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# Bittium

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## Bittium Corporation Half Year Financial Report January-June 2018

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Net sales

**28.3**

MEUR

Net sales growth

**+4.3** %

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Operating result

**-0.8**

MEUR

Operating result, % of net sales

**-2.9** %

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## Net sales in January-June 2018 grew and operating loss decreased, operating result outlook for the year 2018 specified

### Summary January-June 2018

- The net sales increased by 4.3 percent year-on-year to EUR 28.3 million (EUR 27.1 million, 1H 2017).
- The share of the product-based net sales grew significantly to EUR 11.8 million (EUR 7.2 million, 1H 2017) and the share of the services-based net sales decreased to EUR 16.5 million (EUR 19.7 million, 1H 2017).
- EBITDA was EUR 1.3 million (EUR -0.9 million, 1H 2017).
- Operating loss was EUR -0.8 million (EUR -2.8 million, 1H 2017).
- Net cash flow was EUR -32.4 million (EUR -21.5 million, 1H 2017).
- Result for the period from continuing operations was EUR -0.8 million and earnings per share were EUR -0.022 (result for the period EUR -2.4 million and earnings per share EUR -0.067, 1H 2017).

GROUP (MEUR)	1-6/2018 6 months	1-6/2017 6 months
NET SALES	28.3	27.1
Change of net sales, %	4.3 %	-12.8 %
EBITDA	1.3	-0.9
EBITDA, % of net sales	4.7 %	-3.3 %
OPERATING PROFIT / LOSS	-0.8	-2.8
Operating profit / loss, % of net sales	-2.9 %	-10.2 %
RESULT OF THE PERIOD FROM CONTINUING OPERATIONS	-0.8	-2.4
CASH AND OTHER LIQUID ASSETS	30.5	73.4
EQUITY RATIO (%)	84.4 %	87.8 %
EARNINGS PER SHARE (EUR)	-0.022	-0.067

In this report, Bittium uses alternative performance measures in accordance with the guidelines issued by the European Securities and Markets Authority (ESMA). Alternative performance measures are derived from performance measures reported in accordance to International Financial Reporting Standards (IFRS). Alternative performance measures are used to better reflect the operational business performance and to enhance comparability between financial periods. They are reported in addition to, but not substituting, the performance measures reported in accordance with the IFRS.

## Bittium's CEO Hannu Huttunen

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Our net sales in January-June 2018 increased by 4.3 percent from previous year and was EUR 28.3 million. The share of the product-based net sales grew significantly to EUR 11.8 million which was EUR 4.6 million more than in the corresponding period last year. The product-based net sales resulted mainly from the product deliveries of tactical communication systems, deliveries of Bittium Tough Mobile smartphones and Mexsat phones, and their related security software deliveries. In addition the product based net sales resulted from the deliveries of biosignal measuring and monitoring devices.

The net sales of service business decreased as expected and remained at EUR 16.5 million being EUR 3.3 million less than in the last year. The decrease in the services business net sales was mainly caused by the termination of significant customer cooperation with a global network equipment manufacturer in 2017.

In the first half of 2018 we received two significant orders. The Finnish Defence Forces ordered products related to the Software Defined Radio based Bittium Tactical Wireless IP Network™ (TAC WIN) system, which is meant for tactical communications. The value of the order was EUR 14.3 million. The order is based on the Framework Agreement signed earlier by Bittium and the Finnish Defence Forces. Another significant order was received as we concluded a three-year supply agreement with a major US remote monitoring provider under which Bittium will supply the Bittium Faros™ 360 and customized Bittium Faros™ 360 cardiac ECG signal measuring and monitoring devices. When materialized in full, the total value of the agreement is USD 21 million.

In line with our strategy, we continued investments into our product business. The R&D investments in own products and product platforms grew significantly to 37.4 percent of net sales. The investments focused mainly on extending the tactical communication product offering targeted for defense industry as well as on different terminal products and their related software development targeted for Mobile Security and Public Safety markets. We also continued further developing our products for measuring and monitoring of biosignals. In the future, we will also increase our investments in sales and marketing.

Net cash flow during the period was EUR -32.4 million. The negativity of the net cash flow resulted from the increase in the inventories and growth of the accounts receivables, which increased the amount of the net working capital by EUR 9.3 million. In addition, the net cash flow includes EUR 7.4 million investments made into own product development and the EUR 10.7 million dividend payment.

The operating loss decreased to EUR -0.8 million. The loss decreased thanks to the growth in the net sales and decreased fixed costs.

We will continue investing in enabling organic growth and in searching for inorganic growth opportunities in all our product and service areas.

## Outlook for 2018

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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. As the digitalization of the healthcare market and remote care are becoming more common it creates demand for Bittium's medical technology products and solutions. In a 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 specifies its expectations for the whole year 2018 operating result and estimates the operating result for the whole year to be positive. 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 positive (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.

More information about Bittium's market outlook is presented in the section "Market outlook" in this Half Year Financial Report.

More information about other uncertainties regarding the outlook is presented in this Half Year Financial Report in the section "Risks and uncertainties" and on the company's internet pages at [www.bittium.com](http://www.bittium.com).

*Previous outlook: 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.*

## Invitation to a press conference

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Bittium will hold a press conference on the Half Year Financial Report January-June 2018 for media, analysts and institutional investors in Restaurant Savoy, Eteläesplanadi 14, Helsinki, Finland, on Wednesday, August 8, 2018 at 9.30am (CEST+1). The press conference will be held in Finnish.

Bittium will also hold a telephone conference on the same day at 11.00am. The dial-in number for the conference call is +358 9 81 71 0495. The conference can also be followed live as a webcast, accessible at <https://bittium.videosync.fi/2018-08-08-bittium-half-year-financial-report>. The conference call will be held in English. A recording of the webcast and the presentation will be available after the conference on Bittium's website at [www.bittium.com/investors](http://www.bittium.com/investors).

