

# Connectivity to be trusted.

Annual Report 2021



**Bittium**



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# Bittium in 2021

## Medical Technologies

Bittium offers medical technology for monitoring biosignals in the areas of cardiology and neurophysiology.

## R&D Services

Bittium offers professional R&D engineering services and technology expertise in the areas of wireless devices, network infrastructure, and IoT solutions.

## Secure Communications & Connectivity

Bittium provides highly secure communications and connectivity solutions for public safety & security, defense, and other professionals' markets.

## Tactical Communications

Bittium specializes in military radio and communication solutions by providing advanced products and services for wireless and wire line tactical communications.



Personnel

**653**

in total

Net Sales  
**86.9**  
MEUR

Products  
**63.1**  
MEUR

Services  
**23.8**  
MEUR

**Product-based Net Sales**  
Medical Technologies **27.8** MEUR  
Defense & Security **35.3** MEUR

**Services-based Net Sales**  
Connectivity Solutions **15.5** MEUR

Operating Profit  
**3.2**  
MEUR

Cash and Other Liquid Assets  
**22.0**  
MEUR

Equity Ratio  
**72.4**  
%

Net Gearing  
**0.2**  
%

Earnings per Share  
**0.09**  
EUR

Order Book  
**29.5**  
MEUR

# CEO's Review

The last quarter of 2021 was excellent for Bittium. Net sales increased by 37.8 percent from the previous year, with product deliveries focusing on the latter part of the year. The operating result for the fourth quarter was EUR 3.7 million corresponding to 12.4 percent of net sales. In my opinion, the development of the last quarter of the year proves that our target, an operating result level of 10 percent, is realistic. We aim at an average annual net sales growth of more than 10 percent and an operating result level of 10 percent.

The net sales in 2021 grew by 10.8 percent from the previous year and the operating result was EUR 3.2 million falling short of our target. The growth in net sales resulted from the great development of Medical Technologies product sales. Defense & Security's product-based net sales remained at the same level than in previous year despite of the difficulties in sourcing components. The additional costs caused by the shortage of components also affected EBITDA and maintaining the expanded product portfolio competitive was reflected as growth of annual R&D costs. Connectivity Solutions' business development was slowed down by the travel restrictions caused by the coronavirus pandemic.

The availability of components has been weak and prices higher than before. We were also unable to deliver all product deliveries to our customers on time. The shortage of components will affect our product business also during the current year. However, we believe that the situation will gradually return to normal when going towards 2023.

The level of R&D investments decreased. Almost EUR 7 million less R&D costs were capitalized in the balance sheet than in the previous year, and despite that, the result for the year was better than in the previous year. As a result of lower R&D costs and almost 20 percent increase in the product sales, the cash flow for the year was approximately EUR 8 million better than in the previous year. We are unlikely to reduce the absolute level of our R&D investments, but the relative level will decrease through the growth we are aiming at.

In the Defense business, the cooperation with our most important domestic and international customers continued well. The general market slowdown due to the coronavirus pandemic had some effect on the progress of ongoing projects. Product deliveries were delayed due to a shortage of components. Towards the end of the year, we were able to manufacture and deliver a significant number of products to our customers, which was reflected in significant growth in Defense product-based net sales in the fourth quarter. In the defense market, the coronavirus pandemic affected the progress of government purchase programs for tactical communications systems, which affected the acquisition of new customer projects.

Despite the delay in the development of Bittium Tough SDR™ radios, I am really pleased with the outcome. These are world-class state-of-the-art vehicle and military radios that are highly competitive internationally. I want to take the opportunity here and thank our development team and our customer, Finnish Defence Forces, who has been involved in the develop-

ment of the radios from the beginning. At the end of the last year, the delivery of the first phase of SDR radios and related equipment to the customer was almost completed. The Finnish Defence Forces started testing radios and their waveforms and will build readiness for more extensive use of radios in the coming years. The Defense Forces is preparing to purchase the next batch of products, and the annual order volumes, according to the letter of intent for the acquisition of new tactical radios published in August 2017, will be reached, according to the current understanding, from 2024 onwards.

a4ESSOR, a multinational joint venture for the development of secure European software-defined radio technology, progressed well over the past year and the jointly developed ESSOR waveform received official approval. a4ESSOR partners, of which Bittium is one of the six companies, will port the ESSOR waveform to their own software radios as part of the next phase of the project. Bittium has been the first ESSOR partner to port the ESSOR waveform to its own SDR radios and to demonstrate the functionality in field tests over large networks. We have world-class waveform expertise and are a nationally and internationally recognized partner in the development of secure and interference-tolerant waveforms. Last year, a4ESSOR launched a new project to develop new ESSOR waveforms interoperable with partner countries' radios and improve the existing waveform, to ensure that these waveforms can be ported to the national radios of the ESSOR countries. In this new project, Bittium will focus on developing ground-to-ground and air-to-ground waveforms.

The importance of mobile security in communications has grown and the demand for secure Bittium Tough Mobile 2 smartphones has increased steadily over the past year. The security classification of the smartphone and its related system plays a key role, especially in the governmental market, and we are actively applying for security classification certificates in various countries together with our customers.

