

# Report by the Board of Directors and Financial Statements 2017

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**Bittium**



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# Report by the Board of Directors 2017

## Year 2017 in Brief

### Net Sales in 2017 Decreased by 19.6 Percent Year-On-Year and Operating Result Was Negative

Bittium's net sales in January-December 2017 decreased by 19.6 percent year-on-year to EUR 51.6 million (EUR 64.2 million, in 2016).

The share of the product-based net sales was EUR 16.3 million (EUR 11.9 million, in 2016), which resulted mainly from the product deliveries of the tactical communication system, product deliveries of Bittium Tough Mobile LTE smartphones and related security software, and deliveries of products for measuring and monitoring biosignals. The increase in the product-based net sales year-on-year resulted mainly from product sales in the medical business acquired at the end of 2016 and increased deliveries of Bittium Tough Mobile LTE smartphones.

The share of the services-based net sales decreased significantly and was EUR 34.9 million (EUR 51.8 million, in 2016). The decrease in the services business net sales was caused by the termination of significant customer cooperation with a global network equipment manufacturer. Bittium has won new R&D services projects for wireless products, however, it has not been able to replace the decrease in the net sales in total.

Operating loss was EUR -6.2 million (operating profit of EUR 2.5 million, in 2016). This loss was caused by the significant decrease in the net sales and significant R&D investments.

### Significant Events during the Reporting Period

On July 6, 2017 Bittium announced that the Finnish Minister of Defence Jussi Niinistö had authorized Finnish Defence Forces to purchase Bittium Tactical Wireless IP Network (TAC WIN) system products. Bittium and Finnish Defence Forces plan to sign a Framework Agreement for the delivery of Bittium TAC WIN products, that covers years 2018–2020, with the total value of the agreement being EUR 30 million (excl. VAT) if materialized in full. According to the Framework Agreement, Finnish Defence Forces would issue separate purchase orders for the products each year. The Framework Agreement did not change Bittium's financial outlook for the year 2017.

The Framework Agreement was told to be a continuation to the long cooperation between Finnish Defence Forces and Bittium. It will continue the renewal of the Finnish Defence Forces' command, control and communications system, where the Software-Defined Radio based Bittium TAC WIN system acts as the backbone for tactical data transfer. The Framework Agreement was signed on August 9, 2017.

On August 8, 2017 Bittium announced that Bittium Wireless Ltd, a subsidiary of Bittium Corporation, and the Finnish Defence Forces have signed a Letter of Intent concerning the purchase of new software defined radio (SDR) based tactical radios and the preparations of the purchase. The Letter of Intent encompasses products belonging to the new Bittium Tough SDR product family: tactical handheld radio Bittium Tough SDR Handheld and tactical vehicular radio

Bittium Tough SDR Vehicular. According to the Letter of Intent, Bittium will develop the products with their own R&D investments and the Finnish Defence Forces will support the development work by ensuring that the products are suitable for their purposes and by making preparations for the purchase of the products.

The Letter of Intent does not bind the parties into making a purchase agreement. Making the purchase agreement requires that the Finnish Ministry of Defence first authorizes the purchase, based on which Bittium and the Finnish Defence Forces would then make a separate purchase agreement. Based on the Letter of Intent, if materialized in full, the total value of the purchase agreement would be approximately EUR 130 million distributed over about 10 years. The Letter of Intent is in force until the binding purchase agreement comes into effect or until December 31, 2019. Should the purchase materialize in full, it would have a significant impact on Bittium's net sales from the year 2019 onward. The Letter of Intent did not change Bittium's financial outlook for the year 2017. The Letter of Intent continues the long-term cooperation between the Finnish Defence Forces and Bittium in developing the performance of the command and control (C2) systems and the supporting software defined radio technology of the Finnish Defence Forces.

On October 10, 2017 Bittium Corporation lowered its financial guidance for the year 2017. The reason for this was the delay in the first phase of the product deliveries for the Mexican Mexsat satellite phone system, to be mainly executed in 2018 due to the internal reasons of Mexican governmental cus-

tomers. Bittium had expected earlier those product deliveries to be executed during the second half of 2017.

Bittium announced that it expects that the net sales in 2017 will be lower than in the previous year (EUR 64.2 million, in 2016).

The operating result was expected to be clearly negative (EUR 2.5 million, in 2016). In the Half Year Financial Report January-June 2017, published on August 9, 2017 Bittium still expected that the net sales in 2017 will be at the same level as in the previous year (EUR 64.2 million, in 2016) and the operating result to be negative (EUR 2.5 million, in 2016).

The decline in the amount of the product deliveries of the Mexsat mobile devices in 2017 did not change Bittium's long-term growth outlook. The year 2017 had already been expected to be challenging mainly due to the termination of significant customer cooperation with a global network equipment manufacturer.

## Financial Performance in January-December 2017

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME, MEUR	2017 12 months	2016 12 months
Net sales	51.6	64.2
Operating profit / loss	-6.2	2.5
Financial income and expenses	0.4	0.6
Result before tax	-5.8	3.1
Result for the period from continuing operations	-4.8	3.5
Result for the period from discontinuing operations	1.7	
<b>Result for the period</b>	<b>-3.1</b>	<b>3.5</b>
<b>Total comprehensive income for the period</b>	<b>-3.2</b>	<b>3.5</b>
Result for the period attributable to:		
Equity holders of the parent	-3.1	3.5
Total comprehensive income for the period attributable to:		
Equity holders of the parent	-3.2	3.5
Earnings per share from continuing operations, EUR	-0.133	0.098

- Cash flow from operating activities was EUR -0.0 million (EUR -1.7 million, in 2016).
- Net cash flow was EUR -32.0 million, including the EUR 10.7 million dividend payment in April and the investments made into the Company's new office building in Oulu, Finland and into own product development (EUR -279 million, in 2016, including the EUR 10.7 million dividend payment and the investments made into the company's new office building in Oulu, Finland).
- Equity ratio was 85.6 percent (87.0 percent, December 31, 2016).
- Net gearing was -52.9 percent (-70.3 percent, December 31, 2016).

## Half Year Figures

<b>GROUP'S NET SALES AND OPERATING RESULT, MEUR</b>	<b>2H/17</b>	<b>1H/17</b>	<b>2H/16</b>	<b>1H/16</b>
Net sales	24.5	27.1	33.1	31.1
Operating profit (loss)	-3.4	-2.8	1.9	0.7
Result before taxes	-3.4	-2.4	2.2	0.9
Result for the period	-2.4	-2.4	2.6	0.9

<b>DISTRIBUTION OF NET SALES BY MARKET AREAS, MEUR AND %</b>	<b>2H/17</b>	<b>1H/17</b>	<b>2H/16</b>	<b>1H/16</b>
Asia	1.0 4.2%	0.3 1.1%	0.2 0.7%	0.5 1.5%
Americas	1.4 5.8 %	4.5 16.4%	6.7 20.2%	5.5 17.6%
Europe	22.0 90.0%	22.4 82.5%	26.2 79.1%	25.1 80.8%

## Research and Development

Bittium continued R&D investments in its own products and product platforms. The investments increased significantly during the year 2017 and were 29.1 percent of net sales. The investments focused mainly on expanding the tactical communication product portfolio targeted to defense industry and on the development of different terminal products and their related software targeted for Mobile Security and Public Safety markets. In 2017, Bittium started to develop new Software-Defined Radio based Bittium Touch SDR™ product family that includes tactical Bittium Tough SDR handheld and Bittium Tough SDR vehicle radios. In addition, Bittium continued to develop Bittium Tough Mobile smartphone and its next generation research and development. The investments were also continued into the further development of the products intended for measuring and monitoring of biosignals.

A significant part of the capitalized R&D investments is related to the further development of the Bittium Tough Mobile smartphone and the related security software and investments related to developing tactical communication handheld and vehicle radios.

<b>R&amp;D INVESTMENTS, MEUR</b>	<b>2017</b> <b>12 months</b>	<b>2016</b> <b>12 months</b>
Total R&D investments	15.0	6.9
Capitalized R&D investments	-5.8	-0.9
Depreciations and impairment of R&D investments	0.3	0.3
Cost impact on income statement	9.6	6.3
R&D investments, % of net sales	29.1%	10.8%

<b>CAPITALIZED R&amp;D INVESTMENTS IN BALANCE SHEET, MEUR</b>	<b>2017</b> <b>12 months</b>	<b>2016</b> <b>12 months</b>
Balance sheet value in the beginning of the period	6.4	5.6
Additions during the period	5.8	0.9
Acquisitions of the business		0.2
Depreciations and impairment of R&D investments	-0.3	-0.3
Balance sheet value at the end of the period	11.9	6.4

## Statement of Financial Position and Financing

The figures presented in the statement of financial position of December 31, 2017, are compared with the statement of the financial position of December 31, 2016 (MEUR).

	Dec. 31, 2017	Dec. 31, 2016
Non-current assets	46.7	30.3
Current assets	91.6	123.0
Total assets	138.4	153.3
Share capital	12.9	12.9
Other capital	103.7	117.7
Total equity	116.7	130.6
Non-current liabilities	1.5	3.1
Current liabilities	20.2	19.6
Total equity and liabilities	138.4	153.3
	<b>Jan.–Dec. 2017</b>	<b>Jan.–Dec. 2016</b>
<b>CASH FLOW OF THE REVIEW PERIOD:</b>		
+ profit of the period +/- Adjustment of accrual basis items	-2.4	5.0
+/- Change in net working capital	2.0	-7.6
- interest, taxes and dividends	0.3	0.9
= net cash from operating activities	-0.0	-1.7
- net cash from investing activities	-18.5	-14.5
- net cash from financing activities	-13.4	-11.6
= net change in cash and cash equivalents	-32.0	-27.9

Net cash from operating activities in January–December 2017 includes operative cash flows from both continuing and discontinuing operations.

The amount of gross investments in the period under review was EUR 20.1 million. Net investments for the review period totaled to EUR 19.1 million. The total amount of depreciation during the period under review was EUR 3.9 million. The amount of interest-bearing debt, including finance lease liabilities, was at the end of the reporting period EUR 1.2 million (EUR 3.2 million on December 31, 2016). Bittium's equity ratio at the end of the period was 85.6 percent (87.0 percent on December 31, 2016).

Cash and other liquid assets at the end of the reporting period were EUR 62.9 million (EUR 94.9 million on December 31, 2016).

Bittium has a total of EUR 20.0 million binding credit facility agreements essentially on the old terms from which EUR 10.0 million are valid until December 31, 2018 and EUR 10.0 million until December 31, 2019. At the end of the review period, EUR 0.0 million of these facilities were in use.

Bittium follows a hedging strategy that has an objective to ensure the business margins in changing market circumstances by minimizing the influence of exchange rates. According to the hedging strategy principles, the net position in the currency is hedged when it exceeds the euro limit defined in the hedging strategy. The net position is deter-

mined on the basis of accounts receivable, accounts payable, order book and budgeted net currency cash flow.

## Business Development in 2017

In the year 2017, the share of the services-based net sales decreased as expected caused by the termination of significant customer cooperation with a global network equipment manufacturer during the first half of the year. Despite of decreased net sales caused by the termination of the cooperation, the demand for Bittium's R&D services developed positively, however, it wasn't able to replace the decrease in the net sales in total.

Bittium continued significant investments in developing its product business and the share of the product-based business turned to growth. Bittium aims at growth in international defense, public safety and mobile security markets.

The product development project, started in May 2015, to develop Android-based mobile devices that use both terrestrial and satellite connection for their MEXSAT system of the Mexican Ministry of Communication and Transportation, was completed in summer 2017. The first product orders are expected to come during 2017, but due to the internal reasons of Mexican governmental customers, the first phase of the product deliveries was delayed to be mainly started in 2018. Therefore Bittium had to lower its financial guidance for the year 2017.

The cooperation with the Finnish Defense Forces continued. The development of the tactical communication system Bittium Tactical Wireless IP Network (TAC WIN), used by the Finnish Defence Forces, continued as well as the product deliveries for

this communication system. Bittium continued efforts to bring its products and services, targeted to defense industry, to the international defense markets and Bittium received purchase orders for a tactical communications system from its customers in Asia and Europe and delivered a pilot system for a new European customer.

In January 27, 2017, Bittium signed a contract with the Finnish Defence Forces for the delivery of Bittium Tough Mobile LTE smartphones and related Bittium Secure Suite back-end system classified for Confidential level. The contract signifies a strategic decision to reinforce the information security of the wireless communications of the Finnish Defence Forces. In order for a phone and a related back-end system to achieve the Confidential level classification, there are specific information security requirements regarding the processing of classified information, secure wireless transfer of files, and other possible communication, which need to be met.

The deliveries of the Bittium Tough Mobile secure LTE smartphone were carried on and Bittium participated in several security and public safety exhibitions abroad in order to extend its customer base abroad.

At the Critical Communications Europe exhibition in February 8, 2017 Bittium launched a new Confidential classification level version of the Bittium Tough Mobile with its back-end system. Bittium Tough Mobiles unique dual-boot functionality for the Confidential classification level makes it possible to operate the device with two completely separate operating systems: Public and Confidential. The operating system classified as Public is meant for personal commu-

nications with access to e.g. social media applications. The operating system classified as Confidential is completely isolated and hardened for secure authority and information security use. The entity enables the user to have only one device for calls and messaging for both personal and for demanding information security needs, thus eliminating the need to carry two separate devices. Although the awareness of security threats thereafter secure mobile devices has increased, the development of security and public safety markets has been somewhat slower than expected. Bittium estimates that the amount of product sales of Bittium Tough Mobile will remain slightly less than expected.

In March 6, 2017, Bittium received a purchase order from the Finnish Defence Forces for further development of the software package (waveform) for the Bittium TAC WIN system. Bittium also received a purchase order from the Finnish Defence Forces for the Bittium TAC WIN system products, which are meant for tactical communications. Both orders are part of the renewal of the Finnish Army's M18 command, control and communications system, where the Software-Defined Radio based Bittium TAC WIN system forms the core of the Army's tactical wireless IP network.

In May 4, 2017, Bittium Faros ECG-measuring devices' built-in algorithms for detection of arrhythmias have received medical device approval in Europe. The algorithms can be used to automatically identify sequences from the heart measurement data. Early detection of atrial fibrillation can be used to predict the risk of brain stroke and to prevent its emergence with timely treatment initiation.

In June 14, 2017, Bittium received a purchase order for supplying the Finnish Air Force with Bittium TAC WIN system. The order is part of the modernization of the radio network performance of the Air Force's bases with a Software-Defined Radio based IP radio system. With the order the use of the Bittium TAC WIN system within the Finnish Defence Forces' branches expands to the Air Force.

In June 16, 2017, Bittium Medanalytics Oy, part of Bittium group, and Coronaria Hoitoketju's subsidiary Coronaria Analyysipalvelut Oy, signed agreements according to which Bittium Medanalytics Oy sold its remote diagnostic service business to Coronaria Analyysipalvelut Oy. According to the agreement Bittium supplies its web-based service kardiolog.fi used in monitoring cardiac abnormalities to Coronaria's use. Kardiolog.fi service is used by more than 70 Finnish health centers and private medical centers. The net sales of Bittium Medanalytics Ltd in 2016 was EUR 0.4 million. Further, Bittium Technologies Ltd, part of Bittium group, acquired 25 percent of the shares in Coronaria Analyysipalvelut Oy. Through this joint ownership Bittium and Coronaria aim at gaining synergies from Bittium's device and system development and the interfaces formed by Coronaria's clinical medicine and services.

On July 6, 2017 the Finnish Minister of Defence Jussi Niinistö authorized Finnish Defence Forces to purchase Bittium Tactical Wireless IP Network(TAC WIN) system products. Bittium and the Finnish Defence Forces signed the Framework Agreement for the purchase of Bittium Tactical Wireless IP Network(TAC WIN) system products on August 9, 2017. The Framework Agreement covers the years 2018–2020, and if materialized in full, the total value of the

agreement is EUR 30 million (excl. VAT). According to the Framework Agreement, Finnish Defence Forces will issue separate purchase orders for the products each year. The Framework Agreement did not change Bittium's financial outlook for the year 2017.

On August 8, 2017, Bittium announced to expand its tactical communication product portfolio with new Software-Defined Radio based Bittium Tough SDR product family that includes tactical Bittium Tough SDR handheld and Bittium Tough SDR vehicle radios. The new product family expands Bittium's tactical communication product portfolio from Bittium Tactical Wireless IP Network (TAC WIN) and its products that form a mobile tactical IP network to radios that bring broadband data transfer and voice to all mobile troops; from combat vehicles to all the way to an individual soldier. This enables bringing broadband data transfer and voice to all mobile troops starting from brigade level and all the way across the battlefield.

On August 8, 2017, Bittium and Finnish Defence Forces signed a Letter of Intent concerning the purchase of new software defined radio (SDR) based tactical radios and the preparations of the purchase. The Letter of Intent encompasses products belonging to the new Bittium Tough SDR product family: tactical handheld radio Bittium Tough SDR Handheld and tactical vehicular radio Bittium Tough SDR Vehicular. The products are intended for renewing the Finnish Defence Forces' existing stock of field radios with modern, SDR based broadband data transfer radios to support the reformed combat doctrine. The tactical radios are compatible with Bittium Tactical Wireless IP Network(TAC WIN) SDR based system al-

ready used by the Finnish Defence Forces. According to the Letter of Intent, Bittium will develop the products with their own R&D investments and the Finnish Defence Forces will support the development work by ensuring that the products are suitable for their purposes and by making preparations for the purchase of the products.

The Letter of Intent does not bind the parties into making a purchase agreement. Making the purchase agreement requires that the Finnish Ministry of Defence first authorizes the purchase, based on which Bittium and the Finnish Defence Forces would then make a separate purchase agreement. Based on the Letter of Intent, if materialized in full, the total value of the purchase agreement would be approximately EUR 130 million distributed over about 10 years. Should the purchase materialize in full, it would have a significant impact on Bittium's net sales from the year 2019 onwards. The Letter of Intent did not change Bittium's financial outlook for the year 2017.

On August 24, 2017, Bittium launched new software for analyzing cardiac event-based ECG measurements and long-term Holter measurements at ESC Congress 2017 in Barcelona, Spain. The new software, together with the versatile Bittium Faros ECG measuring device, allows the follow-up and detection of cardiac arrhythmias as well as in-depth analysis of long-term recordings.

