

GAPWAVES
Annual report 2022



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The year in brief

Net sales

64 023

KSEK

EBITDA

-14 783

KSEK

Antennas delivered

~25 000

Equity/assets ratio

89,4%

Liquidity

185 384

KSEK

Employees

31

31 December 2022

Significant events 2022

January

- An order was received from the global tech company for high-resolution radar antennas with a total value of approx. MSEK 10.
- An order was received from Uhnder for high-resolution radar antennas with a total value of approx. MSEK 0.2.

March

- An order was received from an American autotech company for imaging radar antennas with a total value of approx. MSEK 2.

April

- Annual General Meeting of Gapwaves was held on April 28th.
- An order was received from Hella regarding antennas for a new series of radar sensors with a total value of approx. MSEK 4.
- Two orders were received from Frencken Group for production equipment for radar antennas with a total value of approx. MSEK 4.

May

- An order was received from FWB Kunststofftechnik GmbH regarding production equipment for testing of antennas with a total value of approx. MSEK 3.5.

June

- An order was received from Smartmicro regarding antennas for Traffic management with a total value of approx. MSEK 3.
- An order was received from an other American autotech company for design and manufacturing of antenna prototypes for imaging radar, intended for autonomous vehicles, with a total value of approximately MSEK 2.8.
- Extraordinary General Meeting of Gapwaves was held on June 10th.

July

- Gapwaves acquire the remaining 75% of the shares in Metasum AB on July 1st.
- Bosch and Gapwaves entered into a joint development agreement. The contract has an expected sales value of high double-digit million-euro range over the next decade.

August

- Extraordinary General Meeting of Gapwaves was held on August 19th.
- Jonas Ehinger assumed as new CEO of Gapwaves August 22nd. Jonas Ehinger has previously been Chairman of the board in Gapwaves since 2019.

September

- An order was received from Frencken Group for assembly equipment for radar antennas with a total value of approx. MSEK 4.8.
- A second order was received from the American autotech company for development of an imaging radar with a total value of approx. MSEK 0.5.

December

- A third order was received from American autotech company for antenna prototypes for the imaging radar with a total value of approx. MSEK 0.3.

After the end of the period

- An order was received from Hella regarding their new generation 77 GHz radar sensor for ADAS systems. The order includes design, development and production of antenna prototypes with an order value of approx. MSEK 3.8.

CEO statement

Strong growth with new strategic and long-term agreements

2022 was the year when Gapwaves achieved a new position by moving from being a technology provider to become a recognized player within the global radar market of advanced driving assistance systems and autonomous driving applications. The company had an organic growth of 84% 2022, thanks to a large contract with Bosch. By adding Bosch as partner to the already established customers Hella and Veoneer among others, we now have a strong position within the automotive radar market. With confidence I can say that our journey as a company becomes more exciting every year, where 2022 was exceptional.

Strategic success and commercial growth

Through the agreement with Bosch, a new milestone in Gapwaves development was achieved, moving from being a technology provider to in a few years become an approved and certified supplier of radar antennas to the automotive industry. The company has captured a new position with a larger share of the value chain and increased revenue as result.

Within the partnership with Hella, Gapwaves together with their production partner have established a high volume production line which is now under PPAP* approval. Together with Hella, Gapwaves is now ready to deliver radar antennas in high volumes from 2024 and beyond.

Strong market in the automotive industry

In 2022, market aspects such as EU regulations and Euro NCAP** test protocols have become strong driving forces for increasing radar volumes and increasing demand of high-performance and cost-efficient waveguide antennas. When Gapwaves entered into the agreements with first Veoneer and then Hella, waveguide antennas were quite new and unproven within the automotive radar industry. Now we can state that the industry has made a choice, and that waveguide antennas is an established and proven technology. The majority of the leading Tier 1 suppliers and car manufacturers plan to use waveguide antennas in their coming products. This was confirmed during the European Microwave Week in Milan in September, which was the first large industry-leading event after the pandemic. In Milan it became clear for us how Gapwaves now is an established brand with a strong position as a globally leading supplier of waveguide antennas in the market for advanced driver assistance and automated vehicles of various types.

The intensified collaboration with Hella is further proof of this development in the market. Hella has now chosen to also integrate Gapwaves antenna technology in their next generation radar sensor, in addition to the radar generation they are now launching on the market.

Our offer in the market is growing

Through commitments in our agreements and partnerships with Bosch and Hella among others, we now have a strong foundation and a strategy for continued growth, which now also includes our own high-volume production established from 2026.

With our own production, we strengthen our offer to existing and potential customers where Gapwaves can offer development and design of antennas and also take care of in-house production of our unique high-volume waveguide antennas.



In addition to the agreements with Veoneer, Hella and Bosch in the passenger vehicle segment, we see a continued increased interest in Gapwaves antenna technology for more advanced radar sensors to various types of self-driving or automated vehicles, and in the Smart City segment. The collaboration we have with the American autotech company has continued and we have high expectations of what we can achieve together.

Furthermore, during the year, the board and management have taken a decision to increase the focus on sustainability aiming to strengthen Gapwaves position and to fulfill market requirements.

Financial growth

2022 was characterized by high level of activity and increased sales. For the full year 2022, net sales were MSEK 64, which corresponds to a growth of 84% compared to the previous year. The cash flow was clearly improved compared to 2021 with KSEK -25,771 (KSEK -48,899, adjusted for the new issue to Hella of KSEK 182,192). On the profit level we also saw a strong development in 2022 with a strengthened EBITDA of KSEK -14.8 (KSEK -30.3). For 2023 we expect an over all continued positive development, we expect some volatility in sales from quarter to quarter depending on where in the development cycles our customers are.

I have now been the CEO of Gapwaves for almost eight months and before that involved in the company since 2019 as Chairman of the board. In summary, I see a bright future for Gapwaves and would like to express an open-hearted thank you to all employees at Gapwaves who with great commitment and drive contributed to what we achieved in 2022. We are in a good position for continued growth, and I look forward to further developing the company in our journey ahead.


Gothenburg, April 11, 2023

Jonas Ehinger

CEO Gapwaves AB (publ)

*PPAP, Production Part Approval Process. A process used in production in the automotive industry with the aim of ensuring suppliers production processes. The PPAP approval process ensures that the supplier meets the manufacturing and quality requirements required by the customer.

**Euro NCAP, The European New Car Assessment Programme. An organization that designs and performs vehicle tests and gives cars a safety rating on a 5-star scale where 5 is the highest rating. The tests represent, in a simplified way, real accident scenarios that can result in passengers or other road users being injured or killed.



"5G and autonomous driving are run on antennas. We hold the key."

Gapwaves technology and the products that have been developed are based on the ambition Gapwaves founder Per-Simon Kildal had of transforming research and ideas into usable products.

With the aid of patented waveguide technology, Gapwaves can offer antenna solutions with greater energy efficiency, lower signal losses and superior heat dissipation. Furthermore, the technology allows cost-effective, high-precision manufacturing in large volumes, which creates the prerequisites for replacing traditional antenna technology with Gapwaves' waveguidebased antenna solution.

The history of Gapwaves

Gapwaves was founded in 2011 by Professor Per-Simon Kildal for the purpose of creating usable applications based on Gapwaves waveguide technology developed by Per-Simon and his colleagues in their research at Chalmers University of Technology.

In 2016 the company started its commercial journey and was listed at Nasdaq First North Growth Market Stockholm. Gapwaves has grown from 3 to over 30 employees and is now a well-known product supplier of high-performance antennas to the large customers in both radar and wireless communications industries.

Vision

Gapwaves vision is to be the most innovative supplier of millimetre wave antenna systems and the chosen partner for those at the forefront of next generation wireless technology. By utilizing Gapwaves unique antenna technology, we help leading players in the automotive and telecom industries to create highly efficient antenna systems at millimeter waves that contribute to redefining everyday life.

Market segments

Antenna technology focusing on two market segments

Gapwaves is challenging traditional antenna technology with a ground-breaking solution that combines high performance with standardised manufacturing methods. In order to gain commercial advantage, Gapwaves uses a business strategy with focus on two markets: Waveguide antennas for radar, and wireless communication.

Gapwaves business idea is to implement the waveguide technology in the two market segments. The business model is built around customer financed development of prototypes, which transitions into either a licensing deal where the customer is responsible for high-volume manufacturing, or where Gapwaves is the supplier and responsible for manufacturing and sales of the product.

Within each market segment, the company undertakes the following activities:

- In customer projects, demonstrating the benefits of the technology in relation to market requirements and other existing technologies. Development projects leads in the long term to revenue from volume sales.
- Industrialisation of the technology for high-volume production.
- Technology development in order to meet future market expectations of improved performance.

The next years, the company's revenues will mainly come from development projects reflected by the customers' needs and product development cycles. This is expected to create some volatility in sales volumes from quarter to quarter.

Radar

Within the radar market segment for frequencies between 76-81 GHz and above, we divide the market into two groups; vehicle radar and radar for other application areas such as infrastructure and connected cities.

