

Annual Report 2023



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The year in brief

Net sales

27,5 MSEK

Adjusted EBITDA*

-48,3 MSEK

Liquidity

89,3 MSEK

Employees

42 31 December 2023

*Adjusted for the share of results from associated companies.

Significant events 2023

February

An order was received from Hella with regards their new generation 77 GHz vehicle radar, with a value of approximately MSEK 3.8.

March

Gapwaves entered into a development and supply agreement with Smartmicro relating to high-resolution radar antennas for traffic management, with a total value of approximately MSEK 9.

April

Gapwaves added a new strategic direction in the market for complete radar sensors through an investment in Sensrad AB, corresponding to 30 percent of Sensrad's share capital.

May

An order was received from a leading European Tier 1 supplier in relation to a new project for a high-resolution radar antenna, with an order value in the region of MSEK 1.

June

An order was received from Hella regarding the design, development and production of antenna prototypes for their new radar sensor, with an order value of approximately MSEK 3.7.

An order was received from Sensrad relating to the design, development and production of antenna prototypes for their new generation 4D imaging radar, with an expected order value of approximately MSEK 4.5.

July

A new order was received for high-resolution radar antennas from the European Tier 1 supplier with whom a collaboration was initiated during the first quarter of 2023, with an approximate order value of MSEK 3.7.

August

Gapwaves received a new order from Hella in relation to the development of antennas for the next generation of radar sensors, with an order value of approximately MSEK 4.0.

September

Gapwaves launched the Multi-Layer Waveguide (MLW), an innovation that was initiated by Metasum AB, which was acquired by Gapwaves in 2022.

A new collaboration with NXP® Semiconductors was initiated to develop 3D waveguide antenna solutions.

December

Gapwaves announced the establishment of a pilot production facility adjacent to its head office in Gothenburg.

A development order from Hella was secured with a value of approximately MSEK 16.9, excluding the sale of prototypes.

Gapwaves appointed Sensrad Shanghai as its local representative in China.

After the end of the period

A new enhanced agreement with the Frencken Group positions Gapwaves as a full-service supplier of waveguide antennas.

An order for production equipment was received from the Frencken Group. The value of the order amounted to approximately MSEK 22,9.

An order was received from a European Tier 1 supplier, with an approximate order value of MSEK 1.8.

Positive end of the year

Development in our ongoing Automotive and Mobility projects continued in the existing and ongoing projects as planned. In parallel with developing next generation antennas, we are working on building up and expanding our supply chain to be able to deliver on existing agreements as a certified supplier within the Automotive sector.

The customer projects within the Automotive and Mobility sectors generated revenue as expected. In contrast to 2021 and 2022, we didn't have unusually higher income from licenses and sales of production equipment during the year, which made the year comparatively weak from a revenue perspective. Revenue amounted to MSEK 27.5 (64.0), which is 57 percent lower than in 2022.

Strong project development within the Automotive sector

Within the Automotive sector, we perceived a lag in the market, which has also been confirmed in the media by several major car manufacturers, but towards the end of the year we noted an increase in the level of activity and new enquiries.

At the same time, work in the existing projects continued at a high pace. In recent years, Hella has progressively scaled up the collaboration with us. A significant milestone in our collaboration is that we,

together with our production partner Frencken Group, will start large-scale production in 2024 of Hella's antenna for their corner radar sensor (generation 6). The order placed by Hella in December 2023 entails a further expansion in the development work with their next generation radar sensors (generation 7).

Looking ahead, vehicle manufacturers have already set the agenda for the remainder of the decade. The models planned will meet the requirements set by authorities and car buyers in terms of driver assistance and safety systems. This means continued development towards both more sensors and more radar units, in other words, more antennas, with higher performance. This illustrates the large volumes and long-term perspective that characterize the Automotive sector.

In order for us to be able to meet the increasing demand - and deliver on already agreed assignments - we must be qualified and certified as a supplier. This is one of several goals in the ongoing establishment of a pilot line in our industrialization hub in Gothenburg, and we are continuing preparations in order to be IATF-certified as a supplier.

An example of our technological development is Multi-Layer Waveguide (MLW), which we have developed and are now industrializing in collaboration with our customers. The launch of MLW has been met with positive interest and response from both customers and the market. Thanks to MLW technology, we can manufacture antennas entirely of



Jonas Ehinger, CEO Gapwaves

"We are well on our way to establishing ourselves as a comprehensive supplier, and becoming qualified to deliver to the automotive industry"

Jonas Ehinger, CEO Gapwaves

metal, which can result in lower production costs, very thin profiles, and good thermal properties. All of these advantages are relevant features in many of our current and future customer projects.

Sensrad is our route to the Mobility market

The mobility segment was affected by the weak economy during the year, and many companies have postponed or reformulated their business plans. For our part, this paradoxically means that, by being part owner of and supplier to Sensrad, we instead benefit from the fact these market segments have a stronger interest in a ready-made radar sensor solution than in developing costly proprietary solutions. During the year, we invested in a new emission and now own 30 percent of the shares in Sensrad. The acquisition is part of the strategy to develop into a comprehensive supplier in these market segments.

Sensrad develops and manufactures complete radar sensors, meaning customers do not have to develop their own hardware, and can instead rely on ready-made products from Sensrad. The company's radar sensor products have very high performance, and can be implemented in customers' solutions. For Gapwaves, it means a first step up the value chain in that segment. Sensrad developed positively during the year, and won a number of orders in various market segments. Furthermore, the

company started the launch of its first commercial product during the first quarter of 2024, for which we have developed an antenna. Continued launch of the radar sensor will take place during most of 2024.

We have also entered into a partnership with Sensrad Shanghai, a subsidiary of Sensrad AB, which will represent Gapwaves in the interesting and fast-growing, but difficult to navigate, Chinese market. The collaboration provides us with good conditions to cultivate the market using a local and experienced Chinese team.

Our sustainability initiative

In 2023, we initiated a comprehensive project to map the company's opportunities and risks in terms of sustainability. In the project, we defined Gapwaves' sustainability strategy. and implementation in our daily work. We identified positive and negative aspects of our operations and our products during the course of the project, and compiled a list of measures that we will implement, in both the short and long term. As part of our sustainability strategy, we have defined three focus areas:

- Circular and carbon neutrality
- Build knowledge faster
- Transparency for trust

The sustainability initiative began by establishing the framework, strategy and goals, and will continue with the implementation of additional measures in 2024, and beyond.

We have an expectation that our products will have less impact on the environment than other comparable antenna technologies, and we know that our products can contribute to increased sustainability through more autonomous vehicles and safer traffic.

Strong position for the coming year

Looking back at 2023, I see positive and exciting development. We are following our plan in the projects, as well as our strategy, and are in a position that provides solid opportunities to deliver on the projects and create value for - and together with - our customers.

We are well on our way to establishing ourselves as a comprehensive supplier, and becoming qualified, in order to deliver to companies in the automotive industry.

As such, I would like to thank all employees at Gapwaves for their fantastic work during the year.

Gothenburg, April 12th, 2024

Jonas Ehinger
VD Gapwaves AB (publ)

Gapwaves at a glance

With Gapwaves' unique waveguide technology, we help globally leading players in the automotive industry, mobility and telecom industry to create highly efficient antenna systems.

Our antenna solutions are characterized by high energy efficiency, low signal losses, and a superior thermal conductivity capacity. In addition, our technology enables cost-effective manufacturing, in large volumes and of a high quality, opening the door to replacing traditional antenna technology.

As a comprehensive supplier, based on our unique antenna technology, we can offer our customers a complete solution, from design and development, to industrial manufacturing and deliveries on a large scale, for various applications in the automotive industry, smart cities, infrastructure, wireless communication, and more.

Gapwaves' vision

To be the most innovative provider of mm-wave antenna systems and the preferred partner to those pioneering next generation wireless technology for a safer and more sustainable society.

The history of Gapwaves

Gapwaves was founded in 2011 by Professor Per-Simon Kildal, with the aim of creating useful applications based on Gapwaves' waveguide technology, which Per-Simon and his colleagues developed at Chalmers University of Technology. There are now over 500 scientific research articles that confirm the technology and its benefits.



Well positioned for profitable growth

Significant market potential

The market for Gapwaves' antennas in the automotive sector is in strong growth, driven by legal and technical requirements, as well as clear customer needs.

Read more on page 9

Strong technology position

Proprietary and patented technology, with clear competitive advantages, an extensive patent portfolio and a unique antenna expertise in the company.

Read more on page 13

Strategy with great potential

To become a full-service supplier of waveguide antennas for the automotive market (read more on page 17) and drive growth in new segments outside the automotive sector through the investment in Sensrad (read more on page 19).

Strong partnerships

Established long-term partnerships and customer relations with leading global players in the absolute top tier of the market.



*Through associated company, Sensrad

Markets

Antenna technology with focus on two major markets

Gapwaves challenges traditional antenna technology with a unique solution that combines high performance with standardized manufacturing methods, which results in a cost-effective product suitable for high-volume production. Gapwaves focuses currently on two markets; waveguide antennas for radar and wireless communication.

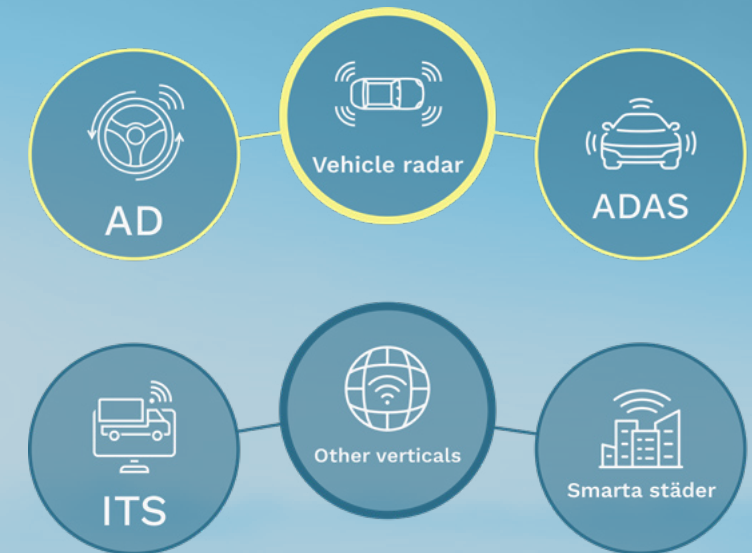
Gapwaves is working towards implementing waveguide technology in the respective markets. At present, Gapwaves licenses out its antenna technology to, for example, Hella, but the company's strategy is to act as a complete supplier in the future. The business model is built around customer-financed development of prototypes, that then transition into high-volume manufacturing, where Gapwaves can be the supplier of the finished product.

Within each market, the company is working on the following activities:

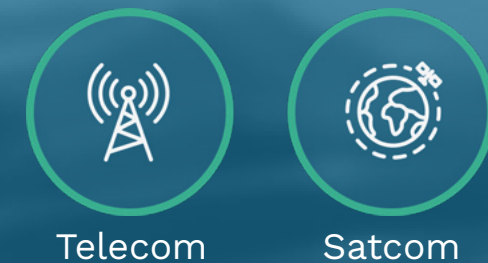
- Customer-financed development projects with the aim of demonstrating the technology's advantages in relation to the market's requirements, and in comparison with competing technologies. Development projects eventually lead to additional income from volume sales.
- Customer-financed industrialization for high-volume production
- Further development of the technology with the aim of meeting tomorrow's expectations for improved performance.

Over the coming years, the company's sales are expected to largely consist of development projects reflecting customers' needs and product development cycles. This is expected to result in volatility in sales from quarter to quarter.

Waveguide antennas for radars



Wireless communication



Radar

We divide the radar market for frequencies between 76-81 GHz and above into two main segments; vehicle radar and radar for other application areas, such as Mobility, infrastructure, and smart city applications.

In April 2023, Gapwaves invested in Sensrad, which offers a unique 4D Imaging Radar sensor based on the latest software and hardware technology, including Arbe's leading chipset and Gapwaves' high-performance antenna technology. Through this investment in Sensrad, we claim a position in the radar market segment for infrastructure & connected cities, while at the same time growing in the automotive market segment in Gapwaves' antenna business. For more information on the investment in Sensrad and the company, see page 19.

Vehicle radar (ADAS & AD)

According to the World Health Organization, almost 1.3 million people die, and 50 million people are injured, on roads globally each year; more than half of whom are pedestrians and unprotected road users. Gapwaves' waveguide technology enables a radar antenna which, 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 the help of innovative product development, Gapwaves contributes to the UN's vision of road safety, to reduce the number of road accidents by 50 percent by 2030*.