On September 6, 2017, Bittium expanded its tactical communications offering by launching a versatile Bittium Tough Comnode terminal. The device fulfils the data transfer needs for mobile troops by functioning for example as a VoIP phone (Voice over IP), an IP router (Internet Protocol),

and an SHDSL repeater (Symmetrical High-speed Digital Subscriber Line). Bittium Tough Comnode is compatible with Bittium Tactical Wireless IP Network (TAC WIN) system, Bittium Tough SDR tactical radios, and Bittium Tough VoIP products, as well as offers diverse connectivity options also to third-party equipment and systems.

Bittium continued efforts to bring its products and services, targeted to defense industry, to the international defense markets and made a pilot system delivery for a new customer in Europe. The new products targeted to defense industry were showcased e.g. at DSEI exhibition in UK, Defence Communications event in Poland, and at Milipol exhibition in France.

On September 12, 2017, Bittium Corporation was awarded the ISO 13485:2016 certificate, which covers the design, development, manufacturing and related services for the entire product life cycle of medical devices. The quality management system based on ISO 13485:2016 standard is a major competitive advantage and supports Bittium's strategy for Connectivity Solutions' product and service area. Medical technologies combined with strong expertise in wireless technologies and security provides Bittium with excellent opportunities to serve its customers in the healthcare sector with offering them new R&D services that meet the quality system standard requirements.

On September 18, 2017, National Cyber Security Centre-Finland of the Finnish Communications Regulatory Authority granted approval for the Mobile Security and Public Safety targeted Bittium Tough Mobile LTE smartphone and related Bittium Secure Suite back-end system to process materi-

al that is classified nationally as Confidential. Bittium's mobile solution is the first one in the world to receive official Confidential level encryption product classification. The mobile solution can be used for creating and processing classified information, as well as for transferring it between smartphone and connected back-end solutions. In order for a phone and a related back-end system to achieve the Confidential level classification, there are specific information security requirements regarding the processing of classified information, secure wireless transfer of files, and other possible communication, which need to be met. Bittium Tough Mobile smartphone was showcased at Cyber Security Nordic event in Helsinki, Finland at the end of September.

On November 7, 2017, the joint venture a4ESSOR (Alliance for ESSOR) was awarded a contract by OCCAR (Organisation Conjointe de Coopération en matière d'Armement) to start a new phase of the ESSOR (European Secure Software defined Radio) programme, called ESSOR Operational Capability 1 (OC1). Bittium is part of the OC1 phase that continues the ESSOR programme. During the OC1 phase, the operational capabilities of ESSOR High Data Rate Waveform (HDR WF), meant for joint operations between defense forces of different countries, will be enhanced. With the development of the operational capabilities of the ESSOR HDR WF during the OC1 phase the new functionalities will be available also for the Tough SDR family of radios. The duration of the ESSOR OC1 phase is 45 months and the value of the contract is around EUR 50 million. The value of the contract will be divided along the duration of the OC1 phase and between the five participant companies: Bittium, Indra, Leonardo, Radmor,

and Thales. The contract did not change Bittium's financial outlook for the year 2017.

On November 27, 2017, Bittium released the new version of the Bittium SafeMove® software product portfolio. The latest software version introduces an intuitive user interface and further enhances information security for demanding environments. The new functionalities enable a faster response to security threats; and efficient implementation of broadband applications with mission-critical data on moving vehicles. The Bittium SafeMove® security solutions were exhibited at HETT Show 2017 in London, UK in September.

In November, Bittium exhibited its innovative products and solutions for neuroscience at Society for Neuroscience 2017 conference in the U.S.A and the Bittium Faros ECG device and software for analyzing cardiac event-based ECG and long-term Holter measurements at Medica exhibition in Germany.

On December 8, 2017, Bittium received a purchase order from the Finnish Defense Forces for versatile Bittium Tough Comnode terminal. The purchase order concerns the final phase of the terminal's productization over a duration of nine months and the delivery of a batch of the terminals to the Finnish Defence Forces after the end of the productization phase. Bittium Tough Comnode will fulfil the data transfer needs of the Finnish Defence Forces' mobile troops by functioning for example as a VoIP phone (Voice over IP), an IP router (Internet Protocol), and an SHDSL repeater (Symmetrical High-speed Digital Subscriber Line). The value of the purchase order was EUR 1.1 million (excl. VAT). The purchase order did not change Bittium's financial outlook for the year 2017.

## Significant Events after the Reporting Period

On February 13, 2018 Bittium Biosignals Ltd, a subsidiary of Bittium Corporation, and a major US remote monitoring provider, concluded a three-year supply agreement under which Bittium will supply the Bittium Faros 360 and customized Bittium Faros 360 cardiac ECG signal measuring and monitoring devices. In addition, Bittium will supply disposable electrodes for attaching Bittium Faros ECG devices. When materialized in full, the total value of the agreement is USD 21 million (approximately EUR 17.1 million based on an exchange rate of February 12, 2018) with revenues recognized gradually during the years 2018, 2019, 2020 and 2021 depending on the progress of the product deliveries, with estimated emphasis on 2019 and 2020. This agreement did not change the Company's long term financial outlook (published in the Half Year Financial Report January-June 2017 on August 9, 2017).

## Outlook for 2018

The growing need for wireless connectivity, increasingly growing amount of data transfer and the need for secure data transfer create demand for Bittium's competence, products and product platforms. The digitalization of the healthcare market and remote care becoming more common create demand for Bittium's medical technology products and solutions. In the long term Bittium has good potential to grow profitably. Bittium invests significantly in developing its own products and solutions and aims at growing its net sales based on its products and product platforms.

Bittium expects that the net sales in 2018 will grow from the previous year (EUR 51.6 million, in 2017) and the operating result to be better than in the previous year (EUR -6.2 million, in 2017). The level of operating result in 2018 will be still affected by the investments started in 2017 to enable future growth.

Bittium's long-term financial targets will be reviewed and estimated as part of the annual strategy process and they will be announced together with the Company's strategy. Long-term financial targets do not form the Company's official financial outlook or the statement about the future. More information about Bittium's market outlook is presented in the section "Market outlook" in this Report by the Board of Directors.

More information about other uncertainties regarding the outlook is presented in this Report by the Board of Directors in the section "Risks and uncertainties" and on the Company's internet pages at [www.bittium.com](http://www.bittium.com).

## Market Outlook

Bittium's customers operate in various industries, each of them having their own industry-specific factors driving the demand. A common factor creating demand among the whole customer base is the growing need for higher quality and secure data transfer. Due to the technology and measuring competences accrued over time and long history in developing mobile communication solutions, Bittium is in a good position to offer customized solutions for its customers.

The following factors are expected to create demand for Bittium's products and services in 2018 and beyond:

- In the mobile telecommunications, the investments to develop 5G technology increases, which creates demand for Bittium's R&D services. There is a wide range of frequencies allocated for this technology thus creating the need to develop multiple products to cover the market and creating demand for R&D services for development of product variants.
- As the digitalization evolves, the secure IoT (Internet of Things) has become a significant development area in many industries. The increasing need of companies to digitalize their operations, collect data wirelessly and transfer it to the internet and cloud services generate need for Bittium's services and customized solutions. For this there is a need for secure connected devices for consumers' free-time applications and demanding industrial usage that collect information through their sensors and connect the devices securely to the internet and cloud services. Also the integration of different systems and technologies play an important role in enabling the complete digitalization service. To ease and speed up the processing of large data amounts there are different kinds of learning systems and devices under development that use different kinds of artificial intelligence (AI) technologies.
- The use of LTE technology, smartphones and applications continues to increase in special verticals such as public safety creating demand for Bittium Tough Mobile secure LTE smartphone and other customized special terminals based on Bittium's own product platform. The awareness of mobile security risks is growing and the interest towards secure mobile devices

is increasing. Also the interest towards LTE-SAT-hybrid devices with terrestrial and satellite connections has grown to further improve the functionality of authorities' critical connections. The implementation of LTE-based devices in Public Safety markets has been slower than expected due to the delay of the device processor functionalities required by the authorities. The sale of the secure terminal products is expected to develop moderately according to the nature of public safety markets.

- Using public network connections in portable devices is increasing also in demanding professional use, such as in the public sector. This creates requirements for network connections to be easy to use and secure. The products in the Bittium SafeMove product family enable the ease of use of the devices and security in demanding use.
- In the defense sector's tactical communication market the governments' defense forces and other authorities need networks that troops, who are more and more constantly on the move, can use for transferring growing amounts of data securely. This creates demand for Bittium Tactical Wireless IP Network (TAC WIN) broadband network and for other Bittium's IP-based (Internet Protocol) tactical communications solutions, as well as for Bittium's new tactical communication handheld and vehicle radios that fulfill the needs of data transfer of moving troops or individual soldiers. Bittium continues its efforts to bring its defense market targeted products and services also to the international defense markets and aims to get new international customers for its tactical communication system in 2018. Due to the long sales cycles driven by purchasing programs of

national governments, it takes time to receive significant purchase orders.

- Heart problems and brain strokes are among the most frequent causes of death. Recognizing the symptoms early on, based on information gathered by measuring, enable the start of effective treatment fast. Also the prevention of diseases and health problems are being increasingly invested in. In the healthcare technology market there is ongoing a significant change in the patient care both inside hospitals as well as in homecare. The repatriation of patients is being pursued earlier than before which may enable significant cost savings in the healthcare. One of the growing application areas in the IoT segment is healthcare technology that enables implementing these changes for its part. A prerequisite for early repatriation is the enabling of accurate and precise follow-up and measurement in home conditions through remote monitoring. For this purpose Bittium offers its Bittium Faros product family for heart remote monitoring and Bittium NeurOne product family for measuring the electrical activity of brain.

## Risks and Uncertainties

Bittium has identified a number of business, market and finance related risk factors and uncertainties that can affect the level of sales and profits.

### Market Risks

The global economic uncertainty may affect the demand for Bittium's services, solutions and products and provide pressure on e.g.

pricing. In the short term such uncertainty may affect, in particular, the utilization and chargeability levels and average hourly prices of R&D services. Growing political uncertainty may also affect the demand for Bittium's services, solutions and products and the price competitiveness in the different geographical areas. Bittium is also increasingly exposed to legal, economic, political and regulatory risks related to the countries in which its suppliers and other cooperation partners are located. Such risks may result in delays in deliveries, currency losses, elevated costs, or litigations and related costs. Bittium's customer base includes, among others, companies operating in the field of telecommunication, defense and other authorities, as well as companies delivering products to them, the Company is exposed to market changes in these industries.

A significant part of Bittium's net sales accumulates from selling products and R&D services to defense and other authorities, as well as companies delivering products to them. Deviation in anticipated business development with such customer concentrations may translate as a significant deviation in the Bittium's outlook, both in terms of net sales and operating result, during the ongoing financial period and thereafter.

Bittium seeks to expand its customer base on a longer term and reduce dependence on individual companies and hence the Company would thereby be mainly affected by the general business climate in the industries of the companies belonging to Bittium's customer base instead of the development of individual customer relationships. The more specific market outlook has been presented in this Report by the Board of Directors in the "Market outlook" section.

### Business Related Risks

Bittium's operative business risks are mainly related to the following items: uncertainties and short visibility on customers' product program decisions, their make-or-buy decisions and on the other hand, their decisions to continue, downsize or terminate current product programs, execution and management of large customer projects, ramping up and down project resources, availability of personnel in labor markets, accessibility on commercially acceptable terms and on the other hand successful utilization of the most important technologies and components, competitive situation and potential delays in the markets, timely closing of customer and supplier contracts with reasonable commercial terms, delays in R&D projects, realization of expected return on capitalized R&D investments, obsolescence of inventories and technology risks in product development causing higher than planned R&D costs, and risks related to the ramp-up of product manufacturing. Revenues expected to come from either existing or new products and customers include normal timing risks. Bittium has certain significant customer projects and deviation in their expected continuation could result also significant deviations in the Company's outlook. In addition there are typical industry warranty and liability risks involved in selling Bittium's services, solutions and products.

Bittium's product delivery business model faces such risks as high dependency on actual product volumes, timing risks and potential delays in the markets. The above-mentioned risks may manifest themselves as lower amounts of products delivered or higher costs of production, and ul-

timately, as lower profit. Bringing Bittium's products to international defense and other authorities markets may take longer than anticipated because the projects are typically long and the purchasing programs are prepared in the lead of national governments and within the available financing. Once a supplier has been selected, product deliveries are typically executed over several years.

Some of Bittium's businesses operate in industries that are heavily reliant on patent protection and therefore face risks related to management of intellectual property rights, on the one hand related to accessibility on commercially acceptable terms of certain technologies in the Bittium's products and services, and on the other hand related to an ability to protect technologies that Bittium develops or licenses from others from claims that third parties' intellectual property rights are infringed. Additionally, parties outside of the industries operate actively in order to protect and commercialize their patents and therefore in their part increase the risks related to the management of intellectual property rights. At worst, claims that third parties' intellectual property rights are infringed, could lead to substantial liabilities for damages. In addition, the progress of the customer projects and delivery capability may be also affected by potential challenges in global accessibility of key technologies and components on commercially acceptable terms, as well as by the acceptance of the necessary export licenses. The Company changed its name to Bittium Corporation as of July 1, 2015 and started using the new trademark. The registration and the use of the new trademark can include customary risks involved in taking in use a new trademark.

### Financing Risks

Global economic uncertainty may lead to payment delays, increase the risk for credit losses and weaken the availability and terms of financing. To fund its operations, Bittium relies mainly on income from its operative business and may from time to time seek additional financing from selected financial institutions. Currently Bittium has a committed overdraft credit facility agreement of EUR 10.0 million with Nordea Bank AB, Finland Branch and a committed overdraft credit facility agreement of EUR 10.0 million with OP Corporate Bank Plc. From these agreements intended for general financing purposes, EUR 10.0 million are valid until December 31, 2018 and EUR 10.0 million until December 31, 2019. These agreements include customary covenants related to, among other things, equity ratio, transferring property and pledging. There is no assurance that additional financing will not be needed in case of clearly weaker than expected development of Bittium's businesses. Customer dependency in some parts of Bittium's business may translate as an accumulation of risk with respect to outstanding receivables and ultimately with respect to credit losses.

## Environmental Factors

Bittium's business operations focus mostly on the design, assembly provided by the manufacturing partners, sales and marketing of products. This represents only a minor part of the environmental impacts over the entire life cycle of the products. Products manufactured by the Company have only minor general environmental impacts.

Bittium Corporation renewed its global environmental management system certification according to ISO 14001:2015 standard in June 2016. The Company is monitoring globally the environmental requirements for products and derived national regulations to the extent that they are related to the company operations. Bittium has also observed and applied the requirements of the ROHS (use of hazardous substances) and WEEE (recycling of electrical and electronic equipment) directives in design since 2002.

The applied environmental standards and regulations in Company operations have been consolidated as uniform Bittium substance list, applicable also to Bittium's significant suppliers. The biannually updated substance list includes, in addition to the compliance of ROHS and REACH directives, the substance requirements applicable in different market areas against which identification of materials is made if needed. Further, materials declaration list observes certain customer-specific requirements. The Company has further updated the requirements mainly on a biannual basis and applied the proper environmental requirements to the products or solutions, in which Bittium has partial or total responsibility depending on the application scope. The imposed requirements will be observed in business operations on a country-specific basis.

During 2017 Bittium has further developed its certified EES+ energy efficiency system to cover also ISO 50001 energy efficiency standard requirements. During the first half of 2018 the Company aims to update its energy efficiency system certification according to the ISO 50001 standard. Bittium has also official energy efficiency review respon-

sible persons in its service authorized by the Finnish Energy Office.

Bittium has further developed the Company's environmental reporting, based on which the 2017 environmental objectives have been followed. The Company has observed the sustainability reporting requirements and published the environmental information as part of its sustainability report. Bittium has developed its energy efficiency in its new Oulu facilities, which is mainly fulfilling the requirements of the Leed Gold level. As an example of the energy efficiency actions was that solar cells have been installed and taken into use and therefore it is expected to improve significantly electricity efficiency with help of solar energy. The results are expected to be visible in 2018.

## Personnel

The Bittium group employed an average of 614 people between January and December 2017. At the end of December 2017, the company had 619 employees (623 employees at the end of 2016). A significant part of Bittium's personnel are R&D engineers.

## Incentive Systems

### Management Group's Variable Pay System

Variable Pay is paid based on the achievement of set targets. In 2017, earning period for the Variable Pay was the calendar year. The targets are determined separately for each earning period. The setting of targets and the review of their achievement is decided on a one-over-one basis. The criteria

for the short-term merit pay are the financial strategic targets of the Company. In addition, part of the targets may be other Company objectives or personal targets. Personal targets vary between duties. In 2017, the net sales, operating profit and/or these both formed the financial targets.

### Directed Share Issue without Consideration (2016)

Based on the authorization granted by Bittium Corporation's Annual General Meeting of Shareholders held on April 15, 2015, the Board of Directors of Bittium Corporation decided on March 22, 2016 on a directed share issue without consideration as reward payments to the key persons of the Company and its subsidiaries. In the share issue, 37,500 new shares were issued without consideration to the key persons entitled to the share bonus. The share bonus was issued to 8 key persons of the Company defined by the Board of Directors, with the condition that they must be employed by Bittium Corporation or its subsidiaries at the time of payment of the share bonus. The shares issued in the directed share issue without consideration are subject to restrictions on the right of disposal until December 31, 2018. However, the Board of Directors may grant permission to dispose or use the shares prior to the given date. The shares were registered to the trade register and on the book-entry accounts of the recipients on March 24, 2016, and became subjects to trading on the trading list of Nasdaq Helsinki on March 29, 2016. The CEO received 10,000 shares of Bittium Corporation, and the rest of the members of the Management Group received in total 27,500 shares of Bittium Corporation.

## Authorizations of the Board of Directors at the End of the Reporting Period

### Authorizing the Board of Directors to Decide on the Repurchase of the Company's Own Shares

The General Meeting April 12, 2017 authorized the Board of Directors to decide on the repurchase of the Company's own shares as follows.

The amount of own shares to be repurchased shall not exceed 3,500,000 shares, which corresponds to approximately 9.81 percent of all of the shares in the Company. Only the unrestricted equity of the Company can be used to repurchase own shares on the basis of the authorization. Own shares can be repurchased at a price formed in public trading on the date of the repurchase or otherwise at a price formed on the market. The Board of Directors decides how own shares will be repurchased. Own shares can be repurchased using, inter alia, derivatives. Own shares can be repurchased otherwise than in proportion to the shareholdings of the shareholders (directed repurchase).