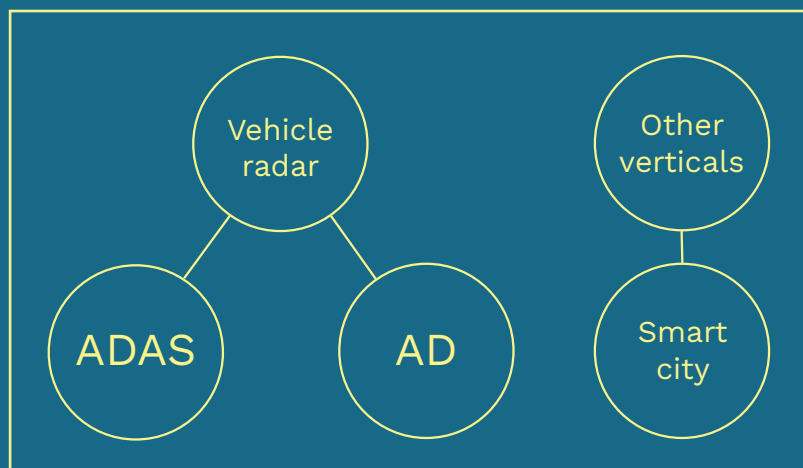
Vehicle radar (ADAS & AD)

According to the World Health Organization, almost 1.3 million people die annually and 50 million people get injured on the roads globally, more than half are pedestrians and vulnerable road users. Gapwaves waveguide technology enables a radar antenna that, in a system for advanced vehicle safety, provides a significant improvement compared to traditional antenna technology and contributes to preventing traffic accidents and protecting the most vulnerable in traffic. With innovative research and product development, Gapwaves contributes to the UN's vision for road safety, to reduce the number of road crashes by 50 per cent by 2030*.

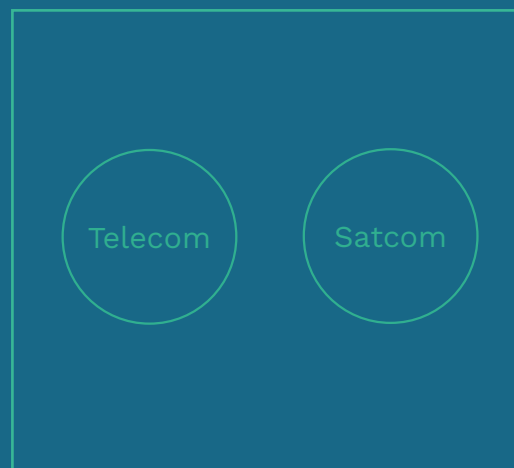
It is in the markets for radar sensors for advanced driver assistance systems (ADAS) and autonomous vehicles (AD) the greatest advantages of Gapwave's technology can be applied. It is also within these areas we currently see the greatest interest from the market.

*source: <https://www.un.org/en/safety-and-security/road-safety>

Radar



Wireless communication



ADAS, Advanced Driving Assistance Systems

Within ADAS the traditional suppliers to the automotive industry (Tier 1s) is found, who mainly focus on radar for warning systems and advanced driver assistance (ADAS), corresponding to SAE* level 0-2 of automated driving (see page 10 for an illustration of the different levels of automated driving).

Standards and regulations drives radar volumes and waveguide antennas

As of the year 2022, 76-81 GHz frequency band is the only approved frequency band for vehicle radar. The broadband part of the spectrum for the previously allocated at 24 GHz frequency band is removed. The shift in global standard have resulted in that players require higher demands on the radar performance, and that the radar need to cover the entire frequency band of 76-81 GHz, requirements that traditional circuit board based (PCB) antenna technology can't fully comply.

Furthermore, EU has introduced legal requirements that all new cars from 2022 and onwards must be equipped with automatic emergency braking systems (AEB**). Globally, there are organizations such as Euro NCAP*** that rate and value AEB and selected ADAS functions, vehicle manufacturers put high value on this ratings. EU regulations and Euro NCAP's test catalog require that vehicles need to be equipped with several radar sensors and cameras to detect smaller objects such as animals, cyclists and pedestrians.

In the automotive industry radar has previously been mainly applied in premium cars for example adaptive cruise control and blind spot warning, given the new regulations at least one radar now is standard in almost all new cars.

Premium cars now have five or even seven radars in their sensor suit. This has resulted in an increased demand for high-performance and cost effective radar sensors and antennas.

Unique technology with major advantages

During the past years, traditional printed circuit board based (PCB) antenna technology has been almost out-competed by waveguide technology, which now often is a requirement from Tier 1-suppliers and car manufacturers, as waveguide antennas is a prerequisite to achieve a high-performance and cost-effective radar sensor.

Waveguide technology enables a radar antenna with reduced need of expensive circuit board materials, a factor that previously has been a main driver for the cost of the complete radar sensor. Furthermore, waveguide technology enables an antenna with lower losses and increased field of view compared to previous circuit board-based solutions.

Gapwaves unique waveguide technology has additional advantages compared to competing waveguide antenna technology, Gapwaves novel antenna solution enables high volume manufacturing in standardized processes, which results in a high quality and cost-effective solution suitable for multimillion market, as confirmed by agreements with Bosch, Hella and Veoneer.

Gapwaves is well positioned to take a large market share of the high-volume production within vehicle radar, as our patented technology enables a high performance and cost-efficient antenna. Advantages that will increase the demand for Gapwaves antennas when radar sensors and advanced vehicle safety become standard in most car models.

*SAE International (Society of Automotive Engineers). An organization that develops standards for the automotive industry among others.

**AEB, Automatic emergency braking.

***Euro NCAP, The European New Car Assessment Program. An organization that designs and performs vehicle tests and gives cars a safety rating on a 5-star scale where 5 is the highest rating. The tests represent, in a simplified way, real accident scenarios that can result in passengers or other road users being injured or killed.

Ratings & regulations drives radar volumes & waveguide antennas

76-81 GHz Band

Regulation****

2017: 76-81 GHz new standard for automotive radar

2022: 24 GHz band disconnected

Tech impact

PCB antennas lack efficiency across broad frequency band (76-81 GHz)

Euro NCAP***

Rating****

2015+: Car-to-car, AEB, Speed Assistance

2025+: Automated Driving

Tech impact

More radars per car with minimum 3 radars for ADAS and 5-7 radars including 1 long range radar

AEB**

Regulation****

2022: All new vehicles in EU shall have AEB system installed

Tech impact

Increased sales volume of radar & camera

Gapwaves

Unique waveguide antenna technology enabling high-volume, high quality production at a competitive price

****Source: ETSI standardization Euro NCAP, CLEPA, European union

AD, Autonomous driving

In recent years, a new market has started to grow alongside the traditional automotive industry. A market for autonomous vehicles applications such as robotaxi, self-driving trucks and vehicles for goods transport. A market driven by new innovative companies, large techcompanies and start-ups. These companies develop products and systems for fully autonomous vehicles at SAE levels 3-5 of automated driving (see illustration at the end of this page).

Increased level of autonomy drives radar volumes

As the level of automated driving capability increases, an increased number of sensors are required. In order to achieve full and functional safety, several cooperating sensors are required, a system consisting of cameras, lidars and radars, where each of them has specific advantages and disadvantages.

The most significant advantage of radar is that, unlike cameras and lidar, radar achieves better performance in almost all weather conditions, wherever snow, fog, or dust, it can detect and classify the most vulnerable road users such as pedestrians and cyclists in difficult conditions.

Imaging radar for level 3-5

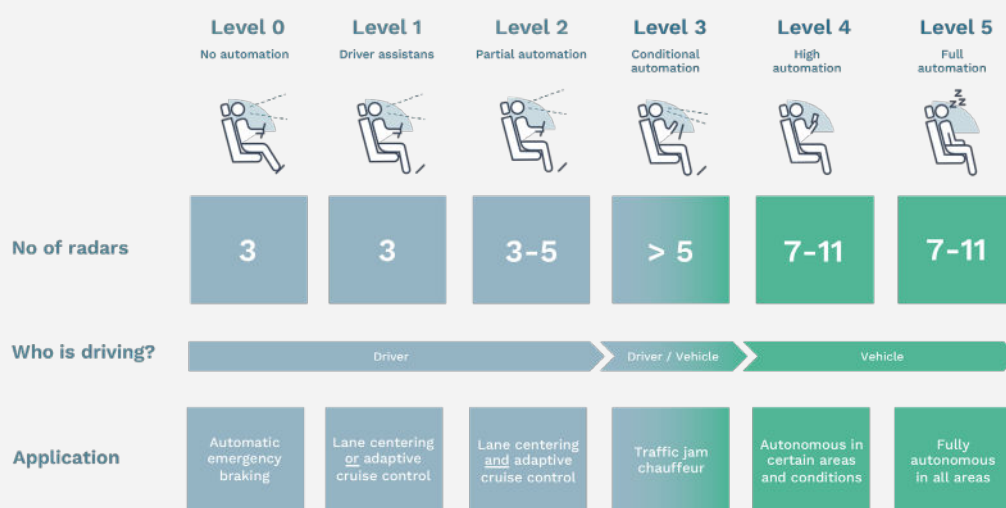
An imaging radar is a high-resolution radar that generates an image of its surroundings with up to ten times higher resolution compared to traditional radar. Furthermore, an imaging radar can detect objects up to 350 meters. The imaging radar can be placed in the front of the vehicle and is the sensor that, together with lidar, is the most advanced sensor in autonomous vehicles and is thus a vital component of an autonomous system. An imaging radar requires a high-performance antenna with low losses - challenges that Gapwaves solution effectively addresses.

In recent years, Gapwaves has seen an increased demand for antennas for imaging radar. The benefits of Gapwaves technology for these advanced radar sensors are confirmed by several global customers as well as the recently signed agreement with Bosch.

Radar for infrastructure

Driven by the market for autonomous vehicles and connected cities, the demand of radar antennas for traffic optimization and monitoring is expected to increase. Waveguide antenna technology enables a high-performance radar reliable in all weather conditions. The value Gapwaves antennas add to radar applications for infrastructure is confirmed by partnership and agreements with Smartmicro among others.

SAE levels of automated driving



Source: SAE International, Yole Automotive report 2022

Illustration of SAE levels of automated driving.

