FREQUENTIS

FOR A SAFER WORLD

Communication and information solutions for a safer world

Annual Report 2019

Dividend proposal of EUR 0.15 per share

Innovative solutions from
Frequentis set standards.

Key figures Frequentis Group

All figures in EUR million, except where otherwise stated.

Earnings data	2019[1)]	2018	+/- in %	+/- in EUR Mio.	2017
Revenues	**303.6**	285.8	+6.3%	+17.9	266.9
EBITDA	**30.2**	21.6	+39.8%	+8.6	20.0
EBITDA margin	**9.9%**	7.6%	+2.3pp	–	7.5%
EBIT	**17.2**	15.6	+10.3%	+1.6	14.3
EBIT margin	**5.7%**	5.5%	+0.2pp	–	5.4%
Profit for the financial year	**12.5**	11.8	+5.8%	+0.7	10.7
Profit attributable to equity holders	**11.8**	11.3	+4.9%	+0.6	9.9
Earnings per share in EUR	**0.93**	0.94	-1.4%	–	0.82

Order data	2019	2018	+/- in %	+/- in EUR Mio.	2017
Order intake	**333.7**	306.3	+9.0%	+27.4	287.8
Orders on hand (at year-end)	**391.5**	355.2	+10.2%	+36.2	335.3

Statement of financial position	2019[1)]	2018	+/- in %	+/- in EUR Mio.	2017
Total assets	**272.1**	198.0	+37.5%	+74.2	194.6
Shareholders´equity	**116.2**	85.6	+35.7%	+30.6	90.1
Equity ratio	**42.7%**	43.3%	-0.6 pp	–	46.3%
Net cash	**77.8**	55.4	+40.4%	+22.4	70.0
No. of employees (average)	**1,849**	1,763	+4.9%	–	1,697

Cash flow statement	2019[1)]	2018	+/- in %	+/- in EUR Mio.	2017
Cash Flow from operating activities	17.7	4.6	> 100%	+13.2	16.7
Cash Flow from investing activities	-4.6	-4.4	+3.0%	-0.1	-4.4
Cash Flow from financing activities	8.0	-14.2	–	+22.2	-3.7

Note: The addition of rounded amounts and percentages may result in rounding differences as a result of the use of automatic data processing.

[1)] Initial application of IFRS 16 (Leases) from 1 January 2019 (↗ *Note 41 to the consolidated financial statements*)

2019 at a glance

Revenue s in EUR million	EBIT in EUR million	Order intake in EUR million
303.6	17.2	333.7
+6.3%	+10.3%	+9.0%

Equity ratio	Dividend per share	Orders on hand in EUR million
42.7%	EUR 0.15[1)]	391.5
		+10.2%

ø no. of employees

1,849

[1)] In view of the uncertainties caused by the coronavirus pandemic, based on the principles of commercial prudence, on 27 March 2020 the Executive Board decided to alter its dividend proposal to the Annual General Meeting from EUR 0.20 to EUR 0.15 per share for 2019.

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Preface

Ladies and gentlemen,

Our IPO in May 2019 was the start of a new chapter in the history of our company. For us, it was the logical next step in order to secure the long-term financial independence and flexibility of the Frequentis Group and to successfully drive forward our development from a Vienna-based company specialised in applications for air traffic management to a global leader in safety-critical communication and information solutions. Together with our staff, our daily work is dedicated to meeting the expectations placed in us. 2019 was a satisfactory year for Frequentis in many respects:

- Revenues +6.3% to EUR 303.6 million
- EBIT +10.3% to EUR 17.2 million, EBIT margin 5.7%
- Dividend of EUR 0.15 (proposal to the General Meeting)
- Order intake +9.0% to EUR 333.7 million
- Orders on hand +10.2% to EUR 391.5 million at year-end 2019

Installed base business remains both the guarantor of Frequentis' stability and its most important growth driver. In 2019, more than 40% of Group revenues once again came from follow-on orders relating to installed systems and solutions. The remainder was split between new products and projects with established customers, established products sold to new customers, and, to a small extent, consulting. Overall, sales grew by 6.3% thanks to scheduled progress with the execution of orders and good project acceptance patterns, including the completion of the project at Beijing Airport and control centres for police and fire services in Europe.

However, the installed base business is not only of enormous significance for Frequentis' revenues. It is also important for margins. As a rule, margins on revenues from maintenance and add-on orders are higher than those generated, for example, with new customers. That made a positive contribution to earnings before interest and taxes (EBIT). As a result of further high-margin projects and the good development of order acceptance, we were able to increase EBIT by 10.3% to EUR 17.2 million. That corresponds to an EBIT margin of 5.7% in 2019, compared with 5.5% in 2018.

We would like our investors to share in this success. Taking into account both the increased profit and the uncertainties caused by the coronavirus pandemic, in accordance with the principle of commercial prudence, at the General Meeting the Executive Board will be proposing a dividend of EUR 0.15 per share, which is below the target range set for our dividend policy. The dividend policy envisages an annual payout ratio in a target range of 20% to 30% of the adjusted profit after taxes – bearing in mind the annual ceiling of 40% of the net profit of Frequentis AG defined by the Austrian Commercial Code.

The increase in order intake (+9.0% to EUR 333.7 million) reflects the high confidence in our know-how, the high acceptance of our products, our good sales activities, and our rising international penetration. Around two thirds of order intake was in the Air Traffic Management segment and one third in the Public Safety & Transport segment. Europe continued to dominate order intake, accounting for 60% of the total, followed by the Americas at almost 20%, Asia, which accounted for over 10%, and Australia/Pacific and Africa with a combined share of less than 10%.

The highlights of the new orders in the Air Traffic Management segment range from New Zealand, Argentina, Brazil (digital (remote) towers) through Norway (drone management), and Austria (voice communication system for air traffic control) to the United States (voice and data communication for the US Navy's drone programme for in-flight refuelling of planes). In the installed base business, we gained orders, for example, from the Czech Republic and Slovakia for extensive air defence modernisation programmes.

The Public Safety & Transport segment beats strong competition for orders from the Metropolitan Police in London (modernisation of communications infrastructure). In Germany, the command centres for the police in the federal states of North Rhine-Westphalia and Rhineland-Palatinate have put their trust in our communication systems, which are equipped for the multimedia age. The favourable picture is rounded out by installed base business with railway operators in Europe and overseas and orders received by the Maritime business domain for Global Maritime Distress and Safety Systems in Greece and Greenland.

The sharp rise in order intake resulted in orders on hand of EUR 391.5 million (+10.2%) at the end of December 2019. We estimate that around 55% of these orders will be delivered 2020, enabling us to recognise the related revenues. In addition, there are long-term orders from previous years and an ongoing inflow of new orders. For example, the Danish air navigation service provider Naviair will be taking a multi-remote tower centre with Frequentis technology into service at Billund Airport in 2022 and Norway is implementing Scandinavia's first drone management system in collaboration with Frequentis.

Successes like these show that we are on the right track. Our innovative capability is the key to that. In 2019, we spent EUR 22.1 million on in-house research and development. That was in addition to work on state-subsidised projects and projects based on customer orders.

As you can see, our strategy of positioning the Frequentis Group as an innovation leader playing an active role in the standardisation of safety-critical applications, building a global distribution network, and growing with established customers is working. Acquisitions also contribute to growth. In March 2020 we made our first acquisition since the IPO (effective 1 April 2020): a majority stake in ATRiCs, a software producer based in Freiburg, Germany. This company offers software solutions for runway taxi operations management at airports as well as consultancy services for airports and air traffic control organisations. In this way, Frequentis is continuing to diversify its product portfolio. Moreover, we regularly monitor the market so that we can respond quickly when attractive opportunities arise.

Following a positive start to 2020 with a further increase in order intake, we aim to raise revenues and order intake further in 2020. That said, the coronavirus pandemic entails risks for the current year. At present, it is not possible to make a reliable estimate of the impact on global growth, project acceptance, the supply chain, the budgets available, and the potential postponement of investments – or the resulting effect on revenues and order intake.

The budget process for safety-critical applications is driven first and foremost by regulatory requirements. Moreover, the award of orders is often preceded by a multi-year process, and some systems have a useful life of more than 15 years. These long lead times allow efficient planning and risk management. The stability of our business model is shown by the fact that we have operated profitably for more than 30 years – through all the economic crises.

And because we are aware that Frequentis can only be successful as a team that focuses on its goals, we want to enable our staff to participate more closely in our shared success in the future. In March 2020, we decided to launch an employee participation programme for staff at participating companies in Austria and Germany, to turn employees into co-owners and co-entrepreneurs.

We have plenty of plans. And for that we are counting on the support of our employees. We would therefore like to take this opportunity to thank our staff most sincerely for their commitment and expert solutions. We would also like to thank our shareholders and business partners for their trust in us.

Vienna, 27 March 2020

Best regards,

Norbert Haslacher Chairman of the Executive Board	Sylvia Bardach Member of the Executive Board	Hermann Mattanovich Member of the Executive Board

Report of the Supervisory Board

The successful IPO of Frequentis AG made 2019 an exceptional year in the history of our company. Since 14 May 2019, shares in Frequentis AG have been traded on the official market of the Vienna Stock Exchange (market segment "prime market") and on the regulated market of the Frankfurt Stock Exchange (market segment "general standard").

In other respects as well, 2019 was a year we can look back on with pride and pleasure. Consolidated revenues rose 6.3% to EUR 303.6 million and consolidated EBIT increased to EUR 17.2 million. The company has a very sound financial base and is prepared for further sustained growth in the future.

Changes on the Supervisory Board

At the company's Extraordinary General Meeting on 20 September 2019, the number of shareholder representatives on the Supervisory Board was increased from four to five and Ms. Petra Preining was elected to the Supervisory Board as a further shareholder representative. Mr. Reinhard Steidl was delegated by the Workers' Council as an additional employee representative on the Supervisory Board.

Work of the Supervisory Board and its committees

In 2019, the Supervisory Board performed the tasks imposed on it by the law, the articles of association, and the rules of procedure with the utmost care. We regularly advised and supervised the Executive Board in the management of the company. The Executive Board kept the Supervisory Board informed at all times about the business situation and development of Frequentis AG. In addition, the chairmen of the committees and I maintained regular contact with the Executive Board to discuss opportunities and risks for the company.

The Supervisory Board of Frequentis AG held four regular meetings in 2019. At these meetings, the Supervisory Board received detailed reports from the Executive Board on the company's business performance and situation, as well as the principal projects in progress, material events, possible acquisitions, and the related questions. In this context, the Supervisory Board discussed, questioned, and examined the information provided by the Executive Board. This examination, which took the form of an open discussion between the Executive Board and the Supervisory Board, did not result in any objections. The approval of the Supervisory Board was obtained on matters where this was required by the articles of association or rules of procedure.

The Audit Committee held three meetings in the reporting period and performed the tasks entrusted to it. In particular, it examined the company's financial statements and consolidated financial statements, supervised the audit of the financial statements and consolidated financial statements and the independence of the auditor, prepared a proposal for the appointment of the auditor of the financial statements and consolidated financial statements, and oversaw the company's accounting, internal control and internal audit system, and its risk management system. The Supervisory Board was kept continuously informed of the outcome of the meetings of the Audit Committee.

The Committee for Executive Board Issues met twice in the reporting period. As well as evaluating target attainment in the 2018 financial year and agreeing the targets for 2019, it mainly discussed and defined the modalities of the Long-Term Incentive Plan 2019 (LTIP 2019) for the Chairman of the Executive Board. The LTIP 2019 was subsequently adopted at the company's Extraordinary General Meeting on 20 September 2019.

Average attendance at the meetings of the Supervisory Board and its committees was around 93%. None of the members of the Supervisory Board were present at only half or less than half of the meetings of the Supervisory Board and the committees they belong to.

Financial statements of Frequentis AG and consolidated financial statements for 2019

The annual financial statements of Frequentis AG and the consolidated financial statements as at 31 December 2019 submitted by the Executive Board, as well as the management report for the company and the Group for the 2019 financial year were audited by the appointed auditors, BDO Austria GmbH Wirtschaftsprüfungs- und Steuerberatungsgesellschaft. The audit did not give rise to any objections and the statutory requirements were complied with in full, so the auditors issued an unqualified audit opinion.

The Audit Committee examined the annual financial statements, the consolidated financial statements, the auditors' reports, the Executive Board's proposal for the distribution of the profit, the corporate governance report, and the consolidated non-financial report in detail with auditors at its meeting on 27 March 2020 and proposed that they should be approved by the Supervisory Board. The Supervisory Board examined the documents in accordance with Section 96 of the Austrian Companies Act and agreed with the findings of the Audit Committee. The annual financial statements for Frequentis AG for 2019 were accepted by the Supervisory Board, so they are deemed to be approved pursuant to Section 96(4) of the Austrian Companies Act. The consolidated financial statements were prepared in accordance with the International Financial Reporting Standards (IFRS), the management report, the Group management report, the consolidated corporate governance report, and the consolidated non-financial report were approved by the Supervisory Board. The Supervisory Board agreed to the Executive Board's proposal for the distribution of the profit. At the Annual General Meeting on 14 May 2020, the Executive Board will therefore propose payment of a dividend of EUR 0.15 per share for the 2019 financial year.

Finally, on behalf of the Supervisory Board, I would like to express my thanks and appreciation to the entire Executive Board and all employees of the Frequentis Group for their successful work in the past financial year. We would also like to express our special thanks to our customers and to the shareholders of Frequentis AG for their trust in us.

Vienna, 27 March 2020

Johannes Bardach
Chairman of the Supervisory Board of Frequentis AG

The Company

Over 70 years of innovation – for a safer world

Wherever Frequentis' systems are used, people bear responsibility for the safety of other people and of goods. As an international provider of communication and information systems for control centres for safety-critical tasks, Frequentis has two segments that develop custom-tailored control centre solutions, which are marketed in about 140 countries. In 2019, the Frequentis Group generated revenues of EUR 303.6 million, EBIT of EUR 17.2 million, and a profit of EUR 12.5 million.

The Air Traffic Management segment (about 70% of revenues) comprises the following business domains:

- Civil and military air traffic control
- AIM (Aeronautical Information Management)
- Air defence

The Public Safety & Transport segment (about 30% of revenues) comprises the following business domains:

- Police
- Fire brigades
- Emergency medical services
- Shipping
- Railways

As a recognised specialist, Frequentis designs future-oriented solutions for command and control centres in collaboration with key account customers and makes new technologies usable for safety-critical applications. Using a human-centric design process, integrated systems are created to provide safer and more stable working environments for end-users in control centres, such as air traffic controllers, operators, and dispatchers. For more information on Frequentis, please visit www.frequentis.com/en/about-us.

Frequentis control centres for people's lives

Frequentis develops and optimises systems for customers in safety-critical areas of the global mega-markets for transport and safety infrastructure – wherever efficient and flexible high-performance solutions are required. Increasing mobility, digitalisation, and rising safety and security requirements are driving long-term growth. Modern technologies are used to optimise control centres for traffic and public safety.

Frequentis' solutions are already used by air traffic controllers, dispatchers, and operators at more than 30,000 working positions in air traffic control, public safety, railways, and maritime control centres. The knowledge and experience of about 1,850 employees worldwide (including nearly 1,000 at our head-quarters in Vienna), together with a network of subsidiaries and local representatives in more than 50 countries, enable Frequentis to serve more than 500 customers in some 140 countries.

Founded in 1947, Frequentis is the global market leader in voice communication systems for air traffic control with a market share of about 30%. Moreover, the Frequentis Group's systems are global leaders in AIM (aeronautical information management) and aeronautical message handling, as well as in GSM-R systems for railways. Since May 2019, shares in Frequentis AG have been listed on the Vienna and Frank-furt stock exchanges under the ticker symbol FQT, ISIN: ATFREQUENT09.

Safety-critical DNA

Frequentis thrives on a corporate culture supported by safety-critical DNA. Our DNA influences everything we do. Understanding our customers’ safety-critical environment means we can provide optimum support so they can meet their business objectives. This deep knowledge of their tasks and responsibilities helps us support them in the safety-critical processes and workflows in their day-to-day work.

Cross-sector control centre solutions

Control centre solution is a generic term for command centre for safety-critical tasks, as encountered daily by Frequentis on its customers’ premises. Control centre solutions are used either to control traffic or to organise safety. The same tasks have to be carried out, although they are labelled differently in each application.

To put it simply, there are basically four components that always interact:

- A tactical situation report that shows the operator the current situation
- A planning and management tool that helps make the right decision quickly and safely
- A communication system to communicate with transport users, emergency services, or security forces
- Safety-critical networks to ensure seamless operational continuity

Voice and data communication, an area where Frequentis is the world leader, is an indispensable element of every control centre. The communication system is therefore often a good starting point for the development of fully integrated solutions for customers, using additional products and services from the Frequentis service portfolio. In addition, networks are becoming the centre of communication solutions. For example, traditional voice communication systems are being extended by networked voice and data communication services. The requirements for safety-critical operations entail high market entry barriers.

Frequentis sets standards

Frequents' customers are public authorities, organisations, and companies that perform safety-critical tasks. Its control centre solutions comprise proprietary software solutions and hardware components that are configured for specific applications.

The company develops state-of-the-art IT components and integrates them into comprehensive communication and information systems that meet the highest requirements for safety-critical applications. In addition, Frequentis provides a range of supplementary services to support customers throughout the entire life cycle of their Frequentis systems. Work on standardisation bodies such as EENA and EUROCAE enables Frequentis to base its solutions on standards and regulations. That underscores the future-proofing of Frequentis solutions.

Subsidiaries and associated companies

The parent company of the Frequentis Group is Frequentis AG, which is based in Vienna, Austria. The main business activities and strategic corporate functions are bundled at the parent company. The Frequentis Group is managed through a Group-wide governance structure focused on three key areas: Regional Sales & Operations, Software & Products, and Services & Solutions.

FREQUENTIS-GROUP

FREQUENTIS AG

Regional Sales & Operations

Europe
- Frequentis Deutschland, Germany
- Frequentis France
- Frequentis Norway
- Frequentis UK

Americas
- Frequentis Canada
- Frequentis do Brasil, Brazil
- Frequentis USA

Asia
- Frequentis (Shanghai), China
- Frequentis Middle East, UAE
- Frequentis Singapore

Australia
- Frequentis Australasia, Australia

Software & Products

Europe
- ELARA Leitstellentechnik, Germany, 51%
- Frequentis Czech Republic
- Frequentis Romania
- Frequentis Slovakia
- PDTS, Austria

Asia
- AIRNAV Technology Services, Philippines, 40%

Services & Solutions

Europe
- AIRlabs Austria, 18%
- ATRiCS Advanced Traffic Solutions, Germany, 51%
- CNS-Solutions & Support, Austria
- Frequentis Comsoft, Germany
- Frequentis DFS Aerosense, Austria, 70%
- Frequentis Solutions, Slovakia
- GroupEAD Europe, Spain, 28%
- Mission Embedded, Austria, 20%
- Secure Service Provision, Germany, 80%
- Systems Interface, UK, 51%
- Team Communication Technology Management, Austria, 51%

Americas
- Frequentis California, USA

Simplified visualisation; all shareholdings 100%, unless otherwise stated. As at April 2020

Regional Sales & Operations

Frequentis has a strong network of subsidiaries in the area of Regional Sales & Operations. The establishment and expansion of these subsidiaries was and is dominated by major and pioneering customer projects. As part of the expansion of Frequentis' sales organisation, these companies are gradually being developed into regional sales units with responsibility for the region allocated to them.

The aim is to successively build and expand the creation of value in sales and after sales – to complement distribution and realise some aspects of project management locally. The central units in Vienna will still be responsible for management. In this way, organisational and structural adjustments can be implemented quickly.

Software & Products

The Software & Products function comprises all Group companies that provide internal development services in the areas of hardware and software.

Services & Solutions

The companies in the Services & Solutions function work together with other companies in the Frequentis Group, but operate independently on the market. Their products and services complement the Frequentis portfolio of solutions.

AIRlabs Austria – innovation lab for drone management

In summer 2019, the Austrian Federal Ministry of Transport, Innovation and Technology awarded the AIRlabs consortium the contract to create the innovation laboratory AIRlabs Austria GmbH. This company was established in December 2019 and Frequentis holds an 18.0% stake. Using a six-step multi-site concept covering research and development, validation, and deployment of unmanned aircraft in real conditions at all levels of technological maturity, AIRlabs Austria is realising a unique test infrastructure for drones.

Acquisition of ATRiCS, Germany

In March 2020 (effective as of 1 April 2020), Frequentis acquired a 51% stake in ATRiCS, which is based in Freiburg, Germany. Founded in 2002, this owner-run company offers software solutions for runway taxi operations management at airports and related consultancy services for airports and air traffic control organisations – to improve safety and increase airport capacity. This enables the Frequentis Group to significantly extend the technology it offers.

The Share

IPO

Since 14 May 2019, shares in Frequentis AG have been listed on the Vienna Stock Exchange (market segment "prime market") and the Frankfurt Stock Exchange (market segment "general standard"). 2,873,975 shares, including 1,200,000 new shares, were placed on the capital market at a price of EUR 18.00 per share through an initial public offering (IPO). The number of shares therefore increased from 12.0 million before the IPO to 13.2 million after the IPO. The total IPO volume was EUR 5.17 million and the gross proceeds received directly by Frequentis totalled EUR 21.6 million. To prepare for the IPO, in the reporting period 907,055 of the shares held by Mr. Bardach were placed with selected investors in a pre-IPO placement at a price of EUR 18.00 per share. Through the pre-IPO placement and the IPO, a total of 3,781,030 shares were placed on the capital market.

Overview

Shareholder structure

Following the IPO, the core shareholder, Johannes Bardach, has a shareholding of around 68% (around 8% held directly and 60% held indirectly via Frequentis Group Holding GmbH) and B&C Innovation Investments GmbH, Austria, has a shareholding of 10%. The free float is around 22% and is split as follows: about 39% of investors come from Germany, about 37% from Austria, about 19% from other European countries and about 5% from the USA. The majority of the free float is held by institutional investors. For further information on the share, including a price chart, see www.frequentis.com/en/ir.

Share price performance

Frequentis shares traded sideways for some months after the IPO in May, followed by a downward trend in August 2019. From September, the shares rallied, rising to their highest closing price for the year in December 2019: EUR 20.88 on the Vienna Stock Exchange and EUR 20.70 in XETRA trading in Frankfurt. The shares ended the year at EUR 19.85 on the Vienna Stock Exchange and EUR 20.20 in Frankfurt (XETRA). Taking the Vienna Stock Exchange, XETRA, and the Frankfurt Stock Exchange together, the average trading volume was around 6,700 shares per day (excluding the first week of trading in May 2019).

Analysts

The following banks publish equity research on Frequentis: BankM, Commerzbank, and Raiffeisen Centrobank.

Key share data

		2019 XETRA Frankfurt	Vienna Stock Exchange
Closing price on 31 December	in EUR	20.20	19.85
Lowest price (closing price)	in EUR	16.00	15.92
Highest price (closing price)	in EUR	20.70	20.88
No. of shares as at 31 December	in millions of shares	13.2	13.2
Market capitalisation as at 31 December	in EUR million	266.6	262.0
Development of the share price (31 December 2019 compared with the issue price of EUR 18.00 in May 2019)		+12,2%	+10,3%
Index development (31 December 2019 versus 13 May 2019)		DAX +11.6%	ATX +5.9%

Basic information on the share

ISIN	ATFREQUENT09
Date of initial listing	14 May 2019
Issue price	EUR 18.00
Free float	around 22%
Stock exchanges	Vienna Stock Exchange, XETRA Frankfurt, Frankfurt Stock Exchange
Market makers	Raiffeisen Centrobank (Vienna), BankM (Frankfurt)
Ticker symbol	FQT
Reuters ticker symbol	FQT.VI (Vienna), FQT.DE (Frankfurt)
Bloomberg ticker symbol	FQT:AV (Vienna), FQT:GY (XETRA Frankfurt)

Dividend, dividend policy, and treasury shares

At the Annual General Meeting on 14 May 2020, the Executive Board of Frequentis AG will propose a dividend of EUR 0.15 per share for 2019 (2018: EUR 0.10 per share). Assuming this is approved by the Annual General Meeting, the total payout would be EUR 1.98 million (based on 13.2 million shares as at end-December 2019). The payout ratio for the 2019 financial year would therefore be 15.8% (based on the profit for 2019), compared with 11.2% for 2018 (dividend of EUR 0.10 based on the profit for 2018). That would give a dividend yield of 0.8%, based on the closing price of the Vienna Stock Exchange as at end of December 2019 (2018: 0.55% / pro forma dividend yield based on the issue price of EUR 18.00).

Frequentis' dividend policy is to pay out around 20-30% of adjusted profit of the Frequentis Group, after tax - bearing in mind the annual ceiling of 40% of the net profit of Frequentis AG reported in the individual financial statements of Frequentis AG prepared in accordance with the Austrian Commercial Code (UGB).

As at 31 December 2019, Frequentis AG did not hold any treasury shares (own shares).

Capital market communication

The Executive Board and the Investor Relations department engaged in extensive communication with private and institutional investors in 2019 to provide transparent information on Frequentis and foster dialogue. In addition to the events listed below, there was an Extraordinary General Meeting in September 2019, which included a resolution on the dividend for 2018.

- Investor conferences: Equity Forum Fall Conference in Frankfurt, German Equity Forum in Frankfurt, plus one conference in London and one in Warsaw
- Roadshows: London, Paris, Vienna
- Group meetings with investors at the company's headquarters in Vienna (2x)
- Presentation at the Gewinn-Messe in Vienna as "star of the hour"
- Presentation at Investment-Club Austria in Vienna
- Vienna Stock Exchange information day for bank relationship managers, Vienna

Investor Relations Contact

Frequentis' investor relations website at www.frequentis.com/en/ir provides extensive information for shareholders – press releases, presentations, financial reports, a share price chart, financial calendar, and information on corporate governance.

Contact: Stefan Marin, +43 1 81150 1074, investor-relations@frequentis.com.

Initiatives for and with children

Some insights

Teambuilding & social commitment

into **corporate**

Worldwide sports and running initiatives

social

Recruiting @ Women Techmakers Conference

responsibility

Emergency call app for deaf people

projects &

CO_2 compensation

initiatives

Educational sponsoring

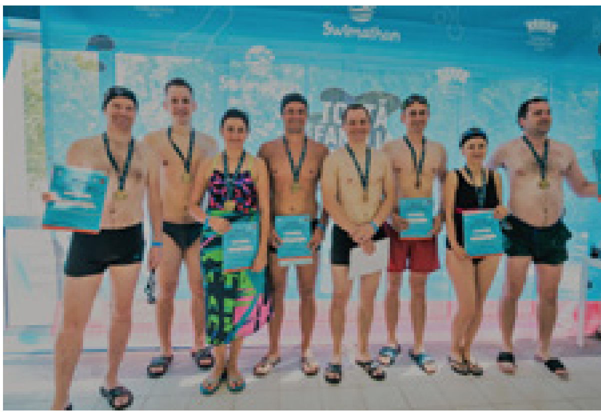
Teambuilding & social commitment

Once a year, Frequentis Romania participates in a sports initiative with social responsibility: teams from the subsidiary take part in the "Swimathon" to raise funds to combat diabetes among young people.

As part of a team initiative on the occasion of the "Frequentis Romania Community Day", the approximately 18-kilometre-long "Yellow Point" hiking trail in the Apuseni Mountains (south of Cluj) was signposted to help hikers who are less familiar with the area to find their way around.

In Australia, the teams from the four locations met for a special kind of team building: they collected bonus points during the day, which were then exchanged for bicycles for autistic children in support of the "Autism Queensland" initiative.

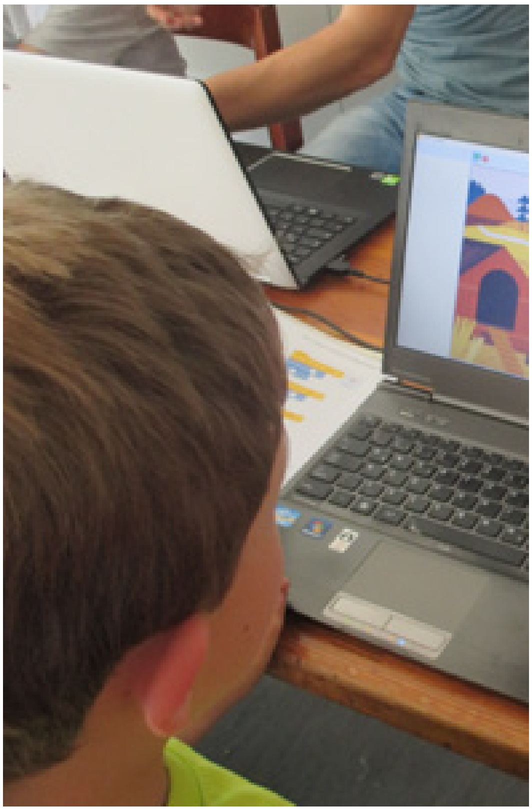
The Frequentis UK office supported a youth rugby team, which required sponsorship to help cover the costs of team shirts for them, to take part in a rugby festival across the UK. The team of 13/14 year olds had no previous team kit and purchasing one was not affordable.



Recruiting @ Women Techmakers Conference

Women Techmakers Vienna is part of an international event series initiated by Google. The target group comprises people who work in or are interested in the STEM fields (science, technology, engineering, mathematics). Frequentis sponsored the Women Techmakers Conference for the first time in 2019 and was – with its own exhibition stand – able, to actively and directly inform and advise interested women about job and career opportunities at Frequentis.

In addition, the Frequentis team took part in 8 recruiting events and welcomed schoolchildren and students from 6 colleges and universities to its headquarters to present everyday life at Frequentis at close quarters.



Initiatives for and with children

The "Frequenty" summer care program for approximately 100 employees' children aged four to twelve years has already entered its eighth round this year. For the first time, different topics were set for each week. In the first week, the focus was on outer space and the moon ("50 years of moon landings"). Exciting workshops and excursions were offered, such as the live show "Digital Planetarium" at the Natural History Museum. During the second week, the children could show their musical and acting skills. The programme was completed with lots of games, fun, and sports activities.

The CoderDojo movement (https://coderdojo.com) is a global initiative with local organisations in currently 109 countries. Frequentis supports the CoderDojo Neusiedl am See by providing free notebooks at regular meetings to support children and young people (aged 8-17) in their exercises/projects. They learn from or with each other, work in teams. This encourages independent learning. The aim is to show the participants that it is not only possible to use software, but also to design it themselves in order to implement their own ideas.

Worldwide sports and running initiatives

In 2019, around 100 employees took part in the Vienna running events, the Vienna City Marathon and Business Run, in which Frequentis sponsored participation. In Germany there was strong participation in the B2Run. Other subsidiaries offer regular running meetings with trainers or finance/support membership of local fitness centres.

CO_2 compensation

Reducing CO2 is a basic idea that can be applied in many areas.

Frequentis "TeamSBB" – as part of a project with the customer Schweizerische Bundesbahnen AG – took an initial initiative by attempting to reduce project-related flights or offer the customer CO_2 compensation. The result for 2019 is impressive: 27% fewer flights / 73% compensated.

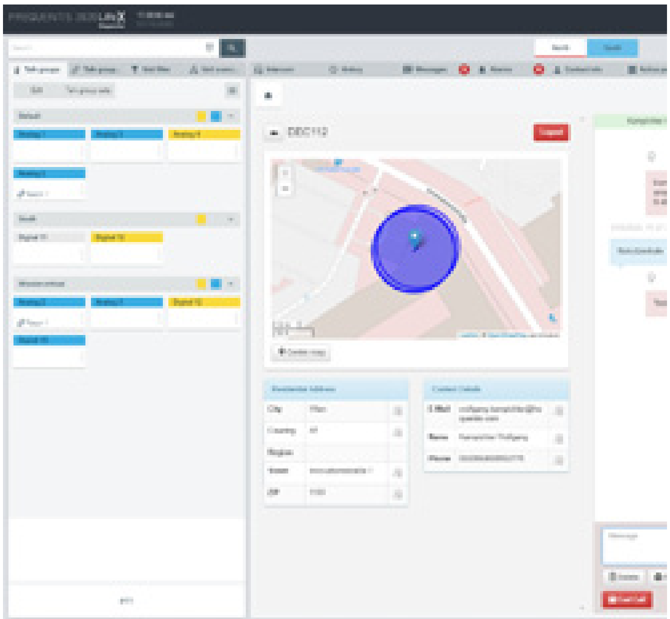
Wherever people cook and eat, waste is produced. Thanks to fresh preparation and good planning, this waste is kept to a minimum in the staff restaurant at the Vienna headquarters. Any food leftovers and kitchen waste that are nevertheless produced are taken to biogas plants for recycling and cooking oil leftovers are processed into biodiesel. By processing the used cooking oil into ecologically sustainable biodiesel, a CO_2 reduction of 2,032 kg was achieved in 2019.

Educational sponsoring - Close cooperation with technical universities

Targeted educational sponsoring is a matter of great concern to Frequentis. A cooperation with the Vienna Technical University (TU Vienna) on the "Adventure in Computer Science" underlines this commitment to get children interested in computer science at an early age. For students and other interested parties, a course on "Next Generation Air Traffic Management Systems" was once again held at the Vienna Technical University, with a focus on safety-critical systems using air traffic control as an example.

Frequentis Comsoft maintains close scientific cooperation with the Intelligent Sensor-Actuator-Systems Laboratory of the Karlsruhe Institute of Technology (KIT) in the field of developing modern sensor solutions.

There is also close cooperation with the local technical universities in Cluj and Bucharest in Romania.



Collaboration on an emergency call app for deaf people

Frequentis supports a private initiative (DEC112) in which Frequentis employees operate a standards-based emergency call service (messaging) for deaf people and extend its functionality. The extension work includes a training mode where people practice emergency calls as realistically as possible and the data obtained is transmitted to control centres for training purposes after user approval. In addition, DEC112 is to be integrated into the multimedia integration platform 3020 LifeX™ and will be tested in an international pilot project across countries. In this way Frequentis is making an important contribution to the implementation of barrier-free emergency calls within Europe.

Malta enhances airspace communication

Networked voice communication system for Beijing mega-airport

Polish Air Navigation Services Agency rolls out electronic flight data management solution

Some

ATM-grade network solution Vitalsphere across Malaysia

insights into

Cross-border emergency communication network for Norway and Sweden

the **Frequentis**

Sydney Trains enables faster incident resolution

projects

Multimedia control room solution for largest German police organisation

Voice communication system for US Navy

Digital distress call at sea around Greenland

New Beijing mega-airport opens with FREQUENTIS networked voice communication system at its core

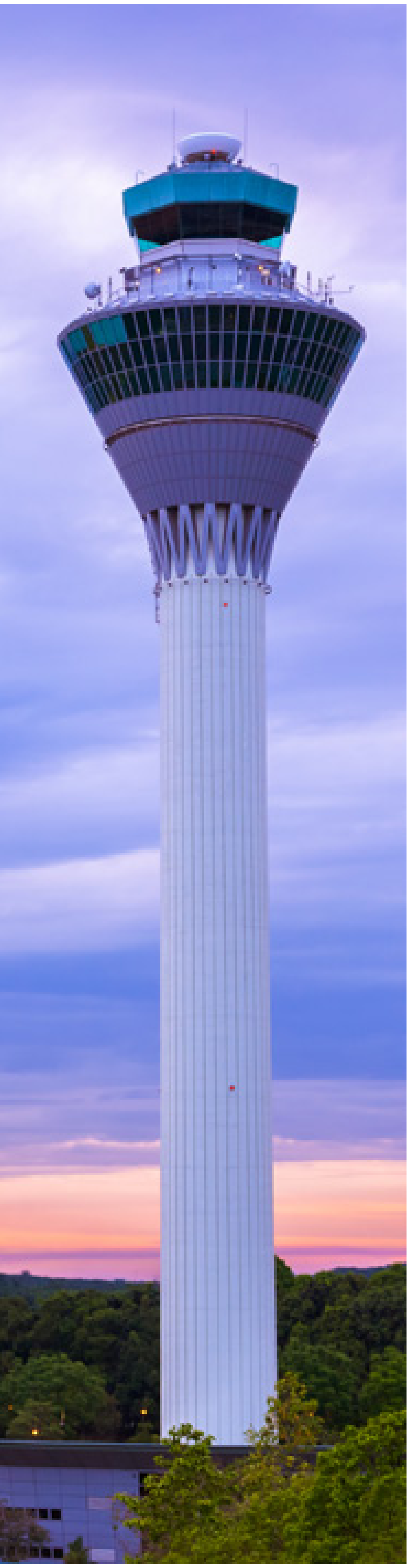
After a total construction period of only four years, the new Beijing Daxing International Airport officially went into operation on 25 September 2019. When fully completed, it will handle over 100 million passengers a year.

Frequentis implemented its state-of-the-art 3020X voice communications system, an emergency system and a network solution with full IP integration for the new airport. The network comprises the two towers at the new airport, the new and existing system for controlling and monitoring arrivals and departures, as well as the connection to the air traffic control centre in Beijing. In addition, several test and training facilities were supplied.

FREQUENTIS supports PANSA in its goal for data-driven airports

Polish Air Navigation Services Agency (PANSA) is rolling out the new electronic flight data management solution (EFES) from Frequentis, as the first step towards the next generation of tower services. EFES will be implemented at all 15 control towers in Poland, marking the first step in a programme to integrate and streamline flight data around its airports. Airspace users, airport operators, and third parties will also see enhancements resulting from flight plan digitalisation.

At the World ATM Congress 2019 in Madrid, Frequentis – together with PANSA –demonstrated how innovative solutions can change the industry. Tower automation and digitialisation will allow all partners to increase efficiency and capacity.



FREQUENTIS installs ATM-grade network solution across Malaysia

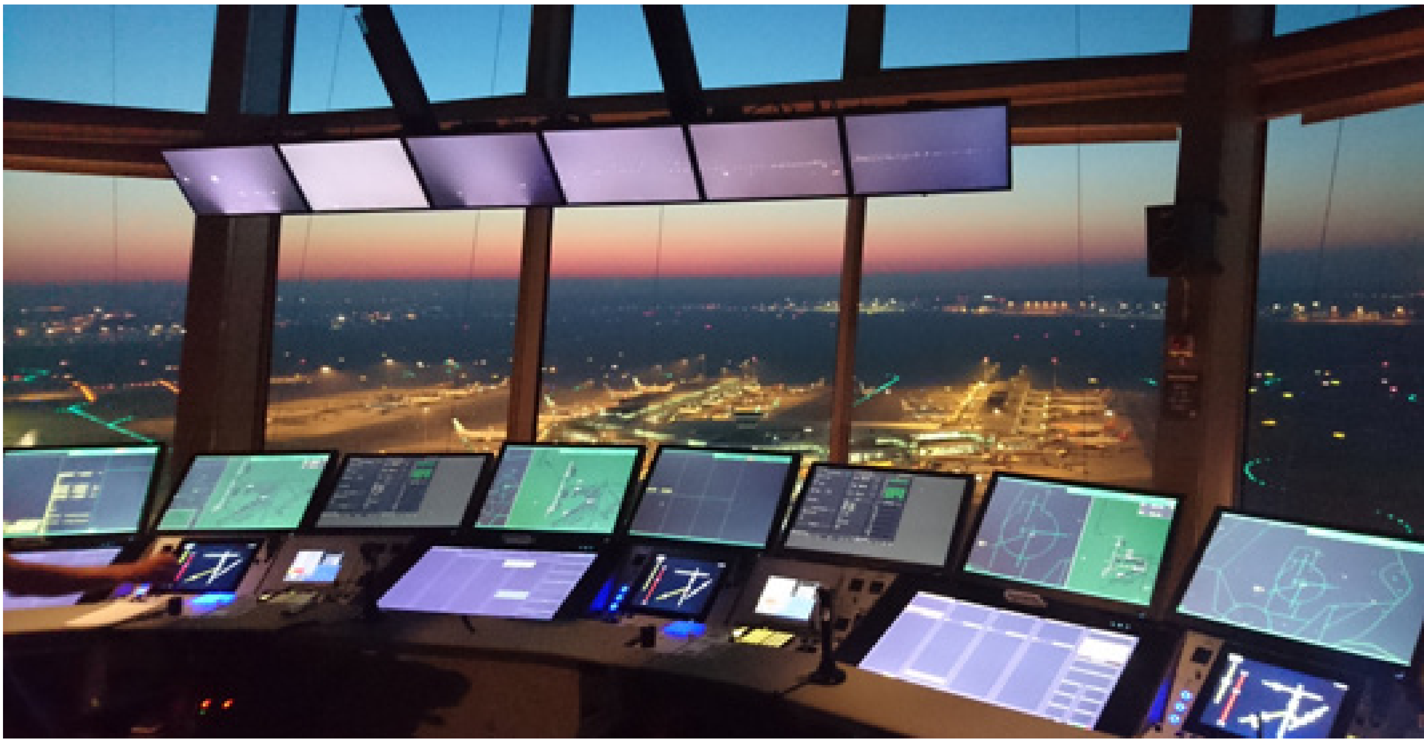
Frequentis has successfully installed its vitalsphere network solution for the new Kuala Lumpur Air Traffic Control Centre, marking a major milestone in the project. Frequentis was chosen by Telekom Malaysia to deliver an ATM-grade radio communication solution for the Civil Aviation Authority of Malaysia (CAAM). The solution is based on VCX-IP and integrates the new centre in Kuala Lumpur and 21 radio sites across the country, paving the way for resilient and safe ATC radio communication.