The authorization cancels the authorization given by the General Meeting on April 19, 2016 to decide on the repurchase of the Company's own shares. The authorization is effective until June 30, 2018.

### Authorizing the Board of Directors to Decide on the Issuance of Shares as Well as the Issuance of Special Rights Entitling to Shares

The General Meeting authorized the Board of Directors to decide on the issuance of shares and special rights entitling to shares referred to in Chapter 10 Section 1 of the Companies Act as follows.

The amount of shares to be issued shall not exceed 7,000,000 shares, which corresponds to approximately 19.61 percent of all of the shares in the Company. The Board of Directors decides on all the conditions of the issuance of shares and of special rights entitling to shares. The authorization concerns both the issuance of new shares as well as the transfer of treasury shares. The issuance of shares and of special rights entitling to shares may be carried out in deviation from the shareholders' pre-emptive rights (directed issue).

The authorization cancels the authorization given by the General Meeting on April 19, 2016 to decide on the issuance of shares as well as the issuance of special rights entitling to shares referred to in Chapter 10 Section 1 of the Companies Act. The authorization is effective until June 30, 2018.

## Shares and Shareholders

The shares of Bittium Corporation are quoted on Nasdaq Helsinki. The Company has one series of shares. All shares entitle their holders to dividends of equal value. Each share has one vote. The share does not have

a nominal value. The Company's shares have been entered into the Euroclear Finland Ltd.'s book-entry securities system.

At the end of the financial period, the fully paid share capital of the Company entered into the Finnish Trade Register was EUR 12,941,269.00 and the total number of the shares was 35,693,166. The accounting par value of the Company's share is EUR 0.10. The Company does not have its own shares in its possession.

Shareholding and control related information is presented in section 34 of the notes to the Financial Statement.

## Flagging Notifications

There were no changes in the ownership during the period under review that would have caused flagging notifications which are obligations for disclosure in accordance with Chapter 2, section 9 of the Securities Market Act.

## Notifications of Managers' Transactions

May 9, 2017: Name of the person subject to the notification requirement: Erkki Veikkola, member of the Board of Directors. Notification type: initial notification. Nature of transaction: Receipt of a Share-Based Incentive. Transaction date: May 5, 2017. Aggregated transactions: volume 2,625 shares, volume weighted average price: EUR 6.39000.

May 9, 2017: Name of the person subject to the notification requirement: Staffan Simberg, member of the Board of Directors. Notification type: initial notification. Nature of transaction: Receipt of a Share-Based Incentive. Transaction date: May 5, 2017. Aggregated transactions: volume 1,500 shares, volume weighted average price: EUR 6.39000.

May 9, 2017: Name of the person subject to the notification requirement: Seppo Mäkinen, member of the Board of Directors. Notification type: initial notification. Nature of transaction: Receipt of a Share-Based Incentive. Transaction date: May 5, 2017. Aggregated transactions: volume 1,500 shares, volume weighted average price: EUR 6.39000.

May 9, 2017: Name of the person subject to the notification requirement: Juha Putkiranta, member of the Board of Directors. Notification type: initial notification. Nature of transaction: Receipt of a Share-Based Incentive. Transaction date: May 5, 2017. Aggregated transactions: volume 1,500 shares, volume weighted average price: EUR 6.39000.

May 9, 2017: Name of the person subject to the notification requirement: Kirsi Komi, member of the Board of Directors. Notification type: initial notification. Nature of transaction: Receipt of a Share-Based Incentive. Transaction date: May 5, 2017. Aggregated transactions: volume 1 500 shares, volume weighted average price: EUR 6.39000.

May 9, 2017: Name of the person subject to the notification requirement: Tero Ojanperä, member of the Board of Directors. Notifica-

tion type: initial notification. Nature of transaction: Receipt of a Share-Based Incentive. Transaction date: May 5, 2017. Aggregated transactions: volume 1,500 shares, volume weighted average price: EUR 6.39000.

## The Board of Directors, Board Committees and The Auditor

The Annual General Meeting held on April 12, 2017, decided that the Board of Directors shall comprise six (6) members. Ms. Kirsi Komi, Mr. Seppo Mäkinen, Mr. Juha Putkiranta, Mr. Staffan Simberg and Mr. Erkki Veikkolainen were re-elected as members of the Board of Directors for a term of office expiring at the end of the next Annual General Meeting. Further, Mr. Tero Ojanperä was elected as a new member of the Board of Directors for a corresponding term of office.

At its assembly meeting held on April 12, 2017, the Board of Directors elected Mr. Erkki Veikkolainen Chairman of the Board. Further, the Board resolved to keep the Audit Committee. Staffan Simberg (Chairman of the Committee) and Kirsi Komi were elected as members of the Audit Committee and authorized public accountant Seppo Laine was invited to the Audit Committee as external advisor of the Board of Directors.

The Annual General Meeting held on April 12, 2017 re-elected Ernst & Young Oy, authorized public accountants as auditor of the Company for a term of office ending at the end of the next Annual General Meeting. Ernst & Young Oy notified that Mr. Ju-

hani Rönkkö, authorized public accountant, will act as responsible auditor. It was decided that the remuneration to the auditor shall be paid against the auditor's reasonable invoice.

## Corporate Governance Statement

The Board of Directors has issued the corporate governance statement separate from this report.

## Dividend from 2016

The Annual General Meeting held on April 12, 2017 decided in accordance with the proposal of the Board of Directors to pay EUR 0.05 per share as dividend based on the adopted balance sheet for the financial period January 1, 2015–December 31, 2016 and EUR 0.25 per share as additional dividend. The dividend was paid to the shareholders who are registered as shareholders in the Company's register of shareholders as maintained by Euroclear Finland Ltd on the dividend record date Tuesday, April 18, 2017. The dividend was paid on Tuesday, April 25, 2017.

# Consolidated Statement of Comprehensive Income

Continuing operations, 1000 EUR	Notes	Jan. 1– Dec. 31, 2017	Jan. 1– Dec. 31, 2016
<b>NET SALES</b>	1, 3	<b>51,637</b>	<b>64,192</b>
Other operating income	4	2,109	1,891
Change in work in progress and finished goods			
Work performed by the undertaking for its own purpose and capitalized		681	381
Raw materials		-5,940	-5,057
Personnel expenses	7	-33,044	-35,492
Depreciation	6	-3,902	-3,263
Other operating expenses	5	-17,784	-20,110
Share of results of the associated companies	15	39	
<b>OPERATING PROFIT</b>		<b>-6,203</b>	<b>2,541</b>
Financial income and expenses	9	378	604
<b>PROFIT BEFORE TAX</b>		<b>-5,825</b>	<b>3,146</b>
Income tax	10	1,065	359
<b>PROFIT FOR THE YEAR FROM CONTINUING OPERATIONS</b>		<b>-4,760</b>	<b>3,505</b>
Profit for the year from discontinued operations	2	1,653	
<b>PROFIT FOR THE YEAR</b>		<b>-3,108</b>	<b>3,505</b>
<b>Other comprehensive income:</b>			
Items that will not be reclassified to statement of income			
Re-measurement gains (losses) on defined benefit plans			
Income tax effect			
Items that may be reclassified subsequently to the statement of income			
Exchange differences on translating foreign operations		-122	-34
<b>TOTAL COMPREHENSIVE INCOME FOR THE YEAR</b>		<b>-3,229</b>	<b>3,471</b>
<b>Profit for the year attributable to</b>			
Equity holders of the parent		-3,108	3,505
<b>Total</b>		<b>-3,108</b>	<b>3,505</b>
<b>Total comprehensive income for the year attributable to</b>			
Equity holders of the parent		-3,229	3,471
<b>Total</b>		<b>-3,229</b>	<b>3,471</b>
<b>Earnings per share for profit attributable to the shareholders of the parent company:</b>	11		
<b>Earnings per share from continuing operations, EUR</b>			
Basic earnings per share		-0.133	0.098
Diluted earnings per share		-0.133	0.098
<b>Earnings per share from discontinued operations, EUR</b>			
Basic earnings per share		0.046	
Diluted earnings per share		0.046	
<b>Earnings per share from continuing and discontinued operations, EUR</b>			
Basic earnings per share		-0.087	0.098
Diluted earnings per share		-0.087	0.098
Average number of shares, 1000 pcs		35,693	35,670
Average number of shares, diluted, 1000 pcs		35,693	35,670

# Consolidated Statement of Financial Position

1000 EUR	Notes	Dec. 31, 2017	Dec. 31, 2016
<b>Non-current assets</b>			
Property, plant and equipment	12	21,946	12,591
Goodwill	13	5,820	6,737
Intangible assets	13	14,951	9,278
Investments in associated companies	15	1,242	
Other financial assets	16	112	132
Non-current receivables	18	210	
Deferred tax assets	17	2,463	1,516
<b>Total</b>		<b>46,744</b>	<b>30,254</b>
<b>Current assets</b>			
Inventories	18	10,574	4,097
Trade and other receivables	19	18,151	24,018
Financial assets at fair value through profit or loss	20	56,401	66,935
Cash and short-term deposits	21	6,518	27,987
<b>Total</b>		<b>91,644</b>	<b>123,038</b>
<b>Total assets</b>		<b>138,387</b>	<b>153,292</b>
<b>Equity and liabilities</b>			
Equity attributable to equity holders of the parent	22		
Share capital		12,941	12,941
Translation differences		1,030	1,158
Invested non-restricted equity fund		25,953	25,953
Retained earnings		76,753	90,562
<b>Total</b>		<b>116,678</b>	<b>130,615</b>
<b>Total equity</b>		<b>116,678</b>	<b>130,615</b>
<b>Non-current liabilities</b>			
Deferred tax liabilities	17	377	461
Interest-bearing loans and borrowings (non-current)	25	484	1,956
Other non-current liabilities, non-interest bearing	26	678	602
Provisions	24		48
<b>Total</b>		<b>1,540</b>	<b>3,067</b>
<b>Current liabilities</b>			
Trade and other payables	26	18,302	16,176
Financial liabilities at fair value through profit or loss	26		6
Provisions	24	1,143	2,230
Interest-bearing loans and borrowings (current)	25	725	1,198
<b>Total</b>		<b>20,170</b>	<b>19,610</b>
<b>Total liabilities</b>		<b>21,710</b>	<b>22,677</b>
<b>Total equity and liabilities</b>		<b>138,387</b>	<b>153,292</b>

# Consolidated Statement of Cash Flows

1000 EUR	Notes	Jan. 1– Dec. 31, 2017	Jan. 1– Dec. 31, 2016
<b>Cash flow from operating activities</b>			
<b>Profit for the year from continuing operations</b>		<b>-4,760</b>	<b>3,505</b>
<b>Profit for the year from discontinued operations</b>		<b>1,653</b>	
Adjustments			
Effects of non-cash business activities	28	2,189	2,434
Finance costs	9	448	300
Finance income	9	-826	-904
Income tax	10	-1,065	-359
Change in net working capital			
Change in short-term receivables	19	5,598	-3,276
Change in inventories	18	-6,363	-827
Change in interest-free short-term liabilities	26	2,773	-3,515
Interest paid on operating activities		-451	-370
Interest and dividend received from operating activities		825	903
Income taxes paid		-67	411
<b>Net cash from operating activities</b>		<b>-45</b>	<b>-1,698</b>
<b>Cash flow from investing activities</b>			
Acquisition of business unit, net cash acquired	14		-6,354
Purchase of property, plant and equipment	12	-11,408	-7,032
Purchase of intangible assets	13	-6,677	-1,169
Sale of property, plant and equipment	12	116	31
Sale of intangible assets	13	149	
Purchase of investments/associated companies	15	-728	
<b>Net cash from investing activities</b>		<b>-18,549</b>	<b>-14,524</b>
<b>Cash flows from financing activities</b>			
Share option plans exercised	23		30
Repayment of borrowing	25	-1,692	-86
Payment of finance lease liabilities	25	-1,010	-874
Dividend paid and capital repayment		-10,708	-10,708
<b>Net cash from financing activities</b>		<b>-13,410</b>	<b>-11,638</b>
<b>Net change in cash and cash equivalents</b>	21	<b>-32,004</b>	<b>-27,861</b>
Cash and cash equivalents at 1 January		94,922	122,783
Change in fair value of investments			
<b>Cash and cash equivalents at the end of the year</b>		<b>62,919</b>	<b>94,922</b>

# Consolidated Statement of Changes in Equity

## Equity attributable to equity holders of the parent

1000 EUR	Share capital	Invested non- restricted equity fund	Translation difference	Retained earnings	Non- controlling interests	Total
<b>Shareholders' equity Jan 1, 2017</b>	12,941	25,953	1,158	90,562	0	130,615
<b>Comprehensive income for the period</b>						
Profit for the period				-3,108		-3,108
Exchange differences on translating foreign operations			-122			-122
<b>Total comprehensive income for the period</b>	0	0	-122	-3,108	0	-3,229
<b>Transactions between the shareholders</b>						
Dividend distribution				-10,708		-10,708
<b>Other changes</b>						0
<b>Shareholders' equity Dec. 31, 2017</b>	12,941	25,953	1,036	76,747	0	116,678
<b>Shareholders' equity Jan 1, 2016</b>	12,941	25,923	1,192	97,526	0	137,582
<b>Comprehensive income for the period</b>						
Profit for the period				3,505		3,505
Exchange differences on translating foreign operations			-34			-34
<b>Total comprehensive income for the period</b>	0	0	-34	3,505	0	3,471
<b>Transactions between the shareholders</b>						
Share issue		31				31
Share-related compensation				246		246
Dividend distribution				-10,708		-10,708
<b>Other changes Dec. 31, 2016</b>				-6		-6
<b>Shareholders' equity Dec. 31, 2016</b>	12,941	25,953	1,158	90,562	0	130,615

# Notes to the Consolidated Financial Statements

## Corporate Information

The Company's field of activities is the development, production and selling of software, equipment and other products for the automotive and electronics industry, the production of R&D services and other services as well as other industrial operations. The Company may administer product and other rights and conduct research and development operations, hold and trade securities and real-estate and conduct other investment activities.

The parent company of the Group is Bittium Corporation, which is a Finnish public company. The parent company is domiciled in Oulu and its registered address is Ritaharjantie 1, 90590 Oulu.

## Accounting Principles for the Consolidated Accounts

### Basis of Preparation

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as well as the SIC and IFRIC interpretations in force at December 31, 2017. The financial statements are presented in thousands of euro. The consolidated financial statements have been prepared on a historical cost basis unless otherwise indicated.

## Consolidation Principles

The consolidated financial statements of Bittium include the financial statements of the parent company Bittium Corporation and its subsidiaries.

## Subsidiaries

The consolidated financial statements include Bittium Corporation and its subsidiaries financial statements. Subsidiaries are companies in which the Bittium Corporation has a controlling interest. A controlling interest arises when the Group holds more than half of the voting rights or it otherwise has the power to govern the financial and operating policies of the entity. The existence of potential voting rights is taken into account in assessing the conditions under which control arises whenever instruments conferring potential voting rights can be exercised at the review date.

## Associated Companies

An associated company is a company in which the Group has a significant influence. A significant influence exists, when the Group has a right to participate in the decision making in regards of financing or operative business of the associated company but has no sole or common control of such decisions. In the consolidated financial statements the investments in the associated companies are accounted for using the equity method according to the IFRS 11 Joint Arrangements standard. The investment in associated companies is recorded using the acquisition price, adjusted for the Group's share of changes in the associated companies' equity after the date of acquisition. If the Group's share of associated companies' losses exceeds the carrying amount of the investment, the investment in the associated company in the balance sheet shall be written off. The losses exceeding the carrying amount are consolidated only if the Group has a binding obligation of covering the associated companies' liabilities. Investments in the associated companies include the goodwill emerging upon the acquisition. The unrealized profits or loss-

es between the Group and the associated companies are eliminated according to the share of Group's ownership.

The Group's share of results in the associated companies is recorded as an item above the operating result if the result arises from the operative business. The Group's share of associated companies' other comprehensive income is recorded in the other items of comprehensive income in the consolidated statement of profit and loss.

The carrying value of investments in the associated companies is tested by comparing the carrying amount and the recoverable amount of the associated companies. An impairment loss is recognized if the carrying amount of the investment in associated companies exceeds the recoverable amount. An impairment loss is recognized in the income statement.

## Elimination of Intra-Group Transactions

Intra-Group share ownership has been eliminated by means of the purchase method. Acquired subsidiaries are included in the consolidated financial statements from the time when the Group has obtained control, and divested subsidiaries up to the time when control ceases. The excess of the acquisition cost of the subsidiary shares over fair value of the net assets acquired is allocated partly to the identifiable assets and liabilities. Any excess is recorded as goodwill. Business combinations that occurred before the implementation of IFRS, in 2004, the carrying amount of the goodwill has been treated according to the Finnish GAAP in accordance with the exemption under IFRS 1. According to IFRS goodwill is not amortized but tested annually for impairment.

Intra-Group transactions, receivables, liabilities and margins are eliminated in preparation of the consolidated financial statements.

## Foreign Currency Transactions

Figures relating to the financial statements of Group entities are measured in the currency that is the currency of each entity's main operating environment ("functional currency"). The consolidated financial statements are presented in euros, which is the functional currency of the Group's parent company.

Transactions denominated in foreign currency are recorded in euros using the exchange rate on the date of the transaction. Monetary items denominated in foreign currency are translated to euros using the European Central Bank exchange rates at the balance sheet date. Gains and losses arising from transactions denominated in foreign currency and the translation of monetary items are recorded in the income statement.

Income statements and cash flows of subsidiaries, whose functional and reporting currency is not the euro, are translated into euros at the average exchange rates during the financial period. Their balance sheets are translated at the exchange rates prevailing at the balance sheet date. Translating the profit for the period using different rates in the income statement and the balance sheet leads to a translation difference that is recorded in equity. The translation differences arising from the elimination of the cost of foreign subsidiaries are recorded in equity. When a subsidiary is sold, the cumulative translation differences are entered in the income statement as part of the capital gain or loss.

Cumulative exchange differences arising from the translation of internal long term loans, which are in actual terms net investments in foreign operations, are taken directly to a separate component of equity.

The goodwill arising from the acquisition of foreign operations as well as fair value adjustments made to the carrying amounts of the assets and liabilities of said foreign operations in connection with an acquisition are treated as the assets and liabilities of said foreign operations and translated to euros using the exchange rates at the balance sheet date.

## Property, Plant and Equipment

Property, plant and equipment are measured at historical cost less depreciation and impairment losses. Assets of acquired companies are stated at their fair values at the date of acquisition.

