year, we activated the quality and management system to provide support in the changed situation. A total of 71 new employees started working at Fintraffic in 2023. The sector urgently needs more new experts.



Together with Häme University of Applied Sciences (HAMK), we have developed a new 15-credit study module focusing on the railway sector. It was carried out very successfully for the first time in spring 2023.

At the beginning of the year, we introduced a service-oriented operating model and organisational structure. They are aimed at strengthening customer and service orientation, simplifying operations, clarifying roles and management, and enhancing development work. Especially the current technological revolution, Digirail, the growing importance of data utilisation and the company's strengthened role in the development of the entire railway system accelerated our need for change. In the autumn, our organisational structure was further clarified. At the same time, clarifications were also made in the services provided by rail traffic control, such as traffic control and management services, Digirail and ecosystem services. The composition of the Management Group was supplemented with Pia Julin, CEO of Fintraffic Railway Ltd, when she was elected CEO of the Group. The new CEO of Fintraffic Railway Ltd, Sanna Järvenpää, entered her position on 29 June 2023.

Read more at: [www.fintraffic.fi/en/raide/fintraffic-railway-brief](http://www.fintraffic.fi/en/raide/fintraffic-railway-brief)

### How we make an impact in rail traffic

Rail traffic is an extremely safe mode of transport, and traffic management services play a key role in ensuring a high level of rail safety. Our services – combined with close development cooperation in our partner network – ensure that rail passengers and goods travel smoothly and in an environmentally friendly manner. We have been very successful in meeting this target in recent years, as Finland has been ranked number one in the EU in terms of rail passenger safety in 2010–2020. (Report on Railway Safety and Interoperability in the EU – 2022 (europa.eu) [page 27, published in May 2022] Passenger fatalities per billion passenger kilometers, average over 2010–2020). Our services affect the punctuality of rail traffic, the capacity utilisation rate of the rail network, the customer experience, rail traffic costs and energy savings. Foresight and information sharing play a key role in preventing accidents, delays and environmental damage.

### CASE

## Information increases productivity and improves services

The development of transport services and increasing automation are largely based on information. For information to be useful in the development work, it must be available in a format that is appropriate in terms of content and quality. For this reason, Fintraffic invests in knowledge management in rail traffic. It made significant advances in this sector in 2023.

In rail transport, the Ministry of Transport and Communications' vision of creating a digital twin means, among other things, creating a common knowledge base for all information related to railway infrastructure. This work is carried out in close cooperation with the Finnish Transport Infrastructure Agency. The Digirail project, which aims to reform train control, will also bring a lot of new opportunities for utilising information in rail traffic.

The increased use of intelligent automation and information in transport improves

safety, helps to optimise transport, speeds up service development and saves energy. It even offers opportunities to increase the capacity of existing rail lines and to improve their maintenance. This means mitigation of climate emissions, enhanced efficiency, improved services and achieving savings.

In 2023, technological development was also accelerated by artificial intelligence. In rail traffic management, we started utilising generative AI in a Proof of Concept project to improve the use of information through enhancing the accessibility and interpretation of technical and safety instructions for railways. Especially, this will help to bring situations back to normal in the event of disruptions, thus contributing to improved traffic flow and safety. The project carried out together with the operative personnel succeeded well. It provides a good starting point for the responsible use of AI in Fintraffic's services.



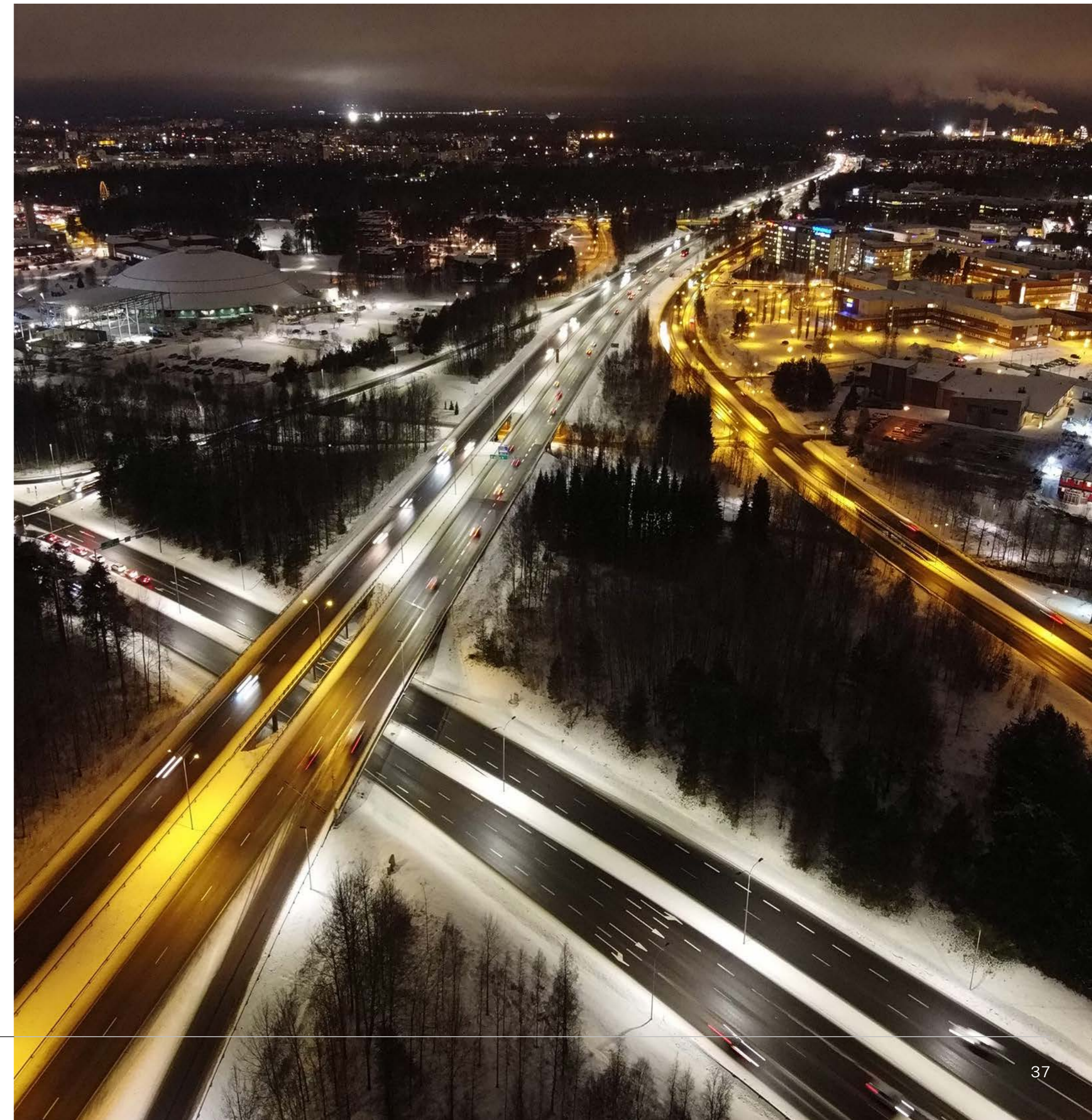
# Road traffic management

Finland's passenger and goods transport relies on smooth and efficient traffic on our roads, stretching more than 78,000 kilometres. We promote safe and smooth road traffic 24 hours a day, all year round. Our services include designing technical systems for roads, tunnels and border crossings; providing and maintaining traffic lights and automatic monitoring infrastructure; producing road weather data; and providing continuous traffic monitoring and announcements.

The Russian war of aggression in Ukraine and the general economic downturn were reflected in road traffic volumes: heavy transport reduced by almost five per cent from the previous year. Passenger car traffic remained at the previous year's level with a slight three-per cent increase.

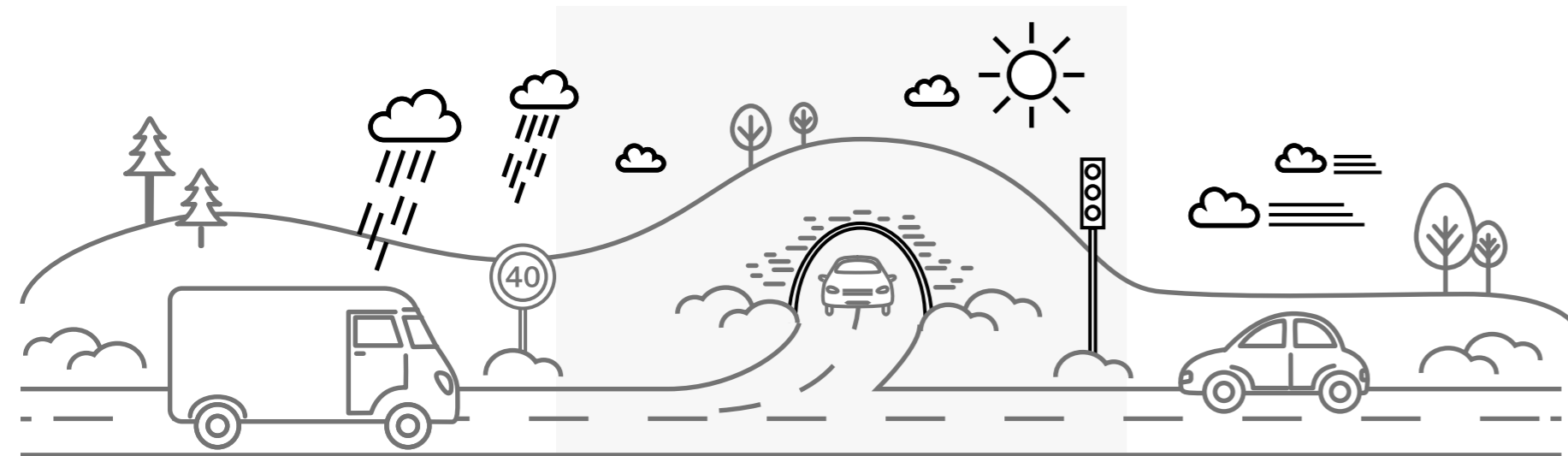
As in the previous year, the EU's sanctions against Russia and the collapse of trade between Finland and Russia were also strongly reflected in border traffic volumes: the traffic volume at border crossing points on the eastern border was less than a tenth of the normal level. The temporary closure of border crossing points in November also meant the end of passenger traffic.

Traffic in the road network was relatively smooth, and large-scale deviations were avoided. Information flowed between authorities, such as the police and rescue services, and maintenance contractors: we provided nearly 10,000 traffic bulletins about deviations. We were involved in informing about, for example, more than 7,000 roadworks. We sent more than 110,000 contractor messages, of which about 8,000 required immediate action from the contractor. In addition to providing traffic and situational data, we received more than 120,000 customer phone calls, of which about 15,000 required acute measures to ensure traffic safety.





### Division of responsibilities in road traffic



#### **ROADS AND STREETS** Finnish Transport Infrastructure Agency, ELY Centres, cities

- Road and street development and maintenance, fixed road signage and speed limits

#### **TRAFFIC CONTROL** Fintraffic

- Operation of traffic control systems, including tunnels, variable speed limits, traffic lights, road weather information and images
- Analysis and distribution of traffic information to users
- Road User Line, 24H, tel. +358 200 2100 (local network rate or mobile charge) for the notification of problems that cause traffic hazards
- Incident management and cooperation with the authorities

#### **ROAD USERS** Motorists, transport companies

- Safe mobility and taking others into account, observance of the rules

### Continuous customer-oriented development – safety at the core of everything

The year 2023 included continuous technical development to provide an improved situational picture and ensure operational reliability. We were involved in more than 80 different projects and initiatives to promote the operational and technological development of our services.

Our project investments focused especially on improving operational reliability.

The telecommunications network, road weather stations, and roadside traffic control devices and systems all received lifecycle upgrades. As regards tunnel projects, the extensive renovation of the Revontuli tunnel in Rovaniemi that lasted over a year was successfully completed in June. At the same time, a completely new network-based backup operating system was deployed in the tunnel for the first time in Finland. In the future, it will ensure the functionality of tunnel technology in the event of a system failure.

For the first time in Finland, driving time and deviation data was utilised on the sections of open road. For this, Fintraffic uses not only its own traffic data but also real-time situational information from Waze. The changing traffic information displays provide motorists with



**Our project investments focused especially on improving operational reliability.**

a wider range of traffic data on the pilot section on Ring Road III, where a completely new traffic control system was deployed in October.

In the planning of infrastructure projects, the Vuosaari Road Tunnel construction project was promoted, with an aim to modernise the safety and traffic management technology that has reached the end of its life cycle. The goal of the repairs is to ensure undisturbed harbour transport and other traffic in the area, as well as safety in the tunnel. The planned construction work in the tunnel will begin in 2025.

Significant advances were also made in mobility data: in the future, national mobility data will enable analysing road traffic based on mobile data. This will provide more accurate background information on traffic calculations carried out in the field. The data will be utilised for such



diverse purposes as traffic planning, winter maintenance, maintenance of roads and various investment projects.

### **Making service-orientation part of the management system and daily life**

The journey from a product-oriented approach towards service-oriented thinking continued throughout the year. The introduction of a service-oriented organisation was reflected in, for example, more detailed descriptions of our management system and the roles of our different services. We also built our organisation in digital services and carried forward development and project activities. Extensive investments were made in competence development both through internal training and by using external training providers in a targeted manner in such areas as coaching management and project management. The training programmes of road transport operators and operative shift managers also progressed as planned, and, for example, the tunnel qualifications were widely verified during the year.

Read more at: [www.fintraffic.fi/tie](http://www.fintraffic.fi/tie)

### **How we make an impact in road traffic**

For traffic to flow safely and smoothly, we need a situational picture of road traffic that is as up-to-date and comprehensive as possible – as well as the ability to share it widely and in real-time with a variety of user groups. For example, we produce 240,000 weather camera images every day. In the future, we will use crowdsourcing to collect even more observations for situational awareness.

We improve traffic flow and safety with the aid of traffic lights, tunnel technology, road weather data and variable speed limits. Our technical infrastructure also enables automatic traffic control to be carried out by the Police. Our Traffic Management Centre issues traffic bulletins covering the entire road network and ensures that any incidents are managed as effectively as possible through cooperation between the authorities. We also collect feedback from road users.

Open-data solutions enable us to share our data and situational picture with, for example, vehicle navigators and the media without any delay. We produce traffic data that plays an essential role in road maintenance and associated decision-making.

### **CASE**

## **Advanced technology for backup operating systems in road tunnels**

**We developed a new solution for the safe use of road tunnels in various fault situations.**

Road tunnels are critical hubs of the transport network and contain a huge number of technical solutions to enable safe and smooth traffic. As a whole, an individual road tunnel is comparable to a medium-sized industrial plant when calculating, for example, the number of I/O points that describe the number of automation connections.

In recent years, fault management in tunnels has been one of Fintraffic's largest development projects in road traffic management. The aim is to develop

an internationally groundbreaking backup system that meets the stringent safety requirements for tunnels, making it safe to use the tunnel even in fault situations.

The new backup solution was deployed for the first time in Finland in connection with the renovation of the Revontuli tunnel in Rovaniemi in June. The official permits have already been granted for the tunnel. In the future, the solution will bring an advanced, duplicated browser-based implementation into use alongside the main tunnel logics. This will make it possible to perform the necessary measures for the safety of the tunnel even in fault situations. In addition, the new backup solution will bring clear cost savings of up to 90% to the investment costs for backup systems.



# Cooperation of the traffic data ecosystem and digital services

In 2023, we progressed from conceptualisation to concrete development in both ecosystem cooperation and digital services. The traffic data ecosystem established its position as a cooperation partner in promoting digitalisation. Our work is known both in Finland and at the EU level. Solutions promoting the digitalisation of transport were systematically taken forward in different areas. Fintraffic Mobile, launched at the end of the year, combines the best parts of several services in a user-friendly format.

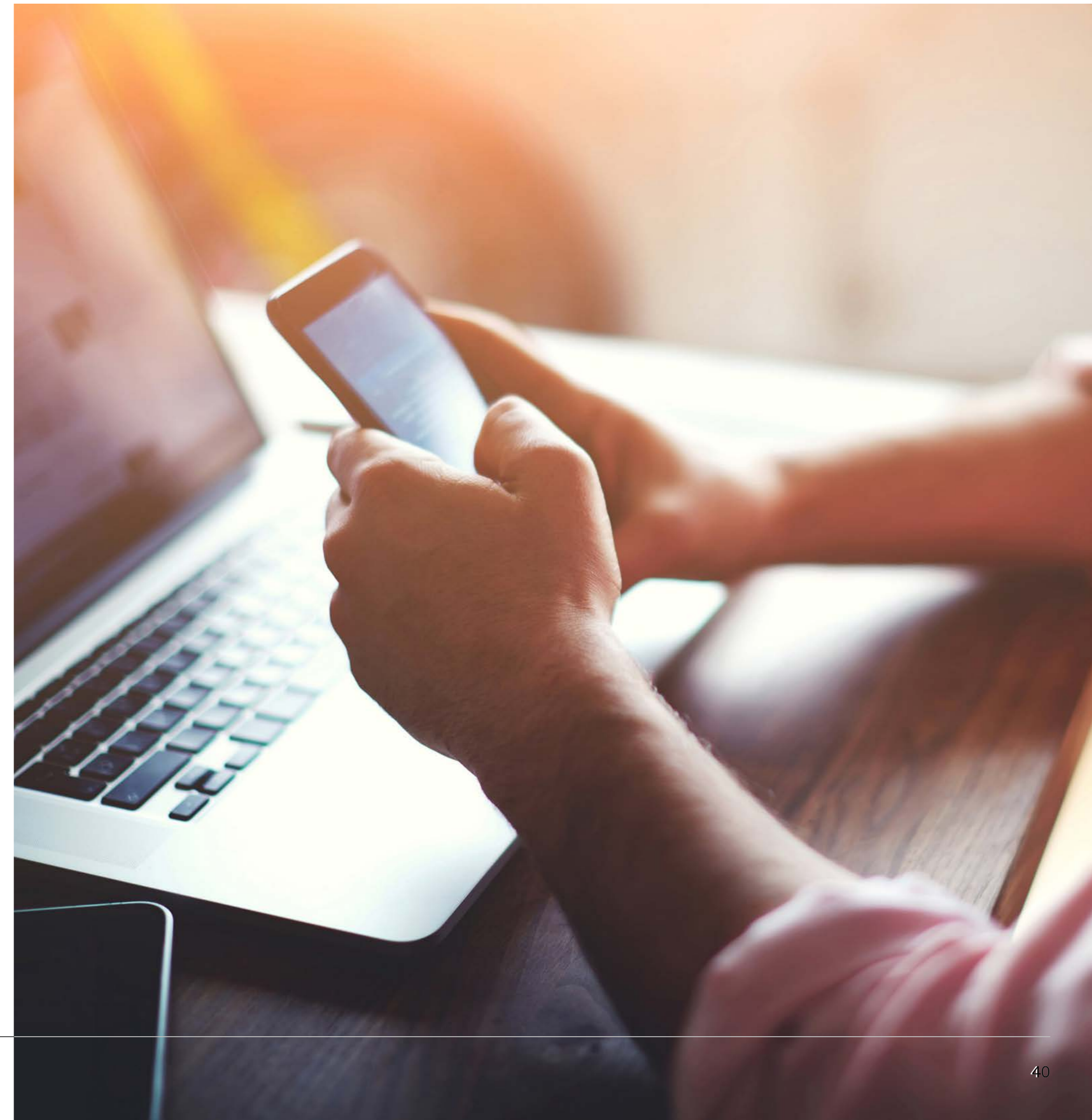
**In 2023, around 40 actors** joined the traffic data ecosystem, currently involving about 200 organisations. The aim of the ecosystem is to create new operating models for the transport sector, improve operational efficiency through sharing and utilising data, save costs through co-development, and reduce traffic emissions.