The Frequentis VCX-IP is an application-level gateway for voice and data communications complying with European and international VoIP (voice over IP) standards for civil and military air traffic management. It provides protocol conversion for radio, phone, and data, enables ATM-specific contingency scenarios using intelligent routing, and optimises ATM applications used by civil and military air navigation service providers.

World's first cross-border emergency communication network in Norway and Sweden in operation

Norway and Sweden have become the first two countries in the world to connect their national emergency communication networks. Sweden and Norway share a 1,619-kilometre open border. The Norwegian air ambulances faced particular challenges when dealing with ski incidents on the Swedish side of the Scandinavian mountains, often losing network coverage.

The Frequentis control room communication solution allows all Norwegian emergency centres to seamlessly manage both domestic and foreign resources on the Norwegian public safety network, Nødnett.



Dutch air traffic controllers work with FREQUENTIS to implement electronic flight strips

Air Traffic Control the Netherlands (LVNL) selected Frequentis electronic flight strips as part of its tower system modernisation programme. Two towers at Amsterdam Schiphol airport - Europe's busiest airport and the world's ninth busiest - have been equipped with Frequentis smartSTRIPS, meeting the ambitious time frame set for completion before the 2019 summer period.

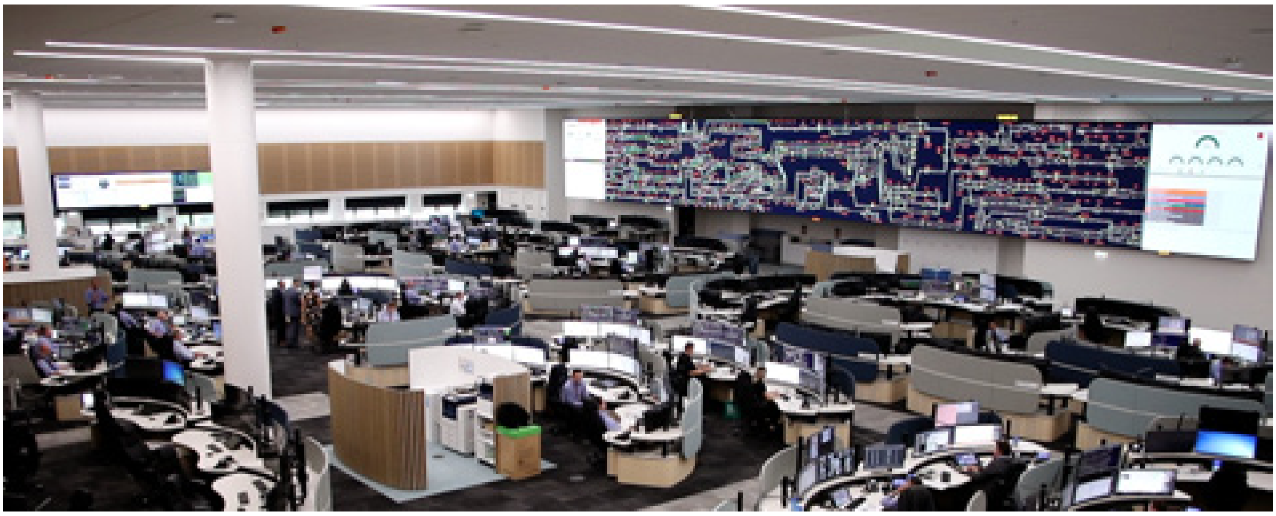
By digitalising paper strips ANSPs are paving the way for automation and efficiency, improving controllers' situational awareness and workflow.

Malta enhances airspace communication with FREQUENTIS Comsoft

Malta Air Traffic Services Ltd. (MATS) has successfully installed the aeronautical message handling (AMHS) switch from Frequentis Comsoft. The solution replaces its previous fixed terminal network messages (AFTN) system, increasing its communication capability and fully supporting the ICAO basic and extended AMHS service profiles.

Frequentis Comsoft's Aeronautical Integrated Data Exchange Agent – Next Generation (AIDA-NG) was designed in close cooperation with leading air navigation service providers. It is a unified message handling switch enabling AFTN, Common ICAO Data Interchange Network, and AMHS messages to be exchanged, based on the European ATM Communication Gateway software.

Sydney Trains enables faster incident resolution with FREQUENTIS technology in its Rail Operations Centre (ROC)



The Frequentis Incident and Crisis Management (ICM) solution was officially taken into operation in the first half of 2019, enhancing the way that Sydney Trains manages and resolves incidents on its railway network. Sydney Trains operators can now enter incident information in real-time, increasing efficiency and boosting operational performance.

Implementation has taken place over a phased project roll-out. The REM client has been used by incident managers in Sydney Trains' Rail Operations Centre (ROC) since December 2018. The mobile application and web portal were deployed to all Sydney Trains' customer service teams over a four-week period in June 2019, following a successful pilot with 150 users in May.

FREQUENTIS wins order for New Zealand's largest digital tower

The Frequentis Digital Tower System at Auckland International Airport in New Zealand will initially act as a back-up contingency system, allowing air navigation service provider Airways New Zealand and its airline and airport customers to assess the viability of using the digital system as a full replacement for the existing tower in the future.

The order from Airways New Zealand is a proof of the confidence in the Frequentis experts, the company's way of working and technology. The Frequentis digital tower solutions allow the operation of smaller airports that do not require full capacity utilisation by air traffic controllers, and they support operations at large airports. In addition, new airports do not require the construction of an expensive tower and the air traffic controllers themselves can work more comfortably because all information is displayed simultaneously on the virtual tower screen.

US Navy selects FREQUENTIS voice communication system for the MQ-25 unmanned air system

In July 2019, the US Navy selected a Frequentis voice and data communication system to support their MQ-25 unmanned aircraft programme for the in-air refueling (AR) of other naval aircraft. The new system allows seamless integration into the IP infrastructure and meets the highest security requirements. The project will be implemented by 2021.

The MQ-25 UAV is multi-mission capable UAV that will be initially used for air-to-air refueling (AAR) of other naval aircraft, allowing significant operational enhancements by extending mission duration.

Frequentis USA, based in Columbia, Maryland, will provide engineering and logistics for the design, development, testing, manufacture, and sustainment of the integrated communications system.

FREQUENTIS digitises distress call at sea around Greenland

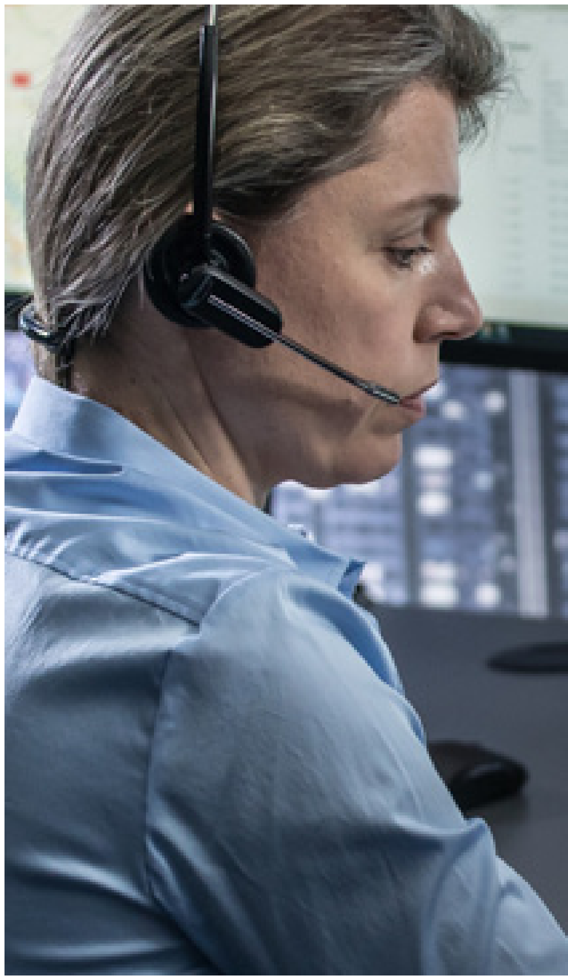
Frequentis is supplying an integrated control centre solution for the maritime control centre in Aasiaat in southwest Greenland to TELE Greenland, the largest postal and telecommunications provider in Greenland which has as its main pillar the coastal radio service, as well as emergency communication and commercial ship radio services.

The scope of supply of the Frequentis GMDSS (Global Maritime Distress and Safety System) includes a recording and monitoring system as well as the training of TELE Greenland employees. In addition, a contract for long-term technical system support has been signed. The control centre is designed in accordance with the latest ergonomic methods and the special Frequentis software system shortens the time needed to rescue shipwrecked persons.

FREQUENTIS equips largest German police organisation with its multimedia control room solution

Frequentis was selected for phase two of the modernisation and standardisation of control centre technology for the police in the German state of North Rhine-Westphalia (NRW). NRW police selected the Frequentis multimedia communication platform 3020 LifeX™ to meet the requirements for future emergency call and broadband radio communications. Phase two of the programme includes 50 police control centres with approximately 400 operator working positions. In the future, these will be hosted in a virtual cloud-based solution available in five networked technical centres across the region.

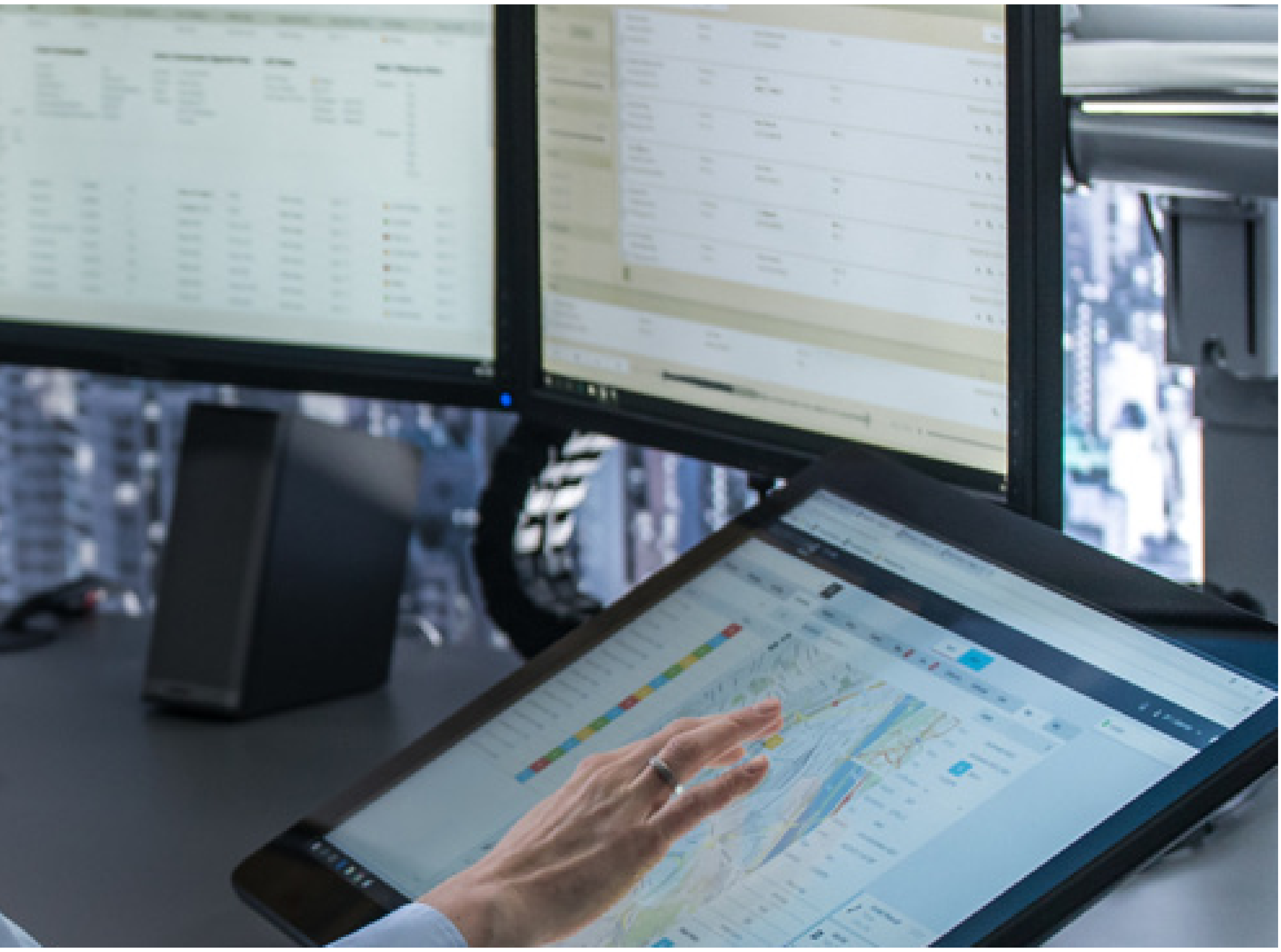
The Frequentis multimedia communication platform 3020 LifeX™ will ensure efficient emergency call handling and operation on the public safety digital radio network, as well as the interconnection of both channels.



FREQUENTIS Comsoft and EUROCONTROL increase functionality of ARTAS surveillance tracker and server

EUROCONTROL's Air Traffic Management suRveillance Tracker And Server – ARTAS – is receiving a software upgrade to increase its tracking functionality in the airport vicinity.

Frequentis Comsoft has been EUROCONTROL's industrial partner for ARTAS maintenance and support since 2001 and is also a turnkey supplier of ARTAS systems. The software release tests attracted a great deal of interest from the European ARTAS user community, with a record number of 22 visitors from 11 different ANSPs visiting the Frequentis Comsoft premises in Karlsruhe.



Safe planning of drone flights

Some insights into **R&D** projects & initiatives

Managing drone incursions in an airport environment

Live trials, with unmanned and manned aircraft operators for safe drone traffic integration in the Gulf of Finland (GOF)

Virtual Centre – the future of air traffic control

"DRIVER+" project: Innovations in safety-critical data communication

Innovation projects for a pan-European broadband mobile radio system

Drone Risk Austria: New tool for the safe planning of drone flights

Together with Frequentis, Austro Control, and the weather service UBIMET, the Carinthia University of Applied Sciences (FH Kärnten) is developing a tool for the risk assessment of drone flights. Digital geodata and weather data play a key role here.

"Drone Risk Austria" is funded by the Austrian Federal Ministry of Transport, Innovation and Technology (BMVIT) as part of the FTI programme "Take Off". Project support and funding is provided by the Austrian Research Promotion Agency FFG.

German Federal Minister of Transport Scheuer awards Frequentis Group funding to develop counter-drone system for the FALKE project

Frequentis and Hensoldt are creating the blueprint for managing drone incursions in an airport environment. In collaboration with Hamburg Airport, the German Air Navigation Service Provider (DFS), German Federal Police (Bundespolizei), and Lufthansa, the consortium will develop holistic and integrated counter drone solutions.

The FALKE project is funded by the German Federal Ministry of Transport and Digital Infrastructure as part of its call for ideas and funding for drones and flight taxis.

SESAR GOF U-space project: Safe drone traffic integration in the Gulf of Finland (GOF)

Drones are proliferating throughout the world's airspace and as their numbers rise, the importance of finding a way for them to safely coexist with manned aircraft is growing increasingly urgent. The SESAR JU GOF U-space project tested U-space services in seven advanced live trials, with eleven unmanned and manned aircraft operators. The tests, in both controlled and uncontrolled airspace, and below as well as above 500 feet in urban, rural, and maritime environments successfully demonstrated that an integrated environment, where manned and unmanned aircraft share the same data, can indeed improve situational awareness and improve safety.

This U-space project is one of several research projects of the SESAR Joint Undertaking, which has received funding within the framework of the European Union's Connection Europe Facility (CEF) programme under grant agreement SJU/LC/343-CTR.

SESAR conference at FREQUENTIS reveals future of air traffic control

Frequentis hosted the high-ranking event "SESAR Virtual Centre @ next level" at its headquarters in Vienna on 16 October 2019. The presentations and live tests focused on the implementation of virtual centres in European air navigation services. A virtual centre is the technological combination of several air traffic control centres into a network of air traffic control units operating from different locations.

This project has received funding from the SESAR Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement No. 734141.

"DRIVER+" project: Innovations in safety-critical data communication

DRIVER+ (Driving Innovation in Crisis Management for European Resilience) is an EU-funded project that helps people engaged in crisis management find the best possible ways to cope with disasters. A total of four trials and a final demonstration event will take place during the project. The "Common Information Space" (CIS), developed by Frequentis and partners, will be used to ensure a secure, interoperable exchange of information between authorities and organisations with security tasks (BOS) in European crisis and disaster management.

This project has received funding from the European Union's 7th Framework Programme for Research, Technological Development and Demonstration under Grant Agreement (GA) No. 607798.

"FLUIT" joint research project: Security for interconnected air traffic management

Since 1 May 2019, the joint research project "Security for Interconnected Air Traffic Management ("FLUIT") has been running at the Research Centre for Information Technology in Karlsruhe, Germany. The project aims at sustainably improving the IT security situation in the air traffic control and at forwarding the safeguarding of aircraft against targeted attacks. For this purpose, the project partners have developed a catalogue of security criteria, best practices, methods, and standard process models, which can serve as a basis for an international standardisation project.

The FLUIT project is funded by the German Federal Ministry of Education and Research.

EU project BroadWay paves the way for pan-European Public Safety broadband communication

The aim of the innovative European BroadWay programme is to define innovation projects for a pan-European broadband mobile radio system for PPDR (Public Protection and Disaster Relief). The accompanying validation is carried out through comprehensive tests and evaluations.

This project received funding from the European Union's Horizon 2020 research and innovation programme.

Golden Decoration of Honour of the Republic of Austria

Awards

Best Recruiters award

and

Grand Decoration of Honour of the Republic of Austria

International Safety Award

Honours

Queen's Award for Enterprise for International Trade

International Critical Communications Award

FREQUENTIS CFO Sylvia Bardach receives Grand Decoration of Honour of the Republic of Austria

Sylvia Bardach, Chief Financial Officer of Frequentis AG, has received a special award. At a formal ceremony on 24 October 2019, Federal Minister Elisabeth Udolf-Strobl awarded her the Grand Decoration of Honour for Services to the Republic of Austria.

Sylvia Bardach has been contributing to the successful growth of Frequentis for almost 40 years. In 2019, she positioned Frequentis AG as an internationally operating, listed family company on the Vienna and Frankfurt stock exchanges. This was achieved thanks to her high level of commitment and expertise in comprehensive liquidity protection and skilful financial and strategic management of the Frequentis Group.

FREQUENTIS Vice President Public Transport, Thomas Karl, receives Golden Decoration of Honour of the Republic of Austria

Thomas Karl, Vice President Frequentis Public Transport and authorised officer of Frequentis AG, has been decorated for services to the Republic of Austria. At a formal ceremony on 11 December 2019, Federal Minister Andreas Reichhart presented him with the Golden Decoration of Honour.

Frequentis is delighted that one of its top managers has received this award. Under the leadership of Thomas Karl, Frequentis has risen to world market leader in the rail sector.

Best Recruiters: FREQUENTIS again awarded in 1st place in the category IT / software

Professional employer branding and targeted recruiting play an important role in the race for the best brains and for employee retention.

The "Best Recruiters" study 2019/20 awarded Frequentis first place in the IT/ Software/Telecommunications category for its professional and authentic HR activities. This annual study examines the recruiting activities and their quality at 1,300 largest employers in Austria, Germany, and Switzerland (based on sales and workforce). The golden seal was awarded in Vienna on 3 December 2019.

FREQUENTIS safety expert Gabriele Schedl presented with the "International Safety Award"

"International Safety Award 2019" at the International System Safety Conference in Norfolk. The International System Safety Society is a non-profit organisation that aims to support safety experts in the application of systems engineering and system management in hazard, safety, and risk analysis processes.

The third honour in a row (Mrs. Schedl was already named "International Manager of the Year" in 2014, and in 2012 and 2017 she was (re)elected Regional Vice President Europe of the International System Safety Society) is a clear sign of international appreciation of the excellent safety competence at Frequentis.

Systems Interface wins Queen's Award for Enterprise for International Trade

Systems Interface, a Frequentis Group company, is very honoured to be one of 129 organisations within the United Kingdom to be recognised with the prestigious Queen's Award for Enterprise for International Trade in 2019.

Systems Interface is a service provider to airports, supplying, installing and commissioning ground to air navigation aids, air traffic control and communication equipment sourced from the world's leading manufacturers.

FREQUENTIS receives award for best use of safety-critical communication in the transport sector

The Frequentis railway specific bearer-independent communications system (BIC) in Finland has won the International Critical Communications Award (ICCA). These awards focus on excellence in the public safety sector and 42 shortlisted entries competed for just 10 awards. The winners were announced on 18 June 2019 at Critical Communications World at the Malaysia International Trade and Exhibition Centre (MITEC) in Kuala Lumpur.

Industry experts on the judging panel praised the Frequentis project for its interesting and innovative evolution from GSM-Rail to the Future Railway Mobile Communication System (FRMCS), hailing it an important integration project.

Consolidated Corporate Governance Report 2019

Commitment to the Austrian Code of Corporate Governance

Frequentis is committed to accountable management of the company geared to creating sustainable, long-term value. In keeping with this, Frequentis AG supports the Austrian Code of Corporate Governance, which aims to strengthen the confidence of national and international investors in the Austrian capital market by increasing transparency and establishing uniform principles of good corporate management.

The Austrian Code of Corporate Governance, published by the Austrian Working Group for Corporate Governance, is generally recognised. The applicable version is publicly available at www.corporate-governance.at and comprises three categories of rules:

- **L rules** (legal requirements), which are based on mandatory legal requirements;
- **C rules** (comply or explain), which have to be followed; any deviation has to be explained and the reasons stated to be in compliance with the Code; and
- **R rules** (recommendations) since these are recommendations, non-compliance does not require either disclosure or reasons.

Frequentis AG recognises the Austrian Code of Corporate Governance and gave its first undertaking to comply with its requirements from 14 May 2019, the date on which its shares were first listed on the stock exchange.

Corporate Governance Declaration

Frequentis AG complies with all mandatory L rules and – with the exception of the deviations set forth below or elsewhere in this Corporate Governance Report – all C rules set out in the Austrian Code of Corporate Governance in the version dated January 2018:

Rule 2

- Under article 5.1.2 of the articles of association of Frequentis AG, the holder of registered share no. 1 with restricted transferability, Mr. Johannes Bardach, is authorised to appoint one third of the maximum number of shareholder representatives on the Supervisory Board (right to appoint Supervisory Board members under Section 88 of the Austrian Companies Act (AktG)). In this respect, the principle of "one share - one vote" is not fulfilled. The company benefits from the commitment, knowledge, and experience of the Supervisory Board members appointed by the majority shareholder, Mr. Johannes Bardach. In all other respects, share no. 1 has the same rights (especially voting and profit-sharing rights) as all other shares. An agreement on the election of a person nominated by B&C Innovation Investments GmbH (BCII) as a member of Frequentis AG's Supervisory Board has been concluded between Frequentis Group Holding GmbH and BCII.

Rule 27

- This rule applies for the conclusion of new contracts with the Executive Board (including extensions and significant changes to existing contracts). No such new contracts have been concluded since the flotation of Frequentis AG. The old contracts that are currently still in force do not contain any way of reclaiming short-term variable remuneration components, but there is a possibility of reclaiming long-term variable components (LTIP) that have been granted. Further, based on the old contracts still in force at present, there is currently no provision for the payment of variable long-term components to all members of the Executive Board. The intention is to comply with the requirements of the Austrian Code of Corporate Governance when concluding or renewing contracts with Executive Board members.

Rule 39

- Neither the Audit Committee nor the Committee for Executive Board Issues meets the requirements of the C rule no. 39 of the Austrian Code of Corporate Governance as only one of the two shareholder representatives on these committees can be regarded as independent. The two shareholder representatives who are not deemed to be independent are Mr. Bardach (Committee for Executive Board Issues) and Mr. Daxecker (Audit Committee). They have extensive knowledge of the relevant fields and, above all, the Frequentis Group. This is of material importance for the work of these committees, so their appointment represents added value for the committees.

Rule 83

- The Supervisory Board regularly examines the company's risk management and related issues as part of its oversight of the Executive Board's management of the company. Furthermore, a risk assessment is prepared and discussed as part of the audit. However, a separate assessment of risk management by the auditor in accordance with C rule no. 83 was not commissioned for the reporting period.

Executive Board

Members of the Executive Board

In 2019, the Executive Board of Frequentis AG comprised the following members:

Name (Year of birth)	Function	Date of initial appointment	End of current term of office	Supervisory Board or similar offices1)
Norbert Haslacher (1970)	Chairman of the Executive Board (CEO)	1 April 2015 (member of the Executive Board) 16 April 2018 (Chairman)	15 April 2023	None
Sylvia Bardach (1962)	Member of the Executive Board (CFO)	3 July 2007	31 July 2022	None
Hermann Mattanovich (1960)	Member of the Executive Board (CTO and COO)	1 January 2009	31 December 2020	None

[1)] Seats on Supervisory Boards or comparable offices at domestic and foreign companies that are not included in the consolidated financial statements

Norbert Haslacher has been a member of the Executive Board of Frequentis AG since April 2015. Prior to his appointment as CEO in April 2018, Mr. Haslacher was responsible for the sales and marketing division.

Responsibilities: Strategy, Sales, Strategic Business Units, Business Development, and Investor Relations.

Norbert Haslacher studied business economics at St. Gallen Business School and has more than two decades of experience of technology solutions, services, and consulting, including as managing director responsible for Austria and Eastern Europe at the US IT company CSC and as a consultant at Coopers & Lybrand Consulting.

Sylvia Bardach has been Chief Financial Officer of Frequentis AG since July 2007. Mrs. Bardach is also managing director of the following Frequentis Group company: BlueCall Systems GmbH.

Responsibilities: Finance, IT, Legal & Procurement, Human Resources, Corporate Communications, Corporate Affairs, and Facility Management.

Sylvia Bardach has extensive training in accounting, controlling, and corporate management. In addition to this, she has taken courses in personnel development, project portfolio, and risk management. She started her career as a bookkeeper at CDS Computer and Data Systems and joined Frequentis in 1989 as Head of the Finance and Controlling department.

Hermann Mattanovich has been Chief Technology Officer of Frequentis AG since January 2009. In addition, Mr. Mattanovich is managing director of the following Frequentis Group companies: Frequentis Czech Republic s.r.o., Frequentis Slovakia s.r.o., PDTS GmbH, Mission Embedded GmbH.

Responsibilities: Technology Management, Production & Logistics, Project Management, Customer Services, Information & System Security, Safety Management, Quality Management, and Health Safety Environment (HSE) Management.

Hermann Mattanovich studied electrical engineering at Vienna University of Technology and started his career as a technical consultant for companies such as Philips, Elin, VOEST, and Frequentis. He also worked as a lecturer at Vienna University of Technology. In 1988, he co-founded PDTS, a software development company that was later taken over by Frequentis. In addition, between 1999 and 2004 he was responsible for the TETRA development portfolio at Frequentis.

Remuneration of the Executive Board

The agreed remuneration of the Board of Management for 2019 was split between the individual members as follows:

in **EUR thousand** **(rounded)**	Total remuneration 2019 (gross, excluding ancillary wage costs)	Fixed (excluding benefits in kind)	Variable (short-term)	Fixed/short-term variable components as a proportion of total remuneration
Norbert Haslacher[1)] (Chairman)	540	360	180	67% / 33%
Sylvia Bardach	379	253	126	67% / 33%
Hermann Mattanovich	405	270	135	67% / 33%
Total	**1,324**	**883**	**441**	**67% / 33%**

1) In 2019, the Chairman of the Executive Board was paid an additional one-off bonus for the successful IPO. In addition, a long-term, performance-related remuneration component was agreed with him (see details below).

The remuneration of all members of the Executive Board comprised fixed and variable components. The fixed remuneration component ("base salary") is principally intended as remuneration for taking on a position on the Executive Board and the associated overall responsibility of the individual members. The level of the base salary is based on market remuneration rates for Executive Board members at comparable companies and also takes into account the individual responsibilities for each member, which are derived from the areas of responsibility allocated to them. The taxable benefits in kind comprising company cars and allowances for all Executive Board members totalled EUR 28 thousand in 2019.

The variable components are based on the achievement of short-term financial targets for the company. Achievement of the targets is measured by an indicator of the earnings before interest and taxes as stated in the consolidated financial statements in accordance with IFRS (IFRS EBIT), provided that the earnings before tax reported in the financial statements of Frequentis AG in accordance with the Austrian Commercial Code (UGB EBT) after provisions for short-term variable remuneration reach a defined minimum for the relevant financial year. Assuming 100% target achievement, the variable remuneration component is 50% of the annual base salary. Over-fulfilment is possible, but the variable remuneration is capped at 100% of the annual base salary. If the relevant targets are not met, the variable remuneration is reduced proportionately. For the 2019 financial year, the Executive Board members have entitlements to short-term variable remuneration as set out in the table in a total amount of EUR 441 thousand. These variable components are payable in 2020.

For the successful IPO of shares in Frequentis AG on the Vienna Stock Exchange and the Frankfurt Stock Exchange, the Chairman of the Executive Board was also granted and paid a one-off bonus of EUR 540 thousand (gross, before income tax). As agreed, he used this to acquire 15,000 shares in the pre-IPO placement. Taking this and other variable remuneration components into account, the ratio of the fixed and variable components of the remuneration of the Chairman of the Executive Board in 2019 was 33% (fixed) / 67% (variable).

In addition, the General Meeting in 2019 adopted a resolution on a long-term, share-based, and performance-related incentive and remuneration programme for the Chairman of the Executive Board. The Long-Term Incentive Plan 2019 (LTIP 2019) is based on sustainable, long-term performance criteria (especially an increase in the share price compared to a reference base, organic growth in operating performance, and an increase in the EBIT margin). It also includes non-financial criteria (especially the development of additional key account customers, employee fluctuation, and customer satisfaction) to avoid inappropriate risk-taking and to focus on the long-term development of the company. Depending on the achievement of targets, under the LTIP 2019 the Chairman of the Executive Board is entitled to receive up to 14,000 shares (gross), with the award capped at 200% of his gross annual base salary for 2019. The right to the award of the shares under the LTIP arises following determination of the level of target achievement by the Supervisory Board and at the earliest on 30 April 2022. If the target achievement is less than 50%, the Chairman of the Executive Board is not entitled to receive any shares in the company under the LTIP 2019. From the date of the payout, in each calendar year the beneficiary can sell a maximum of one third of the shares awarded under the LTIP 2019. Until he leaves the company, he is required to hold at least 7,000 of the shares awarded under a long-term incentive plan (minimum shareholding). The proportionate expense for the three-year performance period for the LTIP 2019 allocated to 2019 using the IFRS measurement criteria was EUR 63 thousand at the reporting date and a corresponding provision was recognised.

The present members of the Executive Board have been granted contractual entitlements to pension benefits. This comprises a retirement pension and pension benefits for surviving dependants (including widow's and orphan's pensions). The total expense for this in the reporting period was EUR 150 thousand. Further, in the reporting period Frequentis AG paid a pension to a former member of the Executive Board. This pension is covered by reinsurance.

When their employment contract ends, the Executive Board members have a contractual claim to severance payments according to the Section 23 of the Austrian Employees Act (AngG). However, there is no entitlement to such payments if the appointment of the Executive Board member is terminated as a result of gross breach of duty pursuant to Section 75 (4) of the Austrian Companies Act (AktG) and the employment contract is terminated prematurely in application, mutatis mutandis, of Section 27 AngG, or if the Executive Board member resigns without good reason or without the agreement of the Supervisory Board.

The members of the Executive Board, the Supervisory Board, and senior executives of the Frequentis Group are insured against certain personal liability risks through a D&O insurance policy, the costs of which are borne by the company.

Supervisory Board

Members and independence of the Supervisory Board

In 2019, the Supervisory Board of Frequentis AG comprised the following members:

Name (Year of birth)	Function	Date of initial appointment	End of current term of office	Supervisory Board or similar offices1)
Johannes Bardach (1952)	Chairman of the Supervisory Board (shareholder representative)	16 April 2018	Indefinite (member delegated pursuant to article 5.1.2 of the articles of association)	None
Karl Michael Millauer (1958)	Deputy Chairman (shareholder representative)	17 July 2007[2]	Until the Annual General Meeting in 2020	None
Boris Nemsic (1957)	Member of the Supervisory Board (shareholder representative)	17 July 2007[2]	Until the Annual General Meeting in 2020	None
Reinhold Daxecker (1970)	Member of the Supervisory Board (shareholder representative)	16 April 2018	Indefinite (member delegated pursuant to article 5.1.2 of the articles of association)	None
Petra Preining (1973)	Member of the Supervisory Board (shareholder representative)	20 September 2019	Until the Annual General Meeting in 2024	Semperit AG Holding (Austria)[3]
Gabriele Schedl (1968)	Member of the Supervisory Board (employee representative)	1 January 2015	Indefinite (delegated pursuant to Section 110 ArbVG)	None
Siegfried Meisel (1955)	Member of the Supervisory Board (employee representative)	1 January 2019	Indefinite (delegated pursuant to Section 110 ArbVG)	None
Reinhard Steidl (1962)	Member of the Supervisory Board (employee representative)	20 September 2019	Indefinite (delegated pursuant to Section 110 ArbVG)	None

1) Supervisory Board or similar offices at publicly listed Austrian or foreign companies.
2) Previously a member of the Supervisory Board of Frequentis GmbH (from 2002), which became Frequentis AG on 17 July 2007 through a change in its legal status
3) Ms. Preinig's seat on the Supervisory Board of Semperit AG Holding will be dormant from 20 March 2020.

The Supervisory Board's **criteria for independence** are based on the "Guidelines for Independence" set out in the Austrian Code of Corporate Governance, which specify – among other things – that a Supervisory Board member shall not have served as member of the Executive Board or as a management-level staff member at the company in the past five years. Mr. Bardach was Chairman of the Executive Board of Frequentis AG before being appointed to the Supervisory Board in April 2018 and is married to Mrs. Bardach (member of the Executive Board). Mr. Daxecker held a management position at Frequentis AG before being appointed to the Supervisory Board in April 2018. Consequently, Mr. Bardach and Mr. Daxecker are not deemed to be independent. The other members of the Supervisory Board (shareholder representatives) are independent of the company and the members of its governance bodies. Moreover, no shareholder's representative holds more than 10% of the company's shares.

Apart from the disclosures made in notes to the consolidated financial statements for 2019 (note 42 "Information on business relations with related parties"), in 2019 there were no business relations requiring approval pursuant to Section 95 (5) subsection 12 of the Austrian Companies Act or L Rule no. 48 of the Austrian Code of Corporate Governance.

Remuneration of the members of the Supervisory Board

Subject to the approval of the General Meeting 2020, the total agreed remuneration of the Supervisory Board for 2019, including attendance fees, is EUR 103 thousand. The breakdown is as follows:

Member	Function	Remuneration in EUR thousand (rounded)
Johannes Bardach	Chairman (shareholder representative)	25
Karl Michael Millauer	Deputy Chairman (shareholder representative)	29
Reinhold Daxecker	Member of the Supervisory Board (shareholder representative)	26
Boris Nemsic	Member of the Supervisory Board (shareholder representative)	18
Petra Preining	Member of the Supervisory Board (shareholder representative)	5
Total		**103**

The remuneration plan for the shareholder representatives on the Supervisory Board provides for a fixed annual payment of between EUR 12 thousand and EUR 15 thousand and fees for the attendance of meetings of the Supervisory Board and its committees ranging from EUR 2 thousand to EUR 2.5 thousand. The graduation within these bands depends on the individual's function on the Supervisory Board (Chairman, Deputy Chairman, member). The Deputy Chairman is also entitled to an additional attendance fee of EUR 2 thousand for attendance at each General Meeting of the company in his role as Deputy Chairman of the meeting. All members of the Supervisory Board are reimbursed for cash expenses incurred in the performance of their duties as members of the Supervisory Board.

The members of the Supervisory Board, the Executive Board, and the senior executives of the Frequentis Group are insured against certain personal liability risks through a D&O insurance policy, the costs of which are borne by the company.

Working procedures of the Executive Board and the Supervisory Board and its committees

The **Executive Board** conducts the business of Frequentis AG in accordance with the law, the articles of association, and the rules of procedure issued by the Supervisory Board (the allocation of business responsibilities can be seen from the section of this report ↗ *"Members of the Executive Board"*). The rules of procedure govern, in particular, reporting to and collaboration with the Supervisory Board and contain an extensive list of business activities that require the consent of the Supervisory Board. The Executive Board holds regular meetings at which it discusses and decides on strategic and operational issues and on other matters of significance for the Frequentis Group or individual parts of the Frequentis Group which fall within the remit of the Executive Board. In addition, the members of the Executive Board constantly share information with each other and with the responsible managers and specialists.

The Executive Board constantly maintains close contact with the Supervisory Board and, in particular, its Chairman, especially on strategic and other fundamental matters relating to the Frequentis Group's business policy. In addition, the Executive Board reports at least once a quarter to the Supervisory Board on the business performance and situation of the Frequentis Group.

The **Supervisory Board** advises and oversees the management of the company by the Executive Board. It held four regular meetings in 2019. All members of the Supervisory Board attended more than half of the meetings of the Supervisory Board. At its meetings, the Supervisory Board openly discussed with the Executive Board the business development and situation of the Frequentis Group. It also examined in detail the key projects and individual measures and business activities requiring its consent.

A self-evaluation within the meaning of C rule no. 36 of the Austrian Code of Corporate Governance is planned for 2020 – not least because the Supervisory Board was extended to include two new members in 2019.

In conformance with the statutory requirements and the corresponding rules of the Austrian Code of Corporate Governance, the Supervisory Board has set up the following **committees**:

Committee	Members
Audit Committee	Karl Michael Millauer (chairman / financial expert) Reinhold Daxecker Gabriele Schedl
Committee for Executive Board Issues	Johannes Bardach (chairman) Boris Nemsic

The **Audit Committee** has been established in accordance with the provisions of Section 92 (4a) of the Austrian Companies Act. It is responsible, in particular, for the audit and for preparations for adoption of the annual financial statements for the company and the consolidated financial statements, the management report, the corporate governance report, and the proposal for the distribution of the profit. It also puts forward a proposal for the election of the auditor for the resolution of the Annual General Meeting. In addition, the Audit Committee performs the preliminary examination of the non-financial report. The Audit Committee held three meetings in 2019. The auditor also attended these meetings.

The **Committee for Executive Board Issues** deals, on the one hand, with matters relating to the relationship between the company and members of the Executive Board, especially the content and conclusion of employment contracts, and, on the other hand, with all aspects of succession planning for the Executive Board and the Supervisory Board. Therefore, it combines the typical agendas of a remuneration committee and a nomination committee ("identical committee" as defined in the C rule no. 43 of the Austrian Code of Corporate Governance). In 2019, this committee held two meetings.

As already outlined, neither the Audit Committee nor the Committee for Executive Board Issues meets the requirements of the C rule no. 39 of the Austrian Code of Corporate Governance because in each case only one of the two shareholder representatives on the committee can be regarded as independent (see previous section of this report: ↗ *"Members and independence of the Supervisory Board"*). Mr. Bardach and Mr. Daxecker both have extensive knowledge of the relevant fields and, above all, the Frequentis Group. This is of material importance for the work of these committees, so their appointment as committee members represents added value for the committees.

Diversity and measures to foster women

Frequentis is committed to equal opportunities for all employees. As a global company, it employs men and women from a wide range of age groups with diverse competencies, different cultural and religious backgrounds, and different sexual orientations. Respecting this diversity is essential for successful collaboration on the company's numerous international projects and is therefore a crucial element in the success of the Frequentis Group. Accordingly, respect, diversity, and inclusion are central values that are taken into account when making appointments to all functions. The principal factors in such appointments are the individual skills and abilities of each person. By contrast, gender, origin, religion, and sexual orientation are not selection criteria.

Similarly, diversity in the composition of the Executive Board and Supervisory Board are vital for the effectiveness of the work of the Supervisory Board. When selecting potential candidates, the Supervisory Board takes appropriate account of diversity and proposes candidates for election by the General Meeting who have the professional and personal qualities that ensure a balanced professional and diversity-oriented composition of the Supervisory Board, especially with regard to the company's structure and business activities. This also applies to the appointment of members of the Executive Board. A diversity concept based on these principles is to be drafted and adopted in 2020.

The statutory percentage of women on the Supervisory Board pursuant to Section 86 (7) of the Austrian Companies Act is not applicable to the company because the Supervisory Board has fewer than six shareholder representatives. The General Meeting on 20 September 2019 resolved to increase the number of shareholder representatives from four to five and elected Ms. Petra Preining as a member of the Supervisory Board, in line with the proposal made by the Supervisory Board. That increased the percentage of women on the Supervisory Board to 25%. The percentage of women on the Executive Board is 33%. About 22% of the Frequentis Group's staff are female.