Assets are depreciated using the straight-line or reducing balance method over their useful life.

The residual value of assets and their useful life are reviewed periodically in connection with each set of financial statements and the interim report and, if necessary, they are adjusted to reflect changes that have occurred in the expectations for the asset's useful life. Ordinary repair and maintenance costs are charged to the income statement during the financial year in which they incurred. Gains and losses on sales and disposals are determined by comparing the received proceeds with the carrying amount and are included in operating profit.

## Intangible Assets

### Goodwill

After January 1st, 2004 the cost of goodwill is the excess of the cost of the busi-

ness combination over the acquirer's interest in the net fair value of the identifiable assets. The goodwill arising from the business combinations prior to this represents the amount recorded under previous GAAP, which has been used as the deemed cost. The classification and accounting treatment of these business combinations has not been adjusted when the Group's opening IFRS balance sheet has been prepared.

Goodwill is tested annually or, if necessary, more frequently to determine any impairment. For this purpose, goodwill has been allocated to cash-generating units. The recoverable amount of a cash generating unit is compared to its carrying amount and an impairment loss is recognized if the carrying amount of the assets exceeds the recoverable amount. An impairment loss is recognized in the income statement.

### Research and Development Expenditure

Research expenditures are recorded as an expense as they are incurred. Expenditure on development activities is capitalized if they meet the criteria defined in IAS 38 Intangible Asset. Capitalized development expenses include mainly materials, supplies and direct labor costs. They are amortized on a systematic basis over their expected useful lives.

Capitalized development expenses are reviewed for potential impairment regularly by comparing the carrying amount to their recoverable amount. Significant changes in the technological environment are taken into account. If the carrying amount of the development expenses is greater than the recoverable amount, an impairment loss is recognized immediately.

### Other Intangible Assets

Patents, trademarks, licenses and other intangible assets having a finite useful life are entered in the balance sheet and the

amortized expense is recorded in the income statement over their useful life. If indications on possible impairment exist, the recoverable amount is determined and an impairment loss is recognized if necessary. Intangible assets with an indefinite useful life are not amortized but tested annually or, if necessary, more frequently to determine any impairment.

## Inventories

Inventories are stated at the lower of initial cost or net realizable value. Net realizable value is the estimated selling price in the normal course of business less the estimated costs of sale. The value of raw material inventory is determined using a weighted average cost formula. The initial cost of finished and semi-finished products comprises of raw material, direct labor and other direct expenses as well an appropriate share of fixed and variable production overheads, based on the normal capacity of the production facilities.

## Borrowing Costs

Borrowing costs are recognized in the income statement as they accrue.

## Government Grants

Government grants are recognized when there is reasonable assurance that Group will comply with the conditions attaching to them and the grant will be received. Government grants received from public corporations are presented as other income in the income statement.

## Leases

When the Group is a lessee, all lease contracts of property, plant and equipment, in which the Group has substantially all the risks and rewards of ownership, are classified as finance leases. A finance lease agreement is recognized in the balance

sheet at an amount equal at the inception of the lease to the fair value of the leased property or, if lower, at the present value of the minimum lease payments. An asset obtained on a finance lease is depreciated over the useful life of the asset or, if shorter, the lease term. Lease obligations are included in interest-bearing liabilities.

Lease agreements in which the risks and benefits attached to ownership remain with the lessor are classified as operating leases. Lease payments under an operating lease are recognized as an expense in the income statement on a straight line basis over the lease term.

## Impairment of Assets

At each balance sheet date (including interim reports) the Group estimates whether there is any indication that an asset may be impaired. If any such indication exists, the recoverable amount of the asset is estimated. The recoverable amount is estimated annually regardless of any indication of impairment to the following assets: investments, goodwill, intangible assets with an indefinite useful life and for intangible assets which are not yet ready for use. The recoverable amount is based on the future discounted net cash flows, which are equivalent with the expected cash flows generated by the asset.

An impairment loss is recognized whenever the carrying amount of an asset exceeds its recoverable value. The loss is booked to the income statement. A previously recognized impairment loss is reversed only if there has been a change in the estimates used to determine the recoverable amount. However, the reversal must not cause that the adjusted value is higher than the carrying amount that would have been determined if no impairment loss had been recognized in prior years. Impairment losses recognized for goodwill will under no circumstances be reversed.

## Employee Benefits

### Pension Liabilities

Group companies in different countries have pension plans in accordance with local conditions and practices. The plans are classified as either defined contribution plans or defined benefit plans.

In Finland, the Group has organized pension coverage for its staff through independent pension insurance companies. The Finnish system under the Employees' Pensions Act and the disability portion are treated as a defined contribution plan. The contributions to defined contribution plans are charged to the income statement in the year to which they relate. After this the Group has no other obligations for additional payment. Also the pension arrangements of the foreign subsidiaries are classified as defined contribution plans.

### Share-Based Payment

The Group has applied IFRS 2 Share-Based Payment standard. The Group has incentive plans which include equity-settled or cash-settled share-based payment transactions. The fair value of equity-settled share-based payments granted is recognized as an employee expense with a corresponding increase in equity. The fair value of cash-settled share-based payments is valued at each reporting period closing date and the changes in fair value of liability are recognized as expense when incurred. The fair value is measured at grant date and spread over the vesting period during which the employees become unconditionally entitled to the awards.

Option rights and shares granted are measured at fair value at the time they are granted and entered as an expense in the income statement in even installments during the vesting period. The expense determined is based on the defined fair value of the stock options and shares as well as on management's estimate of the amount of options or

shares to which the employee will be entitled at the end of the vesting period. The fair value of the options is determined on the basis of the Black-Scholes pricing model. The Group updates the assumption concerning the final amount of stock options and shares at each balance sheet date. Changes in the estimates are recorded in the income statement. When options are exercised, the cash payments received on the basis of share subscriptions (adjusted for any transaction expenses) are entered in the share capital (at nominal value) and in the share premium reserve.

Share-based incentives are measured at fair value at the time they are granted and entered as an expense in the income statement when right is granted.

## Provisions

A provision is recognized when the Group has a legal or constructive obligation as a result of a past event, it is probable that a payment obligation will be realized or cause a financial loss and the amount of the obligation can be estimated reliably. Provisions can arise from restructuring plans, onerous contracts, warranty repairs and allowances and from environmental, litigation or tax risks.

The amount recognized as a provision is the best estimate of the expenditure required to settle the present obligation at the balance sheet date. If the time value of money is material, provisions will be discounted.

If a reimbursement can be obtained from a third party for part of the obligation, the reimbursement is treated as a separate asset when it is virtually certain that the reimbursement will be received.

## Taxes

Tax expense in the Group's income statement comprises the current tax and change in deferred taxes of each group company. Current tax is calculated based on the taxable income using the tax rate that is enacted in each country at the balance sheet date.

Deferred tax liability is calculated on the temporary differences between the carrying amounts and the amounts used for taxation purposes. Deferred tax assets are recognized for deductible temporary differences and tax losses to the extent that it is probable that taxable profit will be available against which tax credits and deductible temporary differences can be utilized. In calculating deferred tax liabilities and assets, the tax base which is in force at the time of preparing the financial statements or which has been enacted by the balance sheet date for the following period, has been applied.

## Revenue Recognition

Sales of goods are recognized after the significant risks and rewards that, are connected with ownership, have been transferred to the buyer. Neither the Group retains a continuing managerial involvement to the degree usually associated with ownership, nor effective control of those goods. Revenues from services are recorded when the service has been performed. Sales are presented net of indirect sales taxes and discounts.

Revenue from long-term construction contracts is recognized based on the stage of completion when the outcome of the project can be reliably measured. The stage of completion is measured by using the cost-to-cost method under which the percentage of completion is defined as the ratio of costs incurred to total estimated costs.

## Assets Held for Sale and Discontinued Operations

The Group classifies a non-current asset or disposal as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use. Non-current assets and asset items related to discontinued operations, which are classified as held for sale, are measured at the lower of their carrying amount and fair value less costs to sell. Depreciation and amortization on these asset items is discontinued at the time of classification. Profit after tax and gain on sale of discontinued operation is presented as a separate line item in the consolidated income statement.

Profit for the year from discontinued operations is presented separately in Consolidated Statement of Comprehensive Income. Discontinued operations are disclosed in note 2.

## Financial Assets, Financial Liabilities and Derivative Contracts

### Financial Assets

The Group's financial assets are classified in accordance with IAS 39 Financial Instruments: Recognition and Measurement in the following categories: financial assets at fair value through profit or loss, held-to-maturity investments, loans and receivables and financial assets held for sale. The classification is based on the purpose for which the assets have been acquired and they are classified upon acquisition.

A financial asset is classified at fair value through profit or loss, when it has been acquired for trading purposes. The category

comprises the Group's investment portfolio and all derivative contracts. The consolidated balance sheet does not contain assets that would be classified in this category upon initial recognition as allowed under the fair value option of IAS 39. Realized and unrealized gains and losses from changes in fair values are recognized in profit or loss in the financial year they are incurred. The assets are in accordance with their nature included in the non-current and current assets of the balance sheet.

Loans and receivables are assets other than derivative contracts with related payments that are fixed or determinable. They are not quoted on efficient markets and they are not held by the Group for trading purposes. They are valued at amortized cost. They are in accordance with their nature included in the current or long-term assets of the balance sheet: long-term if they fall due after more than 12 months.

The Group has not had held-to-maturity investments during the financial or the prior financial year. In case of occurrence they are valued at amortized cost.

Financial assets held for sale are assets other than derivative contracts that have particularly been classified into this category or have not been classified into any other category. They are included in the balance sheet on the basis of their estimated date of sale. Assets to be sold within 12 months are included in current assets. Such financial assets are disclosed separately in the consolidated balance sheet if their carrying amount is significant. The change in fair value of the financial assets held for sale is recognized net of tax in the revaluation fund in equity. The cumulative change in fair value recognized in equity is recognized in profit or loss when the asset is sold or the asset has been impaired and an impairment loss has to be recognized. Investments, whose fair value may not be reliably established, are valued at cost or cost adjusted for a permanent impairment loss.

Cash comprises cash on hand, bank deposits and other highly liquid investments. Assets classified as financial assets have a maximum maturity of three months from the date of acquisition.

Transaction costs are included in the cost of financial assets that are not valued at fair value through profit or loss. The purchases and sales of financial assets are recognized at the trade date.

### Financial Liabilities

Financial liabilities are initially recognized at fair value. Transaction costs are included in the initial carrying amount of financial liabilities. All financial liabilities are subsequently measured at amortized cost. Financial liabilities are included in current and non-current liabilities and may be interest-bearing or interest-free.

The bases for determining the fair value of all financial assets and liabilities have been disclosed in notes 20, 27 and 28.

### The Impairment of Financial Assets

The Group assesses whether objective indications of the impairment of any financial assets exist at each balance sheet date. A loss is recognized in profit or loss as a recognized or probable credit loss, when there are indications that trade or loan receivables may not be collected in full. Impairment losses on trade receivables are included in other operating expenses and on loan receivables in financial expenses.

Impairment losses on financial assets recognized in the financial year are disclosed in notes 20 and 21.

### Derivative Contracts and Hedge Accounting

Derivative contracts are recognized at their fair value. Hedge accounting in accordance with IAS 39 Financial Instruments: Recognition and measurement is not applied. The change in fair value of hedging instruments is recognized in finance items in profit or loss.

The fair values of derivative contracts and the valuation methods used are disclosed in note 28.

### Significant Accounting Estimates and Judgments

The preparation of financial statements requires management to make estimates and assumptions about the future that affects the reported amounts. Used estimates and assumptions are based on prior experience and presumptions, which reflect the circumstances and expectations prevailing at the time of the preparation of the financial statements. Materiality and judgment in assessing the effect of uncertainties and the application of accounting principles have been observed in the preparation of the financial statements.

The management has exercised judgment during the financial year in applying e.g. in assessing the future cost forecasts in the percentage of completion projects, assessing the value of intangible assets in business acquisitions and also when assessing the future prospects of Group companies in conjunction with standards IAS 12 Income Taxes and IAS 36 Impairment of Assets. Based on the management judgment, the majority of the capitalized R&D investments are depreciated based on the production amounts of the goods.

Financial statements may include non-recurring income or expenses that are not related to normal operative business or that

occur only infrequently. Such items are among others sales profits or losses, substantial changes in asset values, like impairment or reversal of impairment, substantial restructuring costs or other substantial items that are considered as non-recurring by the management. Substantiality of the item is based on the item's euro amount and the relative share of total value of the asset.

## The Application of New and Revised IFRS Regulations

The consolidated financial statements are prepared in accordance with International Financial Reporting Standards (IFRS) effective at the end of the period. The new, revised or amended IFRS regulations did not have significant impact on the consolidated financial statements during the period.

IFRS 15 Revenue from Contracts with Customers, came into force on 1st of January 2018. IFRS 15 covers the former IAS 18 Revenue and IAS 11 Construction contracts standards. Bittium adopts the standard using the modified retrospective approach. The retrospective effect of adopting the new standard is shown as a restatement to the group equity at the balance sheet on January 1st, 2018. Bittium estimates that the new standard does not have a material effect on the restated opening balance of year 2018. The new standard provides more focus especially to those contracts which include multiple elements of revenue. Bittium has already taken identification of customer contracts and performance liabilities into account in revenue recognition and applied multi-element principles as presented in the new standard. Therefore Bittium will not make substantial changes on the current accounting principles regarding the revenue recognition.

Bittium has, however specified the accounting principles of the time-based service contracts regarding the duration and amount of these contracts. The more

specified principles shall affect the revenue spread through periods making the timing of revenue more stable and accurate during the financial year and possibly also at the end of the financial year.

The new standard has specifying impact on the notes of the financial reports. According to the standard, Bittium shall present the forecasted revenue spread of the ongoing projects at the balance sheet date. These forecasts may change as the time-based service contracts are rendered to the customer. The forecasts are also subject to changes due to cost and customers' plans.

IFRS 9 Financial Instruments standard has come into force on 1st of January 2018. It replaces the former IAS 39 Financial Instruments: Recognition and Measurement standard. The objective of the new standard is to clarify the classification and assessment of the financial assets and liabilities and to create a new model for impairment and for the hedge accounting. In Bittium the new standard will not have significant impact on the classification of the financial assets or liabilities, nor to the assessments or processes of managing the currency risks. The model for impairment is going to lead to earlier recognition of impairment losses but it will not have a material effect on Bittium financial reporting. The new standard has specifying impact on the notes to the financial reporting with respect to financial instruments.

The impacts of the IFRS 16 Leases standard, coming into force in 2019 are being analyzed during the year 2018. According to the standard, basically all the Group lease agreements are presented in the assets and liabilities in the balance sheet. According to the current estimate, the adoption of the standard will slightly increase the value of assets and liabilities in the consolidated balance sheet.

The other forthcoming revisions or amendments of the standards are not expected to have significant impact on the consolidated financial statements in the future.

# Notes to the Consolidated Financial Statements

## 1. OPERATING SEGMENTS

Bittium has one reporting business segment, the Wireless business, that includes three product and service areas supporting each other. These areas are as follows: Defence & Security, Connectivity Solutions and Medical Technologies.

Wireless business is focused on creating reliable and secure communication and connectivity solutions, as well as on developing healthcare technology solutions for biosignal measuring. For its customers Bit-

tium offers innovative products and solutions based on its product platforms, and R&D services. Bittium also offers high quality information security solutions for mobile devices and portable computers. For customers in biosignal measuring in the areas of cardiology, neurology, rehabilitation, occupational health and sports medicine Bittium offers healthcare technology products and services.

The highest operative decision-making body of the company is the Board of Di-

rectors of Bittium which is responsible for allocating resources to and evaluating the results of Bittium's operating segment. Income statement and balance sheet information of the Wireless business are equivalent to corresponding information of the Bittium group.

**Wireless****Geographical areas**

Bittium operates in three geographical areas which are Europe, Americas and Asia. In presenting the geographical information, the revenue is based on the geographical location of customers. Geographical assets are based on the geographical location of the assets.

**Geographical areas****Jan. 1–Dec. 31, 2017**

1000 EUR	Finland	Other Europe	Americas	Asia	Eliminations	Group total
<b>Net sales</b>						
Sales to external customers	39,060	5,361	5,888	1,328		51,637
Non-current assets	43,770	2	299			44,071
<b>Total non-current assets *)</b>						<b>44,071</b>
*) does not include deferred tax assets						
Capital expenditure, continuing operations						
Tangible assets	9,252		103			9,355
Intangible assets	5,673					5,673
Investments	1,220	2				1,223
Goodwill	-890		-27			-917

**Geographical areas****Jan. 1–Dec. 31, 2016**

1000 EUR	Finland	Other Europe	Americas	Asia	Eliminations	Group total
<b>Net sales</b>						
Sales to external customers	47,923	3,392	12,177	700		64,192
Non-current assets	28,515		223			28,738
<b>Total non-current assets *)</b>						<b>28,738</b>
*) does not include deferred tax assets						
Capital expenditure, continuing operations						
Tangible assets	8,480					8,480
Intangible assets	1,725					1,725
Goodwill	5,290		7			5,297

**Information of primary customers**

Group's revenues from the 10 largest customers in period Jan. 1–Dec. 31, 2017 were EUR 41.1 million (EUR 56.2 million in 2016) representing 79.6 percent of the net sales (87.6 percent in 2016).