In the first half of the year, we entered into a distribution agreement with Mexican telecommunication solutions provider Inmosat for the distribution of Mexsat satellite phones designed for the Mexican state's Mexsat satellite communications system. The products of the first order under the distribution agreement have been delivered to the customer, and we expect the deliveries to continue this year.

The medical technology market clearly began to recover from the downturn caused by the coronavirus pandemic. The demand from the service providers recovered, which was reflected in the development of Medical Technologies' product-based net sales. Remote monitoring and remote diagnostics solutions facilitate the challenges of limited medical resources and cost pressures, which was reflected in increased sales of Bittium's medical remote diagnostics solutions. The extent of the growth was limited by the shortage of components, which we expect to continue until the end of 2022.

The European Medical Device Regulation (MDR) entered into force in May, causing a backlog of quality system audits and device approvals and thus a significant delay in application lead times. We launched our new home sleep apnea testing solution Bittium Respiro™ in the early last year, and its MDR approval has been delayed due to a delay in lead times. With the current information at hand, we believe we will get the approval during the second half of this year.

The demand for Bittium's ECG measuring devices increased during the last year. The majority of the product deliveries were made to our customer Preventice, a provider of remote monitoring services in the U.S. ECG market. The demand for Bittium's EEG devices designed for intensive care slowed down. The temporary overload of intensive care units with patients infected by the coronavirus affected the ability of intensive care units to promote the use of new technologies and solutions.

In September, we announced an agreement under which Bittium planned to buy a 25 percent stake in the shares of Technomed Ltd, a UK provider of ECG diagnostic services. Since the technical conditions required for the share purchase were not met, we terminated the agreement. However, the cooperation with Technomed continues in the measurement and monitoring of biosignals and the development of analysis software, and we signed a new distributor agreement for Bittium Faros™ ECG measuring devices and Bittium Respiro™ home sleep apnea measuring devices and software.

In the Connectivity Solutions business, the delivery of our R&D services and connectivity solutions to our customers continued. The net sales of Bittium's R&D services remained at the same level as in the previous year. The business grew in the Open Radio Access Network (O-RAN) market, and we made investments in the development, sales, and marketing of our own O-RAN business over the past year. There was also new demand arising in wireless satellite technology. The growth in these areas brought us new international customers.

In the manufacturing industry, the coronavirus pandemic slowed down the start of new R&D service projects, and the demand in this market has clearly decreased. The demand for the development of new medical technology solutions, on the other

hand, remained stable despite the slowdown in the approvals of new medical devices caused by the new MDR regulation. The exceptional circumstances caused by the pandemic strengthened our remote work practices with our existing customers. Despite the virtual meetings and events becoming more and more common, acquiring new customers was challenging. In addition, the availability of a professional workforce on the market weakened. There are not enough software engineers available in the markets compared to the demand. The competition for the workforce also increased labor mobility.

Our goal in the Connectivity Solutions service business is to further increase the number of product development service projects and expand the international customer base.

During 2021, we strengthened our position as a provider of secure and reliable solutions as well as a provider of solutions for remote monitoring and remote diagnostics. We also focused strongly on continuously improving the customer experience and quality. We will continue to develop our operations and investments in line with our strategy to enable the company's international growth this year as well.

To conclude, I would like to thank all our customers and partners, as well as our shareholders, for their trust in Bittium. I would also like to thank all our employees for the past year and their strong commitment to our common goals. Our personnel is united by the same enthusiasm for technologies and learning of new things, which is ultimately reflected in our product development and the work for our customers. I am proud of all of you and the results we have together achieved.



**Hannu Huttunen**  
CEO

# Business and Operating Environment

## Bittium in Brief

Bittium is a Finnish technology company specializing in the development of reliable, secure communications and connectivity solutions and healthcare technology products and services measuring and monitoring biosignal outside the hospital.

Bittium has deep, over 35-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 measurement in the areas of cardiology, neurology, rehabilitation, and occupational health.

Bittium, formerly known as Elektrotbit Corporation, was established in 1985. It changed its name to Bittium after selling

its Automotive business and the rights to brand name Elektrotbit on July 1, 2015. Bittium is a publicly listed company on Nasdaq Helsinki as BITTI.

Bittium operates in Finland, Germany, the United States, Mexico and Singapore. Bittium headquarters is located in Oulu, and the company's other Finnish offices are in Espoo, Kajaani, Kuopio and Tampere.

At the end of 2021, Bittium had 653 employees, of which the majority were R&D engineers. In 2021, the Company did not undergo any significant changes in relation to its size, structure, operating areas, ownership, distribution of shares, income formation or the maintenance of operations.

Bittium operates globally. With regards to sustainable business, Bittium's products and services comply with the statutory requirements, directives, general standards and frameworks, such as SA 8000 (social responsibility), ISO 14001 (environmental systems), RoHS I, II, III (hazardous sub-

stances), REACH (chemicals regulations), WEEE (recyclability of waste electrical and electronic equipment), ETJ+ / ISO 50001 (energy efficiency), EICC (Electronic Industry Citizenship Coalition) and GRI G4 (reporting guideline for sustainable development). As a global enterprise, the Company also takes the special requirements of its international customers into account.