In 2023, the awareness of the ecosystem increased. Currently, the traffic data ecosystem is used as a good example of an ecosystem that combines public and private actors. By the end of the year, **the Rulebook for the Traffic Data Ecosystem** had already been signed by more than 20 operators. In December, SITRA selected the traffic data ecosystem's work on

the Traffic Data Ecosystem Rulebook on its list of **The Most Interesting Data Economy Solutions**.

The perceived benefit of belonging to the ecosystem has remained at a good level. On a scale of one to five, Fintraffic's external partners gave our activities a score of 3.95 for the usefulness and 3.95 for inspiration.

At the end of the year, we also launched a traffic data export cluster. The cluster is aimed at increasing the export activities of traffic sector companies' digital data solutions while strengthening Finland's pioneering role in utilising digitalisation and promoting sustainable development.







## Solutions promoting the digitalisation of transport were systematically taken forward in different areas.

### Many advances in ecosystem working groups

The logistics study initiated in 2022 was completed in January 2023. During the year, we actively planned the establishment of a centralised data hub for freight goods at Helsinki-Vantaa Airport. The conclusion of the study, funded by Sitra and carried out in collaboration with Finnair and Finavia, was that there is interest in promoting the work, but funding would need to be found for implementing it. In addition, the logistical needs of rail transport were mapped.

We also promoted the implementation of the EU eFTI Regulation related to digitalisation of transport data. The regulation encourages the digitalisation of freight transport and logistics by reducing administrative costs, improving the authorities' control capacities and increasing the efficiency and sustainability of transport. After the completion of the structuring phase, in 2024 we will get into the project implementation phase, and the pilots will be launched.

In the travel data working group, we promoted the determination and introduction of uniform travel data standards and the preparation of a roadmap. The aim is to make it easier for, for example, public transport service providers to produce information for their own customers on travel chains consisting of the services of various actors and thus facilitate combining journeys. In the future, uniform data models will provide customers with more detailed information on travel, travel chains, travel-related services and, for example, accessibility. In addition, experiences of the digitalisation of ticket systems, contactless payment, integration of parking services and public transport were shared, and the interface configurations of ticket and payment systems were worked on. In this context, we consulted European experts and considered how existing technical

solutions could also serve the business processes of private and public actors in Finland.

In the travel information services provided by Fintraffic, we actively developed the national quality process of travel data during the year. In the future, this service package will constitute an essential part of the operators' shared system that seeks to improve the quality of traffic data. The service will become part of the National Access Points (NAP) operated in Finland by Fintraffic. It will also be published as an open source code for the use of the whole data ecosystem. We also launched the Aggregate Database project, the purpose of which is to produce a uniform and reliable picture of all Finnish traffic services. The roll-out project of Aggregate Database will begin with a new partner in 2024.

Our Digitransit community, which develops route planners, significantly improved passenger information both in urban areas and at a national level. We entered a new era in route planners. We made one of the biggest technical updates into our routing engine which now allows us to offer faster and better routing results and seamless integration of travel chains to end users and interface customers. In the future, Digitransit will also offer route calculations and assistance

for Kela's school transport subsidy process. So far, it has already meant using Digitransit for automating the application for school transport subsidies and providing uniform information on, for example, the length of school journeys. In the future, Digitransit route planners and developer interfaces will also include capabilities for building international travel chains. As an example, we could mention the capability added to the national opas.matka.fi route planner to search for trips to Estonia. During the year, we also introduced the emissions calculator for travel chains and the occupancy rate view for means of transport. The emissions calculator allows passengers to compare different means of transport and select the option with the lowest emissions. The occupancy rate data allows the passenger to see how full the bus is before departure.

With regard to the situational picture, we maintained an active dialogue with various actors to improve the availability of road traffic data.

### Sharing data across national borders

During the year, we also made progress in international cooperation. The international European Mobility Dataspace (EMDS) project, collecting urban mobility data, was launched. We deepened our cooperation with the City



## An increasing number of digital services is serving a variety of modes of transport and improving the efficiency of their hubs.

of Tampere, whose data is being exported to National Access Points for further distribution. Another significant project ODIN, combining Nordic public transport data, also progressed during the year. Our aim is to provide as good situational picture of Finland's transport system as possible as part of the international network, one step at a time.

During the year, we published several **reports** on different areas of the work process. In addition, we produced the report **Vision for Multimodal Traffic Management and Control 2030** together with Frequentis.

### Ambitious service development

In 2022, we initiated the work of the steering group of digital services that combines the different functions of Fintraffic. It started producing visible results in 2023. We continued to build the Design System and thus harmonised our service offering. We also revamped the display window of our services, the fintraffic.fi website, to make it more customer-oriented and to present our services better.

We brought several new functionalities to the Traffic Situation service, which uses Digitraffic data. It provides a broad variety of information on, for example, weather conditions, roadworks and winter maintenance. It also shows the charging points for electric vehicles and fuelling stations for gas-powered vehicles. The service also provides information about rail, air and maritime traffic. The traffic weather warnings from the Finnish Meteorological Institute were also added to the service. We developed summary views for the service that allow viewing driving conditions and weather cameras in the near areas at a glance.

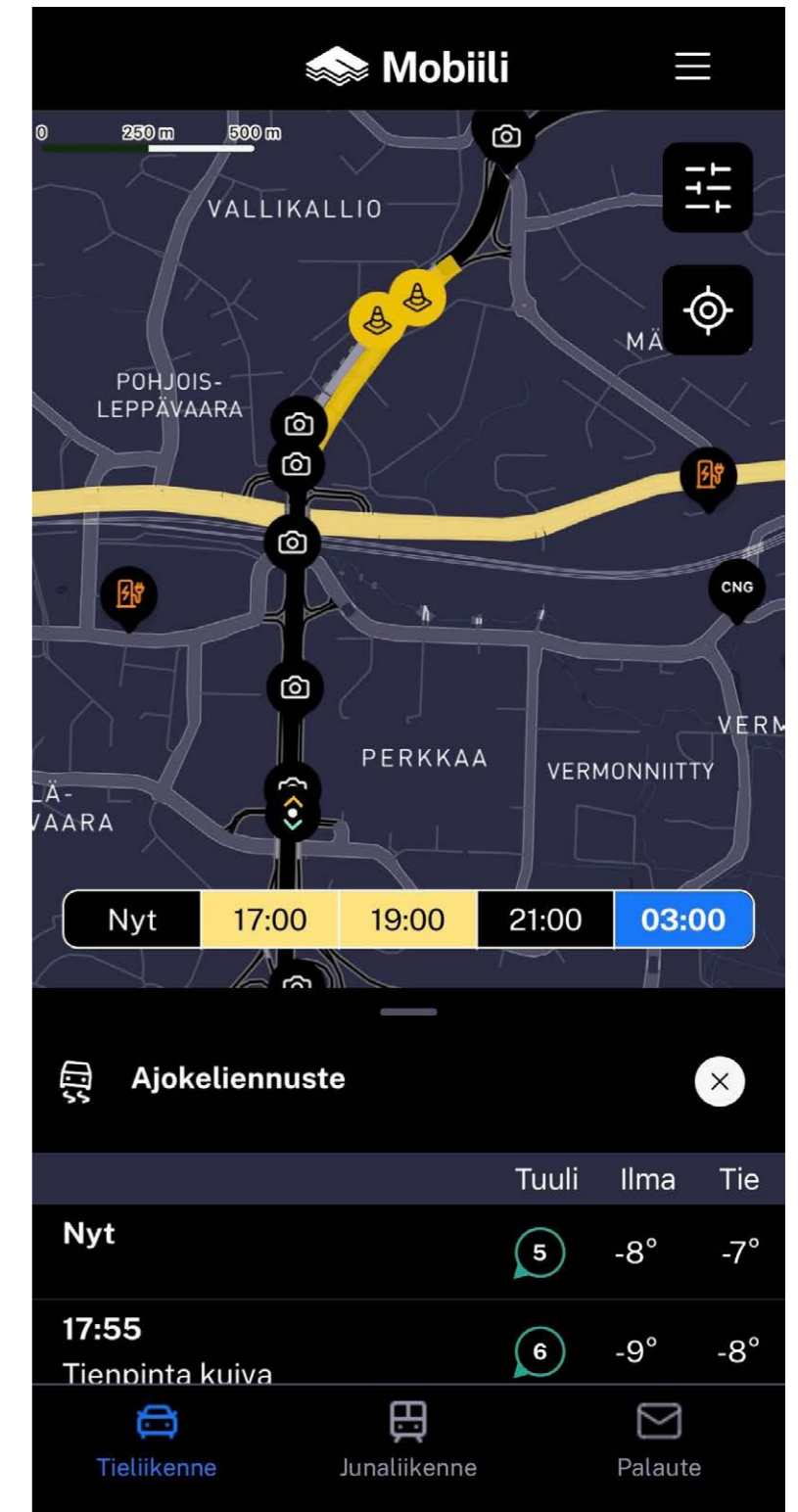
Radio Nova and other Bauer Media radio channels, among others, use the Traffic Situation service in their programme production. In 2023, Bauer Media introduced real-time traffic bulletins and local traffic bulletins read by artificial

intelligence. Now motorists receive targeted traffic bulletins from A.I.mo. or A.I.no. 24 hours a day. The service is particularly beneficial for professional drivers who drive at night.

At the end of 2023, we published the **Fintraffic App**, which combines the best functions of the Traffic Situation, Train Departures and Feedback Channel services. Its Push messages serve drivers by displaying any road traffic disruptions within a 20 km radius.

Various actors are using the data and digital solutions provided by Fintraffic in increasingly extensive ways in their channels. An increasing number of digital services is serving a variety of modes of transport and improving the efficiency of their hubs. For example, the Port Activity App also serves road transport.

Those who use maps and navigators are using Fintraffic data in services provided by, for example, Google Maps, Waze, Apple and HERE. Route planners for Finnish public transport could not function without the data shared by Fintraffic. VR offers its passengers real-time train location information in its own digital channels, which is based on the data produced by Fintraffic. Fintraffic data is also used by emergency rescue operators, in traffic planning, and to optimise road maintenance.



Fintraffic App.



## More than 4.7 billion interface calls were made to the Digitraffic service.

In 2023, more than 4.7 billion interface calls were made to the Digitraffic service, which provides open data and connects traffic data providers and users. This is 11% more than in the corresponding period in 2022.

Fintraffic’s digital services were of interest to citizens in the fourth quarter – all together, Fintraffic’s digital services saw a total of about one million visits. The monthly peak, 463,000, was reached in December. This figure is approximately three times that of a typical summer month.

### Increased speed, ambition and added value for customers

For 2024, we hope to speed up the development of ecosystem activities. The 2023 Digital Barometer showed that, in digitalisation, we have all the prerequisites for acting as a trailblazer, but there is room for major improvement in utilising data. The traffic data ecosystem also hopes for more ambition to EU-level regulation.

In 2024, in ecosystem cooperation and the development of digital services, we will focus on generating added value by developing statutory tasks and services. We want to produce scalable, high-quality platform services and integrated interfaces for transport and logistics. We provide services primarily for the needs of corporate customers. Our impact on end users is primarily generated through the support we give to other operators. We focus on improving our existing services, with no intention to significantly expand our service portfolio.

Read more at: [www.fintraffic.fi/en/trafficecosystem](http://www.fintraffic.fi/en/trafficecosystem)

### CASE

## Fintraffic App immediately tells you what’s happening in traffic

**The new Fintraffic App brings real-time traffic data from Finnish roads and rail traffic to road users and rail passengers.**

**The application utilises real-time data obtained directly from Fintraffic’s traffic centres.**

Fintraffic App also offers road users images from all Finnish road weather cameras and details of road works, congestion points, driving conditions and weather information, road weather warnings, electric car charging stations and gas car refuelling stations. The convenient map view allows you to view the information that interests you most. For rail traffic, the app shows real-time timetable and departure platform information and disruption alerts for all Finnish railway stations.

The application utilises real-time data from Fintraffic’s Digitraffic service, which imports

data from sources such as Fintraffic’s traffic centres.

Location-based push notifications inform the user immediately when something abnormal happens nearby on the roads or on a preferred rail route. Notifications of road traffic disruption alerts are based on GPS positioning, so the service also works when on the road. Train users, meanwhile, can select which train services they wish to receive notifications for. A similar feature is also planned for road traffic.

The Traffic Customer Service’s Feedback Channel has also been integrated into the application. It enables sending direct feedback via the application, where the user can also easily monitor the progress of their feedback.



# Responsibility





## RESPONSIBILITY AT FINTRAFFIC

# Responsibility is part of Fintraffic's business and daily life

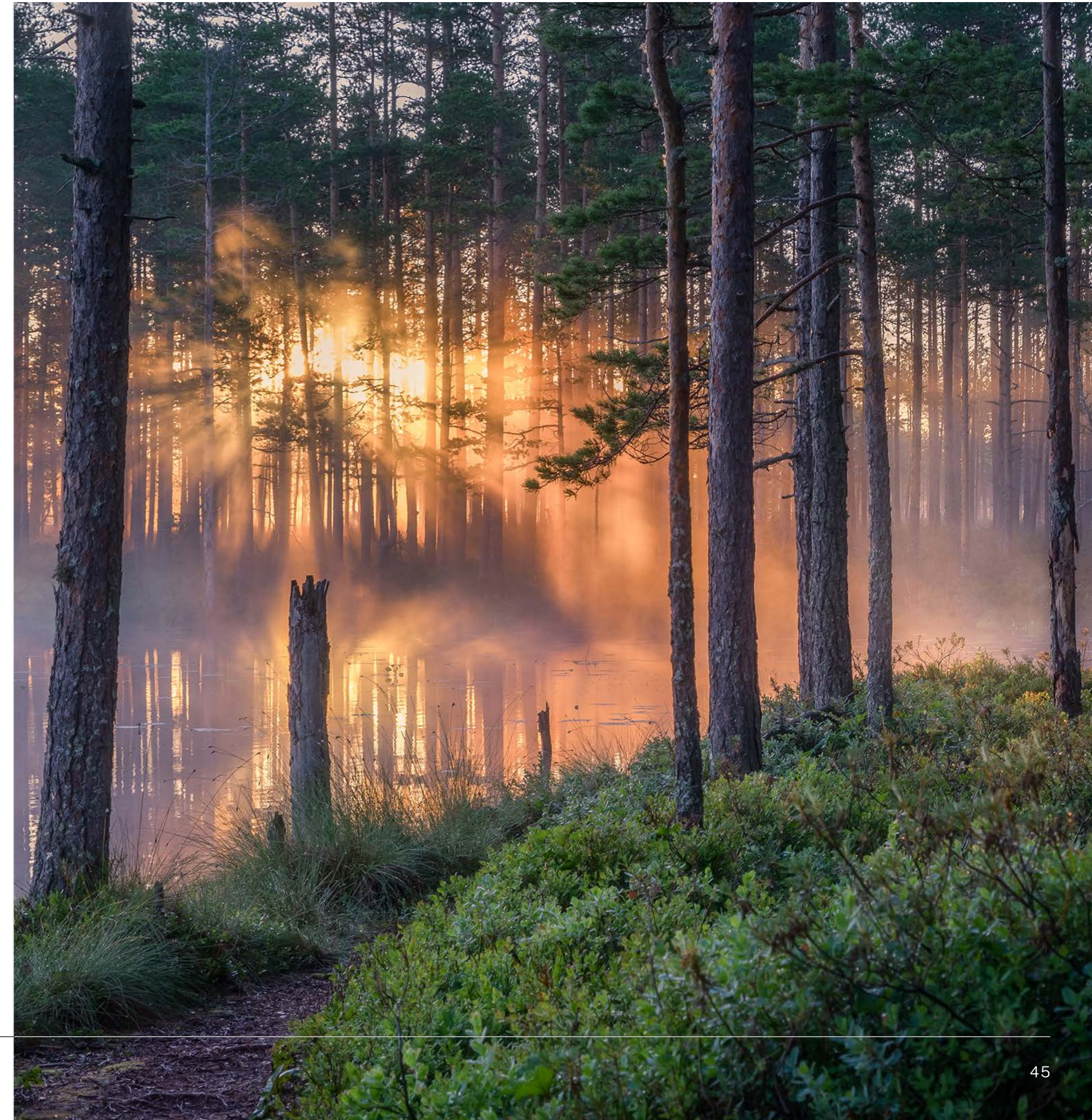
At Fintraffic, responsibility and sustainability issues are managed as part of our daily operations and service production. Our corporate responsibility work provides strong support for the company's business, strategic implementation and stakeholder relations. Continuous development of responsibility is part of our daily life. Every year, we publish a report on responsibility and sustainability as part of our Annual Report.

**In 2023, Fintraffic completed** its first materiality analysis process of identifying and assessing material sustainability impacts, risks and opportunities in accordance with the double materiality criteria as required by the EU's Corporate Sustainability Reporting Directive (CSRD).

In our first sustainability analysis, which we conducted in 2020, we included the expectations of our key stakeholders among the materiality topics based on the surveys conducted by the persons the company assigned for each stakeholder. When identifying our materiality themes, we examined a number of sector-specific aspects and trends, sustainability frameworks and standards, regulatory requirements, and our

strategy. Our materiality analysis was updated in 2022.

The double materiality assessment carried out in autumn 2023 complemented the previous analysis and the previous year's update. As assessment methods we used reviews based on public and internal materials, stakeholder interviews, the materiality assessments of Fintraffic experts and management, and working group meetings. Most of Fintraffic's management team members participated in the materiality assessment process, and the entire management team validated its results.





The double materiality assessment process was carried out in three main stages:

1. Understanding the context: examination of internal materials (operations and business relationships, business model and value chain), reviews of other contextual information (sectoral studies, EU sustainability regulation, benchmarking), and review of stakeholder views.
2. Identification of the actual and potential impacts, risks and opportunities (IROs) related to sustainability matters.
3. Assessment and determination of the material impacts, risks and opportunities related to sustainability matters, and a consolidated outcome of both the impact and financial materiality dimensions, mainly based on Fintraffic's internal quantitative and qualitative assessment and findings from stakeholder analysis.

The materiality analysis highlighted the societal impact of Fintraffic, i.e., the benefits generated for the transport ecosystem and users. In environmental issues, the focus is on topics related to emissions and the prevention of environmental damage. The focus of financial responsibility is on sustainable use of tax revenue and good governance. The sustainability themes related to personnel are still strongly represented.