The area in which we currently experience the greatest interest is from the market segments for radar sensors in systems for advanced driver assistance and autonomous vehicles of various kinds.

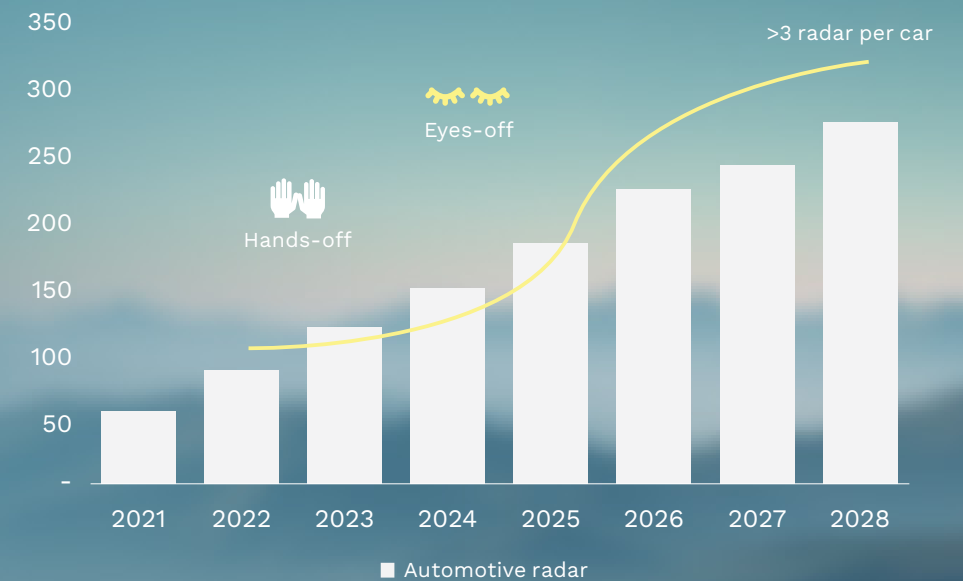
ADAS, Advanced Driving Assistance Systems

ADAS encompasses the more traditional suppliers to the automotive industry (Tier 1 suppliers), who, at present, mainly supply radars for warning and advanced driver assistance (ADAS), corresponding to SAE** level 0-2 of automated driving capability (see page 14 for an illustration of the different levels of automated driving ability).

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

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

Automotive radar forecast (million units)



Source: Yale Market Report 2022

Legal requirements and regulatory frameworks drive radar and waveguide antenna volumes

As of 2022, 76-81 GHz is the only approved frequency band for vehicle radars. The broadband part of the spectrum of the previously standardized frequency band of 24 GHz is completely removed. The shift in the global standard for vehicle radar has meant that the automotive industry places higher demands on the radar's performance, and that the radar shall cover the entire frequency band of 76-81 GHz, which is a requirement traditional circuit board-based (PCB) antenna technology does not fully meet.

In addition, the EU has introduced legal requirements that all newly manufactured cars from 2022 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, which vehicle manufacturers view as very important. EU regulations and Euro NCAP's test catalog require that vehicles need to be equipped with a number of sensors, meaning sensors of various types, including radar and cameras, that can detect small objects such as animals, cyclists and pedestrians.

In the past, radar within the automotive industry has mainly been used in premium cars, for example adaptive cruise control and blind spot warning, but the new regulatory frameworks mean that at least one radar is now standard in the vast majority of newly manufactured cars.

Premium cars are on the way to having five, or even as many as seven, radars in their sensor suite. This has resulted in an increased demand for high-performance and cost-effective antennas and radar sensors.

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

The efficiency of traditional printed circuit board (PCB) antenna technology is too low at higher frequencies (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 and camera.

Gapwaves

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

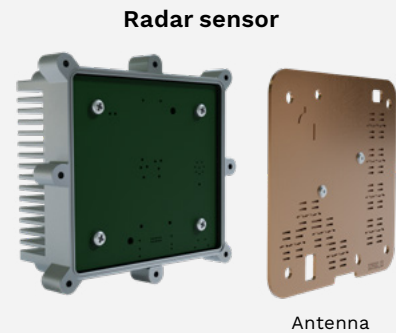
*AEB, Automatic emergency braking.

**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.

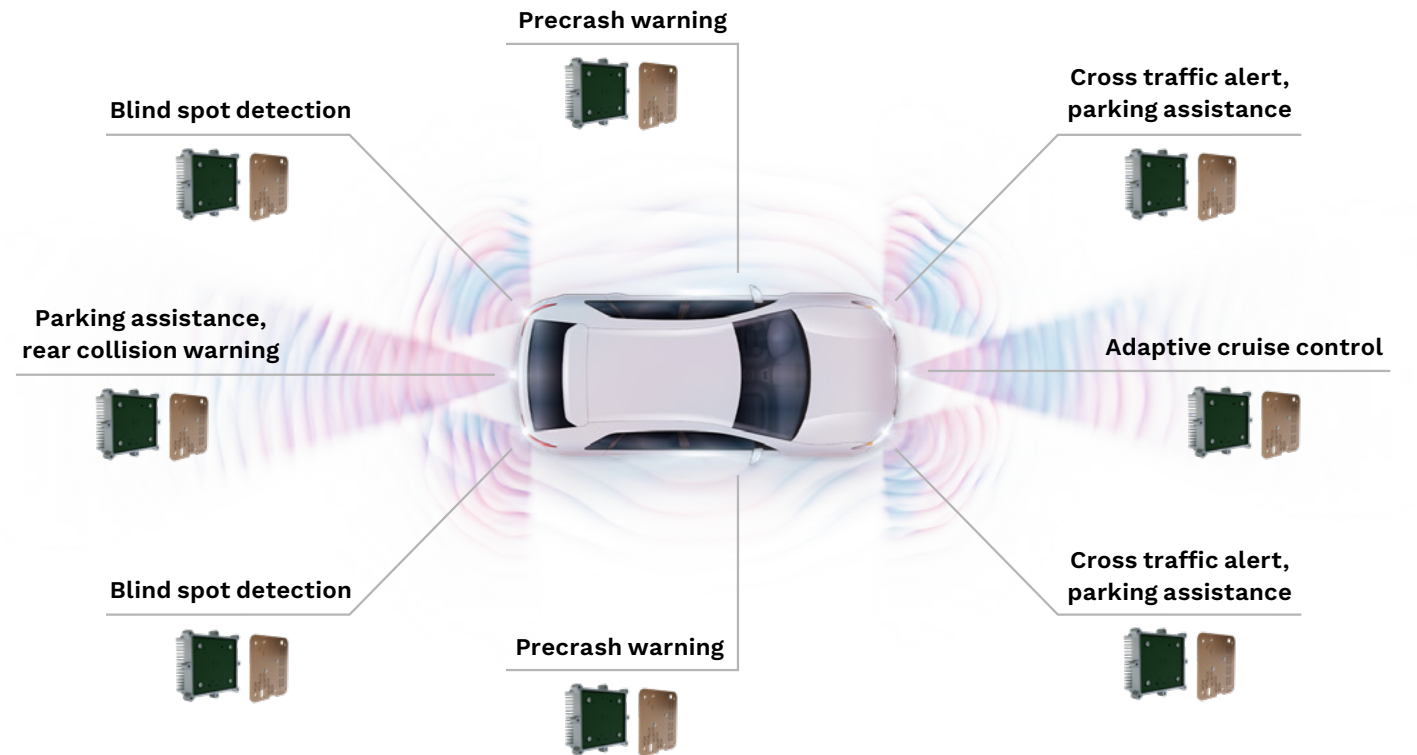
***Source: ETSI standardization Euro NCAP, CLEPA, European union

1 radar sensor = 1 antenna

A radar sensor detects objects and individuals, and assesses their relative speed and direction of movement. It can monitor both the rear and front areas of a vehicle, whether on the highway or in city traffic, such as at complex intersections. It can warn the driver when necessary, and trigger an emergency braking action if required. Radar sensors can also help the driver "see" what is happening in the car's blind spot, for example during lane changes or when parking the car.



Radar sensors can be positioned in different places on a car: front, back, on the sides. Each radar sensor contains an antenna, which is a crucial component as it is responsible for receiving and transmitting signals that allow the detection of objects and individuals in the environment.





Nils Dagås

R&D Director

With over 25 years' work history in radar technology, Nils has extensive industrial experience of leading and developing technology teams at SAAB and Ericsson, most recently as Deputy Development Manager at Radar Solutions at SAAB. Nils started at Gapwaves in October 2023.

"The market for vehicle radar is moving towards ever higher frequencies. Higher frequencies allow the radar to operate in a frequency range with fewer sources of interference and makes it possible to create higher resolution. The radar is the only sensor that enables active safety systems and self-driving vehicles that work in all weather and visibility

conditions, even in the presence of dirt. Advanced antennas are a key component in creating these systems. The high frequencies in the millimeter wave range provide high resolution without making the antenna physically large. Simple, traditional antennas at these high frequencies have large losses that negatively affects the detection capability of the system. The solution is to use waveguide antennas that combine high bandwidth with low losses. Traditionally, waveguide antennas have been expensive, but with gap waveguides it is possible to create high-performance antennas, with significantly simpler manufacturing."

Unique technology with significant competitive advantages

Traditional circuit board-based antenna technology, also called PCB-based technology (Printed Circuit Board) has, in recent years and in higher frequency bands, started to be out-competed by waveguide-based antenna technology. It will soon become a requirement of Tier 1 suppliers and car manufacturers, as waveguide-based antennas are the technology that enables a sufficiently high-performance radar antenna.

Waveguide-based technology enables a radar antenna with a greatly reduced need for expensive circuit board materials, a factor that was previously a driver behind the cost of a radar. Furthermore, waveguide technology enables an antenna with lower losses and a larger field of view compared to previous circuit board-based solutions.

Gapwaves' unique waveguide technology has several advantages over competing traditional waveguide technology, as the technology allows high-volume manufacturing in standardized processes. This results in a high-quality, cost-effective solution adapted to a high-volume market, which has been confirmed through agreements with, among others, Bosch, Hella and Veoneer.

Gapwaves is well positioned to be able to take a significant market share of the antenna market within vehicle radar given that, with our patented technology, we can be unique in the field of waveguide antennas in high volume with good quality at an attractive price. These are characteristics that lead to an increase in the demand for Gapwaves antennas, as a result of radar sensors and advanced vehicle safety becoming requirements, and standard, in more and more car models.

Strong long-term patent protection

Gapwaves is building its business on advanced technology, and a strong IP portfolio is a key factor for the company. By the end of 2023, Gapwaves had 44 active patent families, which give the company's technology global protection. The company works continuously to develop the patent portfolio, and new patent applications are made on an ongoing basis. With waveguide technology as the foundation, the company's patent strategy aims to create conditions for the long-term development of future antenna products within high and very high radio frequencies.

AD, Autonomous driving

In recent years, a new market segment has taken shape alongside the traditional automotive industry. A market segment for autonomous vehicles relating to applications, such as self-driving trucks, vehicles for goods transportation, self-driving vehicles in industry, robotic vehicles, etc. It is a market segment often driven by new and innovative companies, as well as large tech companies. These companies develop systems and services for fully autonomous vehicles that correspond to SAE levels 3-5 of automated driving (see illustration page 14).

This market segment has great potential and is moving faster than the passenger car market segment. Many of the players need a ready-made, high-performance radar sensor. Through the investment in Sensrad, whose radar sensors also contain Gapwaves' antennas, we can claim a stronger position in that market segment. The value that Gapwaves' antennas add to radar applications is confirmed by Sensrad's business with world-leading players.

Increased level of autonomous driving capability drives radar volumes

As the level of automated driving capability increases, a greater number of sensors are required, often those of a high-performance. In order to achieve full and functional safety, several cooperating sensors are required, a system consisting of several cameras, lidars, and radars, where each of them has its own advantages and disadvantages.

The most prominent advantage of radar is that, unlike cameras and lidar, it can achieve good performance in the vast majority of weather conditions. Whether there is snow, fog, dust or dirt, it can detect and classify other vehicles, and even the most vulnerable in traffic, such as pedestrians and cyclists.



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.