Radar is the sensor that increase most in number in the higher levels of automated driving. The illustration describes how the number of sensors is linked to the different levels of automated driving and which safety functions is enabled.



Wireless communication

Within the wireless communication market segment, the applications where Gapwaves are monitored technology can create added value compared to today's traditional antenna technology.

Telecom

Today's 5G is capable of using traditional antenna technology (circuit board based PCB antennas) for lower frequencies (mid band, 3-5 GHz). It is first when 5G requires higher frequencies, 28 GHz and above, a better performance antenna technology like Gapwaves solution is needed. We continue to see positive of the future: Connected cities, IoT and autonomous vehicles require communication with limited delay and higher data rates. This is driving a shift towards higher frequencies and more bandwidth, where Gapwaves antenna technology has advantages. Market analysts predict that it is autonomous vehicles that will drive the development of 5G at higher frequencies and then Gapwaves antenna technology will bring huge value to the market.

Satcom

During 2022, Gapwaves has participated in three research projects within satellite communications. The first addresses antennas for satellite communication on higher frequencies where a first demonstrator will be released soon. The second aims to develop the next generation satellite terminal together with Satcube, Chalmers University of Technology and Forsway Scandinavia, Gapwaves has designed and manufactured the first antenna prototype that now will be integrated into the final product. The third project, is newly started and funded by ESA (European Space Agency). This aims to develop a high pressure positioning (GPS) demonstrator with low-flying satellites.

Intellectual property (IP)

Gapwaves business is built on advanced technology, and a strong IP portfolio is a central issue for the company. At the end of 2022, Gapwaves had 40 active patent families that provide worldwide protection for the company's foundational technology. The company works continuously to develop its patent portfolio, and new patent applications are filed on an ongoing basis. The aim of the company's patent strategy is to use the waveguide technology as a foundation on which to build opportunities for long-term development of future antenna products within high and extremely high frequencies.

Gapwaves as a supplier to Bosch

In July 2022, Gapwaves entered into an agreement with Bosch to develop waveguide antennas based on Gapwave's unique technology. The goal of the collaboration is to develop waveguide antennas optimized for use in high-resolution radar sensors for the automotive industry at SAE level 4 (See illustration on page 10), where Gapwaves will be the high-volume supplier to Bosch, with start of production in the near future.

Gapwaves moving towards IATF certification

Through the collaboration with Bosch, Gapwaves has increased the speed of product development of next-generation waveguide antennas intended for high-resolution radar sensors. The collaboration with Bosch has also accelerated Gapwave's development to become a qualified antenna supplier according to the automotive industry standard, IATF 16949*. Bosch holds extensive competence in relevant production processes, industrialization and preparations for series production, which Gapwaves now get access to use and learn from.

*IATF 16949 is a specific standard for the automotive industry containing process requirements for quality management systems that drive continuous improvement, error prevention and reduction of variation and waste in the supply chain.

Strong momentum in 2022

The collaboration shows good progress and Gapwaves has delivered the first antenna prototypes to Bosch in 2022. Gapwaves focus during 2023 will be to freeze material selection and manufacturing methods for the first antenna intended for series production, as well as to start the development of the production line and production facilities. Furthermore, in 2023, Gapwaves will continue to deliver prototypes with an increasing degree of maturity to Bosch.

All development performed within the framework of the collaboration with Bosch, Gapwaves are able to reuse for product development and product delivery to other customers. This will further strengthen Gapwave's position as a leading supplier of waveguide antennas for the automotive industry.

"Gapwaves offers a novel and disruptive market leading technology for waveguide-based radar antennas. By entering into this agreement and combining our expertise, we are heading for a market leading radar sensor with significant increased performance intended for higher levels of automated driving", says Volker Wetekam, Head of the Automated Driving unit at Bosch Mobility Solutions; "thus we are also strengthening Bosch's position and opportunities in the emerging market for radar sensors for highly automated driving."



New position in the value chain

Through the agreement with Bosch, Gapwaves moves from being a technology provider (license/royalty business) to being a supplier of antennas to Bosch. The repositioning implies that Gapwaves will take a larger share in the value chain with increased revenues as a result.

In total, the deal with Bosch represents an expected sales value of a high double-digit million euro amount over the next decade according volume indications from Bosch.

Great market potential

The trend is clearly upwards for the market of advanced radar sensors for the higher levels of automated driving at SAE level 2-4 (see illustration on page 10) with an increased demand of advanced antenna technology as a result. Gapwaves antenna technology has proven to have increased competitive advantages the more complex and advanced antenna that is required and is thus a perfect match for high-resolution radar sensors as well as imaging radars.



Meet the team

Gapwaves strives to be an attractive employer offering stimulating roles at the forefront of a new cutting-edge technology in rapidly expanding markets. We attach great importance to recruitment and skills development in order to secure our employees and the development of our company.

We are actively working to promote equal rights and career opportunities, regardless of background, gender or religion. At year end, the company had over 30 employees representing a large number of nationalities. Employees have the opportunity to participate in the development of the company through, for example, share option programmes.

Our employees high level of expertise in product development, production of antennas on millimetre wave frequencies and business development in areas such as radar applications, are things we highly value. This is crucial in order to develop Gapwaves into the wanted position as a world leading supplier in regulated markets such as the automotive industry.

During 2022, we have strengthen the company's competences in general and more focused in process and production development, with a dedicated Quality Manager, to meet the industrialization that is now underway together with our customers.



Oskar Thordén, Quality Manager

"As Quality Manager at Gapwaves, I am currently working intensively with our IATF 16949 certification, a required standard to be approved as a supplier to the automotive industry. Together with our main customers Hella and Bosch, the plan is to have an approved certification in place in the the coming years."

"Gapwaves offers a dynamic environment and committed and curious colleagues. Together, we solve challenges that no one has previously succeeded in. We develop completely unique solutions that we can be proud of and that touch. This is meaningful and creates joy for me and many people around me."



Hanna Skårbratt, Project Manager

"As a Project Manager at Gapwaves, I am involved in the entire process from idea to industrialization, I work closely with our customers and all our fantastic engineers."

"There are different challenges in different projects, and it is my role as Project Manager to find a balance between technical performance and commercial requirements to optimize each antenna based on the customer's specific needs. I appreciate the dynamic environment and the creative thinking required to solve the challenges me and my team face on a daily basis."

Shares and shareholders

Shares

Gapwaves B share has been listed since November 18th 2016 on Nasdaq First North Growth Market Stockholm and trading takes place under the short name GAPW B. As of 31 December 2022 had the company approx. 7,600 shareholders. There are a total of 31,146,299 in the company shares, of which 7,667,500 are A shares and 23,478,799 are B shares. Each A share gives the right to ten votes and each B share the right to one voice. As of December 31, the share capital was SEK 1,868,778 which represents a quota value of SEK 0.06 per share. The number shares increased in connection with the acquisition of Metasum AB was completed on July 1st when Gapwaves issued 435,000 new B shares.

Share capital

As of December 31st 2022, the share capital was SEK 1,868,778 and the total number of shares was 31,146,299. This gives a quota value of SEK 0.06 per share.

Share information

Number of A-shares:	7 677 500
Number of B-shares:	23 478 799
Total number of votes:	100 153 799
Total number of shares:	31 146 299
High price 2022:	SEK 51,70
Low price 2022:	SEK 19,78
Market value as on 30 Dec 2022:	MSEK 867

Marketplace:	Nasdaq First North Growth Market
Certified Adviser:	G&W Fondkommission
Auditor:	PricewaterhouseCoopers AB

Share options: Series 2022/2025

The shareholders decided at the extraordinary general meeting on June 10th, 2022 to issue a warrant program (Series 2022/2025) for permanent employees (540,000 warrants) and the board (100,000 warrants), a total of 640,000 warrants. During the period June 9th 2025 up to and including August 29th 2025, the holder has the right to convert a warrant into a B share. A total of 502,541 warrants were subscribed with an exercise price of SEK 38.20. The price per option was set at SEK 7.18 through an external valuation.

Total dilution effect is expected at full utilization to be approx. 2.3% of the outstanding capital and 0.65% of the outstanding votes.

New share issue

In July 2022, a new issue was carried out in connection with the acquisition of Metasum AB, a total of 435,000 B shares were issued. Total number of shares after the new issue amounted to 31,146,299. The company's share capital increased by KSEK 26, from KSEK 1,843 to KSEK 1,869.

Dividend policy

Gapwaves is in a developmental phase and is not paying any dividends.

Largest shareholders in Gapwaves AB (publ)

The twenty largest shareholders in terms of capital (A- and B-shares)

31 December 2022	A-shares	B-shares	Share of equity %	Share of voting power %
Kildal Antenn AB, incl. related parties	5 618 000	390 200	19,29%	56,48%
Lars-Inge Sjöqvist with companies	848 000	161 048	3,24%	8,63%
Jian Yang	509 500	21 113	1,70%	5,11%
Abbas Vosoogh with companies	265 000	546 658	2,61%	3,19%
HELLA GmbH & Co. KGaA	-	3 122 400	10,02%	3,12%
Peter Enoksson	185 500	92 750	0,89%	1,94%
Ashraf Uz Zaman	165 000	100 000	0,85%	1,75%
Avanza Pension	-	1 585 604	5,09%	1,58%
Nordnet pensionsförsäkring AB	-	960 043	3,08%	0,96%
BNP Paribas Sec Serv Luxemburg	-	631 125	2,03%	0,63%
Six Sis AG	-	558 800	1,79%	0,56%
Bright Ebenezer	-	510 000	1,64%	0,51%
Nordea Livförsäkring Sverige AB	-	260 926	0,84%	0,26%
Leif Hagne	-	225 839	0,73%	0,23%
Chalmers Ventures AB	-	201 229	0,65%	0,20%
RGG ADM-Gruppen AB	-	175 000	0,56%	0,17%
Brynn Settels	-	175 000	0,56%	0,17%
Ann Christin Berardi	-	175 000	0,56%	0,17%
Peter Tafazoli	-	164 192	0,53%	0,16%
Greven Dental AB	-	133 465	0,43%	0,13%
Others	76 500	13 288 407	42,91%	14,03%
Total	7 667 500	23 478 799	100,00%	100,00%

Board of directors and management

Board of directors

The board of directors consists, in addition to representatives of the major shareholders, of people with extensive experience of the industry and large networks of contacts.