### Material sustainability themes from 2024 onwards

Topical ESRS standard	Material ESRS sustainability matters	Connection to Fintraffic's operations
ESRS E1 Climate change	Climate change mitigation	<ul style="list-style-type: none"> <li>Reducing greenhouse gas emission from transport; promoting multimodal travel and transport chains and low-carbon transport from the perspective of reducing emissions and new business opportunities.</li> <li>Greenhouse gas emission across the whole value chain. Energy consumption, travel, procurement and fuel consumption. Transition risks related to energy and increase in costs.</li> </ul>
ESRS E2 Pollution	Pollution of air, water and soil	<ul style="list-style-type: none"> <li>Prevention of environmental damage and accidents, and accelerating the resolving of incidents by providing information.</li> <li>Improving local air quality by means of traffic control to prevent congestion. Efficient use of airspace, thus reducing local emissions and noise pollution.</li> </ul>
ESRS S1 Own Workforce	Working conditions: Health and safety and wellbeing, labour market dialogue	<ul style="list-style-type: none"> <li>Promoting the health and safety and wellbeing of the personnel. In particular, preventing exhaustion and stress caused by strain at work.</li> </ul>
	Equal treatment and equal opportunities for all, other rights	<ul style="list-style-type: none"> <li>Competence building and availability of skilled labour. The effects of industrial action on the level of service.</li> <li>Promoting an equal and inclusive work community and its impact on the employer image and the ability to recruit employees. The privacy of employees (including data security).</li> </ul>
ESRS S3 Affected communities	Communities' economic, social and cultural rights	<ul style="list-style-type: none"> <li>The impacts of Fintraffic's services on the overall safety and security of society (including cyber security).</li> <li>Promoting regional and international accessibility and smooth logistics.</li> <li>The benefits of automation and digitalization for society.</li> </ul>
ESRS S4 Consumers and end-users	Personal safety and social inclusion of consumers and/or end-users	<ul style="list-style-type: none"> <li>Enhancing the safety of transport users.</li> <li>Improving the accessibility of public transport and making it more attractive.</li> <li>Developing the data ecosystem and, consequently, making Fintraffic a more attractive partner.</li> </ul>
ESRS G1 Business Conduct	Ethical business conduct and good governance	<ul style="list-style-type: none"> <li>Responsible and cost-efficient use of tax resources.</li> <li>Good governance and anti-corruption and anti-bribery policies.</li> </ul>

The sustainability themes prioritised as a result of the analysis will lay the foundation for Fintraffic's sustainability reporting from 2024 onwards. The report for 2023 is based on the key themes identified earlier.

### Sustainability management

The company's Board of Directors approves the company's strategies and principles relating to sustainability and the environment, assessments of climate change-related risks and opportunities, and responsibility reporting. The Group

Management Team holds ultimate responsibility for integrating sustainability targets at a strategic and operational level.

Safety and environmental management teams also meet at Group level. They meet monthly to decide on development projects,



## The operations of the sustainability group became established and the group met at regular intervals.

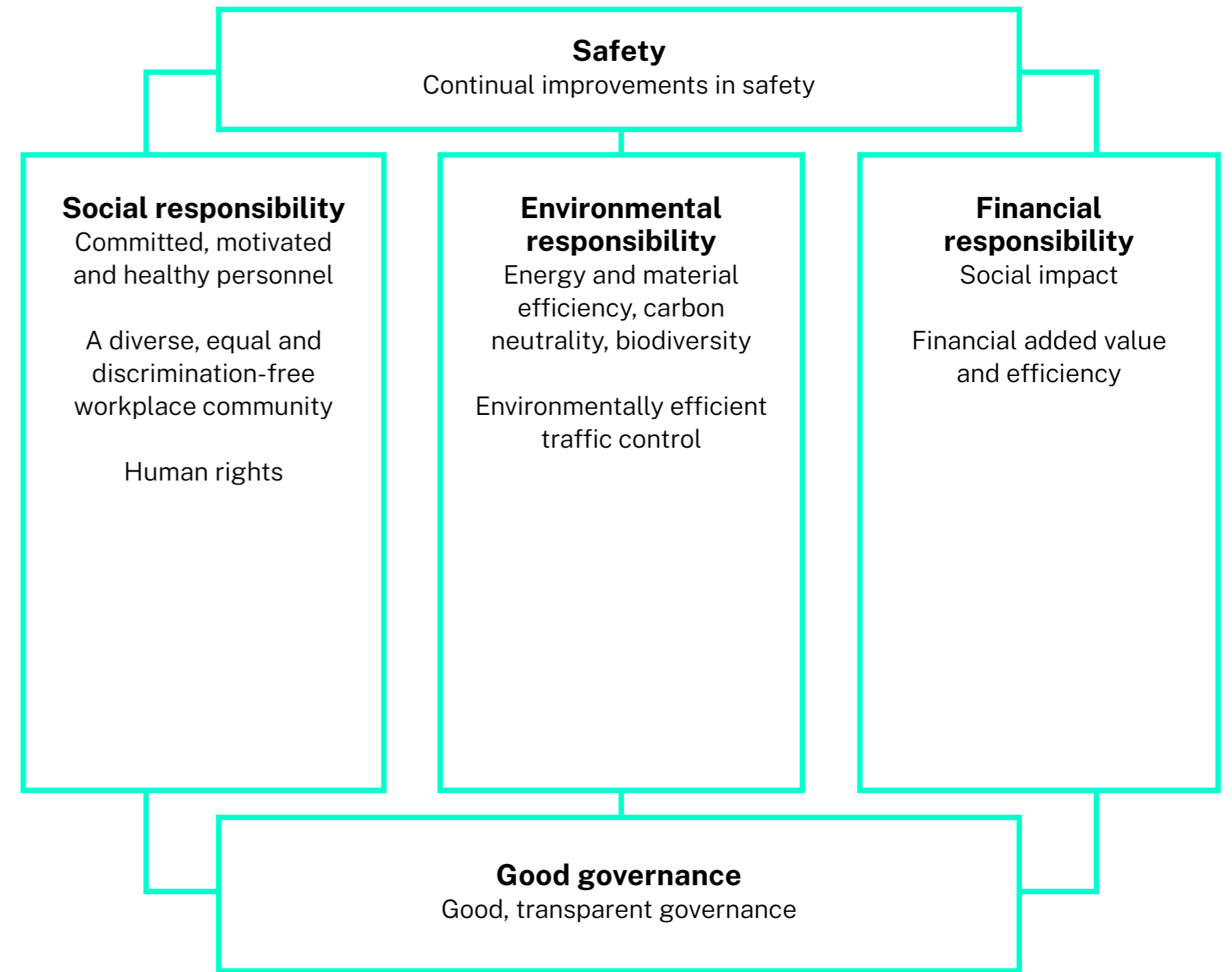
monitor their progress, and promote safety and environmental action. The HR, finance, SQE, legal affairs, procurement and communications units all have their appointed representatives in the sustainability group. In 2023, the operations of the sustainability group became established. The group met at regular intervals to examine the realisation of sustainability objectives and to prepare Fintraffic's development measures to comply with future EU regulation.

In 2023, our Director of Strategy and Communications was in charge of coordinating our corporate responsibility issues.

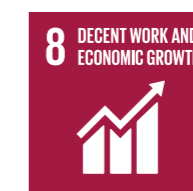
### Responsibility is part of daily life at Fintraffic

- We are committed to operating responsibly, honestly and ethically.
- We are moving towards carbon neutrality. Our services help to reduce traffic emissions.
- Our daily work ensures safety and good governance, and takes care of people, the environment and the economy.
- We report on our sustainability in accordance with key frameworks. We are committed to supporting the UN Global Compact's Action Plan.

### Material sustainability topics



### Fintraffic supports the UN's Sustainable Development Goals





## Corporate responsibility is taken into account in the target setting of the management and personnel.

We assess climate change risks and opportunities for our business by applying the reporting recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The assessment has been included in the company's risk management process. It will support our efforts to enhance the continuity of our service production and the development of our sustainability work.

The European Union's classification system for sustainable economic activities, aka the EU taxonomy, came into force in 2020 under the Taxonomy Regulation (EU) 2020/852. This taxonomy will help the EU to create a clear definition of the type of activity that can be considered environmentally sustainable.

The aim is to steer economic activity and channel capital towards achieving the EU's ambitious climate and environmental objectives.

Fintraffic's involvement in climate change mitigation has been partly recognised in the EU taxonomy. In the taxonomy update of 13 June 2023, digital tools to increase efficiency, capacity and energy savings were added as one of the main criteria for rail transport infrastructure. As yet, air navigation is not clearly included in the activities listed in the EU taxonomy, but the taxonomy eligibility for road and vessel traffic has not been ruled out.

Although Fintraffic is not yet obliged to report under the EU Taxonomy Regulation, the company continues to investigate the taxonomy eligibility of its business operations and monitors the development of the regulation.

### Good and productive leadership

We are a wholly state-owned company operating under the ownership steering of the Ministry of Transport and Communications. We provide the traffic management and traffic situation services that are required by society, the economy and the authorities to ensure reliability under both normal and exceptional circumstances. Our work has a great impact on the functioning of society.

In accordance with the Government Resolution on State-ownership Policy issued on 8 April 2020, as the owner of the company, the State is seeking the best possible overall financial and social benefit from the management of its assets, and this will be assessed on the basis of how well and at what cost the company fulfils its social service duties. The company's decision-making and governance comply with the Limited Liability Companies Act, the company's Articles of Association, the guidelines for the ownership steering of limited liability companies issued by the Ministry of Transport and Communications on 1 January 2019, most of the Corporate Governance Code for Finnish listed companies issued by the Securities Market Association in 2020, the OECD Principles of Corporate Governance, the strategic ownership policies for Traffic Management Company Fintraffic Ltd issued on 16 October 2019, and the corporate governance code contained in the Group's own management system.

Corporate responsibility is taken into account in the target setting of the management and personnel and in the performance bonus system in terms of safety, the environment, social responsibility and good governance.







## Good governance

SAFETY		SOCIAL RESPONSIBILITY		ENVIRONMENTAL RESPONSIBILITY		FINANCIAL RESPONSIBILITY		GOOD GOVERNANCE	
		Workplace community	Partners						
<b>Our work is steered by policies and guidelines</b>		<ul style="list-style-type: none"> <li>• Safety policy</li> <li>• Information and cybersecurity policy</li> <li>• Risk management policy</li> <li>• Data protection policy</li> <li>• Preparedness policy</li> </ul>	<ul style="list-style-type: none"> <li>• Remuneration management</li> <li>• Equality and diversity plan</li> <li>• Substance abuse policy</li> </ul>	<ul style="list-style-type: none"> <li>• Management and organisation</li> <li>• Procurement principles</li> </ul>	<ul style="list-style-type: none"> <li>• Management and organisation</li> <li>• Environmental strategy</li> <li>• Procurement principles</li> <li>• Roadmap for carbon neutrality 2022–2035</li> </ul>	<ul style="list-style-type: none"> <li>• Management and organisation</li> <li>• Group's decision-making guidelines</li> <li>• Guidance on actual beneficiaries and politically influential persons, as per the Act on Detecting and Preventing Money Laundering and Terrorist Financing</li> <li>• Management and organisation</li> <li>• Group's decision-making guidelines</li> <li>• Financial policy</li> <li>• Risk management policy</li> <li>• Procurement principles</li> </ul>	<ul style="list-style-type: none"> <li>• Code of Conduct</li> <li>• Guidelines on compliance with competition law</li> <li>• Insider guidelines</li> <li>• Procurement strategy</li> <li>• Roadmap for responsibility</li> </ul>		
<b>Responsibilities</b>		<ul style="list-style-type: none"> <li>• SQE Director</li> <li>• Safety management team</li> <li>• Information and cybersecurity management</li> <li>• Persons responsible for safety at subsidiaries</li> </ul>	<ul style="list-style-type: none"> <li>• Chief Human Resources Officer</li> </ul>	<ul style="list-style-type: none"> <li>• Responsibility divided between members of the Group Management Team</li> </ul>	<ul style="list-style-type: none"> <li>• SQE Director</li> <li>• Environmental management team</li> <li>• Responsibility divided between members of the Group Management Team</li> </ul>	<ul style="list-style-type: none"> <li>• CFO</li> <li>• Responsibility divided between members of the Group Management Team</li> </ul>	<ul style="list-style-type: none"> <li>• CEO</li> <li>• Deputy CEO</li> <li>• Responsibility divided between several directors</li> </ul>		
<b>Activity in 2023</b>		<ul style="list-style-type: none"> <li>• Digitalisation of safety processes and tools</li> <li>• Roadmaps for safety, information and cybersecurity (including measures) for the next five-year period</li> <li>• The regular monitoring of indicators, development activities and results by management teams and the Group's Board of Directors</li> <li>• Implementation of information and cybersecurity acceleration programme (approx. 100 Actions)</li> <li>• Initiating an ISO 27001 Project</li> <li>• Launching development projects related to technical control and monitoring systems</li> <li>• Designing and procuring safety systems for Ilmala Aura</li> <li>• Risk Reviews x 2</li> </ul>	<ul style="list-style-type: none"> <li>• Projects to develop corporate culture</li> <li>• Developing HR processes and putting out a tender for a new HR system</li> <li>• Training programme for management team</li> <li>• Implementing an e-learning environment</li> <li>• Defining strategic competencies</li> <li>• Competency assessments</li> <li>• Equality and non-discrimination plan</li> <li>• Salary examination</li> <li>• Expert programme at Fintraffic</li> </ul>	<ul style="list-style-type: none"> <li>• Meeting with a working group consisting of operators in the sector</li> <li>• Sharing information and opinions on the transport sector with authorities, politicians and the media</li> </ul>	<ul style="list-style-type: none"> <li>• Updating our environmental strategy</li> <li>• Drawing up a carbon neutrality roadmap for 2022–2035</li> <li>• Improving our carbon footprint calculations. Reporting in accordance with GHG protocol: Scope 1 and Scope 2 emissions</li> <li>• Launching the creation of an environmental information system</li> <li>• Reducing the carbon footprint of our own commuting by switching to electric leased vehicles and enabling fossil-free commuting for personnel in the form of company bikes</li> <li>• Launching an energy efficiency development programme and the planning of a property management strategy</li> <li>• Creating an ISO 14000 system</li> <li>• Developing suitable carbon handprint indicators for different modes of transport</li> <li>• Updating climate-change risks and opportunities with the aid of TCFD reporting recommendations</li> </ul>	<ul style="list-style-type: none"> <li>• Developing operational planning and financial forecasting</li> <li>• Building a €30M efficiency programme for the years 2023-2028 and continuing the efficiency work</li> <li>• Developing procurement</li> <li>• Operational adjustments in air navigation services continued. Revenue included a regulatory adjustment based on the EU's traffic risk-sharing mechanism.</li> <li>• Transferring investment projects from the Finnish Transport Infrastructure Agency that were unfinished when Fintraffic was incorporated</li> <li>• Commencement of RP4 Performance Plan development</li> <li>• The development work on common processes continued</li> </ul>	<ul style="list-style-type: none"> <li>• Mobilising and establishing the use of regulations and guidelines in the company</li> <li>• Organising training in topics related to good governance</li> <li>• Conducting double materiality analysis and preparing for reporting according to CSRD</li> </ul>		



### Responsible procurement

Each year, Fintraffic uses more than EUR 100 million to procure mainly ICT systems and related services as well as products and services related to infrastructure and construction. The company is expected to operate cost-effectively, take corporate responsibility better into account, and to be innovative and systematic in its long-term operations. To maximise the cost-efficiency of our operations, we act in accordance with the company's strategy and procurement strategy and comply with all laws concerning public contracts.

Fintraffic's procurement strategy was updated at the beginning of 2023. In the future, responsibility issues will be taken into account as an important criterion in the company's procurement process. The procurement strategy describes how procurement activities support business operations and how procurement is managed, implemented and developed. Procurement strategy-based policies concern procurement activities and the implementation of individual procurements.

The procurement steering group guides the successful attainment of procurement strategy objectives. The Procurement Services function is responsible for the implementation of the strategy

in cooperation with the Group's other common functions, those who need the procurement and contract managers.

### Procurement principles

In their procurement activities, Fintraffic and its subsidiaries comply with current legislation, the company's ethical principles and the principles of openness, fairness and non-discrimination in procurement legislation.

In Group procurement, the company uses Hansel framework agreements and its digital procurement system (DPS). Procurements are also made in such a way that Traffic Management Company Fintraffic Ltd organises a competitive tendering procedure in accordance with the Act on Public Procurement and Concession Contracts, and where possible, Group companies make the procurement jointly. Each company handles procurement for its own needs or several companies may also make joint purchases.

Read more about our procurement strategy at:  
[www.fintraffic.fi/fi/fintraffic/fintrafficin-hankinnat](http://www.fintraffic.fi/fi/fintraffic/fintrafficin-hankinnat)



## STAKEHOLDER COOPERATION

# An expert and transparent partner

Our goal is for Finland to have the world's safest, smoothest and most environmentally friendly traffic. This ambitious target could not be achieved without close partnerships with our stakeholders. Continuous development of our stakeholder work is therefore necessary, so that we can work together to generate as much benefit as possible for people, companies and Finland as a whole.