# Notes to the Consolidated Financial Statements

## 2. DISCONTINUED OPERATIONS

1000 EUR	2017	2016
Other operating income	1,653	
<b>Profit for the year from discontinued operations (ASW)</b>	<b>1,653</b>	
The other operating income includes the reversal of provisions related to the sale of Automotive-segment (2015) as well as VAT returns related to sale of shares which have been returned due to changes in legal interpretation.		
Cash received	432	
<b>Cash flow impact</b>	<b>432</b>	

## 3. NET SALES

1000 EUR	2017	2016
Services	34,919	51,835
Products	16,314	11,920
Other	403	462
<b>Total</b>	<b>51,637</b>	<b>64,217</b>
Income recognized from construction contracts	13,472	23,190
Net sales other	38,165	41,003
<b>Total</b>	<b>51,637</b>	<b>64,192</b>
<b>Construction contracts</b>		
The contract revenue is recognized in the income statement in proportion to the stage of completion of the contract. The stage of completion is defined as the ratio of costs incurred to total estimated costs.		
Income recognized as sales based on the stage of completion of long-term construction contracts	13,472	23,190
Revenue recognized from long-term construction contracts in progress amounted to	8,443	21,146
Advances received from long-term construction contracts recognized in the balance sheet amounted to	475	895
Receivables recognized from long-term construction contracts amounted to	1,289	2,803

**4. OTHER OPERATING INCOME**

1000 EUR	2017	2016
Government grants	1,944	1,766
Other income	165	125
<b>Total</b>	<b>2,109</b>	<b>1,891</b>

**5. OTHER OPERATING EXPENSES**

External services	4,313	6,002
Voluntary staff expenses	1,045	880
Premises expenses	2,886	2,701
Travel expenses	1,163	1,796
IT expenses	2,625	2,434
Other expenses	5,752	6,297
<b>Total</b>	<b>17,784</b>	<b>20,110</b>
<b>Auditor's charges</b>		
<b>Ernst &amp; Young</b>		
Auditing	68	34
Tax advice	17	31
Other services	11	109
<b>Total</b>	<b>96</b>	<b>174</b>
<b>Others</b>		
Auditing	25	21
Tax advice	12	9
Other services		1
<b>Total</b>	<b>37</b>	<b>31</b>

# Notes to the Consolidated Financial Statements

1000 EUR	2017	2016
<b>6. DEPRECIATIONS AND IMPAIRMENTS</b>		
<b>Depreciations</b>		
Intangible assets		
Capitalized development expenditure	339	283
Intangible rights	845	744
Other intangible assets	75	73
Tangible assets		
Machinery and equipment	2,642	2,163
<b>Total</b>	<b>3,902</b>	<b>3,263</b>
<b>7. EMPLOYEE BENEFIT EXPENSES AND NUMBER OF PERSONNEL</b>		
<b>Number of personnel</b>		
Average number of personnel during the fiscal period		
Continuing operations	614	569
<b>Personnel expenses 1000 EUR</b>		
Personnel expenses		
Managing Director's salaries	214	280
Board of Directors *	165	162
Other salaries and wages	25,861	28,137
<b>Total</b>	<b>26,239</b>	<b>28,578</b>
Pension expenses, defined contribution plans		
	5,528	5,201
Other personnel expenses	1,276	1,713
<b>Total</b>	<b>33,044</b>	<b>35,492</b>

\*Including the share-based incentives. Further information in the note no. 32.

1000 EUR	2017	2016
<b>8. RESEARCH AND DEVELOPMENT EXPENSES</b>		
The research and development expenses total	15,045	6,912
Capitalized to the balance sheet	-5,766	-932
Recognition as an asset	339	283
The expensed research and development expenses recognized in the income statement amounted to	9,618	6,263
<b>9. FINANCIAL EXPENSES (NET)</b>		
Interest expenses	-87	-89
Interest income	2	1
Dividend income	1	0
Exchange gains and losses	47	-63
Change of financial assets and liabilities at fair value through profit or loss	394	829
Other financial expenses	-408	-75
Other financial income	428	1
<b>Total</b>	<b>378</b>	<b>604</b>
<b>10. INCOME TAXES</b>		
Income taxes, current year		-28
Other taxes		-78
Income taxes, previous years	-7	-2
Deferred taxes	1,072	467
<b>Total</b>	<b>1,065</b>	<b>359</b>
A reconciliation between the effective tax rate and domestic tax rate (20.0 percent) of the Group:		
<b>Profit before taxes</b>	<b>-5,825</b>	<b>3,146</b>
Tax at the domestic tax rate	1,177	-629
Effect of tax rates of foreign subsidiaries	6	2
Taxes for prior years	-7	-2
Tax free income	268	220
Non-deductible expenses	-2,267	-1,403
Utilization of deferred tax assets from previous years	1,112	2,043
Reassessment of deferred tax assets	1,072	467
The deferred tax assets from tax losses	-297	-265
Others		-73
<b>Income taxes in the consolidated income statement</b>	<b>1,065</b>	<b>359</b>

# Notes to the Consolidated Financial Statements

1000 EUR	2017	2016
<b>11. EARNINGS PER SHARE</b>		
<b>Basic</b>		
Basic earnings per share amounts are calculated by dividing net profit for the year attributable to ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the year.		
Profit attributable to the equity holders of the parent, continuing operations (1000 €)	-4,760	3,505
Profit attributable to the equity holders of the parent, discontinued operations (1000 €)	1,653	
Profit attributable to the equity holders of the parent, continuing and discontinued operations (1000 €)	-3,108	3,505
Weighted average number of ordinary shares during the financial year (1000 PCS)	35,693	35,670
<b>Basic earnings per share, continuing operations, €</b>	<b>-0,133</b>	<b>0,098</b>
<b>Basic earnings per share, discontinued operations, €</b>	<b>0,046</b>	<b>0,000</b>
<b>Basic earnings per share, continuing and discontinued operations, €</b>	<b>-0,087</b>	<b>0,098</b>
<b>Diluted</b>		
Diluted earnings per share is calculated by dividing the net profit attributable to ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the year plus the weighted average number of ordinary shares that would be issued on the conversion of all the dilutive potential ordinary shares into ordinary shares. In 2017, the Group had no share-based payment schemes which would have a diluting effect on the number of shares.		
Profit attributable to the equity holders of the parent, continuing operations (1000 €)	-4,760	3,505
Profit attributable to the equity holders of the parent, discontinued operations (1000 €)	1,653	0
Profit attributable to the equity holders of the parent, continuing and discontinued operations (1000 €)	-3,108	3,505
Weighted average number of ordinary shares during the financial year (1000 PCS)	35,693	35,670
Effect of dilution (1000 PCS)		
Weighted average number of ordinary shares during the financial year (1000 PCS)	35,693	35,670
<b>Diluted earnings per share, continuing operations, EUR</b>	<b>-0.133</b>	<b>0.098</b>
<b>Diluted earnings per share, discontinued operations, EUR</b>	<b>0.046</b>	<b>0.000</b>
<b>Diluted earnings per share, continuing and discontinued operations, EUR</b>	<b>-0.087</b>	<b>0.098</b>

## 12. PROPERTY, PLANT AND EQUIPMENT

The Group has not revalued property, plant and equipment, hence the Group has not recognized any impairment losses directly to equity or recorded any reversals of those.

1000 EUR	31.12.2017	31.12.2016
<b>Land and water</b>		
Acquisition cost Jan. 1	1,091	0
Additions during the period		1,091
Acquisition cost at the end of the period	1,091	1,091
Carrying amount at the end of the period	1,091	1,091
<b>Buildings and constructsures</b>		
Acquisition cost Jan. 1	10,145	2,804
Additions during the period	7,193	5,948
Disposals during the period	-55	
Acquisition of business unit		1,394
Acquisition cost at the end of the period	17,284	10,145
Accumulated depreciations Jan. 1	-2,551	-2,267
Translation differences	0	
Depreciation for the period	-379	-284
Depreciations on disposals	51	
Carrying amount at the end of the period	14,406	7,595
No revaluations or capitalizations of interest costs have been done.		
<b>Machinery and equipment</b>		
Acquisition cost Jan. 1	44,921	42,720
Translation differences	34	-9
Additions during the period	5,003	2,010
Acquisition of business unit		211
Disposals during the period	-144	-18
Transfer to assets		7
Acquisition cost at the end of the period	49,814	44,921
Accumulated depreciations Jan. 1	-41,105	-39,234
Translation differences	-34	9
Depreciation for the period	-2,347	-1,867
Depreciations on disposals	32	-13
Carrying amount at the end of the period	6,361	3,817
<b>Other tangible assets</b>		
Acquisition cost Jan. 1	88	88
Acquisition cost at the end of the period	88	88
Carrying amount at the end of the period	88	88

## Notes to the Consolidated Financial Statements

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
<b>Property, plant and equipment total</b>		
Acquisition cost Jan. 1	56,066	45,432
Translation differences	34	-9
Additions during the period	12,196	9,049
Acquisition of business unit	0	1,605
Disposals during the period	-199	-18
Transfer to assets	0	7
Acquisition cost at the end of the period	68,097	56,066
Accumulated depreciations Jan. 1	-43,476	-41,321
Translation differences	-34	9
Depreciation for the period	-2,726	-2,150
Depreciations on disposals	84	-13
Carrying amount at the end of the period	21,946	12,591
<b>Finance leases</b>		
The Group had the following amounts of property, plant and equipment acquired by finance leases:		
<b>Machinery and equipment</b>		
Acquisition cost	6,551	5,793
Accumulated depreciations	-5,376	-4,373
Carrying amount at the end of the period	1,175	1,420

Additions of property, plant and equipment include assets acquired by finance leases of EUR 0.8 million in 1.1.–31.12.2017 (EUR 0.9 million in 2016).

## 13. INTANGIBLE ASSETS

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
<b>Capitalized development expenses</b>		
Acquisition cost Jan. 1	10,855	9,763
Additions during the period	5,764	932
Acquisition of business unit		161
Acquisition cost at the end of the period	16,619	10,855
Accumulated depreciations Jan. 1	-4,412	-4,129
Depreciation for the period	-339	-283
Carrying amount at the end of the period	11,868	6,443
<b>Intangible rights</b>		
Acquisition cost Jan. 1	3,889	3,769
Additions during the period	388	47
Acquisition of business unit		73
Transfer to assets	-33	
Acquisition cost at the end of the period	4,244	3,889
Accumulated depreciations Jan. 1	-2,652	-2,319
Depreciation for the period	-352	-334
Carrying amount at the end of the period	1,239	1,237
<b>Customer relations and technology</b>		
Acquisition cost Jan. 1	1,688	524
Acquisition of business unit		1,164
Acquisition cost at the end of the period	1,688	1,688
Accumulated depreciations Jan. 1	-173	-73
Depreciation for the period	-241	-101
Carrying amount at the end of the period	1,274	1,515

# Notes to the Consolidated Financial Statements

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
<b>Other intangible assets</b>		
Acquisition cost Jan. 1	3,406	3,336
Translation differences	-13	3
Additions during the period	528	66
Transfer to assets	33	
Acquisition cost at the end of the period	3,955	3,406
Accumulated depreciations Jan. 1	-3,323	-3,246
Translation differences	13	-3
Depreciation for the period	-75	-73
Carrying amount at the end of the period	570	84
<b>Intangible assets total</b>		
Acquisition cost Jan. 1	19,838	17,392
Translation differences	-13	3
Additions during the period	6,680	1,045
Acquisition of business unit	0	1,398
Acquisition cost at the end of the period	26,506	19,838
Accumulated depreciations Jan. 1	-10,560	-9,766
Translation differences	13	-3
Depreciation for the period	-1,008	-791
Carrying amount at the end of the period	14,951	9,278
<b>Goodwill</b>		
Acquisition cost Jan. 1	6,737	1,440
Translation differences	-27	7
Disposals during the period	-890	5,290
Carrying amount at the end of the period	5,820	6,737

### Impairment Test

The cash flow forecasts employed in impairment test calculations are based on the budgets for 2018 and the Long Range Plans (LRP) for 2019–2020 approved by management for the strategical period and management estimations for 2021–2022. Cash flows beyond five-year period are calculated by using the terminal value method. Future cash flows are exposed to the risks that are discussed in section “Risks and uncertainties” in the Report by the Board of Directors.

The used discount rate in impairment testing is Weighted Average Cost of Capital (WACC) before tax defined for Bittium. WACC defines average costs of equity and debt by noticing the risks belonging to the each component. The components of WACC are risk-free interest rate, market risk premium, beta, cost of debt, corporate income tax rate and target capital struc-

ture. WACC calculated according to these parameters amounted to 9.8 percent (9.8 percent in 2016).

In 2017 Wireless business did not reach the cash flow forecasted in the impairment test calculation in 2016. This was mainly because of slower growth in the product business as expected. There were no fundamental changes in the business environment that would make an impact to the cash flow expectations compared to the previous financial year.

The impairment test is done when needed, but at least once a year. Impairment tests made in December 2017 did not indicate need for impairment bookings. Recoverable amounts exceed significantly the book value of goodwill and other assets. The terminal value represents 84 percent of business value. Product business grew slower than expected and also investments to the

development of a new products move focus of forecasted net present value based cash flows from the near future to further in the future.

Sensitivity analysis was also carried out during the impairment test. Cash flow forecast was either decreased by 20 percent or the discount factor was increased by 5 percent. It was noticed that cash flows are relatively sensitive to increase in discount factor. However, there are no expectations for impairment losses in the future.

# Notes to the Consolidated Financial Statements

## 14. ACQUISITIONS

### Acquisitions in 2017

In 2017 the Group did not have acquisitions.

### Acquisitions in 2016

November 10, 2016 Bittium Technologies Ltd, a subsidiary of Bittium Corporation acquired the ownership in Mega Electronics Ltd, specialized in healthcare technology, by purchasing 100 percent of the shares in Remega Ltd. Mega Electronics Ltd is a fully owned subsidiary of Remega Ltd. Mega Electronics Ltd owned 28.2 percent of the shares in MegaKoto Ltd, a company specialized in healthcare services, and was signed binding share purchase agreements to ac-

quire 100 percent of the shares in MegaKoto Ltd. The acquisition of the rest of the shares in MegaKoto Ltd was completed as planned.

Their consolidated proforma net sales was approximately EUR 3.1 million in 2015 and pro forma operating profit was approximately EUR 0.2 million. The companies employ altogether 28 persons and are located in Kuopio, Finland.

The debt free cash purchase price of the share acquisition, including the purchase price of MegaKoto shares, is EUR 8.0 million, which will be adjusted based on the

level of cash, debt and networking capital of the acquired companies as of completion of the acquisition. In addition to the aforementioned purchase price, an additional purchase price, capped at EUR 1.0 million, is payable upon the achievement of certain financial performance targets for the acquired business between January 1, 2017 and December 31, 2018. The potential additional purchase price will be paid in cash after achieving the goals.

The net assets of the company on the acquisition date were:

1000 EUR	2016
Assets	
Intangible assets	1,398
Tangible assets	1,605
Investments	10
Inventories	1,379
Receivables	649
Cash	106
<b>Assets total</b>	<b>5,148</b>
Provisions	
Non-current loan	1,575
Other liabilities	1,396
<b>Liabilities total</b>	<b>2,972</b>
<b>Net assets</b>	<b>2,176</b>
Goodwill	5,290
<b>Purchase price</b>	<b>7,466</b>

## 15. SHARES IN ASSOCIATED COMPANIES

On June 16, 2017 Bittium Medanalytics Oy, part of Bittium group, and Coronaria Hoitoketju's subsidiary Coronaria Analyysipalvelut Oy, signed agreements according to which Bittium Medanalytics Oy sells its remote diagnostic service business to Coronaria Asiakaspalvelut Oy. According to the agreement Bittium supplies its web-based service kardiolog.fi used in monitoring cardiac abnormalities to Coronaria's use. Kardiolog.fi service is used by more than 70 Finnish health centers and private medical centers.

Further, Bittium Technologies Ltd, part of Bittium group, acquired 25 percent of the shares in Coronaria Analyysipalvelut Oy. Through this joint ownership Bittium and Coronaria aim at gaining synergies from Bittium's device and system development and the interfaces formed by Coronaria's clinical medicine and services.

Coronaria Analyysipalvelut Oy has been consolidated using the equity method. The domicile of the company is Oulu and Bittium group has 25 percent of the shares of the company in the end of 2017.

1000 EUR

2017

<b>Shares in associated companies</b>	
Coronaria Analyysipalvelut Oy	1,220
Other associated companies	22
<b>Assets total</b>	<b>1,242</b>
Coronaria Analyysipalvelut Oy	
Current assets	1,050
Non-current assets	1,188
Non-current liabilities	63
Turnover	4,364
Net profit	834
<b>Reconciliation of financial information of the associated company to asset value of the group</b>	
Net assets of associated company	457
Share % of ownership	25%
Share of net assets	114
Goodwill	839
Other intangible assets	289
Other items	-22
Carrying value of the associated company	1,220

# Notes to the Consolidated Financial Statements

## 16. OTHER FINANCIAL ASSETS

1000 EUR	2017	2016
At 1 January	132	122
Additions		10
Disposals	-20	
<b>At the closing date</b>	<b>112</b>	<b>132</b>

## 17. DEFERRED TAX LIABILITIES AND ASSETS

1000 EUR	Jan. 1, 2017	Recognized in the income statement	Acquisitions and disposals of subsidiaries	Dec. 31, 2017
<b>Deferred tax assets</b>				
Unutilized losses in taxation	360	162		523
Other items	1,156	784		1,940
<b>Total</b>	<b>1,516</b>	<b>947</b>	<b>0</b>	<b>2,463</b>

On December 31, 2017 the Group had 78.0 million euros tax losses and non-depreciated depreciations of which it had not booked deferred tax receivables due to the uncertainty of the future profits, their timing, taxation or location. The amount of these non booked deferred tax receivables is approximately 15.6 million euros. The aging of these tax losses begins from year 2018.

1000 EUR	Jan. 1, 2017	Recognized in the income statement	Acquisitions and disposals of subsidiaries	Dec. 31, 2017
<b>Deferred tax liabilities</b>				
Customer and technology assets	461	-83		377
<b>Total</b>	<b>461</b>	<b>-83</b>	<b>0</b>	<b>377</b>

1000 EUR	Jan. 1, 2016	Recognized in the income statement	Acquisitions and disposals of subsidiaries	Dec. 31, 2016
<b>Deferred tax assets</b>				
Unutilized losses in taxation	0	360		360
Other items	1,156			1,156
<b>Total</b>	<b>1,156</b>	<b>360</b>	<b>0</b>	<b>1,516</b>

On December 31, 2016 the Group had 79.5 million euros tax losses and non-depreciated depreciations of which it had not booked deferred tax receivables due to the uncertainty of the future profits, their timing, taxation or location. The amount of these non booked deferred tax receivables is approximately 16.4 million euros. The aging of these tax losses begins from year 2017.

1000 EUR	Jan. 1, 2016	Recognized in the income statement	Acquisitions and disposals of subsidiaries	Dec. 31, 2016
<b>Deferred tax liabilities</b>				
Customer and technology assets	90	-83	454	461
<b>Total</b>	<b>90</b>	<b>-83</b>	<b>454</b>	<b>461</b>

# Notes to the Consolidated Financial Statements

## 18. INVENTORIES

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
Raw materials and supplies	5,797	2,179
Work in progress	3,193	790
Finished products	742	1,089
Other inventories	843	39
<b>Total</b>	<b>10,574</b>	<b>4,097</b>

## 19. TRADE AND OTHER RECEIVABLES (CURRENT)

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
Non-current receivables	210	
<b>Non-current receivables total</b>	<b>210</b>	
Current receivables:		
Trade receivables	13,891	18,285
Receivables from construction contracts	1,289	2,803
Prepaid expenses and accrued income	2,285	2,327
Other receivables	684	603
<b>Current receivables total</b>	<b>18,151</b>	<b>24,018</b>

Receivables are valued at nominal value or probable current value, whichever is lower.