Consolidated Non-financial Report 2019

Introduction

In keeping with its mission "for a safer world", the Frequentis Group is committed to sustainability in everything it does. Its subsidiaries also take comprehensive steps to address sustainability. Appropriate action is taken directly at their locations, in conformance with local law. For the first time, we are publishing a non-financial report as part of the Annual Report for 2019.

The basis is the Austrian Sustainability and Diversity Improvement Act (NaDiVeG), which was published in 2017 in the Austrian Federal Law Gazette (Bundesgesetzblatt) and transposes the European Union's Non-Financial Information (NFI) Directive (2014/95/EU) into Austrian law. This stipulates that large undertakings whose transferable securities are admitted to trade on a regulated market in a member state of the European Union must publish a non-financial statement. This must contain information to the extent necessary for an understanding of its business development, performance, position, and the impact of its activity, relating to, as a minimum, environmental, social and employee matters, respect for human rights, and anti-corruption and bribery.

The non-financial information is outside the scope of the audit of the consolidated financial statements. The consolidated group on which this report is based is the same as for the financial reporting. If any information applies only to Frequentis AG, this is specifically stated. Frequentis does not utilise the option of relying on national, EU-based, or international frameworks.

To avoid redundancy, where appropriate the report refers to the notes to the consolidated financial statements for 2019 ("consolidated financial statements"), the consolidated corporate governance report for 2019 or the profile of the company. References within this report are are indicated by an arrow ↗ followed by the title of the section *in italics*.

Business model

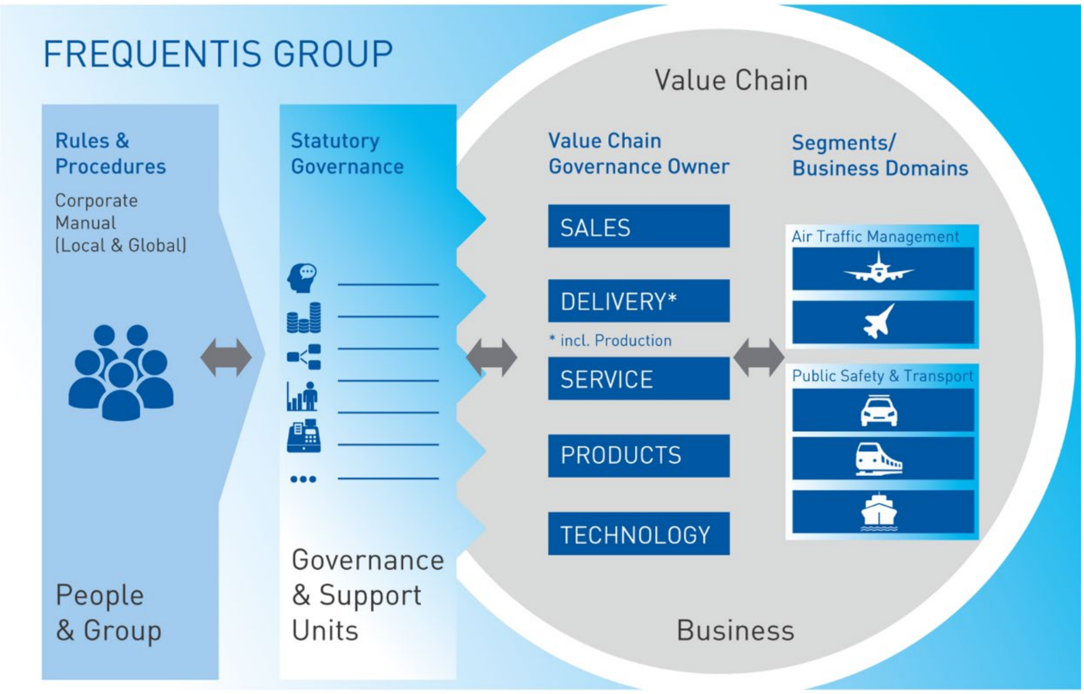
Wherever Frequentis' systems are used, people are responsible for the safety of other people and of goods. The Frequentis Group is an international provider of communication and information systems for safety-critical control centres. Custom-tailored control centre solutions are developed and marketed by the Air Traffic Management segment (for civil and military air traffic control and air defence) and the Public Safety & Transport segment (for police forces, fire brigades, emergency rescue services, shipping, and railways).

As a recognised specialist, Frequentis develops future-oriented solutions for control centres in collaboration with its customers and makes new technologies usable for safety-critical applications. Using a human centred design process, integrated systems are created to provide a safer and more stable working environment for end-users in control centres, such as air traffic controllers, operators, and dispatchers.

The central focus is on long-term customer relationships. Customers – public authorities, organisations, and companies with safety-critical tasks – often use the solutions provided for several decades. That requires a deep understanding of the customer's requirements, maximum reliability, and long-term trust. The extensive installed base also drives the steady and sustained growth of the Frequentis Group (↗ *The Company*).

Governance organisation

Based on an extensive strategy process in 2018, structural changes were made to the Frequentis organisation to pave the way for further sustained growth. The key element is a strong governance organisation that ensures optimised interaction between the central units, the business domains, and the international subsidiaries.



Frequentis' two segments (and the business domains grouped in these segments) focus on successful business operations as their contribution to the group's overall performance. The main responsibility is allocated to local value-generating functions such as Domain Sales, Key Accounts, Product Management, and Project Management. Subsidiaries and investments are an integral part of the value chain and play a significant part in Frequentis' overall success.

The role of the central governance and support functions (which include, for example, Human Resources, IT, Finance & Controlling, Legal, ...) is to ensure smooth global collaboration. These functions focus on supporting the business, minimising risk, optimising workflows, and maintaining a general overview of the company.

People & Group covers units/tasks that do not have a direct impact on the value chain and are defined in the rules and procedures of the Frequentis Group.

Integrated management system

Frequentis assumes its social responsibility through an integrated management system organised via processes. These processes, which are divided into core processes, management processes, and support processes, form the basis for ongoing optimisation and efficiency improvements.

- The core processes directly create value for customers.
- The management processes define the activities for the strategic alignment and management of the company. They include, for example, innovation and product management.
- The support processes support the core processes. They include processes such as the supply chain and development.

These processes form the principal basis for initial and ongoing validation of the company in conformance with the following standards:

- ISO 9001:2015 (quality)
- ISO 14001:2015 (environment)
- ISO 27001:2013 (information security) & UK Cyber Essentials Certificate
- ISO 45001:2018 (occupational safety)

The content of these processes and their application are reviewed regularly in the course of audits by external certification authorities.

Company	ISO 9001	ISO 14001	ISO 27001	ISO 45001	AEO	Cyber Essentials
Frequentis AG, Austria	1993	2005	2011	2005[1)]	2008	2016
CNS Solutions & Support GmbH, Austria	2016		2016			
Frequentis (Shanghai) Co. Ltd., China	2014					
Frequentis Australasia Pty Ltd.	2012	2018	2011	2019		
Frequentis California Inc., USA	2000					
Frequentis Canada Limited	2008	2009		2009		
Frequentis Comsoft GmbH, Germany	1993		2018			
Frequentis Czech Republic s.r.o.	2011					
Frequentis Deutschland GmbH	1998		2011			
Frequentis do Brazil Ltda.	2019					
Frequentis Romania SRL.	2010					
Frequentis Slovakia s.r.o.	1997					
Frequentis Solutions s.r.o., Slovakia	2018		2018			
Frequentis UK Ltd.	2015		2011			
Frequentis USA, Inc.	2003		2011			
GroupEAD Europe S.L., Spain	2004					
PDTS GmbH, Austria	2000					
Systems Interface Ltd., UK	2018					
Team Communication Technology Management GmbH, Austria	2004					

1) Previously certified as compliant with OHSAS 18001:2007; in 2019 all certificates were altered to the new ISO 45001:2018.

In 2019, Frequentis' Brazilian subsidiary was certified as conforming to ISO 9001 and energy efficiency was re-audited. The aim of the energy audit is to identify energy flows and implement scope for further improvement.

The Frequentis processes apply to all companies in the Frequentis Group. The only exceptions are those subsidiaries that have their own certified quality management system with individual processes, for example, Frequentis Comsoft GmbH, Frequentis California, and Frequentis USA Inc.

The concepts developed for individual issues are based on the integrated management system. This system is used to manage them and evaluate the related KPIs.

Materiality analysis and results

The starting point for the non-financial report is a materiality analysis. For this, potential aspects of sustainable corporate management are examined and evaluated with internal and external experts in the light of the Austrian Sustainability and Diversity Improvement Act (NaDiVeG). As the first step in identifying the relevant topics, a workshop was held to obtain input from all relevant areas at Frequentis (internal team including representatives of Procurement, Quality/Environment/Occupational Safety/Safety and Security Management, IT, HR, Investor Relations, Financing, Production, Workers' Council).

This identified the following four stakeholder groups:

- Customers
- Employees & prospective employees
- Shareholders / representatives of the capital market
- Statutory requirements

The feedback on content was divided into the following four areas:

- Social and employee matters
- Human rights, compliance, anti-corruption
- Safety & security
- Environmental matters

The results were discussed and agreed with the Executive Board at a meeting in November 2019. The concept for the non-financial report was also presented at a meeting of the Supervisory Board in early December 2109.

Procedure / methodology used for the materiality analysis

Frequentis conducted a survey comprising a standardised questionnaire with 18 statements. The evaluation was based on the following question:
From your standpoint as a stakeholder, which of these topics are important for the future development of Frequentis and which topics should we work on more intensively in the coming years?

A standardised Sharepoint-based survey was used to obtain the assessment of Frequentis' top management (Executive Board and Vice Presidents; x-axis). Stakeholders were also asked for their views, either personally or by email (y-axis).

The key topics for Frequentis are thus the nine aspects that have the greatest impact or are most important to stakeholders and that are classified as being most significant for Frequentis' business activities. These are shown in the following matrix:

To make the context of these material issues clearer, this report allocates the aspects to higher-level topics.

The results of the materiality matrix were presented to the Executive Board at a meeting at the end of December 2019 and the procedure for this report was agreed.

Social and employee matters

Employees are the most important factor for the successful achievement of Frequentis' corporate objectives and its international growth. Their commitment and dedication, and the innovative capability of multi-cultural teams are the foundations on which Frequentis has built more than 30 years of profitable growth and give the company key competitive advantages on the international market.

About 75% of Frequentis' employees are highly qualified engineers and specialists. Their broad and deep specialist knowledge and their extensive practical focus on customer and market needs are widely appreciated. As a high-tech company, Frequentis employs both young, highly trained university graduates and staff with practical experience. It offers them all an attractive working environment characterised by continuity and sustainability.

In 2019, recruitment of new employees concentrated on technical staff. In addition to system engineers, there was particularly high demand for software engineers, project managers, customer service staff, and offer managers. The company gives high priority to a thorough and exhaustive recruiting process. Alongside professional qualifications, Frequentis looks for an understanding of its business and its specific safety-critical culture.

Risks

Excessively high staff turnover would be extremely detrimental for the long-term focus of Frequentis' customer relationships. This would lead to a loss of domain know-how, which is particularly important in the safety-critical area, and continuity in customer and project management could not be assured.

Concepts

The long-term nature of Frequentis' business relationships and the extensive periods for which its systems are used by customers require special action to secure the know-how and stability of project teams. Therefore, Frequentis has a range of staff retention measures.

In addition, there are many activities to prevent accidents at work and preventive health measures to enhance the long-term well-being and job satisfaction of Frequentis staff.

The number of employees in the Frequentis Group rose from an average of 1,763 in 2018 to 1,849 in 2019, a growth rate of 4.9%. Nearly 54% of employees work at the Vienna location.

Attractive workplaces

As a responsible employer, Frequentis has a genuine desire to actively foster the health of its employees. Vaccinations (influenza, FSME), annual health checks, and specific supplementary measures such as heart check days, lung function tests, eye tests, and vein checks are offered annually to staff at the Vienna location as part of the company's occupational healthcare activities. These supplemented by occupational psychology measures such stress checks and burnout prevention, bioimpedance analyses, and other activities to promote health through the vitality programme. Further, the statutory evaluation of psychological stress in the workplace has recommenced in an extended form (workshops).

In addition, in 2019 the company's medical officer organised another workshop on the basics of reanimation, heart massage, and the use of a defibrillator at the Vienna location. Moreover, more than 50 company first aiders attended a first aid refresher course.

The wide-ranging vitality programme at the Vienna headquarters includes an extensive choice of free sports activities and a range of discounted sports and fitness offerings. In 2019, about 100 employees took part in the Vienna City marathon and the Vienna Business Run. Participation was sponsored by Frequentis. Other activities sponsored by the company include table tennis and soccer.

A key aspect of the Frequentis vitality programme is healthy nutrition for employees and guests at the Vienna location. Meals are freshly cooked and four different menus are available. Great emphasis is placed on the top quality of ingredients and on using regional and seasonal products. Another focus is steadily increasing the range of vegetarian dishes through innovative new recipes and regular speciality weeks. For example, an "Appetite for climate protection" week in September 2019 gave staff an opportunity to sample autumn vegan and vegetarian dishes prepared with ingredients from Austria.

Where possible, subsidiaries of the Frequentis Group also offer programmes to promote health, check-ups and activities to support physical and mental health. These include regular running groups, sometimes accompanied by special trainers, participation in regional runs and other sports events, free gym membership or joint exercise sessions for office staff in the workplace.

Flexible working time models

A flexible working time model aligned to the legal requirements in different regions allows personal needs to be taken into account and encourages a good work-life balance.

Enabling staff to combine work and family life is important to Frequentis. As a family-friendly enterprise, Frequentis AG has offered the Frequenty summer activity weeks for employees' children since 2012. Around 100 children aged between four and twelve took part in this two-week initiative in 2019. They were offered an exciting and varied programme.

The Frequenty children´s week programme is very popular and will be continued in 2020. The main activities are organised on the company's premises to give the children an insight into where their parents work. Through this initiative, Frequentis actively contributes to the Austrian Family Ministry's "Companies for Families" programme. Frequentis has been a network partner for this programme since 2015.

To help staff pursue their personal interests, the company also supports parental and educational leave.

In the Frequentis Group, the responsible managers and, where appropriate, various management and corporate governance bodies, conduct an annual salary review on the basis of statutory requirements and external benchmarks to examine whether salaries meet the minimum requirements and also correspond to market conditions.

An adaptable international leadership development programme supports succession planning. Group-wide building and sharing of knowledge is aided, for example, by ongoing extension of skills management, virtual platforms, and distant learning.

Broadly based staff development

Training and continuing professional development are very important at Frequentis and staff commitment is a key factor in the company's success. In order to remain successful on the market, it is important to be able to adapt quickly to new challenges and to constantly update knowledge of laws, requirements, technical specifications, and global issues such as the environment. Frequentis has a lifelong learning concept, which starts when joining the company.

An onboarding programme and trainee programmes within the Frequentis Group ensure that new employees, in particular, are rapidly integrated into the company and given the necessary knowledge of project management, systems engineering, and software development. New staff are supported by a tutor in their first months with the company. The onboarding programme at the headquarters in Vienna sets the standard for the other companies in the Group. Subsidiaries offer their new staff a combination of corporate standards and a local touch.

Appraisal interviews are the main tool used for employee development and leadership. In 2019, a documented appraisal interview was held with 89% of staff at Frequentis AG. This included agreeing and defining targets for the coming year.

The aim of these appraisal interviews is to reflect on work and the results achieved in the past year, establish the status quo, and make plans for the coming year. That includes discussing the expectations of both parties and defining binding targets.

In addition to the Frequentis career model, which places management, expert, and project management careers on an equal footing, specific attention is paid to cross-departmental and cross-border development of talented employees and those with potential. Talent management, which covers more than three-quarters of all employees in the Frequentis Group, provides an overview of the distribution of performance and potential in the company and its organisational units and teams. At the same time, it provides a specific case-by-case insight into where development measures are necessary. Company-wide vocational training and continuing professional development programmes are aligned to these needs. Further, identifying key staff and key functions allows long-term succession planning. Data on succession planning for management and key staff formed the basis for development of the Group-wide talent programme in 2019.

Thanks to the extensive training offering, Frequentis employees participated in more than 7,000 training sessions in 2019. These were mainly held by internal trainers. This in an important element in passing on knowledge and safeguarding Frequentis-specific know-how.

In the area of personal development, the focus was on intercultural training and training in lateral leadership. Training was also provided in specialist areas and new technologies. This was supplemented by well-attended security training sessions and mandatory training on protection of personal data.

A survey of Frequentis subsidiaries in 2018 showed enormous interest in extending the distant learning modules. The findings were taken into account in planning, extending, and sharpening the offer for 2019. As a result, the number of distant learning modules available to employees in the Frequentis Group almost doubled from 83 to 165 in 2019. To supplement the established e-learning modules on the General Data Protection Regulation (GDPR), Austrian occupational safety legislation, and security awareness, there are modules on networks, the Frequentis Project & Process Framework, and introductory videos for business domains.

Frequentis sees informal learning as an important element in modern vocational training and continuing professional development: it enhances the effectiveness and durability of learning processes. Communities of practice provide a platform for communication and for sharing knowledge across functional and organisational boundaries at Frequentis. In 2019, eight company-wide expert communities were registered at Frequentis. They cover a wide range of topics, from security aspects to engineering challenges. A knowledge-sharing platform for top technology experts and project managers at Frequentis was added in 2019. This is specifically geared to complex projects.

Sales Excellence Programme

The Sales Excellence Programme, which was introduced in 2013, is an extensive training programme for all sales staff at Frequentis. Staff from the strategic business domains, regions, and international subsidiaries who work in the areas of sales & operations were involved in designing this programme. The aim is to ensure that all sales staff in the Frequentis Group have a uniform knowledge base, and to provide individuals with opportunities to deepen their knowledge.

The programme is divided into two parts: the "basic" training is mandatory and includes legal and compliance modules. "Advanced" training is tailored to the precise requirements of the individual's functions and personal skills. A certificate is awarded for completion of both parts.

To improve training of sales staff, the Sales Excellence Programme became compulsory in 2019.

50% of the mandatory training sessions were successfully completed in 2019. To raise the proportion in the following year, Frequentis will be stepping up virtual/distant learning modules in the future to cater even better for those in the target group outside headquarters.

These measures will be continued pursued in 2020. In particular, the technical training offering will be extended I (for information on mandatory training in data protection and security ↗ *Safety & Security*).

Equal treatment and equal opportunities

Customers greatly appreciate the internationality of Frequentis' teams. The culture on which this is based is a key competitive factor on the international market. That is why every effort is made to ensure that it is a sustainable, element throughout the fast-growing Frequentis Group.

An optimum work-life balance should be possible for all employees, irrespective of their age, gender, culture, religion, or background. Frequentis established the conditions for this many years ago. This is reflected in the international composition of its teams – in Vienna alone, staff come from 41 nations – and in long-term employment relationships, which support the aim of retaining knowledge in the Frequentis Group.

The Frequentis Group does not tolerate any form of discrimination, especially not on the grounds of gender, age, sexual orientation, race, ethnic background, or religion. Frequentis is an equal opportunity employer. All personnel decisions – recruitment, training, remuneration, and promotion – are based on suitability, performance, qualifications, integrity, and similar criteria.

The present low proportion of female specialists and managers is due to the fact that the proportion of women in technical professions is still comparatively low. For instance, only 25.9% of the roughly 2,600 job applications received by Frequentis AG in 2019 were submitted by women. From the perspective of a high-tech business like Frequentis, a higher number of female staff in technical professions would be desirable. Mixed teams are generally more effective and enrich the company. High value is placed on talented female staff, as shown by the fact that the project management trainee programme in 2019 included four female trainees. In addition, Frequentis strives to take such aspects into account in its cooperation with schools and universities.

Human Resources International

An in-house competence centre is responsible for the main tasks required to provide continuous support for international employees and to set up international assignments. The Human Resources International competence centre also provides valuable assistance for the rollout of HR processes and for knowledge sharing and knowledge transfer across the Group.

These services were extended in 2019, e.g. through local strategy, team, and management workshops and "educational visits" to corporate headquarters. Further support comes from the International Management Handbook, a practical tool to assist managers in different countries and at different levels in their day-to-day HR work. It provides international access to HR standards and processes, and useful tips on aspects such as onboarding, appraisal interviews, and team development.

An important element to increase foreign assignments is the successful reintegration of returning staff. Discussions with (new) managers, tax advice for returning employees, and individual coaching pave the way for ongoing career success at headquarters in Vienna. The International Assignment Programme gives staff an opportunity to gain experience of working at a subsidiary in a different country, which also helps to spread the Frequentis culture throughout the Group.

Another goal is to establish local HR managers or HR support staff. A focus here in 2019 was drawing up a roadmap for the ongoing international roll-out of HR-related processes and tools. In the area of knowledge management, the focus is on efficiently and effectively strengthening international knowledge transfer within the Frequentis Group, for example by giving subsidiaries access to the group-wide learning centre's training catalogue and content.

This knowledge transfer includes recruitment activities. Group-wide, Frequentis uses selected recruiting platforms and events such as job fairs to position itself as an attractive employer in the IT sector. Social media platforms are becoming increasingly important, especially in the area o active sourcing.

KPIs

	2019	2018
Average no. of employees in the Frequentis Group	1,849	1,763
thereof male	78.5%	78.4%
thereof female	21.5%	21.6%
Average no. of employees at Frequentis AG	993	971
thereof male	77.1%	77.1%
thereof female	22.9%	22.9%
New employees in the Frequentis Group	198	291
thereof male	69.7%	78.0%
thereof female	30.3%	22.0%
Employees leaving the Frequentis Group	190	184
Employees (Frequentis Group) in		
Part-time	198	162
Parental leave	49	59
Special dispensation	60	58
Training leave	3	6
Part-time training	4	6
Average age – Frequentis AG	41	41
Average age of new employees – Frequentis AG	34	34
No. of appraisal interviews held – Frequentis AG	89%	87%
No. of open courses offered – Frequentis Group	386	311
thereof distant learning	165	83
No. of classroom training sessions – Frequentis Group	524	633
thereof with internal instructors	84.7%	78.2%

In principle, all of these concepts are being continued in 2020. The aim is to maintain the already high rate of appraisal interviews. With regard to training, increased attention will be paid to distant learning because this is not tied to a particular time or location. Video-based training will also be extended.

Professional employer branding, purposeful recruiting, and frank and open treatment of job applicants are very important in the competition to attract the best brains and secure qualified staff. In the "Best Recruiters" study 2019/20, Frequentis AG emerged as the winner of the IT/Software/Telecommunications category thanks to its professional and candid HR activities.

The measures outlined above will be continued in 2020 to strengthen Frequentis' position as an attractive employer and to retain staff.

Social responsibility

In keeping with its mission "for a safer world", Frequentis sees making a contribution to disaster relief as a social responsibility and an expression of solidarity with those affected.

Particular attention is paid here to children as the weakest members of society. For many years, the company has been a business partner of the UN child welfare organisation UNICEF. UNICEF helps children in need – as a result of wars, disasters, epidemics, and armed conflict. Its assistance ranges from rapid emergency aid to long-term reconstruction work, paving the way for children around the world to grow up safe and healthy and to develop their full potential.

Frequentis also supports innovative projects such as the involvement of members of staff in the development of an app for emergency calls by deaf people.

Sponsoring education

Frequentis has provided selective educational sponsorship for technical schools and universities for many years. Special technically oriented training facilities require considerable financial resources and basic state funding generally only covers part of the cost. Exchange with industry is also vital to ensure top-quality, practice-oriented training that is state-of-the-art. Close collaboration between business and education is therefore essential.

For many years, Frequentis has worked with the FH Technikum Vienna, the FH Campus Vienna, Vienna University of Technology (TU Wien), and Vienna University of Economics and Business to support high-quality education at these institutions. In cooperation with TU Wien, for some years now it has held joint training events where experts from Frequentis give students an insight into control centre know-how and examples of best practices. "Adventure in Computer Science", another cooperation with TU Wien launched in 2019, targets a younger age group: this permanent exhibition is designed to encourage school children's enthusiasms for computer science.

In addition, Frequentis supervises bachelor's dissertations and master's theses. Other activities include sponsorship, workshops, and study trips for higher technical colleges in Vienna and Lower Austria. Frequentis is also actively involved in the development of courses, for example, in software design and engineering.

Similarly, Frequentis has had a long-term cooperation with FH St. Pölten since 2010. This focuses on an exchange on IT-related topics such as cybersecurity. Furthermore, Frequentis managers are represented on advisory boards for security & information security and railway technology & mobility.

Start-up activities

The Frequentis Start-Up Centre in Phorusgasse in Vienna, which was established in 2001, helps entrepreneurs set up their own businesses. The support programme basically lasts three years. In addition to an inexpensive and flexible location with appropriate infrastructure, during this time young entrepreneurs have opportunities to access direct business opportunities at Frequentis. In total, more than 50 companies with over 200 employees in the fields of IT, hardware & software development, and technology consulting have found their "first home" at the Start-Up Centre.

The Frequentis Start-Up Centre is currently undergoing extensive refurbishment and will re-open in 2021. Plans include stepping up collaboration with the companies in the Frequentis Group even further. In addition, during the refurbishment period we will be drawing up a concept for a virtual Start-Up Centre to increase our global reach.

To supplement this, a growing area of focus is strategic investment in specific start-ups. One example is the investment in Altitude Angel Ltd. In the UK. In January 2018 Frequentis acquired a minority shareholding in this aviation technology company, which operates in the field of drones.

Human rights & anti-corruption

Combating corruption and the violation of human rights is important for the Frequentis Group. Frequentis operates internationally and is therefore increasingly active in countries that have a high score on Transparency International's Corruption Perception Index (CPI).

The employees of the Frequentis Group are required to act lawfully in all business dealings and to show clearly through their personal conduct that they reject all forms of bribery and corruption.

Risks

Corruption and violation of human rights can have serious implications for the company and its employees. The principal risks are the loss of orders and exclusion from future tender processes, fines, reputational damage, and criminal prosecution of the company and the employees involved.

Concepts

The principles of integrity and business ethics at Frequentis are set out in the Code of Conduct and internal anti-corruption policies and form the basis for internal and external collaboration.

To draw attention to the importance of this issue, Frequentis adopted a Group policy on "Anti-Corruption, Invitations, and Gifts" in September 2018. This is an operational instruction designed to avoid all forms of corruption and provides guidance on ensuring legally compliant conduct when dealing with the Frequentis Group's business partners.

The Code of Conduct was drawn up by the Executive Board of Frequentis AG and applies to all employees of the Frequentis Group. Alongside Frequentis AG, it therefore applies at all companies in which Frequentis AG has a direct or indirect stake of at least 50% or in which it exercises control in a different manner.

The Code of Conduct defines principles and guidelines for responsible conduct and integrity. It is a key element in Frequentis' corporate culture and shapes the Frequentis Group.

In addition to the written version, in 2018 the basic principles of the Code of Conduct were presented to employees through an awareness video. This video is also used in compliance training and new employees are introduced to it in the onboarding phase.

It is also in the interest of the Frequentis Group to ensure that all significant business partners (suppliers, consultants, contractors, …) who provide services for the Frequentis Group or operate on its behalf are familiar with the Code of Conduct. These business partners are expected to respect the principles set out in the Code of Conduct and to observe them in their business relationship with the Frequentis Group.

KPIs

In 2019, there were no cases of corruption, nor any disciplinary measures, court cases, or dismissals linked to corruption. Moreover, no contracts with suppliers had to be terminated as a result of violations of human rights (↗ *The Company*). The Frequentis Group did not receive any fines in the reporting period in connection with corruption or competition law.

	2019	2018
Cases of corruption resulting in disciplinary action	0	0
Termination of contracts with suppliers due to violation of human rights	0	0
Fines in connection with corruption or competition law	0	0

Preventive measures will continue to be implemented over the coming year to make sure that employees can recognise corruption and violations of human rights and the company can take any necessary action.

Compliance

The Executive Board of Frequentis AG has appointed a Compliance Officer for the Frequentis Group. The Compliance Officer's main role is to raise awareness and to take steps to ensure exemplary conduct in compliance with the law and guidelines.

Risks

The reputation and business success of a company can be put at considerable risk by breaches of compliance. As a producer of communications equipment for safety-critical applications, Frequentis AG has an enormous responsibility to its customers, society, and its shareholders.

Concepts

The compliance management system is based on the following principles:

- **Prevention:** defining corporate policies, training, creating compliance awareness, providing advice on complex compliance issues
- **Early detection:** performing compliance audits and special audits in response to specific circumstances
- **Response:** taking any necessary measures and imposing sanctions

Training

Four classroom-based training sessions were held for sales staff at Frequentis AG in 2019. They were a compulsory part of the Sales Excellence Programme for all sales staff. The courses were organised to coincide with international sales meetings so that international staff could also take part. 47% of sales staff were trained in 2019 (↗ *Sales Excellence Programme*).

Advice

The Compliance Officer is also the first line of contact for staff on compliance issues. 14 enquiries were dealt with in 2019. These were submitted by email to a special email account, compliance@frequentis.com, or asked personally or over the phone.

Compliance audits

Since 2019, incoming invoices and expense claims have been monitored continuously to ensure compliance with the thresholds set out in the "Anti-Corruption, Invitations, and Gifts" policy. The focus is on invoices relating to gifts, invitations, and hospitality. An internal process was introduced in 2019 to automatically submit all invoices relating to gifts and invitations that exceed the net limit of EUR 50 set in the corporate policy to the Compliance Officer for further checking and clarification.

Agent management

Frequentis AG has a network of 60 representatives and agents around the world. Agent management is responsible for supervising and managing them. To ensure optimum collaboration, the agents submit regular reports on their activities during a defined period.

In 2019, intensive work was invested in improving the quality of these reports (providing a uniform template, quality assurance of their content, workshops for partners/agents, monthly reporting to the regional sales managers at Frequentis) and increasing the response ratio.

In view of the international structure of Frequentis' agents and the associated compliance risks, the agent management process includes a compliance questionnaire that has to be completed and submitted before an agent agreement can be signed. In addition, it has to be checked by the Vice President Sales.

KPIs

	2019	2018
Processed enquiries from employees	14	9
Face-to-face training sessions	4	n.a.
Checking invoices for compliance with the requirements of the Group policy on anti-corruption, invitations, and gifts – cases referred	40	n.a.

Making staff aware of the key principles is a declared aim of the Frequentis Group. Compliance is not an option for Frequentis, it is a duty.

In 2020, the training rate will be increased steadily by providing compliance training via Skype. This should give international staff easier access to the compliance training sessions.

In addition, an internal gap analysis of the compliance management system compared with ISO 19600 is planned. This will provide a basis for a decision on possible certification.

Other focal areas of future compliance activities will be preventing and identifying compliance violations that harm the company's interests, avoiding liability risks and reputational damage, training, and advising and protecting the senior management, manager, and staff.

Capital market compliance

To implement capital market-relevant laws and regulations within the Frequentis Group, a capital market compliance policy has been drawn up. In particular, it covers the handling and publication of capital market-relevant information, the prohibition of trading in shares and other financial instruments of Frequentis AG, and the obligation to report own-account trading ("Directors' Dealings"). In addition, the position of Capital Market Compliance Officer has been established. The Capital Market Compliance Officer is responsible for implementing the capital market compliance policy and reports directly to the Executive Board of Frequentis AG. This is designed to ensure that the Frequentis Group acts with integrity on the capital market and to enhance employees' understanding of what is meant by capital market compliance.

Risks

Failure to comply with laws and regulations relating to the capital market can result in criminal and administrative sanctions and can have civil-law consequences for Frequentis AG and/or its employees.

The measures set out in the capital market compliance policy are designed to ensure compliance with capital-market relevant laws and regulations. The Capital Market Compliance Officer is responsible for implementing the policy in the Frequentis Group and monitoring the measures it describes. To enhance understanding of this policy, employees also receive training.

KPIs

Four classroom-based training sessions were held for specific employee groups in 2019. There was also a general information event on capital market compliance. Managers and heads of compliance areas received information on their personal obligations in connection with capital market compliance, either in written form or at personal meetings.

	2019	2018
Classroom-based training in capital market compliance for specific target groups	4	n.a.

In 2020, the company will be working on an online training course on capital market-related issues.

Selection of suppliers

The criteria used by Frequentis to select suppliers include ethics, compliance with labour standards, and environmental protection, as set out in the Corporate Social Responsibility (CSR) code for suppliers and sub-contractors.

Operating in the safety-critical area requires reliable partners on the supply side and ongoing, long-term business relationships. A stable procurement base is vital for project execution.

The introduction of a CSR code for suppliers and subcontractors is evidence of Frequentis' commitment to protecting the environment, respecting human rights and the labour standards, and fighting corruption. Frequentis' suppliers give an undertaking that they will act in accordance with these principles. The focus is first and foremost on respecting labour standards. Frequentis explicitly rejects forced and compulsory lab, child and youth labour, moonlighting, and discrimination of employees. Observing working hours, ensuing a safe working environment, and paying the statutory minimum wage are other key elements of the CSR code.

Risks

As a result of the large number of business relationships, there is a significant risk that suppliers could fail to respect human rights, labour standards, and social welfare legislation. That could result in inhumane living and working conditions and non-compliant business relationships with third parties. Moreover, in this context there are delivery risks, reputational risks, and a risk of losing customers.

Concepts

Supply chain management staff and managers receive training in the principles of transparency along the supply chain, including strict avoidance of slavery, human trafficking, any form of forced or compulsory labour, child labour, and all types of discrimination.

"Modern slavery" is included in the Code of Conduct (CoC) and the Corporate Social Responsibility (CSR) code for suppliers and subcontractors, and in the contractual documents for subcontractors, suppliers, coaches, and employment agencies.

The CSR code issued in 2010 is an integral part of the master agreement with suppliers.

Supplier audits

Frequentis AG regularly audits its suppliers. The audits are conducted at the end of a year for the following year. There are various reasons for a supplier audit:

- To get to know a potential new supplier
- The supplier accounts for a material order volume or has increased risk potential
- Difficulties in the relationship with the supplier over the past year (e.g. delivery, quality, communication problems, etc.)

The audit plan can be modified in the light of events during the year, planned audits may be dropped or postponed, and new audits may be added to the plan. This flexibility is necessary to respond to current requirements.

Subsidiaries audit suppliers as necessary.

Supplier assessments

In addition to the supplier audits, Frequentis AG assesses its established suppliers once a year. They are assessed in the first quarter of the year using the following criteria:

- Quality: e.g. product quality, product complexity, quality assurance system
- Price: e.g. development of prices and comparison with the previous year and market prices
- Support quality: e.g. commercial, personal, and technical support
- Delivery performance: the main criteria here are adherence to delivery dates and volumes; Attention is also paid to environment-friendly and sustainable packaging
- The supplier's operating environment: this covers, on the one hand, the business environment (stability, performance, flexibility, environmental management, etc.) and, on the other, social aspects (CSR code, social competence, etc.)

These assessment criteria are weighted and included in the overall assessment, which is generated with the aid of the ERP system (SAP).

Assessments are performed for the suppliers that account for the highest order volume (top 50) and those that play a key role in the supply of specific groups of products. The 2019 assessment is currently in progress. The 2018 assessment covered 60 suppliers accounting for a total procurement volume of EUR 21.8 million.

The Top 3 suppliers received performance awards and certificates. A range of measures is agreed with suppliers whose performance needs to be improved and implementation is monitored.

As well as price, reliability and service, responsible procurement emphasises the importance of respecting human rights, humane working conditions, and environment-related issues.

At Frequentis and its subsidiaries, whose business activities comprise production and integration, other key criteria are short supply lines and improving local value-added. Apart from intra-group procurement, 92.5% of Frequentis AG's procurement is from suppliers in Europe. Even taking into account the subsidiaries that provide independent production and integration services, Europe still accounts for about 77.4% of procurement. This indicator was compiled for the first time for 2019 specifically for the non-financial report.

KPIs

	2019	2018
Supplier audits performed by Frequentis AG	7	7

Geographical structure of suppliers and service providers based on order volume by Frequentis AG	2019	2018
Europe	92.5%	n.a.
North America	3.1%	n.a.
Asia	2.4%	n.a.
Africa	1.1%	n.a.
Middle East	0.5%	n.a.
South America	0.4%	n.a.
Australia	0.1%	n.a.

Geographical structure of suppliers and service providers by order volume[1]	2019	2018
Europe	77.4%	n.a.
North America	16.0%	n.a.
Australia	2.7%	n.a.
Asia	2.5%	n.a.
Africa	0.8%	n.a.
Middle East	0.3%	n.a.
South America	0.3%	n.a.

1) Product and project-related procurement by Frequentis AG, Frequentis Deutschland GmbH, Frequentis Comsoft GmbH, Frequentis USA Inc., Frequentis Australasia Pty Ltd.

The goal is the continuation and Group-wide rollout of supplier assessment in order to achieve a continuous improvement in supplier management. Further, supplier assessments include examining scope for improvement.

In addition to the criteria listed above, the procurement function aims to avoid long procurement distances in order to further reduce the Frequentis Group's carbon footprint.

Safety & security

Handling safety-critical systems is a central feature of Frequentis' corporate culture. It is based on many years' experience of safety-critical systems. That responsibility is reflected in its mission "for a safer world". This expresses a deeply rooted technical and emotional understanding of customers' needs, along with a highly developed ability to understand current challenges and working processes, and strong identification with the task in hand. Other key attributes are openness, flexibility, and transparency – both in internal collaboration and in customer relationships.

Digital security is becoming more and more of a challenge for companies. Increasingly sophisticated cyberattacks on critical infrastructure require special knowledge and specific measures to harden technical systems to such attacks. This has a dual impact on Frequentis: firstly, because it needs to protect its own working environment and IT structure and secondly, because Frequentis Group companies need to provide the best possible support and assistance to help customers handle this new threat.

In line with its motto "for a safer world", Frequentis addresses both safety and security. In this context, safety means avoiding unacceptable risks, while security is the ability to defend oneself from external attacks. In terms of the sustainability of the Frequentis Group's activities, safety and security are therefore closely interlinked: there is no safety without security.

Risks

Safety and security are both fundamental to the Frequentis Group's safety-critical business operations. Failures and shortcomings in these areas would result in an immediate loss of confidence by our customers and business partners and have a lasting negative impact on our business.

Safety

Safety means avoiding unacceptable operating risks, while security refers to the ability to defend against external attacks. System safety is achieved by operating a system on top of the actual system to analyse the environment, users, or third parties. With reference to Frequentis, this means that the safe operation of Frequentis systems has to be guaranteed at all times. Frequentis has been a global leader in safety for many years. Since1995 it has had its own competence centre for system safety management. This provides safety expertise for customer projects. Numerous awards, published papers, and international accolades testify to Frequentis' enormous expertise in this field.

Concepts

Safety management system

Safety is an integral part of Frequentis' business processes and therefore a key competitive advantage.

To perform the required system safety tasks in regulated areas of operation, Frequentis introduced an extensive safety management system back in 1999. An important element is the management's commitment to safety, which is set out in Frequentis' safety policy, together with the goal of upholding safety standards in all activities and improving them wherever possible.

Everyone in the company has to understand the importance of safety and to constantly strive to optimise safety in cooperation with customers, suppliers, and authorities. That allows early identification and evaluation of risks so that appropriate risk mitigation measures can be taken.

The basic elements of the safety management system are consistent application of international safety standards after adaptation for the relevant business domain, an obligatory safety assessment for all product developments, a Group-wide hazard management system for preventive risk minimisation, and the in-house Safety Academy for staff training.

Safety certificate

In response to rising international requirements, in 2005 a Group-wide training concept was established through the Safety Academy, together with specialised safety training leading to the award of a certificate. So far, 143 employees have gained this safety certificate, including 10 staff from Frequentis subsidiaries (in Slovakia, California, at Comsoft, and in Romania). In this way, extensive safety know-how is disseminated within the company and corresponding Group-wide safety expertise is generated.

The training programme leading to the safety certificate is used to train safety peers in a wide range of organisational units and has been running since 2005. Safety competence is a key corporate characteristic in the field of safety.

Following initial collaboration with the FH Campus Vienna, since 2012 training has been carried out in cooperation with the International Safety System Society (ISSS). This has been made possible by Gabriele Schedl, Director of Safety Management at Frequentis, who is Regional Vice President Europe at the ISSS.

KPIs

This programme comprises fundamental, generic system safety training in modular form (ranging from hazard management through safety-critical project management and safety critical system design to software safety). The three-week course ends with an assessment based on Frequentis-specific safety analyses. The certificate has to be upgraded every two years.

	2019	2018
Total number of safety certificates issued	143	106
thereof newly issued “Basic” certificates	12	11
thereof newly issued “Upgrade” certificates	25	18

Training for this certificate – which has to be upgraded every two years – will be continued in the coming years. That will further strengthen Group-wide safety competence. In addition, the results of the analysis are used for continuous improvement of products and internal workflows.

Security

Within the context of safety, security has been an important area of focus at Frequentis for many years. High-tech security centres involve the integration of data from the Internet of Things (IoT), the use of SaaS (Software as a Service) to provide safety-critical applications, big data analyses, and, in particular, the networking of control centres and organisations. To allow systematic Group-wide bundling and expansion of these activities, a Security Expert Community was set up at the start of 2017 on the specific instructions of the Executive Board. Today, Frequentis has a sophisticated security organisation. This ensures that Frequentis takes all necessary measures to maximise security.