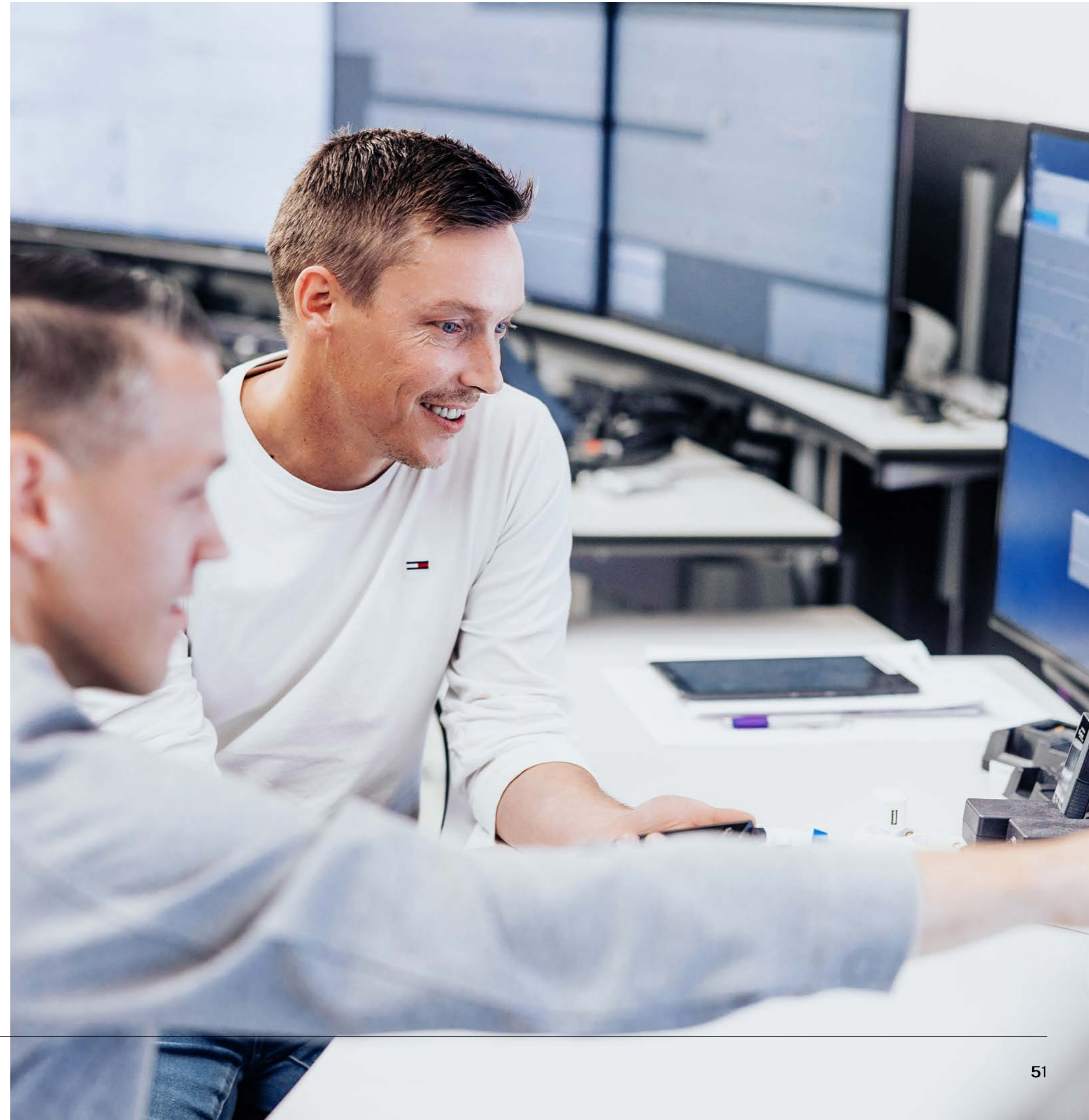
**We are committed** to promoting trust and openness in our partnerships. We want to bring our competence and expertise to our collaborative relationships, so that our interaction would be as beneficial as possible for all those involved.

We actively participate in public debate on themes related to our operating environment. We also strive to ensure that we have relevant things to say and our expertise is in demand. We think it is important for decision-making to consider perspectives relating to traffic management and raising the level of digitalisation in transport, so as to ensure the best possible implementation of a safe, smooth and low-emission transport system in Finland. Our strategic customers and partners are:

the Finnish Transport Infrastructure Agency, Finavia and airlines, Traficom, and ports and cities. Other key partners include the Finnish Defence Forces, the Finnish Border Guard, Customs and the Police, ELY Centres, and transport sector operators.

During 2023, we intensified our cooperation with operators in the traffic data ecosystem in particular. The data ecosystem already consists of more than 200 companies and organisations with whom we promote a fair data economy and a common set of rules for the sector. In the data ecosystem, Fintraffic acts as a coordinator and convener.

As a responsible state-owned company, we promote good dialogue with, for example,





## We actively participate in public debate on themes related to the transport sector.

the research community and educational establishments, industrial policy interest organisations, regions, politicians and the media. In 2023, we published our targets of influence in the parliamentary elections and will continue to increase openness in our stakeholder activities in 2024.

We are also actively involved in many of the international organisations and cooperation bodies in our sector, which have an impact on operating environments both at the EU level and globally. These include CANSO in aviation, IALA in maritime traffic, PIARC in road traffic, ERMTS cooperation in rail traffic and the development of Common European data spaces.

Service providers are also an important stakeholder group, playing a key role in the value chain. For more information on supplier cooperation and value chain management, see page [69](#).

### Increasing confidence among stakeholders

Continuous dialogue, creating common practices and closer cooperation with our partners are important components of our cooperation with stakeholders. We have appointed members of the Group Management Team to be responsible

for our key stakeholders. In addition to keeping in regular contact with our stakeholders, we request feedback on our activities.

In 2023, we conducted targeted stakeholder and customer satisfaction surveys, and also carried out our third corporate image survey of Fintraffic's business among the general public. Both the stakeholder surveys and aforementioned reputation survey indicated increased confidence in Fintraffic and a greater awareness of the company.

### Taking the views of key stakeholders into account in corporate responsibility

Fintraffic carried out the process of identifying and assessing material sustainability impacts, risks and opportunities in accordance with the principles of double materiality analysis for the first time in 2023.

As part of the double materiality process, we studied the views of key stakeholders through interviews. The views focused on issues such as transport safety from various perspectives, the promotion of low emissions from traffic and accessibility of transport, the benefits of the data ecosystem facilitated by Fintraffic, and the health and wellbeing of the personnel.





## Stakeholder cooperation

Stakeholder	Stakeholder expectations	Fintraffic's response
<p><b>Customers:</b>  <b>1. Clients and public-sector partners</b>            Finnish Transport Infrastructure Agency, Finavia, Traficom, cities, defence, emergency rescue, police, Tax Administration, customs and ports  <b>2. End-user customers</b>            Traffic-sector actors: companies, operators, airlines, citizens, and end users: including road users, pedestrians, aviators, cyclists; rail, ship and air passengers; drone service users  <b>3. Application developers and data users:</b>            including data producers, service developers, consultants</p>	<ul style="list-style-type: none"> <li>• Maintaining a high level of security</li> <li>• Smooth and efficient traffic, and lower emissions</li> <li>• Reliable and easy-to-use services</li> <li>• World-class professionalism and quality in traffic control and air navigation services</li> <li>• Functional travel and transport chains</li> <li>• Support for companies in the sector through, for example, service development in Finland and export markets</li> <li>• Launching new services within the sector in Finland and export markets</li> <li>• High-quality data</li> <li>• Easy-to-use APIs and platform services</li> <li>• Support for public authorities</li> </ul>	<ul style="list-style-type: none"> <li>• High-quality data and services, and their continual development</li> <li>• Easy and continuous communication; a single contact person for customers</li> <li>• Customer satisfaction surveys</li> <li>• Corporate image survey</li> <li>• Increasing our understanding of customers</li> <li>• Customer relationship management</li> <li>• Investments in the operational reliability of service production</li> </ul>
<p><b>Personnel</b></p>	<ul style="list-style-type: none"> <li>• Meaningful work</li> <li>• Fair pay</li> <li>• Competitive employee benefits, including occupational healthcare</li> <li>• High-quality supervisory work</li> <li>• Hybrid work</li> <li>• Appropriate, high-quality tools</li> <li>• A unified organisational culture and practices</li> <li>• Competence development and maintaining labour-market competency</li> </ul>	<ul style="list-style-type: none"> <li>• Offering meaningful work and providing information about Fintraffic's activities in an intelligible manner</li> <li>• Remuneration systems and competitive employee benefits, including comprehensive occupational healthcare</li> <li>• Training supervisors, and developing tools for supervisors</li> <li>• Developing our corporate culture</li> <li>• Competence development</li> <li>• Surveys for supervisors and personnel</li> <li>• Close and open contact with trade unions</li> </ul>
<p><b>Research community and education</b></p>	<ul style="list-style-type: none"> <li>• Scientific advancement</li> <li>• Sharing research data</li> <li>• A need for internships or master's theses</li> <li>• Promoting cooperation</li> <li>• Influencing the knowledge-based development of the transport system</li> </ul>	<ul style="list-style-type: none"> <li>• Fintraffic's participation in research projects</li> <li>• Increasing visibility at educational institutions</li> <li>• Providing internships or thesis opportunities</li> <li>• Offering summer jobs to students</li> <li>• Joint projects and partnerships</li> </ul>
<p><b>Industrial policy interest groups</b></p>	<ul style="list-style-type: none"> <li>• Open and active dialogue</li> <li>• Promoting common interests</li> </ul>	<ul style="list-style-type: none"> <li>• Exchanging information within industry forums in Finland and abroad</li> <li>• Proactive participation in organisations' activities</li> <li>• Continuous market development</li> <li>• Participation in employer advocacy</li> </ul>
<p><b>Regions</b></p>	<ul style="list-style-type: none"> <li>• Ensuring smooth cooperation</li> <li>• Involving the entire country in development work</li> <li>• Regional accessibility</li> </ul>	<ul style="list-style-type: none"> <li>• Active dialogue with regions</li> <li>• Harnessing digitalisation in the development of regional accessibility</li> <li>• Increasing the degree of automation in traffic control; improving cybersecurity</li> <li>• Services for the whole country</li> </ul>
<p><b>Politicians</b></p>	<ul style="list-style-type: none"> <li>• Ensuring smooth and safe traffic</li> <li>• Meeting and complying with regulatory standards and requirements</li> <li>• Transparent and efficient operations</li> <li>• Comprehensive sustainability reporting</li> <li>• Providing information as a basis for decision-making on traffic management and the benefits and opportunities afforded by digitalisation</li> </ul>	<ul style="list-style-type: none"> <li>• Providing world-class traffic management, digital services and data</li> <li>• Ensuring the reliability of traffic control and management</li> <li>• Compliance with regulations and regulatory standards</li> <li>• Close cooperation with political actors; knowledge creation</li> </ul>
<p><b>Media</b></p>	<ul style="list-style-type: none"> <li>• Active information sharing</li> <li>• Interesting content</li> </ul>	<ul style="list-style-type: none"> <li>• Continual communication via Fintraffic's various channels</li> <li>• Traffic situation services</li> <li>• Proactive cooperation with different media</li> <li>• Regular meetings</li> <li>• Media service</li> </ul>



## ENVIRONMENTAL RESPONSIBILITY

# We shoulder responsibility for the environment

Traffic control to prevent traffic congestion and efficient use of the Finnish airspace will enable us to contribute to reducing emissions and noise pollution. We also yield impact by preventing environmental damage and accidents and by providing information about traffic disruptions.

**We shoulder responsibility** for the environment by improving the sustainability of the transport system through traffic management services and by providing traffic data and digital services to our customers and partners. We have divided our concrete environmental action into two parts: managing the environmental impact of our own business and value chain and influencing emissions throughout the entire transport system.

Our environmental strategy, extending to 2027, states: we are an environmentally oriented group striving for carbon neutrality; we are an enabler for a smooth and environmentally efficient transport system; we are an influencer for environmentally driven travel; and we prevent

accidents and environmental damage. Our goal is to reduce the greenhouse gas emissions from our own operations to zero in 2030 and to achieve full carbon neutrality in major procurements by 2035, in accordance with the carbon neutrality target of the Finnish government.

In addition to carbon neutrality, our environmental responsibility also includes energy and material efficiency, and environmentally safe and efficient traffic.

Our business operations promote Fintraffic's climate work by providing services to optimise the entire transport system and improve environmental efficiency. Fintraffic's environmental management team convenes on





a monthly basis. It plans, prepares and monitors Fintraffic’s own environmental action and environmental development projects that will impact external stakeholders.

We comply with both Finnish environmental legislation and international regulations and agreements. Our environmental strategy guides our activities, and we continuously monitor the implementation of our environmental objectives.

Fintraffic’s environmental work is also guided by the Roadmap for carbon neutrality 2022–2035. A separate recommendation for measures for 2023–2025 was also prepared based on the carbon report.

### A key role in building a sustainable transport system

Environmentally efficient and optimised traffic management reduces traffic emissions. By producing data and providing digital services, we can streamline travel and logistics chains and prevent environmental damage and accidents. New solutions will enable us to ease congestion and resolve incidents, and also help us to reduce traffic infrastructure management costs.

Our extensive carbon handprint is the sum of many factors, and we have significant opportunities to mitigate climate change and protect

the environment by working with other operators in the transport ecosystem. For example, air route optimisation and continuous descent approaches play an important role in reducing emissions from air traffic. Our data and services can also be used to optimise smooth running of road, rail and maritime traffic, which will reduce traffic emissions and energy consumption. Read more about our impact on pages [20–23](#) of this report.

### In 2023, we continued to strongly develop our environmental action

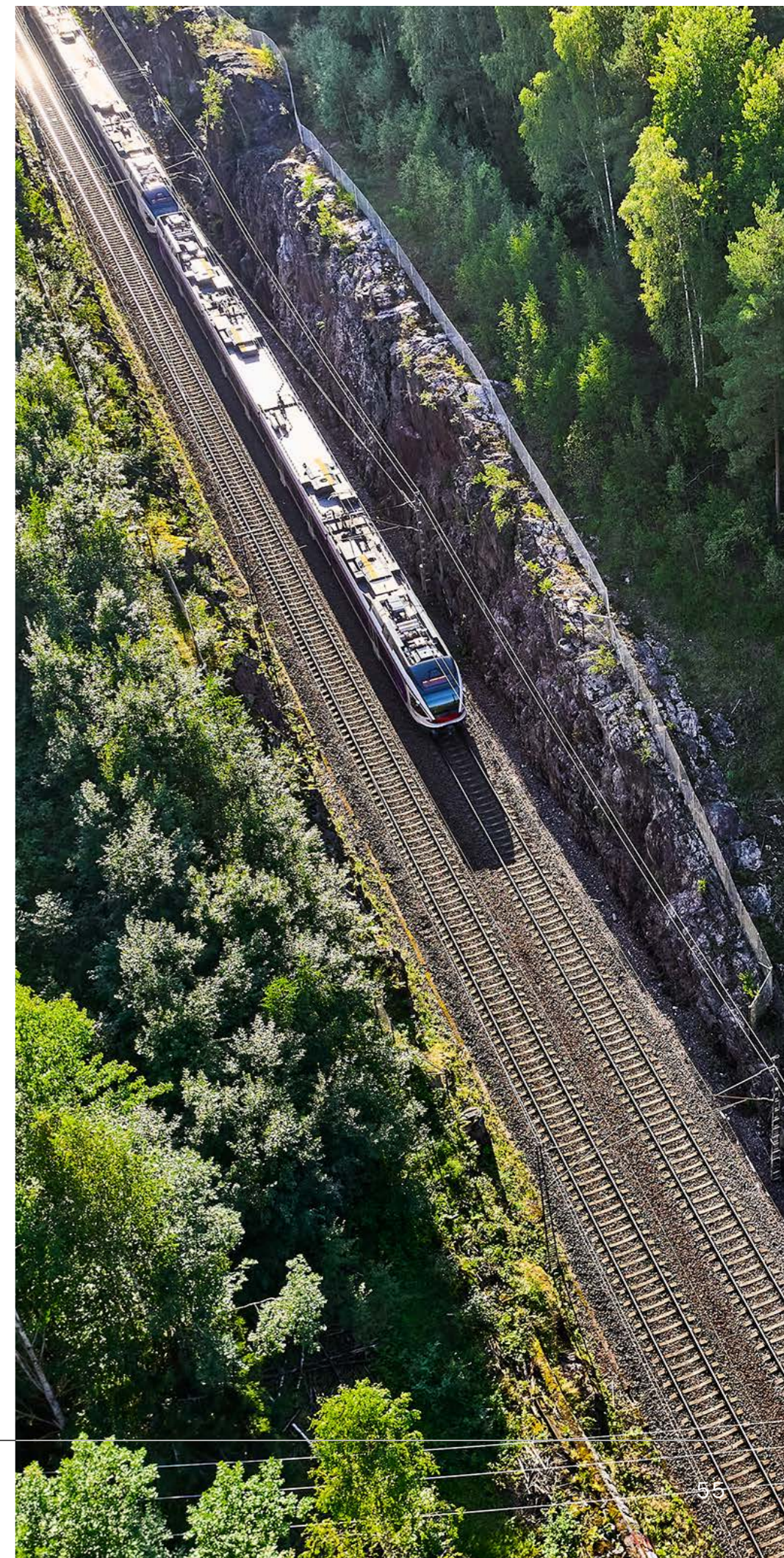
During 2023, we updated our environmental strategy and carbon neutrality roadmap for 2022–2035. Key measures include:

- reduction of emissions by shifting to renewable energy in all energy use
- enhancing work-related mobility; developing hybrid work, digital solutions, virtual negotiations, favouring electronic and public transport
- facility efficiency; a report on the current state of property management and the launch and implementation of energy efficiency measures
- low-carbon procurement; turning major procurements into low-carbon procurements; ICT and infrastructure procurements; developing indicators and monitoring.

We enhanced our carbon footprint calculations and are reporting Scope 1 and 2 emissions more transparently than before in accordance with the GHG Protocol. An important step was the decision to ensure that nearly all of the electricity we use will be fossil-free in the future (renewable or nuclear energy). We reduced the carbon footprint of our own commuting by switching to electric leased vehicles and enabling fossil-free commuting for our personnel in the form of company bikes.

In late 2023, we launched the planning of a property management strategy and an energy efficiency development programme. These programmes aim to boost efficiency in the management of properties used by Fintraffic, and also to increase the energy efficiency of structures and other energy-consuming electrical equipment.

Fintraffic’s procurement strategy was updated at the beginning of 2023. Sustainability, including environmental responsibility, will now be a significant criterion in Fintraffic’s procurement process. Low-carbon procurement will help us achieve carbon neutrality by 2035. Major procurements will also take into account other significant environmental aspects, such as energy efficiency, the circular economy, and promoting biodiversity.





We reduced the carbon footprint of our own commuting by switching to electric leased vehicles and enabling fossil-free commuting for our personnel in the form of company bikes.

We updated the climate change risks and opportunities for our business in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

### Towards carbon neutrality and broader emissions reporting

The most significant direct and indirect emissions of our own operations (Scope 1 and 2 emissions) are generated by vehicles' consumption of fuel, electricity consumption and heating in our properties, and the energy consumption of other electrical equipment and systems (such as traffic control and information technology). We have also identified and reported on our own substantial sources of indirect emissions (Scope 3), and will be developing reporting for both direct and indirect sources of emissions in our value chain during 2024. An essential long-term aspect of the work is to decarbonise Fintraffic's significant procurements.

Emissions from our own operations (Scope 1, Scope 2 and Scope 3) totalled 2,659 tonnes of CO<sub>2</sub> in 2023 (1,369 in 2022). The reasons for increasing emissions include improved computing efficiency in rented premises in terms of energy, district heating and waste consumption data,

### Fintraffic's environmental indicators

Stakeholder	2023	2022
<b>Greenhouse gas emissions, CO<sub>2</sub>-ekv. t</b>		
Fuel consumption of owned vehicle fleet, Scope 1	90	144
Electricity and district heat consumption, Scope 2 market based*	1,302	305
<b>Total Scope 1 and 2 greenhouse gas emissions</b>	<b>1,392</b>	<b>449</b>
Business and employee travel, Scope 3	1,210	885
Waste, Scope 3	57	34
<b>Total greenhouse gas emissions</b>	<b>2,659</b>	<b>1,369</b>
<b>Energy consumption, MWh</b>		
Electricity use	24,028	23,586
from which renewable sources	21%	96%
Heating	1,233	464
<b>Total energy consumption</b>	<b>25,261</b>	<b>24,050</b>
<b>Waste, t</b>		
<b>Total amount of waste</b>	<b>108</b>	<b>77</b>

\* Consumption of electricity, cooling and heating in rental properties has not been taken into account in the calculation.