Imaging radar for SAE * level 3-5

An imaging radar is a high-resolution radar that generates an image of its surroundings with up to 10 times higher resolution, when compared to traditional radar. In addition, an imaging radar can detect objects up to 350 meters away. The imaging radar can be positioned in the front of the vehicle and is the sensor that, together with lidar, represents the most advanced and high-tech sensors in autonomous vehicles, and as such is a vital component for an autonomous system. An imaging radar requires a high-performance antenna with low losses - challenges that Gapwaves' antenna solution handles effectively.

Gapwaves has seen an increased demand for antennas in recent years, specifically for imaging radars. The advantages of Gapwaves' technology for these more advanced radar sensors are confirmed by several global customers, such as Bosch, and by Sensrad, with its unique 4D imaging radar.

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

Radar for Smart Cities and Intelligent Transport Systems

Driven by the market segments for autonomous vehicles and smart cities, we expect an increased demand for radar antennas for traffic optimization and monitoring. Waveguide antennas in this segment also enable a high-performance radar that is reliable in all weather conditions. The value that Gapwaves' antennas add to infrastructure radar applications is confirmed through multi-year partnerships and agreements with, among others, Smartmicro.

Sensrad's 4D imaging radar offers the possibility to detect hundreds of static and moving objects simultaneously, in real time, providing the ability to continuously monitor infrastructure-related objects and areas. A wide viewing angle and large detection area with high resolution provide a robust solution for monitoring entire areas, even in harsh weather conditions, and is insensitive to dust and dirt.



Wireless communication

In the wireless communication market, Gapwaves continuously works on applications where Gapwaves technology can add value and advantages compared to today's traditional antenna technology.

Telecom

Until now, today's 5G has used traditional antenna technology (such as circuit board-based PCB antennas) for lower frequencies (Mid band, 2-6 GHz). It is first 5G that requires higher frequencies, 28 GHz and above, that a better performing antenna technology, like Gapwaves' solution, makes a significant difference. We continue to have a positive view of the future; smart cities, IoT, and autonomous vehicles require communication with virtually no delay and higher data rates. The more individuals or units that are in a given location, for example a lot of machines in a factory or people in a building, such as a hospital, an office, or an airport, the more pronounced the need for increased bandwidth becomes.

This is driving a shift towards higher frequencies with more bandwidth, with Gapwaves' antenna technology being a key factor.

Satcom

In the same way as in telecom, new generation satellites are starting to use higher frequency bands to be able to offer higher bandwidth to users. Terminals for these new satellites need antenna technology with waveguide technology to achieve high performance. Gapwaves' unique waveguide technology enable this high performance, at the same time as being cost effective.

Gapwaves participated in two research projects within satellite communication in 2023. The first addresses antennas for satellite communications at higher frequencies, where a demonstrator was completed. 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 a prototype antenna. The Vinnova project was concluded during the year. We have developed a demonstrator together with Chalmers regarding a circular polarized satcom terminal.



Responsibility for the entire supply chain

From the outset, Gapwaves has developed and designed antenna solutions for its customers. The company has first and foremost been a technology and development business, and left the actual production of the antennas on a larger scale to the customers. That is now changing.

The previous model meant more complex supply chains for our customers, which is the reason we wanted to take on the role of a comprehensive supplier, with responsibility for the entire manufacturing chain. We should be the only contact that customers need when it comes to antenna technology, design, production, and delivery.

As part of its role as a comprehensive supplier, Gapwaves is responsible for the entire chain -from the design of antennas to the production and delivery of the antennas requested by customers. This has proven to be something our customers really wanted.

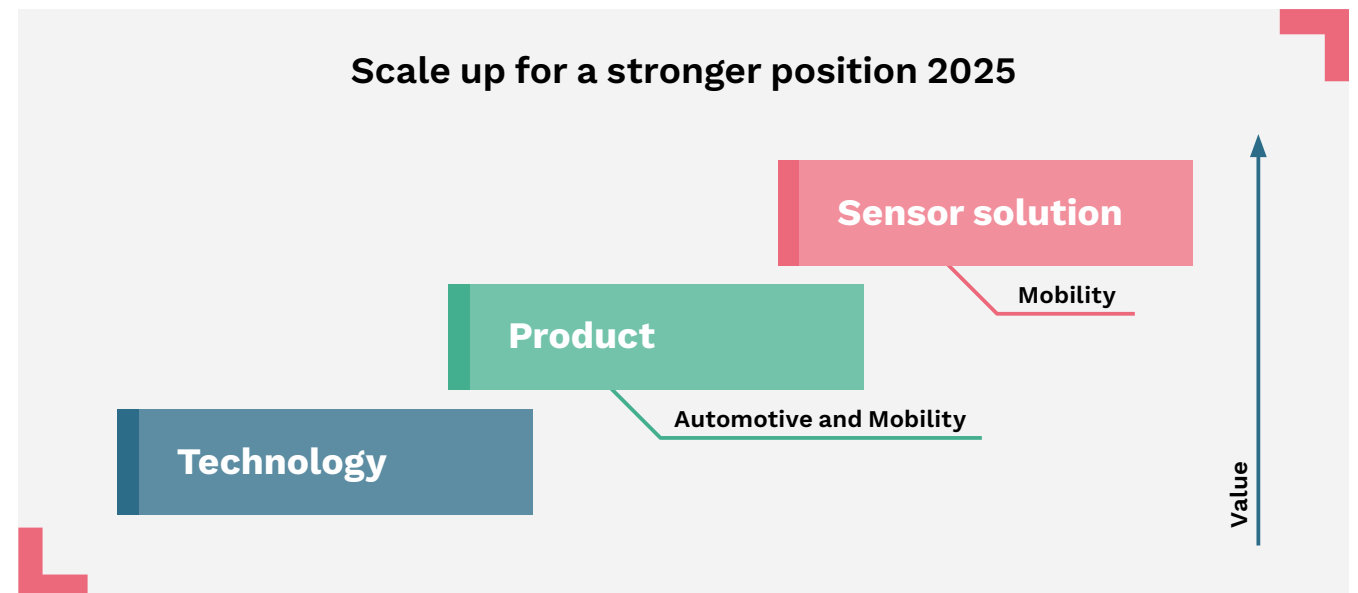
“By taking an interface position with customers, we can speed up and simplify their processes. The fact that we become a comprehensive supplier means our customers avoid many steps in the process: for example, they do not need to identify manufacturers or ensure that the supplier has the tools and ability to produce the antennas. With our knowledge, and with responsibility for the entire chain, we are, more easily and speedily,

able to shorten the process by several months, or more,” says Jonas Ehinger, CEO of Gapwaves. For Gapwaves, this means that the company in parallel builds up additional unique knowledge that strengthens the company's business and profitability, as well as competitiveness.

When we are responsible for production, we gain more insight into the challenges of manufacturing, and this is very valuable information which we take with us into future projects -and our technology

development. This means we will be better able to design products that are easier to manufacture, and with even higher performance.

“Unlike royalties, which presume patents with a limited validity period, this position means a lasting advantage that strengthens us in the eyes of customers, and which also becomes increasingly significant over time. We are moving up the value chain. Instead of being a designer and consultant, we will become a volume supplier of products,” adds Laban Cramér, Supply Director at Gapwaves.



"We work together with manufacturers who are qualified as suppliers."

Jonas Ehinger

The suppliers with which Gapwaves collaborates shall have documented experience of working as a supplier within the Automotive sector.

"We are working alongside manufacturers with which we have worked for a long time, and as such we know they have the capability and are qualified as suppliers. We support these companies by adding specific process and product knowledge in relation to our products. This is a combination that clearly reduces the overall risk for our customers," says Jonas Ehinger.

There are not many companies which have the capability to manufacture this new kind of waveguide antennas in demand in the automotive industry. As Gapwaves builds up this expertise internally, the offer becomes ever stronger. This makes it easier for Tier 1 suppliers in the automotive industry to choose Gapwaves instead of undergoing this process themselves.

"When we go from design and royalties to being a product supplier, it means the value increases ten- or even a hundredfold. The customer is paying for the product, a quicker process, and a significantly lower risk. We take responsibility for ensuring the manufacturing is of the right quality and the production process is efficient, and in this way we can deliver without delays and without extensive scrap. You could say that the customers come to a pre-set table," Jonas Ehinger concludes.

More manufacturing, closer to the customer

Laban Cramér is responsible for Gapwaves' production and logistics. He is also the person in the company responsible for establishing collaborations with various production partners.

"Our fundamental premise is to find suppliers who have already proven themselves in the Automotive sector. We are happy to be guided by our customers' recommendations. The vast majority of the production partners we have right now, such as Frencken, for example, have been recommended by our customers," says Laban Cramér.

Gapwaves' suppliers should not be too big or too small. "We are looking for a kind of sweet spot. The risk with suppliers that are too large is that they are not flexible enough, and they may have difficulty prioritizing our projects, but at the same time they need to be large enough. They mustn't be too dependent on one customer and should be able to share investments with us, but at the same time they need to be sufficiently hungry so that they want to build this business together with us," says Laban Cramér.

At present, Gapwaves has a long-term collaboration agreement with the Frencken Group for the manufacture of antennas, but strives to be able to offer production closer to the customers. "We are working on being able to offer manufacturing in Europe and North America, and in more places in Asia than China," Laban Cramér concludes.



Laban Cramér has been working at Gapwaves since 2020 and has a background as a management consultant in procurement and logistics at KPMG, and in business development at SKF.



Investment in Sensrad

Strategic investment in the market for complete radar sensors

In April 2023, Gapwaves invested in Sensrad AB, which provides radar sensors with very high performance for market segments outside the passenger car market. Through the investment in Sensrad, we not only expand our position in the value chain, but also drive growth in new markets, such as in infrastructure, mobility and transport services.

Fully self-driving vehicles are not expected to happen primarily in passenger cars, but instead in industrial applications, such as for goods transport and the mining industry. These segments are developing faster than the traditional passenger car market, and are already in need of a fully developed, standardized radar sensor product. A complete radar sensor package, which includes both an antenna (from Gapwaves) and sensor, has a significantly higher price level than stand-alone antennas. The market potential is huge; every automated vehicle, whether in a port or a mine, requires robust and high-performance sensor solutions, like Sensrad's radar sensors.

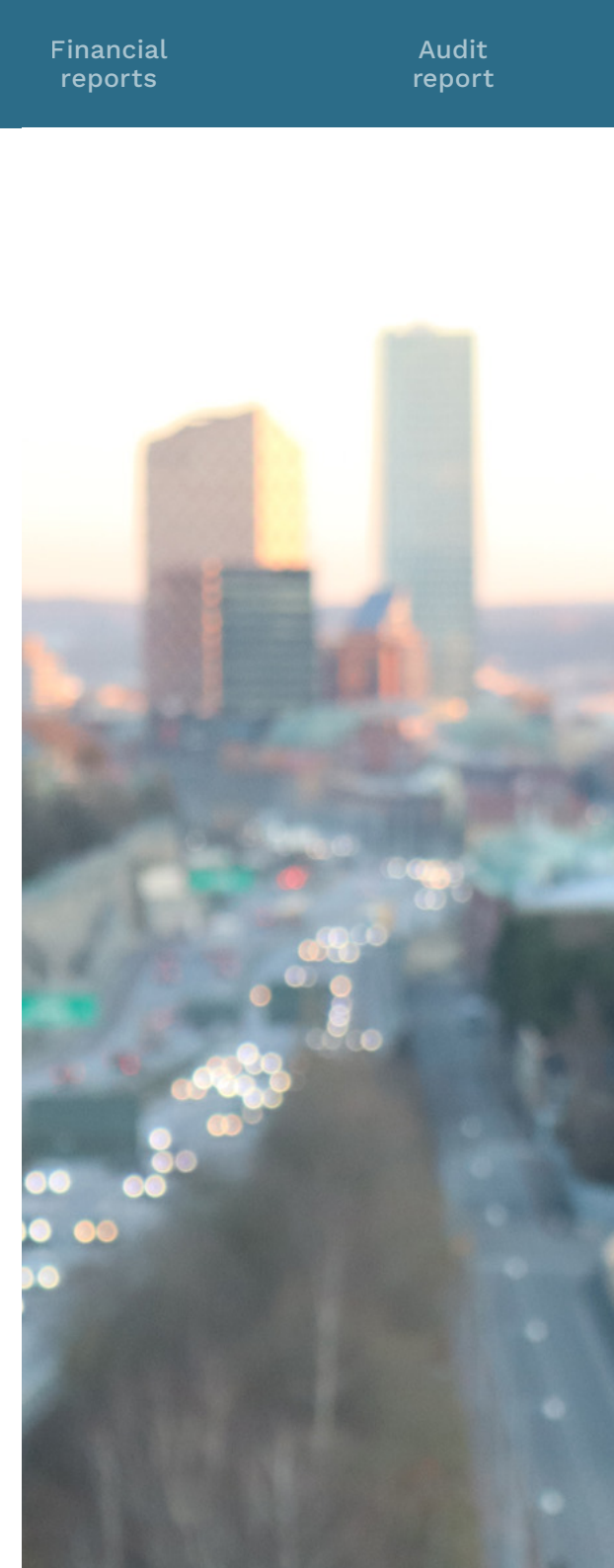
In the spring of 2024, Sensrad is launching a complete 4D imaging radar with sophisticated software and hardware technology, including leading radar chipsets from Arbe and Gapwaves' high-performance antenna technology. This is a product that has attracted significant interest on the market, as confirmed by initial orders from world-leading players within Sensrad's various customer segments.