## Bittium's Purpose

Bittium's purpose is to adapt our deep knowledge to deliver superior technology innovations to enhance connectivity, bring safety and improve health in the society.

## Bittium's Vision

Bittium's vision is to be the world's leading provider of innovative products and services for enhanced wireless communications, cybersecurity, tactical communications and outpatient biosignal measurement.





# Business Model

## Megatrends and Their Phenomenons

Connectivity as an enabler of digitalization, Internet of Things (IoT) and digitalization, aging population, information security



## Customer Groups

Companies of different sizes, OEMs, system integrators, defense and governments, hospitals and hospital districts, other public administration and organizations, research institutes, universities



### Effects on the Customer

- Reliable Finnish partner
- Products and solutions that represent the latest technology
- High product performance and long lifecycle
- Scalable product platforms
- Short customization times and fast market entry of solutions
- Lower costs and risks in customer's own R&D projects



### Products, Services and Solutions

- Products and services in tactical communications
- Secure phones and the related software and systems
- Information security software
- Design services for wireless communications
- IoT and digitalization services
- Biosignal measuring and monitoring equipment in the areas of cardiology and neurology



### Bittium's Vision

is to be the world's leading provider of innovative products and services for enhanced wireless communications, cybersecurity, tactical communications and outpatient biosignal measurement.



### Effects on Bittium

- Long-term projects and customer relationships build stability
- Service projects enable applying new technologies that strengthen the expertise of both the company and its customers
- Extensive understanding of commercial technologies and the customized communications systems used by authorities
- Integrated expertise in mobile and online technologies
- Good growth opportunities



### Income Streams

- Products and product platforms, systems and the services related to these
- R&D services
- Maintenance fees
- Licenses

## Enablers

### Key Resources

- Experts
- Own products
- IPR
- Partners
- Strong balance sheet
- Efficient processes
- Quality and environment systems

### Key Focus Areas

- Personnel
- R&D
- Sales and marketing
- Way of working
- Digitalization

### Expertise

- Wireless technologies
- Software
- Mechanics and software solution integrations, testing and verification
- Extensive expertise in systems and specialist areas
- Information security
- Measurement of biosignals
- Way of working

### Channels

- Own sales
- Retailers
- System sales
- Integrators
- Web shop

**Bittium's Mission** is to adapt our deep knowledge to deliver superior technology innovations to enhance connectivity, bring safety and improve health in the society.

## Strategic Guidelines

Bittium aims to be a significant global provider of secure and safe communication solutions in the defense and public safety markets, and a leading provider of connectivity solutions and R&D services for different industries, as well as a significant provider of remote measuring and diagnostics solutions for measuring and analyzing biosignals.

Bittium has made significant investments in its future by increasing significantly R&D investments in its own products and solutions. These create a good foundation for future growth. The company will continue to invest in product development and in the development of its operations based on its strategy to enable its international growth.

Bittium continues to search for inorganic growth opportunities in all its product and service areas and is prepared to invest in acquisitions that strengthen the company's growth strategy.

Bittium's business is divided into three product and service areas: Defense & Security, Connectivity Solutions and Medical Technologies.

### Defense & Security

In the Defense & Security product and service area Bittium offers globally leading products and services for its customers in the defense, security and public safety markets aiming at strengthening the national security of independent countries. Bittium's competitiveness in these markets is based on trust and reliability, high quality of the products and services, as well as on advanced technology and security know-how developed within the company during the last 35 years.

Bittium's tactical communication products targeted at customers in the defense market offer a new kind of efficiency for their management systems with products that enable faster data transfer, better mobility, and large compatibility with other communication systems. Secure communication solutions, targeted for the public safety market, are responding to the increasing requirements for information security. The demand for secure communication solutions in the public safety markets is driven by the increasing use of LTE technology, smartphones and smartphone applications.

### Connectivity Solutions

The development of wireless technology continues and the digitalization creates a growing need for wireless connections. Bittium offers its customers R&D services and wireless connectivity solutions for the development of new innovative products in a secure and evolving wireless environment.

The company's competitiveness in these markets is based on its unique technology and information security expertise, as well as the reliability and quality of its products and services. Bittium's special strength is demanding systems.