## Ympäristöriskit

Description of risk	The aspects that will be primarily affected by the risk	Temporal nature of the risk	Risk impact	Criticality	Our own ability to control risk	Comments or controls
Extreme weather phenomena (such as storms, floods and heavy rainfall) affect the functionality of traffic management centres or units. Damage to buildings or equipment. Direct consequence.	B	3	3	9	2	Can be mitigated by making changes in our own infrastructure (protection).
Extreme weather phenomena (such as storms, floods and heavy rainfall) affect the infrastructure used by traffic management centres, such as equipment (damage) and telecommunications connections in the rail network, in sea areas, on roads and at airports.. Direct consequence.	B	2	3	6	2	Can be mitigated by making changes in our own infrastructure (protection).
Global or local extreme weather phenomena affect energy supply (outages, regulation or restrictions). Direct consequence.	B	3	4	12	2	Own contingency arrangements for critical systems.
Global climate action affects energy supply (energy shortages) or causes significant increases in electricity/energy prices. Direct consequence.	A	4	3	12	1	More energy-efficient solutions and an energy price protection mechanism. The possibilities to influence this are, however, very limited.
Demand for traffic management services is decreasing and will not be met by climate action (policy) or changes in transport or mobility (consumer behaviour). The reduction in demand for services may affect air, maritime, road and/or rail transport. Indirect consequence.	A	5	3	15	2	Cannot be significantly controlled by our own means. Increasing overall efficiency, for example by developing and building transport ecosystem services to make mobility as sustainable as possible.
Individual modes of transport (aviation, road, rail, maritime traffic) experience difficulties arising from extreme weather phenomena. For example, the impact of storms on air, road, rail and maritime traffic. Indirect consequence.	A	2	2	4	2	Prepare for exceptional circumstances, and provide traffic management services to support operators who are experiencing difficulties caused by extreme conditions. The traffic data and real-time situational picture produced by Fintraffic can help the traffic system adapt to extreme weather phenomena.
Biological threats caused by climate change increase the likelihood of pandemics, causing illness and sickness absences among personnel. Direct consequence.	B	3	3	9	1	Cannot be significantly influenced, excl. Our own protection measures
Global climate change affects people's housing choices, resulting in higher costs or issues with personnel availability. Direct consequence.	A	4	2	8	3	Organise activities, workplaces and job opportunities in such a way that alternative ways of working can be found. These are long-term strategic decisions in which climate change must be taken into account.
The global risks caused by climate change cause significant cost increases, making things like insurance and construction more expensive or leading to a rise in other operating costs (e.g. insurance, rents, maintenance). Direct consequence.	A	5	3	15	2	Real estate strategy and contract hedging mechanisms.
Supply issues make it increasingly difficult for various modes of transport to obtain spare parts for their systems. This may lead to interruptions in the provision of traffic management services. Direct consequence.	B	3	3	9	2	Sufficient stocks of our own for critical systems.
Extreme weather phenomena make the provision of traffic management services more complex. This increases the pressure on service provision and makes it more difficult to use standardised models. The risk of human error increases.	B	2	3	6	3	Timely restrictions on traffic, sufficient investments in traffic management systems.
Environmental regulation affects the way in which traffic management operates, and consequently the smoothness and efficiency of traffic flow. Direct consequence.	A	4	3	12	2	Adapting to regulations, continuously developing our operations, and ensuring economic efficiency and a sufficient level of profitability so that the company can make investments and maintain sufficient resources.
As exceptional circumstances increase, traffic management becomes more complex and requires more frequent deviations from basic operating models. This increases the need to invest in the traffic management system. An inability to make investments will threaten the reliability of the system and the quality and effectiveness of the service. Direct consequence.	A	4	3	12	2	Continuous and proactive business development. Ensuring financial efficiency and a sufficient level of profitability. The ability to invest in traffic management systems.

**A)** Economic (e.g. reduced service demand due to traffic risk or significant new investment needs)  
**B)** Service capability (affecting our ability to provide traffic management, e.g. flooding of our facilities or problems with energy supply or personnel availability)  
**C)** Other

Indicate the worst that is believed possible  
**1** Temporary (max 1 day)  
**2** Max 1 month  
**3** Max 1 year  
**4** Less than 10 years  
**5** Permanent (more than 10 years)

Indicate the worst possible impact on the economy or activity  
**1** Small (small local impact)  
**2** Small regional impact (multiple units)  
**3** Moderate impact on traffic management  
**4** High impact on all of the Group's services  
**5** Major impact on all of the Group's services

**1** No or very limited means to control risk  
**2** Some possible means to control risk  
**3** Our own means to control risk that can significantly impact it



# ” We are developing concrete action to streamline traffic and reduce emissions.

and a significant increase in work-related mobility compared to the previous year.

Our total energy consumption in 2023 was 24 GWh. Although purchased energy accounts for a significant proportion of our annual energy consumption, greenhouse gas emissions from purchased energy are already at a very low level, as 93 per cent of the electricity we consume is either nuclear power or comes from renewable sources.

We also measure and aim to reduce emissions from commuting, business travel and waste. Computational emissions from commuting and business travel amounted to 1,190 tonnes of CO<sub>2</sub> in 2023. Business travel increased in Fintraffic by

35 per cent in 2023 compared to the previous year. Our premises generated 108 tonnes of waste, which caused an estimated 56.5 tonnes of CO<sub>2</sub> emissions. At our premises, waste is sorted into recoverable, recyclable, incinerable and hazardous waste.

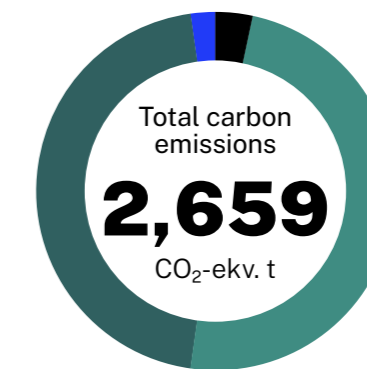
## Our future focus as an enabler of the green transition

Fintraffic plays an active role as both a developer and an enabler of environmentally friendly transport and traffic management. We are developing concrete action to streamline traffic and reduce emissions, and to enhance our ability to prevent accidents and provide high-quality traffic data and analyses of transport-related environmental factors. Environmentally efficient traffic management reduces the negative environmental impacts of traffic throughout the transport system. We are an active participant and partner in environmental cooperation groups for all modes of transport, by which we enable the successful achievement of environmental goals throughout the transport system.

In 2024, we will be introducing a new environmental management system and organising associated training and communications for personnel. Environmental work will be more closely integrated into our

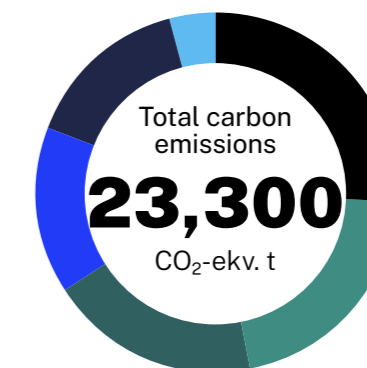
business functions and practices. We will be developing the automation of our environmental calculations, our carbon handprint and footprint calculations, our environmental and impact reporting, and our own environmental capabilities at every level. We will make concrete progress in achieving our carbon neutrality objective by, for example, increasing the use of renewable electricity and heating energy, boosting space usage and the energy efficiency of properties' and other electrical systems, favouring hybrid work models and remote meetings, further electrifying work-related mobility, taking environmental perspectives into greater consideration in our procurement process, and increasing the effectiveness of waste sorting at our own and rented properties.

## Direct emissions from own operations and other indirect emissions



- Fuel consumption of owned vehicle fleet (Scope 1), 3%
- Electricity and district heat consumption (Scope 2), 49%
- Business and employee travel (Scope 3), 46%
- Waste (Scope 3), 2%

## Indirect emissions from procurement



- Building and building area maintenance, 26%
- ICT procurement, 21%
- Infrastructure, 19%
- Machinery, equipment and transportation, 15%
- Professional and administrative services, 15%
- Others, 4%



## SOCIAL RESPONSIBILITY

# In 2023, we focused on personnel wellbeing, developing management and mapping of competence

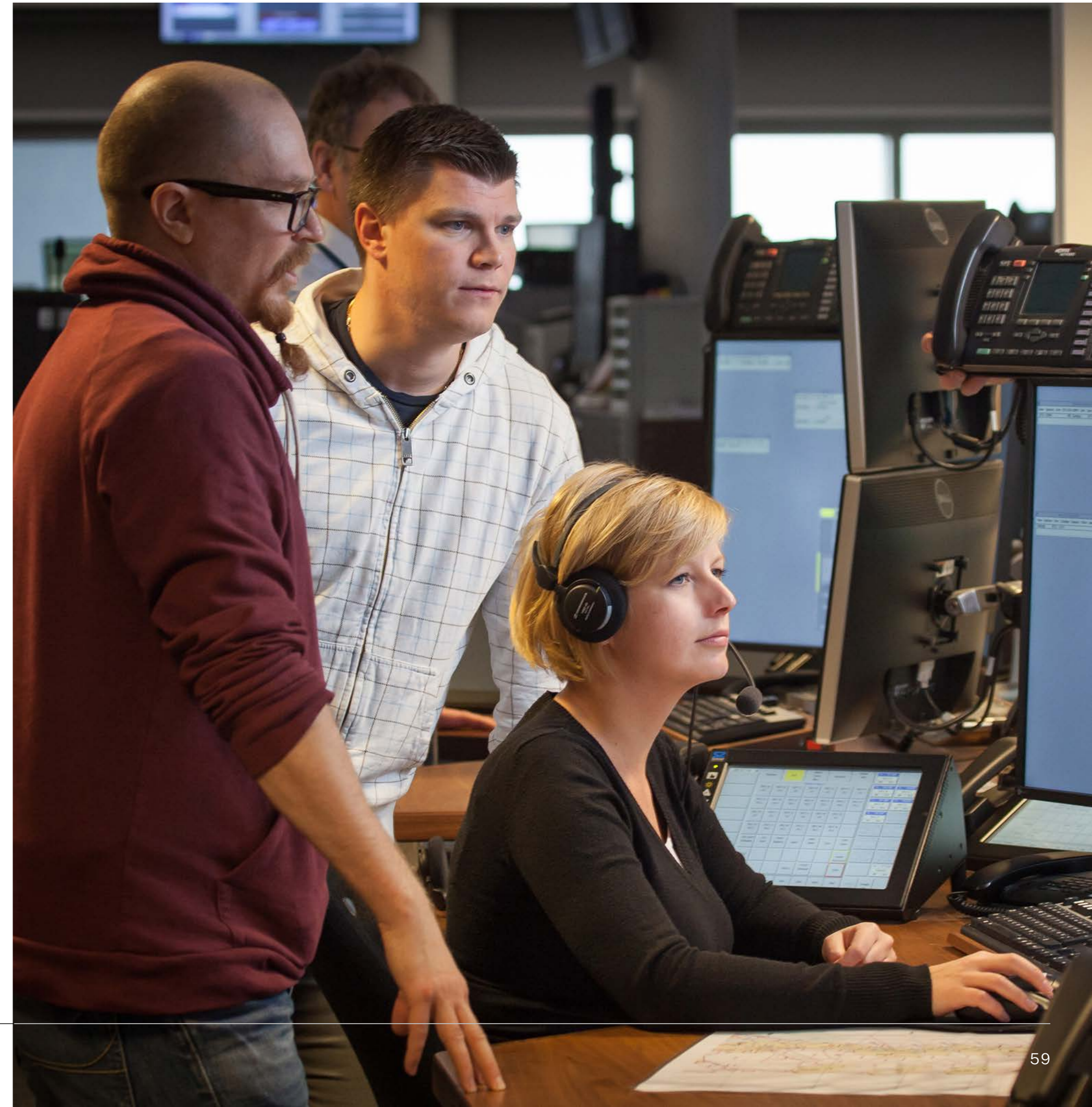
The aim of Fintraffic's HR work is a skilled and healthy personnel, who together produce world-class traffic management services and build a transport ecosystem that covers all modes of transport and the related digital services.

Operating in a safety-critical sector makes it vital for Fintraffic to ensure safety. Our core task is to ensure overall traffic safety because, at worst, any traffic accidents and incidents can cause damage to people, the environment and the economy. In addition to traffic safety, other key themes of our safety work include health security, information security and cybersecurity.

**At the end of 2023**, 1,180 people worked for Fintraffic, 24 per cent of them were women and 76 per cent men. The average age of our personnel was 46. In 2023, 142 new employees joined the company. Personnel turnover was 8.5 per cent, and 6.3 per cent excluding retirements.

Our guiding policies include the development plan for the work community, overall remuneration

policy, supervisor instructions on early intervention practices, instructions on managing work ability, recruitment instructions, the equality and non-discrimination plan, instructions for preventing harassment and inappropriate treatment, the substance abuse programme, job orientation instructions and safety clearance instructions.





Fintraffic’s Code of Conduct creates a shared way of working and helps us to ensure that we act in accordance with our values and internal guidelines.

### We focused on supporting wellbeing and coping

Fintraffic’s social responsibility emphasises occupational health and safety, which are crucial for the wellbeing of our personnel. As we provide traffic control services around the clock, more than 70 per cent of our personnel do shift work. Especially night work involves identified stress factors. Office work is carried out quite flexibly as hybrid work, which in practice is done in daytime. People at Fintraffic experience less exhaustion and stress than in reference companies.

All personnel have access to comprehensive occupational healthcare services at Suomen Terveystalo. Mood Chat 24/7 and online Mood Sparring are also included in our wellbeing services. Short-term psychotherapy will be offered with a referral from an occupational healthcare physician and occupational psychologist. Everyone working at Fintraffic can use BreakPro, an app that provides mindfulness exercises and short fitness programmes for breaks. Alma Talent’s extensive online bookshelf is

also available to all personnel, offering books on topics such as self-management and work community skills.

In 2023, Fintraffic supported the wellbeing of its personnel through exercise campaigns, comprehensive occupational health care services and Auntie, a low-threshold mental wellbeing service. In the spring, we carried out a HeiaHeia campaign, in which the personnel collected physical activity points by getting virtually acquainted with Fintraffic’s facilities. A total of 394 people participated in the successful campaign, collecting 34,244 kilometres and about 62 million steps. The company bike was a popular employee benefit in 2023: by the end of the year more than 250 Fintraffic employees were using one.

According to our occupational health partner Terveystalo, we take care of monitoring sickness absences and working capacity negotiations in an exemplary manner. The number of sickness absences decreased compared to the previous year. In 2023, sickness absences stood at 2.4 per cent (3.6 in 2022). This brought significant savings to the employer. According to the Terveystalo calculation formula, we saved EUR 1.7 million in sick leave costs. In 2023, the sick leave costs amounted to EUR 3.6 million and in 2022 they amounted to EUR 5.3 million.

The welfare index shows a positive trend. The index describes the share of people who do not experience any of the following problems: inadequate control over work, conflicts in harmonising work and other areas of life, work is not sufficiently rewarding, not enough social support at work, stress and job dissatisfaction. The welfare index is based on the responses to the health survey.

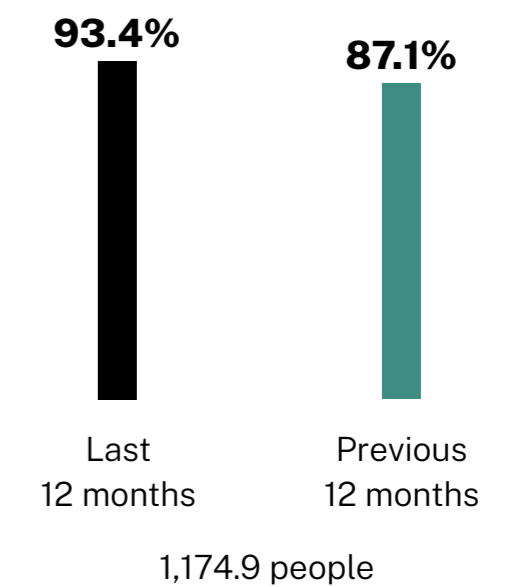
According to the Työoptimi index for 2023, 77 per cent of the respondents at Fintraffic were doing well, whereas in Terveystalo’s comparative material, containing more than 10,000 respondents, 66 per cent of the respondents said that they were doing well. Among Fintraffic personnel, 9 per cent of the respondents were exhausted or at risk of exhaustion, compared to 16 per cent in Terveystalo’s reference material.

Of Fintraffic personnel, 25 per cent are overweight, and most of them suffer from at least one disease associated with overweight, such as diabetes. As a new wellbeing project, we were preparing a Fit for Future Fintraffic programme. It is aimed at inspiring insights into permanent weight management and strengthening motivation to foster personal wellbeing with the assistance of a multiprofessional team. From among those who apply to the programme,



## More than 250 Fintraffic employees already use the company bike.

Welfare index



the occupational health care provider selects people whose weight management will also be supported with weight management medication, used under the guidance of an occupational health physician. The programme will be implemented in 2024.



### Personnel satisfaction increased

The response rate of the Pulse personnel satisfaction survey 2023 conducted by Fintraffic rose to a record high: 85 per cent (82). The overall score rose from 3.8 to 3.9. Personnel’s willingness to recommend Fintraffic as a workplace rose from satisfactory to good. The workplace atmosphere, the colleagues’ behaviour and supervisor index all rose from the comparison year, and are now at a high level (workplace atmosphere 4.1, supervisor index 4.2 and the impact of colleagues 4.3, on a scale of 1–5). In these indicators, the results have improved for two consecutive years. The understanding of the company strategy and the realisation of its values in daily work also rose several points from the previous year. Both are currently at a good level (understanding the strategy 3.7 and realisation of values 4.0).

