




Interim Report Q1 2022



# Contents

Significant events Q1 2022	4
CEO comments	5
Financial summary	7
Outlook 2022	8
Gapwaves in brief	9
Risks and uncertainties	10
Largest shareholders	11
Income statement	12
Balance sheet	13
Statement of change in equity	15
Cash flow statement	16
Submission of Interim Report Q1 2022	17



A panoramic view of a city at sunset. The foreground is filled with a dense forest of tall evergreen trees. In the middle ground, a city skyline is visible, with several tall buildings and a large body of water. The background shows a range of mountains under a sky with soft, orange and yellow clouds. The overall scene is bathed in the warm light of the setting sun.

*"At Gapwaves, we're exploring what an antenna can do.  
We're curious about what this will mean for the technology  
of tomorrow and how we can build a creative future where  
our imagination sets the limits, not technology"*

# Interim report Q1 2022

Gapwaves AB (publ), 556840-2829

## Significant events January - March 2022

- An order was received from the global tech company for high-resolution radar antennas with a total value of approximately MSEK 10.
- An order was received from Uhnder with a total value of approximately MSEK 0.2.
- An order was received from an American autotech company for imaging radar antennas with a total value of approximately MSEK 2.
- Jonas Ehinger will assume the position as CEO of Gapwaves from August 2022.

## Key performance indicators

Amount in KSEK	Jan-Mar 2022	Jan-Mar 2021	Full Year 2021
Net revenue	5,774	2,406	34,860
EBITDA	-8,231	-12,440	-30,265
Profit/Loss for the period	-9,878	-13,929	-36,312
Cash Flow	-17,794	-13,756	133,293
Equity ratio at the end of the period	91.2%	76.9%	89.9%
Average number of shares	30,711,299	27,611,299	30,711,299
Earnings per share (SEK)	-0.32	-0.50	-1.18
Number of FTEs	28	23	26

## Events after the end of the period

- An order was received from HELLA regarding antennas for a new series of radar sensors with a total value of approximately MSEK 4.
- Two orders were received from Frencken Group for production equipment for radar antennas with a total value of approximately MSEK 4.
- An order was received by the global tech company with a total value of approximately MSEK 0.5.
- An order was received from FWB Kunststofftechnik GmbH regarding production equipment for testing of antennas with a total value of approximately MSEK 3.5.

# CEO comments

## Intense quarter with the largest order in Gapwaves' history

We summarize the first quarter of the year with the conclusion that the positive commercial improvement continues and that the business is developing towards making Gapwaves' antennas standard for radar sensors in active vehicle safety and autonomous vehicles such as robotaxi or trucks.

One of the most significant events during the period was when the global tech company, that Gapwaves has been working with since 2020, ordered additional high-resolution antennas intended for an imaging radar. The value of the order is about MSEK 10 and is the largest single order that Gapwaves has received to date.

In parallel, product development, deliveries and strategic discussions continues with a number of additional customers within radar antennas for active vehicle safety, autonomous vehicles and traffic management.

## Increased interest in advanced radar sensors

During the period, we have seen an increased interest in Gapwaves' technology for imaging radar intended for the higher levels of automated driving, SAE level 3-5 (see illustration on page 6). We are, in collaboration with our customers, targeting to develop a market leading radar sensor for self-driving vehicles at SAE level 3-5. At the end of the period, a new order was received from an American autotech company intended for an imaging radar. We see this order as a confirmation of the high value Gapwaves' antenna solution brings to the most advanced radar sensors, which are crucial to enable robotaxis and autonomous trucks etc.

Furthermore, in April we participated in an autotech event in California and visited several global companies and customers that are interested in Gapwaves' antenna solution for imaging radar. The conclusion from our meetings is clear, existing and potential customers have one common statement which speaks for Gapwaves; *"The biggest limitation on today's radar solution is the PCB-based antennas - We need a waveguide antenna."*

## Production for high volume

To meet the increased demand from customers, the development of a high-volume production continues with partners such as the Frencken Group. It is Gapwaves that is responsible for the development of the equipment that will perform assembly and testing of radar antennas in high-volume production.

During the period, focus has been towards completing this equipment, which is an automated solution for fast and robust testing of antennas with subsequent quality assurance of each produced antenna.