### Medical Technologies

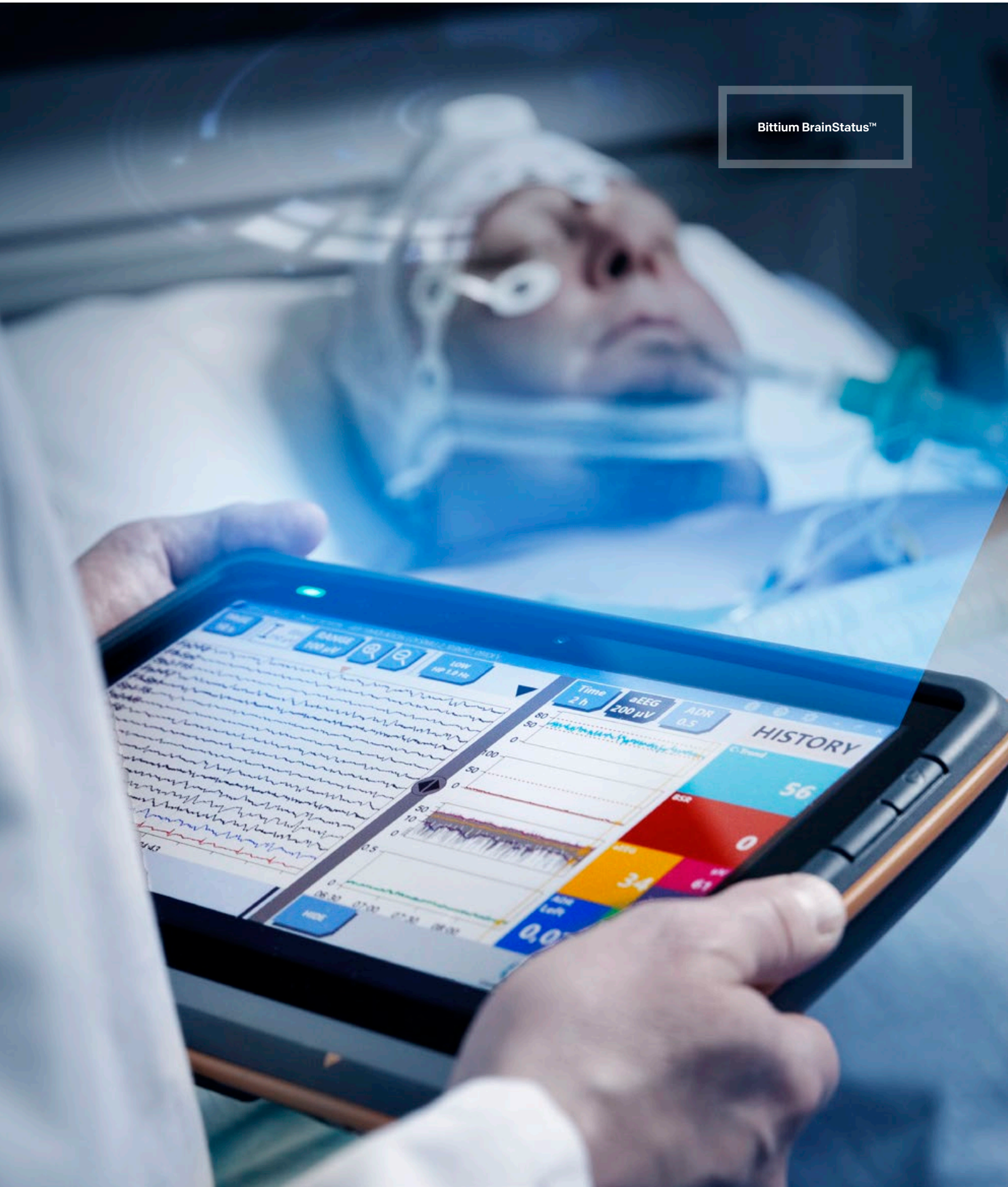
The medical technology market is undergoing significant developments in patient care, especially outside hospitals. There is an increasing focus on the prevention of diseases and health problems through early diagnosis and the repatriation of patients at an earlier stage in order to reduce hospital and treatment days. These trends create demand for biosignal measurement, digitalization of services, wireless, and secure connections.

Bittium aims at promoting better health in society by providing products and complete solutions for the healthcare market in biosignals' remote monitoring and diagnostics, based on the company's long experience and deep knowledge of biosignal measurement, wireless communications and security technology.

## Long-term Financial Targets

Bittium aims for an average annual net sales growth of more than 10 percent and an operating result level of 10 percent.

Bittium BrainStatus™



# Products and Services



# Defense & Security

## Tactical and Secure Communication Systems

In the Defense & Security product and service area Bittium offers globally leading products and services for its customers in the defense, security and public safety markets. Bittium's competitiveness in these markets is based on trust and reliability, high-quality products and services, as well as on advanced technology and security know-how developed within the company for more than 35 years.

### **Bittium Tough Mobile™ Product Family**

At the core of the information security features of the Bittium Tough Mobile smartphones lies their multilayered security structure, which is based on a hardened Android™ operating system, unique hardware solutions, and the information security features, and software integrated into the source code. The phones are fully designed and manufactured in Finland and Bittium ensures supervised and secure manufacturing and supply of the smartphones to customers. Bittium Tough Mobile smartphones together with Bittium Secure Suite device management and encryption software product can be certified for secure use of different national government authorities. Bittium Tough Mobile 2 C smartphone together with Bittium Secure Suite back-end system form a smartphone-based communication solution that has been certified for CONFIDENTIAL security level (NCSA-FI). As the smartphones have been designed for use by authorities, they have a significantly longer availability and lifespan and better availability of security updates compared to conventional smartphones.

**Bittium Secure Suite™** is a device management and encryption software product that complements Bittium Tough Mobile smartphone with a scalable set of new software services for remote management, remote attestation and securing the network connections of the device. Bittium Tough Mobile smartphone and Bittium Secure Suite form a unique, complete, reliable system for processing and transferring sensitive and classified material and securing critical communication.