The index for ‘success in important areas’ rose to 3.9 from 3.7 in the previous year. The index measures, among other things, the actions of colleagues, supervisors and management, and the personal experience of future direction and of how cooperation works. The stress experienced by the personnel decreased, and the majority felt that their work situation was suitable for them, i.e., they had neither too much nor too little work. The respondents also felt that the results of

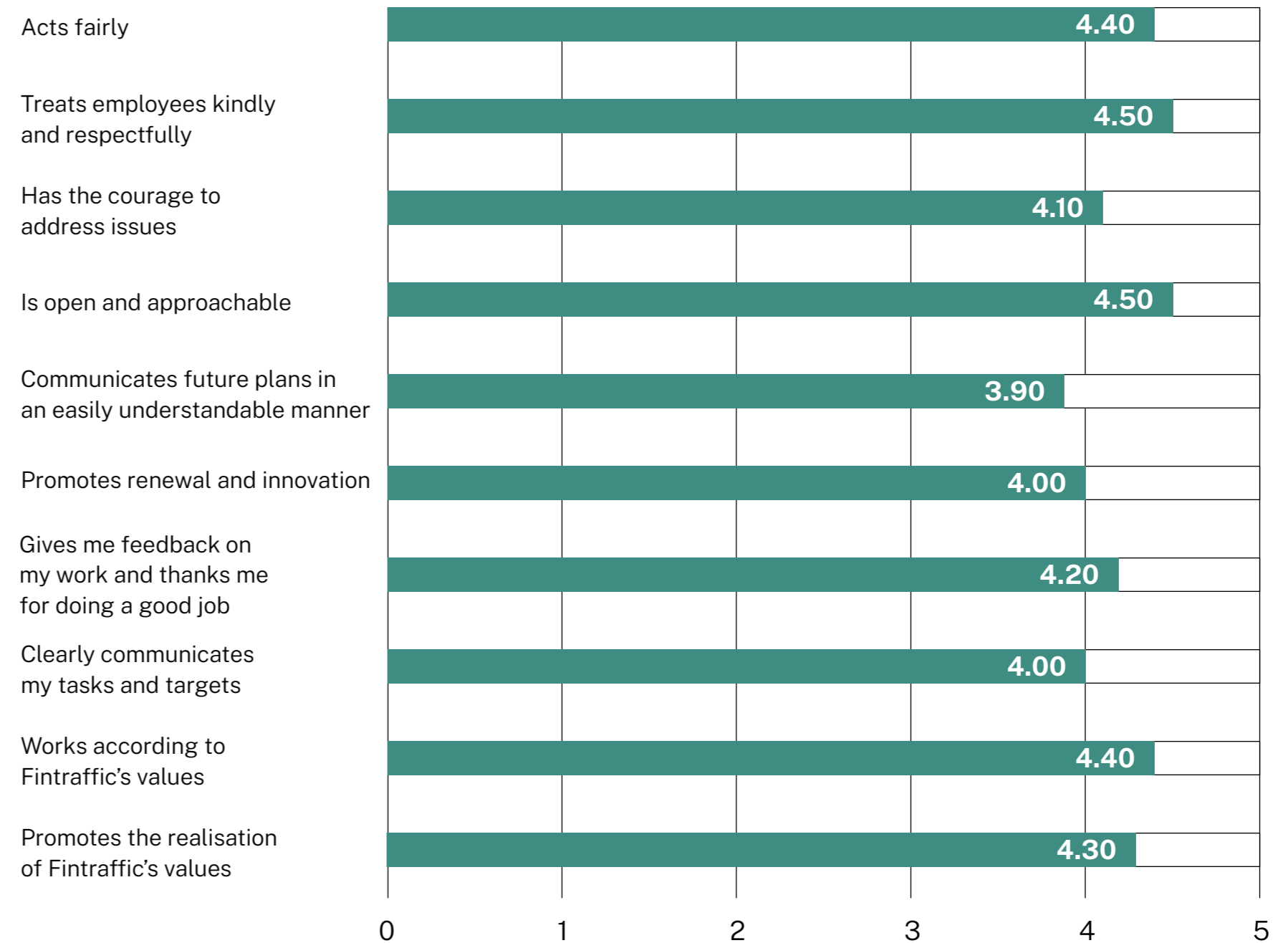
the survey have been more successfully utilised than before (4.1 vs. 4.0).

### Sickness absences decreased

Sickness absences reduced by 33.3 per cent from the previous year and stood at 2.4 (3.6) per cent of the working hours in 2023. Employees took a total of 10,285 (15,100) days of sick leave. 40.9 per cent of personnel (24.6%) did not have any sickness absences, and most sickness absences (25%) lasted one to three days. The second highest number of sickness absences lasted 4–10 days, which accounted for 18.2 per cent of the cases. Sickness absences of more than ten days accounted for 47.4 per cent of the cases (incl. 11–30, 31–60, 61–90 and 91–365). All of our personnel have access to the same extensive occupational healthcare services.

Fintraffic’s occupational health and safety efforts focused on safe and healthy working conditions, a safe and healthy working environment, and measures to maintain employees’ mental and physical working capacity. In 2023, our proactive occupational health and safety activities focused on the management of psychosocial stress factors. At the beginning of the year, Fintraffic organised occupational safety and health days, the theme of which was

### Results of the supervisor index



managing psychosocial stress and the Wellbeing at Work Card training. The training provided by the Centre for Occupational Safety was completed by Fintraffic supervisors and occupational health and safety representatives. Three people from

Fintraffic took part in the Wellbeing at Work Card instructor training in September. In the future, we will organise the Wellbeing at Work Card training on our own.



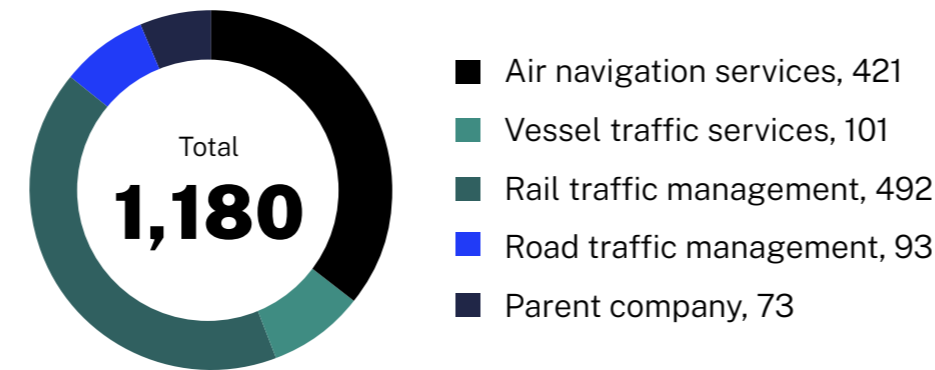
Fintraffic personnel had 10 workplace accidents and 18 commuting accidents. None of the accidents at the workplace led to sick leave, so the accident frequency rate in 2023 stood at 0. These accidents mainly involved minor stumbles and slips.

### Competence development in 2023

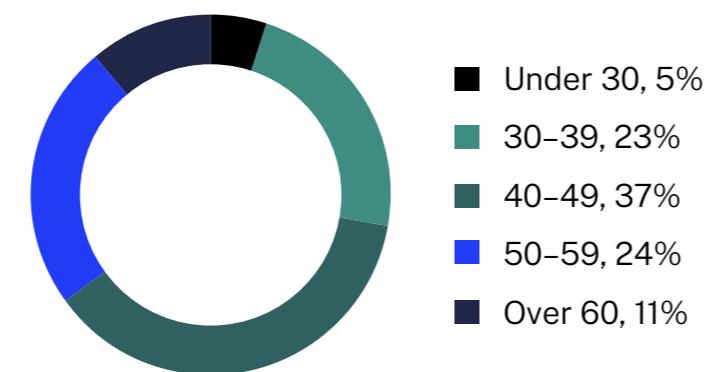
With a view to ensuring the success of Fintraffic's operations, the development of personnel competence and the availability of skilled labour are key themes on which HR work aims to influence. The supervisory and management skills were further enhanced. For example, supervisors were trained in basic HR processes, such as the payroll process from the supervisor's perspective, early intervention practices and the intervention process, and the supervisor's role in the event of inappropriate behaviour or underachievement. The new themes for 2023 were the training module in the management of the emotional climate and the basics of change management. Both of them were approached from the viewpoint of, in particular, change situations and other challenging situations.

A separate coaching programme was built for the Group's management in cooperation with external partners. It enhanced the leadership capabilities of the management, strengthened

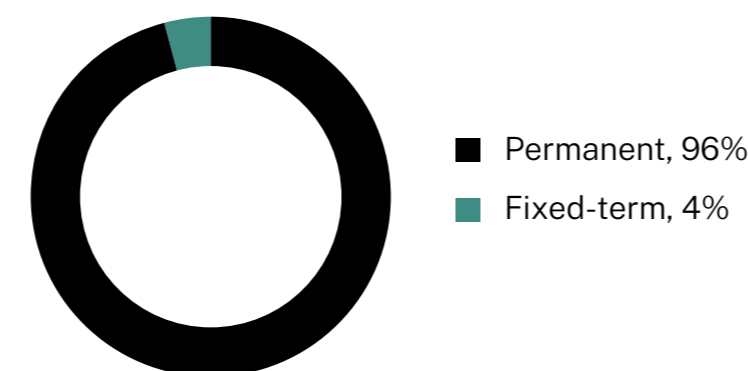
### Personnel by business area (31 Dec 2023)



### Age distribution of personnel

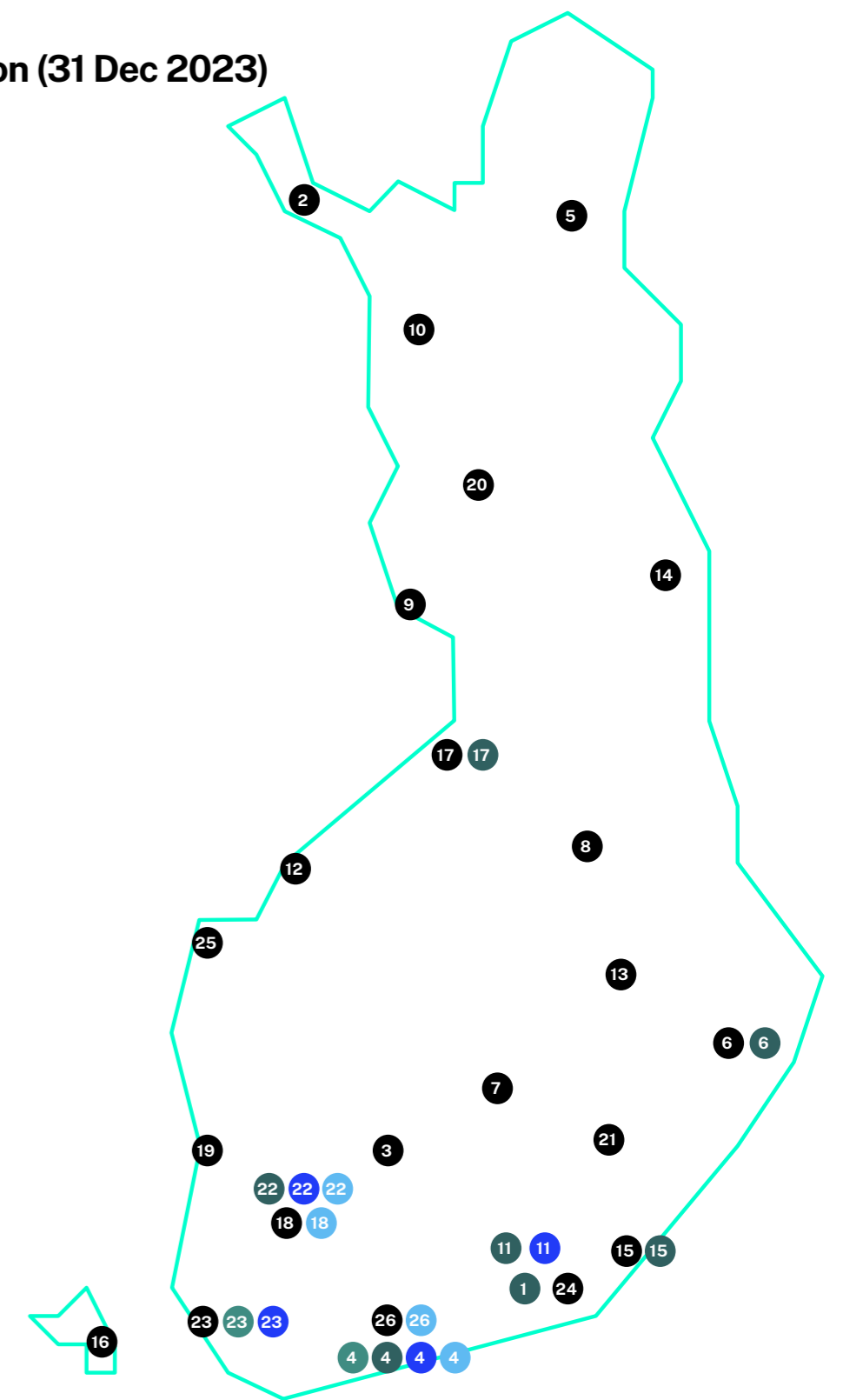


### Personnel by type of employment contract



### Geographical distribution (31 Dec 2023)

- 1 Anjalankoski 5
- 2 Enontekiö 1
- 3 Halli 1
- 4 Helsinki 360
- 5 Ivalo 3
- 6 Joensuu 5
- 7 Jyväskylä 10
- 8 Kajaani 4
- 9 Kemi 5
- 10 Kittilä 4
- 11 Kouvola 95
- 12 Kruunupyy 3
- 13 Kuopio 14
- 14 Kuusamo 3
- 15 Lappeenranta 4
- 16 Maarianhamina 4
- 17 Oulu 85
- 18 Pirkkala 17
- 19 Pori 4
- 20 Rovaniemi 15
- 21 Savonlinna 1
- 22 Tampere 155
- 23 Turku 76
- 24 Utti 3
- 25 Vaasa 6
- 26 Vantaa 297



- Fintraffic Air Navigation Services Ltd
- Fintraffic Vessel Traffic Services Ltd
- Fintraffic Railway Ltd is responsible for
- Fintraffic Road Ltd is responsible for
- Traffic Management Company Fintraffic Ltd



the management’s understanding of service management and the utilisation of artificial intelligence, and focused on the requirements of the evolving responsibility regulation through the perspectives of the state owner and an example company. In 2024, the programme will continue with such themes as ecosystems, the platform economy and DEI, i.e., the promotion of diversity, equality and inclusion. The duration of the training programme was about 10 working days.

In 2023, Fintraffic organised the first training session under the title Acting as an Expert at Fintraffic. It was specifically targeted for people who are interested in expert work or have recently moved from operational work to expert work. During spring, the participants received coaching on, for example, presentation and negotiation skills, facilitation, reporting and self-management. The participants also visited the traffic control centres and acquainted themselves with their activities.

A total of 25 people from all modes of transport participated in the training. The content of the coaching programme was planned together with a planning group consisting of experts from each mode of transport. In 2023, the Acting as an Expert at Fintraffic training consisted of eight training days, which were organised both in person

and as Teams meetings. The overall grade given to the training was excellent 4 (on a scale of 1–5). The participants particularly thanked the visits to different modes of transport and control centres. The programme also provided an opportunity to network with other Fintraffic employees.

In 2023, we reviewed the strategic competence of our personnel and defined the key competences for implementing the company strategy. Directors and experts from all modes of transport participated in the review process. The competence review will continue in 2024.

**The labour market situation is getting more difficult; most of the personnel are covered by collective agreements**

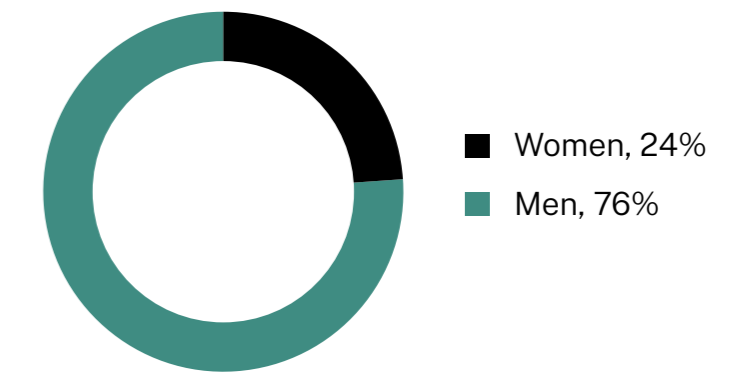
The year 2023 was reasonably stable in terms of the labour market situation, even though the Finnish Railway Union RAU and the Trade Union for the Public and Welfare Sectors JHL threatened Fintraffic with a strike in March when the term of the Collective Agreement for Customer Service, Traffic Management and Control and Administrative and Other Office Work, and the collective agreement for the railway industry concluded with JHL were coming to an end. However, the strike was cancelled after the negotiation process was concluded.

In December, a 24-hour political strike, focusing on rail traffic control at Fintraffic, took place. The strike was part of a wider trade union campaign against the labour market reforms planned by the Finnish Government. As train drivers also went on an extensive strike and there was thus less traffic than usual, Fintraffic was able to handle all the necessary work quite comprehensively also during the labour market disruption.

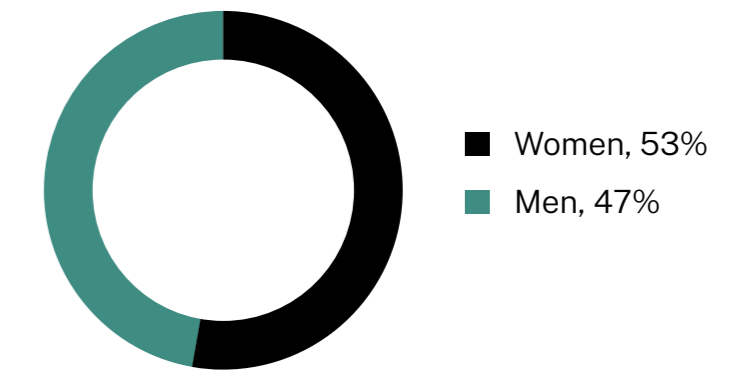
We expect the labour market situation to become more strained in the near future as the trade unions are increasing their action against the Finnish Government as their legislative reforms progress. In addition, the collective agreement for air traffic controllers of Fintraffic Air Navigation Services Ltd has been terminated to end at the end of April 2024. Unless a new collective agreement can be negotiated before the end of the old one, industrial action is possible. Fintraffic has also concluded a total of eight other collective agreements. Of these, the collective agreements concerning Fintraffic Air Navigation Services Ltd concluded with the Federation of Professional and Managerial Staff YTN and Trade Union Pro will also terminate in spring 2024.

The majority of Fintraffic’s employees are covered by collective agreements. The largest

**Proportion of men and women in the Group**



**Proportion of men and women on Boards of Directors and in Management Teams**





# ” Everyone’s contribution is important, regardless of their duties or job titles.

number of Fintraffic personnel (31%) are covered by the Collective Agreement for Customer Service, Traffic Management and Control and Administrative and Other Office Work (2 March 2023–31 March 2025) applied at Fintraffic Railway Ltd. The second largest number of personnel (15%) are covered by the collective agreement for air traffic controllers at Fintraffic Air Navigation Services Ltd (19 May 2021–30 April 2024). Another major collective agreement in air navigation is the collective agreement covering Fintraffic Air Navigation Services Ltd (20 May 2022–29 February 2024), which covers 10 per cent of the Group’s personnel. Eight per cent of the Group’s employees are covered by the collective agreement for the railway industry (in force until 31 March 2025). The largest number

of Fintraffic Road Ltd’s personnel are covered by the collective agreement for Fintraffic Road Ltd (in force until 31 March 2025) and the largest number of Fintraffic Vessel Traffic Services Ltd’s personnel are covered by the collective agreement for Fintraffic Vessel Traffic Services Ltd (in force until 31 March 2025), together making up a total of 16 per cent of the Group’s personnel. The other collective agreements used at Fintraffic are: the collective agreement for aeronautical technical personnel (in force until 28 February 2025, 2% of the Group’s personnel) and the collective agreement for the railway industry (1 March 2023–31 March 2025), covering less than one per cent of the personnel. About 17 per cent of the Group’s personnel are not covered by any collective agreements. Their terms and conditions of employment are specified in their employment contracts and in the policies and principles followed by their employer.