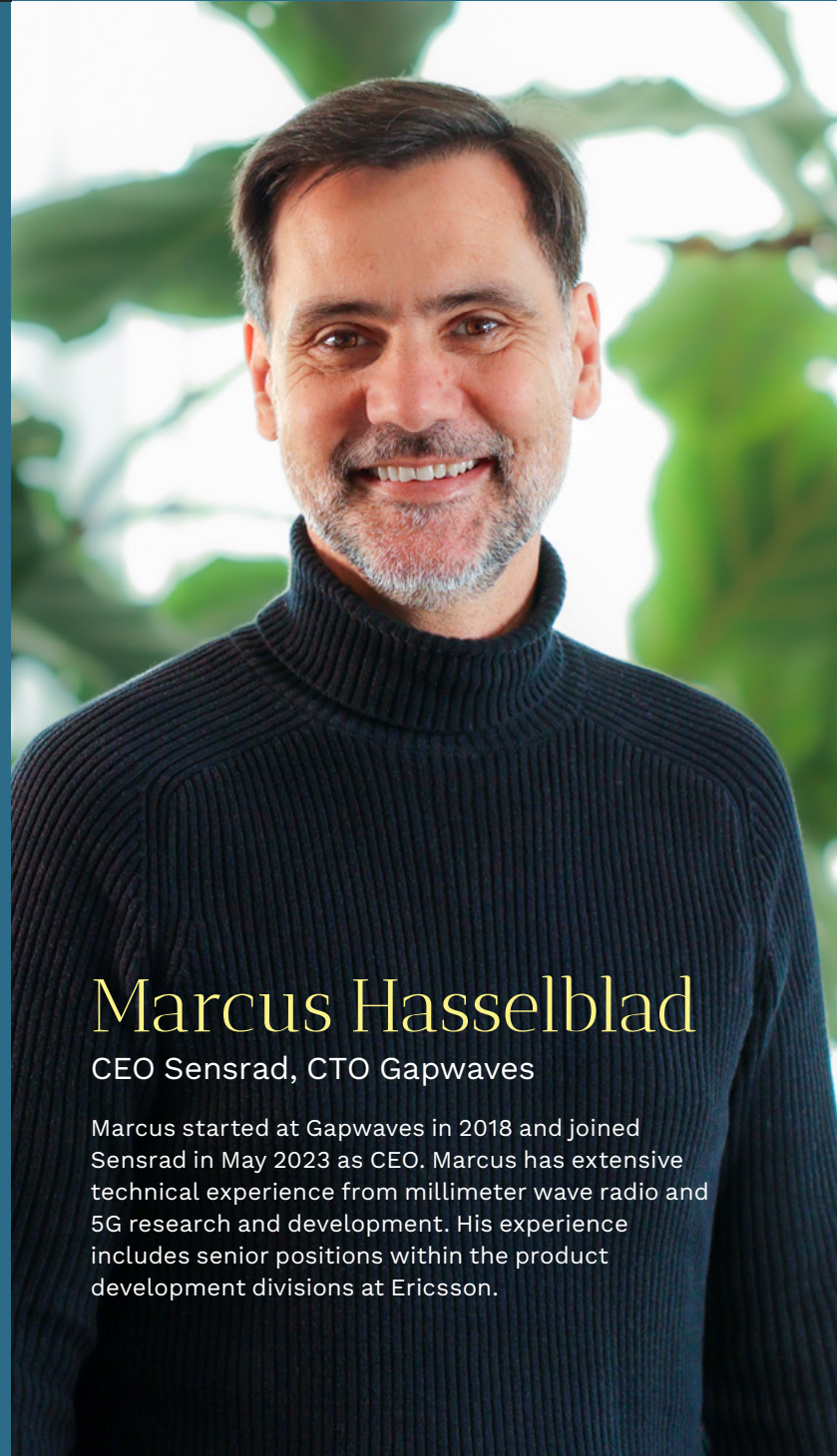
About Sensrad

Sensrad AB is a spin-off company from Qamcom Group's radar division, and offers a unique 4D Imaging Radar sensor based on the latest software and hardware technology, including Arbe's leading chipset and Gapwaves' antenna technology. Sensrad is based in Gothenburg and currently has around 20 employees. Sensrad has delivered prototype volumes of its 4D Imaging Radar early to customers in infrastructure, surveillance and industrial vehicles (used in agriculture, mining, etc.). True 4D Imaging Radar provides a step forward in the capabilities of radar sensors, including the fourth dimension that allows objects to be separated vertically, which is a crucial advantage compared to today's radar sensors.

Sensrad currently offers two own products: Hugin – Dynamic 4D Imaging Radar, which involves radar solutions in transport, robotic vehicles and aircraft, and Munin – Static 4D Imaging Radar, which offers radar solutions in infrastructure and surveillance. In the infrastructure segment, which includes, among other things, smart cities and traffic management, Sensrad's 4D imaging radars offer the possibility to detect hundreds of static and moving objects simultaneously, in real time. This enables constant monitoring of complex infrastructure-related objects and areas. A wide and long detection area with high resolution enables presence detection of the entire environment - even under the most difficult weather conditions.

Qamcom Group is a leading research and technology company, with in-depth expertise in hardware, software and system development. Qamcom is based in Gothenburg, and currently has approximately 150 employees, with research training and extensive industry experience combined with flexible, innovative methods for technology development.





Marcus Hasselblad

CEO Sensrad, CTO Gapwaves

Marcus started at Gapwaves in 2018 and joined Sensrad in May 2023 as CEO. Marcus has extensive technical experience from millimeter wave radio and 5G research and development. His experience includes senior positions within the product development divisions at Ericsson.

True imaging radar

"Sensors are already widely used in automation, autonomous equipment, smart solutions and monitoring today. There are many types of sensors, from simple sensors, such as ultrasonic sensors for parking assistance, to very advanced sensors. Within the ongoing transformation towards a safer, smarter, and more sustainable society, three types of sensors are primarily used: radar, camera and lidar. All sensors have advantages and disadvantages, and multiple sensors are often used together to achieve the desired functionality with sufficient precision and reliability.

Radar is a sensor technology with crucial advantages, as they are the only sensors that are robust against conditions such as fog, rain, mist, dust and darkness. In addition, they do not create privacy issues, unlike cameras. They also benefit from a built-in method for

detecting relative speed with precision, and offer a good balance between performance and cost. All this makes radar indispensable in most sensor systems. However, current radars suffer from poor resolution, and given the ever-increasing need to detect more details when automating vehicles of various types, this has become a limiting factor. That is, at least until now; as our technology addresses this problem.

We offer a 4D imaging radar with very high resolution combined with a pre-eminent density in its detection. Coupled with AI-powered perception software and Gapwaves unique waveguide antenna, our technology enables users to detect what other sensors cannot. As such, we make autonomous vehicles and machines possible, and contribute to improved safety and security through our sensor."



Normal radar.
Poor resolution.



Today's Imaging Radar.
High resolution in limited view.



Sensrad's Imaging Radar.
High resolution in full view.



Nils Patriksson

Antenna Engineer, Gapwaves

Nils started working as an Antenna Engineer at Gapwaves in September 2023. He also worked part-time at Gapwaves during his studies at Chalmers University of Technology.

Most advanced antenna yet

"The antenna that Gapwaves has developed for Sensrad's 4D imaging radar represents our most advanced antenna yet. The antenna is unique in that it contains a very large number of channels in a small and compact surface. With 48 transmitters and 48 receivers, it significantly outperforms other radar antennas. This waveguide antenna is unmatched in its performance, and stands as clear testament to Gapwaves' expertise and high performance in antenna technology."



Sensrad's products:
Hugin – Dynamic 4D Imaging Radar (left)
Munin – Static 4D Imaging Radar (right)



Sonja Rommel

Project Manager, Gapwaves

Sonja started at Gapwaves towards the end of 2023, and has experience in technical project management dating back to 2016. During her time at Fingerprint Cards, she worked with process and product development, as well as with project management.

Effective collaboration for a successful project

"The development of this advanced antenna, breaking new ground with the number of channels per unit area for Sensrad's 4D imaging radar, has been a complex project. Effective collaboration within the team has been critical to its success. They have demonstrated an impressive ability to collaborate and complement each other, which has made a significant contribution to the progress of the project."

Sustainability

Sustainability work in 2023

In 2023, Gapwaves began an overall and systematic mapping of the company's opportunities and risks from a sustainability perspective. As part of the project, we have defined goals and measures in Gapwaves' sustainability work, which began to be implemented in our daily work in 2023. Positive and negative aspects in the operations and products have been identified, and a list of short- and long-term measures has been drawn up.

A review of the company's vision and strategy was also carried out in order to ensure compliance with the global goals for sustainable development, in accordance with the UN's Agenda 2030. This work has established both short- and long-term goals, as well as a strategy for how they will be achieved. Sustainability is viewed as an integral part of the company's business model, working methods, and values, in order to attract competent personnel, appeal to investors, and create competitive products and services.

Global Sustainable Development Goals (SDG*)

Gapwaves is committed to contributing to the 17 global sustainability goals. The four goals related to planetary boundaries (Goals 6, 13, 14 and 15) have been included, and additional goals relevant to

Gapwaves' operations have been selected. Prioritization was based on the severity of potential adverse effects, and considered factors, such as the gravity and extent of the effects and difficulty in addressing them.

Our contributions relate primarily to the following goals:

- Goal 5: Gender equality
- Goal 8: Decent work and economic growth
- Goal 11: Sustainable cities and communities
- Goal 12: Responsible consumption and production

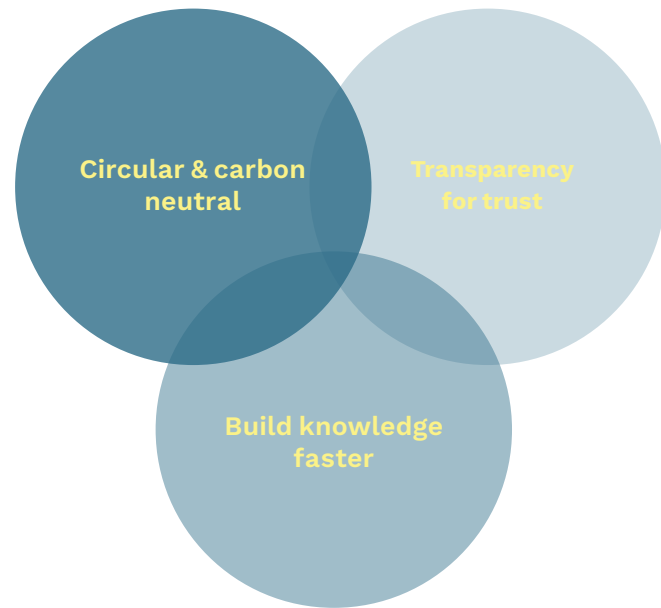
We believe that we can contribute to a positive environmental effect. By implementing technologies that enable driver assistance and autonomous driving, we can reduce resource consumption in society. In addition, advances in antenna technology, such as the use of smaller antennas which can be produced in more recyclable materials, can further improve our environmental impact. In addition to the environmental impact, our technology can make driving safer for drivers, passengers, and the entire traffic environment, and also paves the way for self-driving and more resource-efficient transport systems in the future.

*SDG (Sustainability Development Goals) are the 17 sustainability goals set by the United Nations.