### **Bittium**

Bittium specializes in the development of reliable, secure communications and connectivity solutions leveraging its 30 year legacy of expertise in advanced radio communication technologies. Bittium provides innovative products and services, customized solutions based on its product platforms and R&D services. Complementing its communications and connectivity solutions, Bittium offers proven information security solutions for mobile devices and portable computers. Bittium also provides healthcare technology products and services for biosignal measuring in the areas of cardiology, neurology, rehabilitation, occupational health and sports medicine. Net sales in 2017 were EUR 51.6 million and operating loss was EUR -6.2 million. Bittium is listed on Nasdaq Helsinki. [www.bittium.com](http://www.bittium.com)

## Bittium Corporation's Half Year Financial Report January-June 2018

### Financial performance in January-June 2018

Bittium's net sales in January-June 2018 increased by 4.3 percent year-on-year to EUR 28.3 million (EUR 27.1 million, in 1H 2017).

The share of the product-based net sales increased significantly to EUR 11.8 million (EUR 7.2 million, in 1H 2017), which resulted mainly from the product deliveries of the tactical communication system, product deliveries of Bittium Tough Mobile smartphones and Mexsat phones and their related security software, as well as deliveries of products for measuring and monitoring biosignals.

The share of the services-based net sales decreased as expected to EUR 16.5 million (EUR 19.7 million, in 1H 2017). The decrease in the services business net sales was caused by the termination of significant customer cooperation with a global network equipment manufacturer in 2017. Bittium has won new R&D services projects for wireless products, but it has not been able to replace the decrease in the service based net sales in total.

Operating loss was EUR -0.8 million (EUR -2.8 million, in 1H 2017). The decrease in the operating loss was caused by the increased net sales and decreased fixed costs of the company.

#### CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME, MEUR

	1-6 2018 6 months	1-6/2017 6 months
Net sales	28.3	27.1
Operating profit / loss	-0.8	-2.8
Financial income and expenses	0.0	0.3
Result before tax	-0.8	-2.4
RESULT FOR THE PERIOD FROM CONTINUING OPERATIONS	-0.8	-2.4
RESULT FOR THE PERIOD FROM DISCONTINUING OPERATIONS		1.3
RESULT FOR THE PERIOD	-0.8	-1.1
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD	-0.8	-1.2
Result for the period attributable to:		
Equity holders of the parent	-0.8	-1.1
Total comprehensive income for the period attributable to:		
Equity holders of the parent	-0.8	-1.2
Earnings per share from continuing operations, EUR	-0.022	-0.067

- Cash flow from operating activities was EUR -10.5 million (EUR 0.4 million, in 1H 2017).
- Net cash flow during the period was EUR -32.4 million. The negativity of the net cash flow resulted from the increase in the inventories and growth of the accounts receivables, which increased the amount of the net working capital by EUR 9.3 million. In

addition, the net cash flow includes EUR 7.4 million investments made into own product development and the EUR 10.7 million dividend payment (EUR -21.5 million, 1H 2017, including EUR 10.7 million dividend payment and investments in the new premises in Oulu).

- Equity ratio was 84.4 percent (87.8 percent, June 30, 2017).
- Net gearing was -27.9 percent (-60.6 percent, June 30, 2017).

## Half year figures

<b>GROUP'S NET SALES AND OPERATING RESULT, MEUR</b>	<b>1H/18</b>	<b>2H/17</b>	<b>1H/17</b>	<b>2H/16</b>
Net sales	28.3	24.5	27.1	33.1
Operating profit (loss)	-0.8	-3.4	-2.8	1.9
Result before taxes	-0.8	-3.4	-2.4	2.2
Result for the period	-0.8	-2,4	-2,4	2.6

<b>DISTRIBUTION OF NET SALES BY PRODUCT AND SERVICES, MEUR AND %</b>	<b>1H/18</b>	<b>2H/17</b>	<b>1H/17</b>	<b>2H/16</b>
Product based net sales	11.8 41.8 %	9.1 37.2 %	7.2 26.5 %	6.6 20.0 %
Services based net sales	16.5 58.2 %	15.2 62.0 %	19.7 72.7 %	26.3 79.4 %
Other net sales		0.2 0.8%	0.2 0.7 %	0.2 0.7 %

<b>DISTRIBUTION OF NET SALES BY MARKET AREAS, MEUR AND %</b>	<b>1H/18</b>	<b>2H/17</b>	<b>1H/17</b>	<b>2H/16</b>
Asia	0.5 1.7 %	1.0 4.2 %	0.3 1.1%	0.2 0.7%
Americas	3.0 10.6 %	1.4 5.8 %	4.5 16.4%	6.7 20.2%
Europe	24.8 87.7 %	22.0 90.0 %	22.4 82.5%	26.2 79.1%

## Research and development

Bittium continued significant investments in its own products and product platforms. In January-June 2018 the investments were 37.4 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 Tough 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 developing tactical communication handheld and vehicle radios and investments related to the further development of the Bittium Tough Mobile smartphone and the related security software. The majority of the capitalized R&D investments are being depreciated based on the production amounts of the goods.