Magnus Jonsson

Chairman

A shares: –
B shares: –
Options 2022/2025: 20 000

Independent in relation to management and larger shareholders.



Olle Axelsson

Director

A shares: –
B shares: 62 765
Options 2022/2025: 20 000

Independent in relation to management and larger shareholders.



Madeleine Schilliger Kildal*

Director

A shares: –
B shares: 25 200
Options 2022/2025: –

Independent in relation to management. Dependent in relation to larger shareholders.



Torbjörn Gustafsson

Director

A shares: –
B shares: 10 000
Options 2022/2025: 20 000

Independent in relation to management and larger shareholders.



Dietmar Stapel

Director

A shares: –
B shares: –
TO 2022/2025: –

Independent in relation to management. Dependent in relation to larger shareholders.

*Madeleine Schilliger Kildal owns through companies 5% of Kildal Antenn AB's shares in Gapwaves AB.

Management

Gapwaves management consists of two people in addition to the CEO. Each person in the management team has substantial experience within their field and reports directly to the CEO.



Jonas Ehinger

CEO

A shares: –
B shares: 33 500
Options 2022/2025: 40 000

Employed since 2022



Marcus Hasselblad

CTO

A shares: –
B shares: 41 000
Options 2022/2025: 30 000

Employed since 2018



Robert Berhof

CFO

A shares: –
B shares: 700
Options 2022/2025: 38 900

Employed since 2021

Statutory administration report

General information about the business

Gapwaves is active in the development of waveguide antennas for applications in radar and wireless communication. The basis of the business is a technical invention for waveguide technology. The company's business model is based on generating revenue through product development financed by customers, which then becomes sales revenue once the product has been developed and the antennas are being mass-produced. In addition, there are license revenues from IP and revenues from sales of production equipment. Gapwaves has in-house production for the assembly and testing of lower volumes, while there are established partnerships with specialist producers for high-volume production.

Significant events during the financial year

Group consolidation

During the year, the remaining 75% of Metasum AB was acquired by the parent company and included in the consolidated accounts with amounts relating to the time after the acquisition date, 1 July 2022. In the previous period in 2022, the equity method was used. The associated company is consolidated as a subsidiary from July and is included as a subsidiary from 1 July 2022.

New agreement and deeper collaborations

In July 2022, Gapwaves entered into an agreement with Bosch regarding the development and large-scale production of high-resolution radar antennas for automotive applications. The agreement has an expected sales value of a high double-digit amount in million euros over the next decade. The deal with Bosch is the largest in Gapwaves history and stipulates that Gapwaves takes the step from being a technology provider to become a supplier of antennas. Furthermore, the agreement implies that Gapwaves takes a new position and a larger share of the value chain with increased revenues as a result. Focus during the year has been that, together with Bosch, define production processes, industrialization concepts and to prepare for serial production and to deliver the first antenna prototypes.

During the year, the interest in Gapwaves antenna technology for more advanced imaging radar antennas has continued to grow, which is confirmed by the strong momentum in the collaboration with the American autotech company that develops self-driving vehicles.

The collaboration with Hella continues according to plan. Gapwaves together with their production partner now has a complete production line for high-volume production installed and approved according to standards in the automotive industry.

Risks

Risk management

Market & Customers

Gapwaves business areas have relatively few potential customers but these customers are large. If any of these potential customers does not in fact become a customer, this may have a negative impact on the company's sales.

Gapwaves is constantly seeking relationships with new companies and within new applications to which Gapwaves' knowledge and technology can be applied.

Subcontractors

Gapwaves works on the basis of an efficient organisation where parts of production are contracted out and are conducted when customers place orders. This means we are dependent on subcontractors fulfilling their commitments.

Gapwaves is working actively and on a long-term basis with several partners and is reducing its dependence on individual suppliers by maintaining contact with several suppliers within important areas. High quality is always prioritised when Gapwaves is assessing suppliers.

Competition & IP

The company may be subject to competition from a number of other companies that operate in the same segment. Several of these companies may have greater financial resources than Gapwaves.

Gapwaves has a strong patent portfolio and is constantly working to develop this in order to prevent IP infringements. In addition, Gapwaves is working to commercialise its products quickly and thus gain an advantage by early getting them on the market.

Key Personnel & Recruitment

The company is in an expansive phase, which means that the company is dependent on its ability to recruit, develop and retain qualified members of staff. If the company is unable to recruit at the pace necessary, there is a risk that development will not continue at the desired pace.

Gapwaves is working actively to developing the expertise of the company's staff and promotes the sharing of knowledge and experience in its operations. In addition, Gapwaves is using its close relationships with academia and industry to recruit new members of staff. The company also works actively to be an attractive employer.

Financing risk

The company is financed through equity. Even if the company generates revenue, capital may be needed as the company grows. In which case, the company is also exposed to financing risk.

Gapwaves management continuously monitors the company's liquidity situation. Following the private placement in 2021, the company has a stable cash balance and the company's management therefore does not see any immediate threats to liquidity.

Future development

The ambition is to continue the development and commercialisation of active antennas for integration in telecommunications systems at higher frequencies as well as in automotive radar. This development is expected to be partly financed by customers and is estimated to continue over the coming years. If development is successful, Gapwaves will become a supplier of antennas and components to the customer. Alternatively, Gapwaves may end up licensing IP to the customer. The majority of production will be carried out by a third party supplier but Gapwaves owns the IP rights. When preparing this annual report, Gapwaves has not seen any material impact on the business as a result of Covid-19, the war in Ukraine or the sanctions against Russia. The higher interest rates, energy prices and inflation during 2022 may affect Gapwaves and operations. At the end of December 2022 this has not happened.

Gapwaves follows the development closely and is prepared to act if needed.

Environmental impact

Gapwaves does not conduct any activities that are notifiable or required permits in accordance with the Environmental Code.

Research and development

The company conducts research and development of products within the millimetre wave area. The research is conducted in close partnership with Chalmers University of Technology, while development is primarily conducted inhouse with support from subcontractors.

Potential to continue as going concern

The board of directors makes the assessment that, with the available liquid assets, the company has the funding to conduct the planned activities in 2023.

Gapwaves does not issue any forecasts.

Multi-year overview

KSEK	2022	2021	2020	2019	2018
Net sales	64 023	34 860	16 263	16 096	1 762
Profit/loss after financial items	-19 659	-36 312	-44 324	-35 888	-43 982
Operating margin	neg.	neg.	neg.	neg.	neg.
Balance sheet total	246 756	253 592	98 690	133 415	94 705
Equity/assets ratio	89,4%	89,9%	80,4%	85,9%	84,4%
Number of employees at the end of the period	31	26	23	22	22

For further information, please see Note 28 Definitions of key performance indicators.

Please note that the key performance indicators above concerns the parent company Gapwaves AB. In connection with the acquisition of Metasum AB in July, Gapwaves is a Group with both consolidated financial statements and separate financial statements for the parent company. Since Gapwaves Group has no comparable figures from previous periods, we have chosen to illustrate the parent company.

Proposed appropriation of earnings

KSEK	2022
The following is at the disposal of the annual general meeting:	
Share premium reserve	426 146
Retained earnings	-193 041
Profit/loss for the year	-19 659
The board of directors proposes that non-restricted equity be appropriated such that:	
is carried forward	213 446

Income statement

Group consolidated

KSEK	Note	2022 Full year
Operating revenue		
Net sales	2	64 023
Work performed by the company for its own use and capitalised		914
Other operating revenue	3	6 011
Total Operating revenue		70 948
Operating expenses		
Goods for resale		-21 754
Other external costs	4, 5	-29 248
Personnel costs	6	-33 714
Depreciation/amortisation of property, plant and equipment and intangible assets	11, 12, 13	-7 979
Other operating expenses		-1 021
Total operating expenses		-93 716
Operating income		-22 768
Financial items		
Results from shares in associated companies	7	3 503
Financial income	8	1 302
Financial expenses	9	-56
Total financial items		4 748
Profit/loss after financial items		-18 020
Tax	10	
Deferred tax		8
Tax on profit/loss for the year		-
Total tax		8
Profit/loss for the year		-18 013
Earnings per share before and after dilution (SEK)		Neg.
Average number of shares		31 146 299

Balance sheet

Group consolidated

Assets (KSEK)	Note	2022 31 Dec
Non-current assets		
<i>Intangible assets</i>		
Capitalised expenditure on research and development and similar works	11	5 259
Concessions, patents, licences, trademarks and similar rights	12	16 754
Total intangible assets		22 013
 Property, plant and equipment		
Equipment, tools, fixtures and fittings	13	7 239
Ongoing new equipment	14	598
Total property, plant and equipment		7 837
 Financial assets		
Deferred tax assets	21	3 446
Long-term deposits		642
Total financial assets		4 088
 Total non-current assets		33 938
 Current assets		
<i>Stock</i>		
Raw materials and consumables		1 609
Total stock		1 609
 Current receivables		
Accounts receivable		9 161
Other receivables		1 916
Current tax assets		3
Prepaid expenses and accrued income	17	19 456
Total current receivables		30 536
 Cash and bank balances		
Cash and bank balances		185 428
Total cash and bank balances		185 428
 Total current assets		217 573
Total assets		251 511