The Frequentis Security Organisation

Concepts

Frequentis introduced an extensive security organisation in 2018 and 2019. This comprises three areas:

Governance and Support

This area of the organisation is authorised to issue policies. It is responsible for supporting the operational units in the implementation of these policies and for checking and reporting on their implementation. Support comprises training, providing tools, know-how and experts, and, in certain cases, taking on specific security tasks.

Governance and Support is structured as follows:

- **Chief Information Security Officer (CISO)**: responsible for security risk management at corporate level, the information security management system, and shaping the security organisation
- **Security Incident Response Team Manager (SIRT Manager)**: responsible for security notifications and security incident response
- **IT Information Security**: responsible for the security of the IT and communications infrastructure at Frequentis
- **System Security Team**: responsible for the security of systems delivered to customers (security of Frequentis products and solutions)

Business

Security has to be practised by all employees and integrated into their daily working processes. That applies, above all, to system security, which involves implementing specific security activities for Frequentis products along the entire value chain, from product design to delivery of a ready-to-use system to the customer and subsequent security cooperation during the operational phase. For this reason, the second part of the security organisation at Frequentis is composed of explicit security roles that are anchored in the operational units and work together with the governance and support units. They are:

- **Security engineers** in product and project teams: security engineers are responsible for correct implementation of security specifications at the technical level, e.g. design guidelines, coding guidelines, system hardening measures, and security tests.
  Training was introduced in 2019 for this target group, which comprises system engineers, integration engineers, test engineers, software engineers, and software architects. The training was focused on participants in Vienna.
- **Security agents** in the business units: the security agents represent the business perspective and support the management of their business unit in security-related aspects. These include the business unit's security offering, management of security-specific risks in products, offers, and projects, market presence, and communicating with customers on security notifications. Frequentis currently has eight security agents, each of which is allocated to a business domain.

Virtual cross-functional teams

These teams support the implementation of security throughout the Group. They are:

- The **Security Incident Response Team SIRT**: this team is composed of selected experts from various operational units and is headed by the SIRT Manager. It is responsible for security notifications and incident response.
- The **Security Council**: the Security Council is a team of top managers from relevant units (Development, Maintenance, Communications, Legal, IT). Its role is to coordinate and monitor vulnerability and incident management processes at Frequentis. The Security Council meets regularly once a quarter and as required.
- The **Security Community**: this is a community of security-oriented employees. It is moderated by the SIRT Manager. Any employee may take part. Topical security issues are analysed and discussed at monthly meetings. The community also provides a framework for informal exchange.

Networking with international communities

Many of Frequentis' customers operate "critical infrastructure". Such infrastructure is especially important for people, the environment, and essential processes such as energy supply, food, health services, telecommunications, transport, and safety. Frequentis is aware of its special responsibility as a supplier of systems used in these areas. Therefore, it gives high priority to active participation in national and international security communities, platforms, and bodies. These platforms assess future risks, develop strategies, and share experience. That creates communities of trusted experts that can be relied on when necessary, for example, in the event of a major infrastructure attack.

In 2019, Frequentis actively contributed to the following communities:

- Austrian CERT network
- FIRST (global Forum of Incident Response and Security Teams)
- EUROCAE WG 72
- Cyber Security Platform Austria
- Programme Committee of the (ISC)2 ISACA Conference 2019

IT measures

Companies around the world have been a focus for hackers and cybercrime for many years. Identity theft and data theft are major areas of cybercrime. As a company operating in the safety-critical area, Frequentis takes special precautions to avoid cybercrime in the form of attacks on its in-house IT infrastructure. Protection of the Frequentis network, including all subsidiaries and external access, is therefore always state-of-the-art.

Employees are an important factor in this. To ensure the greatest possible awareness of this issue within the company, for around 10 years all new staff in Vienna have taken part in Information Security Awareness Training. In addition, a web-based version of this training module has been used throughout the Frequentis Group since 2015. Information Security Awareness Training is a compulsory course that has to be repeated every two years.

To further sharpen employees' awareness, there are also regular Group-wide phishing campaigns. Here, a random sample of people at the company receive simulated phishing mails. Their response is automatically evaluated on an anonymous basis and feedback is published in the intranet and the staff newsletter.

In 2019, IT services were not affected by any outages caused by cyberattacks.

Data protection

The European Union's General Data Protection Regulation (EU GDPR) requires every company to apply the European data protection principles in its corporate activities and to require staff to respect data privacy and the confidentiality of business and operating secrets.

Frequentis appointed its own Data Protection Officer when the GDPR came into effect on 18 May 2018. At the same time, Frequentis introduced mandatory e-learning modules to provide training on the protection of personal data.

KPIs

	2019	2018
Completed system security training sessions		
System Security Overview for Engineers	46	n.a.
System Security Advanced for Engineers	42	n.a.
Successful completion of "Security Awareness Training"	93%	94%
Successful completion of "Personal Data Protection" training	92%	n.a.
No. of meetings of the security community	12	4[1]
Average no. of participants	20	n.a.
Proven IT service outages due to cyberattacks	0	n.a.

[1] Meetings introduced in May 2018

These compulsory training modules still have a firm place in the training programme at Frequentis. The concepts for security awareness and the security organisation are subject to ongoing development and are revised to reflect the latest conditions.

Environmental matters

Environmental aspects and careful use of resources are important to Frequentis at all stages in the value chain. Sustainability and environmental awareness are integrated into production workflows: careful use of primary energy resources and raw materials, reducing harmful emissions, and the use of environmentally compatible production processes are documented and checked as part of the management review in the regular HSE report.

Another Group-wide contribution to the sustainability and the conservation of resources is that Frequentis products and solutions are used by customers for many years, often decades. Frequentis supports this long-life cycle by providing extensive service and maintenance programmes and through life cycle management. Customer Service offers various service levels and service teams are available worldwide around the clock.

In addition, Frequentis solutions help optimise traffic flows and therefore reduce pollution.

Risks

Frequentis' business operations involve comparatively high energy consumption (climate-relevant emissions are negligible). If Frequentis had not drawn up and implemented energy efficiency concepts, its environmental impact would be higher than necessary. Inefficient use of energy resources would also mean higher costs for the company.

Equally, high energy consumption by Frequentis systems affects the energy efficiency of the customers who use them.

Concepts

Frequentis uses various concepts to reduce environmental impact in the production and use of its systems.

Long-standing partner for the EU's SESAR programme

SESAR – the Single European Sky ATM Research programme – is a key element in the creation of a uniform airspace as part of the European Commission's Single European Sky Initiative. The aim is to do away with the present fragmented national flight management systems and processes, pool the expertise of the aviation sector, and establish a uniform flight management network in Europe. For the first time in history, the entire sector, including the armed forces, is working to meet commonly defined specifications and requirements, especially for capacity, safety, the environment, and cost-efficiency for the next 30 years. One focus is on improving environmental compatibility, for example, by cutting carbon emissions by 10% to improve air quality and reduce noise. Frequentis has been a major industrial partner for this initiative since it started.

Frequentis systems also provide direct support for environment-friendly solutions. One example is the delivery of an AIM (aeronautical information management) system to the Australian airline Qantas Australia to optimise its routes. In March 2019, Frequentis and its partners received the highly regarded Jane's ATC Award for this project. This highlights the increased efficiency of flight management and the related fuel savings and emissions reductions facilitated by this solution.

Energy consumption

Through a variety of measures – free cooling, use of heat pumps, solar systems – Frequentis AG has succeeded to manage power consumption effectively in recent years, even though it has raised revenues.

Since 2018 the Frequentis Group has taken part in Earth Hour, the World Wildlife Fund's biggest worldwide climate protection campaign. Alongside the Vienna location, where around 10,000 kWh power were saved in one weekend, many other companies in the Frequentis Group joined in this initiative.

Since 1 January 2019, all power used by Frequentis AG has been sourced from hydroelectric and ecological sources. The company has confirmation that 100% of the power supplied to it by KELAG Energie & Wärme GmbH is generated from renewable resources such as hydroelectric, wind, and other ecological sources. This step makes a contribution to reducing pollution by climate-damaging gases (e.g. carbon dioxide) and radioactive waste. It is also a clear signal for sustainability and efficient use of resources.

Efficient use of resources and waste separation

In the context of efficient use of resources, Frequentis makes a sustained effort to reduce the resources used within the company and to minimise the use of hazardous materials in production. An annual HSE audit evaluates the action taken and recommends new initiatives.

Environmental protection plays an important role throughout the value chain at Frequentis, from the selection of materials to processing and recyclability. Considerable attention is paid to reducing the use of hazardous materials in production. At the same time, Frequentis takes environmental relevance into consideration by using environmentally compatible production processes such as lead-free soldering and reducing power consumption in the production and operation of its systems. Attention is also paid to resource-saving packaging in the shipment of equipment, for example, by using reusable transport boxes.

Systematic sorting of different types of waste is compulsory. Frequentis has many waste collection points at its location in Vienna. Each office has separate containers for recyclable paper (data protection regulations are observed in the disposal of paper) and other refuse. For all other types of waste, there are waste sorting points in every kitchenette and at the large copy centres. Used electrical appliances are collected centrally by Logistics (Material & Transport Department). At subsidiaries, waste is sorted in accordance with local regulations.

Business trips / reducing CO_2 emissions

Business trips are very important at Frequentis because of the international nature of its business activities. Business travel is generally organised centrally via Frequentis Travel Management. The defined travel policy applies to all business travel by members of staff on behalf of the Frequentis Group.

Business trips may only be undertaken for business reasons and if the tasks cannot be undertaken in another form (email, phone, online meetings, or video conferencing). Decisions on business travel are taken on the basis of cost-efficiency and sustainability.

KPIs

	2019	2018
No. of flight legs on business trips	14,663	16,510
CO_2 in tonnes relating to these flights	2,635	2,788
PCs and workstations equipped with Skype functionality	100%	100%
Average no. of Skype meetings per month	5,446	4,627
Energy consumption[1] at the location in Innovationstraße, Vienna, in kWh	6,258,770	6,346,070
Total consumption in kWh in % of total operating performance	2.7%	3.0%

[1] Electricity and gas

A Group-wide CSR and sustainability concept is being drawn up in 2020. It focuses specifically on environmental matters.

Group Management Report 2019

as at 31 December 2019

Economic environment

The areas in which the Frequentis Group operates (information and communication systems for civil and military air traffic control, emergency services, rail, and water transport) have relatively low cyclical exposure compared with other sectors of industry. Frequents' business performance would be adversely affected by a significant global decline in one of these five areas.

The International Monetary Fund (IMF) published its World Economic Outlook Update in January 2020. Consequently, the forecasts for 2020 set out below do not include the impact of the coronavirus epidemic. The IMF's present baseline scenario, which includes the effects of coronavirus, assumes a lower growth rate for the global economy and China, as explained in the IMF's press release of 22 February 2020.

The World Economic Outlook Update of January 2020 assumes that the global economy grew by 2.9% in 2019 and projects a slight improvement to 3.3% in 2020 (3.2% using the assumptions of the above baseline scenario). It considers that consumer spending and capital expenditures by businesses are still resilient. However, downside risks remain prominent, including increasing geopolitical tensions and the impact of coronavirus.

For the USA, the report assumes growth of 2.3% in 2019 and 2.0% in 2020. The growth trend in the euro zone is weaker than in the USA, with the IMF anticipating growth of 1.2% in 2019 and 1.3% in 2020. Looking at the major euro-zone economies, the highest growth rates are forecast for Spain, with projected growth of 2.0% in 2019 (2020: 1.6%), followed by France with a growth rate of 1.3% (2020: 1.3%), Germany with growth of 0.5% (2020: 1.1%), and Italy with growth coming in at 0.2% (2020: 0.5%). The forecast for the UK is slightly above the level for the euro zone, with projected growth rates of 1.3% for 2019 and 1.4% for 2020.

For the emerging and developing economies in Asia, the forecast growth rates are 5.6% for 2019 and 5.8% for 2020. The projected growth forecast for China is above-average at 6.1% for 2019 (2020: 6.0%; 5.6% assuming the IMF's baseline scenario as outlined above), while the projection for India is 4.8% for 2019 (2020: 5.8%).

The IMF assumes growth of 0.1% in Latin America in 2019 (2020: 1.6%). The projection for Brazil in 2019 is 1.2% (2002: 2.2%), while for Mexico it is 0.0% (2020: 1.0%).

The growth projection for Middle East and Central Asia for 2019 is 0.8% (2020: 2.8%).

Business performance

The Frequentis Group continued its sustained growth trajectory in 2019. The IPO was a major event in the ongoing development of the company. Since 14 May 2019, shares in Frequentis AG have been listed on the prime market at the Vienna Stock Exchange and in the general Standard on the Frankfurt Stock Exchange, with the ticker symbol FQT, ISIN: ATFREQUENT09.

Order intake

Order intake in the Frequentis Group increased by 9.0% or EUR 27.4 million, from EUR 306.3 million in 2018 to EUR 333.7 million in 2019. As in previous years, customers mainly placed orders with Frequentis in the second half of the year. In 2019, the ratio of orders placed in the second half of the year versus the first half was 60%:40%.

The distribution of order intake between the two segments in 2019 was as follows: Air Traffic Management 67% (2018: 64%), Public Safety & Transport 33% (2018: 36%).

The regional breakdown of order intake in 2019 was as follows: the European home market remained the dominant market, accounting for 64% of order intake (2018: 55%), ahead of the Americas, which accounted for 19% (2018: 17%) and Asia, with a share of 12% (2018: 11%). They were followed by Australia/Pacific with 4% (2018: 16%) and Africa with < 2% (2018: < 1%).

Highlights of order intake in the Air Traffic Management segment

Frequentis' leading position in the market for digital (remote) towers is underscored by numerous orders from around the world: Airways New Zealand (the air navigation service provider for New Zealand) ordered a second digital tower, and two systems were sold to Argentina and Brazil.

The Austrian air navigation service provider Austro Control placed an order for the latest generation voice communication system, another milestone in the decades-long collaboration with this organisation.

An order of strategic significance has been received from the Norwegian air navigation service provider for the delivery of a nationwide system for the management of unmanned aircraft (drones).

Installed base business in the Defence business domain is developing positively, with orders received from the Czech Republic and Slovakia for extensive modernisation of their air defence systems. Special mention should be made of an order from the US Navy for a voice and data communication system as part of a program for unmanned aircraft for in-flight refuelling of planes.

Highlights of order intake in the Public Safety & Transport segment

In the Public Safety business domain, Frequentis was able to beat strong competition for orders from the Metropolitan Police in London (modernisation of communications infrastructure) and the Scottish police force. Further orders from the police organisations in North Rhine-Westphalia and the Rhineland Palatinate for the ongoing development of their communications systems using the 3020 LifeX™ multimedia platform as a software solution for safety-critical control centres provide further evidence of Frequentis' strong position.

In the Public Transport business domain, a broad range of orders was secured from the installed base in Europe and overseas. These included both roll-out orders and orders for releases and upgrades.

In the Maritime business domain, Frequentis' good position is highlighted by orders from Greenland and Greece for the Global Maritime Distress and Safety System (GMDSS).

Orders on hand

Orders on hand as at 31 December 2019 amounted to EUR 391.5 million, an increase of 10.2% from the level of EUR 355.2 million as at 31 December 2018. At year-end 2019, the Air Traffic Management segment accounted for 60% of total orders on hand (year-end 2018: 61%) and the Public Safety & Transport segment for 40% (2018: 39%).

Revenues and operating performance

Revenues rose by 6.3% to EUR 303.6 million in 2019, with both segments reporting growth. Public Safety & Transport grew revenues by 11.2% to EUR 92.4 million, faster than the Air Traffic Management segment, where revenues increased by 4.3% to EUR 211.2 million.

In 2019, the Air Traffic Management segment accounted for 70% of Group revenues (2018: 71%) and the Public Safety & Transport segment accounted for 30% (2018: 29%). Looking at the regional revenue split in 2019, Europe accounted for 61% (2018: 60%), the Americas for 19% (18%), Asia for 13% (12%) , Australia/Pacific for 6% (7%), Africa for 1% (2%), and <1% (<2%) of revenues were not allocated to a region.

The operating performance increased by 5.6% to EUR 310.3 million, which was slower than revenue growth. In particular, other operating income was lower than in the previous year.

Profit

The cost of materials and purchased services increased by 6.2% to EUR 81.6 million (2018: EUR 76.8 million), so the rate of increase was below that of revenues. By contrast, personnel expenses increased by 8.3% to EUR 154.8 million (2018: EUR 142.9 million), driven principally by wage and salary increases, the higher average headcount and the rise in provisions for bonuses and variable salary components.

The other operating expenses decreased by EUR 8.9 million to EUR 43.7 million in 2019 (2018: EUR 52.5 million), mainly because lease expenses totalling EUR 7.5 million were shifted to depreciation and amortisation and financial expenses as a result of initial application of IFRS 16 (↗ *Consolidated financial statements, note 41*). The IPO expenses were incurred in both 2019 and 2018, but a fair amount of the expenses was recognised in equity, so no further significant amount for the IPO was included in other operating expenses in 2019.

EBITDA (earnings before interest, taxes, depreciation and amortisation) improved from EUR 21.6 million in 2018 to EUR 30.2 million in 2019 (+EUR 8.6 million). EUR 7.1 million of this increase was due to the shift in lease expense outlined above. The EBITDA margin (relative to revenues) was 9.9%, compared with 7.6% in the previous year.

Depreciation and amortisation increased by EUR 7.0 million to EUR 13.0 million. The increase resulted from the change in accounting prescribed by IFRS 16 was EUR 7.1 million, while current depreciation and amortisation decreased by EUR 0.1 million.

EBIT rose 10.3% or EUR 1.6 million to EUR 17.2 million (2018: EUR 15.6 million). The EBIT margin (relative to revenues) improved to 5.7% in 2019 (2018: 5.5%), partly due to high-margin projects.

Financial results fell to -EUR 0.4 million (2018: +EUR 0.1 million). This was mainly attributable to the shift in some lease expenses to interest expense as outlined above. Earnings of investments accounted for at equity were EUR 0.1 million in 2019 (2018: EUR 0.2 million).

Profit before tax improved 6.7% to EUR 17.0 million in 2019 (2018: EUR 15.9 million). Income tax expense rose 9.3% to EUR 4.5 million (2018: EUR 4.1 million) and the consolidated profit improved to EUR 12.5 million, up from EUR 11.8 million in 2018. Basic and diluted earnings per share were EUR 0.93 in 2019 (2018: EUR 0.94).

Asset and capital structure

At year-end 2019, total assets were 37.5% higher at EUR 272.1 million (year-end 2018: EUR 198.0 million), principally as a result of the initial application of IFRS 16 (↗ *Consolidated financial statements, note 41*).

Non-current assets amounted to EUR 71.5 million as at 31 December 2019 (year-end 2018: EUR 28.8 million). The main items here were property, plant and equipment, which totalled EUR 48.2 million (year-end 2018: EUR 9.1 million) and intangible assets, which totalled EUR 7.6 million (year-end 2018: EUR 6.5 million). The increase in property, plant and equipment was mainly due to the initial application of IFRS 16. Current assets amounted to EUR 200.6 million (year-end 2018: EUR 169.2 million). The principal items here are cash and cash equivalents and time deposits, which together came to EUR 74.9 million (year-end 2018: EUR 55.5 million), trade accounts receivable of EUR 58.5 million (year-end 2018: EUR 44.4 million), and contract assets from contracts with customers of EUR 38.4 million (year-end 2018: EUR 40.9 million).

On the liabilities side, shareholders' equity was the biggest item, amounting to EUR 116.2 million at year-end 2019 (year-end 2018: EUR 85.6 million). The increase in shareholders' equity was mainly attributable to the inflow of funds from the IPO in May 2019. The equity ratio was 42.7% at year-end 2019 (year-end 2018: 43.3%).

Non-current liabilities totalled EUR 58.9 million at year-end 2019 (year-end 2018: EUR 28.1 million). The largest item here was non-current lease liabilities, a new item introduced by IFRS 16 which totalled EUR 32.8 million and was mainly responsible for the increase in non-current lease liabilities.

Current liabilities were EUR 97.1 million (year-end 2018: EUR 84.2 million), with the increase mainly coming from the new item current lease liabilities introduced in 2019 as a result of IFRS 16. At year-end 2019, this item contained discounted rental payments of EUR 7.3 million (mainly for offices) for 1 year, i.e. for 2020.

The largest items within current liabilities were contract liabilities from contracts with customers totalling EUR 48.7 million (year-end 2018: EUR 48.6 million), trade accounts payable of EUR 13.5 million (year-end 2018: EUR 13.8 million), provisions of EUR 13.5 million (year-end 2018: EUR 9.9 million), and other current liabilities of EUR 11.2 million (year-end 2018: EUR 8.8 million).

Net cash (time deposits and cash and cash equivalents less liabilities to banks and other financial liabilities) was EUR 77.8 million as at 31 December 2019 (2018: EUR 55.4 million). At year-end 2019, net cash contained advances from customers of EUR 30.5 million (year-end 2018: EUR 27.8 million). The increase in the net cash position was mainly due to the increase in cash and cash equivalents resulting from the proceeds of the IPO. At year-end 2019, cash and cash equivalents were EUR 66.9 million, compared with EUR 45.5 million at year-end 2018.

Cash flow

The cash flow from operations improved from EUR 16.2 million in 2018 to EUR 34.2 million in 2019. This was attributable to higher depreciation (mainly due to the initial application of IFRS 16), the change in provisions, and the improvement in profit before tax.

The cash flow from operating activities increased from EUR 4.6 million in 2018 to EUR 17.7 million in 2019. The improvement was due to the improvement in the cash flow from operations and the positive change in contract assets and other liabilities. On the other hand, the changes in contract liabilities and trade accounts receivable had a negative effect.

The cash outflow for investing activities was EUR 4.6 million in 2019, compared with an outflow of EUR 4.4 million in 2018. Capital expenditure was EUR 4.5 million in 2019, which was below the 2018 level of EUR 4.8

The cash flow from financing activities improved to EUR 8.0 million in 2019, mainly due to the inflow of funds from the IPO (EUR 21.6 million), compared with an outflow of EUR 14.2 million in 2018. IFRS 16 resulted in reclassification of cash outflows for the payment of lease liabilities (2019: EUR 7.2 million), which were contained in the cash flow from operating activities in 2018 as they were a component of profit before tax.

This overall cash flow in the reporting period was therefore positive at EUR 21.2 million (2018: outflow of EUR 14.1 million). Cash and cash equivalents were EUR 66.9 million as at 31 December 2019 (31 December 2018: EUR 45.5 million). It should be noted that as at 31 December 2019, time deposits (short and long-term deposits at banks) of EUR 18.0 million were not included in cash and cash equivalents.

Employees

The headcount increased by 4.9% to an average of 1,849 employees in 2019 (average in 2018: 1,763 employees).

Business relations with related parties

Information on business relations with related parties can be found in the notes to the consolidated financial statements.

Segment performance

Air Traffic Management / ATM

The Air Traffic Management (ATM) segment comprises the ATM Civil business domain (which includes AIM / Aeronautical Information Management) and the ATM Defence business domain. This segment focuses on civil and military air traffic control organisations and therefore generally on one to two customers per country. It is estimated that the market entry barriers are relatively high.

The business domains' products are similar and are based on the same product platform. In the Defence business domain, there is also demand for additional encryption solutions. The safety and quality management requirements are the same: the international regulations for standardisation of air traffic issued by the International Civil Aviation Organization (ICAO) apply. Moreover, the infrastructure to be installed for customers (radar, radio transmission, networks) is similar.

Revenues in the Air Traffic Management segment increased by 4.3% to EUR 211.2 million in 2019 (2018: EUR 202.5 million). EBIT was EUR 10.4 million (2018: EUR 11.8 million) and the EBIT margin (relative to revenues) dropped to 4.9% in 2019 (2018: 5.9%).

Highlights from the operating business

As the leading provider of voice and data communication systems for civil air traffic control, Frequentis implemented a state-of-the-art voice communication system, an emergency system, and a network solution with full IP integration for the new mega-airport in Beijing. The network comprises the two towers at the new airport, the new and existing systems to control and monitor landing and take-off, and connection to the air traffic control centre in Beijing.

The modernisation programme for the Dutch air navigation service provider LVNL was completed. Frequentis equipped two towers at Amsterdam Schiphol airport with smartSTRIPS. Digitalising the paper strips formerly used increases automation, enhances efficiency, and improves air traffic controllers' workflows. In the field of aeronautical information management, a project with Jeppesen was completed. Delivery of a new release for the European Aeronautical Information Systems Database (EAD) makes Frequentis the market leader in these complex, large-scale systems.

In the UK, Jersey Airport became the first British airport to receive approval for operational deployment of a digital (remote) tower based on Frequentis technology.

In Malta, a message handling system was implemented as a uniform switch for the handling of aeronautical data and messages.

In Finland, a wide area multilateration system (aircraft surveillance system as a substitute for radar) was taken into service.

Within the framework of the Defence business domain's long-term collaboration with armasuisse and the Swiss air force on the "VCS Airbase" project to replace the voice communications infrastructure at seven military airbases, systems were successfully brought into service at the first two airbases.

Two assignments of strategic importance are Frequentis' involvement in the AIRlabs Austria innovation lab research project and the successful conclusion of the first drone demonstration in the Gulf of Finland (SESAR GOF U-space project), a research project geared to the safe integration and environmentally friendly operation of drones in ground-level airspace.

Public Safety & Transport / PST

The Public Safety and Transport segment comprises the Public Safety, Public Transport, and Maritime business domains. Its customers are public authorities or related organisations with monitoring and control functions.

The Public Safety business domain's customers are the police, fire and rescue services. Police organisations also require additional encryption solutions. Alongside conventional rail operators, the Public Transport business domain's customers include local public transport providers. The Maritime business domain focuses on coastguards and port operators.

The business domains' products are similar and are based on the same product platform. Moreover, the infrastructure to be installed for customers (phones, radio transmission, networks) is similar. Despite several international standardisation efforts, different national and regional requirements and regulations still apply.

Revenues in the Public Safety & Transport segment increased by 11.2% to EUR 92.4 million in 2019 (2018: EUR 83.1 million). EBIT was EUR 7.0 million (2018: EUR 3.4 million) and the EBIT margin (relative to revenues) rose to 7.5% in 2019 (2018: 4.1%).

Highlights from the operating business

The following projects are examples of the positive development of this segment. In the Public Safety business domain, the success of the 3020 LifeX™ multimedia communication platform continued. For example, the system was taken into service by the Liechtenstein national police force. The collaboration with Nødnett on the Norwegian public safety network is continuing to develop positively. Several control centres in Germany have been equipped with Frequentis' ASGARD product line, which is specifically designed for fire service command centres and industrial control rooms.

Public Transport is implementing the Unified Railway Communication and Application (URCA) System for the Finish transport infrastructure authority. Here, Frequentis is providing a cost-saving and efficient communication solution. Its innovative nature has been highlighted by the presentation of the International Critical Communications Award (ICCA) for the technical process, which also granted a European patent in June 2019.

In the Maritime business domain, an important acceptance milestone was achieved in the delivery of a maritime communication system to South Korea. The Global Maritime Distress and Safety System (GMDSS) is used in 18 countries around the world. The rollout of this system for the Norwegian coastal radio operator, with which Frequentis has worked together successfully for more than 20 years, is proceeding on schedule.

Research & development

Rising cost pressure and continual changes in the operating environment are currently the greatest challenges for customers operating safety-critical services. Users need more flexible systems and software solutions to ensure they continue to meet the demanding safety requirements and can adapt operating resources and operational locations easily to meet current needs. Therefore, flexible means of communication and integrated control room solutions are required. The migration of data and voice communication to joint IP networks creates the technical preconditions for greater flexibility. At the same time, cybersecurity is becoming more and more important as a result of increased networking.

As a recognised innovation leader in the markets it addresses, Frequentis responds to this by providing IP-based systems. In the next phase, the networks will become the centre of communications solutions. Traditional voice communication systems are being extended by networked voice and data communication systems. Close interaction with customers, with most of whom Frequentis has worked in partnership for many years or even decades, allows early identification and a timely response to technological developments.

Future aspects such as examining artificial intelligence or blockchain technology for possible use in safety-critical applications are driven forward centrally by the Corporate Research department. Frequentis' involvement in a range of national and EU-funded projects is also focused on such issues in the safety-critical environment. Wherever possible, Frequentis' innovations are patent-protected.

Non-financial information

Frequentis AG publishes a separate consolidated non-financial report, which meets the statutory requirements of Section 267a Austrian Commercial Code (UGB).

Consolidated corporate governance report

The consolidated corporate governance report is available at www.frequentis.com/en/ir > Investor Relations > Corporate Governance.

Opportunity and risk management

Frequentis has implemented an active risk management system throughout the Group. The fundamental aim is to identify opportunities and risks as soon as possible and take suitable measures to maintain profitability and secure the continued existence of the Group. Risk awareness, the vigilance of all staff, and early identification of business and natural risks are well developed and are incorporated in a solid risk policy.

Variable capacity utilisation scenarios are a central risk factor, which the company addresses through extensive scenario management. This allows timely recognition and Group-wide counteraction, even in business situations that develop in an unforeseen manner.

Project management as an operational mainstay

Risk management is therefore essential in projects, which form Frequentis' core business and are the mainstay of its operations. As part of effective and professional project management, an in-depth risk analysis examines the entire project life cycle. Risks are identified, tracked, mitigated, and eliminated to ensure clear management of risks and results.

The entire project portfolio is managed by a project management board that meets periodically. This board reviews projects and allocates them to the relevant business types. It also drives forward the continuous improvement of project management excellence, project methods, and project management processes.

In addition, projects are evaluated several times a year by an extended management circle. All key projects are presented, risk assessments and deviations are discussed, and the action to be taken is agreed. Performance of the projects, invoicing, and receipt of payments are monitored continuously. These project evaluations are supplemented by periodic status meetings in the individual business units, which monitor operating performance and marginal income with a view to the Group's profit.

Group-wide risk management

Risk and opportunity management is an important precondition for business activity. The Frequentis Group therefore regularly undertakes an extensive evaluation of all relevant risks and opportunities. These are compiled in a Group-wide risk report, which is discussed by an extended management circle. As well as exploiting opportunities, Frequentis enters into risks with a view to enhancing the value of the company. To ensure early identification and proactive management of risks, the Frequentis Group has a Group-wide risk management system, an extensive internal control (ICS) system and an internal audit department.

Essentially, Frequentis systematically evaluates and summarises the strategy, the prevailing competitive landscape, the political situation in the countries with the greatest project exposure, the organisation ensuring professional project execution, and liquidity management. The resulting measures to utilise opportunities and reduce any risks identified are discussed by an extended management circle and the appropriate action is decided on. The Vice President Group Controlling is responsible for this process.

Risks relating to the (macro)economic and political environment

Frequentis' success depends on the political and economic environment

Its ability to secure contracts and their content, amount, and size depends, among other things, on the volume of air, ship and rail traffic, the relative importance attributed to safety awareness by the public, and the funds available for the procurement of control centre solutions, systems and products, as well as for maintenance, enhancements, and upgrading of existing solutions, systems, and products.

Frequentis could be adversely affected by the (mis)utilisation or unavailability of bank guarantees
Frequentis regularly provides bank guarantees (bid bonds, down payment bonds, performance bonds, warranty bonds) to customers as surety for their contractual claims. Justified claims on guarantees with high caps and/or long/undetermined maturities or illegitimate utilisation of such bank guarantee could cause liquidity or other problems. Similarly, it did and could happen for tender invitations for goods and services to be delivered to customers in countries where Frequentis' domestic relationship banks do not have regular business connections, it is difficult to identify appropriate banks for the issuance of letters of credit in time or at all. If no corresponding bank could be found, Frequentis would not be able to take part in the tender process. Frequentis has provided numerous comfort letters on behalf of its subsidiaries. This means that the company assumes the risk of contract performance by many of its subsidiaries.

Exercise of political influence and protectionism could adversely affect Frequentis
Public and semi-public organisations dominate Frequentis' customer structure. Such customers may, for various reasons, prefer suppliers from certain countries over Frequentis.

The coronavirus epidemic could have a negative impact on the economic development of the markets in which Frequentis operates and adversely affect the company's business performance
Among other things, as has been seen in connection with the coronavirus epidemic, restrictions on freedom to travel, immigration bans, quarantine requirements, reductions in flight schedules and the associated reduction in the number of flights, and restrictions on the production of goods and services could have a detrimental effect on the development of the markets served by Frequentis. The measures listed could result, for example, in delays in the acceptance of products on site or in local acceptance by customers or make such acceptance impossible for an indefinite period. There could also be logistics and supply problems, resulting in supply chain bottlenecks. Customers' investment budgets could be cut back, and customers could be less willing to take decisions as a result of the uncertainty. The extent and duration of the impact of coronavirus on the global economy and, in particular, the markets served by Frequentis are unclear at present.

Risks relating to Frequentis' industry and business

Frequentis could be adversely affected by unpredictabilities, which are characteristic of the tender project business and by seasonal and annual fluctuations in the order situation
An important part of the Frequentis Group's business is acquiring orders (often through lengthy tender processes) to provide products and services. Competition is intense, and the tender procedure is typically protracted and extensive and necessitates considerable personnel and financial resources. Projects by public and semi-public organisations depend on regulatory decisions, budget considerations, and internal approval and release procedures. If Frequentis does not succeed in winning the tender process, all funds and resources allocated to such projects are frustrated. Delays in the tender process and during project execution may have detrimental impacts on the Group's order intake and operating performance, which impact can be the more significant the larger a project is.

The order intake, operational performance and earnings of the Frequentis Group are typically subject to considerable seasonal fluctuations. Usually, the Group generates most of its order intakes, earnings and operating performance in the fourth quarter of any given financial year and its financial results in the first half of a business year are usually negative. Moreover, in most cases, payment depends on the achievement of milestones and the successful finalisation of such projects.

Uncertain, delayed, or deferred future orders could adversely affect the Group
The success of Frequentis Group depends on its ability to obtain new customer orders and secure new projects. It is difficult to predict if and when a project, for which Frequentis Group entered a tender, will be awarded.

The Group could be adversely affected by non-negotiable contract terms in public tender projects and, in particular, by unlimited liability clauses in its contracts
Public tenders and other contracts sometimes contain unfavourable and disadvantageous contract terms (such as substantial penalties or change of control clauses as well as foreign jurisdiction clauses) that are not individually negotiable and have to be accepted in order to successfully secure the contract. Among others, Frequentis could be forced to accept unlimited liability for its products and services.

Frequentis could be adversely affected by fluctuations in earnings due to the impact of major contracts
Frequentis' revenues in any period may fluctuate significantly due to the specific payment dates for major projects. Such contracts cause a significant revenue contribution in one year, compared to other years, in which no such major contracts were obtained.

Cyberattacks could pose a substantial risk to Frequentis' business
Given that Frequentis and its business are heavily dependent on IT security, cyberattacks could pose a substantial risk to Frequentis' business, in particular because the technical solutions offered by Frequentis perform safety-critical tasks. If a customer's infrastructure is affected by a cyberattack, and if the vulnerability of the infrastructure is caused by or attributed to a product of the Frequentis Group, this could cause claims for damages, loss of customers, and negatively affect the perception of the reliability of the products of the Frequentis Group, which could have an adverse effect on the business, financial condition, and results of operations of the Frequentis Group.

The Group could be adversely affected by changes in technological standards; the development of products could fail or take more time than permitted by the technological progress; development costs for products with insufficient demand could lead to stranded investments; the implementation of change programmes could fail or require more time and cost
High technological standards in the market in which Frequentis is operating require a continuous development of the offered products. Fundamental changes in technology might occur without the involvement of Frequentis and Frequentis could fail to accommodate such technological development. If Frequentis fails to successfully implement new technological standards in its products and services in time, it might not correspond to the market needs and be accepted and purchased by existing and prospective customers. If any of these risks materialise, this could have an adverse effect on the business, financial condition, and result of operations of the Frequentis Group.

The Group could be adversely affected by technological malfunctions and product failures
The products, systems, and equipment are based on different hardware and software components that are of high technological complexity which might not function and work together flawlessly, leading to malfunctions. Furthermore, products may be affected by design failures, software bugs, hardware failures, or similar deficiencies that could lead to a non-functioning or to malfunctions of the products.

Progressive customer concentration can adversely affect Frequentis
A trend towards amalgamations within the public sector and privatisations of public organisations in some of Frequentis Group's business areas can lead to delays of investment and procurement decisions or a smaller number of customers each with greater market and bargaining power. If few or only one potential customer per country is available, the Frequentis Group's dependency on such customer increases.

Cost overruns could adversely affect the Group
Changes in costs and productivity in projects based on fixed price-contracts might influence the financial result of the relevant project. Expenses necessary to complete projects (in particular, if a project involves significant R&D or engineering work) could be underestimated. This may render certain projects to be unprofitable or even loss-making.

A loss of existing customers could adversely affect Frequentis

Installed base business is the provision of services, of updates, upgrades, or enhancements related to products and systems delivered to and operated by existing customers of the Frequentis Group. The Frequentis Group believes that it has a competitive advantage in such follow-up projects in relation to competitors who are not familiar with the Group's products already operated by such customers. Since customers often rely on the Group's products and services for a longer period of time, installed base business sales offer a relatively stable source of income for the Group. A loss of existing customers therefore has a far-reaching effect.

Embargoes and other trade restrictions could adversely affect the business of the Group

Since Frequentis operates in the development, production, and engineering of safety-critical communication and information solutions, inter alia, for the defence and public safety market, certain products and services provided to customers around the world may be or become exposed to the risk of current or future embargoes, blacklisting, and other trade restrictions.

Frequentis could be adversely affected if it fails to defend its current market position against competitors

Frequentis is active in highly competitive markets where a few large international companies compete against a number of smaller businesses. Some of Frequentis' Group's competitors have a higher market capitalisation and greater financial power, being in a better position to adapt to changes in the market, finance in new technologies, and bypass financial bottlenecks.

Frequentis may not be able to generate enough cash flow from business operations to finance the Group's consistent high liquidity and net working capital requirements

Frequentis' cash flow may be affected by capital tied up in inventory (need to keep sufficient amounts of raw materials and component parts to ensure lifetime support) and by the interval between receipt of orders and receipt of payments on those orders from customers. The length of these intervals is driven by total development and production time, delivery times, and the time it takes to receive payment from the customer. Likewise, payments for products and services provided by subcontractors and the receipt of payment by the customer can cause delays.

The loss of key personnel and the failure to attract, develop, or retain skilled or qualified employees can adversely affect Frequentis; new key personnel and employees might not have sufficient experience and could lead to a decline of Frequentis' know how

The success of Frequentis also depends on the capabilities, experience, market knowledge, technical knowledge and performance of its management, experts in various positions, and employees. Competition for skilled employees in the business in which Frequentis operates is huge. New employees or management resources might not have sufficient or appropriate experience, skills and know-how as are required for Frequentis' business operations, products, and projects.

Frequentis could be adversely affected by a fluctuation of raw material prices and increasing labour costs

The costs of raw materials and components depend on the world market prices for electronic equipment, some of which have significantly fluctuated in recent years and which may be subject to significant increases in the future. Similarly, labour costs may increase over time, e.g. because of inflation adjustments or because of increased wage levels due to the intense competition for qualified personnel.

Frequentis could be adversely affected by increased cost pressure caused, for example, by competitors in low wage countries

Some of Frequentis' competitors may have a lower cost base and may be able to offer their products and services at more attractive prices. Frequentis may, in such a situation, not be able to lower its cost base.

Frequentis could be adversely affected by long-term commitments
For certain of its projects, Frequentis Group is obliged to replace system parts or to deliver spare parts for up to 15 years or longer and needs to keep available the corresponding products and knowhow; such undertakings could lead to unforeseen increased storing costs which bind Frequentis Group's funds or could cause complications if necessary suppliers fail to deliver such components in the required quantity and quality or discontinue the supply of such components at all. In this situation it could be expensive or even impossible for Frequentis to obtain such components from other suppliers or to produce them itself.

Non-performance of payment obligations by its customers could adversely affect Frequentis
In case of non-performance of payment obligations by a customer, particularly in major projects, Frequentis Group bears a significant credit risk. Payment delays by public or semi-public entities could also be caused by a delay in budget negotiations or by political uncertainties.

Frequentis could be adversely affected by a loss of suppliers or interruptions or shortages in supply of the Group's services, software programs, component parts, sub-assemblies, or modules
A delay in the delivery of services or supplies by Frequentis' suppliers could result in delays in projects or the delivery of products, which could ultimately lead to withdrawn orders, cancelled projects, penalty claims, liquidated damages and the like, and could result in reduced output and lower sales. If Frequentis were permanently to lose a supplier of important components or services, such as hardware or software development services, it might be forced to alter the design of its products in order to use different services and it could be at least temporarily unable to proceed with a certain project or products.

If Frequentis fails to meet quantitative requirements, its know-how might not be sufficient to win new customers or retain existing customers
Customers' tenders often have quantitative requirements for their projects, e.g. references from previous customers and projects, a minimum annual turnover and / or revenue, or quantitative requirements relating to the Group's employees, e.g. a minimum number of system experts located in the customer's country.