<b>R&amp;D INVESTMENTS, MEUR</b>	<b>1-6 2018 6 months</b>	<b>1-6 2017 6 months</b>
Total R&D investments	10.6	6.4
Capitalized R&D investments	-7.4	-2.3
Depreciations and impairment of R&D investments	0.1	0.2
Cost impact on income statement	3.3	4.3
R&D investments, % of net sales	37.4 %	23.7 %

<b>CAPITALIZED R&amp;D INVESTMENTS IN BALANCE SHEET, MEUR</b>	<b>1-6 2018 6 months</b>	<b>1-6 2017 6 months</b>
Balance sheet value in the beginning of the period	11.9	6.4
Additions during the period	7.4	2.3
Acquisitions of the business		
Depreciations and impairment of R&D investments	-0.1	-0.2
Balance sheet value at the end of the period	19.1	8.5

## Business development in January-June 2018

January 18, 2018 – Bittium announced to have received the first orders from Mexican government authorities for mobile devices developed for a satellite communication system. The mobile devices have been developed in a product development project that started in the year 2015. The product development phase has been successfully concluded and the devices are now in volume production. The total value of the first orders was approximately 2 million euros and the devices were delivered to the customers by the end of the first quarter of 2018. The mobile devices are manufactured in Finland.

Bittium also announced to have opened a branch office in Mexico to enable high quality customer support for the local customers, and to contribute to sales and marketing in Mexico and other Latin American countries. Mr. Fernando Castillo was appointed as the General Manager of the branch office in Mexico. Mr. Castillo has a long experience in the Mexican authorities market.

February 1-2, 2018 Bittium exhibited its newest products for tactical communications at Mobile Deployable Communications event in Warsaw, Poland.

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.

March 9, 2018 – Bittium Cardiac Navigator™ meant for the analysis of clinical Holter ECG recordings received medical device approval in Europe. The approval allows cardiologists to use the Bittium Cardiac Navigator software solution for official analysis of Holter-ECG recordings collected with Bittium Faros ECG monitoring devices. The user-friendly and informative ECG data presentation and intuitive

analysis tools of Bittium Cardiac Navigator software solutions make the software efficient and easy to use when analyzing multiple days of ECG recordings. Based on recordings, the software provides information about the electrical cardiac activity of the heart, typical of Holter ECG analysis, and in particular, about arrhythmia and other exceptional events. Bittium Cardiac Navigator is designed for scanning longer measurements efficiently in a shorter time and thus speeding up the final diagnosis.

March 13-14, 2018 – Bittium exhibited its innovative R&D services for IoT (Internet of Things); and medical technology products at Wearable Technology Show 2018, held in ExCel, London, the United Kingdom.

March 18-20, 2018 – Bittium exhibited its innovative products and solutions for cardiology at EHRA 2018 in Barcelona, Spain.

March 20-21, 2018 – Bittium exhibited Bittium Tough Mobile, secure LTE smartphone, and innovative Bittium Tough Mobile HybridX extension at the British APCO exhibition for authorities in Coventry, United Kingdom.

The new Bittium Tough Mobile HybridX extension gives Bittium Tough Mobile a new user interface and functionalities that are very useful in demanding Public Safety use. Bittium Tough Mobile HybridX extension combines the secure Bittium Tough Mobile smartphone with a functional HybridX accessory. The HybridX accessory is integrated to the Bittium Tough Mobile and is connected to a PMR (Private Mobile Radio) device, such as TETRA or P25.

March 28, 2018 – Bittium Medanalytics Oy, a subsidiary of Bittium Corporation, and RemoteA Oy signed a business purchase agreement according to which Bittium Medanalytics Oy purchases RemoteA's medical remote diagnostic service platform and the product rights of the related medical measurement devices and their interfaces. With the business transaction Bittium's offering expanded from measuring and monitoring the electrical activity of the heart and brain to measuring and monitoring sleep apnea. In addition, a third party blood pressure measurement device has been connected to the service platform, and in the future, it is possible to connect also other measurement devices to the system. Biosignal information collected from the patients via the remote diagnostics service platform enables the transfer of information over the internet and it serves as a platform for patient measurement data and specialists' diagnosis. The business transaction had no significant impact on Bittium Corporation's financial outlook for 2018. The parties agreed that the value of the transaction will not be published.

April 13, 2018 – Bittium announced to have received a purchase order from the Finnish Defence Forces for products included in the Software Defined Radio based Bittium Tactical Wireless IP Network™ (TAC WIN) system, which is meant for tactical communications. The value of the purchase order is EUR 14.3 million (excl. VAT). The purchase order did not change Bittium's financial outlook for the year 2018. The purchase order is based on the Framework Agreement signed by Bittium and the Finnish Defence Forces on August 9, 2017, according to which the Finnish Defence Forces will order products included in the Software Defined Radio based Bittium TAC WIN system during the years 2018-2020. According to the Framework Agreement, Finnish Defence Forces will issue separate purchase orders for the products each year. The products ordered now will be delivered to the Finnish Defence Forces during the year 2018. If materialized in full, the total value of the Framework Agreement is EUR 30 million (excl. VAT). Bittium issued a stock exchange release about the Framework Agreement on August 9, 2017.

April 23-27, 2018 – Bittium's secure Bittium Tough Mobile™ smartphone was part of the Locked Shields 2018 cyber defense exercise organized by the NATO Cooperative Cyber Defence Centre of Excellence (CCDCOE), held in Tallinn, Estonia. It was the world's largest and most complex international live-fire cyber defense exercise where more than 1000 experts from 30 nations participated in total. The annual exercise is a unique opportunity for national representatives of cyber defense to practice protection of national information technology systems and critical infrastructure under the intense pressure of a severe cyber attack.

May 15-17, 2018 – Bittium exhibited Bittium Tough Mobile LTE smartphone and other products and solutions for critical communications at the Critical Communications World event in Berlin, German.

May 16-18, 2018 – Bittium exhibited its innovative products and solutions for cardiology at European Stroke Organisation Conference (ESOC) 2018 in Gothenburg, Sweden.