Equity and liabilities (KSEK)	Note	2022 31 Dec
Equity		
Share capital	25	1 869
Other contributed capital		426 146
Other equity including profit for the year		-206 134
Total equity		221 880
Provisions		
Deferred tax	21	3 446
Total provisions		3 446
Non-current liabilities		
Other non-current liabilities	18	-
Total non-current liabilities		-
Current liabilities		
Accounts payable		5 789
Current tax liability		67
Other liabilities	19	11 698
Accrued expenses and deferred income	20	8 632
Total current liabilities		26 186
Total equity and liabilities		251 511

Statement of change in equity

Group consolidated

KSEK			Other equity including profit for the year	
	Share capital	Other contributed capital	Retained earnings, etc	Total equity
Opening balance 01/01/2022	1 843	413 793	-187 892	227 744
Profit/loss for the year	-	-	-18 013	-18 013
New share issue	26	12 353	-	12 379
Share options program	-	-	-229	-229
Closing balance 31/12/2022	1 869	426 146	-206 134	221 880

Cash flow statement

Group consolidated

KSEK	Note	2022 Full year
Operating activities		
Operating income		-22 768
Adjustments for non-cash items, etc.	22	9 591
Interest received		67
Interest paid		-56
Paid tax		132
Operating profit after adjustments		-13 034
Working capital changes		
Change in operating receivables		-10 836
Change in operating liabilities		1 421
Change in stock		-940
Cash flow from operating activities		-23 389
Investing activities		
Acquisition of subsidiaries		-1 591
Acquisition of property, plant and equipment		-502
Long-term deposits		-15
Cash flow from investing activities		-2 108
Financing activities		
Share options programme		-229
Cash flow from financing activities		-229
Cash flow for the period		-25 726
Cash and cash equivalents at beginning of period		211 155
Cash and cash equivalents at end of period		185 428

Income statement

Parent company

KSEK	Note	2022 Full year	2021 Full year
Operating revenue			
Net sales	2	64 023	34 860
Work performed by the company for its own use and capitalised		914	2 474
Other operating revenue	3	6 011	2 588
Total Operating revenue		70 948	39 922
Operating expenses			
Goods for resale		-21 754	-15 502
Other external costs	4,5	-29 243	-31 695
Personnel costs	6	-33 714	-22 487
Depreciation/amortisation of property, plant and equipment and intangible assets	11,12,13	-6 121	-5 976
Other operating expenses		-1 021	-502
Total operating expenses		-91 853	-76 162
Operating income		-20 905	-36 241
Financial items			
Financial income	8	1 302	-
Financial expenses	9	-56	-72
Total financial items		1 246	-72
Profit/loss after financial items		-19 659	-36 312
Tax	10		
Tax on profit/loss for the year		-	-
Total tax		-	-
Profit/loss for the year		-19 659	-36 312
Earnings per share before and after dilution (SEK)		neg.	neg.
Average number of shares		31 146 299	30 711 299

Balance sheet

Parent company

Assets (KSEK)	Note	2022 31 Dec	2021 31 Dec
Non-current assets			
<i>Intangible assets</i>			
Capitalised expenditure on research and development and similar works	11	5 259	9 465
Concessions, patents, licences, trademarks and similar rights	12	28	121
Total intangible assets		5 287	9 587
Property, plant and equipment			
Equipment, tools, fixtures and fittings	13	7 239	9 156
Ongoing new equipment	14	598	-
Total property, plant and equipment		7 837	9 156
Financial assets			
Shares in subsidiaries	15, 24	15 464	-
Shares in associated companies	16	-	2 632
Long-term deposits		642	-
Total financial assets		16 106	2 632
Total non-current assets		29 230	21 375
Current assets			
<i>Stock</i>			
Raw materials and consumables		1 609	668
Total stock		1 609	668
Current receivables			
Accounts receivable		9 161	8 295
Other receivables		1 916	1 745
Current tax assets		-	60
Prepaid expenses and accrued income	17	19 456	10 295
Total current receivables		30 533	20 395
Cash and bank balances			
Cash and bank balances		185 384	211 155
Total cash and bank balances		185 384	211 155
Total current assets		217 526	232 218
Total assets		246 756	253 592

Equity and liabilities (KSEK)	Note	2022 31 Dec	2021 31 Dec
Equity			
<i>Restricted equity</i>			
Share capital	25	1 869	1 843
Reserve for development expenditure		5 259	9 465
Total restricted equity		7 128	11 308
Non-restricted equity			
Share premium reserve		426 146	413 793
Retained earnings		-193 041	-160 706
Profit/loss for the year		-19 659	-36 312
Total non-restricted equity		213 446	216 775
Total equity		220 574	228 083
Non-current liabilities			
Other non-current liabilities	18	-	813
Total non-current liabilities		-	813
Current liabilities			
Current liabilities	18	-	650
Accounts payable		5 789	11 675
Current tax liability		64	-
Other liabilities	19	11 698	7 823
Accrued expenses and deferred income	20	8 632	4 549
Total current liabilities		26 183	24 697
Total equity and liabilities		246 756	253 592

Statement of change in equity

Parent company

	<i>Restricted equity</i>		<i>Non-restricted equity</i>			Total equity
	Share capital	Reserve for development expenditure	Share premium reserve	Retained earnings etc	Profit/loss for the year	
KSEK						
Opening balance 01/01/2021	1 657	11 672	231 787	-121 485	-44 324	79 307
Reallocation profit/loss prev. year	-	-	-	-44 324	44 324	-
Merger difference	-	-	-	-27	-	-27
Change for the year in respect of reserve for development expenditure	-	-2 206	-	2 206	-	-
New share issue during the year	186	-	182 006	-	-	182 192
Share options programme	-	-	-	2 924	-	2 924
Profit/loss for the year	-	-	-	-	-36 312	-36 312
Closing balance 31/12/2021	1 843	9 466	413 793	-160 706	-36 312	228 084
Reallocation profit/loss prev. year	-	-	-	-36 312	36 312	-
New share issue	26	-	12 353	-	-	12 379
Share options programme	-	-	-	-229	-	-229
Change for the year in respect of reserve for development expenditure	-	-4 206	-	4 206	-	-
Profit/loss for the year	-	-	-	-	-19 659	-19 659
Closing balance 31/12/2022	1 869	5 260	426 146	-193 041	-19 659	220 574

Cash flow statement

Parent company

KSEK	Note	2022 Full year	2021 Full year
Operating activities			
Operating income		-20 905	-36 241
Adjustments for non-cash items, etc.	22	7 355	5 976
Interest received		67	-
Interest paid		-56	-71
Paid tax		124	-
Cash flow from operating activities before working capital changes		-13 414	-30 336
Working capital changes			
Change in operating receivables		-10 826	-15 629
Change in operating liabilities		2 072	4 664
Change in stock		-941	-308
Cash flow from operating activities		-23 109	-41 609
Investing activities			
Acquisition of intangible assets		-	-2 326
Acquisition of property, plant and equipment		-502	-6 793
Merger of subsidiaries		-	73
Acquisition of associated companies		-	-682
Acquisition of subsidiaries		-1 591	-
Additional purchase price associated companies		-325	-488
Long-term deposits		-15	-
Cash flow from investing activities		-2 432	-10 215
Financing activities			
New share issue		-	182 192
Share options programme		-229	2 924
Cash flow from financing activities		-229	185 115
Cash flow for the year		-25 771	133 293
Cash and cash equivalents at beginning of period		211 155	77 862
Cash and cash equivalents at end of period		185 383	211 155

Notes

Note 1

Accounting policies

General accounting policies

This annual report has been prepared in accordance with the Swedish Annual Accounts Act and Swedish Accounting Standards Board general advice BFNAR 2012:1 Annual reports and consolidated financial statements (K3). The accounting policies are unchanged compared with previous years except that consolidated accounts are also drawn up from 2022 onwards. Gapwaves AB reports as a group from and including 1st July 2022. The group was formed on 1st July and the period from 1st January to 30st June refers to the parent company and capital share in subsidiaries.

Expenditure on research and development

Expenditure on research, that is planned and systematically searching for the purpose of obtaining new scientific or technical knowledge and insights is recognised as costs when it arises. The capitalisation model is used when recognising expenditure on development. That means that expenditure that has arisen during the development phase is recognised as an asset when all of the following conditions have been met:

- It is technically feasible to complete the intangible asset so that it can be used or sold.
- The intention is to complete the intangible asset and use it or sell it.
- There is the potential to use or sell the intangible asset.
- It is probable that the intangible asset will generate future economic benefits.
- There are the requisite and adequate technical, financial and other resources to complete the development and to use or sell the intangible asset.
- The expenditure attributable to the intangible asset during its development can be measured reliably.

Internally generated intangible assets are recognised at historical cost less accumulated amortisation. The historical cost of an internally generated Intangible asset consists of all directly attributable costs (e.g. materials and salaries). Indirect manufacturing costs that constitute more than a negligible portion of the total cost for manufacturing and that exceed an insignificant amount are included in the historical cost. The company conducts an impairment test of capitalised development expenditure each year.

Other intangible assets

Other intangible assets that have been acquired by the company are recognised at historical cost less accumulated amortisation. Expenditure for internally generated goodwill and trademarks is recognised in the income statement as an expense when it arises.

The company's net sales consist of the following items;

Sales of goods

Revenue is recognised at the fair value of what the company has received or will receive. That means that the company recognises revenue at nominal value (invoiced amount) if the company receives remuneration in cash or cash equivalents directly at the time of delivery. Deductions are made for discounts provided.