Frequentis could be adversely affected by fluctuations of currency exchange rates and rising interest rates
Frequentis has offices, subsidiaries, suppliers, and customers in many countries outside the eurozone. A considerable part of the revenues and costs related to individual projects is settled in other currencies than the euro, while most of the Frequentis Group's cost base is in euros. Furthermore, currency fluctuations cannot be hedged between the time when the Group places an offer for a specific project and the time when the order is actually placed (usually a period over a period of up to twelve months), because there is no certainty that it will be awarded the contract. Similarly, rising interest rates lead to increased financing costs including the costs of bank guarantees.

Frequentis could be adversely affected by growth through acquisitions
Acquisitions are associated with a general entrepreneurial risk. Frequentis might not be able to identify and purchase suitable acquisition targets and it might not have sufficient funds for a potential acquisition. Successful integration of the acquired business might be difficult or impossible, the anticipated goals and synergies might be unachievable, and Frequentis Group could face new risks not evaluated in advance.

Frequentis could be adversely affected by not successfully dealing with the challenges of (organic) growth and Frequentis' organisational units may have excess capacities or capacity shortages
Frequentis' ability to achieve and to deal with further (organic) growth will depend, among others, on further improving its products, developing new products and services, controlling costs, maintaining effective quality assurance systems, marketing present and future products and services, securing an appropriate level of expert resources and adapting the internal management, technology and finance systems and processes to the expected growth. Depending on the development of market and customer segments, Frequentis may have excess capacities or capacity shortages.

Regulatory, legal and tax risks

Legal risks relating to public tender contracts
An important aspect of Frequentis' business is the delivery of products and rendering of services that are subject to public tender procedures and therefore bear several specific risks. It should be noted that, in particular, (i) competition is typically very intense in tender procedures, (ii) such procedures require considerable personnel and financial resources over a considerable period of time, (iii) public tenders sometimes contain significantly disadvantageous contract terms that are often not individually negotiable, (iv) public and semi-public organisations (which dominate Frequentis' customer structure) may prefer suppliers from certain other countries over Frequentis for reasons of protectionism or political influence, and (v) a tender awarded to Frequentis may be challenged by unsuccessful competitors.

Frequentis could be adversely affected by any failure to successfully protect its technology and proprietary know-how or to defend its intellectual property
The protection of the Frequentis Group's intellectual property by way of patent and trademark registrations, non-disclosure agreements etc. might be insufficient; possible industrial espionage against the Frequentis Group and the unauthorised disclosure or misappropriation of trade secrets cannot be ruled out. The laws of certain countries do not protect intellectual property rights to the same extent as the laws of Austria. The maintenance of patent protection is cost-prohibitive.

Minimum domestic content requirements could adversely affect the Group
Some countries, e.g. the U.S. (Buy American Act) and Australia (Australian Industry Involvement Program) prescribe minimum domestic content by statute. In such situations, Frequentis must purchase local content from local suppliers, or must make acquisitions or direct investments in the relevant market, regardless of the cost level and the capacity situation within the Frequentis Group and any underemployed capacity resulting from that.

Frequentis could be adversely affected by faulty performance under its contracts (also if acting as subcontractor), which can include complete non-fulfilment, less fulfilment, or bad fulfilment in terms of quality, time, or budget
Frequentis Group is often required to contractually agree in its contracts to specific performance and time clauses (deadlines), also if acting as subcontractor; default under these clauses could lead to substantial penalty payments, purchase / service price reductions, the liability to effect changes in the supplied services, the assertion of consequential damage, and/or contract termination. Additionally, to these risks, acting as a subcontractor includes the risk of a payment default due to a bad financial situation of the main contractor, which may lead to losses for the Group.

The Group could be adversely affected by a faulty performance by its subcontractors
In an increasing number of situations, if the Frequentis Group assumes the position of the main contractor and/or system integrator, it also assumes responsibility for third party suppliers, which involves additional risks: If a subcontractor provides certain components which have to be integrated by the prime contractor into a complete solution, the latter faces technological and financial integration risks. It might not be possible to conclude the subcontract on terms and conditions materially equivalent to those contained in the main contract with the customer. If a subcontractor does not meet its contractual performance obligations, the Frequentis Group might face damage or penalty claims (which might not be recoverable from the defaulting or not performing subcontractor) or be compelled to re-assign the outstanding performance to a third party or to provide the remaining performance itself.

Damage to assets of customers during on-site works
Employees of the Frequentis Group or of a subcontractor of the Frequentis Group working at the facilities of a customer might cause damage to the assets of the customer, which could lead to claims for damages and have an adverse effect on the business, financial condition, and results of operations of Frequentis Group.

Compliance-related risks

Frequentis' management is not currently aware of material non-compliance of a Frequentis Group entity with applicable laws. However, given the constantly increasing complexity of the legal framework and the global activities of the Frequentis Group (i.e. in a multitude of jurisdictions), it cannot be excluded that a Frequentis Group entity, or a third party acting on behalf of, or otherwise attributable to, the Frequentis Group may be in breach of or non-compliance with certain laws, regulations, or governmental orders. Furthermore, many of the jurisdictions in which the Frequentis Group does business, including the United States, United Kingdom, Germany, and other member states of the European Union, issue regulations requiring that the Frequentis Group refrains from doing business, or allowing its clients to do business through the Frequentis Group, in certain countries or with certain organisations or individuals on a prohibited list maintained by such governments. The Frequentis Group may also be held liable for the actions taken by its local, strategic, or joint venture partners outside of Europe.

The Group's business activity could be adversely affected by changes in the legal and political framework or in the application or interpretation of laws, especially in regulatory, commercial, financial and tax law

Frequentis is active in numerous international markets. Typical risks involved include different economic situations and circumstances, many different jurisdictions and legal/tax systems, differing statutory regulations, currency fluctuations, achieving import/export licenses, customs, the worldwide transport of products, systems and equipment, and the necessary work on site. In addition, enforceability, stability, and reliability of the legal systems in the local jurisdictions may differ from country to country.

Internal control system (ICS) for the accounting process

Corporate Accounting comprises those activities that are necessary to prepare annual financial statements and consolidated financial statements in compliance with the law and IFRS.

Structure of Accounting
The accounting function in the Frequentis Group comprises the accounting departments at local companies and the Corporate Accounting department in Vienna. Book-keeping for several major subsidiaries is carried out directly at the Group's headquarters in Vienna. The local companies draw up financial statements in accordance with local law and then prepare financial statements in accordance with the IFRS. Both sets of financial statements are submitted to Corporate Accounting in Vienna.

Book-keeping for most companies, especially the large companies, is performed using a uniform SAP system. For some local companies, which use other ERP systems, Corporate Accounting in Vienna uploads the accounts to the SAP system. Consolidation is performed by Corporate Accounting.

Consolidation
The IFRS financial statements are drawn up in accordance with the IFRS accounting and valuation policies. The staff responsible for local accounting take the IFRS into account. Every year, they receive any necessary information on Group-wide reporting requirements before the annual financial statements are prepared. Local financial reporting data are checked manually by Corporate Accounting (mainly plausibility checks) and also undergo automatic, tool-based checking routines. During this process, Accounting works closely with other departments, especially Controlling (e.g. in respect of target/actual comparisons).

The overall consolidation process includes checking the consistency of the data transmitted and plausibilisation of the financial statements as a whole.

To ensure correct and timely completion of the annual report by the publication date, deadlines are set for both the half-year and the annual financial statements. The entire accounting function is notified of these in good time. In addition to the annual report at the end of each financial year, a half-year interim report is published in accordance with IAS 34.

Controls
The entire accounting function reports to the CFO. Quarterly reports to the Executive Board and the Supervisory Board contain information on order intake, the development of revenue, the income statement, and opportunities and risks. This ensures ongoing oversight of the internal control system. Existing and potential risks are constantly monitored by several bodies. This is based on uniform risk guidelines. The management of the local companies is responsible for implementing these guidelines and ensuring they are observed.

In the Frequentis Group, the internal accounting function is a staff department reporting to the CFO. The annual audit schedule is determined by the Supervisory Board's Audit Committee on the basis of a proposal by the internal audit function. Focal areas are examining the effectiveness of the internal control system, compliance with the applicable Group-wide guidelines at individual companies, and special audits triggered by specific events. Audits are conducted locally and at headquarters. The results of audits are presented once a year to the Audit Committee.

Information pursuant to Section 243a (1) UGB[1)]

1. The share capital of Frequentis AG was EUR 13,200,000.00 as at 31 December 2019 and was divided into 13,199,999 no-par bearer shares, all of which are equal in all respects, and one registered share with restricted transferability ("share no. 1"). The holder of share no. 1 is authorised by article 5.1.2 of the articles of association to appoint one third of the members of the Supervisory Board (i.e. one third of the maximum number of shareholder representatives set out in article 5.1.1 of the articles of association).

2. Apart from the following exceptions, there are no restrictions on voting rights or the transfer of shares other than the general provisions of company law. Under article 3.3. of the articles of association, registered share no. 1 can only be transferred with company's consent (restricted transferability). In terms of voting rights, share no. 1 has the same rights as the bearer shares. There is an agreement between Frequentis Group Holding GmbH and B&C Innovation Investments GmbH ("BCII") on the election of a person nominated by BCII to the Supervisory Board of Frequentis AG.

3. As at 31 December 2019, Frequentis Group Holding GmbH had a direct stake of over 50.00% in Frequentis AG and was thus the direct majority shareholder of Frequentis AG. B&C Innovation Investments GmbH held a 10.00% stake in Frequentis AG as at 31 December 2019.

4. As at 31 December 2019, the owner of share no. 1 was Johannes Bardach; this share has the rights set out in subsection 1 above.

5. Employees who hold shares may exercise their voting rights at the General Meeting.

6. The Executive Board comprises one, two, three, or four people. The members of the Executive Board are appointed by the Supervisory Board for a maximum of five years. Reappointment is permitted.

The articles of association contain the following ruling on the appointment and dismissal of members of the Supervisory Board: The Supervisory Board comprises at least three and at most six members elected by the General Meeting or delegated by the shareholders (shareholder representatives) and a corresponding number of employee representatives delegated in accordance with Section 110 of the Austrian Labour Constitution Act (Arbeitsverfassungsgesetz).
The shareholder of registered share no. 1 is authorised to appoint one third of the members of the Supervisory Board (i.e. one third of the maximum number of shareholder representatives set out in article 5.1.1 of the articles of association).
The Supervisory Board members elected by the General Meeting shall, unless they are elected for a shorter term of office, be elected for the period until the end of the General Meeting that resolves on ratification of their actions for the fourth financial year after their election. The financial year in which they are elected is not included in this calculation. Re-election of a Supervisory Board member is permitted.
The appointment of an elected Supervisory Board member can be revoked by the General Meeting before the end of the term of office. The resolution requires a simple majority of the valid votes cast. Abstentions do not count as votes cast.
The members of the Supervisory Board delegated by shareholders are members of the Supervisory Board for an unlimited period. The parties who delegated them may revoke their appointment at any time and replace them by others. Otherwise the appointment of delegated members of the Supervisory Board may only be terminated in accordance with Section 88 (4), last sentence, of the Austrian Companies Act (AktG). A member whose appointment is terminated in this way may be replaced by the parties who delegated them.
Any member of the Supervisory Board can resign their seat subject to four weeks' notice, even without good cause, by submitting a written letter of resignation to the chairman of the Supervisory Board. The chairman's resignation shall be submitted to his deputy. Re-election of members who leave the Supervisory Board is permitted.

[1] The numbering in this section refers to the subsections in Section 243a (1) UGB.

If elected members resign from the Supervisory Board before the end of their term of office, replacements need not be elected until the next Annual General Meeting. However, a replacement must be elected without delay by an Extraordinary General Meeting if the number of shareholder representatives drops below three. Replacements are elected for the remaining term of office of the member who resigned.

The articles of association contain the following ruling on amendments to the Articles of Association: The Supervisory Board is authorised to make amendments to the articles of association that only affect the wording. Furthermore, the Supervisory Board is authorised to make amendments to the articles of association that result exclusively from the issuance of new shares out the authorised and/or conditional capital set out in article 3 of the articles of association or from other capital measures.

7. Under the resolution of the Annual General Meeting of 8 April 2019, the Executive Board is authorised, subject to the approval of the Supervisory Board, to increase the company's share capital up to 7 April 2024 by up to EUR 4,800,000 (four million eight hundred thousand) by issuing up to 4,800,000 (four million eight hundred thousand) new bearer shares in return for cash or contributions in kind, in one or more tranches, or through a direct subscription offer following acceptance by one or more banks in accordance with Section 153 (6) of the Austrian Companies Act (AktG). The Executive Board is authorised, subject to the approval of the Supervisory Board, to fully or partially exclude shareholders' subscription rights and, subject to the approval of the Supervisory Board, to define further details of the issue conditions (especially the issue price, type of contribution in kind, rights of the shares, exclusion of subscription rights, etc.) (authorised capital). The Supervisory Board is authorised to adopt amendments to the articles of association resulting from the issuance of shares out of the authorised capital.

The Executive Board was authorised by the Extraordinary General Meeting of 20 September 2019, pursuant to Section 65 (1) No. 4 and No.8, to purchase, via the stock exchange or off-market, bearer shares in the company in an amount of up to 10% of the company's share capital during a period of 30 months from the date of the resolution by the General Meeting, whereby the minimum consideration per share many not be more than 20% below and the maximum consideration per share may not be more than 10% above the average closing price on the stock exchange over the preceding ten trading days. Trading in own shares is excluded from the purpose of purchase. The authorisation may be exercised in full or in part or in several tranches and for one or more purposes by the company, by a subsidiary (Section 189a No. 7 Austrian Commercial Code, UGB) or by a third party for the account of the company or of a subsidiary (Section 189a No. 7 UGB). If the shares are purchased off-market, the purchase may also be effected under exclusion of the shareholders' general right of sale, even for certain shareholders or one individual shareholder. Furthermore, the Executive Board is authorised to reduce the share capital by cancelling shares in the company without a further resolution of the General Meeting. The Supervisory Board is authorised to adopt amendments to the articles of association resulting from the cancellation of shares. There is currently no share purchase programme and the company does not have any treasury shares.

8. Some financing agreements and customer contracts contain customary agreements on a change of control in the event of a takeover within the meaning of Section 243a (1) No. 8 UGB.

9. There are no compensation agreements within the meaning of Section 243a (1) No. 9 UGB.

Outlook

Frequentis continued to grow profitably in 2019 and the IPO was a milestone in the ongoing development of the company. At the same time, the long-term growth strategy was implemented consistently in many areas. For example, with its digital (remote) tower technology and in the area of drones, the company has successfully made new technology usable and acquired the first relevant orders.

Frequentis' expertise in integrating drones into airspace is shown, for instance, by the order from the Norwegian air navigation service provider and the company's involvement in AIRlabs Austria. Frequentis' digital (remote) tower solutions are already in regular use or currently being installed at 8 locations on 4 continents. These successes confirm our research & development strategy and Frequentis' strong role as an innovation leader.

The extension of the global sales network was also a step in this direction. In particular, the development of the US business was above average in 2019. The branch opened in Abu Dhabi in 2018 resulted in more orders from Arab countries. In the future as well, Frequentis intends to use its position as a global specialist to differentiate itself from local niche suppliers and international groups. In 2020, the company's internationalisation strategy will place a special focus on the Public Safety & Transport segment and on the Defence business domain, which is part of the Air Traffic Management segment.

The installed base remains both the guarantor of Frequentis' stability and its most important growth driver. More than 40% of revenues come from follow-on orders relating to installed systems and solutions. About half of the installed base business comprised maintenance contracts. As a rule, higher margins are earned on revenues generated from maintenance and add-on orders. The remainder of revenues is split between new products and projects with established customers, established products sold to new customers, and, to a small extent, consulting.

Frequentis will be continuing this basic long-term strategic focus in 2020. For example, the Danish air navigation service provider Naviair will be taking a multi-remote tower centre with Frequentis technology into service at Billund Airport in 2022. Norway is implementing the first unmanned traffic management system in Scandinavia in collaboration with Frequentis.

Capital expenditure (capex) of about EUR 5 million is planned for 2020. The expenses for in-house research & development activities, in other words R&D that is not based on customer orders, should be around the same level as in 2019 (EUR 22 million). To ensure applications are fit for purpose from the outset, business planning is performed for all research and development activities at an early stage.

Another milestone this year is the acquisition of a majority stake in ATRiCS, a software producer based in Freiburg, Germany, that offers airport-specific software solutions for runway taxi operations management as well as related consultancy services for airports and air traffic control organisations. In March 2020, Frequentis acquired 51% of this owner-run business, which was established in 2002. ATRiCS will be consolidated by the Frequentis Group at the start of April. This is Frequentis' first acquisition since the IPO and the aim is to diversify the product portfolio.

The acquisition therefore fits the company's M&A strategy of expanding its portfolio of products and services by acquiring smaller companies with revenues of less than 10% of the annual revenues of the Frequentis Group. Frequentis regularly monitors the market on the basis of these criteria and maintains contact with other market participants so that it can respond quickly when interesting opportunities arise.

The record order level of EUR 391.5 million as at 31 December 2019 (+10.2% compared with 31 December 2018) is expected to generate revenues of about EUR 215.5 million in 2020, with the remainder being realised in 2021 and subsequent years.

Following a positive start to 2020 with a further increase in order intake, Frequentis' aim is to raise revenues and order intake further in 2020. That said, the coronavirus epidemic entails risks for the current year. At present, it is not possible to make a reliable estimate of the impact on global growth, project acceptance, the supply chain, the budgets available, and the potential postponement of investments – or the resulting effect on revenues and order intake.

Vienna, 13 March 2020

Consolidated financial statements 2019

as at 31 December 2019

Consolidated income statement

	Note	2019 EUR thousand	2018 EUR thousand
Revenues	(3) (4)	303,631	285,764
Change in inventories of finished goods and work in progress	(3)	9	679
Own work capitalised	(3) (5)	372	20
Other operating income	(3) (6)	6,243	7,421
Total income (operating performance)		**310,255**	**293,884**
Cost of materials and purchased services	(7)	-81,597	-76,814
Personnel expenses	(8)	-154,810	-142,946
Other operating expenses	(9)	-43,669	-52,533
Earnings before interest, taxes, depreciation, and amortisation (EBITDA)		**30,179**	**21,591**
Depreciation and amortisation	(10)	-12,962	-5,988
Earnings before interest and taxes (EBIT)	**(3)**	**17,217**	**15,603**
Financial income	(11)	440	503
Financial expenses	(11)	-819	-429
Other financial results	(11)	-2	-8
Financial result		**- 381**	**66**
Earnings from investments accounted for at equity	(17)	148	243
Profit before tax		**16,984**	**15,912**
Income taxes	(12)	-4,462	-4,081
Profit for the financial year		**12,522**	**11,831**
Profit attributable to:			
Equity holders of the company		**11,818**	**11,265**
Non-controlling interests	(29)	**704**	**566**
		12,522	**11,831**
Basic earnings per share	(13)	**0.93**	**0.94**
Diluted earnings per share	(13)	**0.93**	**0.94**

The comparative figures for 2018 have not been restated due to the application of the modified retrospective method for IFRS 16.

Consolidated statement of comprehensive income

	Note	2019 EUR thousand	2018 EUR thousand
Profit for the financial year		**12,522**	**11,831**
Items that may be reclassified to the income statement in subsequent periods			
Foreign currency translation	(27)	302	71
Realised gains/losses from foreign currency translation	(27)	-17	0
Measurement of cash flow hedges	(27) (40)	-860	-245
Taxes on items that may be reclassified to the income statement	(27)	215	61
Items that may not be reclassified to the income statement			
Remeasurement gains/losses from post-employment benefits	(27) (31) (32)	-1,480	-663
Investments accounted for at equity – amounts recognised in other comprehensive income	(27)	-2	-0
Taxes on items that may not be reclassified to the income statement	(27)	370	166
Other comprehensive income, net of tax		**-1,472**	**-610**
Total comprehensive income		**11,050**	**11,221**
Total comprehensive income attributable to:			
Equity holders of the company		**10,362**	**10,655**
Non-controlling interests		**688**	**566**
		11,050	**11,221**

The comparative figures for 2018 have not been restated due to the application of the modified retrospective method for IFRS 16.

Consolidated statement of financial position

ASSETS	Note	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Non-current assets			
Property, plant and equipment	(14)	48,244	9,131
Intangible assets	(15)	7,572	6,499
Goodwill	(16)	2,228	2,228
Investments accounted for at equity	(17)	733	665
Equity instruments	(18)	874	576
Other non-current assets		189	193
Time deposits	(19)	9,997	7,998
Deferred tax assets	(12)	1,705	1,497
		71,542	**28,787**
Current assets			
Inventories	(20)	13,805	13,114
Trade accounts receivable	(21)	58,527	44,366
Contract assets from contracts with customers	(22)	38,354	40,850
Contract costs	(23)	2,549	1,697
Receivables from affiliated and associated companies	(24)	23	31
Other current assets	(25)	8,029	10,283
Income tax receivables		4,432	3,293
Time deposits	(19)	7,998	9,997
Cash and cash equivalents	(19)	66,882	45,543
		200,599	**169,174**
Total assets		**272,141**	**197,961**

The comparative figures for 2018 have not been restated due to application of the modified retrospective method for IFRS 16.

LIABILITIES AND EQUITY	Note	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Shareholders' equity			
Share capital	(26)	13,200	12,000
Capital reserves	(27)	19,976	245
Retained earnings	(27) (28)	81,691	72,582
Adjustments for foreign currency translation		-249	-534
Equity attributable to equity holders of the parent company		**114,618**	**84,293**
Non-controlling interests	(29)	1,568	1,340
Total shareholders' equity		**116,186**	**85,633**
Non-current liabilities			
Liabilities to banks and other financial liabilities		5,500	6,500
Provisions	(30)-(34)	16,066	14,191
Lease liabilities	(41)	32,788	0
Other liabilities	(37)	663	3,493
Deferred tax liabilities	(12)	3,840	3,964
		58,857	**28,148**
Current liabilities			
Liabilities to banks and other financial liabilities		1,609	1,651
Contract liabilities from contracts with customers	(35)	48,682	48,623
Trade accounts payable		13,468	13,775
Payables to affiliated and associated companies	(36)	182	226
Lease liabilities	(41)	7,289	0
Other liabilities	(37)	11,178	8,822
Current tax liabilities		1,151	1,150
Provisions	(38)	13,539	9,933
		97,098	**84,180**
Total shareholders' equity and liabilities		**272,141**	**197,961**

The comparative figures for 2018 have not been restated due to application of the modified retrospective method for IFRS 16.

Consolidated cash flow statement

	Note	2019 EUR thousand	2018 EUR thousand
Profit before tax		16,984	15,912
Net interest income/expense		378	-65
Foreign currency translation		-33	152
Profit/loss from the disposal of non-current assets		18	6
Depreciation of property, plant and equipment and amortisation of intangible assets	(2) (14) (15)	12,962	5,988
Earnings of investments accounted for at equity	(17)	-148	-244
Change in provisions	(30)-(34) (38)	4,001	-5,553
Other non-cash income/expenses		65	5
Net cash flow from operations		**34,227**	**16,201**
Change in inventories	(20)	-690	-2,881
Change in trade accounts receivable and receivables from affiliated and associated companies	(21)	-14,154	-5,371
Change in contract assets	(22)	1,644	-9,073
Change in other receivables	(25)	2,463	636
Change in trade accounts payable and payables to affiliated and associated companies	(36)	-2,048	3,096
Change in contract liabilities	(35)	59	9,155
Change in other liabilities	(37)	1,895	-3,214
Change in net working capital		**-10,831**	**-7,652**
Interest paid		-799	-429
Interest received		235	205
Dividends received		104	172
Income taxes paid	(12)	-5,208	-3,938
Net cash flow from operating activities		**17,728**	**4,559**
Cash inflows from the sale of intangible assets, property, plant and equipment		289	60
Cash inflows from the sale of securities and equity instruments		0	878
Cash outflows for the purchase of intangible assets, property, plant and equipment		-4,541	-4,808
Cash outflows for investment in securities, equity instruments, and time deposits		-294	-569
Cash outflows for the acquisition of associated companies		-27	0
Net cash flow from investing activities		**-4,573**	**-4,439**
Dividends paid to owners	(26)	-1,320	-14,400
Dividends paid to non-controlling interests		-540	-530
Cash inflows from capital increase in connection with the IPO	(26)	21,600	0
Cash outflows for transaction costs for the IPO	(26)	-892	0
Payments from non-controlling interests		79	10
Cash inflows from loans and other financing		82	13,717
Cash outflows for repayment of loans and other financing		-3,744	-13,020
Cash outflows for repayment of lease liabilities	(41)	-7,238	0
Net cash flow from financing activities		**8,027**	**-14,223**
Change in cash and cash equivalents			
Net cash flow from operating activities		17,728	4,559
Net cash flow from investing activities		-4,573	-4,439
Net cash flow from financing activities		8,027	-14,223
Net change in cash and cash equivalents		**21,182**	**-14,103**
Cash and cash equivalents at start of period		**45,543**	**77,734**
Cash-flow related change in cash and cash equivalents		21,182	-14,103
Non-cash related change in cash and cash equivalents		0	-18,000
Foreign currency translation		163	-84
Loss allowance		-6	-4
Cash and cash equivalents at end of period		**66,882**	**45,543**

The comparative figures for 2018 have not been restated due to application of the modified retrospective method for IFRS 16.

For further information on the consolidated cash flow statement, see Note 39.

Consolidated statement of changes in shareholders' equity

in EUR thousand	Share capital	Capital reserves	IAS 19 reserve (net of tax)	Option reserve (net of tax)	Cash flow hedge reserve (net of tax)	Retained earnings	Foreign currency translation	Equity attributable to equity holders of the parent company	Non-controlling interests	Total shareholders' equity
Note	(26)	(27)	(31) (32)	(28)	(40)	(27)			(29)	
As at 31 December 2018	12,000	245	-4,512	0	-30	77,124	-534	84,293	1,340	85,633
Changes in accounting policies (IFRS 16)						290		290	0	290
As at 1 January 2019	12,000	245	-4,512	0	-30	77,414	-534	84,583	1,340	85,923
Capital increase	1,200	20,400						21,600		21,600
Costs of the capital increase		-892						-892		- 892
Related income taxes		223						223		223
Payments from non-controlling interests									79	79
Profit for the financial year						11,817		11,817	705	12,522
Other comprehensive income	0	0	-1,096	0	-645	0	285	-1,456	-17	-1,473
Total comprehensive income	0	0	-1,096	0	-645	11,817	285	10,362	688	11,050
Dividends						-1,320		-1,320	-539	-1,859
Other changes				63				63	0	63
As at 31 December 2019	**13,200**	**19,976**	**-5,608**	**63**	**- 675**	**87,911**	**- 249**	**114,618**	**1,568**	**116,186**

in EUR thousand	Share capital	Capital reserves	IAS 19 reserve (net of tax)	IAS 39 reserve (net of tax)	Cash flow hedge reserve (net of tax)	Retained earnings	Foreign currency translation	Equity attributable to equity holders of the parent company	Non-controlling interests	Total shareholders' equity
Note	(26)	(27)	(31) (32)		(40)	(27)			(29)	
As at 31 December 2017	12,000	245	-4,015	143	0	81,073	-604	88,842	1,254	90,096
Changes in accounting policies (IFRS 9 and 15)				-143	154	-774		-763	0	- 763
As at 1 January 2018	12,000	245	-4,015	0	154	80,299	-604	88,079	1,254	89,333
Payments from non-controlling interests									10	10
Profit for the financial year						11,265		11,265	566	11,831
Other comprehensive income	0	0	-497	0	-184	0	70	- 611	-0	- 610
Total comprehensive income	0	0	-497	0	-184	11,265	70	10,654	566	11,221
Dividends						-14,400		-14,400	-530	-14,930
Increase(+)/decrease(-) in non-controlling interests						-40		-40	40	0
As at 31 December 2018	**12,000**	**245**	**-4,512**	**0**	**- 30**	**77,124**	**- 534**	**84,293**	**1,340**	**85,633**

Notes to the consolidated financial statements

1. General information

Reporting

The consolidated financial statements of Frequentis AG for the 2019 financial year have been prepared in accordance with the provisions of the International Financial Reporting Standards (IFRS) as adopted by the European Union. Similarly, all interpretations of the International Financial Reporting Interpretations Committee (IFRIC) that were mandatory for 2019 have been applied.

The present consolidated financial statements, including the group management report, comply with Section 245a of the Austrian Commercial Code (UGB) on consolidated financial statements in accordance with the International Financial Reporting Standards.

Information on the company

These consolidated financial statements include Frequentis AG, registered address Innovationstrasse 1, 1100 Vienna, Austria, and its subsidiaries (subsequently referred to as the Frequentis Group or the Group).

Its parent company, Frequentis Group Holding GmbH (holds 60% of shares in Frequentis AG), also files all required financial statements at its registered office (Dommayergasse 8/15, 1130 Vienna, Austria) and at Vienna Commercial Court under the number FN 477997 m.

Frequentis AG was founded in 1947 and has been registered in the commercial register at Vienna Commercial Court under the number FN 72115 b since 30 August 1948.

According to Section 2 of the articles of association, the purpose of the company is the development, production, distribution and maintenance of control systems, information processing and transmission systems and communication systems, especially for air traffic control, road, rail and water transport and public safety organisations.

The reporting date is 31 December 2019.

The financial year is 1 January to 31 December.

In the reporting period, the Executive Board comprised:

- Norbert Haslacher, Chairman
- Sylvia Bardach
- Hermann Mattanovich

In the reporting period, the Supervisory Board comprised:

- Johannes Bardach, Chairman
- Dr. Karl Michael Millauer, Deputy Chairman
- Dr. Boris Nemsic, member
- Reinhold Daxecker, member
- Petra Preining, member from 20 September 2019
- Gabriele Schedl, member pursuant to Section 110 of the Austrian Labour Relations Act (ArbVG)
- Siegfried Meisel, member pursuant to Section 110 ArbVG from 1 January 2019
- Reinhard Steidl, member pursuant to Section 110 ArbVG from 20 September 2019

The consolidated financial statements were approved by the Executive Board on the date of signature, subject to the approval by the Supervisory Board at its meeting on 27 March 2020.

Consolidated group

Besides Frequentis AG, which is the parent company of the consolidated group, the consolidated financial statements of Frequentis AG include 5 (2018: 5) domestic subsidiaries and 21 (2018: 22) foreign subsidiaries controlled by Frequentis AG.

The Group controls an entity if it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date when control ends.

Two foreign companies and two domestic companies are included in the consolidated financial statements by applying the equity method. The reporting date for all companies included in the financial statements is 31 December.

a) **Fully consolidated Austrian subsidiaries**
- BlueCall Systems GmbH, Vienna (100%)
- CNS-Solutions & Support GmbH, Vienna (100%)
- Frequentis DFS Aerosense GmbH, Vienna (70%)
- PDTS GmbH, Vienna (100%)
- Team Communication Technology Management GmbH, Vienna (51%)

b) **Fully consolidated subsidiaries in Europe**
- ELARA Leitstellentechnik GmbH, Aachen (51%)
- Frequentis Comsoft GmbH, Karlsruhe (100%)
- Frequentis Czech Republic s.r.o., Prague (100%)
- Frequentis Deutschland GmbH, Langen (100%)
- Frequentis France SARL, Toulouse (100%)
- Frequentis Norway AS, Oslo (100%)
- Frequentis Romania S.R.L., Cluj-Napoca (100%)
- Frequentis Slovakia s.r.o., Bratislava (100%)
- Frequentis Solutions s.r.o., Bratislava (100%)
- Frequentis UK Ltd., Twickenham (100%)
- Secure Service Provision GmbH, Leipzig (80%)
- Systems Interface Ltd., Surrey (51%)

c) **Fully consolidated subsidiaries in the Americas**
- Frequentis California Inc., Monterey (100%)
- Frequentis Canada Ltd., Ottawa (100%)
- Frequentis Defense Inc., Columbia (100%)
- Frequentis do Brasil Assessoria, Serviços e Comércio de Sistemas de Informação e Comunicação Ltda., São Paulo (100%)
- Frequentis USA Inc., Columbia (100%)

d) **Fully consolidated subsidiaries in Asia**
- Frequentis Middle East Limited, Abu Dhabi (100%)
- Frequentis (Shanghai) Co. Ltd., Shanghai (100%)
- Frequentis Singapore Pte. Ltd., Singapore (100%)

e) **Fully consolidated subsidiaries in Australia/Pacific**
- Frequentis Australasia Pty. Ltd., Hendra (100%)

f) **Companies accounted for using the equity method**

- AIRlabs Austria GmbH, Graz (18%)
- AIRNAV Technology Services Inc., Iloilo (40%)
- GroupEAD Europe S.L., Madrid (28%)
- Mission Embedded GmbH, Vienna (20%)

All information on the consolidated group relates to the circumstances as at 31 December 2019.

Changes to the consolidated group

In summer 2019, the Austrian Federal Ministry of Transport, Innovation and Technology awarded the AIRlabs consortium led by the FH JOANNEUM university of applied sciences in Graz the contract to the innovation laboratory AIRlabs Austria GmbH. This company was established in December 2019 and entered in the commercial register in January 2020. Frequentis AG has a stake of 18.0% in AIRlabs Austria GmbH. Although Frequentis AG only holds 18.0% of the shares, as a result of its representation on the management and voluntary supervisory Board and a shareholder agreement, it is able to exercise significant influence but not control.

The liquidation of Frequentis Saudi Arabia Ltd. was successfully completed in the reporting period.

These changes did not have a material impact on the Group's assets, financial position, and financial performance in the reporting period.

2. Accounting policies

The consolidated financial statements are prepared by applying the historical cost convention. Excluded from this principle are derivative financial instruments and equity instruments, which are measured at fair value, and personnel-related provisions, which are measured using the projected unit credit (PUC) method.

The financial statements of all consolidated companies are prepared using uniform Group-wide accounting policies. There are no significant differences in the accounting policies used for the associated companies accounted for by applying the equity method of accounting compared to those applied by the Frequentis Group.

In the event of business combinations, the assets, liabilities and contingent liabilities of the subsidiaries acquired are measured at fair value at the date of acquisition as specified by IFRS 3. If the fair value of the consideration transferred and the amount of all non-controlling interests in the acquired business exceed the fair value of the acquired identifiable assets and liabilities, the difference is recognised as goodwill. Any excess of the fair value of the net assets acquired over the consideration transferred is recognised in profit or loss, after a review of their measurement.

The consolidated financial statements of Frequentis AG are prepared in euros. All amounts are reported in thousands of euros (EUR thousand), except where otherwise stated. Rounding may result in minor discrepancies in totals as a result of the use of automatic data processing.

The annual financial statements of subsidiaries whose functional currency is not the euro are translated into the reporting currency (EUR) using the modified closing rate method. Investments in consolidated subsidiaries and the equity items that are eliminated on consolidation are translated at the historical rates; the other items in the statement of financial position are translated using the average exchange rate as at the reporting date. Income statement items are translated using average annual exchange rates. The foreign currency translation differences arising from different exchange rates are recognised in other comprehensive income (OCI) and are presented in "Foreign currency translation", a separate line item within equity, until the subsidiary is sold.

The following exchange rates are used for translation of the main currencies (exchange rates for EUR 1):

Currency		Closing rate 31 December 2019	Closing rate 31 December 2018	Average rate 31 December 2019	Average rate 31 December 2018
AUD	Australian dollar	1.60	1.62	1.61	1.58
BRL	Brazilian real	4.52	4.44	4.42	4.33
CAD	Canadian dollar	1.46	1.56	1.48	1.53
CNY	Chinese renminbi yuan	7.82	7.88	7.72	7.82
CZK	Czech koruna	25.41	25.72	25.66	25.68
GBP	British pound	0.85	0.89	0.88	0.89
NOK	Norwegian krone	9.86	9.95	9.84	9.63
SGD	Singapore dollar	1.51	1.56	1.53	1.59
RON	Romanian leu	4.78	4.66	4.75	4.66
USD	US dollar	1.12	1.15	1.12	1.18

Revenues, income, expenses, receivables and liabilities resulting from intercompany transactions and intercompany profits or losses are eliminated in consolidation, taking into account deferred taxes.

New and amended standards and interpretations

When preparing the consolidated financial statements, the following amendments to existing IAS/IFRS standards and interpretations as well as, the new standards and interpretations were applied, insofar as they had been endorsed by the European Union by 31 December 2019 and were effective at that date:

- IFRS 16 "Leases"
- IFRIC 23 "Uncertainty over Income Tax Treatments"
- Prepayment Features with Negative Compensation (Amendments to IFRS 9)
- Annual Improvements to IFRS Standards (2015-2017 Cycle)
- Long-term Interests in Associates and Joint Ventures (Amendments to IAS 28)
- Plan Amendment, Curtailment or Settlement (Amendments to IAS 19)

Where applicable, the above standards and amendments were applied in full in these consolidated financial statements. The effects of these changes on the financial statements are outlined in more detail in the section "Changes in accounting policies".

In addition, as at 31 December 2019, some of the following new and amended standards had been endorsed by the EU, but were not mandatory for the 2019 financial year. Frequentis did not elect to adopt these standards early on a voluntary basis, even if they had already been endorsed by the EU.

	Newly amended IFRSs	Endorsement by the EU	Effective date	Significant effects
IAS 1 and IAS 8	Definition of Material (amendments)	29 Nov. 2019	2020	None
IFRS 3	Definition of Business (amendments)	Planned for 2020	2020	None
IFRS 17	Insurance Contracts	Open	2021	None
IFRS 9, IAS 39, IFRS 7	Interest-rate Benchmark Reform (amendments)	15 Jan. 2020	2020	None

Changes in accounting policies

The Frequentis Group initially applied IFRS 16 "Leases" as at 1 January 2019. This standard replaces the previous standard on leases, IAS 17, and the related interpretations. In addition, a number of other new standards had to be applied for the first time as at 1 January 2019, but these did not have a material impact on the consolidated financial statements.

Under IFRS 16, lessees recognise a right-of-use assets, corresponding to the present value of the future lease payments plus any direct costs incurred, and a lease liability for future payments in their statement of financial position. For lessors, the requirements of the new standard are similar to the provisions of the previous standard, IAS 17.

For initial application of IFRS 16 as at 1 January 2019 (date of initial application), the Group elected to use the modified retrospective method (without restatement of the comparative data for 2018). All right-of-use assets were recognised at the amount of the lease liability as at the date of initial application after adjustment for any prepaid or accrued lease payments.

The Group elected to apply the recognition exemptions for short-term leases and for leases for which the underlying asset is of low value. Furthermore, the original assessment of existing leases was maintained. In addition, the option to exclude intangible assets from the scope of IFRS 16 and the option to apply the exemption for short-term leases to leases expiring in 2019 were used.

For all leases previously classified as operating leases, where the Frequentis Group is the lessee, the right-of-use asset was measured using the lessee's incremental borrowing rate. This is derived from the risk-free interest rate for the underlying lease term, adjusted for the country, currency and company risk, and is between 0.0% and 2.27% in the euro zone and between 0.0% and 5.5% outside the euro zone.

In accordance with IFRS 16, the lease term is essentially the non-cancellable period of the lease. In addition, options to extend or terminate the lease are taken into account.

Non-lease components of a contract such as electricity, servicing, etc. are excluded from the calculation of the right-of-use asset.

IFRS 16 requires estimates that influence the measurement of both the right-of-use assets and the lease liabilities. These cover the lease term and the incremental borrowing rate applied to discount future payment obligations.

The accumulated effect as at the date of initial application, 1 January 2019, is as follows:

	31 December 2018 EUR thousand	Adjustments EUR thousand	1 January 2019 EUR thousand
ASSETS			
Non-current assets			
Property, plant and equipment	**9,131**	39,107	**48,238**
Deferred tax assets	**1,497**	-86	**1,411**
LIABILITIES AND EQUITY			
Shareholders' equity			
Retained earnings	**72,582**	290	**72,872**
Non-current liabilities			
Non-current lease liabilities	**0**	32,608	**32,608**
Other non-current liabilities	**3,493**	-403	**3,090**
Current liabilities			
Current lease liabilities	**0**	6,539	**6,539**
Other current liabilities	**8,822**	-11	**8,811**

As a result of the initial application of IFRS 16 as at 1 January 2019, shareholders' equity was increased by an accumulated amount of EUR 290 thousand. This effect results from the reduction in other non-current and current liabilities due to the linearisation of lease obligations.

As a result of the increase in assets and liabilities, the equity ratio decreased from 43.3% as at 31 December 2018 to 36.3% as at 1 January 2019.

In the income statement, initial application of this standard results in reclassification of lease expense, which was recognised in EBITDA until 2018, to depreciation and interest expense, which is recognised outside of EBITDA.

In the cash flow statement, cash outflows for operating leases were recognised in cash flows from operating activities until 2018. From 2019, these payments are divided into the payments of principal and interest. The payments on principal relating to the lease liabilities are recognised in the cash flow from financing activities, while the interest payments are recognised in the cash flow from operating activities

As a lessee, the Frequentis Group leases assets such as real estate, vehicles and IT equipment. The right-of-use assets are recognised in property, plant and equipment where the underlying assets would have been recognised if they had been purchased.

The right-of-use assets recognised by Frequentis AG as at 1 January 2019 totalled EUR 27,377 thousand.