During the financial year group has booked impairment losses from accounts receivable EUR 0.0 million (EUR 0.0 million 2016).

Age distribution of accounts receivable		
Current	10,012	14,572
Aged Overdue Amounts		
0-3 months	2,897	3,703
4-6 months	297	
7-12 months	667	10
> 12 months	18	
<b>Total</b>	<b>13,891</b>	<b>18,285</b>

**20. FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS**

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
<b>Currency derivatives</b>		
Balance sheet value on Jan. 1		67
Changes in fair value		-67
Balance sheet value at the end of the period	0	0
<b>Interest rate funds</b>		
Balance sheet value on Jan. 1	66,935	66,032
Disposals	-11,000	
Changes in fair value	466	903
Balance sheet value at the end of the period	56,401	66,935
<b>Financial assets at fair value through profit or loss total</b>		
Balance sheet value on Jan. 1	66,935	66,100
Disposals	-11,000	0
Changes in fair value	466	836
<b>Balance sheet value at the end of the period</b>	<b>56,401</b>	<b>66,935</b>
<b>21. CASH AND SHORT-TERM DEPOSITS</b>		
Cash and short-term deposits	6,518	27,987
<b>Total</b>	<b>6,518</b>	<b>27,987</b>
<b>Cash and cash equivalents at consolidated cash flow statement consist of:</b>		
Interest rate funds	56,401	66,935
Cash and short-term deposits	6,518	27,987
<b>Total</b>	<b>62,919</b>	<b>94,922</b>

Fair value of cash and cash equivalents does not significantly differ from the carrying amount.

# Notes to the Consolidated Financial Statements

## 22. ISSUED CAPITAL AND RESERVES

	Shares 1000 PCS	Share premium 1000 EUR	Premium fund 1000 EUR	Invested non- restricted equity fund 1000 EUR	Total 1000 EUR
On December 31, 2016	35,693	12,941	0	25,953	38,894
On December 31, 2017	35,693	12,941	0	25,953	38,894

### Shares and the Share Capital

The shares of Bittium Corporation are listed on the NASDAQ OMX Helsinki Ltd. The Corporation has one series of shares. All the shares entitle their holders to dividends of equal value. Each share has one vote. The share does not have a nominal value. The Company's shares have been entered into the Finnish Central Securities Depository Ltd's book-entry securities system.

At the end of the financial period, the fully paid share capital of the Company entered into the Finnish Trade Register was EUR 12,941,269.00 and the total number of the shares was 35,693,166. The accounting per value of the Company's share is EUR 0.10. The Company is not in the possession of its own shares.

### Translation Differences

The translation reserve comprises all foreign exchange differences arising from the transition of the financial statements of foreign subsidiaries.

### Dividends

The Board of Directors proposes that the Annual General Meeting resolve to pay EUR 0.30 of dividend per share based on the adopted balance sheet for the financial period of January 1, 2017–December 31, 2017.

### 23. SHARE-BASED PAYMENT PLANS

During the financial year 2017 the group has paid 40 percent of total remuneration of the Board of Directors of Bittium Plc by the shares of Bittium. The shares were acquired from the stock exchange. The main terms of the remuneration arrangement are presented in the table below.

#### Share-based remuneration of the board of directors

Form of the reward	Shares
Grant date	5.5.2017
Total amount of the executed shares	10,125
Share price at the grant date, EUR	6.39
Total expenses of the reward, EUR million	0.1
Vesting conditions	Ownership of the shares was transferred to the recipients at once but the recipients have agreed the lock-up undertaking until the membership in the board have ceased.
Execution	In shares

### 24. PROVISIONS

1000 EUR	Guarantee provisions	Others	Total
Dec 31, 2016	1,033	1,245	2,278
Increase in provisions	640		640
Utilized provisions	-320	-180	-500
Reversal of utilized provisions	-275	-1,000	-1,275
<b>Dec 31, 2017</b>	<b>1,077</b>	<b>66</b>	<b>1,143</b>
Current provisions	1,077	66	1,143
<b>Total</b>	<b>1,077</b>	<b>66</b>	<b>1,143</b>

Reversal of 1M€ in other reserves relates to discontinued operations, further disclosed in the note 2.

# Notes to the Consolidated Financial Statements

## 25. FINANCIAL LIABILITIES

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
<b>Non-current loans</b>		
Bank loans		1,325
Finance lease liabilities	484	631
<b>Total</b>	<b>484</b>	<b>1,956</b>
<b>Current loans</b>		
Finance lease liabilities	720	825
Repayments of non-current bank loans	5	372
<b>Total</b>	<b>725</b>	<b>1,198</b>
Repayment schedule of long-term loans:		
2018		743
2019	363	411
2020	104	327
2021	14	
Later	3	475
<b>Total</b>	<b>484</b>	<b>1,956</b>

The interest-bearing non-current loans are distributed by currency as follows:

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
EUR	484	1,956
<b>Total</b>	<b>484</b>	<b>1,956</b>

The interest-bearing current loans are distributed by currency as follows:

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
EUR	725	1,198
<b>Total</b>	<b>725</b>	<b>1,198</b>

Maturities of the finance lease liabilities:

<b>1000 EUR</b>	<b>Dec. 31, 2017</b>	<b>Dec. 31, 2016</b>
Finance lease liabilities - minimum lease payments	1,236	1,501
Within one year	743	857
After one year but no more than five years	493	645
After five years	0	0
Finance lease liabilities - Present value of minimum lease payments	1,204	1,456
Within one year	720	825
After one year but no more than five years	484	631
After five years	0	0
Future finance charges	32	46
Total amount of finance lease liabilities	1,236	1,501

# Notes to the Consolidated Financial Statements

## 26. CHANGES IN LIABILITIES ARISING FROM FINANCING ACTIVITIES

1000 EUR	Jan. 1, 2017	Cash flows	New leases	Dec 31, 2017
Current interest-bearing loans and borrowings (excl. items listed below)	374	-374		0
Obligations under finance leases and hire purchase contracts	1,456	-1,010	758	1,204
Non-current interest-bearing loans and borrowings	1,323	-1,323		0
<b>Total liabilities from financing activities</b>	<b>3,154</b>	<b>-2,707</b>	<b>758</b>	<b>1,204</b>

## 27. TRADE AND OTHER PAYABLES

1000 EUR	31.12.2017	31.12.2016
<b>Non-current liabilities</b>		
<b>Other non-current liabilities, non-interest bearing</b>		
Non-current advances received	190	102
Other non-current liabilities, non-interest bearing	488	500
<b>Total</b>	<b>678</b>	<b>602</b>
<b>Current liabilities</b>		
<b>Trade and other payables</b>		
Trade liabilities	9,162	3,711
Accrued liabilities, deferred income	6,023	6,643
Other liabilities	3,116	5,822
<b>Total</b>	<b>18,302</b>	<b>16,176</b>
Material of accrued expenses and deferred income consist of personnel expenses and other accruals.		
Fair value of the other liabilities than derivatives doesn't significantly differ from the initial carrying value, because the impact on discounting is not significant when taking into account the maturities of the loans.		
<b>Financial liabilities at fair value through profit or loss</b>		
Liabilities based on derivatives		
Balance sheet value on Jan. 1	6	0
Changes in fair value	-6	6
<b>Balance sheet value at the end of the period</b>	<b>0</b>	<b>6</b>

## 28. FINANCIAL RISK MANAGEMENT

Under its normal business activities, Bittium Corporation is exposed to several financial risks. The primary financial risks are foreign exchange rate risk, interest rate risk, investment risk and default risk. The goal of the Group's financial risk management function is to reduce adverse effects of price fluctuations and other uncertainties on earnings, balance sheet and cash flows as well as to ensure sufficient liquidity. In its risk management, the Group uses financial instruments such as forward exchange agreements and interest rate swaps. External professional portfolio managers are employed for investing activities.

The Group's general risk management principles are approved by the Board of Directors. The responsibility for their implementation lies with the group finance department together with operational units. The Group finance department identifies and assesses risks and obtains relevant financial instruments for hedging them in close co-operation with the operative units. Management evaluates risk concentrations from the viewpoint of business activities, taking into consideration shared factors between underlying variables such as those arising from changes in economic conditions or other variables. Operations and funding programs executed in the financial markets are mainly concentrated into the parent company. Subsidiaries are mainly funded through intra-Company loans and Group account overdraft credit limits.

The Group's financial risks are divided into market, default and liquidity risk.

### Market Risks

Market risks are caused by changes in foreign exchange rates, interest rates and the price of securities. Fluctuations in these may have an impact on the Group's income statement, cash flow or balance sheet.

### Foreign Exchange Rate Risk

The Group operates globally and is exposed to transaction risk from foreign exchange positions as well as to risks due to the translation of investments in different currencies to the functional currency of the parent company. The most relevant currencies for the Group are the Euro and the US dollar. Foreign exchange rate risk is caused by commercial activities, monetary items on the balance sheet and net investments in foreign subsidiaries. A business unit's functional currency or generally used currencies (EUR, USD) are used as invoicing currency. Additional information on functional currency and foreign currency conversion is available in the accounting principles section of the consolidated financial statements.

The Group follows a currency strategy that aims at securing the margin of business activities in changing market conditions by minimizing the effect of fluctuations in foreign exchange rates. According to the principles of the currency strategy, surely considered and the most probable net cash flow in a particular currency is hedged as net position. The cash flow is defined based on the net position of the trade receivables, trade payables, order intake and forecasted net currency cash flow. According to the currency strategy the degree of hedging can vary from approximately 50 percent to 100 percent of the forecasted net position when net position exceeds EUR 1 million. The Group could also apply hedge accounting as defined in the IAS 39 standard. Hedge accounting was not applied during 2017. At the end of the financial period the counter value of the hedged net position was EUR 0.0 million. During the financial year the amount of the hedged position has been changing between EUR 0.0–5.0 million.

The Group has hedged the transaction risk related to its income statement and the translation risk related to equity on the balance sheet or economic risk has not hedged. Foreign currencies denominated equities of foreign subsidiaries on December 31, 2017 was EUR 2.0 million (EUR 3.2 million in 2016) from which dollar denominated equities of foreign subsidiaries was EUR 1.0 million (EUR 1.8 million in 2016).

## Notes to the Consolidated Financial Statements

On the closing date, the Group had the following foreign exchange derivative contract nominal amounts outstanding (the nominal amounts do not represent the amounts exchanged by the parties):

1000 EUR	2017	2016
Forward contracts		
Market value		-6
Nominal value		5,000

Dollar denominated assets and liabilities translated to euros using the closing date's value:

1000 EUR	2017	2016
Long-term assets	0	1
Long-term liabilities	0	759
Current assets	1,809	2,676
Current liabilities	848	111

The table below describes the 10 percent appreciation or depreciation of the Euro against the US dollar, other variables remaining constant. The sensitivity analysis is based on foreign currency denominated assets and liabilities as of the closing date. The change in dollar denominated trade receivables and debt would primarily have been due to fluctuations in the foreign exchange rate.

1000 EUR	Changes in income statement before tax		Changes in equity before tax	
	2017	2016	2017	2016
EUR appreciates	-100	-200	-100	-200
EUR depreciates	100	200	100	200

### Interest Rate Risk

Part of the Group's debt is tied to fixed interest rates.

At the closing date, the Group had the following fixed interest rate debts outstanding:

1000 EUR	2017	2016
Fixed interest rate debts	1,209	2,063

The table below describes the interest rate risk of debts should there have been a  $\pm 1$  percent change in interest rates of short term reference interest rate debts, other variables remaining constant. The figures presented indicate the change in yearly interest expense calculated using the average amount of debt during the financial period.

1000 EUR	Changes in income statement before tax		Changes in equity before tax	
	2017	2016	2017	2016
Loan stock January, 1	3,200	1,400		
Loan stock December, 31	1,200	3,200		
Average loan stock	2,200	2,300		
Change in interest	+/- 0	+/- 0	+/- 0	+/- 0

### Market Risk of Investment Activities

The Group's interest investments result in interest rate exposure, but their effect is not considered significant. The Group's revenue and operative cash flows are mainly independent of market rate fluctuations.

The Group invests in low-risk interest rate funds and therefore it has not been exposed to security price risk of fluctuations in the stock markets. According to the Group's principles, investments related to cash management are made in liquid and low-risk money market or bond instruments

and thus have not been hedged using derivatives.

The table below describes the distribution of investments in securities at the closing date.

	2017	2016
Stock shares	0.0 %	0.0 %
Bonds	64.1 %	65.2 %
Money market investments	35.9 %	34.8 %
<b>Total</b>	<b>100.0 %</b>	<b>100.0 %</b>

## Notes to the Consolidated Financial Statements

The combined value of the above instruments during the financial period has ranged from approximately EUR 56.4 to EUR 67.4 million. At closing date their value was approximately EUR 56.4 million. This risk concentration has been managed by investing in well spread and low-risk money market funds.

The table below describes the price risk of the investments if they had exhibited a  $\pm 1$  percent change in a market rate of interest, other variables remaining constant. Financial assets that are recognized at market value in the income statement affect net income. Changes in the value of for-sale financial assets affect equity. In the calcula-

tions it is presumed that the Group's investments change with the interest rate level in question. The sensitivity analysis describes the total market risk of investment activity because all investments are in the interest rate instruments.

1000 EUR	Changes in income statement before tax		Changes in equity before tax	
	2017	2016	2017	2016
Interest investments	+/- 400	+/- 400	+/- 400	+/- 400

### Default Risk

Group's credit risks are mainly related to accounts receivable, cash, financial investments and derivatives used in hedging. In its deposit, financial investment and hedging activities Bittium operates only with well-known partners who have good credit rating.

About 84 percent of the Group's trade receivables are from ten customers. The other trade receivables are distributed among a wide customer base and across several geographical areas. Credit risk is mitigated for example by documentary credits or bank guarantees when needed. Default risk concentration is mainly assessed as a single customer's share of total trade receivables but also according to the receivable's date of maturity.

Bittium's significant default risk concentration is EUR 0.7 million which represents approximately 5.1 percent of the total accounts receivable.

During the past financial year the amount of recognized credit losses was approximately EUR 0.0 million (EUR 0.0 million in 2016). The amount of loans granted to affiliated company were EUR 0.1 million at the

end of 2017 (EUR 0.0 million in 2016). Group did not have capital loans granted outside of the Group at the end of 2017 (EUR 0.0 million in 2016).

The amount of the Group's counterparty default risk is consistent with the book value of financial assets at the closing date. For the maturity distribution of trade receivables, see note 19.

### Liquidity Risk

The Group and business segments strive to continuously evaluate and monitor the amount of liquid funds needed for business operations and loan repayments. The Group strives to guarantee the availability and flexibility of financing by its strong financial position and liquid investments. The Group has also EUR 10.0 million credit facility agreement with Nordea Bank AB, Finland branch and EUR 10.0 million credit facility agreement with OP Corporate Bank Plc. From these agreements, intended for general financing purposes, EUR 10.0 million are valid until December 31, 2018 and EUR 10.0 million until December 31, 2019. The agreements include conventional covenants that are, among others, related to equity ratio, transfer and pledge of the assets. These credit facilities were in use EUR

0.0 million at the end of the reporting period. For the maturity distribution of the Group's debt, see note 25.

### Capital Structure Management

The Group strives to optimize its capital structure and thus support business activities by ensuring normal operating conditions under all circumstances. An optimal capital structure also ensures that the cost of capital is minimized.

The capital structure is affected by dividend policy and share issuance. The Group can alter and adjust dividends paid to shareholders as well as share repurchases. The Group can also alter and adjust the amount of shares issued, or make decisions on the sale of assets.

The management has continuously monitored the development of the Group's net gearing and solvency ratio. The Group's interest bearing net debt at the end of 2017 was EUR -61.7 million (EUR -91.8 million in 2016) and net gearing was -52.9 percent (-70.3 percent in 2016). The Group's solvency ratio at the end of 2017 was 85.6 percent (87.0 percent in 2016).

### Fair Values of Financial Assets and Liabilities

This section presents the Group's fair valuing principles for all financial instruments. The table below presents book values for each item in detail. Their fair values are not considered to materially differ from the book values presented in the consolidated balance sheets.

1000 EUR	Note	Book value 2017	Fair value 2017	Book value 2016	Fair value 2016
Financial assets					
Other financial assets	16	112	112	132	132
Trade receivables and other receivables	19	18,151	18,151	24,018	24,018
Financial assets at fair value through profit or loss	20	56,401	56,401	66,935	66,935
Cash and cash equivalents	21	6,518	6,518	27,987	27,987
Financial liabilities					
Bank loans	25	5	5	1,698	1,698
Finance lease liabilities	25	1,204	1,204	1,456	1,456
Trade payables and other debts	17, 24, 26	20,500	20,500	19,518	19,518
Currency forwards	27			6	6

#### Investments in Shares and Funds and Other Investments

For-sale financial assets consist mainly of money market investments that fair values are based on the quotes of the closing day (IFRS 7 fair value hierarchy level 1; quoted prices (unadjusted) in active markets for identical assets or liabilities).

#### Derivatives

The fair values of forward contracts are defined based on publicly quoted currency and interest rate information and using commonly accepted valuation methods (IFRS 7 fair value hierarchy level 2; instruments whose fair value is observable either directly (i.e. as prices) or indirectly (i.e. derived from prices)). These calculations have been carried out by an outside professional party.

#### Bank Loans

Book values are considered to closely approximate fair values.

#### Finance Lease Liabilities

Book values are considered to closely approximate fair values.

#### Trade Receivables and Other Receivables

The original book value of receivables is considered to equal their fair values, since the effect of discounting is non-significant considering the maturities of the receivables.

#### Trade Payables and Other Debts

The original book value of payables and other debts is considered to equal their fair values, since the effect of discounting is non-significant considering the maturities of the receivables.