When goods are sold, the income is normally recognised as revenue when the material benefits and risks associated with ownership of the goods have been transferred from the company to the purchaser.

Service contracts

For fixed-price service contracts, the revenue and expenditure that are attributable to a completed service contract are recognised as revenue and expenditure respectively in relation to the contract's degree of completion on the balance sheet date (percentage-of-completion method). The degree of completion is determined by comparing expenditure incurred on the balance sheet date with estimated total expenditure. Feared losses on a contract are recognised immediately as an expense.

Licensing revenue

Gapwaves AB (publ) has granted external companies rights to use products it has developed in-house. Income is obtained on the basis of the volume produced and is recognised under income once production has taken place. The same policies are used for those parts of licensing agreements that can be connected to technology transfer where revenue is recognised for the period in which the company has an obligation to offer assistance connected to the technology

Public grants

In those cases where no future achievement is required in order to obtain the grants, the company recognises public grants as revenue once the conditions for obtaining the grants have been fulfilled. Public grants are measured at the fair value of what company has received or will receive.

Leases

The company reports both finance and operating leases as operating leases. Operating leases are recognised as an expense on a straight-line basis over the term of the lease.

Further information is provided in Note 5.

Employee benefits

Employee benefits means all types of benefits that the company provides to its employees. The company's benefits include salaries, paid holidays, paid leave, bonuses and post-employment benefits (pensions). Reporting takes place when the benefit is earned.

Post-employment benefits means defined contribution or defined benefit pension plans. Defined contribution plans refers to plans where fixed contributions are paid and there are no obligations, legal or informal, to pay anything else in excess of these contributions. Other plans are classified as defined benefit pension plans.

The company has no other long-term employee benefits.

The company only has defined-contribution pension plans. Expenditure on defined contribution plans is recognised as an expense in the period in which the employees perform the services that form the basis of the obligation.

Further information is provided in Note 6.

Translation of items in foreign currencies

Receivables and liabilities in foreign currencies have been measured at the exchange rate in force on the balance sheet date. Exchange gains and exchange losses on operating receivables and operating liabilities are recognised under operating income, while exchange gains and exchange losses on financial receivables and liabilities are reported as financial items.

Tax

Total tax consists of current and deferred tax. Taxes are reported in the income statement, except when underlying transactions are reported directly against equity, in which case the associated tax effect is reported in equity.

Current tax

Current tax means income tax for the current financial year and that part of previous financial years' income tax that not yet been reported. Current tax is calculated on the basis of the tax rate that applies on the balance sheet date.

Deferred tax

Deferred tax is income tax that pertains to future financial years as a result of past events. Reporting takes place in accordance with the balance sheet method. Under this method, deferred tax liabilities and deferred tax assets are reported for temporary differences that arise between the book value and tax base of assets and liabilities, and for other tax deductions or tax losses.

Deferred tax assets are only reported net against deferred tax liabilities if they can be paid with a net amount. Deferred tax is calculated on the basis of a decided tax rate on the balance sheet date. Effects of changes in the applicable tax rates are taken up as income in the period in which the change becomes legally binding. Deferred tax assets are reduced by the portion of the underlying tax asset that it is unlikely will be possible to realise within the foreseeable future.

Further information is provided in Note 10 and 21.

Non-current assets

Property, plant and equipment and intangible assets are recognised at historical cost less accumulated depreciation/ amortisation and any impairment losses. The depreciable amount comprises the historical cost minus an estimated residual value, if this is material. Depreciation takes place on a straight-line basis over the expected useful life.

Depreciation periods

Intangible assets,

Capitalised expenditure on development and similar works	5 years
--	---------

Concessions,

Patents, licences, trademarks and similar rights	5 years
--	---------

Property, plant and equipment,

Equipment, tools, fixtures and fittings	3-5 years
---	-----------

Stock

Stock has been measured at the lower of its historical cost and its net realisable value on the balance sheet date. Net realisable value denotes the estimated sales price less selling expenses.

Client's funds

Gapwaves AB (publ) administers research projects that involve partners including Chalmers University of Technology. These involve the receipt of research grants that are to be forwarded to the parties involved in the research project in accordance with a predetermined plan. These funds are recognised as current liabilities on the balance sheet and are classified as client's funds.

Further information is provided in Note 19.

Financial assets and liabilities

Financial assets and liabilities are recorded in accordance with Chapter 11 (Financial instruments measured at historical cost) of BFNAR 2012:1.

Recognition on and derecognition from the balance sheet

A financial asset or financial liability is recognised on the balance sheet when the company becomes party to the instrument's contractual terms. A financial asset is removed from the balance sheet when the contractual right to the cash flow from the asset has expired or been settled. The same applies when the risks and benefits connected to the holding have been transferred in all material respects to another party and the company no longer has control of the financial asset. A financial liability is removed from the balance sheet when the contractual obligation has been fulfilled or expired.

Measurement of financial assets

At initial recognition, financial assets are measured at historical cost, including any transaction expenses that are directly attributable to the acquisition of the asset.

After initial recognition, current financial assets are measured at the lower of historical cost and net realisable value on the balance sheet date.

Accounts receivable and other receivables that constitute current assets are measured individually at the amount that is expected to be received. After initial recognition, non-current financial assets are measured at amortised cost less any impairment losses and with the addition any appreciation.

Measurement of financial liabilities

Financial liabilities are measured at amortised cost. Expenditure that is directly attributable to the taking out of loans adjusts the historical cost and is allocated to a particular period in accordance with the effective interest method.

Earnings per share

(i) Earnings per share before dilution

Earnings per share before dilution is calculated by dividing:

- profit attributable to the parent company's shareholders,
- with a weighted average number of ordinary shares outstanding during the period.

(ii) Earnings per share after dilution

For the calculation of earnings per share after dilution, the amounts used for the calculation of earnings per share before dilution are adjusted by taking into account:

- the weighted average of the additional common shares that would have been outstanding upon a conversion of all potential common shares.

Warrants

Payments regarding warrants are booked against equity.

Consolidation

The consolidated accounts have been prepared according to the acquisition method. This means that the identifiable assets and liabilities of acquired businesses are reported at market value according to the prepared acquisition analysis. If the acquisition value of the business exceeds the calculated market value of the expected net assets according to the acquisition analysis, the difference is reported as goodwill.

The consolidated accounts include, apart from the parent company, all companies in which the parent company directly or indirectly has more than 50% of the voting rights or otherwise holds the controlling influence and thus has a right to shape the company's financial and operational strategies in order to obtain financial benefits.

A subsidiary's income and expenses are included in the consolidated accounts from and including the time of the acquisition up to and including the time when the parent company no longer has a controlling influence over the subsidiary.

Elimination of transactions between group companies

Intra-group receivables and liabilities, income and expenses and unrealized profits or losses arising from transactions between group companies are eliminated in their entirety.

The parent company and the group apply the same accounting policies unless otherwise stated below.

Shares and participations in subsidiaries

Shares and participations in subsidiaries are recognised at historical cost less any impairment losses. The historical cost includes the consideration paid for the shares and acquisition expenses. Any capital contributions are added to the historical cost when they are paid. Dividends from subsidiaries are recognised as revenue.

Equity

Equity is divided into restricted and non-restricted equity, in accordance with the division of the Annual Accounts Act.

Note 2

Net sales per geographic market

	Group consolidated	Parent company	
KSEK	2022	2022	2021
Sweden	320	320	216
EU	36 195	36 195	24 541
The rest of the world	27 509	27 509	10 103
Total	64 023	64 023	34 860

Note 3

Other operating revenue

	Group consolidated	Parent company	
KSEK	2022	2022	2021
Grants received	2 861	2 861	2 304
Exchange gains on receivables and liabilities	3 077	3 077	271
Capital gain on sale of inventory	63	63	-
Other revenue	10	10	13
Total	6 011	6 011	2 588

Note 4

Fees to auditors

	Group consolidated	Parent company	
KSEK	2022	2022	2021
<i>PricewaterhouseCoopers AB</i>			
Audit engagement	455	455	-
Other services	367	367	-
<i>KPMG</i>			
Audit engagement	-	-	485
Other services	-	-	127
Total	822	822	612

Note 5

Leases

	Group consolidated	Parent company	
KSEK	2022	2022	2021
<i>Expensed payments in respect of operating leases</i>	4 092	4 092	4 114
Future minimum lease payments in respect of non-cancellable operating leases.			
To be paid within 1 year	3 732	3 732	3 919
To be paid within 1–5 years	6 524	6 524	9 544
To be paid later than 5 years	-	-	-
Total	10 256	10 256	14 348

Operating lease payments refers to rental agreements, laboratory equipment, leased IT software and leased cars.