In early April, the first two orders for this test equipment were received, one from FWB Kunststofftechnik GmbH and one from Gapwaves production partner Frencken Group. We see these orders as an important step towards establishing high-volume production capability for the automotive industry.

## Gapwaves business plan develops well despite pandemic and war in Ukraine

During the first quarter, we have seen that the pandemic has taken a new grip on China at the same time as Russia has invaded Ukraine - two events that have caused large uncertainty to the global supply chain and a lot of human suffering.

Gapwaves will continue to monitor the progress of the pandemic and the war in Ukraine carefully. At the end of the quarter, we have not seen any direct negative impact on the business so far. Our sales and business development is proceeding without disturbance. We continue to follow the outcome and have the resources to act if necessary.

## Change of CEO

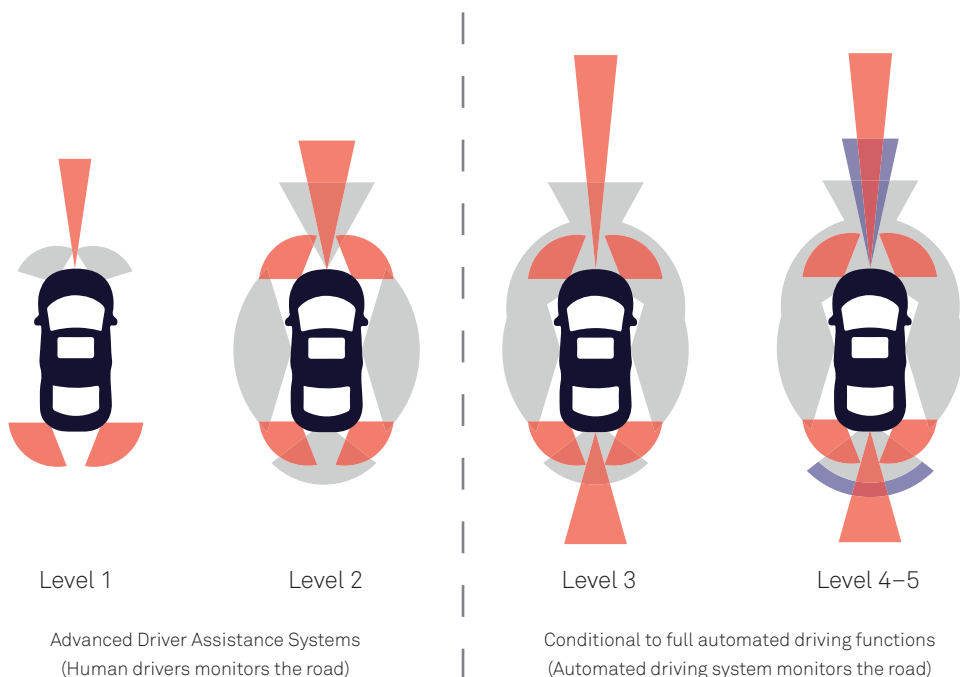
In February, the board announced that Jonas Ehinger will assume the position as Gapwaves CEO in August. Jonas has extensive experience of business and company development in various CEO positions, as well as good insight into Gapwaves through his position as Chairman of the Board. It is with great confidence that I transfer the CEO position to Jonas. I am absolutely convinced that he will bring a lot of new energy and knowledge to Gapwaves.

I am satisfied with what Gapwaves has achieved during the first quarter of the year. We have created a stable foundation to develop the company further in 2022 and I would like to thank all employees who always do their outmost to deliver in large and small tasks.

Gothenburg, May 2022

Lars-Inge Sjöqvist  
CEO of Gapwaves AB





Source: SAE International

# Financial summary

## January - March 2022

During the first quarter 2022, Gapwaves' net revenue was TSEK 5,774, representing an increase of 140% year-on-year. The growth in the first quarter is mainly due to increased revenue from ongoing customer engagements such as HELLA and Uhnder.

## Net Revenue and EBITDA

In the period January-March 2022, net revenue amounted to TSEK 5,774 (TSEK 2,406). Revenue include sales of antenna prototypes, development projects and sale of antennas. Besides income from customer engagements, subsidies from three research projects were accounted for, amounting to TSEK 577. The company has also capitalized expenses related to tangible assets of TSEK 299.4.