**Bittium Secure Call™** is a communication application for public authorities and businesses with security for end-to-end encrypted voice and video calls, group calls, messages with attachments, group messaging, push-to-talk voice messages and a message that is destroyed after a predetermined time. Authority-level security is achieved when Bittium Secure Call is used in conjunction with Bittium Tough Mobile smartphones and the Bittium Secure Suite background system.

**Bittium Specialized Device Platform™** is a versatile device platform leveraging the latest mass-market mobile device hardware and software technologies. The platform enables companies to roll out fully customized mobile devices in various form factors (incl. module, smartphone, tablet and smart watch) faster and with lower development risks. The platform has been productized to public safety, security, industrial and smart watch markets. One of the major products based on this platform is the secure Bittium Tough Mobile smartphone.

**Bittium SafeMove® Mobile VPN** software enables the utilization of all IP based applications and networks by securing the connections between the work station and corporate services immediately from the startup of the phone. With Bittium SafeMove, for instance home care workers are allowed to have full access to the same systems and applications they would have on a hospital desktop, enabling safe and real-time access to patient records. The new SafeMove Streams feature enables optimized, durable and secure connectivity, even when the network connections in use are unreliable and sensitive for interference.

**Bittium SafeMove® Analytics** is an advanced monitoring and reporting module that helps organizations to monitor network connectivity and performance to improve productivity and user experience. The analytics tool continuously gathers connectivity data such as connectivity status, speed, throughput and bytes transferred, network type and Wi-Fi network information. It is also easy to enhance the tool with positioning information if GPS data is available. In addition, the new security features enable immediate report of possible security deviations in the mobile phones used by the employees. This enables reacting to the cyber threats without any delay, for example by disconnecting device that reported the deviation, from the company network for the time of clearance of the situation.

**Bittium Tactical Wireless IP Network™ (TAC WIN)** is a Software-Defined Radio based wireless broadband network system intended for military and public safety use. With the system MANET (mobile ad hoc network), link, and connection networks can be formed into one logical IP network quickly, no matter where the location is. Bittium TAC WIN is compatible with existing fixed and wireless network infrastructures. The core of the system is a tactical router that enables users to freely form both wired and wireless broadband data transfer IP connections. The tactical router also enables connections to different types of terminals and other communication systems connecting them into one communication network. In addition to the router, the system comprises of three types of radio heads, and each radio head covers its own frequency band area and can be used for flexible formation of optimized network topologies for different communication needs. All the products of the system are designed for harsh conditions, and thanks to the system's automated functions the implementation of the system can be done quickly. Due to the software-based functionality of the Bittium TAC WIN system, it can be easily updated with additional performance cost-efficiently during the whole lifespan of the system.

**Tactical Bittium Tough SDR™** product family of tactical radios consists of Bittium Tough SDR Handheld™, handheld radio for individual soldiers, and Bittium Tough SDR Vehicular™, tactical radio for vehicle installations. Bittium Tough SDR products help to produce and share real-time situational awareness (location, image, voice, video, and sensor data) to all levels of the organization. The uniquely wide frequency range of the radios brings combat resistance and the use of multiple waveforms such as Bittium TAC WIN Waveform™, Bittium Narrowband Waveform™ and ESSOR Wide Band Waveform™ simultaneously improves compatibility and allows for different tasks and levels depend-

ing on the situation. Together with the SDR-based Bittium TAC WIN system, it is possible to bring broadband data and voice to all mobile troops starting from brigade level and all the way across the battlefield.

**Bittium Tough VoIP™** product family's products enable tactical IP calls and broadband data transfer even in demanding conditions. Products are easily integrated into existing IP infrastructure. The product family consists of a range of tactical IP-based communication products, including Bittium Tough Comnode™ device and Bittium Tough VoIP Field Phone as well as Bittium Tough VoIP Service and Bittium Tough VoIP Softphone software products.

**Bittium Tough Comnode™** fulfills 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). Additionally, Bittium Tough Comnode also provides SIP (Session Initiation Protocol) server functionalities of the tactical voice network for commercial VoIP terminals and enables using also legacy Combat Net Radios (CNR) as part of the IP-based tactical communication system (Radio over IP, RoIP).

**Bittium Tough VoIP Field Phone™** is a SIP (Session Initiation Protocol) compliant client that provides interoperability with other SIP clients and server implementations available in the market and incorporates functionality that enables the introduction of VoIP services in dynamic self-forming networks independent from server.

**Bittium Tough VoIP Service™** is a software product, which can be used to connect both fixed data network users and wireless tactical data network users to the same voice service network. It is a flexible and decentralized solution designed specifically for mobile troops. It can be installed on

routing elements of the network, such as the Bittium TAC WIN Tactical Router™, the Bittium Tough Comnode™ device or the Bittium Tough SDR™ radios.

**Bittium Tough VoIP Softphone™** is a VoIP software product designed especially for tactical use. It can be used for VoIP calls, instant messaging, conference calls and screen sharing in the Bittium Tough VoIP Service network either with a PC or smartphone.