Gapwaves' focus areas for sustainability

We have examined Gapwaves' negative and positive, and actual and potential, impact on various stakeholders. We did this by evaluating our operations, and our activities linked to business relationships with suppliers, customers and owners. Based on this evaluation, we have identified areas where our impact is significant and have divided these into three focus areas: (i) circular and carbon neutral, (ii) build knowledge faster, and (iii) transparency for trust.



Circular & carbon neutral

Circularity and carbon dioxide neutrality are of great importance in the automotive industry in order to address the climate crisis. The automotive sector is at the forefront of introducing innovative solutions. Customers make high demands, and legislation is strict due to the automotive industry's significant impact on emissions. It is therefore important for Gapwaves to be able to deliver and influence in this area.

Build knowledge faster

Knowledge is one of the most valuable assets, and is a central driving force for success and survival in a competitive market. Quickly building up knowledge contributes to increased competitiveness by promoting innovation and developing new products and processes. This competitive advantage enables Gapwaves to implement its technology faster on the market, which we believe has a positive impact on the environment and society.

Transparency for trust

We act and conduct our operations based on transparency, both internally and externally. In order to create trust among all our stakeholders, we need to be open about the impact our operations have on the environment. This applies to both negative and positive aspects.





Oskar Thordén

Quality and Sustainability Manager

Oskar has extensive experience of mass production within the automotive industry from several large international companies based in Sweden. His experience also includes senior positions in quality and sustainability.

”For me, as an experienced Quality Manager, it felt obvious that sustainability issues would fall within my area of responsibility. As with quality, sustainability is something that must permeate the entire operation.

It is the committed and curious people at all stages of product development who, in combination with a clear strategy, can make a difference.

It was very rewarding in 2023 to, together with the entire business, develop a sustainability strategy with our three important focus areas and a clear action plan. I look forward to driving this further in 2024.”

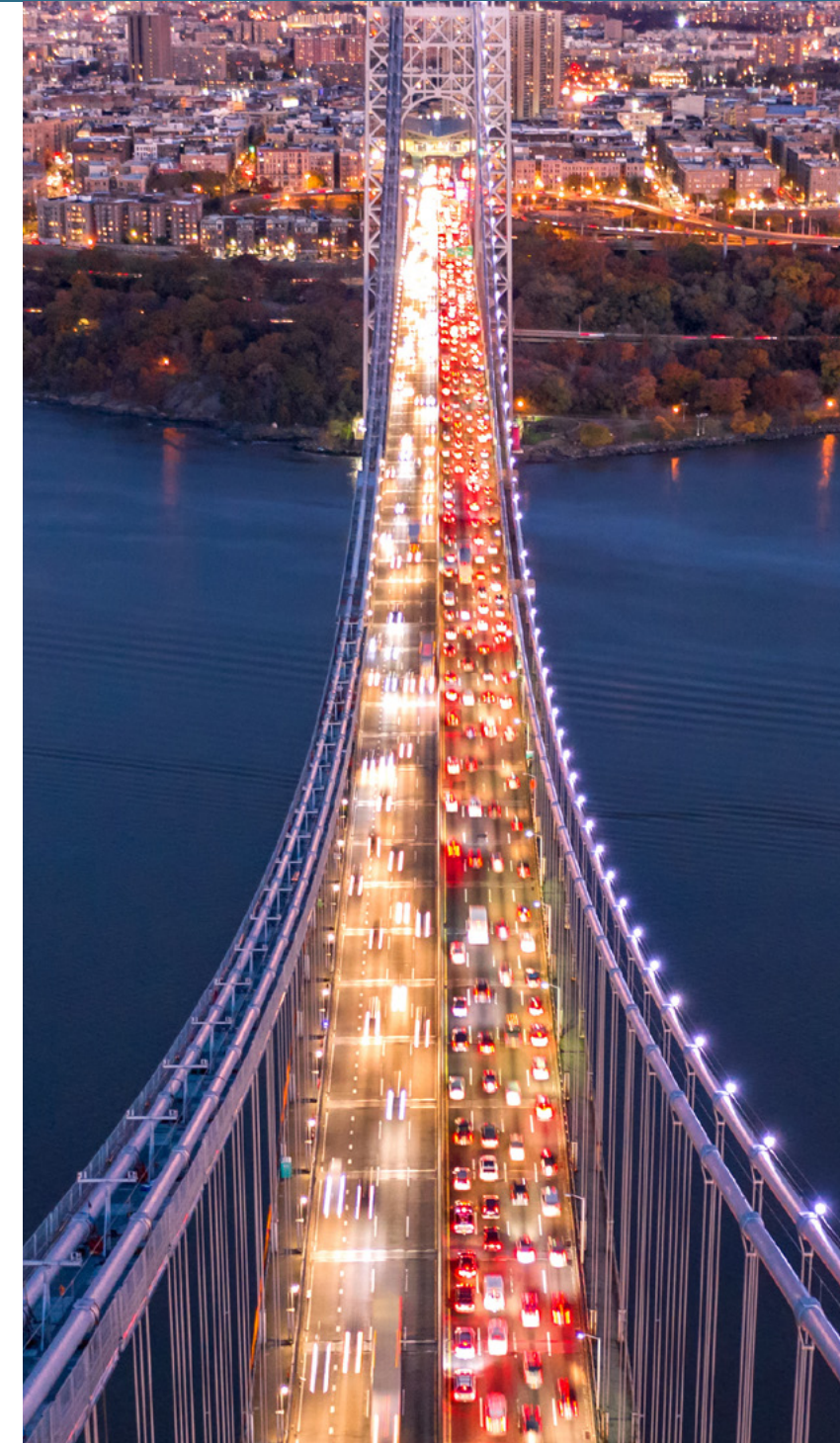
Measures in 2023

Measures include initiatives to improve environmental performance, social responsibility, and governance practices. Some of these measures include:

- Gapwaves’ Quality Manager, Oskar Thordén, was appointed to lead the company's sustainability work and assumed the role of Quality and Sustainability Manager.
- The decision to establish a new production line adjacent to the head office in Gothenburg ties in with two of our focus areas. It promotes both reduced emissions and faster knowledge building, which in turn results in a quicker launch of our products on the market.
- An updated code of conduct was introduced.
- A life cycle analysis of the company's technologies and products was started.

Ahead

The sustainability initiative, which began in 2023 with the establishment of a framework, strategy and goals, will continue with the implementation of additional measures in 2024, and beyond. Due to the fact sustainability is an area that continuously requires improvements and efforts, we will be carefully monitoring and developing our sustainability work. We will validate and update our efforts as needed, in order to ensure we stay on course and continue to make progress towards our sustainability goals.



Statutory Administration Report

Gapwaves AB (publ), corporate ID number 556840-2829 (all amounts in MSEK unless otherwise stated). The Board of Directors and the CEO of Gapwaves AB (publ) hereby submit the Annual Report and Consolidated Financial Statements for the financial year 2023.

General information on the business

Gapwaves develops waveguide antennas for applications in radar and wireless communication. The business is founded on a technical invention of waveguide technology. The Company's business model is based on income being created through product development that is co-financed by customers, and which subsequently leads to sales revenue when the product is fully developed and the antennas are mass-produced. In addition, there is IPR licensing revenue and income from the sale of production equipment. Gapwaves has in-house production for assembly and testing of lower volumes, while, for high-volume production, established collaborations are in place with specialized external production partners.

Multi-year overview

TSEK	2023	2022	2021	2020	2019
Net sales	27 510	64 023	34 860	16 263	16 096
Profit/loss after financial items	-51 045	-19 659	-36 312	-44 324	-35 888
Operating margin	neg.	neg.	neg.	neg.	neg.
Balance sheet total	185 782	246 756	253 592	98 690	133 415
Equity/assets ratio	91,6%	89,4%	89,9%	80,4%	85,9%
Number of employees at the end of the period	42	31	26	23	22

For further information, please see Note 26 Definitions of key performance indicators.

Please note that the key performance indicators above concerns the parent company Gapwaves AB. Since the group was formed in 2022, we do not have any comparable figures from previous periods, thus we choose to illustrate the parent company. The difference mainly concerns the group's financial

statements being impacted by the share of results from associated company.

Significant events during the financial year

2023 has been a year focused on investments in the business and the Company's ability to deliver on a large scale to the automotive industry. Gapwaves' strategy involves us transitioning from a technology company to a comprehensive supplier of antennas for our global customers, based on our antenna technology. We have made progress during the year through the development of our technology, our supply chains, and our customer and partner collaborations.

Orders

- Gapwaves received several orders during the year from Hella regarding antenna development and antenna prototypes, for a total order value of approximately MSEK 28.5.
- During the year, Gapwaves entered into a development and supply agreement with Smartmicro relating to high-resolution radar antennas for traffic management, with a total value of approximately MSEK 9.
- Gapwaves started working with, what is for the company, a new European Tier 1 supplier in relation to the development of a high-definition antenna, with a total order value of approximately MSEK 5.7.

New technology

In September 2023, Gapwaves introduced the Multi-Layer Waveguide (MLW), a completely new technology based on Gapwaves earlier proprietary technology for waveguide antennas.

Expanded production capacity

In December, Gapwaves entered into a lease agreement relating to the acquisition of production premises next to the head office in Gothenburg. The production premises will house a flexible production line intended for prototypes and smaller series deliveries.

Investment in Sensrad AB

On April 27, 2023 Gapwaves invested in Sensrad AB in the form of a private placement, and became a minority owner of the equivalent of 30 percent of the shares. Through this acquisition, Gapwaves has taken a new strategic position in the market for complete radar sensors. Gapwaves has right of first refusal to acquire additional shares and then become the majority shareholder in Sensrad AB.

Revenue and result

The Group's net turnover during the year amounted to MSEK 27.5 (64.0), which corresponds to a decrease of 57 percent from the previous year. Net turnover is mainly attributable to project and prototype revenues from Bosch, Hella, Sensrad, and to a new and leading European Tier 1 supplier for Gapwaves. The reduced sales are primarily related to licensing revenue of MSEK 15.6 from Bosch linked to the agreement entered into during Q3 2022, and that the Group had income in 2022 of approximately MSEK 12.1 from the sale of production equipment, which amounted to roughly MSEK 0.8 in 2023. Adjusted for the above, net turnover decreased by approximately 26 percent. Other reduction is mainly attributable to reduced revenue in the mobility segment.

The operating result in 2023 amounted to MSEK -71.3 (-19.3). Operating expenses, excluding depreciation and profit share from associated companies, amounted to MSEK 82.1 (85.7). The lower operating result for the period is largely due to lower turnover, as well as increased personnel costs attributable to an increased number of employees. Personnel costs do not include expenses affecting cash flow of MSEK 0.9 for the LTI 2022 incentive program. The operating result includes profit share from associated companies of MSEK -14.5, which is derived from the depreciation of goodwill of MSEK -2.9, and the Group's share of the result from associated companies of MSEK -11.6. Adjusted for this, the operating result amounted to MSEK -56.9.

Financial position and cash flow

The Group's financial position and liquidity are satisfactory. Cash and cash equivalents on December 31, 2023 amounted to MSEK 89.3 (MSEK 185.4), and the equity/assets ratio to 89.4 (89.4) percent. The Board of Directors deems that available cash and cash equivalents as of December 31, 2023 are sufficient to finance operations in 2024, which is why the Annual Report is

prepared on the basis that the assumption of continued operations is fulfilled.

Cash flow from operating activities after changes in working capital for 2023 amounted to MSEK -47.5 (-24.6). Cash flow from investment activities amounted to MSEK -48.6 (-2.1), of which MSEK -4.0 relates to shareholder contributions to Sensrad. Cash flow from financing activities amounted to MSEK 0.0 (-0.2). Total cash flow during the period amounted to MSEK -96.1 (-27.0), of which MSEK -42.9 relates to the investment in Sensrad AB.

Organization

One of Gapwaves' most important success factors is the Company's personnel. The average number of employees in the Group during the year amounted to 34 (30), of which 6 (5) are women. The number of employees at the end of the year amounted to 42 (31) full-time employees, of which 5 (6) are women. The education level of personnel is generally high, with several having doctorates in antenna and wireless communication, or alternatively having higher university degrees. In addition to its employees, the Company has a number of consultants continuously associated with the business.

Significant events after the end of the financial year

The Company signed a new enhanced agreement with the Frencken Group, which positions Gapwaves as a full-service supplier of waveguide antennas. Simultaneously, an order for production equipment was received from the Frencken Group. The value of the order amounted to approximately MEUR 2. The Company received an order from a European Tier 1 supplier, with an order value of approximately MSEK 1.8.