EBITDA for the period was TSEK -8,231 (TSEK -12,440). The improved result is mainly explained by increased revenue. Operating expenses, TSEK -6,873 (TSEK -8,317) was lower compared to same period last year due to less development consultants and interim administrative personnel, partly offset by consultancy expenses. Decreased operating expenses are partly offset by higher personnel expenses attributable to increased number of staff.

Result after financial items was TSEK -9,878 (TSEK -13,929).

## Liquidity and cash flow

Cash flow for the period amounted to TSEK -17,794 (TSEK -13,756). Cash flow from operating activities amounted to TSEK -14,111 (TSEK -12,863). During the period, TSEK 3,819 was invested in tangible assets, which mainly relates to production equipment.

As per March 31<sup>st</sup>, 2022, Gapwaves' cash and cash equivalents amounted to MSEK 193.4 (MSEK 77.9). Gapwaves has no interest-bearing financial liabilities.

# Outlook 2022

## Focus 2022

It is still in the markets for radar sensors for Advanced Driver Assistance Systems (ADAS) and autonomous vehicles where we see the greatest interest in Gapwaves technology. Our focus for 2022 is to be fully approved in the evaluation and tests that are ongoing with our customers, and that Gapwaves will be the choice for their vehicle radar. Furthermore, we aim to win additional business with new customers in addition to the agreements already signed with Veoneer and HELLA. Our target is that Gapwaves antenna technology shall become standard for antennas for radar sensors.

### Increased interest for advanced radar sensors

For fully autonomous vehicles such as robotaxis and trucks, a suit of sensors including cameras, lidar and radars are required. Radar together with lidar are the most advanced active sensors and thus crucial components for fully autonomous vehicles.

During the period, we have seen a continued increased interest in Gapwaves' antenna solution for imaging radar from new innovative tech companies alongside the traditional suppliers to the automotive industry. In customer dialogues, we repeatedly hear that it is the performance of the antenna that is the key to achieve a radar sensor with enough performance, capable of performing fully autonomous driving. We see a growing market where Gapwaves' high-performance and robust waveguide antennas add great value. The more complex and advanced antenna - the greater are the benefits of Gapwaves' technology.

In addition to the already received order for imaging radar from an American autotech company, the intention is that ongoing customer dialogues will turn out in new development projects in 2022 and the coming years.

### Production adapted to high volume

During 2022, we will continue to focus on developing our high-volume production capacity with partners like the Frencken Group. Gapwaves' in-house developed production equipment that will be delivered to Frencken and FWB Kunststofftechnik GmbH is an automated solution for fast and robust testing and quality assurance of antennas in high-volume production.

In parallel, we are developing our own production capacity on site in Gothenburg. The focus here is in high-performing antennas for imaging radar, where an assembly and test capacity of 150,000-200,000 units per year is now in place.

Producing a radar antenna that is both high-performance and cost-effective in high-volume manufacturing has long been a well-known challenge. By using Gapwaves' unique waveguide technology, our antenna now solve these problems and meets the requirements to be a subcontractor to the automotive industry. We consider ourselves being in a good position to capture a large part of the growing market in radar sensors for active vehicle safety and autonomous vehicles.

## A turbulent world

The pandemic has created a lot of uncertainty around the world and affected both society and the economy negatively with a lot of human suffering.

Gapwaves has followed the development closely and sees that our customers in the automotive industry, have to some extent been negatively affected due to disturbed supply chains and delays. As it is still a few years away until Gapwaves products are fully launched on the market in larger volumes, we have not yet seen any impact on our sales or business development. We continue to monitor the development of the recent outbreak and lockdowns in China and are prepared to act if needed.

Russia's invasion of Ukraine has severely affected the world economy and created a large uncertainty. Gapwaves has no ongoing business with either Russia or Ukraine and has so far not been adversely affected by the war. Gapwaves observe the progress of the war and are prepared to act if needed.



# Gapwaves in brief

Gapwaves AB (publ) has its heritage from research at Chalmers University of Technology and was established in 2011 to commercialize innovations for products within millimeter wave technology. With the exponentially increased use of image and video in our mobile devices and a desire to create autonomous vehicles, there is an increasing need for high-performance wireless systems and radar. For these systems, Gapwaves develops waveguide and antenna products based on a patented waveguide technology. The company's target markets are mainly within radar antennas for the automotive industry and antennas for the telecom industry.