**Bittium Tactical Power Pack™** is specifically designed for tactical data transfer as an accessory to the Bittium Tough SDR Handheld™ radio and the Bittium Tough Comnode™ device, for example, but can also be easily used with standard tablets and smartphones via USB. The Tactical Power Pack enables uninterrupted field operation for the devices.

**Bittium Tactical LTE Access Point™** is a stand-alone LTE access solution that enables the creation of multiple parallel wireless LTE areas and seamless connection to an IP network. The Tactical LTE Access Point is fully compatible with the Bittium TAC WIN backbone network. With the solution, different troops can benefit from cost-effective and fast multimedia data transfer and VoIP services with both commercial smartphones and special terminals intended for government use.

**Bittium Tactical Device Management™** is an advanced system that enables secure deployment and operative use for the tactical communication devices. With the system, different defense forces can maintain sovereign, centralized, and efficient control over Bittium's tactical devices. The system enables preparation of the devices for operative use and management of the devices during operative use, including commissioning, software updates, and key management.

Bittium Tactical Power Pack™  
 Bittium Tough SDR Vehicular™  
 Bittium Tough SDR Handheld™



**Bittium Tactical Network Management™** is an easy-to-use and visual system for managing Bittium's tactical communication networks and network nodes, including Bittium Tactical Wireless IP Network™, Bittium Tough SDR™, and Bittium Tough Comnode™. Different defense forces can use the system's tools for planning the locations of the networks and their nodes so that optimal network performance can be achieved. When the networks are in operative use, the system provides a real-time and reliable status view of network operation and node configurations. The data collected from the networks and nodes during operative use is recorded and can be easily analyzed. This enables optimizing the network performance for upcoming operations.

## Year 2021

Cooperation with the Finnish Defence Forces continued closely during 2021. Deliveries of products required for tactical communication continued, however, the shortage of components slowed down the delivery schedule. Despite the challenging availability of components in the fourth quarter, a significant number of products were delivered to the customers, which was reflected in fourth-quarter revenue growth in Defense and Security products.

Deliveries of the first phase of the Bittium Tough SDR™ handheld and vehicle radios and related accessories, agreed under the purchase agreement between the Finnish Defence Forces and Bittium, published in December 2018, were almost completed. The poor availability of components need-

ed in production slowed down the final deliveries. The Finnish Defence Forces launched the Field Radio 2020 project, which serves the testing and operational implementation of Bittium Tough SDR products and their waveforms and is preparing the purchase of the next batch of products to expand the Defence Forces' testing activities and preparations for the commissioning of radios. With the current understanding, the annual order volumes stated in the letter of intent to acquire new tactical radios, published in August 2017, will be reached from 2024 onwards. The Defence Forces have been involved in defining the Bittium Tough SDR™ system from the beginning of the project and believe to achieve a significant performance improvement through the system. Alongside the testing and introduction of the radios, the development of the waveforms used in the radios continued as planned.

The development of the Bittium Tactical Wireless IP Network™ software-defined radio system continued in cooperation with the Finnish Defense Forces as planned. In March, the Defense Forces ordered products from the TAC WIN system and Bittium Tough Comnode™ products based on the existing framework agreements for the purchase of the products. The share of TAC WIN products was approximately EUR 8.5 million and the share of Bittium Tough Comnode was approximately EUR 1.7 million. All products have been delivered to the Defence Forces during 2021.

Cooperation with the Estonian Defense Forces continued closely in the supply of tactical communication products and systems, which complement the tactical communication system already delivered for the customer. The product deliveries are based on a framework agreement between Bittium's Estonian partner Telegrupp AS and the Estonian Defense Forces, and it covers the years 2021–2025. The deliveries, integration work and testing of tactical communication system products were also continued with the Austrian Defense Forces.

In November, a4ESSOR, a multinational joint venture developing secure European software defined radio technology, launched a new ESSOR New Capabilities (ENC) project to develop new ESSOR waveforms interoperable with partner countries' radios and to improve the existing system to enable the waveforms portability to the national radios. The new project aims to improve the interoperability and security of ground-to-ground, air-to-ground and satellite-based tactical data transmission. In this project, Bittium will focus on the development of ground-to-ground and air-to-ground waveforms. Earlier in May, a4ESSOR received official approval for its ESSOR High Data Rate Base Waveform.

The importance of mobile security in communications has increased and the demand for the secure Bittium Tough Mobile™ 2 smartphones grew steadily over the past

year. The security classification of the phone and its related system plays a key role, especially in the governmental market. Bittium actively applies for security classification certificates in various countries together with its customers. The customer experience of the Secure Call communication application, launched on the Tough Mobile 2 phone at the beginning of the year, has been positive and the delivery volumes of the Secure Call application increased.

Deliveries of Mexsat satellite phones designed for the Mexican state's Mexsat satellite communications system continued. The resale cooperation with the Mexican telecommunications solutions provider Inmosat has worked well and the products of the first order related to the distributor agreement have been delivered to the customer. The product deliveries to Mexico are expected to continue this year.