The reconciliation of the operating lease obligations as at 31 December 2018 to the lease liabilities as at 1 January 2019 is as follows:

in EUR thousand	
Operating lease obligations as at 31 December 2018	44,337
Short-term leases	-1,631
Leases for low-value assets	-38
Discounting using the lessee's incremental borrowing rate as at 1 January 2019	-1,532
VAT effect vehicle fleet	-129
Foreign currency translation	57
Reassessment of leases with extension or termination options	-1,917
Lease liabilities from initial application of IFRS 16 as at 1 January 2019	**39,147**
Finance lease liabilities as at 31 December 2018	0
Lease liabilities as at 1 January 2019	**39,147**

The Frequentis Group tested the right-of-use assets for impairment at the date of transition to IFRS 16 and came to the conclusion that there were no indications of impairment of right-of-use assets.

In addition to the changes due to IFRS 16, the presentation of non-current contract liabilities from contracts with customers and non-current trade accounts payable was adjusted. These balances are presented as current liabilities in the statement of financial position in accordance with IAS 1.68 because they are realised within the normal operating cycle; any long-term portion is disclosed in the notes.

	31 December 2018 EUR thousand	Adjustments EUR thousand	1 January 2019 EUR thousand
Non-current liabilities			
Contract liabilities from contracts with customers	1,072	-1,072	0
Trade accounts payable	748	-748	0
Current liabilities			
Contract liabilities from contracts with customers	47,551	1,072	48,623
Trade accounts payable	13,027	748	13,775

In addition, within equity there was a change in the presentation of reserves.

Intangible assets, property, plant and equipment

Intangible assets, property, plant and equipment are measured at acquisition or manufacturing cost less accumulated amortisation, depreciation and impairment losses. The acquisition cost of intangible assets, property, plant and equipment comprises the purchase price including import duties and non-refundable taxes, and all directly allocable costs incurred to bring the asset to the intended location and condition necessary for it to be capable of operating. The manufacturing cost of self-constructed property, plant and equipment comprises material and production costs and appropriate overhead costs.

Borrowing costs that are directly attributable to the acquisition or manufacturing cost of a qualifying asset are capitalised as part of the cost of acquisition or production of the asset. Other borrowing costs are recognised as expenses.

The following useful lives are used for amortisation of intangible assets and depreciation of property, plant and equipment. They are unchanged from the previous year.

Buildings on leased land	5 - 40 years
Technical plant and machinery	3 - 10 years
Other plant, factory and office equipment	2 - 20 years
Software and licences	3 - 10 years

The carrying amounts of intangible assets, property, plant and equipment are tested for impairment as soon as there is an indication that the carrying amount could exceed the recoverable amount. In this case, the carrying amount is compared to the higher of the fair value less costs of disposal and the present value of the estimated future cash flows from use of the asset. If the recoverable amount of individual assets cannot be determined, it is determined for the cash-generating unit to which the asset is allocated. If the reason for an impairment no longer exists, the impairment loss is reversed up to the carrying amount that would have been determined if no impairment loss had been recognised.

Goodwill

Goodwill, which results exclusively from business combinations, is not amortised. Instead, it is tested for impairment at least once a year. The impairment test is performed irrespective of whether there is an indication of impairment. For the impairment test, the goodwill is allocated to those cash-generating units that are expected to benefit from the synergies of the business combination. In addition, goodwill is tested for impairment if there is an indication of impairment.

Investments in associated companies

Associated companies are companies where the Group exercises significant influence over the financial and operating policy decisions but does not control or jointly control the investee. Associated companies are included in the consolidated financial statements using the equity method and are initially recognised at acquisition cost of. In subsequent periods, the carrying amount of the investment increases or decreases in accordance with Frequentis AG's share of the profit or loss of the associated company.

Leases

The Frequentis Group has applied IFRS 16 using the modified retrospective method. Therefore, the comparative information has not been restated and is still presented in accordance with IAS 17. Details of accounting in accordance with IAS 17 are presented separately.

Since the Frequentis Group has only concluded insignificant contracts as a lessor, only the regulations applicable for lessees are outlined below.

Accounting policy applied from 1 January 2019 (IFRS 16)

At the inception of a contract, the Frequentis Group assesses whether the contract is, or contains, a lease. A contract is, or contains, a lease if it conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

At the commencement date or upon modification of a contract that contains a lease component, the Frequentis Group allocates the contractually agreed consideration based on the relative stand-alone prices of the components. On the commencement date, the Frequentis Group recognises an asset for the right of use granted and a lease liability. The right-of-use asset is initially measured at cost, which corresponds to the initial measurement of the lease liability, adjusted for any initial direct costs and costs of dismantling the underlying asset, less any lease incentives received.

The right-of-use assets are depreciated over the useful life of the leased asset or the term of the lease if this is shorter, including any extension options. Depreciation is based on the following useful lives:

Right-of-use assets for land and buildings	2 - 8 years
Right-of use assets for other plant, factory and office equipment	2 - 6 years

The lease liability is initially measured on the commencement date at the present value of the lease payments that are not paid at that date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the incremental borrowing rate of the Frequentis Group. The Frequentis Group normally uses the incremental borrowing rate.

To determine the incremental borrowing rate, the Frequentis Group uses interest rates from various external financial sources and adapts these to the lease conditions and type of asset.

The lease payments included in the measurement of the lease liability comprise:

- fixed payments, including in-substance fixed payments,
- variable lease payments that depend on an index or (interest) rate,
- amounts expected to be payable by the lessee under residual value guarantees,
- the exercise price of a purchase option if the lessee is reasonably certain to exercise that option,
- and payments of penalties for terminating the lease, unless it is reasonably certain that the Frequentis Group will not exercise such termination options.

The carrying amount of the lease liability is subsequently measured using the effective interest method. The lease liability is remeasured if there is a change in future lease payments resulting from a change in the index or the (interest) rate used, if there is a change in the amounts expected to be payable under a residual value guarantee, and if there is a change in the assessment of a purchase, extension or termination option.

In the event of remeasurement of the lease liability, the carrying amount of the right-of-use asset is adjusted by the same amount or the adjustment is recognised in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

The Frequentis Group has decided not to recognise right-of-use assets and lease liabilities for leases where the underlying leased assets are of low value and for short-term leases. The Frequentis Group recognises the lease payments relating to such leases as expense on a straight-line basis over the term of the lease.

Policy applied until 31 December 2018 (IAS 17)

Leases that transferred substantially all the risks and rewards incidental to ownership of an asset were classified as finance leases. Since the Frequentis Group did not have any finance leases, no such leases were recognised.

Other leases were classified as operating leases and were not recognised in the statement of financial position.

Financial instruments

A financial asset or financial liability is initially measured at fair value plus transaction costs. Financial assets classified at fair value through profit or loss form an exception to this rule. They are initially measured at fair value excluding transaction costs. Trade accounts receivable that do not contain significant financing components are initially measured at the transaction price. Non-derivative financial assets are initially recognized at settlement date, while derivative financial assets are initially recognized at trade date. Gains and losses from the disposal of financial instruments are determined by comparing the carrying amount with the proceeds of the sale.

The following categories are used for initial classification and measurement of financial assets:

- At amortised cost
- At fair value through other comprehensive income (FVOCI)
- At fair value through profit or loss (FVTPL)

The classification is performed separately based on the type of instrument: financial derivatives, equity instruments and debt instruments.

Subsequent measurement of all financial assets depends on the category to which they are assigned.

Financial assets are not reclassified after initial recognition unless the Group alters the business model used to manage its financial assets. In this case, all financial assets affected are reclassified on the first day of the reporting period subsequent to the change in business model occurs.

If a financial asset is a debt instrument, it is measured at amortised cost if both of the following conditions are satisfied and it is not designated at FVTPL:

- it is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows, and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

In the Frequentis Group, all trade accounts receivable, loans and other receivables with fixed or determinable payments are allocated to this category. These assets are measured at amortised cost using the effective interest method. The amortised cost is reduced by impairment losses. Interest income, currency gains and losses, derecognition effects and impairment losses are recognised in profit or loss.

A debt instrument is carried at FVOCI if both of the following conditions are met and it is not carried at FVTPL:

- it is held within a business model whose objective is achieved both by holding financial assets in order to collect contractual cash flows and by selling financial assets, and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

In the Frequentis Group, no instruments were allocated to this category in either 2019 or 2018.

At the date of initial recognition of an equity instrument that is not held for trading, the Group can elect irrevocably to present subsequent changes in the fair value of the investment in other comprehensive income. This option can be selected for each investment on a case-by-case basis.

All financial assets that are not measured at amortised cost or at FVOCI are measured at FVTPL. This comprises all derivative financial assets that are not designated as a cash flow hedge in a hedging relationship. At the date of initial recognition, the Group can irrevocably elect to designate financial assets at FVTPL, even though they meet the criteria for measurement at amortised cost or at FVOCI, if this avoids or significantly reduces an accounting mismatch.

Financial liabilities are classified and measured at amortised cost or at fair value through profit or loss (FVTPL). A financial liability is classified at FVTPL if it is held for trading, is a derivative, or if the derivative is designated as a hedging instrument at the date of initial recognition.

Financial liabilities at FVTPL are measured at fair value and any net gain or loss, including interest expense, is recognised in profit or loss.

Other financial liabilities are subsequently measured at amortised cost using the effective interest method. Interest expenses and foreign currency translation differences are recognised in profit or loss. Derecognition gains and losses are also recognised in profit or loss.

The Group holds derivatives in the form of forward exchange contracts to hedge currency risks.

At initial recognition and subsequently at each reporting date derivatives are measured at fair value. Any changes in the fair value are recognised in profit or loss, unless the derivatives are designated in a hedging relationship classified as a cash flow hedge.

In connection with hedging of future cash flows ("cash flow hedges") relating to a recognised receivable or liability or a highly probable future transaction, the effective portion of the change in fair value is recognised in other comprehensive income and any ineffectiveness is recognised in profit or loss. The amounts recognised in other comprehensive income are reclassified to the income statement (revenues, other operating income or other operating expenses) in the period in which the hedged item affects the income statement.

At the initial designation of a hedging relationship, the Group documents the risk management objectives and strategies of the hedge. Further, it documents the economic relationship between the hedged item and the hedging instrument, and whether it expects changes in cash flows from the hedged item and the hedging instrument to offset each other. Hedging instruments were only designated as cash flow hedges for projects where execution commenced prior to 1 January 2019.

A prospective effectiveness test is performed when the derivative is concluded to make a quantitative assessment of the hedging relationship. If the criteria for hedge accounting are met, the financial derivative is designated as a hedging instrument. The effectiveness of the hedge is tested annually using a retrospective effectiveness test based on a hypothetical derivative.

Under IFRS 9, a company may separate the forward and spot elements of a forward transaction and designate only the changes in the fair value of the spot element as hedging instruments. The Frequentis Group applies this option. Accordingly, it has separated the forward element and credit risk relating to the derivatives and recognised them in the income statement. The change in the fair value of the designated element (spot element) is recognised in other comprehensive income.

In the absence of such a documented allocation of derivative financial instruments to highly probable future cash flows, which economically hedge a foreign currency risk, changes in its fair value were recognised in profit or loss.

Receivables are measured at cost. Foreign currency receivables are measured using the average exchange rate on the reporting date.

Provided that an asset is not a purchased or originated credit-impaired asset, it is initially measured using the 12-month expected credit losses concept. This assessment is maintained for subsequent reporting dates. If the credit risk of a financial asset has increased significantly on the reporting date compared with its credit risk at initial recognition, the lifetime expected credit losses method is applied. The lifetime expected credit losses concept must always be applied to trade accounts receivable and to contract assets without a significant financing component.

When determining whether the credit risk of a financial asset has increased significantly since its initial recognition and estimating expected credit losses, the Group uses appropriate and supportable evidence that is relevant and available with economically reasonable efforts. This comprises both quantitative and qualitative information and analyses based on the Frequentis Group's historical experience, prospective information and a solid creditworthiness assessment.

Inventories

Raw materials and supplies are measured at acquisition or manufacturing cost or net realisable value. For raw materials and supplies, the replacement costs were determined to be the best available measure of their net realisable value.

Work in progress and finished goods are measured at the manufacturing cost or lower net realisable value. The net realisable value is the price that could be obtained in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make a sale. The manufacturing cost is calculated using all direct costs incurred, fixed and variable production overheads. Borrowing costs are not recognized because the criteria set out in IAS 23 are not met. The consumption of goods is determined using the moving average cost method.

IFRS 15 Revenue from Contracts with Customers

The Frequentis Group accounts for customer contracts using the five-step model in accordance with IFRS 15. The first step in the model is identifying the contract with a customer. This is followed by identifying the distinct performance obligations. In this step, distinct goods and services and bundles of goods and services are identified. The third step is determining the transaction price. The transaction price is the amount of consideration the supplying company expects to be entitled to in exchange for transferring the goods or services. The transaction price is then allocated to the identified performance obligations. The final step is recognising revenue when the performance obligation is satisfied. Revenue is recognised either at a point in time or over time.

For the vast majority of the Frequentis Group's contracts with customers, revenue is recognised over time. Revenue is recognised on the basis of the progress towards satisfaction of the performance obligation using the cost-to-cost method. Under this method, revenues are recognised on the basis of the production costs actually incurred in relation to expected total costs. The impact of changes in the estimated total cost is recognised in profit or loss in the period in which it occurs.

For certain services (e.g. repairs) with a short lead time or performance period, orders for replacement parts or small parts, and the sale of standard products without customisation or extensive processing so that the product can be taken into service by the customer, revenue is recognised at a point in time. Revenue is recognised when control transferred to the customer or the performance obligation is completely satisfied.

The contract assets from contracts with customers do not contain significant financing components.

Certain costs such as the costs incurred in obtaining a contract and the cost of fulfilling a contract to deliver goods and services to customers are recognised as contract costs (mainly sales commission) and amortised in line with transfer of control over goods and services to the customer.

The contract liabilities comprise all obligations from contracts with customers (goods or services) for which the Frequentis Group has already received (or will receive) consideration. This mainly relates to advance payments from customers and services still to be performed for projects already invoiced.

Employee benefit obligations

The obligations for severance payments, pensions and anniversary bonuses were measured on the basis of an actuarial report using the projected unit credit method in accordance with IAS 19 ("Employee Benefits").

When determining the severance payment obligation, the retirement age was deemed to be the earliest possible date for (early) retirement under the 2018 pension reform.

The pension provisions were established on the basis of an actuarial report. Since the pension insurance policy has been pledged to the Executive Board, it meets the definition of plan assets and the pension provisions are offset against the amount accumulated in the pension insurance scheme in accordance with IAS 19.

The effects of remeasurement of severance and pension obligations are recognised in other comprehensive income. Any past service cost is recognised immediately in profit or loss. The interest cost is recognised together with the service cost in personnel expenses.

Share-based payment

As part of a long-term share plan, Frequentis AG has agreed share-based payment with one member of the Executive Board. This is accounted for in accordance with IFRS 2 (Share-based Payment). The plan is exclusively equity-settled. Frequentis AG therefore measures these instruments at fair value on the grant date, taking into account the performance conditions on which the instruments are granted. The expense is allocated over the specified service period. .

Provisions

Provisions are recognised if there is a present (legal or substantive) obligation arising from a past event, an outflow of economic resources to meet this obligation is probable, and the level of the obligation can be estimated reliably. The provision is measured at the expected settlement amount. Provisions are reviewed at every reporting date and adjusted on the basis of the new assessment. If the interest rate effect is material, non-current provisions are recognised at the present value of the expected outflow to settle the obligation.

Research and development costs

Research projects are original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge. In the Frequentis Group, research projects generally have a time horizon of 3 - 10 years and their technical and commercial outcome is uncertain. All research expenditures are expensed as incurred (IAS 38.54).

Development projects comprise expenditures that serve to apply theoretical knowledge for technical and commercial use. If the criteria for recognition as an intangible asset pursuant to IAS 38.21 are met, the directly allocable development costs are recognized as an intangible asset; otherwise, the development costs are expensed as incurred. In the reporting period as well as in the previous year, the technical feasibility of hardware and software development projects either could not be assessed or the research and development phases could not be clearly distinguished. Moreover, confirmation of technological feasibility and commercial usability is generally only obtained shortly before projects are ready for the commercial market. Therefore, the criteria for recognition as an asset were not met in either 2019 or 2018.

Income taxes

Tax expense comprises current and deferred taxes. Current and deferred taxes are recognised in profit or loss, except if they relate to a business combination or to items recognised directly in equity or in other comprehensive income.

Current taxes are the expected tax liability or tax receivable on the taxable profit for the financial year, based on the tax rates that have been enacted or substantially enacted on the reporting date and all adjustments to the tax liability for previous years.

In accordance with IAS 12, deferred taxes are recognized in the IFRS financial statements for temporary differences between the carrying amounts of assets and liabilities and their tax base. Deferred taxes are recognised for:

- taxable temporary differences on initial recognition of goodwill.
- temporary differences on initial recognition of assets or liabilities for a business transaction that is not a business combination and that does not affect either the profit before tax or the taxable profit.
- temporary differences relating to investments in subsidiaries, associated companies and joint operations, provided that the Frequentis Group is able to control the timing of reversal of temporary differences and it is probable that they will not be reversed in the foreseeable future.

Deferred tax assets and liabilities are netted to the extent that, within an independent Group company, they relate to the same tax authority.

A deferred tax receivable is recognised for unused tax loss carryforwards to the extent that it is probable that future taxable profit will be available.

Significant estimates and exercise of discretion

Preparation of the consolidated financial statements in accordance with the generally accepted accounting and valuation principles of the IFRS involves estimates and assumptions that may influence the amount and presentation of the reported assets and liabilities, the disclosure of contingent assets and liabilities as at the reporting date, and the reported income and expenses during the reporting period. The actual amounts may ultimately differ from the estimates and assumptions. Estimates and assumptions are reviewed continuously and revised prospectively.

When preparing the consolidated financial statements, the Frequentis Group has made the following judgements:

a) The Frequentis Group holds less than 20% of the shares and voting rights of an associated company, but classifies its influence as significant as it is represented on the management of the associated company (Note 17).
b) When assessing the term of leases, especially real estate leases, it takes into account any extension or termination options where it is reasonably certain that they will be exercised.

The consolidated financial statements include the following items whose measurement depends to a large extent on assumptions and estimates:

a) Useful life of non-current assets: Property, plant and equipment and purchased intangible assets are recognised at acquisition or manufacturing cost and are depreciated/amortised over their useful life using the straight-line method. Factors such as wear and tear, obsolescence, technical standards and contract duration are taken into account when determining the useful life.

b) Estimated impairment of goodwill: The Frequentis Group tests goodwill for impairment once a year. The recoverable amount of cash-generating units is determined by calculating their value-in-use. This is based on corresponding planning calculations, which are naturally based on estimates and assumptions. See note 16 for information on the assumptions and sensitivity analyses used in the goodwill impairment test.

c) Revenue is recognised over time according to the progress towards satisfaction of the performance obligation using the input-based method (cost-to-cost method). Invoicing of orders completed over time is based on estimated contract costs, achievable contract revenue and the risks associated with the contract. These estimates are regularly reviewed and revised. Although the estimates are made using all information available at the reporting date, changes may occur. These changes may affect both the revenue recognised and the carrying amounts of contract assets.

Evaluating whether two or more contracts with a customer are to be combined or whether a contract with a customer has to be split into a series of performance obligations involves estimates that may affect the recognition of revenue or profit. Variable consideration is estimated at the highest probable amount to which an entitlement exists. These estimates are based, in particular, on expectations and on the historical, present and forecast information available at the reporting date.

d) The recognition of provisions for onerous contracts is subject to estimates of expected contract costs and contract results. These are forecast on the basis of historical experience and current information as at the reporting date.

e) Post-employment benefit obligations are measured using various parameters such as the discount rate and salary increases. Changes in these parameters can result in a change in the obligation recognised. The sensitivity of post-employment benefit obligations is outlined in notes 31 and 32.

f) The recognition of deferred tax assets requires that sufficient taxable income will be generated in the future against which the tax credits and loss carryforwards credits can be utilised. The assessment as to whether deferred taxes can be recognised is subject to estimates of various factors. Tax matters are subject to uncertainties regarding their assessment by the tax authorities and therefore it cannot be precluded that in individual cases they may reach a different conclusion than the Frequentis Group. If changes in the assessment are probable, a corresponding provision is recorded.

Notes to the consolidated income statement

3. Segment report

Operating segments

- Air Traffic Management
- Public Safety & Transport

The main customer groups in the market served by the Air Traffic Management (ATM) segment are civil and military air traffic control and homeland security organisations. The Frequentis Group supports its customers in their central role of air traffic management and efficient and safe control and management of aviation. Product solutions for control centres in the ATM segment range from voice communication, networks, remote (digital) towers, ATC towers, surveillance, AIM (aeronautical information management), and AMHS (aeronautical message handling systems) to ATM/UTM (unmanned traffic management) integration. For the defence sector, the portfolio is supplemented by secure communications and situational awareness applications.

The market served by the Public Safety & Transport (PST) segment comprises public safety (police, fire and emergency rescue services), public transport (railways), and maritime (coast guard, port operators and organisations that monitor shipping on inland waterways). The Frequentis Group's PST segment delivers emergency management solutions for police, ambulance and fire service organisations, search and rescue, coastal surveillance, operations communications, and incident & crisis management.

Data on the operating segments

The chief operating decision maker of the Frequentis Group is the Executive Board. The accounting policies applied by the individual segments are the same as those for the Frequentis Group. Earnings before interest and taxes (EBIT) are used for internal reporting and correspond to the segment result as defined in IFRS 8.23. There are no inter-segment revenues. The amounts in the column headed reconciliation/consolidation mainly comprise transactions that cannot be allocated clearly to one segment and were undertaken for both segments.

	Air Traffic Management 2019 EUR thousand	Public Safety & Transport 2019 EUR thousand	Reconciliation/ consolidation 2019 EUR thousand	Total 2019 EUR thousand
Revenues	211,164	92,440	27	303,631
Change in inventories of finished goods and work in progress	14	-5	0	9
Own work capitalised	10	0	362	372
Other operating income	4,250	878	1,115	6,243
Total operating income (total operating performance)	**215,438**	**93,313**	**1,504**	**310,255**
EBIT	**10,414**	**6,958**	**-155**	**17,217**

	Air Traffic Management 2018 EUR thousand	Public Safety & Transport 2018 EUR thousand	Reconciliation/ consolidation 2018 EUR thousand	Total 2018 EUR thousand
Revenues	202,495	83,108	161	285,764
Change in inventories of finished goods and work in progress	441	238	0	679
Own work capitalised	5	0	15	20
Other operating income	4,852	1,381	1,188	7,421
Total operating income (total operating performance)	**207,793**	**84,727**	**1,364**	**293,884**
EBIT	**11,850**	**3,436**	**317**	**15,603**

Segment assets and segment liabilities are not disclosed here because internal reporting does not include a breakdown of assets between the two segments.

Details of Group-wide data

Neither in 2019. nor 2018 did the Frequentis Group generate more than 10% of its total revenues with any single customer.

In terms of revenue categories, 52% (2018: 51%) of the Group's revenues were generated principally with new products for established customers and existing products sold to new customers, 46% (2018: 46%) comprised IBB (installed base business, i.e. follow-on business for installed systems and solutions), and 2% (2018: 3%) came from other sources (mainly consulting). Around half of the installed base business comprised maintenance contracts.

The regional breakdown of orders received by end-users in 2019 was as follows: orders are still dominated by the established European market, which accounted for 63.8% (2018: 55.2%), ahead of the Americas (19.4%; 2018: 16.9%), Asia (11.6%; 2018: 11.2%), Australia/Pacific (3.7%; 2018: 16.4%) and Africa (1.5%; 2018: 0.3%).

Orders on hand as at 31 December 2019 totalled EUR 391,460 thousand (2018: EUR 355,220 thousand). The ATM segment accounted for EUR 233,779 thousand (2018: EUR 215,722 thousand) of this amount and the PST segment for EUR 157,681 thousand (2018: EUR 139,498 thousand).

Regional breakdown of non-current assets

	2019 EUR thousand	2018 EUR thousand
Austria	39,345	9,641
Europe (excluding Austria)	13,728	6,971
Americas	4,483	998
Australia	437	210
Asia	51	37
	58,044	**17,858**

Non-current assets comprise property, plant and equipment, intangible assets and goodwill. The increase in non-current assets is mainly due to the initial application of IFRS 16.

4. Revenues

The following comments apply for both operating segments, because both generate almost all of their revenue with customer-specific production orders and maintenance contracts. Only a few of the products sold are not customised.

Revenues are recognised when the contractually agreed milestones have been achieved. Amounts where the work or services have been performed but which have not yet been invoiced are recognised as contract assets. In principle, invoices are due within thirty days.

Revenues from customer-specific construction contracts and multi-component contracts meet the criteria for recognition of revenue over time based on the progress towards satisfaction of the performance obligation because there is no alternative use for the asset produced and the Frequentis Group has a right to receive payment for the work performed (costs plus an appropriate margin).

Revenue is recognised using the input-based method (cost-to-cost method). Contract assets are only recognised if they exceed the associated advance payments from customers. In the reporting period, contract assets from contracts with customers increased by EUR 755 thousand which is the net result of a large number of newly commenced projects and invoiced projects.

In the case of maintenance contracts, the customer generally receives the benefits as the performance obligation is satisfied. Revenue is recognised over time. Exceptions from this rule are certain services (e.g. repairs) with a short lead time or performance period, and orders for replacement parts or small parts where the revenue is recognised at point in time. The revenues from these orders amounted to EUR 5,885 thousand in the reporting period (2018: EUR 1,020 thousand).

In accordance with IFRIC 22, the Frequentis Group measures advance payments made and received in foreign currencies at the transaction exchange rate rather than the closing rate.

The revenue split by category in the reporting period was as follows:

	2019 EUR thousand	2018 EUR thousand
New products and/or new customer business	157,565	146,926
IBB (installed base business)	138,678	130,303
Other revenues	7,388	8,535
	303,631	**285,764**

The regional distribution of revenues by end-users was as follows:

	2019 EUR thousand	2018 EUR thousand
Europe	184,157	170,165
Americas	56,303	50,111
Asia	39,879	35,312
Australia/Pacific	18,399	19,500
Africa	3,459	5,951
Small orders (not allocated)	1,434	4,725
	303,631	**285,764**

The line item “small orders” relates to revenues from customer contracts that were not allocated to the other categories in the above table.

The expected revenues from performance obligations for orders on hand were approximately EUR 391.5 million (31 December 2018: EUR 355.2 million) and correspond to the orders on hand in the Frequentis Group at the reporting date. It is expected that revenue of approximately EUR 215.5 million will be recognised in 2020 and revenue of EUR 176.0 million will be recognised in 2021 and subsequent years. The expected timing of revenue recognition is based on the expected progress towards satisfaction of the performance obligation.

5. Own work capitalised

The expenses capitalised in 2019 comprise EUR 372 thousand (2018: EUR 20 thousand) include, among other things, expenses for self-produced internal demonstration and test systems.

6. Other operating income

	2019 EUR thousand	2018 EUR thousand
Grants and subsidies for research and development costs	3,282	3,761
Income from a research premium	1,177	1,716
Exchange rate gains and currency differences	496	741
Gain from the sale of intangible assets, property, plant, and equipment	13	13
Miscellaneous other operating income	1,275	1,190
	6,243	**7,421**

Grants, subsidies and research premiums are recognised in income when the conditions for their granting are fulfilled and the grants have either already been paid or it is reasonably sure that they will be paid.

The miscellaneous other operating income relates mainly to compensation from insurance, rental revenue and revenue from the reversal of loss allowances.

7. Cost of materials and purchased services

	2019 EUR thousand	2018 EUR thousand
Cost of materials	40,403	35,166
Cost of purchased services	41,194	41,648
	81,597	**76,814**

The increase in the cost of materials from EUR 35,166 thousand in 2018 to EUR 40,403 thousand in 2019 was due to an increase in the material intensity of the projects invoiced.

8. Personnel expenses

	2019 EUR thousand	2018 EUR thousand
Salaries	122,474	112,213
Expenses for severance payments	1,845	2,149
Expenses for pensions	992	856
Social security contributions	26,151	24,627
Other voluntary social welfare expenses	3,348	3,101
	154,810	**142,946**

The headcount at the end of the reporting period was 1,850 (2018: 1,843). The average number of employees was 1,849 (2018: 1,763).

The increase in salaries was partly due to the increase of EUR 2,275 thousand in provisions for bonuses and variable salaries.

9. Other operating expenses

	2019 EUR thousand	2018 EUR thousand
Travel expenses	11,861	12,177
Legal and consulting expenses	5,522	5,650
External personnel	3,700	3,693
Advertising	2,824	2,737
Insurance expenses	2,561	2,205
Maintenance	1,834	1,938
Transport	1,236	1,306
Energy	1,167	1,040
Rental and operating expenses (buildings)	0	7,937
Operating expenses (buildings)	1,161	0
Short-term leases and leases for low-value assets	930	0
Telephone and communications expenses	1,157	1,118
Cleaning	1,065	1,020
Vehicles	940	1,572
Licences (terms of up to 1 year)	934	364
Exchange rate differences	857	462
Change in project provisions	827	3,383
Staff recruitment	760	847
Other taxes and levies	754	664
Claims for damages	663	796
Bank charges and bank guarantee fees	661	516
Loss allowances for receivables and contract assets	250	189
Losses from the disposal of intangible assets, property, plant, and equipment	32	16
Miscellaneous	1,973	2,903
	43,669	**52,533**

Operating expenses for buildings, and short-term leases and leases for low-value assets, which are presented separately for the reporting period, were included in the line item "rental and operating expenses (buildings)" in the previous year. They are presented separately for the reporting period as required by IFRS 16.

The reduction in vehicle expenses is due to the altered presentation of vehicle leases in accordance with IFRS 16. In the previous year, the lease expense for vehicles was included in vehicle expenses.

Since the Frequentis Group has applied IFRS 16 using the modified retrospective method, the prior-year figures have not been restated.

The project provisions mainly relate to three projects in Europe, one in America, and one in Australia, where the remaining project revenues do not cover the remaining project costs. These projects started in 2018 but execution has been delayed. As a result, there was a considerable addition to project provisions in 2018; these were not used the reporting period but a further amount was added to them.

The loss allowances contain EUR 224 thousand for receivables and EUR 26 thousand for contract assets. These are not presented separately in the income statement as the amount is insignificant.

10. Depreciation and amortisation

	2019 EUR thousand	2018 EUR thousand
Depreciation of property, plant and equipment and amortisation of intangible assets	12,545	5,588
Depreciation and amortisation of low-value assets	417	400
	12,962	**5,988**

EUR 7,093 thousand of the increase in depreciation of property, plant and equipment is due to the depreciation of right-of-use assets recognised in accordance with IFRS 16.

Assets with acquisition or manufacturing cost of up to EUR 800 (country-specific) are defined as low-value assets and are recognised as expenses in the year of acquisition.

11. Financial results

Financial income

	2019 EUR thousand	2018 EUR thousand
Interest and similar income	440	494
Income from securities (FVTPL)	0	9
	440	**503**

The interest and similar income exclusively comprise interest income from assets recognised at amortised cost. Interest income is recognised using the effective interest method.

Financial expenses

	2019 EUR thousand	2018 EUR thousand
Interest and similar expenses	819	429
	819	**429**

EUR 438 thousand of the increase in interest is attributable IFRS 16. Interest expenses are recognised using the effective interest method.

Other financial results

	2019 EUR thousand	2018 EUR thousand
Increase in fair value of equity instruments (FVTPL)	4	3
Losses from the disposal of securities	0	-3
Impairment of time deposits and cash and cash equivalents pursuant to IFRS 9	-6	-9
Other	0	1
	- 2	**- 8**

12. Income taxes

	2019 EUR thousand	2018 EUR thousand
Current income taxes	4,125	2,218
Taxes relating to other periods	7	-56
Non-deductible withholding tax	148	97
Change in deferred tax assets/liabilities	182	1,822
	4,462	**4,081**

The tax reconciliation is as follows:

	2019 EUR thousand	Tax rate in %	2018 EUR thousand	Tax rate in %
Profit before tax	16,984		15,913	
Theoretical tax expense based on a tax rate of 25%	4,246	25%	3,978	25%
Tax additions	272		339	
Tax deductions	-322		-444	
Changes in tax rates	-34		0	
Differences in tax rates in foreign tax systems	145		167	
Taxes relating to other periods	7		-56	
Non-deductible withholding tax	148		97	
Actual total tax expense	**4,462**	**26%**	**4,081**	**25%**

The tax additions comprise non-tax-deductible expenses such as representational expenses. The tax deductions mainly comprise the research subsidy.

Deferred tax assets and liabilities are netted if there is a corresponding legally enforceable claim to netting and the deferred tax assets and liabilities refer to income taxes that are levied by the same tax authority for the same taxable entity.

The deferred tax assets and liabilities recognised in the statement of financial position relate to the following items:

	Assets 2019 EUR thousand	Liabilities 2019 EUR thousand	Assets 2018 EUR thousand	Liabilities 2018 EUR thousand
Property, plant and equipment	164	-9,358	145	-380
Intangible assets	105	-128	112	-83
Goodwill	143		166	
Financial assets	65	-2	79	-1
Inventories	41	-14	32	
Contract assets from contracts with customers and contract costs	163	-5,220		-4,825
Trade accounts receivable and other assets	90	-1,383	51	-134
Cash and cash equivalents and time deposits	4		2	
Option reserve	16			
Provisions	2,767	-1,254	2,544	-671
Liabilities	9,491	-123	312	-10
Contract liabilities from contracts with customers	3,475	-1,300	973	-1,536
Deferred taxes on currency differences, debt consolidation	15	-20	16	-16
Tax loss carry-forwards	128		757	
Total	**16,667**	**-18,802**	**5,189**	**-7,656**
Netting	-14,962	14,962	-3,692	3,692
Deferred taxes	**1,705**	**-3,840**	**1,497**	**-3,964**

Deferred tax liabilities resulting from temporary differences in connection with investments in subsidiaries are not recognised if the date of reversal of the temporary differences can be controlled by the Frequentis Group and it is probable that the temporary differences will not be reversed in the near future. Such temporary differences for which no deferred tax liabilities are recognised amounted to EUR 2,175 thousand (2018: EUR 2,042 thousand).

As at the reporting date, the Frequentis Group had loss carry-forwards totalling EUR 656 thousand (2018: EUR 2,884 thousand), for which deferred taxes were recognised.

The amount of tax-deductible impairments on equity instruments that is spread over seven years under Austrian tax law is EUR 140 thousand (2018: EUR 183 thousand). Deferred tax assets of EUR 35 thousand (2018: EUR 46 thousand) are recognised for this amount.

As at 31 December 2019, there were no material income tax uncertainties, so the initial application of IFRIC 23 with effect from 1 January 2019 had no impact.

13. Earnings per share

Basic earnings per share are calculated by dividing the result for the period attributable to equity holders of Frequentis AG by the weighted average number of shares outstanding in the reporting period. In the reporting period, the weighted average number of shares was 12,772,603 (2018: 12,000,000).

Diluted earnings per share are calculated by dividing the result for the period attributable to the equity holders of Frequentis AG by the weighted average number of shares issued in the reporting period, adjusted in each case by the dilutive effect of the share-based payment of 10,368 shares, which was granted for the first time in the 2019 financial year. The average weighted number of shares and options was 12,775,244 (2018: 12,000,000).

Notes to the consolidated statement of financial position

14. Property, plant and equipment

in EUR thousand	Buildings on leased land	Technical plant and machinery	Other plant, factory and office equipment	Advances and plants under construction	Total
Carrying amount as at 31 December 2017	**2,333**	**479**	**5,519**	**368**	**8,699**
Foreign currency translation difference	3		-8	8	3
Reclassification of advances	162	152	62	-376	0
Additions from business combinations	0	0	0	0	0
Addition	542	131	3,449	43	4,165
Disposal	-3	0	-58	0	-61
Depreciation	-320	-183	-3,172	0	-3,675
Carrying amount as at 31 December 2018	**2,717**	**579**	**5,792**	**43**	**9,131**
Cost of acquisition/production	5,499	3,895	22,925	43	32,362
Accumulated depreciation	-2,782	-3,316	-17,133	0	-23,231
Carrying amount as at 31 December 2018	**2,717**	**579**	**5,792**	**43**	**9,131**
Carrying amount as at 31 December 2018	**2,717**	**579**	**5,792**	**43**	**9,131**
IFRS 16	**38,299**	**0**	**808**	**0**	**39,107**
Foreign currency translation difference	142	0	13	0	155
Reclassification of advances	0	0	43	-43	0
Additions from business combinations	0	0	0	0	0
Addition	6,914	55	3,791	86	10,846
Disposal	-237	-1	-59	0	-297
Depreciation	-6,955	-132	-3,611	0	-10,698
Carrying amount as at 31 December 2019	**40,880**	**501**	**6,777**	**86**	**48,244**
Cost of acquisition/production	50,297	3,913	25,976	86	80,272
Accumulated depreciation	-9,417	-3,412	-19,199	0	-32,028
Carrying amount as at 31 December 2019	**40,880**	**501**	**6,777**	**86**	**48,244**

During 2019, the Frequentis Group concluded agreements for the purchase of property, plant and equipment totalling EUR 22 thousand, which will be delivered and invoiced in 2020.

For information on the recognised right-of-use assets resulting from the application of IFRS 16, see note 41.

15. Intangible assets

in EUR thousand	Software and licences	Advances	Total
Carrying amount as at 31 December 2017	**7,971**	**75**	**8,046**
Foreign currency translation difference	0	0	0
Reclassification of advances	0	0	0
Additions from business combinations	0	0	0
Addition	761	8	768
Disposal	-2	0	-2
Amortisation	-2,314	0	-2,314
Carrying amount as at 31 December 2018	**6,416**	**83**	**6,499**
Cost of acquisition/production	17,744	83	17,827
Accumulated amortisation	-11,328	0	-11,328
Carrying amount as at 31 December 2018	**6,416**	**83**	**6,499**
Carrying amount as at 31 December 2018	**6,416**	**83**	**6,499**
Foreign currency translation difference	0	0	0
Reclassification of advances	8	-8	0
Additions from business combinations	0	0	0
Addition	3,160	186	3,346
Disposal	-10	0	-10
Amortisation	-2,263	0	-2,263
Carrying amount as at 31 December 2019	**7,311**	**261**	**7,572**
Cost of acquisition/production	19,175	261	19,436
Accumulated amortisation	-11,864	0	-11,864
Carrying amount as at 31 December 2019	**7,311**	**261**	**7,572**

In the reporting period, Frequentis spent EUR 22.1 million (2018: EUR 19.4 million) on research and development work that was not ordered by customers. This was recognised in the income statement.

During 2019, the Frequentis Group concluded agreements for the purchase of intangible assets totalling EUR 520 thousand, which will be received and invoiced in 2020.

16. Goodwill

in EUR thousand	Goodwill
Carrying amount as at 31 December 2017	**2,228**
Foreign currency translation difference	0
Additions from business combinations	0
Additions	0
Disposal	0
Impairment losses	0
Carrying amount as at 31 December 2018	**2,228**
Cost of acquisition/production	2,228
Accumulated impairment losses	0
Carrying amount as at 31 December 2018	**2,228**
Carrying amount as at 31 December 2018	**2,228**
Foreign currency translation difference	0
Additions from business combinations	0
Additions	0
Disposal	0
Impairment losses	0
Carrying amount as at 31 December 2019	**2,228**
Cost of acquisition/production	2,228
Accumulated impairment losses	0
Carrying amount as at 31 December 2019	**2,228**

For the purpose of impairment testing, goodwill has been allocated to the group's cash-generating units (CGUs) as follows:

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Systems Interface Ltd.	1,266	1,266
Frequentis Comsoft GmbH	909	909
Team Communication Technology Management GmbH	53	53
	2,228	**2,228**

Goodwill was tested for impairment when preparing the consolidated financial statements by estimating the recoverable amount of the relevant companies using discounted cash flows for a three-year detailed planning period and a perpetual annuity derived from this.

The impairment test in accordance with IAS 36 was based on detailed plans for earnings, the statement of financial position and investment for all cash-generating units for the next three years. These are prepared annually as part of the group-wide budget planning process, taking the current business situation into account. For periods after the budget planning period, a long-term growth rate of 2% has been determined and was used to forecast future cash flows.

Forecast future cash flows were discounted using discount rates based on normal market and country-specific risks.

Impairment test 2019	Systems Interface Ltd.	Frequentis Comsoft GmbH	Team Communication Technology Management GmbH
Interest rate (WACC after taxes)	9.27%	7.49%	7.90%
Recoverable amount in EUR thousand	4,670	47,471	10,956
Carrying amount of the CGU including goodwill in EUR thousand	4,287	7,910	518

Impairment test 2018	Systems Interface Ltd.	Frequentis Comsoft GmbH	Team Communication Technology Management GmbH
Interest rate 2019-2021	7.65%	7.22%	7.22%
Interest rate perpetual annuity	8.55%	8.12%	8.12%
Recoverable amount in EUR thousand	4,561	24,578	6,511
Carrying amount of the CGU including goodwill in EUR thousand	4,052	6,251	367

Since the present value of the forecast cash flows for the cash-generating units exceeds the goodwill allocated to them, no impairment losses had to be recognised in the reporting period.