## The share

Gapwaves B share has been listed on Nasdaq First North Growth Market Stockholm since 18 November 2016 and trading takes place under the short name GAPW B. The issue price on November 18 2016 was SEK 5.95 and the price on March 31 2022 was SEK 37. As of March 31<sup>st</sup> 2022, the company had approximately 8,000 shareholders. The company has a total of 30,711,299 shares, of which 7,667,500 are A shares and 23,043,799 are B shares. Each A share entitles the holder to ten votes and each B share entitles the holder to one vote. G&W Fondkommission is the company's Certified Adviser.

## Share capital

As of March 31<sup>st</sup>, the share capital was SEK 1,842,678 and the total number of shares was 30,711,299. This gives a quotient value of SEK 0.06 per share.

## Employees

The number of permanent employees in the company as of March 31<sup>st</sup> 2022 was 28 (23).

## Accounting principles

The company applies the Annual Accounts Act and the Swedish Accounting Standards Board's general advice BFNAR 2012: 1 Annual Report and consolidated accounts ("K3"). Furthermore, all balance sheet items are valued at acquisition value according to K3, chap. 11. The interim report has not been audited.

## Financial Calendar

**Interim report Q2 2022:** 2022-08-25

**Interim report Q3 2022:** 2022-11-09

**Year-end report Q4 2022:** 2023-02-10

# Risks and uncertainties

## Operational risks

In the operating activities, there are risk factors that may affect the company's business and financial position. The risks are associated with the development operations running according to plan, that the company can recruit and retain qualified personnel and that the technology can be industrialized to the extent that scalability is achieved. To develop a component that is part of a larger system, the company is also dependent on cooperation with other component manufacturers and customers. As several of Gapwaves customers and suppliers have been affected by disruptions in operations linked to Covid-19, the ongoing war in Ukraine and the sanctions against Russia and Belarus, there is a risk that Gapwaves will be affected by component shortages, postponed or interrupted projects. As of the end of March 2022, this has not yet been the case.

## Market risks

Gapwaves technology is mainly focused on being used as a component in a larger system within, for example, vehicle radar or mobile telecommunications networks. As such, there are risks linked to potential customers preference for the technology, to the integration of the technology as well as the demand for the end product.

As a developer of products that are not currently on the market, there are risks and uncertainties linked to schedules, customer needs and competitors. A delay or failure to introduce the next generation of vehicle radar in the automotive industry or the introduction of 5G in the telecom industry may entail a risk of lower growth rates in the area than expected.

## Financing risk

The company is financed through equity. Even if the company generates revenue, capital needs may arise as the company grows. In this case, the company is also exposed to financing risks. Following the new share issue that was carried out in connection with HELLA joining as owner in June 2021, the Board assesses that the company is well capitalized and that the financing risk has decreased in the short term.



# Largest shareholders in Gapwaves AB (publ)

March 31, 2022

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

	Number of A shares	Number of B shares	Share of equity %	Share of voting power %
Kildal Antenn AB, incl. related parties	5,618,000	390,200	19.56%	56.73%
HELLA GmbH & Co. KGaA	-	3,100,000	10.09%	3.11%
Försäkringsaktiebolaget Avanza Pension	-	1,596,659	5.20%	1.60%
Lars-Inge Sjöqvist with companies	848,000	161,048	3.29%	8.67%
Nordnet Pensionsförsäkring AB	-	777,718	2.53%	0.78%
Alfred Berg (BNP Paribas)	-	715,639	2.33%	0.72%
Six Sis AG	-	553,755	1.80%	0.56%
Bright Ebenezer	-	542,000	1.76%	0.54%
Jian Yang	509,500	13,333	1.70%	5.12%
Abbas Vosoogh with companies	265,000	111,658	1.23%	2.77%
Peter Enoksson	185,500	92,750	0.91%	1.95%
Chalmers Ventures AB	-	269,307	0.88%	0.27%
Ashraf Uz Zaman	165,000	100,000	0.86%	1.75%
Erste Group Bank AG	-	251,070	0.82%	0.25%
Nordea Livförsäkring Sverige AB	-	240,000	0.78%	0.24%
Leif Hagne	-	175,000	0.57%	0.18%
RGG ADM-Gruppen AB	-	174,850	0.57%	0.18%
Ann Christin Berardi with companies	-	172,500	0.56%	0.17%
Brynn Settels	-	160,000	0.52%	0.16%
Peter Tafazoli	-	150,015	0.49%	0.15%
Others	76,500	13,296,297	43.54%	14.10%
<b>Total</b>	<b>7,667,500</b>	<b>23,043,799</b>	<b>100.00%</b>	<b>100.00%</b>