## Market Outlook

### Defense and Public Safety Market

In the defense market's tactical communications sector, the governments' defense forces and other authorities need networks that troops, who are more and more constantly on the move, can use and transfer growing amounts of data securely. This creates demand for Bittium Tactical Wireless IP Network™ (TAC WIN) broadband network, Bittium Tough SDR™ handheld and vehicular radios, and for other Bittium's IP-based (Internet Protocol) tactical communication solutions that fulfill the needs of data transfer of moving troops and 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 2022. Due to the long sales cycles driven by purchasing programs of national governments, it will take time to receive purchase orders. Exceptional circumstances

due to the coronavirus pandemic have to some extent affected the progress of programs, which has slowed down the completion of larger deals.

The financial difficulties caused by the coronavirus pandemic affect the budgets of public finances such as states and public authorities and have required postponing of procurement. This has somewhat delayed the launch of new projects and receiving orders. Especially in the defense and authorities' markets testing and piloting of products and systems are typical phases before receiving orders of larger entities, and current circumstances due to the pandemic situation have caused delays in them. However, the market has begun to recover from the effects of the pandemic. The global shortage of components affects the availability of various components used in products, which affects the company's ability to deliver products to its customers on time.

The use of LTE technology, smartphones, and applications continue 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 in secure mobile devices is increasing. The sales of secure terminal products are expected to develop moderately according to the nature of public safety markets.

The smartphone sales process often involves testing and piloting systems and equipment, possibly integrating third-party technologies, and possible local regulatory approvals, which are typically lengthy processes. Exceptional circumstances caused by the coronavirus pandemic may have a significant impact on the progress of projects, which slows down the closings of larger transactions.





# Connectivity Solutions

## R&D Services

Bittium provides product development services in the areas of wireless communications, medical technologies, connected vehicles, and manufacturing. Outsourcing R&D either entirely or partly results in cost savings and enables the scaling of customers' product development volumes according to their prevailing needs. Bittium has long experience in wireless connectivity, information security, and different communications technologies such as 5G. The understanding of industry-specific requirements and strong competence in R&D services, wireless devices, digitalization, and information security, as well as the ISO 13485:2016 quality certificate for medical devices and equipment, enable Bittium to create solutions that bring clear added value to customers and partners. Bittium also conducts R&D in the technology areas of Artificial Intelligence (AI) and Cloud Solutions.

## Year 2021

Bittium provides R&D services in the areas of wireless telecommunications, medical technology, automotive and manufacturing industries. Outsourcing R&D services, in whole or in part, brings customers cost savings and enables the scaling of their product development volume to meet their current needs. Bittium has extensive expertise in the areas of wireless connectivity, information security, and various communication technologies (such as 5G).

The delivery of R&D services and connectivity solutions for the customers continued and the demand for Bittium's R&D services remained stable during 2021. The market for Open Radio Access Network (O-RAN) architecture developed further and the demand for O-RAN know-how increased. During the last year, Bittium has been investing in the development, sales and marketing of its own O-RAN business. New demand also arose in wireless satellite technology. The growth of these areas has provided the company with new international customers.

The coronavirus pandemic slowed down the start of new R&D service projects in the manufacturing industry and automotive markets, and the demand clearly declined. The demand for medical technology solutions remained stable despite the slowdown in the lead times of the new medical device approvals caused by the new European Medical Device Safety Regulation (MDR).

The exceptional circumstances caused by the pandemic strengthened the remote work practices with existing customers. However, despite the virtual meetings and events becoming more and more common, acquiring new customers was challenging. Also, the availability of a professional workforce on the market weakened, and, in particular, there is an insufficient amount of software engineers available compared to the demand. The competition for the workforce also increased labor mobility.

## Market Outlook

### Telecommunication and Digitalization

In mobile telecommunications, the implementation of 5G is accelerating in pace. Investments in developing new features continue and the importance of software development in the 5G network development expands. This creates demand for Bittium's R&D services. There is a wide range of frequencies allocated for the 5G technology, thus creating the need to develop multiple products to cover the market and creating demand for R&D services for the development of product variants. The different kinds of needs for solutions in the open radio frequency network architecture, Open Radio Access Network (O-RAN), and satellite communication increase the demand for Bittium's R&D expertise as new players enter the traditional supplier network. Also, the development of new devices utilizing 5G technology increases the demand for Bittium's services.

As digitalization evolves, secure IoT (Internet of Things) has become a significant development area in almost every industry. The increasing need for companies to digitalize their operations, collect data wirelessly, and transfer it to the internet and cloud services generate a need for Bittium's services and customized solutions. To this end, the market needs secure devices, for both demanding industrial and leisure applications, which collect information from the sensors used by the device and create a reliable wireless connection to the Internet and cloud services. The deployment of

5G technology is expanding and the number of digitalized devices increases continuously. The devices will also feature new and more advanced features that will create demand for design services. Therefore, the integration of different systems and technologies plays an important role in enabling complete digitalization services. There are several learning systems and devices under development that use different kinds of artificial intelligence (AI) technologies to ease and speed up the processing of large data amounts.