Note 6

Number of employees and personnel costs

	Group consolidated	Parent company	
Average number of employees	2022	2022	2021
Men	25	25	19
Women	5	5	5
Total	30	30	24

Wages, salaries and other benefits

KSEK	2022	2022	2021
Board of directors and CEO	3 450	3 450	2 616
Bonus remuneration to the CEO	500	500	-
Other employees	17 026	17 026	13 818
Total	20 476	20 476	16 434

Pension costs and other social security contributions

KSEK	2022	2022	2021
Pension costs for board of directors and CEO	654	654	400
Pension costs for other employees	1 844	1 844	1 503
Other social security contributions pursuant to legislation and agreements	5 927	5 927	4 230
Total	8 425	8 425	6 133

Gender distribution among senior officers

	2022 Dec 31	2022 Dec 31	2021 Dec 31
Proportion of women on the board of directors	20%	20%	17%
Proportion of men on the board of directors	80%	80%	83%
Proportion of women among other officers of the company	0%	0%	0%
Proportion of men among other officers of the company	100%	100%	100%

Note 7

Results from shares in associated companies

	Group consolidated	Parent company	
KSEK	2022	2022	2021
Results from revaluation of shares in associated companies	3 503	-	-
Total	3 503	-	-

Note 8**Financial income**

	Group consolidated	Parent company	
KSEK	2022	2022	2021
Capital gains financial items	1 234	1 234	-
Interest income	67	67	-
Total	1 302	1 302	-

Note 9**Financial costs**

	Group consolidated	Parent company	
KSEK	2022	2022	2021
Rate losses financial items	-	-	72
Interest charges	56	56	-
Total	56	56	72

Note 10**Tax on profit/loss for the year**

	Group consolidated	Parent company	
KSEK	2022	2022	2021
Current tax	-	-	-
Deferred tax	8	-	-
Total reported tax	8	-	-
<i>Reconciliation of effective tax rate</i>			
Net profit/loss before tax	-18 020	-19 659	-36 312
Tax on net profit/loss in accordance with applicable tax rate (20.6%)	3 712	4 050	7 480
<i>Tax effect of:</i>			
Non-deductible expenses	-140	-140	-103
Tax-free income	1	1	-
Increase in loss carry-forwards without corresponding capitalisation of deferred tax	-3 573	-3 911	-7 377
Change in deferred tax	8	-	-
Reported tax	8	-	-
Effective tax rate	-	-	-
The company has accumulated tax loss carry-forwards of	220 263	221 894	202 346
The value of the deferred taxes attributable to these losses amounts to	45 374	45 710	41 683

In the annual accounts for 2022 and 2021, the company has chosen not to report the value of the loss carry-forwards on the balance sheet as the board of directors does not believe it will be able to utilise the loss carry-forwards within the foreseeable future.

Note 11

Capitalised expenditure on development and similar works

	Group consolidated	Parent company	
	2022 Dec 31	2022 Dec 31	2021 Dec 31
KSEK			
Historical cost brought forward	36 018	36 018	33 687
Internally developed assets	-	-	2 331
Accumulated historical cost carried forward	36 018	36 018	36 018
Depreciation brought forward	-23 253	-23 253	-18 715
Depreciation for the year	-4 206	-4 206	-4 538
Accumulated depreciation carried forward	-27 459	-27 459	-23 253
Impairment losses brought forward	-3 300	-3 300	-3 300
Accumulated impairment losses carried forward	-3 300	-3 300	-3 300
Carrying amount carried forward	5 259	5 259	9 465

Note 12

Concessions, patents, licences, trademarks and similar rights

	Group consolidated	Parent company	
	2022 Dec 31	2022 Dec 31	2021 Dec 31
KSEK			
Historical cost brought forward	665	665	665
Acquired during the year	18 585	-	-
Accumulated historical cost carried forward	19 250	665	665
Depreciation brought forward	-544	-544	-428
Depreciation for the year	-1 951	-93	-116
Accumulated depreciation carried forward	-2 495	-637	-544
Carrying amount carried forward	16 754	28	121

Note 13

Equipment, tools, fixtures and fittings

	Group consolidated	Parent company	
	2022 Dec 31	2022 Dec 31	2021 Dec 31
KSEK			
Historical cost brought forward	12 846	12 846	6 904
Acquired during the year	8 238	8 238	6 891
Sales/disposals	-401	-401	-949
Reclassifications	-7 985	-7 985	-
Accumulated historical cost carried forward	12 698	12 698	12 846
Depreciation brought forward	-3 689	-3 689	-3 211
Depreciation for the year	-1 821	-1 821	-1 321
Sales/disposals	53	53	844
Accumulated depreciation carried forward	-5 457	-5 457	-3 689
Carrying amount carried forward	7 239	7 239	9 156

Note 14**Ongoing new equipment**

	Group consolidated	Parent company	
KSEK	2022 Dec 31	2022 Dec 31	2021 Dec 31
Acquired during the year	598	598	-
Carrying amount carried forward	598	598	-

Note 15**Shares in the group**

	Parent company	
KSEK	2022 Dec 31	2021 Dec 31
Reclassifications	2 632	-
Purchases	12 833	-
Carrying amount carried forward	15 464	-

Specification of shares in associated companies

Name	Org. number	Residence	Share of equity
Metasum AB	559131-0072	Gothenburg	100%

During the year, the remaining 75% of Metasum AB was acquired by the parent company and included in the consolidated accounts with amounts relating to the time after the acquisition date, 1 July 2022. In the previous period in 2022, the equity method was used. The associated company is consolidated as a subsidiary from July and is included as a subsidiary from 1 July 2022.

Note 16**Shares in associated companies**

	Parent company	
KSEK	2022 Dec 31	2021 Dec 31
Historical cost brought forward	2 632	-
Reclassifications	-2 632	-
Purchases	-	2 632
Carrying amount carried forward	-	2 632

Note 17**Prepaid costs and accrued income**

	Group consolidated	Parent company	
KSEK	2022 Dec 31	2022 Dec 31	2021 Dec 31
Prepaid rents	1 064	1 064	1 391
Accrued income	16 692	16 692	7 688
Other prepaid costs	1 699	1 699	1 215
Total	19 456	19 456	10 295

Accrued income mainly refers to revenue recognized, but not yet invoiced, license fees to Hella and Bosch

Note 18**Non-current liabilities****Group consolidated****Parent company**

Amount of the liability that is due
KSEK

2022
Dec 31

2022
Dec 31

2021
Dec 31

Within 1 year	-	-	650
Within 5 years	-	-	813
After 5 years	-	-	-
Total	-	-	1 463

Note 19**Other liabilities****Group consolidated****Parent company**

KSEK

2022
Dec 31

2022
Dec 31

2021
Dec 31

Grant/client's funds	11 050	11 050	7 281
Employee tax	648	648	542
Total	11 698	11 698	7 823

Note 20**Accrued expenses and deferred income****Group consolidated****Parent company**

KSEK

2022
Dec 31

2022
Dec 31

2021
Dec 31

Accrued holiday pay	3 215	3 215	2 274
Accrued bonus	2 493	2 493	-
Accrued directors' fees	504	504	682
Accrued social security contributions	1 636	1 636	1 254
Other accrued expenses	782	782	338
Total	8 632	8 632	4 549

Note 21**Deferred taxes****Group consolidated**

2022 Dec 31

KSEK

Temporary
difference

Deferred
tax claim

Deferred
tax liability

Opening balance	-	-	-
Asset acquisition patent	16 726	3 446	3 446
Closing balance	16 726	3 446	3 446

Note 22**Items not affecting cash flow****Koncernen****Moderbolaget**

KSEK

2022
Dec 31

2022
Dec 31

2021
Dec 31

Depreciation	7 980	6 121	5 976
Exchange rate gains	1 234	1 234	-
Results from revaluation of shares in associated companies	3 503	-	-
Adjustment in connection with conversion to group	-3 126	-	-
Total	9 591	7 355	5 976

Note 23

Group affiliation

The company is a subsidiary of Kildal Antenn AB, org. reg. no. 556423-0794. This company holds 561,800 A shares and 390,200 B shares. The ultimate parent company is Kildal Inventors AB, org. reg. no. 559005-1776. Both companies have their registered offices in Hårryda Municipality.

Note 24

Subsidiaries and consolidated financial statements

During the year, the remaining 75% of Metasum AB, 559131-0072, was acquired by the parent company and included in the consolidated accounts with amounts relating to the time after the acquisition date July 1, 2022. In the previous period in 2022, we used the equity method.

The associated company is consolidated as a subsidiary from July and is included as a subsidiary from 1 July 2022.

Note 25

Share capital

As at 31 December 2022, the share capital was KSEK 1,869 (KSEK 1,843). The number of shares is 31,146,299 (30,711,299), which gives a nominal value of SEK 0.06 per share.

Note 26

New share issue

In July 2022, a new issue was carried out in connection with the acquisition of Metasum AB, a total of 435,000 new B shares. Total number of shares after the new issue amounted to 31,146,299. The company's share capital increased by SEK 26 thousand, from SEK 1,843 thousand to SEK 1,869 thousand.

Warrants: Series 2022/2025

At the Extraordinary General Meeting on 10th of June 2022, the shareholders decided to issue a warrant program (Series 2022/2025) for permanent employees (total 540,000 warrants) and the Board of Directors (total 100,000 warrants), all in all a total of 640,000 warrants. The warrants may be exercised for subscription of B-shares in the Company during the period from and including 9th of June 2025 to and including 29th of August 2025. A total of 502,541 warrants were subscribed for with a subscription price of 38.20 SEK. The price per option was set at SEK 7.18 through an external valuation.

The total dilution effect at full utilization is expected to be approx. 2.3% of the outstanding capital and 0.65% of the outstanding votes.

Warrents	Group consolidated 2022		Parent company 2022	
	Avarage exercise price in SEK per option	Options (thousands)	Average exercise price in SEK per option	Options (thousands)
Ingoing as of 1 st of January 2022	-	-	-	-
Assigned	7	503	7	503
Outstanding as of 31st December 2022	7	503	7	503

Of the 503 warrants, 0 warrants were redeemable

Note 27

Significant events after the balance sheet date

Gapwaves has received an order from Hella for their new generation 77 GHz automotive radar sensor for ADAS systems. The order includes design, development and production of antenna prototypes with an order value of approximately MSEK 3.8 with expected delivery in the second quarter of 2023.

Note 28

Definitions of key performance indicators

Operating margin

Operating income as a percentage of net sales.

Equity/assets ratio at end of period Equity at the end of the period divided by total assets at the end of period.