# Income statement

KSEK	Jan-Mar 2022	Jan-Mar 2021	Full Year 2021
<b>Revenue</b>			
Net revenue	5,774	2,406	34,860
Capitalized work on own account	299	-	2,474
Other operating income	908	542	2,588
	<b>6,981</b>	<b>2,949</b>	<b>39,922</b>
<b>Operating expenses</b>			
Raw material and consumables	-1,929	-1,445	-15,502
Operating expenses	-6,873	-8,317	-31,695
Personnel expenses	-6,368	-5,612	-22,487
Depreciation of tangible and intangible assets	-1,577	-1,419	-5,976
Other operating expenses	-42	-15	-502
<b>Total operating expenses</b>	<b>-16,790</b>	<b>-16,807</b>	<b>-76,162</b>
<b>Operating profit/loss</b>	<b>-9,809</b>	<b>-13,859</b>	<b>-36,241</b>
Financial items	-69	-70	-72
<b>Total financial items</b>	<b>-69</b>	<b>-70</b>	<b>-72</b>
<b>Earnings after financial items</b>	<b>-9,878</b>	<b>-13,929</b>	<b>-36,312</b>
<b>Tax</b>	-	-	-
<b>Profit/loss for the year</b>	<b>-9,878</b>	<b>-13,929</b>	<b>-36,312</b>
Earnings per share (SEK)	-0.32	-0.50	-1.18
Average number of shares	30,711,299	27,611,299	30,711,299



# Balance sheet

KSEK	31 Mar 2022	31 Dec 2021
<b>Assets</b>		
<b>Fixed assets</b>		
<i>Intangible assets</i>		
Capitalised expenditure on research and development and similar works	8,344	9,465
Concessions, patents, licences, trademarks and similar rights	98	121
<b>Intangible fixed assets</b>	<b>8,442</b>	<b>9,587</b>
<i>Financial assets</i>		
Shares in associated companies	2,632	2,632
<b>Financial fixed assets</b>	<b>2,632</b>	<b>2,632</b>
<i>Property, plant and equipments</i>		
Equipment, tools and installations	12,542	9,156
<b>Tangible fixed assets</b>	<b>12,542</b>	<b>9,156</b>
<b>Total fixed assets</b>	<b>23,616</b>	<b>21,375</b>
<b>Current assets</b>		
Inventory	951	668
<b>Total inventory</b>	<b>951</b>	<b>668</b>
<b>Current receivables</b>		
Accounts receivable	4,698	8,295
Other receivables	6,048	1,745
Tax receivables	103	60
Prepayments and accrued income	10,554	10,295
<b>Total current receivables</b>	<b>21,402</b>	<b>20,395</b>
<b>Cash and bank balance</b>		
Cash and bank equivalents	193,361	211,155
<b>Total cash and bank equivalents</b>	<b>193,361</b>	<b>211,155</b>
<b>Total current assets</b>	<b>215,714</b>	<b>232,218</b>
<b>Total assets</b>	<b>239,330</b>	<b>253,592</b>

KSEK	31 Mar 2022	31 Dec 2021
<b>Equity and liabilities</b>		
<b>Restricted equity</b>		
Share capital	1,843	1,843
Reserve for development expenditure	8,344	9,465
<b>Total restricted equity</b>	<b>10,187</b>	<b>11,308</b>
<b>Non-restricted equity</b>		
Share premium reserve	416,850	416,717
Retained earnings	-198,821	-163,630
Profit/loss for the period	-9,878	-36,312
<b>Total non-restricted equity</b>	<b>208,151</b>	<b>216,775</b>
<b>Total equity</b>	<b>218,338</b>	<b>228,083</b>
<b>Non-current liabilities</b>		
Other non-current liabilities	813	813
<b>Total non-current liabilities</b>	<b>813</b>	<b>813</b>
<b>Current liabilities</b>		
Short-term liabilities	650	650
Accounts payable	5,581	11,675
Other liabilities	7,397	7,823
Accrued expenses and deferred income	6,551	4,549
<b>Total current liabilities</b>	<b>20,179</b>	<b>24,697</b>
<b>Total equity and liabilities</b>	<b>239,330</b>	<b>253,592</b>