## Other events in 2023

Fintraffic Air Navigation Services conducted extensive change negotiations related to the Multi Remote Operating Tower (MROT) project. The first phase of the project involves launching a tendering process. However, if implemented, the project could lead to a need to reduce more than 30 people

in seven locations if the operations of the airports located in them were to be centralised to the Helsinki Airport using remote air traffic control.

The rail traffic management transitioned to a service-oriented operating model, and its organisational structure was reformed accordingly. The reasons behind the reform were the introduction of the service-oriented management model, the progress of the Digirail project, the increasing importance of data and data utilisation, and the strengthening of the company’s role in the development of the entire railway system. Based on the feedback received in the beginning of the year, this organisational structure was slightly adjusted in September 2023.

In Helsinki, the most important change affecting the everyday lives of the office workers was the move to new, smaller premises. There, we could bring the office employees of rail traffic, shared services, vessel traffic and road traffic under one roof. The employees welcomed the move to the new, well-functioning facilities. They strengthened the sense of community between different modes of transport and shared services.

## A responsible employer

We are involved in Oikotie’s Responsible Employer campaign, in which we commit to creating better

conditions at work by developing six key principles. These principles are: non-discrimination, wellbeing and a good work-life balance, investing in supervisory work, meaningful work and self-development, appropriate remuneration, and a good applicant experience. At Fintraffic, responsibility is reflected in good leadership, capacity for renewal, and appreciative corporate culture. In addition to the values drawn up together, our corporate culture is based on respectful interaction, openness and working together. We do socially meaningful work in which everyone’s contribution is important, regardless of their duties or job titles. 80% of our employees feel that they are doing meaningful work.

Development discussions are held with all employees at least once a year. If necessary, performance discussions are also held at other times with those who fall within the scope of personal remuneration. We encourage supervisors to have regular one-on-one conversations with their employees, and to run through their tasks and any issues relating to job satisfaction and wellbeing. Supervisors have access to Voimavartti (a tool for having fifteen-minute chats with employees) and Työkykyväline (a working capacity tool developed by a pension insurance company).





### Equality and non-discrimination of personnel developed favourably

At the end of 2023, a new equality and non-discrimination plan for 2024–2025 was adopted together with personnel representatives. At the same time, the implementation of the measures of the previous plan was reviewed.

It was concluded that equality and non-discrimination had strengthened in the following ways:

1. The share of women in expert positions has increased.
2. A more balanced gender distribution has been achieved in Fintraffic’s management team. The age structure of Fintraffic’s Management Team is also quite balanced.
3. Both women and men work as CEOs.
4. The Helsinki business premises project took gender diversity and a variety of health conditions into account. For example, changing rooms were designed to provide personal shower facilities for those who do not identify as men or women, or would otherwise prefer more private facilities.
5. Recruitment marketing continued in its mission to increase women’s interest in operative positions as well.

6. In recruitment assignments, our executive search partners were instructed to search equally for both male and female applicants.
7. Supervisors and management have been trained to lead diversity and increase the experience of fair and equitable treatment.
8. In 2022 and 2023, we conducted Terveystalo’s digital TyöOptimi survey to detect any issues with stress and coping among those working in supervisor and expert positions. In 2023, the survey was also conducted for those engaged in operative work.
9. We have regularly monitored our supervisors’ proactivity with respect to early intervention.
10. Fintraffic has participated in social media campaigns to promote equality.
11. Fintraffic was awarded the Hyvän mielen työpaikka (Mental Health Friendly Workplace) certificate.
12. Supervisors have been encouraged and trained to intervene in inappropriate behaviour and activities that are contrary to our values.
13. We developed our Pulse survey to provide more measurable statistical data on gender- and sexuality-related harassment against individuals.
14. The personnel can report any faults they detect in the Whistleblowing channel.



### A few notifications received through the whistleblowing channel

Fintraffic’s whistleblowing channel allows people to make anonymous reports of suspected criminal offences, violations and misconduct, or breaches of our Code of Conduct. In 2023, two reports were submitted (4 in 2022). In the case concerning the recruitment procedure, the employer took action. The other case was an observation made by a third party related to road maintenance that did not fall within Fintraffic’s remit. The notifier was advised to submit a notification to the correct responsible party. As in previous years, there were no actual whistleblowing reports as specified in the Whistleblowing Directive.

1. Elojuhlat event for all personnel (17 August)
2. Helsinki City Run (13 May)
3. HeiaHeia campaign (spring 2024)
4. AF programme group photo from spring (SurfHouse)
5. Bring your child to work day (24 November)

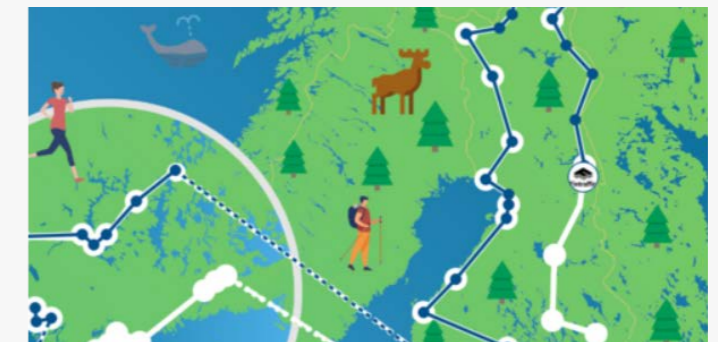
### Happy moments during the year



1.



2.



3.



4.



5.



## Safety comes first

We are responsible for maintaining the safety and reliability of our operations by ensuring a high level of safety in our traffic management services and by developing leadership and digital tools. The importance of information and cybersecurity increased in 2023.

**Traffic accidents** and incidents can cause significant damage to people, the environment and the economy. Fintraffic's task is to ensure smooth and safe traffic around the clock, every day of the year, under all circumstances. This requires traffic management to maintain a high level of safety, reliability and resilience to disruption.

Our work revolves around continuously increasing the safety level of the transport system, traffic control and traffic management. Ensuring safety includes activities such as traffic management safety, incident management, risk management, preparedness, information and cybersecurity, corporate security, and the management of safety deviations. Our main operational risks relate to serious accidents, accident precursors, and threats to operational reliability and information and cybersecurity. We cooperate with the authorities in all modes

of transport to promote national security and security of supply.

Our safety and security work is being simultaneously affected by a number of megatrends and changes in our operating environment. The impacts of Russia's invasion of Ukraine are particularly noticeable in the growing importance of infrastructure that is critical to security of supply, and an increase in information and cybersecurity threats. For example, ensuring a sufficient supply of electricity and providing backup power solutions can ensure that traffic management remains operational under varying circumstances. Therefore, preparedness measures aimed at improving operational reliability now form the core of Fintraffic's strategy alongside safety, and information and cybersecurity.

Fintraffic's work in this area is guided by our policies for risk management, safety, information and cybersecurity, data protection





# ” There were no serious accidents or accident precursors caused by Fintraffic.

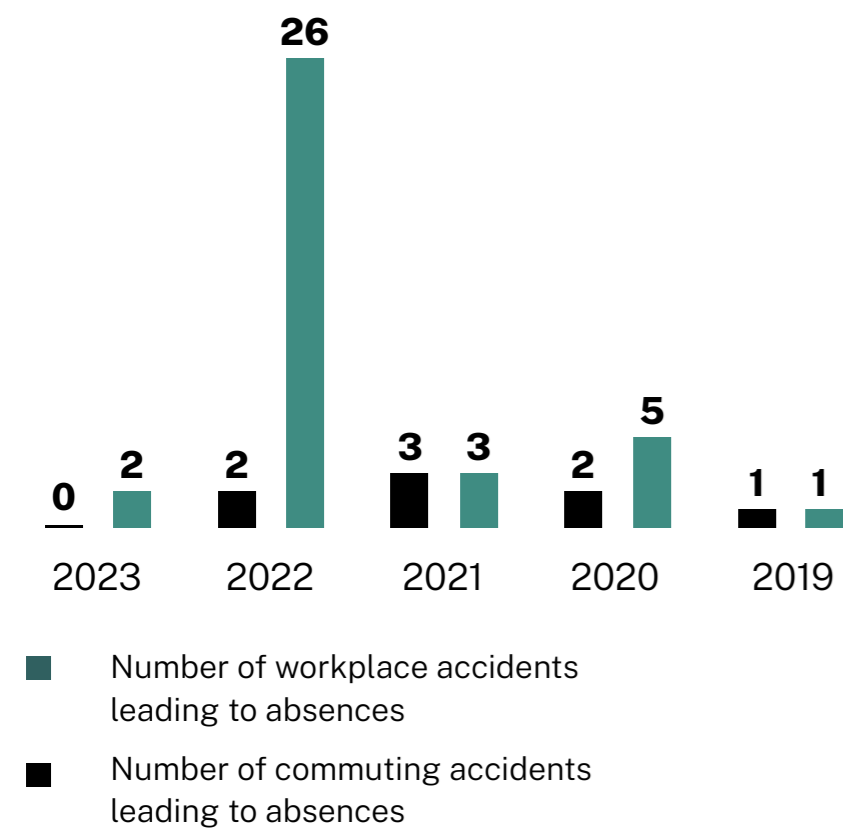
and preparedness, which have all been approved by the Board of Directors. Safety management is based on our management systems and strategies for both safety and information and cybersecurity with action plans and roadmaps extending over several years, as well as the detailed annual targets, indicators and development programmes derived from them, including concrete measures. The indicators, development measures and results are monitored on a monthly basis by the Group Management Team, the management teams for different modes of transport, and the Group’s Board of Directors.

In 2023, we maintained a good level of safety in traffic management in all modes of transport and there were no serious accidents or accident precursors caused by us. No high-risk deviations were reported in air navigation during 2023, and, in railway traffic management, high-risk deviations have been decreasing since May. No significant safety deviations were reported in maritime and road traffic management during the year. One major information and cybersecurity deviation was reported, and this also indicates Fintraffic’s increased ability to detect such deviations. Maritime traffic control enabled us to prevent 13 vessels from running aground.

The Information and Cybersecurity Team, working alongside the Safety Steering Group, has representatives from each mode of transport and ecosystem services. In addition, separate steering groups were established for corporate security, preparedness and risk management. They will enable a more efficient and broad-based organisational base to improve and develop overall security management and, above all, to intensify cooperation and utilise best practices throughout the Group.

The Safety Makers team, which was established the year before, continued to meet regularly during 2023. Support and best practices were shared within the team, which not only increased synergies but also strengthened our culture of working together in line with the company’s values. We want to network more closely with other operators in the sector and also seek best practices from outside the Group.

## Workplace accidents



## Safety is at a good level in all modes of transport

Safety levels are monitored in a variety of ways, such as with internal and external audits. We measure safety using both common indicators and indicators for specific modes of transport. Common indicators include the number of accidents, serious accident precursors and significant deviations in safety, and the success of safety control functions. We have an evolving set of indicators to manage deviations and processes to analyse them. We report safety issues systematically and comprehensively to the relevant supervisory authority.

In 2022, Fintraffic began digitalising its safety tools and processes, which will bring even more advanced tools for reporting safety issues and analysing results. We introduced the upgraded tools for risk management, incident management and monitoring in the second half of 2023.

## Evolving safety management

In 2023, we renewed and continued to strengthen our organisation in the area of safety. The Group’s safety work is managed by the Safety Steering Group, which includes representatives from each mode of transport. The group coordinates the Group’s safety work, and each mode of transport is responsible for its own safety.

## Information and cybersecurity increasingly important

The effects of Russia’s war of aggression, combined with the digitalising world, have further increased the importance of information and cybersecurity at Fintraffic. During 2023, some DoS attacks and threats were also targeted at the operations of Fintraffic or partners closely



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**Fintraffic’s operative traffic management functioned normally without service disruptions throughout the year.**

involved in its operating environment. Despite external disruptions and increased information and cyber security threats, Fintraffic’s operative traffic management functioned normally without service disruptions throughout the year.

During 2023, we significantly increased our own financial investments and increased our human resources to raise the level of information and cyber security throughout the Group in all modes of transport. We launched a separate information and cybersecurity acceleration programme aimed at speeding up previously planned measures to strengthen our information and cybersecurity capabilities.

In 2023, we implemented nearly 100 measures in different modes of transport and in the Group

as part of the acceleration programme. The work will continue through determined and systematic development efforts also in 2024. We also intensified cooperation with key stakeholders and external service providers, and actively participated in a variety of national drills.

**Continuous improvement of security**

We expect that Fintraffic’s safety priorities will remain relatively unchanged in the near future. We will continue to systematically improve the safety level of traffic management for all modes of transport.

In the area of information and cyber security, we are investing heavily in the deployment of an ISO 27001-compliant management system and in meeting the requirements of the NIS2 Cybersecurity Directive in all modes of transport. We will further develop our continuity management by investing strongly in our preparedness and continuous improvement of operational reliability through diverse development projects and increasing automation. For example, our new office premises offer a more advanced facility infrastructure with duplicated technical solutions and advanced security systems. At the same time, we will extensively upgrade the safety systems of control centres and equipment facilities.

We will also continue to closely monitor the pandemic situation and provide working conditions that ensure health security. We will continue to develop Group-wide processes, reporting systems and tools so that we can harness our expertise and smart working methods more consistently and effectively and utilise best practices throughout the Group.

**CASE**

**Digitalisation of safety and security progressed**

During 2023, we carried out a large-scale project to digitalise our safety and security processes. We introduced new Group-wide user-friendly tools for reporting safety incidents and processing the reports, monitoring procedures and risk management. The new digital platform was named the Security Service Channel (TUPA).

The system initially served the needs of rail traffic, road traffic control and shared services. It was used particularly actively in rail traffic management, where more than 1,200 safety reports or observations were filed using the TUPA tools in 2023. The aim is to further develop applications and the shared platform and to bring the new tools to more extensive use in 2024.



## FINANCIAL RESPONSIBILITY

# Benefits for people, companies and society

We generate as much benefit as possible with the money at our disposal – for the transport system, people, companies and Finland as a whole. As a special assignment company, our goal is to be moderately profitable and to maintain a stable balance sheet. As a significant proportion of the funding for our operations comes out of taxpayers' pockets, we are committed to continuous improvements in productivity and building impact in the Finnish society.

**Fintraffic's financial responsibility** is based on how much benefit we can generate for society with the resources at our disposal. We provide nationwide, correctly scaled traffic control and management services cost-effectively and with moderate profitability. We promote the smooth running, safety and efficiency of transport, which reduces transport emissions, congestion and accidents. We modernise traffic control services and develop the traffic data ecosystem by enhancing the efficiency of travel chains and logistics, and thereby increase Finland's competitiveness. We are a responsible and

reliable partner for both the public sector and private operators that provide transport-related services or make use of the information produced by Fintraffic.

In addition to the financial statements, the company regularly reports on its financial performance and responsibility in [the Annual Report and the Corporate Governance Statement and Remuneration Report](#). In addition, it publishes a half-year report twice a year: <https://www.fintraffic.fi/en/financial-information>





**Fintraffic’s financial responsibility is based on the following principles:**

**Maintaining financial stability:** Fintraffic takes care of its financial stability to be able to manage the responsibilities and tasks assigned to it over the long term. The indicators of financial stability are:

- Profitability: Fintraffic aims for moderate profitability in its business operations. Moderate profitability (profit before appropriations and taxes) is considered to be around 3–5 per cent measured in EBT. The company does not aim to maximise its profits but to make an adequate level of profit to ensure the continuation of its operations.
- Solvency: In addition to income financing, Fintraffic funds its development activities and investments with debt financing. The company may incur a moderate debt, ensuring that the net gearing remains below 100 per cent.

**Promoting societal impact:** Fintraffic promotes the smooth running and safety of transport, which reduces transport emissions, congestion and accidents. By processing traffic data and sharing it with a wide range of stakeholders, Fintraffic improves the competitiveness of Finnish society. Impact indicators are:

- Enhanced efficiency: Fintraffic develops its operations so that it can provide its services taking advantage of economies of scale, adjusted for inflation and at decreasing unit costs. In services provided to the Finnish Transport Infrastructure Agency, the measures to enhance efficiency will be monitored by means of a programme to improve efficiency by EUR 30 million extending to 2028 and, in air navigation, through the implementation of the performance requirements set by the EU.
- Other impact indicators: Fintraffic has carried out an assessment of the impact of its data ecosystem development work and open data in the transport sector. The company actively monitors the indicators describing the utilisation of its traffic data and the overall service quality of the services provided. The company reports on the allocation of cash flows to different stakeholders. However, the impact of the company’s all business operations to Finnish society extends well beyond those modelled.

**Responsible business practices and risk management:**

- Fintraffic’s core task is to ensure that the transport system operates as safely as

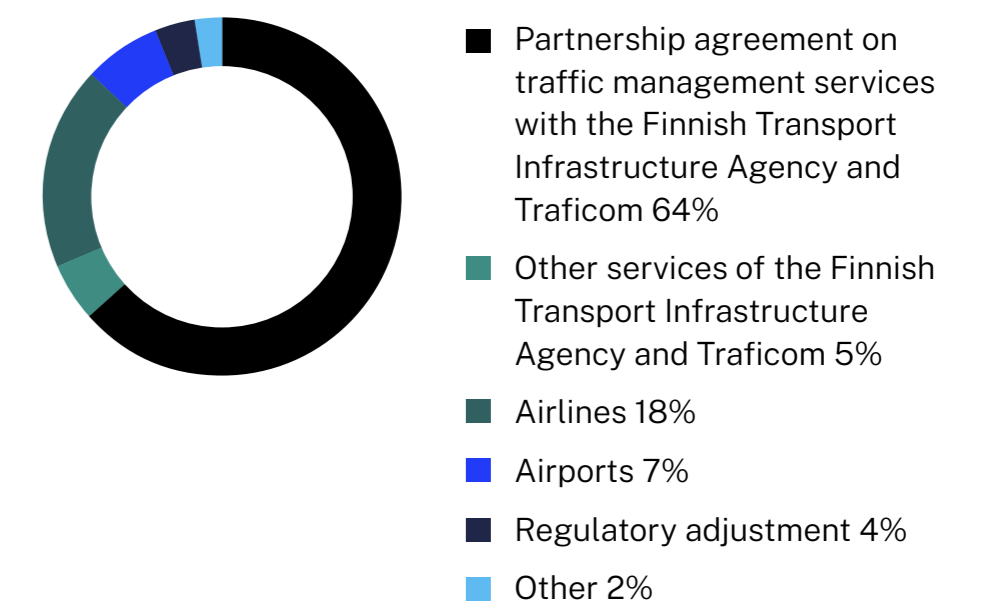
possible. It ensures the continuity of its operations by regularly assessing the risks in its business operations and operating environment and by taking care of risk management measures. The quality and legality of the operations and compliance with the company’s Code of Conduct are inspected through audits, internal audits and inspections by authorities. The company also has statutory whistleblowing practices at its disposal. The continuity of Fintraffic’s operations is protected by appropriate insurance cover. The company fulfils its tax obligations punctually.