Proposed appropriation of earnings

SEK	2023
The following is at the disposal of the annual general meeting:	
Share premium reserve	426 145 467
Retained earnings	-209 504 132
Profit/loss for the year	-51 045 424
The board of directors proposes that non-restricted equity be appropriated such that: is carried forward	165 595 911

Outlook for 2024

Gapwaves’ overall objective is to continue the development and commercialization of antennas for vehicle radars, and for integration into telecom systems at higher frequencies. Antenna development is expected to continue to be financed to some extent by the Company’s customers, and is anticipated to be ongoing for the coming years. Once successful development is achieved, Gapwaves is expected to transition into a supplier of antennas and components to the customer. Alternatively, Gapwaves may license the IP to the customer. The majority of the manufacturing will be carried out by a third-party supplier, where Gapwaves owns the IP rights.

The strategy, and objective, is to add additional customers for long-term collaborations, as well as to further strengthen the Company’s supply chain by adding more production partners and completing the production in close proximity to the Company’s head office in Gothenburg.

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 conduct the planned activities in 2023. Gapwaves does not issue any forecasts.

Risks and Risk Management

Gapwaves is influenced by a number of factors that can have a negative impact on the operations. It is therefore of great importance to consider relevant risks in parallel with the Company’s growth opportunities. Risk factors are described below, in no particular order and without claims to be comprehensive. For obvious reasons, risk factors should not be assessed without first conducting an overall evaluation of the Company’s operations, together with a general assessment of the environment.

Market and Customers

Gapwaves’ business areas have relatively few, but large, existing and potential customers. If any collaboration with these existing or potential customers were to cease, there is a risk that this could have a negative impact on the Company’s operations, financial position, and results. Gapwaves is constantly seeking out relationships with new companies, and in new application areas, where Gapwaves’ knowledge and technology can be applied.

Subcontractors

Gapwaves operates based on an efficient organization, where parts of the production are outsourced and carried out against customer orders. This entails a dependence on subcontractors fulfilling their commitments. Gapwaves works actively and long-term with several partners, and reduces its supplier dependency through contact with a number of suppliers in important areas and in different geographies. High quality is always a priority in Gapwaves’ supplier assessment.

Competition and IP

The Company may be exposed to competition from several other companies with ventures in the same segment. A number of these companies may have greater financial resources than Gapwaves. Gapwaves has a strong patent portfolio, and constantly strives in developing this in order to prevent IP infringement. Furthermore, Gapwaves works to quickly commercialize its products, and as such gain an advantage by being early on the market.

Key personnel and Recruitment

Gapwaves is in an expansive phase, which means that the Company is dependent on the ability to recruit, develop, and retain qualified employees. If the Company does not succeed in recruiting the expertise, or at the rate required, there is a risk that development will not continue at the desired rate. The Company works actively to market itself as an attractive employer, where employees are given the opportunity to work with antenna technology at the forefront. In addition, the Company has collaborations with several Technical Universities.

Financing and capital needs

Gapwaves is financed through equity. Even if the Company generates income, capital needs may arise as the Company grows. In such a case, the Company is also exposed to financing risks. If Gapwaves, in whole or in part, fails to raise sufficient capital, it could have a negative impact on the Company’s operations and financial position. The Company continuously monitors its liquidity situation. Following the private placement carried out in 2021, the Company has had a stable cash flow, and the Company’s management team therefore does not see any immediate liquidity needs.

Share and shareholders

Share

Gapwaves' B share has been listed on Nasdaq First North Growth Market Stockholm since November 18, 2016 and trading takes place under the ticker GAPWB. As of December 31, 2023, the company had approximately 7,000 shareholders. The company has a total of 31,146,299 shares, of which 7,667,500 are A shares and 23,478,799 are B shares. Each A share entitles the holder to ten votes and each B share entitles the holder to one vote. As of December 31 2023, the share capital was SEK 1,868,778 which represents a quotient value of SEK 0.06 per share.

Certified adviser

G&W Fondkommission is the company's certified adviser. www.gwkapital.se

Analysts following Gapwaves

Redeye – Rasmus Jacobsson
SEB – Erik Lindholm-Röjestål

Calendar

2024-05-03	Interim report january-march 2024
2024-05-07	Annual General Meeting
2024-08-22	Interim report april-june 2024
2024-10-31	Interim report july-september 2024
2025-02-07	Year end report 2024

Ten largest shareholders based on no. of votes per 31 december 2023 (A and B shares)

	A shares	B shares	Voices	Share of equity, %	Share of voting power, %
Kildal Antenn AB, inkl. närstående	5 618 000	390 200	56 570 200	19,29%	56,48%
Lars-Inge Sjöqvist med bolag	848 000	161 048	8 641 048	3,24%	8,63%
Jian Yang	509 500	25 113	5 120 113	1,72%	5,11%
Abbas Vosoogh med bolag	265 000	576 635	3 226 635	2,70%	3,22%
HELLA GmbH & Co. KGaA	-	3 122 400	3 122 400	10,02%	3,12%
Peter Enoksson	185 500	92 750	1 947 750	0,89%	1,94%
Ashraf Uz Zaman	165 000	200 000	1 850 000	1,17%	1,85%
Avanza Pension	-	1 458 846	1 458 846	4,68%	1,46%
Nordnet pensionsförsäkring AB	-	1 200 538	1 200 538	3,85%	1,20%
BNP Paribas Sec Serv Luxemburg	-	626 797	626 797	2,01%	0,63%
Övriga	76 500	15 624 472	16 389 472	50,41%	16,36%
Total	7 667 500	23 478 799	100 153 799	100,00%	100,00%

Source: Euroclear och Modular Finance

Board of directors



Magnus Jonsson
Chairman

A shares:	–
B shares:	5 000
TO 2022/2025:	20 000

Independent in relation to management and larger shareholders.



Karl Olof Axelsson
Director

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

Independent in relation to management and larger shareholders.



Madeleine Schilliger Kildal
Director

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

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



Torbjörn Gustafsson
Director

A shares:	–
B shares:	10 000
TO 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

Management



Jonas Ehinger
CEO

A shares:	–
B shares:	38 916
TO 2022/2025:	40 000

Employed since 2022



Robert Berhof
CFO

A shares:	–
B shares:	2 500
TO 2022/2025:	38 900

Employed since 2021



Marcus Hasselblad
CTO Gapwaves, CEO Sensrad

A shares:	–
B shares:	26 000
TO 2022/2025:	30 000

Employed since 2018

Income statement

Consolidated Group

TSEK	Note	Full year 2023	Full year 2022
OPERATING INCOME			
Net sales	2	27 510	64 023
Capitalized development costs		-	914
Other operating income	3	6 233	6 011
Total operating income		33 743	70 948
OPERATING EXPENSES			
Goods for resale		-9 833	-21 754
Other external costs	4,5	-31 061	-29 248
Personnel costs	6,7	-40 082	-33 714
Depreciation/amortization of property, plant and equipment and intangible assets	12,13,14	-8 498	-7 979
Other operating expenses		-1 105	-1 021
Total operating expenses		-90 578	-93 716
Results from shares in associated companies	8	-14 469	3 503
EBIT		-71 304	-19 265
FINANCIAL ITEMS			
Financial income	9	2 075	1 302
Financial expenses	10	-9	-56
Total financial items		2 066	1 245
Loss after financial items		-69 238	-18 020
TAX			
Deferred tax	11	-	8
Tax on result for the period		3	-
Totala skatter		3	8
LOSS FOR THE PERIOD		-69 235	-18 013
Earnings per share before and after dilution (SEK)		Neg.	Neg.
Average no. of shares for the period		31 146 299	31 146 299

Balance sheet

Consolidated Group

TSEK	Note	31 Dec 2023	31 Dec 2022
ASSETS			
Non-current assets			
Intangible assets			
Capitalized expenditure on research and development and similar works	12	2 727	5 259
Concessions, patents, licenses, trademarks and similar rights	13	13 089	16 754
Total intangible assets		15 816	22 013
Property, plant and equipment			
Equipment, tools, fixtures and fittings	14	6 647	7 239
Construction in progress	15	429	598
Total property, plant and equipment		7 076	7 837
Financial assets			
Shares in associated companies	17	32 476	0
Deferred tax	21	2 680	3 446
Deposits		680	642
Total financial assets		35 836	4 088
Total non-current assets		58 728	33 938
Current assets			
Inventories		1 811	1 609
Total inventories		1 811	1 609
Current receivables			
Accounts receivable		7 664	9 161
Other receivables		621	1 916
Current tax assets		-	3
Prepaid expenses and accrued income	18	13 424	19 456
Total current receivables		21 708	30 536
Cash and bank balances			
Cash and bank balances		89 332	185 428
Total cash and bank balances		89 332	185 428
Total current assets		112 851	217 573
TOTAL ASSETS		171 579	251 511

Balance sheet

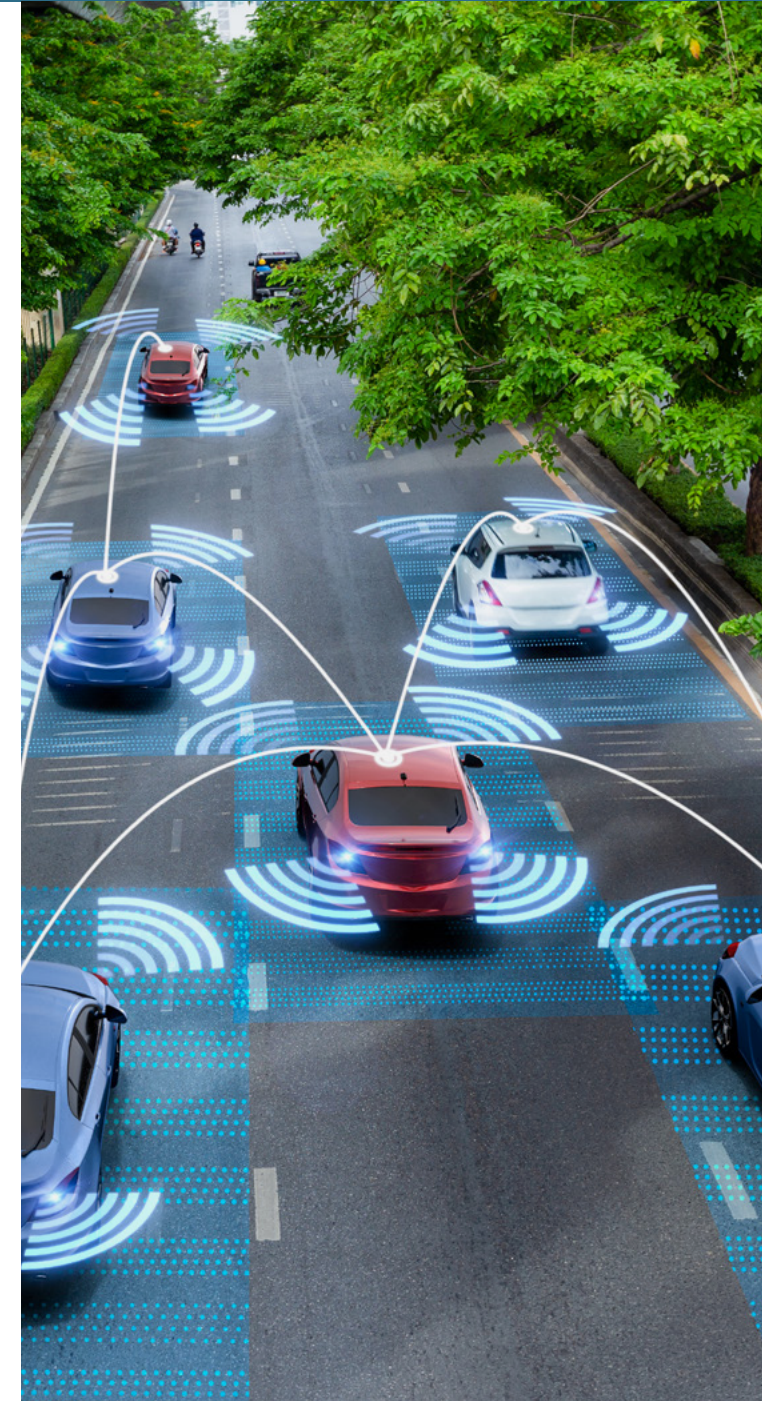
Consolidated Group

TSEK	Note	31 Dec 2023	31 Dec 2022
EQUITY AND LIABILITIES			
Equity			
Share capital	24	1 869	1 869
Other contributed capital		426 146	426 146
Other equity including loss for the period		-274 705	-206 134
Total equity		153 309	221 880
Provisions			
Deferred tax	21	2 680	3 446
Total provisions		2 680	3 446
Current liabilities			
Accounts payable		4 452	5 789
Current tax liabilities		365	67
Other liabilities	19	3 728	11 698
Accrued expenses and deferred income	20	7 045	8 632
Total current liabilities		15 590	26 186
TOTAL EQUITY AND LIABILITIES		171 579	251 511