Basic and diluted earnings per share Earnings attributable to the parent company's shareholders divided by average number of shares during the period.

Note 29

Transactions with related parties

The company has not had any transactions with related parties during the year except during the third quarter. During the third quarter, AB Magnus Jonsson forwarded invoices to the group regarding recruitment costs for the new CEO, which have an effect on the full year 2022.

Signatory of annual accounts 2022

The board and the CEO certify that the consolidated accounts have been prepared in accordance with the Annual Accounts Act and give a fair picture of the group's position and results. The annual report has been prepared in accordance with good accounting practice and provides a fair view of the parent company's position and results.

Gothenburg, 11 April 2023
Gapwaves AB (publ)

Magnus Jonsson

Chairman

Madeleine Schilliger Kildal

Director

Karl Olof Axelsson

Director

Torbjörn Gustafsson

Director

Dietmar Stapel

Director

Jonas Ehinger

CEO

Our auditor's report has been rendered

Gothenburg, 12 April 2023
PricewaterhouseCoopers AB

Johan Malmqvist

Authorised Public Accountant

Revisionsberättelse

Till bolagsstämman i Gapwaves AB, org.nr 556840-2829

Rapport om årsredovisningen och koncernredovisningen

Uttalanden

Vi har utfört en revision av årsredovisningen och koncernredovisningen för Gapwaves AB för år 2022. Bolagets årsredovisning och koncernredovisning ingår på sidorna 20-44 i detta dokument.

Enligt vår uppfattning har årsredovisningen och koncernredovisningen upprättats i enlighet med årsredovisningslagen och ger en i alla väsentliga avseenden rättvisande bild av moderbolagets och koncernens finansiella ställning per den 31 december 2022 och av dessas finansiella resultat och kassaflöde för året enligt årsredovisningslagen. Förvaltningsberättelsen är förenlig med årsredovisningens och koncernredovisningens övriga delar.

Vi tillstyrker därför att bolagsstämman fastställer resultaträkningen och balansräkningen för moderbolaget och koncernen.

Grund för uttalanden

Vi har utfört revisionen enligt International Standards on Auditing (ISA) och god revisionssed i Sverige. Vårt ansvar enligt dessa standarder beskrivs närmare i avsnittet Revisorns ansvar. Vi är oberoende i förhållande till moderbolaget och koncernen enligt god revisorssed i Sverige och har i övrigt fullgjort vårt yrkesetiska ansvar enligt dessa krav.

Vi anser att de revisionsbevis vi har inhämtat är tillräckliga och ändamålsenliga som grund för våra uttalanden.

Övrig upplysning

Revisionen av årsredovisningen och koncernredovisningen för räkenskapsåret 2021 har utförts av en annan revisor som lämnat en revisionsberättelse daterad 6 april 2022 med omodifierade uttalanden i Rapport om årsredovisningen och koncernredovisningen.

Annan information än årsredovisningen och koncernredovisningen

Den andra informationen ingår i ett dokument i vilket årsredovisningen ingår (framvagnen): Detta dokument innehåller även annan information än årsredovisningen och koncernredovisningen och återfinns på sidorna 4-19. Det är styrelsen och verkställande direktören som har ansvaret för denna andra information.]

Vårt uttalande avseende årsredovisningen och koncernredovisningen omfattar inte denna information och vi gör inget uttalande med bestyrkande avseende denna andra information.

I samband med vår revision av årsredovisningen och koncernredovisningen är det vårt ansvar att läsa den information som identifieras ovan och överväga om informationen i väsentlig utsträckning är oförenlig med årsredovisningen och koncernredovisningen. Vid denna genomgång beaktar vi även den kunskap vi i övrigt inhämtat under revisionen samt bedömer om informationen i övrigt verkar innehålla väsentliga felaktigheter.

Om vi, baserat på det arbete som har utförts avseende denna information, drar slutsatsen att den andra informationen innehåller en väsentlig felaktighet, är vi skyldiga att rapportera detta. Vi har inget att rapportera i det avseendet.

Styrelsens och verkställande direktörens ansvar

Det är styrelsen och verkställande direktören som har ansvaret för att årsredovisningen och koncernredovisningen upprättas och att de ger en rättvisande bild enligt årsredovisningslagen. Styrelsen och verkställande direktören ansvarar även för den interna kontroll som de bedömer är nödvändig för att upprätta en årsredovisning och koncernredovisning som inte innehåller några väsentliga felaktigheter, vare sig dessa beror på oegentligheter eller misstag.

Vid upprättandet av årsredovisningen och koncernredovisningen ansvarar styrelsen och verkställande direktören för bedömningen av bolagets och koncernens förmåga att fortsätta verksamheten. De upplyser, när så är tillämpligt, om förhållanden som kan påverka förmågan att fortsätta verksamheten och att använda antagandet om fortsatt drift. Antagandet om fortsatt drift tillämpas dock inte om styrelsen och verkställande direktören avser att likvidera bolaget, upphöra med verksamheten eller inte har något realistiskt alternativ till att göra något av detta.

Revisorns ansvar

Våra mål är att uppnå en rimlig grad av säkerhet om huruvida årsredovisningen och koncernredovisningen som helhet inte innehåller några väsentliga felaktigheter, vare sig dessa beror på oegentligheter eller misstag, och att lämna en revisionsberättelse som innehåller våra uttalanden. Rimlig säkerhet är en hög grad av säkerhet, men är ingen garanti för att en revision som utförs enligt ISA och god revisionssed i Sverige alltid kommer att upptäcka en väsentlig felaktighet om en sådan finns. Felaktigheter kan uppstå på grund av oegentligheter eller misstag och anses vara väsentliga om de enskilt eller tillsammans rimligen kan förväntas påverka de ekonomiska beslut som användare fattar med grund i årsredovisningen och koncernredovisningen.

En ytterligare beskrivning av vårt ansvar för revisionen av årsredovisningen och koncernredovisningen finns på Revisorsinspektionens webbplats: www.revisorsinspektionen.se/revisornsansvar. Denna beskrivning är en del av revisionsberättelsen.

Rapport om andra krav enligt lagar och andra författningar

Uttalanden

Utöver vår revision av årsredovisningen och koncernredovisningen har vi även utfört en revision av styrelsens och verkställande direktörens förvaltning för Gapwaves AB för år 2022 samt av förslaget till dispositioner beträffande bolagets vinst eller förlust.

Vi tillstyrker att bolagsstämman disponerar vinsten enligt förslaget i förvaltningsberättelsen och beviljar styrelsens ledamöter och verkställande direktören ansvarsfrihet för räkenskapsåret.

Grund för uttalanden

Vi har utfört revisionen enligt god revisionssed i Sverige. Vårt ansvar enligt denna beskrivs närmare i avsnittet Revisorns ansvar. Vi är oberoende i förhållande till moderbolaget och koncernen enligt god revisorssed i Sverige och har i övrigt fullgjort vårt yrkesetiska ansvar enligt dessa krav.

Vi anser att de revisionsbevis vi har inhämtat är tillräckliga och ändamålsenliga som grund för våra uttalanden.

Styrelsens och verkställande direktörens ansvar

Det är styrelsen som har ansvaret för förslaget till dispositioner beträffande bolagets vinst eller förlust. Vid förslag till utdelning innefattar detta bland annat en bedömning av om utdelningen är försvarlig med hänsyn till de krav som bolagets och koncernens verksamhetsart, omfattning och risker ställer på storleken av moderbolagets och koncernens egna kapital, konsolideringsbehov, likviditet och ställning i övrigt.

Styrelsen ansvarar för bolagets organisation och förvaltningen av bolagets angelägenheter. Detta innefattar bland annat att fortlöpande bedöma bolagets och koncernens ekonomiska situation, och att tillse att bolagets organisation är utformad så att bokföringen, medelsförvaltningen och bolagets ekonomiska angelägenheter i övrigt kontrolleras på ett betryggande sätt. Den verkställande direktören ska sköta den löpande förvaltningen enligt styrelsens riktlinjer och anvisningar och bland annat vidta de åtgärder som är nödvändiga för att bolagets bokföring ska fullgöras i överensstämmelse med lag och för att medelsförvaltningen ska skötas på ett betryggande sätt.

Revisorns ansvar

Vårt mål beträffande revisionen av förvaltningen, och därmed vårt uttalande om ansvarsfrihet, är att inhämta revisionsbevis för att med en rimlig grad av säkerhet kunna bedöma om någon styrelseledamot eller verkställande direktören i något väsentligt avseende:

- företagit någon åtgärd eller gjort sig skyldig till någon försummelse som kan föranleda ersättningsskyldighet mot bolaget
- på något annat sätt handlat i strid med aktiebolagslagen, årsredovisningslagen eller bolagsordningen.

Vårt mål beträffande revisionen av förslaget till dispositioner av bolagets vinst eller förlust, och därmed vårt uttalande om detta, är att med rimlig grad av säkerhet bedöma om förslaget är förenligt med aktiebolagslagen.

Rimlig säkerhet är en hög grad av säkerhet, men ingen garanti för att en revision som utförs enligt god revisionssed i Sverige alltid kommer att upptäcka åtgärder eller försummelser som kan föranleda ersättningsskyldighet mot bolaget, eller att ett förslag till dispositioner av bolagets vinst eller förlust inte är förenligt med aktiebolagslagen.

En ytterligare beskrivning av vårt ansvar för revisionen av förvaltningen finns på Revisorsinspektionens webbplats: www.revisorsinspektionen.se/revisornsansvar. Denna beskrivning är en del av revisionsberättelsen.

Göteborg den april 2023

PricewaterhouseCoopers AB

Johan Malmqvist
Auktoriserad revisor

GAPWAVES

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