May 14-17, 2018 – Bittium exhibited its innovative IoT (Internet of Things) Design Services and ThingSpace LTE CAT-M1 IoT Reference Hardware Design at IoT World 2018 exhibition, held in Santa Clara Convention Center, California, the United States of America. Bittium's IoT Design Service offerings vary from technology consultation to commercial wireless designs. In addition, Bittium showcased the ThingSpace LTE CAT-M1 IoT Reference Hardware Design, which was developed with Verizon and designed to allow an OEM the building blocks to get up and running quickly on the Verizon network and ThingSpace platform. Bittium provides open source hardware design documents and offers design services to Verizon's ThingSpace development partners.

May 15, 2018 – Bittium received a purchase order from the Finnish Defence Forces for the maintenance and further development of systems and related products meant for tactical communications. The order refers to the Software Defined Radio based Bittium Tactical Wireless IP Network™ (TAC WIN) system, the Bittium Tough VoIP™ system for tactical IP calls and data transfer, as well as the products

related to the systems, which are used by the Finnish Defence Forces. The purchase order applies to the year 2018 and includes the technical support of the systems and the equipment, software support, upkeep of the system support, management of the system support, and development of new features. The value of the purchase order was EUR 2.3 million (excl. VAT). The purchase order did not change Bittium's financial outlook for the year 2018.

May 22-23, 2018 – Bittium exhibited its secure and easy-to-use Bittium SafeMove® remote access solutions at Utility Week Live, held in NEC hall, Birmingham, the United Kingdom.

May 23-24, 2018 – Bittium exhibited secure Bittium Tough Mobile LTE smartphone and related information security solutions Bittium Secure Suite™ and Bittium SafeMove® Analytics at the Infosecurity Mexico event in Mexico City, Mexico.

May 29-30, 2018 – Bittium exhibited its innovative IoT (Internet of Things) Design Services and secure Bittium SafeMove® -remote access solutions at Advanced Engineering trade show, held in Messukeskus, Helsinki.

May 30, 2018 – Bittium Corporation's subsidiary, Bittium BioSignals Ltd and Cerenion Oy announced a collaboration project on bringing advanced brain monitoring into the array of vital signs monitoring available to intensive care staff. The collaboration aims on providing a comprehensive solution for brain electrical activity monitoring for intensive care patients, by combining Bittium BrainStatus™ a wireless EEG-monitoring device meant for real-time brain electrical activity to Cerenion's innovative C-Trend™ index that interprets EEG signal to a simple score facilitate and accelerate the work of nursing staff.

Recently European CE medical approved wireless Bittium BrainStatus™ EEG amplifier and electrode headband enables high quality and fast EEG signal measurement. Through the use of Cerenion C-Trend™ technology this signal data is turned into a simple score that reveals the status of the patient's brain at the bed-side and without requiring any changes to the care of the patient. The first line of C-Trend-enabled Bittium BrainStatus devices are expected to become available in 2019.

June 12-15, 2018 – Bittium exhibited its innovative products and solutions for neuroscience and cardiology at 8th Mismatch Negativity conference (MMN) 2018 in Helsinki, Finland.

June 11-15, 2018 – Bittium exhibited the new Bittium Tough SDR tactical radios and launched Bittium Tough VoIP Softphone software product at the Eurosatory defense exhibition in Paris, France.

The new Bittium Tough VoIP Softphone™ software product is a VoIP client (Voice over Internet Protocol) that can be used for VoIP calls, instant messaging, conference calls and screen sharing in the tactical Bittium Tough VoIP Service™ network either with a PC or smartphone. Especially useful for tactical use are also the Push-To-Talk (PTT) feature as well as the remote control and sending instant messages to existing third party Combat Net Radios (CNR) through Bittium Tough VoIP Service network and Bittium Tough Comnode terminal or Bittium TAC WIN system's router (Radio over IP, RoIP).

## Significant events during the reporting period

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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 was 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).

On April 13, 2018 Bittium Wireless Ltd, a subsidiary of Bittium Corporation received a purchase order from the Finnish Defence Forces for products included in the Software Defined Radio based Bittium Tactical Wireless IP Network™ (TAC WIN) system, which is meant for tactical communications. The value of the purchase order was EUR 14.3 million (excl. VAT). The purchase order did not change Bittium's financial outlook for the year 2018 (published in the Financial Statement Bulletin 2017 on February 22, 2018). The purchase order is based on the Framework Agreement signed by Bittium and the Finnish Defence Forces on August 9, 2017, according to which the Finnish Defence Forces will order products included in the Software Defined Radio based Bittium TAC WIN system during the years 2018-2020. According to the Framework Agreement, Finnish Defence Forces will issue separate purchase orders for the products each year. The products ordered now will be delivered to the Finnish Defence Forces during the year 2018. If materialized in full, the total value of the Framework Agreement is EUR 30 million (excl. VAT). Bittium announced the Framework Agreement on August 9, 2017.

## Significant events after the reporting period

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There were no significant events after the reporting period.

## Outlook for 2018

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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. As the digitalization of the healthcare market and remote care are becoming more common it creates demand for Bittium's medical technology products and solutions. In a 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 specifies its expectations for the whole year 2018 operating result and estimates the operating result for the whole year to be positive. 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 positive (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.

More information about Bittium's market outlook is presented in the section "Market outlook" in this Half Year Financial Report.

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*Previous outlook:*

*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.*

## Market outlook

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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 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. Over thirty years of experience and extensive competence in measuring of biosignals also act as a basis for medical technology solutions.

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 functionalities required by the authorities and due to the slow progress of the market. 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 the 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 the 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 BrainStatus for measuring the electrical activity of brain.

## Risks and uncertainties

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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 Half Year Financial Report in the "Market outlook" section.

## Business related risks

Bittium's operative business risks are mainly related to 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 ultimately, 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 Finland Plc and a committed overdraft credit facility agreement of EUR 10.0 million with Pohjola 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.