# Notes to the Consolidated Financial Statements

## 29. ADJUSTMENTS TO NET CASH FROM OPERATING ACTIVITIES

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
Business transactions without payments		
Depreciations	3,902	3,263
Share of profits in associated companies	-39	
Employee benefits		246
Other adjustments	-1,673	-1,076
<b>Total</b>	<b>2,189</b>	<b>2,434</b>

## 30. OPERATING LEASE AGREEMENTS

### The Group as lessee

The total of future minimum lease payments under non-cancellable operating leases for each of the following periods:

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
Not later than one year	516	2,169
Later than one year and not later than five years	914	222
After five years	63	

The Group owns its facilities in Oulu and Kuopio. The facilities in other locations are rented. In average the maturities of the lease agreements are from 1 month to 5 years and normally they include an option to extend the rental period from originally agreed end date.

### The Group as lessor

The Group has leased the excess office and production facilities with lease agreements valid until further notice. These agreements have been released at the end of year 2017.

**31. SECURITIES AND CONTINGENT LIABILITIES**

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
Against own liabilities		
Floating charges	1,000	3,607
Guarantee limits at the maximum	10,217	2,281
Other contractual liabilities		
Falling due in the next year	1,884	2,078
Falling due after one year	995	33
Mortgages are pledged for liabilities totaled		
Loans from financial institutions		3,216
Other liabilities (guarantees issued)	1,201	
Material purchase commitments	9,882	3,603

**32. RELATED PARTY DISCLOSURES**

The Group has the following structure:

	Country of incorporation	Owned by Parent %	Owned by Group %
<b>Parent</b>			
Bittium Oyj	Finland		
<b>Subsidiaries</b>			
Bittium Technologies Oy	Finland	100.00	100.00
Bittium Wireless Oy	Finland	0.00	100.00
Bittium Safemove Oy	Finland	0.00	100.00
Bittium Biosignals Oy	Finland	0.00	100.00
Bittium Medanalytics Oy	Finland	0.00	100.00
Kiinteistöosakeyhtiö Oulun Ritaharjuntie 1	Finland	0.00	100.00
Bittium Germany GmbH i.G.	Germany	0.00	100.00
Bittium Mexico S.A. de C.V.	Mexico	0.00	100.00
Bittium USA, Inc.	USA	0.00	100.00
Bittium Technology (Beijing) Co. Ltd	China	0.00	100.00
Bittium Singapore Pte. Ltd	Singapore	0.00	100.00

Information on the associated companies is presented in the note no. 15.

**Related party transactions and balances:**

1000 EUR	2017
Associated companies	
Net sales	172
Receivables	336

# Notes to the Consolidated Financial Statements

1000 EUR	2017	2016
<b>Employee benefits for key management</b>		
Salaries and remuneration		
Managing director of the parent		
Hannu Huttunen 1.1.–31.12.2016, 1.1.–31.12.2017	214	214
<b>Total</b>	<b>214</b>	<b>214</b>
Remuneration of the members of the board of the parent, the financial committee and the managing directors of the business segments		
Staffan Simberg 1.1.–31.12.2016, 1.1.–31.12.2017	18	21
Erkki Veikkolainen 1.1.–31.12.2016, 1.1.–31.12.2017	25	31
Kirsi Komi 1.1.–31.12.2016, 1.1.–31.12.2017	17	20
Juha Putkiranta 1.1.–31.12.2016, 1.1.–31.12.2017	14	18
Seppo Mäkinen 1.1.–31.12.2016, 1.1.–31.12.2017	14	18
Tero Ojanperä 1.4.–31.12.2017	10	
<b>Total</b>	<b>99</b>	<b>107</b>
<b>Members of the group executive board</b>	<b>804</b>	<b>929</b>
<b>Share-based incentives</b>		
Board of Directors	66	54
Managing Director		66
Members of the Group executive board		180
<b>Total</b>	<b>66</b>	<b>300</b>

There have not been any business transactions or open balances between the related parties.

#### Loans and guarantees to related party

There are no loans or guarantees granted between the related parties.

### 33. SIGNIFICANT EVENTS DURING THE REPORTING PERIOD

On July 6, 2017 Bittium announced that the Finnish Minister of Defence Jussi Niinistö had authorized Finnish Defence Forces to purchase Bittium Tactical Wireless IP Network (TAC WIN) system products. Bittium and Finnish Defence Forces plan to sign a Framework Agreement for the delivery of Bittium TAC WIN products, that covers years 2018–2020, with the total value of the agreement being EUR 30 million (excl. VAT) if materialized in full. According to the Framework Agreement, Finnish Defence Forces would issue separate purchase orders for the products each year. The Framework Agreement did not change Bittium's financial outlook for the year 2017.

The Framework Agreement was told to be a continuation to the long cooperation between the Finnish Defence Forces and Bittium. It will continue the renewal of the Finnish Defence Forces' command, control and communications system, where the Software-Defined Radio based Bittium TAC WIN system acts as the backbone for tactical data transfer. The Framework Agreement was signed on August 9, 2017.

On August 8, 2017 Bittium announced that Bittium Wireless Ltd, a subsidiary of Bittium Corporation, and the Finnish Defence Forces have signed a Letter of Intent concerning the purchase of new software defined radio (SDR) based tactical radios and the preparations of the purchase. The Letter of Intent encompasses products belonging to the new Bittium Tough SDR product family: tactical handheld radio Bittium Tough SDR Handheld and tactical vehicular radio Bittium Tough SDR Vehicular. According to the Letter of Intent, Bittium will develop the products with their own R&D investments and the Finnish Defence Forces will support the development work by ensuring that the

products are suitable for their purposes and by making preparations for the purchase of the products.

The Letter of Intent does not bind the parties into making a purchase agreement. Making the purchase agreement requires that the Finnish Ministry of Defence first authorizes the purchase, based on which Bittium and the Finnish Defence Forces would then make a separate purchase agreement. Based on the Letter of Intent, if materialized in full, the total value of the purchase agreement would be approximately EUR 130 million distributed over about 10 years. The Letter of Intent is in force until the binding purchase agreement comes into effect or until December 31, 2019. Should the purchase materialize in full, it would have a significant impact on Bittium's net sales from the year 2019 onward. The Letter of Intent did not change Bittium's financial outlook for the year 2017. The Letter of Intent continues the long-term cooperation between the Finnish Defence Forces and Bittium in developing the performance of the command and control (C2) systems and the supporting software defined radio technology of the Finnish Defence Forces.

On October 10, 2017 Bittium Corporation lowered its financial guidance for the year 2017. The reason for this was the delay in the first phase of the product deliveries for the Mexican Mexsat satellite phone system, to be mainly executed in 2018 due to the internal reasons of Mexican governmental customers. Bittium had expected earlier those product deliveries to be executed during the second half of 2017.

Bittium announced that it expects that the net sales in 2017 will be lower than in the previous year (EUR 64.2 million, in 2016).

The operating result was expected to be clearly negative (EUR 2.5 million, in 2016). In the Half Year Financial Report January-June 2017, published on August 9, 2017 Bittium still expected that the net sales in 2017 will be at the same level as in the previous year (EUR 64.2 million, in 2016) and the operating result to be negative (EUR 2.5 million, in 2016).

The decline in the amount of the product deliveries of the Mexsat mobile devices in 2017 did not change Bittium's long-term growth outlook. The year 2017 had already been expected to be challenging mainly due to the termination of significant customer cooperation with a global network equipment manufacturer.

# Notes to the Consolidated Financial Statements

## 34. SUBSEQUENT EVENTS

The Group management is not aware of any significant events after balance sheet date, that would have had impact on the consolidated financial statements.

## 35. KEY RATIOS

	IFRS 2017	IFRS 2016	IFRS 2015	IFRS 2014	IFRS 2013
	Continuing operations	Continuing operations	Continuing operations	Continuing operations	
<b>INCOME STATEMENT, MEUR</b>					
Net sales, MEUR *)	51.6	64.2	56.8	52.7	199.3
Net sales change, %	-19.6	13.0	7.8		14.6
Operating profit/loss, MEUR *)	-6.2	2.5	2.3	0.8	8.1
% of net sales	-12.0	4.0	4.1	1.5	4.1
Profit/loss for continuing operations before taxes, MEUR	-5.8	3.1	2.1	0.6	7.2
% of net sales	-11.3	4.9	3.7	1.2	3.6
Profit for the year from continuing operations, MEUR	-4.8	3.5	2.3	1.3	6.7
% of net sales	-9.2	5.5	4.1	2.4	3.3
Profit after tax for the year from discontinued operations, MEUR	1.7	0.0	539.0	11.2	24.3
% of net sales	3.2	0.0	948.7	21.3	12.2
Profit for the year attributable to equity holders of the parent, MEUR	-3.1	3.5	541.3	12.5	30.9
% of net sales	-6.0	5.5	952.8	23.7	15.5
<b>BALANCE SHEET, MEUR</b>					
Non-current assets	46.7	30.3	14.4	48.8	46.1
Inventories	10.6	4.1	2.2	2.2	0.8
Current assets	81.1	118.9	142.8	115.8	97.4
Shareholders' equity	116.7	130.6	137.6	93.4	81.7
Non-current liabilities	1.5	3.1	2.0	7.6	6.1
Current liabilities	20.2	19.6	19.8	65.8	56.5
Balance sheet total	138.4	153.3	159.4	166.8	144.4
<b>PROFITABILITY AND OTHER KEY FIGURES</b>					
Return on equity % (ROE) *)	-3.9	2.6	2.0		9.0
Return on investment % (ROI) *)	-4.5	2.6	2.5		9.2
Interest-bearing net liabilities, (MEUR)	-61.7	-91.8	-121.4	-35.0	-37.7
Net gearing, %	-52.9	-70.3	-88.2	-37.4	-46.1
Equity ratio, %	85.6	87.0	90.5	62.3	65.1
Gross investments, (MEUR) *)	20.1	18.5	7.4	4.5	7.9
Gross investments, % of net sales	38.8	28.8	13.1	8.5	4.0
R&D costs, (MEUR) *)	15.0	6.9	7.3	6.9	18.5
R&D costs, % of net sales	29.1	10.8	12.9	13.0	9.3
Average personnel during the period, parent and subsidiaries *)	614	569	511	486	1627
Average personnel during the period, jointly owned company					300

\*) Continuing operations. Excluding Automotive business income statements from periods 1.1.–1.7.2015 and 2014.

\*) Comparable key figures for 2014 N/A

	IFRS 2017	IFRS 2016	IFRS 2015	IFRS 2014	IFRS 2013
<b>STOCK-RELATED FINANCIAL RATIOS</b>					
Earnings per share from continuing operations, EUR					
Basic earnings per share	-0.133	0.098	0.020	0.010	0.051
Diluted earnings per share	-0.133	0.098	0.020	0.010	0.051
Earnings per share from discontinued operations, EUR					
Basic earnings per share	0.046	0.000	4.687	0.086	0.188
Diluted earnings per share	0.046	0.000	4.685	0.085	0.187
Earnings per share from continuing and discontinued operations, EUR					
Basic earnings per share	-0.087	0.098	4.708	0.096	0.239
Diluted earnings per share	-0.087	0.098	4.706	0.095	0.238
Equity per share, EUR					
Dividend per share EUR *)	0.3	0.3	0.3	0.04	0.02
Dividend per earnings, %	-344.6	305.3	6.4	42.7	38.9
P/E ratio	-64.9	57.7	344.3	35.9	51.8
Effective dividend yield, %	5.3	5.3	4.3	1.2	0.8
Market values of shares (EUR)					
Highest	7.88	7.40	7.80	3.83	2.90
Lowest	5.55	5.15	3.27	2.30	0.64
Average	6.55	6.05	4.92	2.85	1.55
At the end of period	5.65	5.67	7.01	3.36	2.66
Market value of the stock, (MEUR)					
Trading value of shares	201.7	202.4	249.6	441.8	346.1
MEUR					
1000 PCS	83.1	126.4	837.1	188.0	72.0
Related to average number of shares %	12,684	20,888	169,993	66,019	46,483
Adjusted number of the shares at the end of the period (1000 PCS)	35.5	58.6	147.8	50.4	35.9
Adjusted number of the shares average for the period (1000 PCS)	35,693	35,693	35,600	131,493	130,101
Adjusted number of the shares average for the period (1000 PCS)	35,693	35,670	114,983	130,975	129,528
Adjusted number of the shares average for the period diluted with stock options (1 000 PCS)	35,693	35,670	115,037	131,663	130,092

\*) Proposal of the BoD for 2017

# Notes to the Consolidated Financial Statements

## CALCULATION OF KEY RATIOS

<b>Return on equity % (ROE)</b>	=	$\frac{\text{Profit for the year} \times 100}{\text{Total equity (average for the accounting period)}}$
<b>Return on investment % (ROI)</b>	=	$\frac{\text{Profit before tax} + \text{interest and other financial expenses} \times 100}{\text{Balance sheet total} - \text{interest-free liabilities (average for the accounting period)}}$
<b>Net gearing, %</b>	=	$\frac{\text{Interest-bearing liabilities} - \text{cash and cash equivalents} \times 100}{\text{Total equity}}$
<b>Equity ratio, %</b>	=	$\frac{\text{Total equity} \times 100}{\text{Balance sheet total} - \text{advances received}}$
<b>Earnings per share</b>	=	$\frac{\text{Profit attributable to equity holders of the parent}}{\text{Share issue adjusted number of the shares average for the period}}$
<b>Equity per share</b>	=	$\frac{\text{Equity attributable to equity holders of the parent}}{\text{Share issue adjusted number of the shares at the end of the period}}$
<b>Dividend per share</b>	=	$\frac{\text{Dividend for the period (Board's proposal) per share}}{\text{Adjustment coefficient of post-fiscal share issues}}$
<b>Dividend per earnings, %</b>	=	$\frac{\text{Dividend per share} \times 100}{\text{Earnings per share}}$
<b>P/E ratio</b>	=	$\frac{\text{Share issue adjusted share price at the end of the period}}{\text{Earnings per share}}$
<b>Effective dividend yield, %</b>	=	$\frac{\text{Dividend per share} \times 100}{\text{Share issue adjusted share price at the end of the period}}$

### 36. SHAREHOLDINGS AND SHARES

#### Breakdown of Shares by Shareholding, December 29, 2017

Number of shares	Number of shareholders	Percentage of shareholders	Number of shares	Percentage of shares and votes
1 - 100	9,261	42.1	438,244	1.2
101 - 500	7,086	32.2	1,883,763	5.3
501 - 1000	2,332	10.6	1,844,561	5.2
1001 - 5000	2,516	11.4	5,680,289	15.9
5001 - 10000	409	1.9	3,005,057	8.4
10001 - 50000	322	1.5	6,586,820	18.5
50001 - 100000	30	0.1	2,064,955	5.8
100001 - 500000	20	0.1	4,555,323	12.8
500001 - 999999999999	9	0.0	9,634,154	27.0
<b>Total</b>	<b>21,985</b>	<b>100.0</b>	<b>35,693,166</b>	<b>100.0</b>
nominee-registered	8		1,009,639	2.8

#### Breakdown of Shareholders by Shareholder Type, December 29, 2017

Shareholders by shareholder type	Number of shareholders	Percentage of shareholders	Number of shares	Percentage of shares and votes
Corporations	506	2,3	3,072,968	8.6%
Financial sector	9	0,0	1,409,910	4.0%
Public sector	5	0,0	3,208,121	9.0%
Non-profit organizations	31	0,1	189,442	0.5%
Households	21,353	97,1	26,635,930	74.6%
Foreign owners	73	0,3	167,156	0.5%
Nominee-registered shares	8	0,0	1,009,639	2.8%
<b>Total</b>	<b>21,985</b>	<b>100,0</b>	<b>35,693,166</b>	<b>100.0%</b>

# Notes to the Consolidated Financial Statements

## Largest Shareholders, December 29, 2017

	Number of shares	Percentage of shares and votes
<b>Number of shares total</b>	<b>35,693,166</b>	<b>100.0</b>
1. Hulkko Juha	1,506,955	4.2
2. Veikkolainen Erkki, Chairman of the Board	1,505,025	4.2
3. Ponato Oy	1,501,300	4.2
4. Varma Mutual Pension Insurance Company	1,365,934	3.8
5. Ilmarinen Mutual Pension Insurance Company	1,296,529	3.6
6. Nordea Bank AB (PUBL), Finnish Branch	725,029	2.0
7. Hilden Kai	658,000	1.8
8. Fondita Nordic Micro Cap Placeringsfund	567,000	1.6
9. EVLI Finnish Small Cap (fund)	508,382	1.4
10. ELO Mutual Pension Insurance Company	500,000	1.4
<b>Total</b>	<b>10,134,154</b>	<b>28.4</b>
Others (incl. nominee-registered shares)	25,559,012	71.6

## The Board and CEO

Veikkolainen Erkki, Chairman of the Board	1,505,025	4.2
Komi Kirsi, Member of the Board	3,618	0.0
Mäkinen Seppo, Member of the Board	2,871	0.0
Ojanperä Tero, Member of the Board	1,500	0.0
Putkiranta Juha, Member of the Board	12,871	0.0
Simberg Staffan, Member of the Board*	52,871	0.1
Huttunen Hannu, CEO	10,000	0.0
<b>Total</b>	<b>1,588,756</b>	<b>4.5</b>

\* Including the shareholdings of a company controlled by Staffan Simberg.