In the sensitivity analyses for the groups of cash-generating units to which material goodwill is allocated, a 10% reduction in future cash flows or an increase of one percentage point in discount rates was assumed.

As at the reporting date, the Executive Board did not identify any realistic scenarios for Frequentis Comsoft GmbH and Team Communication Technology GmbH that would result in impairment of goodwill.

For Systems Interface Ltd., the carrying amount would correspond to the recoverable amount if there was a reduction of 8.2% in cash flows or an increase of 0.6% in the discount rate.

17. Investments in associated companies

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Investments in associated companies	733	665

Name of associated company	Registered office	Voting rights and shareholding as at 31 Dec. 2019	Voting rights and shareholding as at 31 Dec. 2018
GroupEAD Europe S.L.	Madrid	28%	28%
Mission Embedded GmbH	Vienna	20%	20%
AIRNAV Technology Services Inc.	Iloilo	40%	40%
AIRlabs Austria GmbH	Graz	18%	-

The reporting date for all associated companies is 31 December and they are all accounted for using the equity method. There were neither any unrealised losses nor any significant restrictions on the repayment of loans. Only at AIRlabs Austria GmbH is there a block on the distribution of profits imposed by the shareholder agreement.

The Frequentis Group has a 28% interest in **GroupEAD Europe S.L.**, Madrid. The carrying amount of this investment developed as follows (based on the most recent available financial statements for 2018 and the dividends already received for 2019):

		2019 EUR thousand	2018 EUR thousand
31 Dec. prior year	**Equity interest in GroupEAD Europe S.L.**	**491**	**491**
	Attributable profit in prior year	48	116
	Less dividend paid for the prior year	-48	-116
	Provisional attributable profit in the reporting period	56	56
	Less dividend paid in the reporting period	-56	-56
31 Dec. reporting period	**Equity interest in GroupEAD Europe S.L.**	**491**	**491**

GroupEAD Europe S.L. acts as operational manager of the EAD system on behalf of EUROCONTROL. The EAD system was developed by the Frequentis Group, which is responsible for technical operation. The close relationship between the technical and operational managers has a positive impact on the quality of service and the customer relationship. In addition, the Frequentis Group is able to use the experience and operational expertise of GroupEAD Europe S.L. in the ongoing development of the EAD system and to develop other AIM systems for the international market.

The next table contains summarised financial information on this company as at the last reporting date (31 December 2018):

GroupEAD Europe S.L.	31 Dec. 2018 EUR thousand	31 Dec. 2017 EUR thousand
Non-current assets	218	220
Current assets	2,678	3,076
Non-current liabilities	0	0
Current liabilities	970	1,130
Net assets (100%)	**1,926**	**2,166**
Frequentis Group's share of net assets (28%)	539	607
Dividend paid in the following year	-48	-116
Carrying amount of the stake in the associated company	**491**	**491**
Revenues	7,211	7,012
Profit from the continuing operations (100%)	373	651
Other comprehensive income (100%)	0	0
Total comprehensive income (100%)	**373**	**651**
Total comprehensive income (28%)	104	182
Earnings included in the prior year (28%)	-56	-66
Share of earnings for the following year included due to dividends received (28%)	56	56
Frequentis Group's share of total comprehensive income	**104**	**172**

The Frequentis Group holds a 20% interest in **Mission Embedded GmbH**, Vienna. The development of this investment is presented below:

		2019 EUR thousand	2018 EUR thousand
31 Dec. prior year	**Equity investment in Mission Embedded GmbH**	**148**	**97**
	Attributable profit in the reporting period	32	51
	Actuarial losses in accordance with IAS 19	-2	0
31 Dec. reporting period	**Equity investment in Mission Embedded GmbH**	**178**	**148**

Mission Embedded GmbH was created by the spin-off of the "Mission Embedded" department in 2014 to drive forward the positive development of Frequentis' expertise in hardware and hardware-related software for safety-critical applications by giving it greater independence.

The next table contains summarised financial information on this company as at the last reporting date (31 December 2019):

Mission Embedded GmbH	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Non-current assets	213	127
Current assets	1,555	1,446
Non-current liabilities	158	136
Current liabilities	718	698
Net assets (100%)	**892**	**739**
Frequentis Group's share of net assets (20%)	178	148
Carrying amount of the stake in the associated company	**178**	**148**
Revenues	4,073	3,311
Profit from continuing operations (100%)	163	254
Other comprehensive income (100%)	-10	-15
Total comprehensive income (100%)	**153**	**239**
Frequentis Group's share of the profit from continuing operations (20%)	32	51
Frequentis Group's share of other comprehensive income (20%)	-2	-3
Frequentis Group's share of total comprehensive income (20%)	**30**	**48**

The Frequentis Group holds 40% of the shares in **AIRNAV Technology Services Inc.**, which is registered in the Philippines (Iloilo). The table shows the development of this investment:

		2019 EUR thousand	2018 EUR thousand
31 Dec. prior year	**Equity interest in AIRNAV Technology Services Inc.**	**26**	**4**
	Goodwill due to capital increase	0	1
	Attributable profit in the reporting period	11	21
31 Dec. reporting period	**Equity investment in AIRNAV Technology Services Inc.**	**37**	**26**

This company was established in 2017 and operates in the ATM segment. Its operations comprise testing, installation and maintenance services and on-site training for international customer projects (especially in the Asian and Arab markets).

In summer 2019, the Austrian Federal Ministry of Transport, Innovation and Technology awarded the AIRlabs consortium led by the FH JOANNEUM university of applied sciences in Graz the contract to create the innovation laboratory **AIRlabs Austria GmbH**. This company was established in December 2019 and registered in the commercial register in January 2020. The purpose of this company is to build and operate testing areas and test infrastructure for drones in Austria, including the related research, development and registration.

The Group has classified its influence as significant, despite the 18% shareholding, due to the significant level of management involvement in the associate.

The table shows the development of this investment:

		EUR thousand
December 2019	Pro rata contribution to share capital	27
31 Dec. 2019	**Investment in AIRlabs Austria GmbH**	**27**

Since AIRNAV Technology Services Inc., and AIRlabs Austria GmbH are not material associated companies, the key financial data are summarised in aggregate form in the following table:

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Non-current assets	32	20
Current assets	256	50
Liabilities	41	5
Net assets (100%)	**247**	**65**
Frequentis Group's share of net assets	**66**	**26**
Revenues	379	298
Profit for the period	27	53
Frequentis Group's share of profit for the period	11	21
Frequentis Group's share of other comprehensive income	0	0
Frequentis Group's share of total comprehensive income	**11**	**21**

A proportionate share of the profit for the year from associated companies of EUR 148 thousand (2018: EUR 244 thousand) was recognised. There were no unrecognised losses in the reporting period or the prior year.

18. Equity instruments

The equity instruments held in the reporting period were as follows:

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Altitude Angel Ltd.	863	569
Viennasys Software Entwicklung GmbH	11	7
	874	**576**

In 2018, a 5.6% interest in the start-up company Altitude Angel Ltd. in Reading, UK, was acquired. Based on the due diligence and valuation, a transaction price of EUR 569 thousand was determined for this investment. This also corresponded to its fair value as at 31 December 2018. In December 2019, there was a further financing round by all investors, with the same valuation of the company. In this context, the Frequentis Group paid a contribution of EUR 294 thousand, which increased its interest to 6.88%. The fair value as at 31 December 2019 was therefore EUR 863 thousand.

The equity instruments also include a 10.29% stake in Viennasys Software Entwicklung GmbH, which is based in Vienna. The calculation of the fair value as at 31 December 2019 showed that it had increased from EUR 7 thousand to EUR 11 thousand.

19. Time deposits, cash and cash equivalents

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Long-term time deposits	10,000	8,000
Loss allowance pursuant to IFRS 9	-3	-2
	9,997	**7,998**

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Short-term time deposits	8,000	10,000
Loss allowance pursuant to IFRS 9	-2	-3
	7,998	**9,997**

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Cash and cash equivalents	66,892	45,547
Loss allowance pursuant to IFRS 9	-10	-4
	66,882	**45,543**

The cash and cash equivalents comprise investments and bank deposits, all of which are short-term and have an original term of up to three months. The carrying amount of these assets corresponds to their fair value. All components of cash and cash equivalents are freely available to the company.

The long-term time deposits expire at the latest at the end of 2021.

In accordance with IFRS 9, based on the expected credit loss (ECL) model, loss allowances were established at the date of recognition of the investment on the basis of the expected potential credit losses. Since no official rating was available for one bank, an expected credit loss of 0.03% was derived by comparing its key figures with those of similar banks for which an official rating was available. Further, an expected credit loss of 0.04% was calculated for another bank due to a poorer rating and higher balance as at 31 December 2019.

No impairment losses had to be recognised for the other bank balances due to good ratings and the short-term nature of the deposits (due daily).

20. Inventories

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Raw materials and supplies	6,672	7,568
Work in progress	804	1,083
Finished goods	1,990	1,689
Merchandise	3,120	2,171
Advance payments made	1,219	603
	13,805	**13,114**

Work in progress comprises assemblies that were still being processed at the reporting date.

The finished goods are assemblies that are part of overall solutions for customers and can only be invoiced as distinct components of a contract with a customer in exceptional cases. The inventories result from optimisation of manufacturing batches (larger production batches reduce unit costs) and procurement lots, as well as the management of a safety stock for maintenance obligations

Merchandise comprises tangible assets, mainly future components of customer projects.

The impairment loss on inventories was EUR 1,122 thousand in 2019 (2018: EUR 227 thousand). Reversals of EUR 6 thousand were made in 2019 (2018: EUR 0 thousand). The increase in the impairment losses is due to a reduction in long-term requirements.

21. Trade accounts receivable

	2019 EUR thousand	2018 EUR thousand
Trade accounts receivable, gross	59,188	45,221
Individual loss allowances	-438	-722
Loss allowance pursuant to IFRS 9	-223	-133
Trade accounts receivable, net	**58,527**	**44,366**

Trade accounts receivable contain non-current items totalling EUR 576 thousand (31 December 2018: EUR 0 thousand) that have to be recognised as current items pursuant to IAS 1.68.

Trade accounts receivable are not interest-bearing and are generally due within 30 days.

Since most of the Frequentis Group's customers are authorities, government-related businesses or, in the case of general contractors, large international companies, the credit risk is classified as low. One aspect of risk management at the Frequentis Group is that business relationships are only entered into with third parties that are deemed to be creditworthy. The creditworthiness of customers is systematically evaluated and deliveries are only made if they have appropriate credit standing or if adequate steps are taken to address the risks identified.

If a higher risk is identified during the quotation process, credit insurance, advances by customers or letters of credit are used to reduce the credit risk.

All identifiable risks are taken into account by appropriate impairment charges. In the event of default, the receivables are derecognised.

The carrying amounts of financial assets represent the maximum credit risk.

The company's trade accounts receivable mainly relate to customers that are authorities and government-related organisations with high creditworthiness so the expected credit loss calculations did not result in any material change in the measurement of the loss allowance.

The table shows the development of the loss allowance for trade accounts receivable:

	2019 EUR thousand	2018 EUR thousand
As at 31 December of the previous year	**855**	**568**
Changes due to accounting policies (IFRS 9)	0	132
As at 31 December of the previous year	**855**	**700**
Change in impairments pursuant to IFRS 9	90	1
Additions	133	188
Utilisation	-294	0
Reversal	-123	-34
As at 31 December of the financial year	**661**	**855**

The maturity structure of trade accounts receivable as at 31 December 2019 was as follows:

	Weighted average loss rate	2019 EUR thousand	2018 EUR thousand
Trade accounts receivable, net		**58,527**	**44,366**
of which: neither overdue nor impaired	**0.05%**	**43,764**	**35,126**
of which, overdue but not impaired			
Up to 30 days	0.12%	8,883	6,097
30-60 days	0.72%	1,707	2,373
60-90 days	0.93%	482	418
90-180 days	1.48%	2,902	47
180-210 days	7.68%	13	42
> 210 days	16.66%	776	262

The Frequentis Group's experience with public-sector customers shows that the payment date often deviates from the due date. This is frequently due to approval processes and budget procedures within the authorities (especially around the turn of the year). Past experience shows that such delays in payment do not in themselves indicate a higher risk of default.

22. Contract assets from contracts with customers

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Contract assets from contracts with customers	54,924	54,169
Advances from customers	-16,570	-13,319
	38,354	**40,850**

The contract assets mainly result from performance obligations already satisfied by the company but not yet invoiced. Contract assets are reclassified to trade accounts receivable when there is an unconditional right to receive consideration. This is normally the case when the Group issues an invoice for the goods and services provided.

The year-on-year increase in contract assets is the net result of a large number of newly commenced and invoiced projects

The contract assets of EUR 40,850 thousand recognised as at 1 January (2018: EUR 32,996 thousand) include EUR 31,773 thousand (2018: EUR 27,049 thousand) that were invoiced in the reporting period.

Based on expected project progress and contractual clauses, EUR 30,970 thousand (2018: EUR 37,658 thousand) of the total contract assets of EUR 38,354 thousand recognised as at 31 December 2019 (2018: EUR 40,850 thousand) are scheduled for invoicing in the following year. Contract assets with a carrying amount of EUR 7,384 thousand (2018: EUR 3,192 thousand) are not expected to be invoiced until after 2020. that date

It is assumed that there are no relevant default risks for contract assets from contracts with customers. The impairment of contract assets recognised in the reporting period amounted to EUR 26 thousand. The creditworthiness of customers is carefully checked, particularly in the case of orders for which the Group makes advance payments. These orders primarily relate to services for public authorities or major international companies.

Based on the sensitivity analysis, a change of +/-5% in the average profit contribution margin would alter contract assets by +/-EUR 3,019 thousand.

23. Contract costs

In the Frequentis Group, contract costs mainly comprise sales commission. These contract costs are recognised and amortised in line with consistent with the transfer of control over goods and services to the customer.

The development of capitalised contract costs is as follows:

	2019 EUR thousand	2018 EUR thousand
As at 1 January	**1,697**	**3,885**
Contract costs capitalised in the reporting period	2,718	1,957
Amortisation in the reporting period	-1,616	-4,145
Impairment losses	-250	0
As at 31 December	**2,549**	**1,697**

The amortisation expense for contract costs is recognised in the cost of materials and purchased services.

The impairment losses relate to loss-making projects. As a result, the related contract costs were impaired.

24. Receivables from affiliated and associated companies

This item contains trade accounts receivable from the following companies:

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Frequentis Group Holding GmbH	15	22
GroupEAD Europe S.L.	1	4
Mission Embedded GmbH	7	5
of which current	23	31
of which non-current	0	0

25. Other current assets

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Prepaid expenses and deferred charges	3,879	3,807
Receivables from research grants and subsidies	2,185	2,711
Receivables from grants and subsidies	259	1,196
Receivables from fiscal authorities (excluding income taxes)	1,204	1,110
Interest receivables from time deposits	205	187
Positive fair value of cash flow hedges and MTM valuation	92	173
Other assets	205	1,099
	8,029	**10,283**

26. Share capital and retained earnings

At the Annual General Meeting on 8 April 2019, the Executive Board was authorised, subject to the approval of the Supervisory Board, to increase the share capital of Frequentis AG by up to EUR 6 million up to 7 April 2024 by issuing up to 6 million new no-par bearer shares in one or more tranches in return for cash or payment in kind. The Executive Board was also authorised, subject to the approval of the Supervisory Board, to fully or partially exclude shareholders' subscription rights and, subject to the approval of the Supervisory Board, to define further details of the issue conditions (especially the issue price, type of contribution in kind, rights of the shares, exclusion of subscription rights, etc.) (authorised capital).

Following the initial public offering (IPO), 13,199,999 bearer shares were admitted to trading on the Vienna Stock Exchange with the admission notification of 6 May 2019 and on the Frankfurt Stock Exchange (regulated market) with the admission decision of 13 May 2019. In the IPO, a total of 2,873,975 shares were placed on the capital market at a price of EUR 18.00 per share. 1,200,000 of these were newly issued shares, while 1,673,975 were shares previously held by Mr. Johannes Bardach and sold by him. In addition to the bearer shares, there is still one registered share with restricted transferability, which is held by Mr. Johannes Bardach. The total number of issued shares as at 31 December 2019 was 13,200,000.

Following the IPO, Johannes Bardach has a shareholding of approximately 68% (around 8% held directly and 60% held indirectly via Frequentis Group Holding GmbH), B&C Innovation Investments GmbH has a 10% shareholding, and the free float is 22%.

The issue price of the shares was EUR 18.00. Since they are no-par shares, an arithmetical amount of EUR 1,200 thousand of the total proceeds of EUR 21,600 thousand received by Frequentis AG was allocated to the share capital, and the remaining amount of EUR 20,400 thousand was allocated to the capital reserves.

The total cost of the IPO was EUR 2,322 thousand, of which EUR 892 thousand was allocated directly to equity after deduction of the related income taxes of EUR 223 thousand. These are the costs relating to the new shares due to the capital increase. Costs of EUR 859 thousand were charged to Mr. Johannes Bardach as they related to the sale of the existing shares. The resulting receivable has already been settled in full.

The following table shows the change in the number of shares:

	2019	2018
As at 1 Jan.	**12,000,000**	**12,000,000**
Newly issued shares due to the capital increase	1,200,000	
As at 31 Dec.	**13,200,000**	**12,000,000**

At the Extraordinary General Meeting of Frequentis AG on 20 September 2019, the Executive Board was authorised, for a period of 30 months, to purchase shares in Frequentis AG pursuant to Section 65(1) No. 4 and Section 8 of the Austrian Companies Act (AktG), both via the stock market and outside the stock exchange, and to exclude the general selling possibilities of shareholders related to such purchase. Furthermore, the Executive Board was authorised to reduce the share capital by cancelling shares in Frequentis AG without a further resolution of the General Meeting.

In addition, at the Extraordinary General Meeting of Frequentis AG on 20 September 2019, the Executive Board was authorised, pursuant to Section 65 1b AktG, to dispose of or utilise own shares purchased, during a period of five years from the date of the resolution, therefore up to and including 19 September 2024, with the consent of the Supervisory Board but without a further resolution by the General Meeting, including in other ways than disposal via the stock exchange or a public offering, in particular

a) to grant own shares to employees, senior managers and/or members of the Executive Board or the managing boards of its affiliates, including for purposes of share transfer programs, in particular stock options, long-term incentive plans and other stock ownership plans,
b) to deliver own shares under convertible bonds issued by Frequentis AG.
c) as consideration for the acquisition of entities, business operations, parts of business operations or shares in one or several domestic or foreign companies, and
d) for any other legally permissible purpose

and to exclude the subscription rights of shareholders. This authorisation may be exercises in full or in part or in several tranches and for several purposes.

The change in shareholders' equity is presented in the consolidated statement of changes in shareholders' equity.

Dividend

The net profit of Frequentis AG stated in the individual financial statements as at 31 December 2019 is EUR 6,969 thousand (31 December 2018: EUR 3,123 thousand) and the distributable profit is EUR 47,341 thousand (31 December 2018: EUR 41,692 thousand).

At the Annual General Meeting on 14 May 2020, the Executive Board of Frequentis AG will propose a dividend of EUR 0.20 per share.

In 2019, the issued shares received a dividend distribution of EUR 1,320 thousand for 2018 (2018 for 2017: EUR 14,400 thousand). That corresponds to a dividend per share of EUR 0.10 in 2019 (2018: EUR 1.20 per share).

27. Reserves

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Capital reserves	19,976	245
IAS 19 reserve	-5,608	-4,512
Option reserve	63	0
Cash flow hedge reserve	-675	-30
Retained earnings	87,911	77,124
Retained earnings and other reserves	**81,691**	**72,582**

The capital reserves result from transactions with owners. For information on the change in 2019, see the explanation on the IPO in note 26: Share capital.

The following table presents the expenses and income and the related tax liability recognised in other comprehensive income:

Item	Amount before income taxes 2019 EUR thousand	Income taxes 2019 EUR thousand	Amount after income taxes 2019 EUR thousand	Amount before income taxes 2018 EUR thousand	Income taxes 2018 EUR thousand	Amount after income taxes 2018 EUR thousand
Foreign currency translation	302	0	302	71	0	71
Realised gains/losses from foreign currency translation	-17	0	-17	0	0	0
Measurement of cash flow hedges	-860	215	-645	-245	61	-184
Remeasurement gains/losses from post-employment benefits	-1,480	370	-1,110	-663	166	-497
Investments accounted for at equity – amounts recognised in other comprehensive income	-2	0	-2	0	0	0
			-1,472			**- 610**

28. Share-based payment

Frequentis AG has agreed a long-term incentive programme (LTIP) with the chairman of the executive board, Mr. Norbert Haslacher.

The share-based payment is measured in accordance with IFRS 2 at fair value on the grant date. The expense is allocated over the required vesting period. Since the agreement stipulates that the shares awarded under the LTIP cannot be settled in cash, the share-based payment is recognised in a separate item of equity.

The participant in this programme is not required to make a personal investment in Frequentis AG shares. From the grant date, in each calendar year the beneficiary can sell a maximum of one third of the shares awarded under the LTIP 2019. In any case, the beneficiary may only sell the number of shares awarded under the LTIP 2019 or any subsequent long-term incentive plan if, at all times, he holds at least 7,000 of the shares awarded under the long-term incentive plan ("minimum shareholding").

The service period for the fulfilment of the targets has been set at three years. The targets for the key indicators were set by the Supervisory Board. On the settlement date (at the earliest three years after the grant date), assuming 100% target achievement, a maximum of 14,000 shares (gross – before deduction of taxes and fees), and at most 200% of the beneficiary's annual gross base salary for the 2019 financial year will be granted. Settlement is effected by transferring the corresponding number of shares of the net amount of the award to the respective securities account. Depending on the approval of the Supervisory Board, the settlement date is 30 April 2022.

The entitlement to the maximum allocation of 14,000 shares arises at a100%. target achievement. A lower target achievement level will result in a proportionate reduction in the entitlement. No shares will be allocated if target achievement is less than 50%.

The LTIP 2019 was approved by the General Meeting on 20 September 2019. The agreement with the Chairman of the Executive Board was signed on 30 September 2019. In order to qualify for the allocation of shares in the company, targets must be achieved. The achievement of each target will be measured over a three-year performance period. The agreed targets are based on the total shareholder return (TSR), organic growth of the operating performance, the EBIT margin and the profit margin, as well as the development of key accounts, employee satisfaction and customer satisfaction. Apart from the achievement of the targets, the Executive Board member does not have to provide any consideration for the shares awarded.

The following table summarises the main conditions for the share-based payment granted in the reporting period:

	LTIP 2019
Start of programme	1 Jan. 2019
Grant date	30 Sep. 2019
End of service period	31 Dec. 2021
Vesting date	30 Apr. 2022
Expected target achievement	74%
Expected no. of shares	10,368
Maximum no. of shares	14,000
Bonus shares allocated	None

Of the expected total future expense relating to the LTIP, the portion already earned as of the reporting date is recognised in shareholders' equity. This is based on the fair value on the grant date. The total expected expense for the LTIP obligation is measured at the fair value of the share as at 30 September 2019 (share price on the date of the agreement), which was EUR 18.05, multiplied by the number of shares granted and the expected target achievement. EUR 63 thousand (EUR 67 thousand including payroll-related costs) was recognised in personnel expenses in the consolidated statement of comprehensive income.

For the present LTIP, it was assumed that both the market-oriented target and the non-market-oriented targets will be achieved so the effect of the market-oriented targets must be reflected in the expected level of the target achievement and not in the fair value of the shares.

29. Non-controlling interests

The non-controlling interests relate to the following subsidiaries:

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Team Communication Technology Management GmbH, Vienna	1,096	925
ELARA Leitstellentechnik GmbH, Aachen	168	57
Systems Interface Ltd., Surrey	-89	48
Secure Service Provision GmbH, Leipzig	322	300
Frequentis DFS Aerosense GmbH, Vienna	71	10
	1,568	**1,340**

Team Communication Technology Management GmbH distributed a proportionate dividend of EUR 441 thousand to non-controlling shareholders and Secure Service Provision GmbH distributed a proportionate dividend of EUR 98 thousand.

In the reporting period, two shareholder contributions totalling EUR 79 thousand were received by Frequentis DFS Aerosense GmbH from non-controlling interests.

The following table provides information on the statement of financial position of consolidated subsidiaries with material non-controlling interests and the carrying amount of the non-controlling interests (amounts stated in EUR thousand, before intragroup eliminations):

Statement of financial position as at 31 December 2019	Non-current assets	Current assets	Non-current liabilities	Current liabilities	Net assets	Carrying amount of non-controlling interests
Team Communication Technology Management GmbH	142	3,689	209	1,386	2,236	1,096
ELARA Leitstellentechnik GmbH	352	312	124	198	342	168
Systems Interface Ltd.	188	2,332	565	2,116	-161	-89
Secure Service Provision GmbH	227	1,596	65	145	1,613	322
Frequentis DFS Aerosense GmbH	44	235	0	43	236	71
						1,568

Statement of financial position as at 31 December 2018	Non-current assets	Current assets	Non-current liabilities	Current liabilities	Net assets	Carrying amount of non-controlling interests
Team Communication Technology Management GmbH	80	2,935	144	983	1,888	925
ELARA Leitstellentechnik GmbH	195	127	0	206	116	57
Systems Interface Ltd.	47	2,597	448	2,075	121	48
Secure Service Provision GmbH	57	1,731	0	285	1,503	300
Frequentis DFS Aerosense GmbH	0	35	0	4	32	10
						1,340

The following table provides information on the income statement and statement of comprehensive income of the consolidated subsidiaries with significant non-controlling interests (in EUR thousand):

	Amounts before intragroup elimination				**Earnings attributable to non-controlling interests**		
2019	Total income (operating performance)	Profit for the period	Other comprehensive income	Total comprehensive income	Profit for the period	Other comprehensive income	Total comprehensive income
Team Communication Technology Management GmbH	8,120	1,282	-34	1,248	628	-17	611
ELARA Leitstellentechnik GmbH	2,231	226	0	226	111	0	111
Systems Interface Ltd.	3,364	-280	0	-280	-137	0	-137
Secure Service Provision GmbH	2,990	603	0	603	121	0	121
Frequentis DFS Aerosense GmbH	3	-59	0	-59	-18	0	-18
Total					**705**	**- 17**	**688**

	Amounts before intragroup elimination				Earnings attributable to non-controlling interests		
2018	Total income (operating per-formance)	Profit for the period	Other compre-hensive income	Total compre-hensive income	Profit for the period	Other compre-hensive income	Total compre-hensive income
Team Communication Technology Management GmbH	6,469	906	-1	905	444	0	444
ELARA Leitstellentechnik GmbH	1,992	82	0	82	40	0	40
Systems Interface Ltd.	5,618	-121	0	-121	-59	0	-59
Secure Service Provision GmbH	3,152	713	0	713	142	0	142
Frequentis DFS Aerosense GmbH	0	-3	0	-3	-1	0	-1
Total					**566**	**0**	**566**

30. Non-current provisions

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Provisions for severance payments	14,475	12,869
Provisions for pensions	3,035	2,647
Less pension insurance scheme	-2,573	-2,434
	462	**213**
Provisions for anniversary bonuses	343	301
Other provisions	786	808
Total non-current provisions	**16,066**	**14,191**

Since the life insurance policies are pledged to cover pension obligations, the corresponding amount accumulated in the pension insurance scheme are offset against the pension provisions.

31. Provisions for severance payments

This item comprises claims by employees in Austria to one-off severance payments on the basis of statutory regulations and collective agreements. These payments may arise due to dismissal by the employer, termination of the employment contract by mutual consent, retirement or death of the employee. The level of the severance payment depends on the number of years of service with the Frequentis Group and the remuneration applicable when the employee leaves the company.

The corresponding severance payments will result in outflows between 2020 and 2047.

Obligations for severance payments were measured using the following parameters:

	2019	2018
Interest rate	1.3%	2.0%
Wage and salary trend	3.0%	3.0%
Average term of the defined benefit obligation	12.1 years	12.2 years

The following table provides the reconciliation of the severance payment obligations at the beginning and end of the reporting period:

	2019 EUR thousand	2018 EUR thousand
Present value of severance payment obligations (DBO) as at 1 January = provisions as at 1 January	**12,869**	**11,989**
Current service cost (CSC)	629	600
Interest cost (IC)	252	219
Actual payments made	-491	-537
Recognised actuarial loss (+)/gain(-)	1,216	598
Present value of severance payment obligations (DBO) as at 31 December = provisions as at 31 December	**14,475**	**12,869**

The provisions for severance payments relate mainly to employees of the Austrian companies in the Frequentis Group before 31 December 2002 as a change in Austrian law led to switch from defined benefit to defined contribution severance payments on 1 January 2002. The new regulation applies to employees who took up employment with the Group after 31 December 2002. For these employees, the Group pays a monthly contribution to an external post-employment benefit plan which has to guarantee the severance payments, so the Frequentis Group has no severance payment obligations for these employees. The expenses for this were EUR 875 thousand in the reporting period (2018: EUR 824 thousand).

Presentation of the recognised actuarial gains/losses for severance payment obligations:

	2019 EUR thousand	2018 EUR thousand
Changes in demographic assumptions	0	-69
Changes in financial assumptions	1,130	632
Other changes	86	35
Total	**1,216**	**598**

The main risk relating to anniversary obligations is the development of inflation and salary increases.

The following sensitivity analysis for severance payment obligations (amounts in EUR thousand) shows the effect of changes in the key actuarial assumptions, while the remaining assumptions remained unchanged.

Interest rate	Salary increases	DBO 31 Dec. 2019
1.3%	3.5%	15,340
1.15%	3.0%	14,734
1.3%	3.0%	14,475
1.45%	3.0%	14,222
1.3%	2.5%	13,669

Interest rate	Salary increases	DBO 31 Dec. 2018
2.0%	3.5%	13,651
1.85%	3.0%	13,101
2.0%	3.0%	12,869
2.15%	3.0%	12,642
2.0%	2.5%	12,141

32. Provisions for pensions

The pension benefit obligations are defined benefit obligations arising from individual commitments to current members of the Executive Board and one former member of the Executive Board. The beneficiaries receive a lifelong monthly retirement pension or pension benefits for surviving dependants, resulting from reinsurance contributions.

The plan assets comprise funded insurance which is pledged to the entitled beneficiaries.

The pension benefit obligations were measured using the following parameters:

	2019	2018
Interest rate	1.3%	2.0%
Retirement age	60/65 years	60/65 years
Average term of the defined benefit obligation	14.18 years	13.8 years

Development of pension provisions and plan assets:

	2019 EUR thousand	2018 EUR thousand
Present value of the defined benefit obligations (DBO) as at 1 January	2,647	5,019
Fair value of plan assets	-2,434	-4,372
+ Provisions/surplus plan assets as at 1 January	**213**	**647**
Present value of the defined benefit obligation (DBO) as at 1 January	2,647	5,019
Service cost	131	97
Interest cost	52	91
Pension payments	-89	-92
Transfer of pension benefit obligations to Frequentis Group Holding GmbH	0	-2,508
Recognised actuarial losses (+)/gains (-)	294	40
Present value of the defined benefit obligations (DBO) as at 31 December	**3,035**	**2,647**
Fair value of plan assets as at 1 January	2,434	4,372
Return on plan assets	49	80
Payments made	150	150
Payments received from plan assets	-89	-119
Transfer of plan assets to Frequentis Group Holding GmbH	0	-2,024
Recognised actuarial losses (-)/gains (+)	29	-25
Fair value of plan assets as at 31 December	**2,573**	**2,434**
Provisions as at 31 December		
Present value of the defined benefit obligation (DBO)	3,035	2,647
Fair value of plan assets	-2,573	-2,434
+ Provisions/surplus plan assets as at 31 December	**462**	**213**

The actuarial gains and losses were recognised in other comprehensive income in the reporting period and are as follows:

	2019 EUR thousand	2018 EUR thousand
Changes in demographic assumptions	0	64
Changes in financial assumptions	276	-52
Other changes	18	28
Other changes to plan assets	-29	25
Total	**265**	**65**

For the Frequentis Group, the principal risks relating to pension obligations are the development life expectancy and the development of inflation, because the pension benefits comprise lifelong pension payments. The risk remaining at the Frequentis Group is that the development of the plan assets may not cover the anticipated minimum return or preserve the value of the capital.

The following sensitivity analysis for pension benefit obligations (amounts in EUR thousand) shows the effect of changes in key actuarial assumptions, while the remaining assumptions remained unchanged.

Interest rate	DBO 31 Dec. 2019
1.15%	3,100
1.3%	3,035
1.45%	2,973

Interest rate	DBO 31 Dec. 2018
1.85%	2,701
2.0%	2,647
2.15%	2,594

33. Provisions for anniversary bonuses

Provisions for obligations to pay anniversary bonuses relate to long-term employee benefits at Frequentis Comsoft GmbH based on company practice. Employees are granted a one-off bonus of between EUR 1 thousand and EUR 3 thousand for a certain length of service.

Obligations for anniversary bonuses were measured using an interest rate of 1.3% (2.0%).

	2019 EUR thousand	2018 EUR thousand
Present value of the defined benefit anniversary bonus obligations (DBO) as at 1 January = Provisions as at 1 January	**301**	**301**
Current service cost (CSC)	34	35
Interest cost (IC)	6	5
Actual payments made	-17	-32
Recognised actuarial loss (+)/gain(-)	19	-8
Present value of the defined benefit anniversary bonus obligations (DBO) as at 31 December = Provisions as at 31 December	**343**	**301**

The main risk relating to anniversary obligations is the development of inflation.

The following sensitivity analysis for anniversary bonus obligations (amounts in EUR thousand) shows the effect of changes in key actuarial assumptions, while the remaining assumptions remained unchanged.

Interest rate	DBO 31 Dec. 2019
1.15%	347
1.3%	343
1.45%	339

Interest rate	DBO 31 Dec. 2018
1.85%	305
2.0%	301
2.15%	298

34. Other non-current provisions

The other non-current provisions comprise:

	As at 31 Dec. 2018 EUR thousand	Foreign exchange difference EUR thousand	Interest EUR thousand	Used EUR thousand	Reversed EUR thousand	Added EUR thousand	As at 31 Dec. 2019 EUR thousand
Provisions for leave based on period of service	58	1	-4	0	0	29	84
Provisions for projects	731	0	-8	-54	0	0	669
Other	19	0	0	0	0	14	33
	808	**1**	**-12**	**- 54**	**0**	**43**	**786**

A long-term holiday provision is recognised for a foreign subsidiary for an additional holiday entitlement which is dependent on length of service.

The provisions for projects contain project costs for which provisions are recognised due to the excess of estimated future expenses over future revenue. It is not expected to be utilized within the next twelve months.

The interest on the service-related holiday provision is recognised in personnel expenses while the interest for the project provisions is recognised in interest expense.

35. Contract liabilities from contracts with customers

Contract liabilities from contracts with customers comprise obligations to transfer goods and services to customers, for which consideration has already been received. This primarily relates to advance payments, some of which are secured by prepayment guarantees. In addition, in some cases payments are secured by bank guarantees. No collateral existed either on the reporting date or during the year.

The following table shows the structure of contract liabilities from contracts with customers:

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Advances for customer projects	44,728	39,695
Advances offset against contract assets from contracts with customers	-14,157	-11,896
	30,571	**27,799**
Other contract liabilities	5,461	9,858
Other contract liabilities offset against contract assets from contracts with customers	-2,413	-1,156
	3,048	**8,702**
Accrued revenue for maintenance contracts	10,867	5,695
Liabilities for outstanding performance obligations for customer orders after final invoicing (current)	3,408	5,355
Liabilities for outstanding performance obligations for customer orders after final invoicing (non-current)	788	1,072
Total contract liabilities from contracts with customers	**48,682**	**48,623**

Other contract liabilities contain contractual claims to advance payments.

EUR 3,347 thousand (2018: EUR 1,072 thousand) of the contract liabilities have a term of more than 12 months.

36. Payables to affiliated and associated companies

This item contains trade accounts payable to the following companies:

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Frequentis Group Holding GmbH	3	3
Mission Embedded GmbH	64	106
Group EAD Europe S.L.	42	85
AIRNAV Technology Services Inc.	73	32
Total, current	**182**	**226**

37. Other liabilities

EUR 2,620 thousand of the reduction in other non-current liabilities results from early repayment of loans in connection with grants and subsidies for research and development.

The other current liabilities comprise:

	31 Dec. 2019 EUR thousand	31 Dec. 2018 EUR thousand
Provisions for holidays not yet taken	3,483	3,370
Negative fair values of cash flow hedges and MTM valuation	2,181	1,009
Liabilities to the Austrian fiscal authorities (excluding income taxes)	1,931	1,160
Advances received in connection with grants and subsidies	466	572
Provisions for overtime	435	328
Provisions for consultancy costs	370	458
Other liabilities	2,312	1,925
Total, current	**11,178**	**8,822**

The other liabilities mainly comprise liabilities to local social security institutions and liabilities to employees.

38. Other current provisions

The other current provisions comprise:

	As at 31 Dec. 2018 EUR thousand	Foreign exchange difference EUR thousand	Utilisation EUR thousand	Reversal EUR thousand	Addition EUR thousand	As at 31 Dec. 2019 EUR thousand
Bonuses	5,411	29	-5,440	0	7,683	7,683
Provisions for projects	3,233	38	-3,271	0	4,150	4,150
Other	1,289	0	-1,204	-85	1,706	1,706
	9,933	**67**	**-9,915**	**- 85**	**13,539**	**13,539**

The provisions for bonuses contain employee bonuses and variable salary components that are not yet due for payment.
The provisions for projects contain project costs for which provisions are recognised due to the excess of estimated future expenses over future revenue.
It is expected that the current provisions will result in actual outflows in the 2020 financial year.
On the basis of the sensitivity analysis, a change in excess costs of +/-10% would change the provisions for projects by +/- EUR 1,682 thousand.

Other information

39. Consolidated cash flow statement

In the consolidated cash flow statement, cash inflows and outflows for operating, investing and financing activities are reported separately. The operating cash flow is reported using the indirect method. Non-cash expenses (mainly depreciation and amortisation) and income are therefore added to or deducted from the profit before tax. Taking into consideration changes in net working capital, this provides the cash flow from operating activities. Cash flows from forward exchange contracts are recognised in the cash flow from operating activities.

The increase in the cash flow from operating activities from EUR 4,559 thousand to EUR 17,728 thousand results, inter alia, from the change in the presentation of rental and lease payments due to the requirements of IFRS 16 (in 2018, these payments were presented in the cash flow from operating activities, while in the reporting period an amount of EUR 7,238 thousand is presented in the cash flow from financing activities). Interest payments on lease liabilities are recognised in the cash flow from operating activities.

Investing activities mainly comprise cash inflows from and outflows for intangible assets, property, plant and equipment, equity instruments, securities, and investments in associated companies.

Financing activities comprise dividend payments, cash outflows for repayment of loans and lease liabilities, and cash inflows from loans. In the previous year, the cash inflows and outflows for loans contained short-term cash advances of EUR 12,600 thousand; the average amount was EUR 1,575 thousand. There were no such cash advances in the reporting period.

The change in financial liabilities, where cash inflows and outflows are presented in the cash flow statement as cash flows from financing activities, is as follows:

	Carrying amount as at 1 Jan. 2019 EUR thousand	Change in accounting methods (IFRS 16) as at 1 Jan. 2019 EUR thousand	Exchange rate differences EUR thousand	Cash flow EUR thousand	Addition IFRS 16 EUR thousand	Reclassification of maturities EUR thousand	Carrying amount as at 31 Dec. 2019 EUR thousand
Non-current liabilities	9,120	0	0	-2,620	0	-1,000	5,500
Non-current lease liabilities	0	32,608	112	0	8,034	-7,966	32,788
Current liabilities	1,651	0	12	-1,054	0	1,000	1,609
Current lease liabilities	0	6,539	22	-7,238	0	7,966	7,289
Total liabilities for financing activities	**10,771**	**39,147**	**146**	**-10,912**	**8,034**	**0**	**47,186**

The cash and cash equivalents presented in the cash flow statement correspond to the line item “cash and cash equivalents” in the statement of financial position.

The cash and cash equivalents comprise cash on hand, cheques, bank deposits that are due daily, and fixed-term deposits with an original maturity of up to three months.

The non-cash change in cash and cash equivalents of EUR 18,000 thousand in the previous year resulted from a change in the purpose of some fixed-term deposits. As at 31 December 2017, these were still earmarked for operational liquidity management and mainly originated from advances for a major project. During 2018, it became clear that the cash outflows for the performance of this project were far lower than had originally been calculated (the marginal income from this project increased massively) and a significant portion of the advances received were therefore no longer required to cover operational processes and were therefore available for investment. Consequently, these fixed-term deposits were no longer contained in cash and cash equivalents as at 31 December 2018.

40. Financial instruments

Overview

The Frequentis Group is exposed to various market risks in respect of its financial assets, liabilities and forecast transactions. These risks comprise interest rate, exchange rate, credit and liquidity risks. The Frequentis Group uses derivatives as currency hedging instruments. The risk of fluctuations in exchange rates is therefore limited by purchasing forward exchange contracts in the required foreign currency and the necessary amount, based on forecast future requirements. The principles are set out in treasury guidelines, which have been approved by the management.