## Statement of financial position and financing

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The figures presented in the statement of financial position of June 30, 2018, are compared with the statement of the financial position of December 31, 2017 (MEUR).

	30.6.2018	31.12.2017
Non-current assets	57.3	46.7
Current assets	69.4	91.6
Total assets	126.7	138.4
Share capital	12.9	12.9
Other capital	92.3	103.7
Total equity	105.2	116.7
Non-current liabilities	1.5	1.5
Current liabilities	20.0	20.2
Total equity and liabilities	126.7	138.4

  

Cash flow of the review period :	1-6/2018	1-12/2017
+ profit of the period +/- Adjustment of accrual basis items	1.5	-2.4
+/- Change in net working capital	-12.0	2.0
- interest, taxes and dividends	-0.0	0.3
= net cash from operating activities	-10.5	-0.0
- net cash from investing activities	-10.7	-18.5
- net cash from financing activities	-11.2	-13.4
= net change in cash and cash equivalents	-32.4	-32.0

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

The amount of gross investments in the period under review was EUR 11.2 million. Net investments for the review period totaled to EUR 11.2 million. The total amount of depreciation during the period under review was EUR 2.2 million. The amount of interest-bearing debt, including finance lease liabilities, was at the end of the reporting period EUR 1.2 million (EUR 1.2 million on December 31, 2017). Bittium's equity ratio at the end of the period was 84.4 percent (85.6 percent on December 31, 2017).

Cash and other liquid assets at the end of the reporting period were EUR 30.5 million (EUR 62.9 million on December 31, 2017). Net cash flow during the period was EUR -32.4 million. The negativity of the net cash flow resulted from the increase in the inventories and growth of the accounts receivables, which increased the amount of the net working capital by EUR 9.3 million. In addition, the net cash flow includes EUR 7.4 million investments made into own product development and the EUR 10.7 million dividend payment (EUR -21.5 million, 1H 2017, including EUR 10.7 million dividend payment and investments in the new premises in Oulu).

Bittium has a total of EUR 20.0 million binding credit facility agreements 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 determined on the basis of accounts receivable, accounts payable, order book and budgeted net currency cash flow.

## Personnel

The Bittium group employed an average of 654 people in between January and June 2018. At the end of June 2018, the company had 683 employees (619 employees at the end of 2017). A significant part of Bittium's personnel are R&D engineers.

## Flagging notifications

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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

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The company had no managers' transactions to report during the reporting period.

## Decisions of the Annual General Meeting of Bittium Corporation

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The Annual General Meeting of Bittium Corporation was held on April 11, 2018, at 1.00 p.m. at the University of Oulu, Saalastinsali, Pentti Kaiteran katu 1, 90570 Oulu, Finland. The Annual General Meeting approved the annual accounts for the financial year 2017 and discharged the company's management from liability.

### Use of the Profits Shown on the Balance Sheet and Payment of Dividend

The Annual General Meeting decided in accordance with the proposal of the Board of Directors to pay EUR 0.30 per share as dividend based on the adopted balance sheet for the financial period January 1, 2017 – December 31, 2017. The dividend was paid to the shareholders who were 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 dividend was paid on Friday, April 20, 2018.

### Election and remuneration of the Members of the Board of Directors

The Annual General Meeting decided that the Board of Directors shall comprise six (6) members. Mr. Seppo Mäkinen, Mr. Juha Putkiranta, Mr. Tero Ojanperä 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, Ms. Riitta Tiuraniemi and Mr. Petri Toljamo were elected as the new members of the Board of Directors for a corresponding term of office.

At its assembly meeting held on April 11, 2018, the Board of Directors elected Mr. Erkki Veikkolainen Chairman of the Board. Further, the Board has resolved to keep the Audit Committee. Mr. Juha Putkiranta (Chairman of the committee) and Ms. Riitta Tiuraniemi 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 following monthly remuneration shall be paid to the members of the Board of Directors: to the chairman of the Board of Directors EUR 3,500 and to the other members of the Board of Directors EUR 2,000 each. In addition, the members of the Board of Directors are entitled to compensation for attending Board Committee meetings as follows: the chairman of the Committee EUR 600 for each meeting and other Committee members EUR 400 for each meeting. Travel expenses of the members of the Board of Directors shall be reimbursed in accordance with the Company's travel policy. The General Meeting also decided that 40 percent of the total amount of the monthly remuneration will be paid at once as Bittium Corporation's shares acquired for the price formed in public trading, and the shares will be acquired according to the share purchase program of the company.

## **Election and Remuneration of the Auditor**

Ernst & Young Oy, authorized public accountants, was re-elected auditor of the Company for a term of office ending at the end of the next Annual General Meeting. Ernst & Young Oy has notified that Mr. Juhani 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.

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

The General Meeting 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 canceled the authorization given by the General Meeting on April 12, 2017 to decide on the repurchase of the company's own shares.

The authorization is effective until June 30, 2019.

## **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 canceled the authorization given by the General Meeting on April 12, 2017 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, 2019.

## **Annual Report, Sustainability Report, Corporate Governance Statement and Salary and Remuneration Report**

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On March 21, 2018 Bittium published its Annual Report, Sustainability Report, Corporate Governance Statement and Salary and Remuneration Report from the year 2017.

The reports are available at the company's internet pages at <https://www.bittium.com> both in Finnish and in English. The Annual Report and Sustainability Report are available also at <https://annualreport.bittium.com>.

Oulu, August 8, 2018

Bittium Corporation  
The Board of Directors

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Nasdaq Helsinki  
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## Bittium Corporation Condensed Financial Statements and Notes January – June 2018

(unaudited)

The Half-year Financial Report has been prepared in accordance with IAS 34 Interim Financial Reporting.