# Income Statement, Parent

1000 EUR	Notes	2017	2016
<b>NET SALES</b>	1, 2	<b>764</b>	<b>974</b>
Other operating income	3	1,379	1
Personnel expenses	4	-926	-1,193
Depreciation and reduction in value	5	-9	-3
Other operating expenses	6	-910	-1,222
<b>OPERATING PROFIT</b>		<b>297</b>	<b>-1,443</b>
Financial income and expenses	7	813	904
<b>PROFIT (LOSS) BEFORE APPROPRIATIONS AND TAXES</b>		<b>1,110</b>	<b>-539</b>
<b>APPROPRIATIONS</b>	8	<b>540</b>	<b>4,000</b>
<b>PROFIT (LOSS) BEFORE APPROPRIATIONS AND TAXES</b>		<b>1,650</b>	<b>3,461</b>
<b>NET PROFIT FOR THE FINANCIAL YEAR</b>		<b>1,650</b>	<b>3,461</b>

## Balance Sheet, Parent

1000 EUR	Notes	Dec. 31, 2017	Dec. 31, 2016
<b>ASSETS</b>			
Non-current assets			
Intangible assets	9	68	48
Tangible assets	10	73	73
Investments	11	39,750	39,750
Non-current assets total		39,890	39,870
Current assets			
Receivables			
Current receivables	12	37,430	19,042
Receivables total		37,430	19,042
Financing securities	13	56,401	66,935
Cash and bank deposits		3,643	20,834
Current assets total		97,474	106,811
<b>TOTAL ASSETS</b>		<b>137,364</b>	<b>146,681</b>
<b>SHAREHOLDER'S EQUITY AND LIABILITIES</b>			
Shareholder's equity			
Share capital	14	12,941	12,941
Invested non-restricted equity fund		25,953	25,953
Retained earnings		94,237	101,484
Net profit/loss for the year		1,650	3,461
Shareholders' equity total		134,782	143,840
Provisions			
Provisions, non-current	15		
Provisions, current		37	1,056
Liabilities			
Current liabilities	16	2,546	1,786
Liabilities total		2,546	1,786
<b>SHAREHOLDERS' EQUITY AND LIABILITIES TOTAL</b>		<b>137,364</b>	<b>146,681</b>

# Cash Flow, Parent

1000 EUR	2017	2016
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>		
Profit before taxes	1,650	3,461
Adjustments:		
Depreciation according to plan	9	3
Effects of non-cash business activities	-1,559	-4,232
Financial income and expenses	-813	-904
Cash flow before change in net working capital	-713	-1,672
Change in net working capital		
Change in interest-free short-term receivables	-189	-85
Change in interest-free short-term payables	241	-81
Cash flow before financing activities	-661	-1,838
Interest paid	-864	-278
Dividends received	1	0
Interest received	1,677	1,250
<b>Net cash from operating activities</b>	<b>152</b>	<b>-867</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>		
Purchase of tangible and intangible assets	-30	-51
<b>Net cash used in investing activities</b>	<b>-30</b>	<b>-51</b>
<b>CASH FLOW FROM FINANCIAL ACTIVITIES</b>		
Share option plans exercised		31
Change in interest-free short-term financial receivables in Group	-21,550	-14,102
Change in interest-free short-term financial payables in Group	410	-6,080
Received group contributions	4,000	
Dividend paid and capital repayment	-10,708	-10,708
<b>Net cash used in financial activities</b>	<b>-27,848</b>	<b>-30,860</b>
<b>NET CHANGE IN CASH AND CASH EQUIVALENTS</b>	<b>-27,725</b>	<b>-31,778</b>
Cash and cash equivalents at beginning of period	87,769	119,547
Cash and cash equivalents at end of period	60,044	87,769
Change in cash and cash equivalents in balance sheet	-27,725	-31,778

Cash and cash equivalents include liquid and low risk financing securities.

# Accounting Principles for the Preparation of Financial Statements

The financial statements have been prepared in accordance with the Finnish Accounting Act.

## Valuation Principles

### Valuation of Non-current Assets

Non-current assets are capitalized in the balance sheet at the original acquisition cost deducted by accumulated depreciation. Depreciations according to the plan is calculated either using the straight-line method or the reducing balance method, taking into consideration of the useful life of assets.

The depreciation periods are:

Intangible assets	3–10 years
Tangible assets	3–5 years

### Valuation of Financial Securities

Financial securities are valued at fair value. The fair value of forward exchange are defined based on forward exchange prices on balance sheet date and option contracts are defined based on market prices on balance sheet date.

### Pensions

The Company has organized pension coverage for its personnel through independent pension insurance companies. The pension insurance expenditures are included into personnel expenses.

### Leasing Agreements

Leasing agreements and fixed-term rental agreements are reported as contingent liabilities off the balance sheet.

### Income Tax

Taxes of the financial year have been reported in the income statement as income taxes. Deferred tax or liabilities or receivables has not been recorded on the financial statement.

### Foreign Currency Items

The transactions in the income statement have been converted into euro using the exchange rate of the transaction date. Receivables and payables denominated in foreign currency have been converted into euro by using the exchange rate of the European Central Bank at the balance sheet date.

### Net Sales

Sales of goods is recorded when goods have been handed over to the customer or the services have been rendered. Sales are shown net of indirect sales taxes and discounts.

# Notes to the Financial Statements of the Parent Company

1000 EUR	2017	2016
<b>1. NET SALES BY SEGMENTS</b>		
Other functions	764	974
<b>Total</b>	<b>764</b>	<b>974</b>
<b>2. NET SALES BY MARKET AREAS</b>		
Europe	751	965
America	13	9
Asia	0	0
<b>Total</b>	<b>764</b>	<b>974</b>
<b>3. OTHER OPERATING INCOME</b>		
Other operating income	1,379	1
<b>Total</b>	<b>1,379</b>	<b>1</b>
<p>The other operating income includes the reversal of provisions related to the sale of Automotive segment as well as VAT returns related to sale of shares which have been returned due to changes in legal interpretation.</p>		
<b>4. NUMBER OF PERSONNEL AND PERSONNEL EXPENSES</b>		
Average number of personnel during the period		
Other functions	7	8
<b>Total</b>	<b>7</b>	<b>8</b>
Number of personnel at the end of the year		
	7	8
Personnel expenses *		
Management salaries	214	214
Board of Directors	165	162
Other salaries and wages	398	665
<b>Total</b>	<b>776</b>	<b>1 041</b>
Pension expenses	136	133
Other social expenses	14	19
<b>Total</b>	<b>926</b>	<b>1 193</b>
<p>* The amount does not include the calculatory costs of share-based compensation. This cost is shown in the consolidated financial statements according to IFRS. The Board of Directors salaries include the share-based compensation.</p>		
<b>5. DEPRECIATION AND REDUCTION IN VALUE</b>		
Intangible rights	6	2
Other capitalized long-term expenditures	2	1
Machinery and equipment	1	1
<b>Total</b>	<b>9</b>	<b>3</b>

# Notes to the Financial Statements of the Parent Company

1000 EUR	2017	2016
<b>6. OTHER OPERATING CHARGES</b>		
IT equipment and SW expenses	82	76
Premises expenses	41	42
Administrative services	488	683
Travel expenses	62	84
Voluntary staff expenses	29	39
Other business expenses	208	297
<b>Total</b>	<b>910</b>	<b>1,222</b>
Auditor's charges		
Auditing	21	13
Tax advice	7	31
Other services	6	108
<b>Total</b>	<b>33</b>	<b>151</b>
<b>7. FINANCIAL INCOME AND EXPENSES</b>		
Income of investments		
From others	811	903
<b>Total</b>	<b>811</b>	<b>903</b>
Other interest and financial income		
From Group companies	432	75
From others	428	212
<b>Total</b>	<b>861</b>	<b>286</b>
Other interest and financial expenses		
To Group companies	1	0
To others	857	285
<b>Total</b>	<b>858</b>	<b>285</b>
Reduction in value of investment	0	0
Net financial income and expenses	813	904
Net financial income and expenses includes exchange gains and losses	3	-8
<b>8. APPROPRIATIONS</b>		
Received Group contributions	540	4,000

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
<b>9. INTANGIBLE ASSETS</b>		
<b>Intangible rights</b>		
Acquisition cost Jan. 1	246	203
Investments during the period	29	44
Acquisition cost at the end of the period	275	246
Accumulated depreciations Jan. 1	-204	-203
Depreciation for the period	-6	-2
Book value at the end of the period	64	42
<b>Other capitalized long-term expenditures</b>		
Acquisition cost Jan. 1	6	
Investments during the period		6
Acquisition cost at the end of the period	6	6
Accumulated depreciations Jan. 1	-1	
Depreciation for the period	-2	-1
Book value at the end of the period	4	6
<b>Intangible assets total</b>		
Acquisition cost Jan. 1	253	203
Investments during the period	29	50
Acquisition cost at the end of the period	281	253
Accumulated depreciations Jan. 1	-205	-203
Depreciation for the period	-8	-2
Book value at the end of the period	68	48

# Notes to the Financial Statements of the Parent Company

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
<b>10. TANGIBLE ASSETS</b>		
<b>Machinery and equipment</b>		
Acquisition cost Jan. 1	4	3
Investments during the period	1	1
Acquisition cost at the end of the period	5	4
Accumulated depreciations Jan. 1	-3	-2
Depreciation for the period	-1	-1
Book value at the end of the period	2	2
<b>Other tangible assets</b>		
Acquisition cost Jan. 1	71	71
Acquisition cost Dec. 31	71	71
Book value at the end of the period	71	71
<b>Tangible assets total</b>		
Acquisition cost Jan. 1	75	74
Investments during the period	1	1
Acquisition cost at the end of the period	76	75
Accumulated depreciations Jan. 1	-3	-2
Depreciation for the period	-1	-1
Book value at the end of the period	73	73
<b>11. INVESTMENTS</b>		
<b>Investments in subsidiaries</b>		
Acquisition cost Jan. 1	39,749	39,749
Book value at the end of the period	39,749	39,749
<b>Investments in other shares</b>		
Acquisition cost Jan. 1	1	1
Book value at the end of the period	1	1
<b>Investments total</b>		
Acquisition cost Jan. 1	39,750	39,750
Book value at the end of the period	39,750	39,750

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
<b>12. CURRENT RECEIVABLES</b>		
Accounts receivable		
From Group companies	92	89
<b>Total</b>	<b>92</b>	<b>89</b>
Other receivables		
From Group companies	36,439	18,783
From others	133	162
<b>Total</b>	<b>36,572</b>	<b>18,946</b>
Prepaid expenses and accrued income		
From Group companies	540	0
From others	226	7
<b>Total</b>	<b>766</b>	<b>7</b>
<b>Current receivables total</b>	<b>37,430</b>	<b>19,042</b>
<b>13. FINANCING SECURITIES</b>		
Cash and cash equivalents include liquid and low risk financing securities		
Financial assets at fair value through profit or loss	56,401	66,935
<b>14. SHAREHOLDERS' EQUITY</b>		
Share capital at the beginning of the period	12,941	12,941
<b>Share capital at the end of the period</b>	<b>12,941</b>	<b>12,941</b>
Invested unrestricted equity fund at the beginning of the period	25,953	25,923
Share issue		31
<b>Invested unrestricted equity fund at the end of the period</b>	<b>25,953</b>	<b>25,953</b>
Retained earnings at the beginning of the period	104,945	112,192
Dividend distribution	-10,708	-10,708
Net profit for the period	1,650	3,461
<b>Retained earnings at the end of the period</b>	<b>95,887</b>	<b>104,945</b>
Distributable earnings at the end of the period	121,840	130,898
<b>Shareholders' equity total</b>	<b>134,782</b>	<b>143,840</b>

# Notes to the Financial Statements of the Parent Company

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
<b>15. PROVISIONS</b>		
Provisions		
Provisions, current	37	1,056
<b>Total</b>	<b>37</b>	<b>1,056</b>
<b>16. LIABILITIES</b>		
<b>Current liabilities</b>		
Accounts payable		
To Group companies	482	61
To others	110	35
<b>Total</b>	<b>593</b>	<b>96</b>
Other short-term liabilities		
To Group companies	1,816	1,357
To others	29	34
<b>Total</b>	<b>1,845</b>	<b>1,391</b>
Accrued expenses and deferred income		
To others	108	299
<b>Total</b>	<b>108</b>	<b>299</b>
<b>Current liabilities total</b>	<b>2,546</b>	<b>1,786</b>

1000 EUR	Dec. 31, 2017	Dec. 31, 2016
<b>17. SECURITIES AND CONTINGENT LIABILITIES</b>		
On behalf of Group companies		
Guarantee limits	10,028	1,726
of which guarantees in use total	1,155	
Leasing liabilities		
Falling due in the next year	1,053	1,230
Falling due after one year	909	1,141
Rental liabilities		
Falling due in the next year	5	13
Contractual liabilities		
Falling due in the next year	42	78
Falling due in 1-5 years	0	
<b>18. NOMINAL VALUE OF CURRENCY DERIVATES</b>		
Foreign exchange forwards		
Market value		-6
Nominal value		5,000

	Owned by Parent, %	Owned by Group, %	Book value 1000 EUR
<b>18. SHARES AND HOLDINGS</b>			
Subsidiaries			
Bittium Technologies Oy	100.00	100.00	39,749
Other holdings by Parent			
Partnera Oy			1

## Proposal by the Board of Directors on the Use of the Profit Shown on the Balance Sheet and the Payment of the Dividend

According to the parent company's balance sheet at December 31, 2017, the distributable assets of the parent company are EUR 121,840,275.23 of which the profit of the financial year is EUR 1,649,956.18.

The Board of Directors proposes that the Annual General Meeting to be held on April 11, 2018 resolve to pay EUR 0.30 per share as additional dividend based on the ad-

opted balance sheet for the financial period of January 1, 2017–December 31, 2017. The dividend will be paid to the shareholders who are registered as shareholders in the Company's register of shareholders as maintained by Euroclear Finland Ltd on the dividend record date, Friday April 13, 2018. The Board of Directors proposes that the dividend be paid on Friday April 20, 2018.

There have not been any substantial changes in the Company's financial position after the financial year. The Company has good liquidity and according to the Board of Directors, the proposed distribution of profits does not danger the Company's solvency.

In Oulu, on February 21, 2018



Erkki Veikkolainen  
Chairman of the Board



Kirsi Komi  
Member of the Board



Juha Putkiranta  
Member of the Board



Staffan Simberg  
Member of the Board



Seppo Mäkinen  
Member of the Board



Member of the Board



Hannu Huttunen  
CEO

## Auditor's Note

Our Auditor's Report has been issued today.

In Oulu, February 21, 2018

Ernst & Young Oy  
Authorized Public Accountant firm

Juhani Rönkkö, Authorized Public Accountant

# Auditor's Report

(Translation of the Finnish original)

## To the Annual General Meeting of Bittium Corporation

### Report on the Audit of Financial Statements

#### Opinion

We have audited the financial statements of Bittium Oyj (business identity code 1004129-5) for the year ended 31 December, 2017. The financial statements comprise the consolidated balance sheet, statement of comprehensive income, statement of changes in equity, statement of cash flows and notes, including a summary of significant accounting policies, as well as the parent company's balance sheet, income statement, statement of cash flows and notes.

In our opinion

- the consolidated financial statements give a true and fair view of the Group's financial position as well as its financial performance and its cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU.
- the financial statements give a true and fair view of the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements.

Our opinion is consistent with the additional report submitted to the Audit Committee.

#### Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of Financial Statements section of our report.

We are independent of the parent company and of the group companies in accor-

dance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

In our best knowledge and understanding, the non-audit services that we have provided to the parent company and group companies are in compliance with laws and regulations applicable in Finland regarding these services, and we have not provided any prohibited non-audit services referred to in Article 5(1) of regulation (EU) 537/2014. The non-audit services that we have provided have been disclosed in note 5 to the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

We have fulfilled the responsibilities described in the Auditor's responsibilities for the audit of the financial statements section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis

for our audit opinion on the accompanying financial statements.

We have also addressed the risk of management override of internal controls. This includes consideration of whether there was evidence of management bias that represented a risk of material misstatement due to fraud.

#### Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, and of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. 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 financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the parent company's and the Group's ability to continue as going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the Group or cease operations, or there is no realistic alternative but to do so.

**KEY AUDIT MATTER****Revenue Recognition**

*We refer to the Group's accounting policies and to the note 3*

Fixed price contracts in long-term construction contracts are part of the Group's business practice. These projects constitute a significant portion of the consolidated net sales. In the financial statements for 2017 the revenue recognized from these projects was 13.5 million euro, which is 26 percentage of the total net sales. The Group applies the percentage of completion method for recognizing revenue from long-term construction contracts, which involves the use of significant management estimates. E.g. the following estimates include significant management judgement for each project: stage of completion, total contract costs and the project margin. The financial outcome of a project is based on the estimates made by the management and will come more accurate when the project advances.

In the Group net sales a key performance indicator, which might generate an incentive to prematurely recognition of revenue. Revenue recognition was determined to be a key audit matter and a significant risk of material misstatement referred to in EU Regulation No 537/241, point (c) of Article 10(2), because of the risk related to correct timing of revenue.

**Development expenses**

*Reference: Accounting principles and notes 6, 8 and 13*

Development projects with significant size are constantly ongoing in the Group. As of 31.12.2017 the carrying value of the development expenses was 11.9 million euro, which is 9 percentage of the total assets and 10 percentage of the equity.

As part of the accounting process for the R&D expenses the management makes assumptions and estimates that has an effect on the carrying values and depreciation methods of R&D expenses.

Development expenses was determined to be a key audit matter and a significant risk of material misstatement referred to in EU Regulation No 537/241, point (c) of Article 10(2), because of the above mentioned reasons there might be risk of material misstatement in the accounting of R&D expenses.

**HOW OUR AUDIT ADDRESSED THE KEY AUDIT MATTER**

Our audit procedures in which risk of material misstatement on revenue recognition has been taken into account included, among other:

- tests of the accounting principles of the Group on revenue recognition and comparing them with the applied accounting standards;
- examination of the nature of revenue, stage of completion and financial contract terms behind the revenue recognized in the long-term projects;
- tests of revenue recognition, which included testing of the calculations and the estimates used in the revenue recognition;
- analytical procedures on revenue and
- tests of the notes of revenue recognized.

Our audit procedures in which risk of material misstatement on development expenses has been taken into account included, among other:

- tests of the costs capitalized and of the calculations prepared for depreciations;
- tests of the production estimations made by the management;
- tests of the financial profit expectations made by the management for the products developed;
- tests of the notes of development expenses.

## Auditor's Responsibilities for the Audit of Financial Statements

Our objectives are to obtain reasonable assurance on whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with good auditing practice will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, indi-

vidually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not de-

tecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the parent company's or the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness

of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the parent company's or the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear

on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

## Other Reporting Requirements

### Information on Our Audit Engagement

We were first appointed as auditors by the Annual General Meeting on April 12, 2002, and our appointment represents a total period of uninterrupted engagement of 16 years.

### Other Information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises information included in the report of the Board of Directors and in the Annual Report, but does not include the financial statements and our report thereon. We obtained the report of the Board of Directors prior to the date of the auditor's report, and the Annual Report is expected to be made available to us after the date of the auditor's report.

Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to report of the Board of Directors, our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion, the information in the report of the Board of Directors is consistent with the information in the financial statements and the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

If, based on the work we have performed, we conclude that there is a material misstatement in the information included in the report of the Board of Directors, we are required to report this fact. We have nothing to report in this regard.

Oulu, February 21, 2018

Ernst & Young Oy  
Authorized Public Accountant Firm

Juhani Rönkkö  
Authorized Public Accountant

# Bittium

Connectivity to be trusted.  
[www.bittium.com](http://www.bittium.com)



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