The Executive Board of Frequentis AG bears the responsibility for setting up and overseeing risk management for the Frequentis Group. It is also responsible for the development and ongoing monitoring of the risk limitation guidelines.

These guidelines serve to identify and analyse the risks to which the Frequentis Group is exposed, set appropriate risk limits, introduce controls and constantly monitor the risks and observance of the limits. The risk management guidelines and workflows are regularly reviewed in order to reflect changes in market conditions and changes in the Group's business activities. The Frequentis Group strives to create a constructive and disciplined control environment where all employees are aware of their role and responsibilities.

In accordance with IFRS 9, the Frequentis Group presents all financial assets, financial liabilities and derivatives in its statement of financial position as assets and liabilities. They are measured at fair value or at amortised cost.

Liquidity risk

Liquidity risk is the risk that the Frequentis Group might not be able to meet its financial obligations when they are due or might not be able to realise its investments. The aim of risk management in the Frequentis Group is to create sufficient liquidity to ensure that it can settle all due obligations in both normal and challenging conditions. Furthermore, all measures required to secure this level of liquidity have to be taken, as set out in the liquidity plan. The liquidity risk is shown by the monthly and annual accumulated difference between cash inflows and outflows (dynamic liquidity risk) and the structure of the statement of financial position (structural liquidity risk).

Liquidity planning is used to analyse the dynamic liquidity risk. The monthly liquidity requirements, based on liquidity planning, are compared with the available funding or the available liquid financial assets. The difference is either a shortfall in liquidity, which needs to be funded, or excess liquidity, which may have to be invested. Liquidity planning forms the basis for decisions on strategy and measures to safeguard liquidity. The liquidity plan is reviewed regularly and any necessary investments are initiated.

The Treasury department operates as an internal financial services centre by making optimum use of potential synergies in the financing of subsidiaries. The overriding aim is to secure (provide) liquidity at the lowest cost. In this way, management of short-term financial investments and loans is managed on optimum interest terms and with minimum administrative work. The operating cash flow basically creates the necessary liquidity. The external sources of any necessary financing requirements are the capital market and the credit market.

A functioning banking system is of fundamental importance for the Frequentis Group and its customers. The Frequentis Group requires access to debt to pre-finance upfront project services up to settlement of the invoice. Therefore, it continuously monitors, controls and evaluates its financial and liquidity position in order to limit the associated risks. The Frequentis Group manages liquidity risks through careful planning and management of its liquidity requirements. Suitable measures are defined on the basis of cash flow forecasts and the Group ensures that it has adequate financial reserves to cover operational requirements and monitors credit lines.

The following table shows the contractually agreed (undiscounted) payments of interest and principal for non-derivative financial liabilities. The variable interest payments for financial instruments were derived from the last applicable interest rates prior to 31 December 2019 and 31 December 2018. Foreign currency amounts were translated in each case at the closing rate on the reporting date.

2019 in EUR thousand	Carrying amount	Contractual cash flows			
		less than 1 year	between 1 and 5 years	more than 5 years	Total
Liabilities to banks and other financial liabilities	7,109	1,684	4,142	1,511	7,337
Lease liabilities	40,077	7,555	23,169	10,160	40,884
Trade accounts payable	13,468	12,297	1,171	0	13,468
Payables to affiliated and associated companies	182	182	0	0	182
Other liabilities	1,822	1,158	664	0	1,822
Non-derivative liabilities	**62,658**	**22,876**	**29,146**	**11,671**	**63,693**
Financial derivatives	2,181	49,715	0	0	49,715
Derivative financial liabilities	2,181	49,715	0	0	49,715
TOTAL	**64,839**	**72,591**	**29,146**	**11,671**	**113,408**

2018 in EUR thousand	Carrying amount	Contractual cash flows			
		Less than 1 year	Between 1 and 5 years	More than 5 years	Total
Liabilities to banks and other financial liabilities	8,151	1,408	4,525	2,532	8,465
Trade accounts payable	13,775	13,027	748	0	13,775
Payables to affiliated and associated companies	226	226	0	0	226
Other liabilities	2,838	218	2,620	0	2,838
Non-derivative liabilities	**24,990**	**14,879**	**7,893**	**2,532**	**25,304**
Financial derivatives	1,009	34,425	0	0	34,425
Derivative financial liabilities	1,009	34,425	0	0	34,425
TOTAL	**25,999**	**49,304**	**7,893**	**2,532**	**59,729**

Credit risk

Credit risk is the risk of a financial loss if a customer or the counterparty to a financial instrument does not satisfy its contractual obligations. Credit risks mainly relate to receivables from customers, contract assets, other financial assets, time deposits and cash and cash equivalents.

The credit risks, their origin, the objectives, guidelines and workflows for ongoing risk monitoring and the methods used to measure credit risks were unchanged in the reporting period.

The risk of default by customers is reduced by mandatory credit assessments and measures to secure payment. For information on the determination of any impairments based on the expected credit loss model, see note 21 (Trade accounts receivable). The estimated loss allowances for cash and cash equivalents and time deposits were measured on the basis of the expected 12-month credit losses and reflect their maturities. Based on the external ratings of the banks and financial institutions it uses, the Frequentis Group estimates that there is a low default risk in respect of its cash and cash equivalents and time deposits.

Apart from investments and deposits totalling EUR 45,639 thousand at two banks, there is no material concentration or material credit risk in respect of individual banks, customers, contractual partners or individual financial instruments.

Interest rate risk

The Frequentis Group is exposed to interest rate risk resulting from fluctuations in interest rates on the capital market. Accordingly, changes in interest rates may lead to fluctuations in the fair value or future cash flows of financial assets and financial liabilities.

Within financial assets, short-term and long-term time deposits bear fixed interest rates, so they are not exposed to any interest rate risk. The bank balances included in cash and cash equivalents amount to EUR 66,882 thousand and bear interest at variable rates or are not interest-bearing. From the present perspective, a reduction in interest rates would not result in negative interest, assuming that all agreed conditions remain unchanged. An increase in interest rates from 0% to 1% would increase interest income by EUR 669 thousand.

Within financial liabilities, non-current liabilities to banks and other non-current financial liabilities bear interest at fixed rates, while the interest rates for some (EUR 609 thousand) of the current liabilities to banks and other current financial liabilities are variable. Interest rates for all lease liabilities are fixed.

Since the interest rate risk insignificant, it is not presented in a tabular form

Exchange rate risk

The operating business of the companies in the Frequentis Group results in cash inflows and outflows in foreign currencies, which are not always matched by payments of the same amount in the same currency and with the same maturity. Therefore, the companies in the Frequentis Group are exposed to exchange rate risks.

For information on the hedging of exchange rate risks, please see the “Financial derivatives” section.

Relationship between the items in the statement of financial position, categories of financial instruments, carrying amounts and fair values

The following table shows the carrying amounts and fair values of financial assets and financial liabilities, including the categories to which they are allocated. It does not contain any information on the fair value of financial assets and financial liabilities that are not measured at fair value if the carrying amount is a reasonable approximation of the fair value (amounts in EUR thousand).

2019	Measured at fair value			Measured at amortised cost		Carrying amount Total
	Hedge accounting	Mandatory recognition at fair value through profit or loss	Equity instruments – at fair value through profit or loss	Financial assets	Other financial liabilities	
Financial assets						
Equity instruments			874			874
Time deposits				17,995		17,995
Trade accounts receivable				58,527		58,527
Receivables from affiliated and associated companies				23		23
Financial derivatives	92					92
Other current and non-current assets				801		801
Cash and cash equivalents				66,882		66,882
Total	**92**		**874**	**144,228**		**145,194**
Financial liabilities						
Liabilities to banks and other financial liabilities					7,109	7,109
Trade accounts payable					13,468	13,468
Payables to affiliated and associated companies					182	182
Lease liabilities					40,077	40,077
Financial derivatives	1,764	417				2,181
Other liabilities					1,822	1,822
Total	**1,764**	**417**			**62,658**	**64,839**

2018	Measured at fair value			Measured at amortised cost		Total carrying amount
	Hedge accounting	Mandatory recognition at fair value through profit or loss	Equity instruments – at fair value through profit or loss	Financial assets	Other Financial liabilities	
Financial assets						
Equity instruments			576			576
Time deposits				17,995		17,995
Trade accounts receivable				44,366		44,366
Receivables from affiliated and associated companies				31		31
Financial derivatives	173					173
Other current and non-current assets				1,540		1,540
Cash and cash equivalents				45,543		45,543
Total	**173**		**576**	**109,475**		**110,224**
Financial liabilities						
Liabilities to banks and other financial liabilities					8,151	8,151
Trade accounts payable					13,775	13,775
Payables to affiliated and associated companies					226	226
Financial derivatives	844	165				1,009
Other liabilities					2,838	2,838
Total	**844**	**165**			**24,990**	**25,999**

Fair value

Trade accounts receivable, contract assets, other receivables, cash and cash equivalents, time deposits, trade accounts payable, contract liabilities and other liabilities are measured at their carrying amount which is a reasonable approximation of the fair value, due to their essentially short remaining term.

For the equity instruments, there are no quoted prices available on an active market. Therefore, they are measured using measurement parameters that are unobservable on the market. Measurement is based on the discounted cash flow method or any equity transactions around the reporting date. Their fair values are allocated to level 3 in the fair value hierarchy. There is currently no intention of selling the equity instruments.

Derivative financial assets and liabilities are carried at fair value. Derivatives that have not been designated as a hedging instrument nevertheless serve economically to hedge fluctuations in exchange rates. Their fair values are allocated to level 2 in the fair value hierarchy.

The long-term incentive programme (LTIP), which is classified as equity-settled share-based payment, was measured at fair value and allocated to level 3 in the fair value hierarchy.

The following hierarchy was used to allocate all financial instruments measured at fair value to a valuation method:

Level	Financial instruments at fair value
Level 1: Measurement based on quoted prices	Securities
Level 2: Measurement based on quoted prices for similar assets	Financial derivatives
Level 3: Measurement based on models with significant valuation parameters that are unobservable on the market	Equity **instruments**

The equity instruments measured at fair value include a 10.29% interest in the Austrian company Viennasys Software Entwicklung GmbH. The scope of this company's business activities is relatively small. For materiality reasons, measurement of the investment was based on the (pro rata) equity of the company.

For the 5.6% stake acquired in 2018 in the start-up company Altitude Angel Ltd., a further financing round by all investors was performed in December 2019 on the basis of the 2018 valuation as there were no indications of a material change in the value of the company since the initial investment. In this context, a payment of EUR 294 thousand was made and the equity interest was increased to 6.88%.

A distinction is made between derivative and non-derivative financial instruments. The derivative financial instruments primarily include hedging instruments to hedge exchange rate fluctuations.

Net gains and losses are as follows (in EUR thousand):

2019	Financial derivatives	Other financial instruments measured at fair value through profit or loss	Financial instruments measured at fair value through OCI	Financial assets measured at amortised cost	Financial liabilities measured at amortised cost
Net interest income/expense				440	-819
Valuation	201	4		-6	
Impairment loss pursuant to IFRS 9				-90	
Currency gains/losses				405	-110
Disposal gains/losses		0			
Net gains/losses recognised in profit or loss	**201**	**4**	**0**	**749**	**-929**
Net gains/losses recognised in other comprehensive income	-860				
Net gains/losses	**-659**	**4**	**0**	**749**	**-929**

2018	Financial derivatives	Other financial instruments measured at fair value through profit or loss	Financial instruments measured at fair value through profit or loss	Financial assets measured at amortised cost	Financial liabilities measured at amortised cost
Net interest income/expense		8		494	-429
Valuation	-405	2		-9	
Impairment loss pursuant to IFRS 9				1	
Currency gains/losses				524	86
Disposal gains/losses		-3			
Net gains/losses recognised in profit or loss	**-405**	**7**	**0**	**1,010**	**-343**
Net gains/losses recognised in other comprehensive income	-245				
Net gains/losses	**-650**	**7**	**0**	**1,010**	**-343**

Financial derivatives

In international business, it is necessary to conclude contracts in foreign currencies. The Frequentis Group's foreign currency risk results mainly from future business transactions, insofar as they are concluded in a currency other than the functional currency of the parent company or the respective subsidiary. Foreign currency exchange risks are managed using financial derivatives, unless a natural hedge can be used (e.g. contracts with suppliers in the same foreign currency). The largest foreign currency exposures arise from customer orders in AUD, CAD, CHF, GBP, JPY, PLN, SGD and USD.

Forward exchange contracts were concluded to hedge the risk of exchange rate fluctuations. Financial derivatives are not used for speculative purposes.

The Frequentis Group aims to manage and monitor the foreign currency risk for future payments under contracts with customers on a rolling basis throughout the entire project period through hedging with forward exchange contracts at the date of order intake (cash flow hedges). The hedging instrument (forwards, swaps) are concluded for a year and extended annually in the amount of the cash flows still expected (extension at historical rates). Payments from the hedged cash flows are expected to occur in the years 2020 and 2024.

Changes in the fair value of forward exchange contracts that are not designated in a hedging relationship are recognised in other operating income or other operating expense.

The carrying amount of financial derivatives corresponds to their current fair value, whereby the fair value was determined from the current market value as at 31 December 2019, verified by corresponding bank confirmations.

The following table shows the development of financial derivatives:

2019	Derivative		Cash flow hedge		For MTM valuation		Total
Sale currency	Sale amount	Purchase EUR thousand	Foreign currency amount	Fair value EUR thousand	Foreign currency amount	Fair value EUR thousand	Fair value EUR thousand
JPY	7,092	-55	0	0	7,092	3	3
SGD	427	-270	0	0	427	8	8
USD	-2,826	2,557	0	0	-2,826	81	81
		2,232		0		92	92
AUD	-4,749	2,901	-3,739	-18	-1,010	-9	-27
CAD	-54	35	-54	-1	0	0	-1
CHF	-1,413	1,294	-29	-1	-1,384	-10	-11
GBP	-16,264	18,208	-9,478	-648	-6,786	-28	-676
JPY	-14,184	110	0	0	-14,184	-6	-6
PLN	-16,058	3,552	-9,918	-128	-6,140	-14	-142
SGD	-7,178	4,555	0	0	-7,178	-112	-112
USD	-20,688	16,828	-11,169	-968	-9,518	-238	-1,206
		47,483		**-1,764**		**- 417**	**-2,181**

2018	Derivative		Cash flow hedge		For MTM valuation		Total
Sale currency	Sale amount	Purchase amount EUR thousand	Foreign currency amount	Fair value EUR thousand	Foreign currency amount	Fair value EUR thousand	Fair value EUR thousand
AUD	-2,880	1,783	-2,880	50	0	0	50
CAD	-297	195	-297	8	0	0	8
GBP	-7,983	8,880	-7,983	78	0	0	78
USD	-2,300	1,987	-2,300	37	0	0	37
		12,845		173		0	173
CHF	-504	445	-361	-3	-142	-2	-4
GBP	-2,730	2,974	-1,474	-36	-1,256	-16	-52
PLN	-12,398	2,753	-12,398	-70	0	0	-70
SGD	-1,747	1,092	-1,747	-6	0	0	-6
USD	-17,918	14,316	-16,553	-730	-1,365	-147	-877
		21,580		**- 845**		**- 165**	**-1,009**

For the carrying amount of the cash flow hedge and the carrying amount of the mark to market (MTM) valuation, a positive fair value of EUR 92 thousand was recognised in other receivables in 2019 (2018: EUR 173 thousand), while a negative fair value of EUR 2,181 thousand was recognised in other liabilities (2018: EUR 1,009 thousand). When the hedged item (revenue) is realised, the amount relating to the hedging instrument recognised in other comprehensive income is reclassified to revenues. The amount reclassified to revenues can be seen from the development of the cash flow hedge reserve presented in the table below.

In principle, a prospective effectiveness test is performed when a derivative is designated as a hedging instrument. At every reporting date, the effectiveness of the hedge is reviewed and any potential ineffectiveness is determined. Ineffectiveness is measured by comparing the accumulated changes in the fair value of the designated hedging instruments since designation of the hedge and the accumulated changes in the fair value of the hedged item with reference to the hedged risk. A hypothetical derivative is used to determine the accumulated changes in the fair value of the hedged item with reference to the risk of a change in price.

Ineffectiveness may arise if there is a significant discrepancy between the credit risk of the trading partner and that of the Frequentis Group. In addition, a reduction in the hedged revenues can result in over-hedging in the short term, resulting in ineffectiveness.

The table presents the development of the cash flow hedge reserve:

	2019 EUR thousand	2018 EUR thousand
As at 31 December of the previous year	**-30**	**154**
Result from changes in fair value	-829	-136
Deferred taxes on this amount	207	34
Reclassification to the income statement	-31	-109
Deferred taxes on this amount	8	27
As at 31 December of the financial year	**-675**	**-30**

Based on the sensitivity analyses performed, a 10% increase in exchange rates on the reporting date would have increased the fair value of the cash flow hedge by EUR 2,308 thousand and the fair value of the MTM valuation by EUR 2,401 thousand, while a 10% reduction in exchange rates would have reduced the fair value of the cash flow hedge by EUR 2,821 thousand and the fair value of the MTM valuation by EUR 2,935 thousand.

41. Leases

Leases as lessee

The Frequentis Group has concluded leases with some contractual partners. The leases have different lease terms and were classified as operating leases under IAS 17. In particular, leases are concluded for buildings, vehicles and IT equipment.

The leases for buildings are concluded either for a defined period or for an indefinite period with short termination periods for the lessee and lessor. Where the leases are for office premises for small companies, they are classified as short-term leases because termination does not result in any penalties and new premises are readily available. The lease for the office building used as the company's headquarters cannot be terminated until 2026. An extension option was taken into consideration when assessing the term of this lease and a term until 2027 was assumed.

The leases for vehicles have a term of approximately 3 to 6 years, while IT equipment is generally leased for 5 years. There are neither options to terminate nor to extend the leases, or the exercise of such options is not classified as reasonably certain, so they are not included in the assessment of the right-of-use asset.

The Frequentis Group also leases IT and other equipment. These leases are classified as short-term leases or leases for low-value assets, for which the exemptions are applied, which are therefore not recognised as assets or liabilities in the consolidated financial statements.

The following table presents details of the right-of-use assets recognised in property, plant and equipment:

	Right-of-use assets for land and buildings EUR thousand	Right-of-use assets for other plant, factory and office equipment EUR thousand	Total EUR thousand
Acquisition cost			
As at 1 January 2019	**38,299**	**808**	**39,107**
Additions	6,573	1,249	7,822
Disposal	-226	0	- 226
Foreign currency translation	131	1	132
As at 31 December 2019	**44,777**	**2,058**	**46,835**
Accumulated depreciation			
As at 1 January 2019	**0**	**0**	**0**
Additions	-6,591	-502	-7,093
Disposal	56	0	56
As at 31 December 2019	**-6,535**	**- 502**	**-7,037**
Carrying amount			
As at 31 December 2019	**38,242**	**1,556**	**39,798**

In addition to new leases, the additions to right-of-use assets include adjustments resulting from contract modifications, contract extensions and index adjustments.

The lease liabilities changed from EUR 39,147 thousand (comprising EUR 32,608 thousand long-term and EUR 6,539 thousand short-term) as at 1 January 2019 to EUR 40,077 thousand (comprising EUR 32,788 thousand long-term and EUR 7,289 thousand short-term) as at 31 December 2019.

The following expenses for leases are recognised in the income statement:

	2019 EUR thousand	2018 EUR thousand
Depreciation of right-of-use assets	7,093	
Interest expense for lease obligations	438	
Lease payments for short-term leases	912	
Lease payments for low-value assets	18	
Rental and leasing expense	0	7,937
Total	**8,461**	**7,937**

Amounts recognised in the cash flow statement in connection with leases:

	2019 EUR thousand
Repayment of lease liabilities	7,238
Interest paid on lease liabilities	438
Lease payments for short-term leases and low-value assets	930
	8,606

Interest paid on leases and lease payments for short-term leases and low-value assets are presented in the net cash flow from operating activities, while the payments on principal of the lease liabilities are reported in the net cash flow from financing activities.

During 2019, the Frequentis Group concluded several leases that start in 2020. However, these are insignificant leases for vehicles and buildings.

Leases as lessor

With regard to leases where the Frequentis Group is the lessor, there was a reduction in lease revenue due to the termination of several leases. These revenues were EUR 73 thousand in the reporting period (2018: EUR 116 thousand) and will be EUR 49 thousand in 2020 and EUR 48 thousand in the following two years. These leases are classified as operating leases.

42. Information on business relations with related parties

Parent company

Frequentis Group Holding GmbH holds a majority stake of 60% of the shares in Frequentis AG.

In the reporting period, revenues from transactions with Frequentis Group Holding GmbH were as follows:

	2019 EUR thousand	2018 EUR thousand
Goods and services supplied and other income	90	71
Goods and services received and other expenses	507	335

Costs of EUR 859 thousand incurred in connection with the IPO were charged to Mr. Johannes Bardach as they related to the sale of existing shares. The corresponding receivable was settled in full in the reporting period.

Associated companies

The Frequentis Group maintains relationships with the associated companies within the scope of ordinary business activities. and buys and sells services at arm's length.

In the reporting period, revenues from transactions with the associated companies were as follows:

	2019 EUR thousand	2018 EUR thousand
Goods and services supplied and other income	122	103
Goods and services received and other expenses	2,077	1,849

The receivables from/payables to affiliated and associated companies are presented separately in the statement of financial position.

Related companies

A number of key management personnel or related parties have functions in other entities that result in them having control or significant influence over the financial and operating policies of those entities

In the reporting period, the following transactions were undertaken with companies and persons classified as related parties:

	2019 EUR thousand	2018 EUR thousand
Expenses for consulting services	315	509
Expenses for project support services	335	266
Expenses for software development and engineering	650	486
Rental expenses		3,766
Rental payments (principal and interest)	3,773	
Revenues	211	362
Receivables as at December 31	62	56
Payables as at December 31	187	161

Austrian Research Promotion Agency (Österreichische Forschungsförderungsgesellschaft/FFG): Mr. Hannes Bardach is a member of the Supervisory Board of FFG. FFG's core business is granting subsidies and loans for research purposes. To ensure the necessary strategic focus of the Supervisory Board, in accordance with the FFG law representatives of companies that receive funding from FFG are nominated as members of the Supervisory Board.

In the reporting period, the Frequentis Group repaid grants and subsidies for research and development totalling EUR 2,620 thousand earlier than scheduled. In addition, advance payments for future research revenues in the amount of EUR 23 thousand (2018: EUR 5 thousand) were disbursed by FFG. The income from grants received from FFG in the reporting period totalled EUR 573 thousand (2018: EUR 720 thousand).

Since the Supervisory Board of FFG is not involved in the award of grants no conflicts of interest arise from this practice.

Related persons

Executive Board

In the reporting period, the Executive Board comprised:

- Norbert Haslacher, Chairman
- Sylvia Bardach
- Hermann Mattanovich

The total remuneration paid to the Executive Board of Frequentis AG amounted to EUR 1,423 thousand (excluding benefits in kind, including a one-off IPO bonus) (2018: EUR 2,731 thousand). The remuneration of the Executive Board comprises fixed and variable components. The variable components are performance-related and are based on the achievement of short-term financial targets for the company. In 2019, a one-off bonus was paid for the successful listing of Frequentis AG on the stock market.

In 2019, Frequentis AG agreed a long-term incentive programme (LTIP) with the Chairman of the Executive Board, Mr. Norbert Haslacher. This does not require any personal investment in Frequentis AG shares. From the date of allocation, a maximum of one third of the shares acquired under the LTIP 2019 may be sold in any financial year. In any case, the beneficiary may only sell the number of shares awarded under the LTIP 2019 or any subsequent long-term incentive plan if, at all times, he holds at least 7,000 of the shares awarded under the long-term incentive plan ("minimum shareholding"). An expense of EUR 63 thousand (EUR 67 thousand payroll-related costs) was recognised for this programme in the reporting period.

The members of the Executive Board have been granted pension benefits. In addition to the post-retirement payments, these include pension benefits for surviving dependants after the death of the beneficiary. The post-retirement benefits are generally paid when the beneficiary reaches a specific age, provided that the employment contract has ended at this date. Expenses of EUR 333 thousand were incurred in the reporting period (2018: EUR 339 thousand) for contributions to pension insurance and the recognition of pension provisions for members of the Executive Board. This amount includes service cost of EUR 131 thousand (2018: EUR 97 thousand), interest cost of EUR 52 thousand (2018: EUR 91 thousand), and pension insurance expense of EUR 150 thousand (2018: EUR 150 thousand).

In the event of termination of employment, severance payments are due in accordance with the legal regulations in Austria. Additions to the corresponding provisions for severance payments amounted to EUR 25 thousand in 2019 (2018: EUR 100 thousand).

No advances or loans were granted to members of the Executive Board.

Supervisory Board

The Supervisory Board of Frequentis AG comprises five representatives of the shareholders and three representatives of the workforce.

The remuneration of the Supervisory Board amounted to EUR 103 thousand in the reporting period (2018: EUR 37 thousand).

An office and support services are provided free of charge for the Chairman of the Supervisory Board, Mr. Johannes Bardach, for the performance of his function as Chairman of the Supervisory Board.

No advances or loans were granted to members of the Supervisory Board of Frequentis AG.

43. Significant events after the reporting date

On 2 March 2020 the Executive Board of Frequentis AG passed a basic resolution –- subject to the approval of the company's Supervisory Board – regarding the implementation of an employee participation programme in the 2020 financial year. For this purpose, it resolved on partial use of the authorised capital with complete exclusion of existing shareholders' subscription rights. Based on the authorisation of the General Meeting of 8 April 2019, the company's share capital would be increased by up to EUR 80,000, from the current level of EUR 13,200,000 to up to EUR 13,280,000 by the issue of up to 80,000 new shares for cash. The final amount of the capital increase will depend on the number of shares ordered by staff participating in the employee participation programme. Under the employee participation programme, eligible employees of the company and certain Austrian and German subsidiaries will be able to purchase new shares at a discount. Provided that the programme is approved by the company's Supervisory Board, the final volume of the capital increase is expected to be determined by the Executive Board (with the approval of the Supervisory Board) on 4 May 2020 on the basis of the demand by eligible employees.

Frequentis AG has acquired 51% of ATRiCS Advanced Traffic Solutions GmbH, which is based in Freiburg im Breisgau, Germany. ATRiCS was established in 2002 and is an owner-run company. It offers airport-specific software solutions for runway taxi operations management as well as consultancy services for airports and air traffic control organisations. The purchase agreement was signed on 5 March 2020 and closing will take place on 1 April 2020. ATRiCS will be fully consolidated by Frequentis from this date.

44. Additional information

The Frequentis Group had an average of 1,849 employees in 2019 (2018: 1,763 employees).

Audit fees

In the reporting period, audit expenses of EUR 120 thousand (2018: EUR 118 thousand) were incurred for the audit of the consolidated financial statements and the annual financial statements of Frequentis AG, expenses of EUR 70 thousand (2018: EUR 0 thousand) were incurred for other consulting services, and expenses of EUR 18 thousand (2018: EUR 31 thousand) were incurred for other services.

45. Capital management

In addition to a sustained increase in the value of the company, financial management of the Frequentis Group aims to maintain an appropriate capital structure. The principal performance indicators used to manage the capital structure are the EBIT margin, the equity ratio and net debt. Since the Frequentis Group currently has a net cash position, it refers to net cash rather than net debt. The net cash position comprises bank deposits less financial liabilities to banks. The key performance indicators developed as follows in the reporting period:

	2019	2018
EBIT margin (based on revenues)	5.7%	5.5%
Equity ratio	42.7%	43.3%
Net cash in EUR thousand	77,768	55,386

The Frequentis Group meets the minimum capital requirements defined by law and the articles of association. The capital managed comprises the shareholders' equity reported in the consolidated statement of financial position.

46. Risk management

The Frequentis Group has an internal control system (ICS) for its accounting process. The reliability of the internal control system is monitored by the internal audit department. The Frequentis Group has initiated several processes based on best practice standards to ensure that its risk management is effective. The fundamental aim is to identify opportunities and risks as soon as possible and take suitable measures to maintain profitability and secure the continued existence of the Group. Risk awareness, the vigilance of all staff and early identification of business risks are well developed and are incorporated in a solid risk management policy.

Business risks are outlined in more detail in the Group Management Report.

Vienna, 13 March 2020

Auditor´s Report

Report on the consolidated financial statements

Audit opinion

We have audited the consolidated financial statements of FREQUENTIS AG, Vienna, and of its subsidiaries (the Group) comprising the consolidated balance sheet as of December 31, 2019, the consolidated income statement, the consolidated statement of changes in equity and the consolidated statement of cash flows for the fiscal year then ended and the notes to the consolidated financial statements.

Based on our audit the accompanying consolidated financial statements were prepared in accordance with the legal regulations and present fairly, in all material respects, the assets and the financial position of the Group as of December 31, 2019 and its financial performance for the year then ended in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU with Austrian Generally Accepted Accounting Principles and other legal or regulatory requirements.

Basis for opinion

We conducted our audit in accordance with Austrian Standards on Auditing. Those standards require that we comply with International Standards on Auditing (ISAs). Our responsibilities under those regulations and standards are further described in the "Auditor's Responsibilities for the Audit of the Financial Statements" section of our report. We are independent of the Company in accordance with the Austrian General Accepted Accounting Principles and professional requirements and in accordance with any other regulations or requirements agreed and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the fiscal year. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

- Project Accounting

Project Accounting

Situation and reference to further information:

A major part of the presented revenues is derived from project related business, which in the main comprises delivery and maintenance contracts. The large number of projects are different in order volume, technical complexity and duration, with a few contracts having terms of several years. In general, revenue of maintenance contracts is realised over the service period. When the requirements for realisation over time are met, revenues form delivery projects are recorded in accordance with IFRS 15 based on the stage of completion applying the cost-to-cost method. Contractual claims arising from these projects are reported as contract assets from contracts with customers and outstanding obligations as contract liabilities from contracts with customers. In case that a project loss is expected from a further execution of a project, including maintenance contracts, that loss will be immediately recognised in the income statement.

For several ongoing or completed projects there may be different views regarding the type or scope of the performance and the contractual obligations. Such differences can have an impact on the project costs and results. The determination of the stage of completion, the estimate of costs to complete as well as the measurement of project provisions require a significant number of assumptions and forward-looking estimates. Due to the significant volume of the project business, the risk for the consolidated statements consist of a material misstatement of the project revenue, the related project costs as well as the corresponding balance sheet items.

Information on the accounting of the project business can be found in chapter 2 of the notes under the accounting policies "IFRS 15 Revenue from Contracts with Customers" as well as "Significant estimates and exercise of discretion". Further information can be found in chapter 4 "Revenues" within the notes on the consolidated income statement and in chapter 22 "Contract assets from contracts with customers" and chapter 35 "Contract liabilities from contracts with customers".

Audit response:

In the course of our audit, we have gained an understanding of the processes and internal controls relevant to the accounting of revenues from customer contracts and we tested the effectiveness of certain internal controls. These controls mainly address the review and approval of project calculation for new contracts, the recognition of purchased services on the corresponding projects as well as the continuing monitoring and assessment for project calculations until the completion of the project.

Based on the results of the control tests, we have performed a more in-depth analysis for a sample of projects under special assessment of the discretionary decisions made. We have selected our samples considering various risk-oriented parameters, e.g. size, margin, start and duration of the project. In addition, we considered the fact of significant adjustments to the assessment compared to previous year for our determination of the sample. The audit procedures performed on the selected sample included, in particular, the review of the underlying contracts and agreements, discussions with the commercial and operating project managers concerning their estimates and assumptions, the analysis of current project data as well as the reconciliation of such assumptions and estimates with contracts and further documents. In addition, we have examined the recording of costs on the projects and the determination of the stage of completion. Finally, we have assessed whether the presentation of the project business in the consolidated financial statement as well as the disclosures in the notes are in accordance with the requirements of IFRS 15.

Responsibilities of management and the supervisory board/audit committee for the consolidated financial statements

Management is responsible for the preparation of the consolidated financial statements in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU and with requirements stated in par. 245a Austrian Company code (UGB), for them to present a true and fair view of the assets, the financial position and the financial performance of the Group and for such internal controls as management determines are necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Audit Committee is responsible for overseeing the Group's financial reporting process.

Auditor´s responsibilities for the audit of the consolidated financial statements

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

As part of an audit in accordance with the EU regulation and in accordance with Austrian Standards on Auditing, which require the application of ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit.

We also:

- identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

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

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Comments on the management report for the Group

Pursuant to Austrian Generally Accepted Accounting Principles, the Group management report is to be audited as to whether it is consistent with the consolidated financial statements and as to whether it was prepared in accordance with the applicable legal regulations.

Management is responsible for the preparation of the Group's management report in accordance with Austrian Generally Accepted Accounting Principles.

We conducted our audit in accordance with Austrian Standards on Auditing for the audit of the Group's management report.

Opinion

In our opinion, the management report for the group was prepared in accordance with the valid legal requirements and is consistent with the consolidated financial statements.

Statement

Based on the findings during the audit of the consolidated financial statements and due to the thus obtained understanding concerning the Group and its circumstances no material misstatements in the Group's management report came to our attention.

Other information

Management is responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated financial statements, the Group's management report and the auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, to consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Additional information in accordance with article 10 of the EU regulation

We were elected as auditor by the ordinary general meeting at April 8, 2019. We were appointed by the Supervisory Board on October 29, 2019. We are auditors without cease since 2018.

We confirm that the audit opinion in the section "Report on the consolidated financial statements" is consistent with the additional report to the audit committee referred to in article 11 of the EU regulation.

We declare that no prohibited non-audit services (article 5 par. 1 of the EU regulation) were provided by us and that we remained independent of the audited company in conducting the audit.

We have not provided any services, in addition to the statutory audit, to the audited company and its controlled undertakings, which have not been disclosed in the Group's management report or in the consolidated financial statements.

Responsible Austrian certified public accountant

The engagement partner on the audit resulting in this independent auditor´s report is Mr. Mag. Gerhard Posautz, Certified Public Accountant.

Vienna, 16 March 2020

BDO Austria GmbH

Wirtschaftsprüfungs- und Steuerberatungsgesellschaft

Mag. Gerhard Posautz Auditor	Mag. Gerhard Fremgen Auditor

Statement of all Legal Representatives

We confirm to the best of our knowledge that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the group as required by the applicable accounting standards and that the group management report gives a true and fair view of the development and performance of the business and the position of the group, together with a description of the principal risks and uncertainties the group faces.

Vienna, 13 March 2020

Norbert Haslacher
Chairman of the Executive Board

Sylvia Bardach

Hermann Mattanovich

Glossary

This glossary explains technical terms and abbreviations relating to Frequentis' business as well as financial terminology.

Glossary of technical terms relating to Frequentis' business

Term	Explanation
3020 LifeX	Product name for the multimedia collaboration platform in Frequentis' Public Safety business domain
AAR	Air-to-Air Refueling
AFTN	Aeronautical Fixed Telecommunication Network Fixed aeronautical telecommunications network; data network for the transmission of aeronautical data between local telecommunications stations
AIDA	Aeronautical Integrated Data Exchange Agent Solution for a uniform and reliable handling of aviation messages
AIM	Aeronautical Information Management Aeronautical information services that provide pilots with all the information necessary for a flight
AMHS; MHS	(Aeronautical) Message Handling Services MHS: System for processing and transmitting aeronautical messages, based on an ICAO standard for air-ground-ground-communication; e.g. for the transmission of NOTAM (notice to airmen), flight plans, or meteorological data
ARTAS	Air Traffic Management suRveillance Tracker And Server
ASGARD	Name of a communication solution developed specifically for fire brigades in Germany
ATC	Air Traffic Control
ATM	Air Traffic Management • Air traffic management (ATM) - ensures the safe and efficient movement of aircraft during all phases of their operation • Name of a Frequentis business segment that comprises the business domains Air Traffic Management Civil, Aeronautical Information Management, and Defence
CEF	Connecting Europe Facility The funding instrument for the trans-European networks in the fields of transport, energy, and telecommunications
EAD	European AIS (Aeronautical Information Services) Database The European AIS Database has been successfully operating since 2003. The EAD system was developed by Frequentis and is operated by GroupEAD. It ensures standardisation and harmonisation of the relevant aviation data and therefore greater safety, while reducing maintenance costs. It therefore represents an initial milestone for the concept of a "Single European Sky"
EENA	European Emergency Number Association The "counterpart" of North America´s NENA, setting standards for improved European networking of emergency numbers and joint projects (Europe-wide emergency number 112)
EFES	Electronic Flight ProgrEss Strips project title for an Electronic Flight Strips System for all major airports in Poland

EUROCAE	European Organization for Civil Aviation Equipment EUROCAE is a non-profit organisation that deals with the standardisation of electronics for aviation
FFG	Austrian Research Promotion Agency National funding agency for industrial research and development in Austria
FRMCS	Future Railway Mobile Communication System
FTI	Austrian strategy for Research, Technology, and Innovations (RTI)
GMDSS	Global Maritime Distress and Safety System Global system for distress and safety radio communication; a set of technical equipment, service centres and rules to support global rescue efforts in cases of distress at sea and for the protection of shipping
GOF U-space	A project of the SESAR Joint Undertaking geared to safely integrating drones into air traffic; To this end, extensive tests and demonstrations were performed in Estonia and Finland (Gulf of Finland, GOF) in 2019
GSM-R	GSM for Railways A mobile radio system which is based on the dominant global mobile radio standard GSM, which has been specifically adapted for use in the railway sector
IBB	Installed Base Business Follow-up business to installed systems and solutions
ICAO	International Civil Aviation Organization ICAO is a UN specialised agency based in Montreal, Canada. Its aim is to foster sustained growth in the global civil aviation system
ICM	Incident and Crisis Management A solution process based on time, location, and classification of an event to enable operators in control centres and on-site personnel to manage planned events, operational and technical incidents, and emergency and crisis situations efficiently
IP Networks	IP stands for "Internet Protocol" IP networks work with the internet protocol and packet switching; They consist of subnetworks that use routers or switches to connect to the actual backbone network, which constitutes the communication infrastructure
MQ-25	Drone of the U.S. Navy with the primary task of air-to-air refueling of aircraft
NG911	Next Generation 9-1-1 Standard defined by the National Emergency Number Association (NENA) for the technical architecture and components for a future emergency call system in North America, including handling of VoIP emergency calls
PST	Public Safety & Transport Name of the Frequentis business segment comprising the Public Safety, Public Transport (i.e. railways) and Maritime business domains
REM	Rail Emergency Management Implementation of an automation-based emergency workflow, alarm and communication system for operational incidents on railways
ROC	Rail Operations Center
SESAR	Single European Sky ATM Research A pan-European initiative for the unification, harmonization, and synchronisation of services within the framework of European air traffic management, which was initiated by the European Commission and the European Organisation for the Safety of Air Navigation, EUROCONTROL
URCA	Unified Railway Communication and Application
VCX	Product name for Frequentis' network nodes

Glossary of financial terms

Term	Explanation
CAPEX	Capital Expenditure Funds that are used by a company for the purchase, improvement, or maintenance of long-term assets
Cash Flow	• From investments: Outflow/inflow of liquid funds from investments/divestments • From operating activities: Outflow/inflow of liquid funds, unless they are affected by investments, divestments or financing • From investing activities: Outflow/inflow of liquid funds from capital payments and capital contributions
C rules	Principles of of the Austrian Code of Corporate Governance ("comply or explain"), which have to be followed; any deviation has to be explained and the reasons stated to be in compliance with the Code
CSR	Corporate Social Responsibility
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings before Interest, Taxes, Depreciation and Amortisation
EBIT margin	EBIT as a percentage of total operating performance
ECL	Expected Credit Loss
Equity ratio	Equity/total equity and liabilities
FN	Commercial register number, unique identifier of a legal entity in Austria
FQT	Ticker symbol of the shares of Frequentis AG
Free Cash Flow	Net cash flow from operating activities – net cash flow from investing activities
GDP	Gross Domestic Product Indicates the market value of all final goods and services produced within a nation's geographic borders within a year
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IFRIC	International Financial Reporting Interpretations Committee
IFRS	International Financial Reporting Standards
IKS	Internal control system
IMF	International Monetary Fund
IoT	Internet of Things
IPO	Initial Public Offering
ISIN	International Securities Identification Number, ISIN of Frequentis: ATFREQUENT09
L-Regeln	Legal Requirements of the Austrian Code of Corporate Governance
LTIP	Long Term Incentive Plan
NaDiVeG	Austrian Sustainability and Diversity Improvement Act
ÖCGK	Austrian Corporate Governance Codex
OCI	Other Comprehensive Income
R-Regeln	Recommendations of the Austrian Code of Corporate Governance

Shareholder's equity	Funds made available to the company by its owners through deposits and/or contributions or retained earnings
STEM	Abbreviation for studies and professions in the fields of science, technology, engineering, mathematics
TEUR	Thousand Euros
UGB	Austrian Commercial Code

Financial Calendar 2020

02.04.2020	Annual financial statements 2019
04.05.2020	Record date for General Meeting
14.05.2020	Annual general meeting, Vienna
18.05.2020	Ex-dividend day
19.05.2020	Record date for dividend
20.05.2020	Dividend payment day
18.08.2020	Half-year financial report 2020

http://www.frequentis.com/en/ir > Financial Calender

Notes / Disclaimer

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