<b>CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (MEUR)</b>	<b>1-6/2018</b>	<b>1-6/2017</b>	<b>1-12/2017</b>
<b>Continuing operations</b>	<b>6 months</b>	<b>6 months</b>	<b>12 months</b>
NET SALES	28.3	27.1	51.6
Other operating income	0.6	1.0	2.1
Change in work in progress and finished goods	0.1		0.7
Work performed by the undertaking for its own purpose and capitalized	-3.7	0.1	-5.9
Raw materials	-16.5	-2.2	-33.0
Personnel expenses	-2.2	-18.0	-3.9
Depreciation	-7.5	-1.9	-17.8
Other operating expenses	0.1	-9.0	0.0
<b>OPERATING PROFIT (LOSS)</b>	<b>-0.8</b>	<b>-2.8</b>	<b>-6.2</b>
Financial income and expenses	0.0	0.3	0.4
<b>PROFIT BEFORE TAX</b>	<b>-0.8</b>	<b>-2.4</b>	<b>-5.8</b>
Income tax	0.0	0.0	1.1
<b>PROFIT FOR THE PERIOD FROM CONTINUING OPERATIONS</b>	<b>-0.8</b>	<b>-2.4</b>	<b>-4.8</b>
<b>Discontinued operations</b>			
Profit for the year from discontinued operations		1.3	1.7
<b>PROFIT FOR THE PERIOD</b>	<b>-0.8</b>	<b>-1.1</b>	<b>-3.1</b>
Other comprehensive income:			
Items that may be reclassified subsequently to the statement of income			
Exchange differences on translating foreign operations	0.0	-0.0	-0.1
Other comprehensive income for the period total	0.0	-0.0	-0.1
<b>TOTAL COMPREHENSIVE INCOME FOR THE PERIOD</b>	<b>-0.8</b>	<b>-1.2</b>	<b>-3.2</b>
Profit for the year attributable to			
Equity holders of the parent	-0.8	-1.1	-3.1
<b>Total comprehensive income for the period attributable to</b>			

Equity holders of the parent	-0.8	-1.2	-3.2
Earnings per share from continuing operations, EUR			
Basic earnings per share	-0.022	-0.067	-0.133
Diluted earnings per share	-0.022	-0.067	-0.133
Earnings per share from discontinued operations, EUR			
Basic earnings per share		0.035	0.046
Diluted earnings per share		0.035	0.046
Earnings per share from continuing and discontinued operations, EUR			
Basic earnings per share	-0.022	-0.032	-0.087
Diluted earnings per share	-0.022	-0.032	-0.087
Average number of shares, 1000 pcs	35 693	35 693	35 693
Average number of shares, diluted, 1000 pcs	35 693	35 693	35 693

<b>CONSOLIDATED STATEMENT OF FINANCIAL POSITION (MEUR)</b>	<b>June 30, 2018</b>	<b>June 30, 2017</b>	<b>Dec. 31, 2017</b>
<b>ASSETS</b>			
Non-current assets			
Property, plant and equipment	23.4	17.9	21.9
Goodwill	5.8	6.3	5.8
Intangible assets	22.5	11.1	15.0
Other financial assets	1.4	1.4	1.4
Other non-current receivables	1.7	0.2	0.2
Deferred tax assets	2.5	1.5	2.5
Non-current assets total	57.3	38.5	46.7
Current assets			
Inventories	13.7	5.9	10.6
Trade and other receivables	25.2	20.9	18.2
Financial assets at fair value through profit or loss	24.6	67.2	56.4
Cash and short term deposits	6.0	6.2	6.5
Current assets total	69.4	100.2	91.6
<b>TOTAL ASSETS</b>	<b>126.7</b>	<b>138.7</b>	<b>138.4</b>
<b>EQUITY AND LIABILITIES</b>			
Equity attributable to equity holders of the parent			
Share capital	12.9	12.9	12.9
Invested non-restricted equity fund	26.0	26.0	26.0
Translation difference	1.1	1.1	1.0

Retained earnings	65.3	78.7	76.7
Total equity	105.2	118.7	116.7
Non-current liabilities			
Deferred tax liabilities	0.3	0.4	0.4
Provisions		0.0	
Interest-bearing liabilities	0.5	0.6	0.5
Other non-current liabilities	0.5	0.9	0.5
Non-current liabilities total	1.5	2.0	1.5
Current liabilities			
Trade and other payables	17.8	16.0	18.3
Financial liabilities at fair value through profit or loss	0.1		
Provisions	1.4	1.2	1.1
Interest-bearing loans and borrowings	0.7	0.9	0.7
Current liabilities total	20.0	18.0	20.2
Total liabilities	21.5	20.0	21.7
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>126.7</b>	<b>138.7</b>	<b>138.4</b>

## CONSOLIDATED STATEMENT OF CASH FLOWS (MEUR)

	1-6/2018	1-6/2017	1-12/2017
	6 months	6 months	12 months
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>			
Profit for the year from continuing operations	-0.8	-2.4	-4.8
Profit for the year from discontinued operations		1.3	1.7
Adjustment of accrual basis items	2.3	-0.1	0.7
Change in net working capital	-12.0	1.5	2.0
Interest paid on operating activities	-1.2	0.0	-0.5
Interest received from operating activities	1.2	0.2	0.8
Income taxes paid	-0.0	-0.1	-0.1
<b>NET CASH FROM OPERATING ACTIVITIES</b>	<b>-10.5</b>	<b>0.4</b>	<b>-0.0</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>			
Acquisition of business unit, net of cash acquired			
Purchase of property, plant and equipment	-2.7	-6.2	-11.4
Purchase of intangible assets	-8.0	-2.4	-6.7
Sale of property, plant and equipment		0.1	0.1
Sale of intangible assets	0.0	0.1	0.1
Purchase of investments/affiliated companies	0.0	-0.7	-0.7
<b>NET CASH FROM INVESTING ACTIVITIES</b>	<b>-10.7</b>	<b>-9.0</b>	<b>-18.5</b>
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>			