Statement of changes in equity

Consolidated Group

TSEK	Share capital	Other contributed capital	Other equity including loss for the period Retained earnings, etc	Total equity
Opening balance 2022-01-01	1 843	413 793	-187 892	227 744
New share issue	26	12 353	-	12 379
Share options programme	-	-	-229	-229
Loss for the period	-	-	-18 013	-18 013
Closing balance 2022-12-31	1 869	426 146	-206 134	221 880
Share options programme	-	-	663	663
Loss for the period	-	-	-69 235	-69 235
Closing balance 2023-12-31	1 869	426 146	-274 705	153 309



Cash flow statement

Consolidated Group

TSEK	Note	Full year 2023	Full year 2022
Operating activities			
EBIT		-71 304	-22 768
Adjustments for non-cash items, etc	22	24 116	8 357
Interest received		2 075	67
Interest paid		-1	-56
Paid tax		301	132
Cash flow from operating activities before changes in working capital		-44 813	-14 268
Changes in working capital			
Changes in operating receivables		9 498	-10 836
Changes in operating liabilities		-11 998	1 421
Changes in inventories		-202	-940
Cash flow from operating activities		-47 515	-24 623
Investing activities			
Paid shareholders contribution		-4 000	-
Acquisition of intangible assets		-69	-1 591
Acquisition of property, plant and equipment		-1 520	-502
Acquisition of associated companies		-42 945	-
Deposits		-38	-15
Cash flow from investing activities		-48 572	-2 108
Financing activities			
Share options program		-	-229
Cash flow from financing activities		-	-229
Cash flow for the period		-96 087	-26 960
Cash and cash equivalents at beginning of period		185 428	211 155
Exchange rate effects		-9	1 233
Cash and cash equivalents at end of period		89 332	185 428

Income statement

Parent Company

TSEK	Note	Full year 2023	Full year 2022
OPERATING INCOME			
Net sales	2	27 510	64 023
Capitalized development costs		-	914
Other operating income	3	6 233	6 011
Total operating income		33 743	70 948
OPERATING EXPENSES			
Goods for resale		-9 833	-21 754
Other external costs	4,5	-31 054	-29 243
Personnel costs	6,7	-40 082	-33 714
Depreciation/amortization of property, plant and equipment and intangible assets	12,13,14	-4 781	-6 121
Other operating expenses		-1 105	-1 021
Total operating expenses		-86 854	-91 853
EBIT		-53 112	-20 905
FINANCIAL ITEMS			
Financial income	9	2 075	1302
Financial expenses	10	-9	-56
Total financial items		2 066	1 246
Loss after financial items		-51 045	-19 659
TAX			
Tax on loss for the period	11	-	-
LOSS FOR THE PERIOD		-51 045	-19 659
Earnings per share before and after dilution (SEK)		Neg.	Neg.
Average no. of shares for the period		31 146 299	31 146 299

Balance sheet

Parent Company

TSEK	Note	31 Dec 2023	31 Dec 2022
ASSETS			
Non-current assets			
Intangible assets			
Capitalized expenditure on research and development and similar works	12	2 727	5 259
Concessions, patents, licenses, trademarks and similar rights	13	80	28
Total intangible assets		2 807	5 287
Property, plant and equipment			
Equipment, tools, fixtures and fittings	14	6 647	7 239
Construction in progress	15	429	598
Total property, plant and equipment		7 076	7 837
Financial assets			
Shares in subsidiaries	16	15 464	15 464
Shares in associated companies	17	46 945	-
Deposits		680	642
Total financial assets		63 089	16 106
Total non-current assets		72 971	29 230
Current assets			
Inventories		1 811	1 609
Total inventories		1 811	1 609
Current receivables			
Accounts receivable		7 664	9 161
Other receivables		623	1 916
Prepaid expenses and accrued income	18	13 422	19 456
Total current receivables		21 708	30 534
Cash and bank balances			
Cash and bank balances		89 291	185 384
Total cash and bank balances		89 291	185 384
Total current assets		112 810	217 526
TOTAL ASSETS		185 782	246 756

Balance sheet

Parent Company

TSEK	Note	31 Dec 2023	31 Dec 2022
EQUITY AND LIABILITIES			
Equity			
Restricted equity			
Share capital	24	1 869	1 869
Development expenditure fund		2 727	5 259
Total restricted equity		4 595	7 128
Non-restricted equity			
Share premium reserve		426 146	426 146
Retained earnings		-209 505	-193 041
Loss for the period		-51 045	-19 659
Total non-restricted equity		165 596	213 445
Total equity		170 191	220 573
Current liabilities			
Accounts payable		4 452	5 789
Current tax liabilities		365	64
Other liabilities	19	3 728	11 698
Accrued expenses and deferred income	20	7 045	8 632
Total current liabilities		15 590	26 183
TOTAL EQUITY AND LIABILITIES		185 782	246 756

Statement of changes in equity

Parent Company

TSEK	Restricted equity		Non-restricted equity			Total equity
	Share capital	Development expenditure fund	Share premium reserve	Retained earnings	Loss for the year	
Opening balance 2022-01-01	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	-	-
Loss for the period	-	-	-	-	-19 659	-19 659
Closing balance 2022-12-31	1 869	5 260	426 146	-193 041	-19 659	220 574
Reallocation profit/loss prev. year	-	-	-	-19 659	19 659	-
Share options programme	-	-	-	663	-	663
Change for the year in respect of reserve for development expenditure	-	-2 532	-	2 532	-	-
Loss for the period	-	-	-	-	-51 045	-51 045
Closing balance 2023-12-31	1 869	2 727	426 146	-209 505	-51 045	170 191



Cash flow statement

Parent Company

TSEK	Note	Full year 2023	Full year 2022
Operating activities			
EBIT		-53 112	-20 905
Adjustments for non-cash items, etc	22	5 929	6 122
Interest received		2 075	67
Interest paid		-1	-56
Paid tax		301	124
Cash flow from operating activities before changes in working capital		-44 807	-14 648
Changes in working capital			
Changes in operating receivables		9 495	-10 826
Changes in operating liabilities		-11 999	2 072
Changes in inventories		-202	-941
Cash flow from operating activities		-47 512	-24 343
Investing activities			
Paid shareholders contribution		-4 000	-
Acquisition of intangible assets		-68	-
Acquisition of property, plant and equipment		-1 520	-502
Acquisition of associated companies		-42 945	-
Acquisition of subsidiaries		-	-1 591
Earnout Metasum AB		-	-325
Deposits		-38	-15
Cash flow from investing activities		-48 571	-2 432
Financing activities			
Share options program		-	-229
Cash flow from financing activities		-	-229
Cash flow for the period		-96 083	-27 004
Cash and cash equivalents at beginning of period		185 384	211 155
Exchange rate effects		-9	1 233
CASH AND CASH EQUIVALENTS AT END OF PERIOD		89 292	185 384

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 BFAR 2012:1 Annual reports and consolidated financial statements (K3). The accounting policies are unchanged compared with previous years.

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 2022 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

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.

Share-based payment transactions

The company has a share-based payment plan where the group receives services from employees and who remuneration issues equity instruments in the form of stock options to the employees. The total amount which must be expensed reported in the income statement as a personnel cost and in equity in the item Other contributed capital, distributed over the earning period. When an assessment is changed for how many equity instruments that will be earned, this deviation is reported in the income statement in the period that changed assessment is made. The social security contributions arising from the allocation of share options are reported as a personnel cost and a liability. Subsequent revaluations are reported in the income statement.

Further information is provided in Note 7.

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 11 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.

Associated companies are the companies in which the group has significant but not controlling influence, which usually applies to shareholdings comprising between 20% and 50% of the votes. Holdings in associated companies are reported according to the equity method. When applying the equity method, the investment is initially valued at acquisition value and the reported value is subsequently increased or decreased to take into account the group's share of the associated company's profit or loss after the acquisition date. The group's reported value of holdings in associated companies includes goodwill identified at the time of acquisition.

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.

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.

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

TSEK	Group		Parent company	
	2023	2022	2023	2022
Sweden	3 507	320	3 507	320
EU	22 503	36 195	22 503	36 195
The rest of the world	1 499	27 509	1 499	27 509
Total	27 510	64 023	27 510	64 023

Note 3
Other operating revenue

TSEK	Group		Parent company	
	2023	2022	2023	2022
Grants received	3 346	2 861	3 346	2 861
Exchange gains on receivables and liabilities	670	3 077	670	3 077
Invoiced costs	2 217	-	2 217	-
Capital gain on sale of inventory	-	63	-	63
Other revenue	-	10	-	10
Total	6 233	6 011	6 233	6 011

Note 4
Fees to auditors

TSEK	Group		Parent company	
	2023	2022	2023	2022
<i>PricewaterhouseCoopers AB</i>				
Audit engagement	591	455	591	455
Other services	2 331	367	2 331	367
Total	2 922	822	2 922	822

Other services mainly refer to transaction costs related to the acquisition of the non controlling interest in Sensrad AB.

**Note 5
Leases**

	Group		Parent company	
	2023	2022	2023	2022
TSEK				
<i>Expensed payments in respect of operating leases</i>	3 957	4 092	3 957	4 092
Future minimum lease payments in respect of non-cancellable operating leases				
To be paid within 1 year	4 086	3 732	4 086	3 732
To be paid later than 1 year but within 5 years	6 181	6 524	6 181	6 524
To be paid later than 5 years	853	-	853	-
Total	11 120	10 256	11 120	10 256

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

**Note 6
Number of employees and personnel costs**

	Group		Parent company	
	2023	2022	2023	2022
Average number of employees				
Men	28	25	28	25
Women	6	5	6	5
Total	34	30	34	30

	2023	2022	2023	2022
Wages, salaries and other benefits				
Board of directors and CEO	4 910	3 450	4 910	3 450
Bonus remuneration to the CEO	106	500	106	500
Other employees	21 619	17 026	21 619	17 026
Total	26 635	20 476	26 760	20 476

Pension costs and other social security contributions

	Group		Parent company	
	2023	2022	2023	2022
TSEK				
Pension costs for board of directors and CEO	806	654	806	654
Pension costs for other employees	3 634	1 844	3 634	1 844
Other social security contributions pursuant to legislation and agreements	7 183	5 927	7 183	5 927
Total	11 623	8 425	11 623	8 425

Gender distribution among senior officers

	Group		Parent company	
	2023	2022	2023	2022
TSEK				
Proportion of women on the board of directors	20%	20%	20%	20%
Proportion of men on the board of directors	80%	80%	80%	80%
Proportion of women among other officers of the company	0%	0%	0%	0%
Proportion of men among other officers of the company	100%	100%	100%	100%

Note 7

Share-based payment

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.

LTI 2022

At the Extraordinary General Meeting on August 19, 2022, the shareholders resolved to approve the Board’s proposal to issue a long-term incentive program for senior executives and other key individuals in the Group. The aim of the program is to strengthen the Group’s ability to recruit and retain key individuals.

LTI 2022 comprises a maximum of 13 key individuals in the Group. The maximum number of performance share rights that can be allocated in accordance with LTI 2022 is to be limited to 642,595 (same amount as the total shares in the company). The targets for the program were established by the Board at the end of the quarter, at which point five key individuals were invited to participate with the opportunity of earning a maximum of 360,656 performance share rights.