# Statement of changes in equity

KSEK	Restricted equity		Non-restricted equity			Total equity
	Share capital	Reserve for development expenditure	Share premium reserve	Retained earnings	Profit/loss for the year	
<b>Opening balance 01/01/2022</b>	<b>1,843</b>	<b>9,466</b>	<b>416,716</b>	<b>-163,630</b>	<b>-36,312</b>	<b>228,083</b>
Reallocation profit/loss prev. year	-	-	-	-36,312	36,312	-
Share options programme	-	-	133	-	-	133
Change for the year in respect of reserve for development expenditure	-	-1,121	-	1,121	-	-
Profit/loss for the period	-	-	-	-	-9,878	-9,878
<b>Closing balance 31/03/2022</b>	<b>1,843</b>	<b>8,345</b>	<b>416,849</b>	<b>-198,821</b>	<b>-9,878</b>	<b>218,338</b>

# Cash flow statement

KSEK	Jan-Mar 2022	Jan-Mar 2021	Full Year 2021
<i>Operating activities</i>			
Operating income	-9,809	-13,859	-36,241
<i>Adjustments for non-cash items, etc.</i>			
Depreciation/amortisation and impairment	1,577	1,419	5,976
<b>Operating profit after adjustments</b>	<b>-8,231</b>	<b>-12,440</b>	<b>-30,265</b>
Financial items	-69	-70	-71
<b>Cash flow from operating activities before working capital changes</b>	<b>-8,301</b>	<b>-12,510</b>	<b>-30,336</b>
<i>Working capital changes</i>			
Change in operating receivables	-1,008	-585	-15,629
Change in operating liabilities	-4,518	279	4,664
Change in stock	-283	-47	-308
<b>Cash flow from operating activities</b>	<b>-14,111</b>	<b>-12,863</b>	<b>-41,609</b>
<i>Investing activities</i>			
Acquisition of intangible assets	-	-	-2,326
Acquisition of property, plant and equipment	-3,819	-966	-6,793
Merger of subsidiaries	-	73	73
Acquisition of associated companies	-	-	-682
Additional purchase price associated companies	-	-	-488
<b>Cash flow from investing activities</b>	<b>-3,819</b>	<b>-893</b>	<b>-10,215</b>
<i>Financing activities</i>			
Share options programme	133	-	2,924
New share issue HELLA	-	-	182,006
New share issue	-	-	186
<b>Cash flow from financing activities</b>	<b>133</b>	<b>-</b>	<b>185,115</b>
<b>Cash flow for the period</b>	<b>-17,794</b>	<b>-13,756</b>	<b>133,293</b>
<b>Cash and cash equivalents at beginning of period</b>	<b>211,155</b>	<b>77,862</b>	<b>77,862</b>
<b>Cash and cash equivalents at end of period</b>	<b>193,360</b>	<b>64,107</b>	<b>211,155</b>

# Submission of Interim Report Q1 2022

Gothenburg, 11 May 2022  
Gapwaves AB (publ)

---

**Jonas Ehinger**

Chair

---

**Madeleine Schilliger Kildal**

Director

---

**Karl Olof Axelsson**

Director

---

**Torbjörn Gustafsson**

Director

---

**Magnus Jonsson**

Director

---

**Dietmar Stapel**

Director

---

**Lars-Inge Sjöqvist**

CEO



Gapwaves AB (publ)  
org. reg. no. 556840-2829

Headquarter:  
Nellickevägen 22, 412 63, Gothenburg,  
Sweden

Telephone: +46 31-762 60 40  
Email: [info@gapwaves.com](mailto:info@gapwaves.com)

[www.gapwaves.com](http://www.gapwaves.com)