Share-option plans exercised	0.1		
Repayment of borrowing	-0.1	-1.7	-1.7
Payment of finance liabilities	-0.5	-0.5	-1.0
Dividend paid and repayment of capital	-10.7	-10.7	-10.7
<b>NET CASH FROM FINANCING ACTIVITIES</b>	<b>-11.2</b>	<b>-12.9</b>	<b>-13.4</b>
NET CHANGE IN CASH AND CASH EQUIVALENTS	-32.4	-21.5	-32.0
Cash and cash equivalents at beginning of period	62.9	94.9	94.9
Cash and cash equivalents at end of period	30.5	73.4	62.9

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (MEUR)

A = Share capital

B = Invested non-restricted equity fund

C = Translation difference

D = Retained earnings

E = Non-controlling interests

F = Total equity

	A	B	C	D	E	F
Shareholders equity on Jan. 1, 2017	12.9	26.0	1.2	90.6		130.6
Comprehensive income for the period						
Profit/loss for the period				-1.1		-1.1
Exchange differences on translating foreign operations			-0.0			-0.0
Total comprehensive income for the period			-0.0	-1.1		-1.2
Transactions between the shareholders						
Distribution of dividends				-10.7		-10.7
Total transactions between the shareholders				-10.7		-10.7
Other changes				-0.0		-0.0
Shareholders equity on June 30, 2017	12.9	26.0	1.1	78.7		118.7

	A	B	C	D	E	F
Shareholders equity on Jan. 1, 2018	12.9	26.0	1.0	76.7		116.7
Comprehensive income for the period						

Profit/loss for the period				-0.8		-0.8
Exchange differences on translating foreign operations			0.0			0.0
Total comprehensive income for the period			0.0	-0.8		-0.8
Transactions between the shareholders						
Distribution of dividends				-10.7		-10.7
Total transactions between the shareholders				-10.7		-10.7
Other changes				-0.0		-0.0
Shareholders equity on June 30, 2018	12.9	26.0	1.1	65.3		105.2

## NOTES TO THE HALF YEAR FINANCIAL REPORTING

### ACCOUNTING PRINCIPLES FOR THE HALF YEAR FINANCIAL REPORTING:

The Half Year Financial Report has been prepared in accordance with IAS 34 Interim Financial Reporting. Bittium Corporation has applied the same accounting principles in the preparation of this Half Year Report as in its Financial Statements for 2017, except for the adoption of new standards and interpretations effective during 2018. The changes did not have material impact on the Half Year Report.

### THE APPLICATION OF IFRS 15 REVENUE FROM CONTRACTS WITH CUSTOMERS STANDARD

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 adopted the standard using the modified retrospective approach. The standard did not have effect on the opening balance of year 2018.

As a result of adopting the new standard, Bittium has specified the accounting principles of the time-based service contracts regarding the duration and amount of these contracts. The new specified principles mainly impact to revenue by spreading it more stable during the financial year and possibly also at the end of the financial year.

### THE APPLICATION OF IFRS 9 FINANCIAL INSTRUMENTS STANDARD

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 did 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 leads to earlier recognition of impairment losses but its effect on Bittium financial reporting has not been material. The new standard has specifying impact on the notes to the financial reporting with respect to financial instruments.

### THE PREPARATIONS FOR APPLICATION OF IFRS 16 LEASES STANDARD

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. The adoption of the standard will slightly increase the value of assets and liabilities in the consolidated balance sheet. Bittium will adopt the standard using the retrospective approach. The retrospective effect of adopting the new standard will not be restated for the comparative periods.

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

## ALTERNATIVE PERFORMANCE MEASURES

In addition to the key ratios defined in the IFRS standards, Bittium may use some alternative performance measures in the financial reporting. The definitions of the common alternative performance measures are listed below.

EBITDA =	Operating profit + depreciations
Net gearing % =	$\frac{\text{Interest-bearing liabilities - cash and deposits and short-term investments} \times 100}{\text{Total equity}}$
Equity per share =	$\frac{\text{Equity attributable to equity holders of the parent}}{\text{Share issue adjusted number of the shares at the end of the period}}$

## SEGMENT-INFORMATION (MEUR)

Bittium Corporation does not have segments that require reporting according to IFRS 8 standard.

NET SALES OF GEOGRAPHICAL AREAS (MEUR)	1-6/2018 6 months	1-6/2017 6 months	1-12/2017 12 months
Net sales			
Europe	24.8	22.4	44.4
Americas	3.0	4.5	5.9
Asia	0.5	0.3	1.3
Net sales total	28.3	27.1	51.6

RELATED PARTY TRANSACTIONS	1-6/2018 6 months	1-6/2017 6 months	1-12/2017 12 months
Employee benefits for key management and stock options expenses total, continuing operations	0.6	0.6	1.2