Warrants: Serie 2022/2025	Group			
	2023		2022	
	Average exercise price in SEK per warrant (thousands)		Average exercise price in SEK per warrant (thousands)	
As of 1 of January	7	503	-	-
Assigned			7	503
Outstanding as of 31 December	7	503	7	503

	Parent company			
	2023		2022	
	Average exercise price in SEK per warrant (thousands)		Average exercise price in SEK per warrant (thousands)	
As of 1 of January	7	503	-	-
Assigned			7	503
Outstanding as of 31 December	7	503	7	503
Of the 502 541 warrants, 0 warrants were redeemable				

Note 8
Results from shares in associated companies

TSEK	Group		Parent company	
	2023	2022	2023	2022
Results from revaluations in associated companies	-	3 503	-	-
Results from shares in associated companies	-14 469	-	-	-
Total	-14 469	3 503	-	-

Note 9
Financial income

TSEK	Group		Parent company	
	2023	2022	2023	2022
Capital gains financial items	-	1 234	-	1 234
Interest income	2 075	67	2 075	67
Total	2 075	1 302	2 075	1 302

Interest income due to bank deposits

Note 10
Financial costs

TSEK	Group		Parent company	
	2023	2022	2023	2022
Rate losses financial items	9	-	9	-
Interest charges	1	56	1	56
Total	9	56	9	56

Note 11

Tax on profit/loss for the year

TSEK	Group		Parent company	
	2023	2022	2023	2022
Current tax	3	-	-	-
Deferred tax	-	8	-	-
Total reported tax	3	8	-	-
<i>Reconciliation of effective tax rate</i>				
Net profit/loss before tax	-69 238	-18 020	-51 045	-19 659
Tax on net profit/loss in accordance with applicable tax rate (20.6%)	14 263	3 712	10 515	4 050
<i>Tax effect of:</i>				
Non-deductible expenses	-35	-29	-39	-29
Tax-free income	2	-	2	-
Increase in loss carry-forwards without corresponding capitalisation of deferred tax	-14 226	-3 683	-10 477	-4 021
Reported tax	3	-	-	-
Effective tax rate	0%	0%	0%	0%
Accumulated tax loss carry-forwards	289 317	220 254	272 756	221 894
The value of the deferred taxes attributable to these losses amounts to	59 599	45 372	56 188	45 710

In the annual accounts for 2023 and 2022, 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 12

Capitalised expenditure on development and similar expenditures

TSEK	Group		Parent company	
	2023	2022	2023	2022
Opening balance	36 018	36 018	36 018	36 018
Closing balance	36 018	36 018	36 018	36 018
Opening balance, depreciations	-27 459	-23 253	-27 459	-23 253
Depreciation for the year	-2 532	-4 206	-2 532	-4 206
Closing balance, depreciations	-29 991	-27 459	-29 991	-27 459
Opening balance, impairment	-3 300	-3 300	-3 300	-3 300
Closing balance, impairment	-3 300	-3 300	-3 300	-3 300
Book value	2 727	5 259	2 727	5 259

Note 13

Concessions, patents, licences, trademarks and similar rights

TSEK	Group		Parent company	
	2023	2022	2023	2022
Opening balance	19 250	665	665	665
Acquired during the year	69	18 585	69	-
Closing balance	19 319	19 250	734	665
Opening balance, depreciations	-2 495	-544	-637	-544
Depreciation for the year	-3 735	-1 951	-18	-93
Closing balance, depreciations	-6 230	-2 495	-655	-637
Book value	13 089	16 754	80	28

Note 14
Equipment, tools, fixtures and fittings

TSEK	Group		Parent company	
	2023	2022	2023	2022
Opening balance	12 698	12 846	12 698	12 846
Acquired during the year	1 091	8 238	1 091	8 238
Sales/disposals	-	-401	-	-401
Reclassifications	548	-7 985	548	-7 985
Closing balance	14 337	12 698	14 337	12 698
Opening balance, depreciations	-5 457	-3 689	-5 457	-3 689
Depreciation for the year	-2 231	-1 821	-2 231	-1 821
Sales/disposals	-	53	-	53
Closing balance, depreciations	-7 688	-5 457	-7 688	-5 457
Book value	6 647	7 239	6 647	7 239

Note 15
Ongoing new equipment

TSEK	Group		Parent company	
	2023	2022	2023	2022
Opening balance	598	-	598	-
Acquired during the year	429	598	429	598
Sales/disposals	-50	-	-50	-
Reclassifications	-548	-	-548	-
Book value	429	598	429	598

Note 16
Shares in the group

TSEK

	Parent company	
	2023	2022
Opening balances	15 464	-
Acquired during the year	-	12 832
Reclassifications	-	2 632
Book value	15 464	15 464

Specification of shares in associated companies

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

Note 17
Shares in associated companies

TSEK

	Group		Parent company	
	2023	2022	2023	2022
Opening balance	-	2 632	-	2 632
Reclassifications	-	-2 632	-	-2 632
Acquired during the year	46 945	-	46 945	-
Results from shares	-14 469	-	-	-
Book value	32 476	-	46 945	-

Specification of shares in associated companies

Name	Org-number	Residence	Share of equity
Sensrad AB	559389-8769	Gothenburg	30%

During the year, 30% of Sensrad AB, 559389-8769, was acquired by the parent company and included in the consolidated accounts with amounts relating to the time after the acquisition date 27 April 2023.

Note 18
Prepaid costs and accrued income

TSEK	Group		Parent company	
	2023	2022	2023	2022
Prepaid rents	908	1 064	908	1 064
Accrued income	10 074	16 692	10 074	16 692
Other prepaid costs	2 440	1 699	2 440	1 699
Total	13 422	19 456	13 422	19 456

Accrued income mainly refers to revenue recognized, but not yet invoiced, license fees.

Note 19
Other liabilities

TSEK	Group		Parent company	
	2023	2022	2023	2022
Grant/client's funds	2 926	11 050	2 926	11 050
Employee tax	802	648	802	648
Total	3 728	11 698	3 728	11 698

Note 20
Accrued expenses and deferred income

TSEK	Group		Parent company	
	2023	2022	2023	2022
Accrued holiday pay	3 459	3 215	3 459	3 215
Accrued bonus	455	2 493	455	2 493
Accrued directors' fees	594	504	594	504
Accrued social security contributions	2 053	1 636	2 053	1 636
Other accrued expenses	483	782	483	782
Total	7 045	8 632	7 045	8 632

Note 21
Deferred taxes

TSEK	Group		
	Temporary difference	Deferred tax claim	Deferred tax liability
Opening balance	16 726	3 446	3 446
Asset acquisition patent	-3 718	-766	-766
Closing balance	13 008	2 680	2 680

Note 22
Items not affecting cash flow

TSEK	Group		Parent company	
	2023	2022	2023	2022
Depreciation	8 497	7 980	4 781	6 122
Exchange rate gains	435	-	434	-
Results from shares in associated companies	14 469	3 503	-	-
Adjustment in connection with conversion to a group	-	-3 126	-	-
Other	716	-	713	-
Total	24 116	8 357	5 929	6 122

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 Härryda Municipality.

Note 24
Share capital

As of 31 December 2023, the share capital was TSEK 1,869 (TSEK 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 25**Significant events after the end of reporting period**

- A new enhanced agreement with the Frencken Group positions Gapwaves as a full-service supplier of waveguide antennas.
- An order for production equipment was received from the Frencken Group. The value of the order amounted to approximately MEUR 2.
- An order was received from a European Tier 1 supplier, with an approximate order value of MSEK 1.8.

Note 26**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 27**Related party transactions**

There are no material transactions with related parties during the year.

Signatory of annual accounts 2023

The board of directors and the CEO certify that the consolidated accounts have been prepared in accordance with the Annual Accounts Act and Swedish general accepted accounting principles (K3) and gives a true and fair view of the group's financial position and results. The annual report has been prepared in accordance with Annual Accounts Act and Swedish general accepted accounting principles (K3) and gives a true and fair view of the parent company's financial position and results.

Gothenburg, April 12, 2024
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 signed

Gothenburg, April 12, 2024
PricewaterhouseCoopers AB

Johan Malmqvist
Authorised Public Accountant



Auditor's report

To the general meeting of the shareholders of Gapwaves AB (publ), corporate identity number 556840-2829

Report on the annual accounts and consolidated accounts

Opinions

We have audited the annual accounts and consolidated accounts of Gapwaves AB (publ) for the year 2023. The annual accounts and consolidated accounts of the company are included on pages 25-56 in this document.

In our opinion, the annual accounts and consolidated accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of parent company and the group as of 31 December 2023 and their financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act. The statutory administration report is consistent with the other parts of the annual accounts and consolidated accounts.

We therefore recommend that the general meeting of shareholders adopts the income statement and balance sheet for the parent company and the group.

Basis for Opinions

We conducted our audit in accordance with International Standards on Auditing (ISA) and generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our 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 opinions.

Other Information than the annual accounts and consolidated accounts

This document also contains other information than the annual accounts and consolidated accounts and is found on pages 1-24. The Board of Directors and the Managing Director are responsible for this other information.

Our opinion on the annual accounts and consolidated accounts does not cover this other information and we do not express any form of assurance conclusion regarding this other information.

In connection with our audit of the annual accounts and consolidated accounts, our responsibility is to read the information identified above and consider whether the information is materially inconsistent with the annual accounts and consolidated accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit and assess whether the information otherwise appears to be materially misstated.

If we, based on the work performed concerning this information, 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.

Responsibilities of the Board of Directors and the Managing Director

The Board of Directors and the Managing Director are responsible for the preparation of the annual accounts and consolidated accounts and that they give a fair presentation in accordance with the Annual Accounts Act. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of annual accounts and consolidated accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts and consolidated accounts, The Board of Directors and the Managing Director are responsible for the assessment of the company's and the group's ability to continue as a going concern. They disclose, as applicable, matters related to going concern and using the going concern basis of accounting. The going concern basis of accounting is however not applied if the Board of Directors and the Managing Director intends to liquidate the company, to cease operations, or has no realistic alternative but to do so.

Auditor's responsibility

Our objectives are to obtain reasonable assurance about whether the annual accounts and consolidated accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and generally accepted auditing standards in Sweden 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 annual accounts and consolidated accounts.

A further description of our responsibility for the audit of the annual accounts and consolidated accounts is available on Revisorsinspektionen's website: www.revisorsinspektionen.se/revisornsansvar. This description is part of the auditor's report.

Report on other legal and regulatory requirements

Opinions

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Directors and the Managing Director of Gapwaves AB (publ) for the year 2023 and the proposed appropriations of the company's profit or loss.

We recommend to the general meeting of shareholders that the profit be appropriated in accordance with the proposal in the statutory administration report and that the members of the Board of Directors and the Managing Director be discharged from liability for the financial year.

Basis for Opinions

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our 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 opinions.

Responsibilities of the Board of Directors and the Managing Director

The Board of Directors is responsible for the proposal for appropriations of the company's profit or loss. At the proposal of a dividend, this includes an assessment of whether the dividend is justifiable considering the requirements which the company's and the group's type of operations, size and risks place on the size of the parent company's and the group's equity, consolidation requirements, liquidity and position in general.

The Board of Directors is responsible for the company's organization and the administration of the company's affairs. This includes among other things continuous assessment of the company's and the group's financial situation and ensuring that the company's organization is designed so that the accounting, management of assets and the company's financial affairs otherwise are controlled in a reassuring manner. The Managing Director shall manage the ongoing administration according to the Board of Directors' guidelines and instructions and among other matters take measures that are necessary to fulfill the company's accounting in accordance with law and handle the management of assets in a reassuring manner.

Auditor's responsibility

Our objective concerning the audit of the administration, and thereby our opinion about discharge from liability, is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the Board of Directors or the Managing Director in any material respect:

- has undertaken any action or been guilty of any omission which can give rise to liability to the company, or
- in any other way has acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association.

Our objective concerning the audit of the proposed appropriations of the company's profit or loss, and thereby our opinion about this, is to assess with reasonable degree of assurance whether the proposal is in accordance with the Companies Act.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the company, or that the proposed appropriations of the company's profit or loss are not in accordance with the Companies Act.

A further description of our responsibility for the audit of the administration is available on Revisorsinspektionen's website www.revisorsinspektionen.se/revisornsansvar. This description is part of the auditor's report.

Gothenburg 12 April 2024
PricewaterhouseCoopers AB

Johan Malmqvist
Authorized Public Accountant

Gapwaves AB (publ)
Corp. Reg. No. 556840-2829

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About Gapwaves AB

Gapwaves AB (publ) originates from research conducted at Chalmers University of Technology and was founded in 2011. Gapwaves' vision is to be the most innovative provider of mm-wave antenna systems and the preferred partner to those pioneering next generation wireless technology for a safer and more sustainable society. By leveraging the disruptive Gapwaves technology, we help pioneers in automotive and telecom to create highly efficient mm-wave antenna systems that contributes to re-defining everyday life.

Gapwaves' share (GAPW B) is traded on the Nasdaq First North Growth Market Stockholm with G&W Fondkommission as certified adviser.