- As a good corporate citizen, Fintraffic complies with legislation and reports and pays its taxes. The Group only uses well-established tax management mechanisms. All of the Group companies are Finnish. Only a limited amount of international services is provided to foreign parties. The company has paid almost all its taxes to Finland.
- Fintraffic has no branches in other countries. Fintraffic does not pay or register taxes in any tax havens (as defined by the OECD) and has not received any financial support from such countries.

**Maintaining financial stability**

In 2023, Fintraffic’s revenue increased by 5.8 per cent from the previous year to EUR 242.2 million. The Group’s profit before appropriations and taxes was EUR 5.4 million, 2.2 per cent of the turnover. This was slightly below the long-term profitability target of 3–5 per cent (EUR 6.9 million/3.0 per cent in 2022). The distribution of turnover by customer is shown in the figure below. The traffic control and management services provided by vessel, road and rail traffic control to the Finnish Transport Infrastructure Agency amounted to EUR 153.9 million and accounted for approximately 64 per cent of the turnover. The services offered will be scaled according to the budgetary appropriations for maximum service provision invoicing confirmed annually by

**The distribution of turnover by customer**





Parliament. In 2023, the amount was EUR 165 million. In accordance with the commercial model, the profitability of the operations remained stable. As in previous years, EBT was 5.0 per cent.

The air navigation business has gradually recovered from the drop in air traffic volume in 2020–2021. In 2023, its revenue increased by 8.3 per cent to EUR 74.2 million. As in previous years, revenue included a regulatory adjustment of EUR 8.7 (9.7) million. The regulatory adjustment is based on the comparison of the traffic volumes of Fintraffic Air Navigation Services Ltd and the actual costs with the performance plan approved by the EU Commission and the pricing criteria for traffic charges. Due to the Russian war of aggression, flight volumes have so far not returned to normal levels, which resulted in revenue of Fintraffic Air Navigation Services Ltd remaining below the performance plan in 2023. The resulting deficit entitled the company to a regulatory receivable that can be invoiced from customers in stages over the coming years in the form of increased unit prices. Although the regulatory adjustment increased the revenue of Fintraffic Air Navigation Services Ltd and the result of the final accounts, the business remained loss-making before appropriations and taxes, coming to EUR -2.3 (-0.7) million.

Fintraffic made investments amounting to EUR 45.0 (38.9) million. The most significant investments focused on the system development of rail traffic management and the modernisation of remote control. In addition, roadside technology was upgraded in such locations as the Ring Road III information systems and road weather stations. Air navigation control systems were also upgraded. Investments and the negative cash flow from the air navigation business could be financed with the company's income financing and existing financial assets. Therefore, no additional loans were needed. The company's solvency is strong: net gearing remained moderate at 25.2 per cent (23.0).

In 2024, the Group's profitability is expected to recover and reach the long-term profitability target of around 4% measured in EBT. The revenue from air navigation services is developing positively, supported by the price development of regulated services. This may return its profitability after several years of making losses. The profitability of other modes of transport is expected to remain at the same level as in previous years.

In accordance with the company strategy, Fintraffic's investments will grow to more than EUR 70 million in 2024 as the company continues to invest in modernising its service production.





In 2024, the company will launch the measures to transfer the rail and road traffic control of the Helsinki Metropolitan Area from its current facilities, which have reached the end of their life cycle, to a new control centre in Helsinki. The road traffic control is preparing for lifecycle upgrades of tunnel technology over the coming years, the first target being the Vuosaari tunnel project in Helsinki.

The Digirail project, carried out in cooperation with the Finnish Transport Infrastructure Agency, will replace the current train control system with a modern radio network-based train control system on the entire Finnish railway network by 2040. In 2023, the project continued to carry out the development and verification phase tasks with an aim to launch the implementation phase of Digirail in 2028. In the coming years, Digirail is Fintraffic's most significant development project. It aims to improve the safety and reliability of rail traffic and increase rail capacity. A modern solution also creates growth opportunities for new business operations.

Fintraffic estimates that it will finance its future investments partly with its income financing and partly with debt financing channelled from the financial markets. In the future, domestic and EU-level grant

financing channels will also be utilised to finance Fintraffic's operations. The company has launched discussions with its responsible ministry on the possibility of partly financing the Digirail project on equity terms. The company will implement long-term financial planning so as to keep its solvency within the objectives set for it in different future scenarios.

### Promoting societal impact

For Fintraffic, it is essential that taxpayers' money is used to provide and develop traffic control services in a prudent manner. During its first five years of operation, the company has monitored how the efficiency of its operations is improving over the long term. Through efficiency monitoring, the company ensures that the unit costs of its service production will decrease in the coming years. Efficiency can be enhanced, for example, by using modern technologies and economies of scale, for example, through service design, cost-effective competitive procurement and streamlining of services and processes. Fintraffic is committed to improving the productivity of its operations by EUR 30 million between 2023 and 2028.

In data ecosystem work and the construction of digital services, the company has expanded

the usability of its data. The development has been partly funded by the Finnish Transport Infrastructure Agency and Traficom. Some of the work has been carried out at own cost and with the support of innovation funding.

The impact of data ecosystem work done by Fintraffic in combining and offering transport data flows is estimated to be EUR 40 million. However, the overall impact of the company's operations on Finnish society is significantly greater.

The company continues its determined efforts to develop means to model its impact. Read more in the section [Impact](#).

### Responsible business practices

In 2023, the effects of inflation on Fintraffic's operations were smaller than expected. Although inflation is decreasing, the company is still preparing to respond to inflationary pressures and high financing rates. There are challenges in the availability of several commodities, and strong foresight is needed in procurement due to long delivery times. Fintraffic will raise a moderate amount of loan to implement its investments. The company has acquired loans from several financial institutions. The loan portfolio has been diversified over time. Interest rate derivatives have been used to provide a 50-per-cent hedge against

interest rate rises. The unhedged component and any additional loans are exposed to interest rate risks. Although the indebtedness and the increase in interest rates will increase the company's interest costs, the terms of the drawn loans are reasonable due to Fintraffic's good financial position and ownership base.

We report to the authorities that supervise our operations and the legality of our financial management. These include the Ministry of Traffic and Communications, the Prime Minister's Office, Traficom, the Finnish National Agency for Education, and the EU. In addition to audits of its accounts, the company organises regular internal audits and special audits of compliance with official obligations. In 2023, the internal audit assessed the practices of investment management and internal supervision procedures.

Fintraffic's tax footprint was EUR 46.8 (44.5) million in 2023. It mainly consists of employees' withholding tax. During the financial year, the company received EUR 7.8 (5.2) million in public subsidies. They have mainly been allocated to the company's development activities and investments. Air navigation training has received support of EUR 1.5 (1.4) million.





### Cash flows for stakeholders

Customers, MEUR	2023	2022
Revenue	242.2	228.9
<b>Goods suppliers and service providers, MEUR</b>		
Purchases of materials and services	59.8	56.1
Other operating expenses	33.2	30.8
Investments	46.5	40.4
<b>Total</b>	<b>139.5</b>	<b>127.3</b>
<b>Personnel, MEUR</b>		
Salaries and fees	85.7	82.1
Pension costs	14.6	14.7
Employee-related expenses	3.0	2.8
<b>Total</b>	<b>103.3</b>	<b>99.6</b>
<b>Public sector, MEUR</b>		
Taxes (direct taxes)	0.0	0.0
<b>Shareholders, MEUR</b>		
Increase in shareholder value (profit for the financial year)	5.0	6.9
<b>Total</b>	<b>5.0</b>	<b>6.9</b>
<b>Financiers, MEUR</b>		
Financial expenses (net)	0.8	0.7

Unlike the accrual based figures, investments are reported on cash basis.

### Taxes to be paid and accounted for

Key indicators for paying taxes, MEUR	2023	2022
Revenue	242.2	228.9
Profit before taxes	5.4	6.9
Personnel	1,160	1,133
<b>Taxes payable and tax-like charges, MEUR</b>		
Income tax	0.0	0.0
Employer contributions	1.3	1.1
Transfer tax	0.0	0.0
Other taxes and tax-like charges	0.8	0.7
<b>Total payable</b>	<b>2.2</b>	<b>1.8</b>
<b>Taxes to be accounted for, MEUR</b>		
Payroll taxes	25.1	23.7
Tax withheld at source	0.0	0.0
VAT, sales	87.2	83.7
VAT, purchases	-67.7	-64.7
<b>Total taxes to be accounted for</b>	<b>44.6</b>	<b>42.8</b>

The figures presented in the tax report have been collated from the Financial Statements of subsidiaries on an accrual basis.



## RESPONSIBILITY

# GRI index

Fintraffic reports with reference to the framework by Global Reporting Initiative (GRI). The reporting covers all Fintraffic Group companies. The reporting is based on materiality assessment on sustainability that has been updated in 2022. The reporting period is 1 January to 31 December 2023, and the report is published on 27 March 2024. In questions regarding the report the contact person is Strategy and Communications Director Mikko Saariaho (mikko.saariaho@fintraffic.fi).

Standard		Location	Comment
<b>GRI 2: GENERAL DISCLOSURES (2021)</b>			
<b>Organisational profile</b>			
2-1	Organisational details	p. <a href="#">2</a> , Back cover p. <a href="#">79</a> , <a href="#">Report by the Board of Directors</a> p. 3-10	
2-2	Entities included in the organisation's sustainability reporting	p. <a href="#">2</a> , <a href="#">GRI index</a>	
2-3	Reporting period, frequency and contact point	<a href="#">GRI index</a>	
2-4	Restatements of information	<a href="#">GRI index</a>	No changes.
2-5	External assurance	<a href="#">GRI index</a>	The report has not been verified by a third party. We are preparing for external assurance in the future.
<b>Activities and workers</b>			
2-6	Activities, value chain and other business relationships	p. <a href="#">2</a> , Towards the world's safest, smoothest and most environmentally friendly traffic p. <a href="#">18, 24</a> , An expert and transparent partner p. <a href="#">51-53</a> , <a href="#">GRI index</a>	Fintraffic is a service company. Our main production factors are personnel, software and equipment, our control centres and open data. We provide traffic management services, digital traffic services and information for our customers, stakeholders and end users. Fintraffic does not produce material products.
2-7	Employees	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">59, 62-63</a>	Partially reported. The number of employees, employment contract types and geographical distribution has been reported separately.
2-8	Workers who are not employees	<a href="#">GRI index</a>	The exact amount is not currently available, but Fintraffic is investigating options on data collection. External employees work e.g. in IT services.
<b>Governance</b>			
2-9	Governance structure and composition	<a href="#">Governance and Remuneration Report</a> p. 3-10	
2-10	Nomination and selection of the highest governance body	<a href="#">Governance and Remuneration Report</a> p. 4-5	
2-11	Chair of the highest governance body	<a href="#">Governance and Remuneration Report</a> p. 6	



Standard		Location	Comment
2-12	Role of the highest governance body in overseeing the management of impacts	Responsibility is part of Fintraffic's business and daily life p. <a href="#">46</a> , <a href="#">Governance and Remuneration Report</a> p. 3-4	
2-13	Delegation of responsibility for managing impacts	Responsibility is part of Fintraffic's business and daily life p. <a href="#">46-47</a> , <a href="#">Governance and Remuneration Report</a> p. 4-5	
2-14	Role of the highest governance body in sustainability reporting	Responsibility is part of Fintraffic's business and daily life p. <a href="#">46</a>	
2-15	Conflicts of interest	<a href="#">Governance and Remuneration Report</a> p. 3	
2-16	Communication of critical concerns	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">66</a>	Board members are informed of the notifications arrived through the Whistleblowing channel, but the operative management is responsible for handling the notifications.
2-17	Collective knowledge of the highest governance body	<a href="#">GRI index</a>	Fintraffic's governance and steering system determines what kind of experience and knowledge is expected, including topics of sustainable development.
2-18	Evaluation of the performance of the highest governance body	<a href="#">Governance and Remuneration Report</a> p. 5	The board does a yearly self-evaluation, where the boards performance and development needs are evaluated. The board approves the yearly goals for sustainability, and follows their development. The execution of the strategy, including sustainability, is addressed by the board. The state owner is being reported yearly on the development and indicators of the strategy (including sustainability).
2-19	Remuneration policies	<a href="#">Governance and Remuneration Report</a> p. 13-18	
2-20	Process to determine remuneration	<a href="#">Governance and Remuneration Report</a> p. 13-18	
2-21	Annual total compensation ratio	<a href="#">Governance and Remuneration Report</a> p. 14, <a href="#">GRI index</a>	Partially reported. Fintraffic is not counting median salaries and changes have been announced as average.
<b>Strategy, policies and practices</b>			
2-22	Statement on sustainable development strategy	CEO's Review p. <a href="#">5-8</a>	
2-23	Policy commitments	Responsibility at the centre of Fintraffic's core activities p. <a href="#">20</a> , Responsibility is part of Fintraffic's business and daily life p. <a href="#">48-49</a>	Fintraffic is committed to supporting the UN Global Compact's Action Plan and UN's policies in the areas of environment, working life, human rights, and anti-corruption.
2-24	Embedding policy commitments	Responsibility is part of Fintraffic's business and daily life p. <a href="#">46-49</a>	
2-25	Processes to remediate negative impacts	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">65</a>	Partially reported.
2-26	Mechanisms for seeking advice and raising concerns	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. 65, <a href="https://www.fintraffic.fi/fintraffic/eettinen-ilmoituskanava-whistleblowing">https://www.fintraffic.fi/fintraffic/eettinen-ilmoituskanava-whistleblowing</a>	
2-27	Compliance with laws and regulations	<a href="#">GRI index</a>	No cases in 2023.
2-28	Membership associations	An expert and transparent partner p. <a href="#">51-52</a>	
<b>Stakeholder engagement</b>			
2-29	Approach to stakeholder engagement	An expert and transparent partner p. <a href="#">51-53</a>	
2-30	Collective bargaining agreements	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">63-64</a>	



Standard		Location	Comment
<b>GRI 3: MATERIAL TOPICS (2021)</b>			
3-1	Process to determine material topics	Responsibility is part of Fintraffic's business and daily life p. <a href="#">42</a> , <a href="#">Governance and Remuneration Report</a> p. 3-4	In the double materiality analysis that was carried out in autumn 2023, we took into consideration the views and expectations of representatives from Finavia, ITS Finland, Traficom, the Finnish Transport Infrastructure Agency, and the Ministry of Transport and Communications regarding Fintraffic's sustainability.
3-2	List of material topics	Responsibility is part of Fintraffic's business and daily life p. <a href="#">46-47</a>	
3-3	Management of material topics	Responsibility is part of Fintraffic's business and daily life p. <a href="#">46-50</a> , We shoulder responsibility for the environment p. <a href="#">54-58</a> , In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">59-68</a>	
<b>Economic standards</b>			
<b>GRI 201: ECONOMIC PERFORMANCE (2016)</b>			
201-1	Direct economic value generated and distributed	Benefits for people, companies and society p. <a href="#">73</a>	
201-2	Financial implications and other risks and opportunities due to climate change	We shoulder responsibility for the environment p. <a href="#">57</a>	
<b>GRI 203: INDIRECT ECONOMIC IMPACTS (2016)</b>			
203-2	Significant indirect economic impacts	Benefits for the whole of Finland: developing services with less disruptions and emissions, and shorter waiting times p. <a href="#">21-24</a>	
<b>GRI 205: ANTI-CORRUPTION (2016)</b>			
205-2	Communication and training about anti-corruption policies and procedures	Responsibility is part of Fintraffic's business and daily life p. <a href="#">42-43</a> , <a href="#">49</a>	Anti-corruption is included in Fintraffic's Code of Conduct. The Code has been presented in an information session for the personnel and published on the intranet. We also go through the Code with our suppliers and partners.
205-3	Confirmed incidents of corruption and actions taken	<a href="#">GRI index</a>	No cases in 2023.
<b>GRI 207: TAX (2019)</b>			
207-1	Approach to tax	Benefits for people, companies and society p. <a href="#">70</a>	
207-2	Tax governance, control, and risk management	Benefits for people, companies and society p. <a href="#">70</a>	
207-3	Stakeholder engagement and management of concerns related to tax	Benefits for people, companies and society p. <a href="#">70</a>	The Group utilises established tax management practices. We engage in active dialogue with, a.o. political operators, representatives of the municipalities and the media.
<b>Environmental standards</b>			
<b>GRI 302: ENERGY (2016)</b>			
302-1	Energy consumption within the organisation	We shoulder responsibility for the environment p. <a href="#">58</a>	



Standard		Location	Comment
<b>GRI 305: EMISSIONS (2016)</b>			
305-1	Direct (Scope 1) GHG emissions	We shoulder responsibility for the environment p. <a href="#">56-58</a>	
305-2	Energy indirect (Scope 2) GHG emissions	We shoulder responsibility for the environment p. <a href="#">56-58</a>	
305-3	Other indirect (Scope 3) GHG emissions	We shoulder responsibility for the environment p. <a href="#">56-58</a>	
305-5	Reduction of GHG emissions	We shoulder responsibility for the environment p. <a href="#">55-58</a>	
<b>Social standards</b>			
<b>GRI 401: EMPLOYMENT (2016)</b>			
401-1	New employee hires and employee turnover	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">59</a>	
<b>GRI 403: OCCUPATIONAL HEALTH AND SAFETY (2018)</b>			
403-1	Occupational health and safety management system	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">60-61</a>	
403-2	Hazard identification, risk assessment, and incident investigation	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">60</a>	
403-3	Occupational health services	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">60-61</a>	
403-4	Worker participation, consultation, and communication on occupational health and safety	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">60-61</a>	The occupational safety and health organisation observes the occupational safety and health situation as well as the fulfilment of occupational safety and health goals and actions. It is the occupational safety and health organisation's duty to suggest improvements regarding occupational safety and health, and to support the line organisation's and the managers' occupational safety and health management.
403-5	Worker training on occupational health and safety	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">61</a>	
403-6	Promotion of worker health	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">60-61</a>	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Responsibility is part of Fintraffic's business and daily life p. <a href="#">50</a>	
403-8	Workers covered by an occupational health and safety management system	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">60-61</a>	
403-9	Work-related injuries	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">61-62</a>	



Standard		Location	Comment
<b>GRI 404: TRAINING AND EDUCATION (2016)</b>			
404-2	Programs for upgrading employee skills and transition assistance programs	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">62–63</a>	
404-3	Percentage of employees receiving regular performance and career development reviews	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">64</a>	
<b>GRI 405: DIVERSITY AND EQUAL OPPORTUNITY (2016)</b>			
405-1	Diversity of governance bodies and employees	In 2023, we focused on personnel wellbeing, developing management and mapping of competence p. <a href="#">64–65</a> , <a href="#">Governance and Remuneration Report</a> p. 4–5	
<b>GRI 416: CUSTOMER HEALTH AND SAFETY (2016)</b>			
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	<a href="#">GRI index</a>	No cases in 2023.



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