<b>CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME BY HALF-YEAR (MEUR)</b>	<b>1-6/2018</b>	<b>7-12/2017</b>	<b>1-6/2017</b>	<b>7-12/2016</b>
<b>Continuing operations</b>	<b>6 months</b>	<b>6 months</b>	<b>6 months</b>	<b>6 months</b>
NET SALES	28.3	24.5	27.1	33.1
Other operating income	0.6	1.1	1.0	1.0
Work performed by the undertaking for its own purpose and capitalized	0.1	0.5	0.1	0.2
Raw materials	-3.7	-3.7	-2.2	-2.7
Personnel expenses	-16.5	-15.1	-18.0	-17.8
Depreciation	-2.2	-2.0	-1.9	-1.9
Other operating expenses	-7.4	-8.8	-9.0	-10.1
OPERATING PROFIT (LOSS)	-0.8	-3.4	-2.8	1.9
Financial income and expenses	0.0	0.0	0.3	0.4
PROFIT BEFORE TAX	-0.8	-3.4	-2.4	2.2
Income tax	0.0	1.0	0.0	0.4
PROFIT FOR THE PERIOD FROM CONTINUING OPERATIONS	-0.8	-2.4	-2.4	2.6
<b>Discontinued operations</b>				
Profit for the period from discontinued operations		0.4	1.3	
PROFIT FOR THE PERIOD	-0.8	-2.0	-1.1	2.6
Other comprehensive income	0.0	-0.1	-0.0	0.0
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD	-0.8	-2.1	-1.2	2.6
Profit for the period attributable to:				
Equity holders of the parent	-0.8	-2.0	-1.1	2.6
Total comprehensive income for the period attributable to:				
Equity holders of the parent	-0.8	-2.1	-1.2	2.6

<b>CONSOLIDATED STATEMENT OF CASH FLOWS BY HALF-YEAR</b>	<b>1-6/2018</b>	<b>7-12/2017</b>	<b>1-6/2017</b>	<b>7-12/2016</b>
	<b>6 months</b>	<b>6 months</b>	<b>6 months</b>	<b>6 months</b>
Net cash from operating activities	-10.5	-0.5	0.4	-1.8
Net cash from investing activities	-10.7	-9.5	-9.0	-10.5
Net cash from financing activities	-11.2	-0.5	-12.9	-0.5
Net change in cash and cash equivalents	-32.4	-10.5	-21.5	-12.8

<b>FINANCIAL PERFORMANCE RELATED RATIOS</b>	<b>1-6/2018</b>	<b>1-6/2017</b>	<b>1-12/2017</b>
	<b>6 months</b>	<b>6 months</b>	<b>12 months</b>
<b>STATEMENT OF COMPREHENSIVE INCOME (MEUR)</b>			
Net sales	28.3	27.1	51.6
Operating profit (loss)	-0.8	-2.8	-6.2
Operating profit (loss). % of net sales	-2.9	-10.2	-12.0
Profit before taxes	-0.8	-2.4	-5.8
Profit before taxes. % of net sales	-2.9	-9.0	-11.3
Profit for the period from continuing operations	-0.8	-2.4	-4.8
<b>PROFITABILITY AND OTHER KEY FIGURES</b>			
Interest-bearing net liabilities. (MEUR)	-29.4	-72.0	-61.7
Net gearing. -%	-27.9	-60.6	-52.9
Equity ratio. %	84.4	87.8	85.6
Gross investments. (MEUR)	11.2	10.3	20.1
Average personnel during the period. continuing operations	654	605	614
Personnel at the period end. continuing operations	683	619	619

<b>AMOUNT OF SHARE ISSUE ADJUSTMENT (1.000 pcs)</b>	<b>Jun. 30.</b>	<b>Jun. 30.</b>	<b>Dec. 31.</b>
	<b>2018</b>	<b>2017</b>	<b>2017</b>
At the end of period	35 693	35 693	35 693
Average for the period	35 693	35 693	35 693
Average for the period diluted with stock options	35 693	35 693	35 693

<b>STOCK-RELATED FINANCIAL RATIOS (EUR)</b>	<b>1-6/2018</b>	<b>1-6/2017</b>	<b>1-12/2017</b>
	<b>6 months</b>	<b>6 months</b>	<b>12 months</b>
<b>Earnings per share from continuing operations. EUR</b>			
Basic earnings per share	-0.022	-0.067	-0.133
Diluted earnings per share	-0.022	-0.067	-0.133
<b>Earnings per share from discontinued operations. EUR</b>			
Basic earnings per share		0.035	0.046
Diluted earnings per share		0.035	0.046

Earnings per share from continuing and discontinued operations. EUR			
Basic earnings per share	-0.022	-0.032	-0.087
Diluted earnings per share	-0.022	-0.032	-0.087
Equity *) per share	2.95	3.33	3.27
*) Equity attributable to equity holders of the parent			

MARKET VALUES OF SHARES (EUR)	1-6/2018	1-6/2017	1-12/2017
	6 months	6 months	12 months
Highest	6.30	7.88	7.88
Lowest	4.93	5.67	5.55
Average	5.65	6.59	6.55
At the end of period	4.97	7.28	5.65
Market value of the stock. (MEUR)	177.4	259.8	201.7
Trading value of shares. (MEUR)	32.9	37.4	83.1
Number of shares traded. (1.000 pcs)	5 818	5 666	12 684
Related to average number of shares %	16.3	15.9	35.5

SECURITIES AND CONTINGENT LIABILITIES (MEUR)	Jun. 30. 2018	Jun. 30. 2017	Dec. 31. 2017
AGAINST OWN LIABILITIES			
Floating charges	1.0	2.9	1.0
Guarantees	10.2	5.4	10.2
Rental liabilities			
Falling due in the next year	0.5	1.3	0.5
Falling due after one year	0.8	0.2	1.0
Other contractual liabilities			
Falling due in the next year	2.4	1.8	1.9
Falling due after one year	2.6	0.0	1.0
Mortgages are pledged for liabilities totaled	0.2	1.2	1.2
Material purchase commitments	7.0	8.9	9.9

<b>NOMINAL VALUE OF CURRENCY DERIVATIVES (MEUR)</b>	<b>Jun. 30. 2018</b>	<b>Jun. 30. 2017</b>	<b>Dec. 31. 2017</b>
Foreign exchange forward contracts			
Market value	-0.1	0.1	
Nominal value	2.0	5.0	