Changes in the digitalization of the automotive industry and new business models as well as the automation of automotive operations create a need for technological

development. Most significant technology trends, such as wireless connectivity, intelligent mobility, self-driving cars, and electric cars, are guiding needs for innovative software development. The share of software in cars is quickly increasing, and software is becoming a major enabler and a differentiator. The use of the Android™ Automotive operating system in the In-Vehicle Infotainment (IVI) systems is strongly entering the market. Several carmakers have announced the launch of cars with Android Automotive. Bittium's more than a decade of experience with the Android operating system and the Google ecosystem combined with wireless connectivity know-how create good business opportunities for this market.

The coronavirus pandemic has slowed sales of product development services. Despite the fact that adaptation to new circumstances and practices has gone well, the pandemic has slowed down the progress of existing projects and the acquisition of new customers. However, the market has slowly begun to recover from the effects of the pandemic and new customer projects have been launched. The coronavirus pandemic and labor competition are expected to continue prevailing in the market during 2022. The goal is to further increase the number of product development service projects and expand the international customer base.

# Medical Technologies

## Products and Services for Biosignal Measuring

In the Medical Technologies product and service area Bittium offers its customers healthcare technology products and services in biosignal measuring in the areas of cardiology, neurology, rehabilitation, occupational health, and sports medicine. Combining healthcare technologies with Bittium's long-term experience and competence in wireless and security technologies gives Bittium a good basis to serve its customers in the healthcare sector.

**Bittium Faros™** is a versatile waterproof ECG device that is used for early detection of cardiac abnormalities in everyday life. Bittium Faros is ultra-small and lightweight, which enables precise full disclosure ECG measurements for long-term holtering, cardiac event monitoring, mobile cardiac telemetry and assessing the autonomic nervous system functions. Bittium Faros outpatient monitoring solutions include several software options for cardiac monitoring. The built-in arrhythmia detection algorithms on the Bittium Faros device are used for event recording and cardiac event monitoring. Bittium's solutions enable the earlier discharge of patients and the ability to react to detected arrhythmias faster.

### **Bittium OmegaSnap™ Product Family**

**Bittium OmegaSnap™ 1-CH ECG Electrode** (released in January 2021) – Bittium OmegaSnap™ one-channel electrode is the most cost-effective, patient compliant and reliable patch electrode for long-term ECG measurements. It is also suitable for HRV applications and for heart monitoring for stroke patients.

**Bittium MiniSnap™ Sensitive 1-CH ECG Electrode** – Bittium MiniSnap™ Sensitive one-channel electrode is the most suitable electrode for 24h ECG measurements on small adults and children.

### **Bittium OmegaSnap™ 2-CH ECG Electrode**

– Bittium OmegaSnap™ two-channel electrode is the best choice when more than one-channel measurement is needed for more comprehensive arrhythmia analysis, while maximizing patient compliance.

### **Bittium OmegaSnap™ 3-CH ECG Electrode**

– Bittium OmegaSnap™ three-channel electrode is the most patient compliant way to perform traditional three-channel measurements.

### **Bittium OmegaSnap™ 1-CH Adapter and Bittium OmegaSnap™ Multi-CH Adapter**

– Bittium OmegaSnap™ ECG electrode and Bittium Faros™ ECG device are connected to each other through the lightweight and discreet Bittium OmegaSnap™ Adapter. The adapter also allows the Faros device to be temporarily detached from the patch electrode when charging, for example. In the case of remote heart monitoring, such as the Bittium HolterPlus™ solution, it significantly enhances the long-term use of the same electrode, thus ensuring that the skin contacts of the attached electrode remain optimal for the measurement to continue. There are two adapter versions available: Bittium OmegaSnap™ 1-CH Adapter is designed for one-channel electrodes, and Bittium OmegaSnap™ Multi-CH Adapter is designed for two- and three-channel electrodes.

**Bittium Cardiac Navigator™** software is a flexible and versatile software solution for performing clinical Holter ECG analysis. Its user-friendly and informative data presentation and intuitive analysis tools make the software efficient and easy to use when analyzing multiple days of ECG recordings. The software allows for scanning long measurements efficiently in a shorter time, thus speeding up the final diagnosis.

**Bittium HolterPlus™** is a web-based remote cardiac monitoring solution, consisting of a Bittium Faros ECG device and Bittium MedicalSuite™ mobile application integrated into a secure smart device and Medical Suite remote service platform. Bittium HolterPlus enables remote monitoring and earlier discharge of the patient and allows the ECG measurement data of the remotely monitored patient to be wirelessly transferred securely from the monitoring device to the Bittium MedicalSuite remote diagnostics service platform. From the platform the ECG recording can be downloaded to a cardiologist for the diagnosis and the diagnosis will be uploaded for the treating physician for further patient care.

**Bittium MedicalSuite™** is an advanced remote monitoring service platform that utilizes wireless data transfer. Bittium MedicalSuite is mainly aimed at service providers to facilitate secure information sharing and workflow management between service providers, clinics, and specialists. Bittium MedicalSuite™ platform allows specialists to perform remote consultations regardless of location. The Service is a combination of intelligent analysis, wireless data transfer, reporting, and management modules that you can optimize according to your needs. The easy-to-use web user interface allows dashboard customization for different user groups, which ensures effortless workflow and improves efficiency. Currently the system supports cardiac monitoring services, but the same technology can be applied to any biosignal measurements, such as brain monitoring and home sleep apnea testing services.

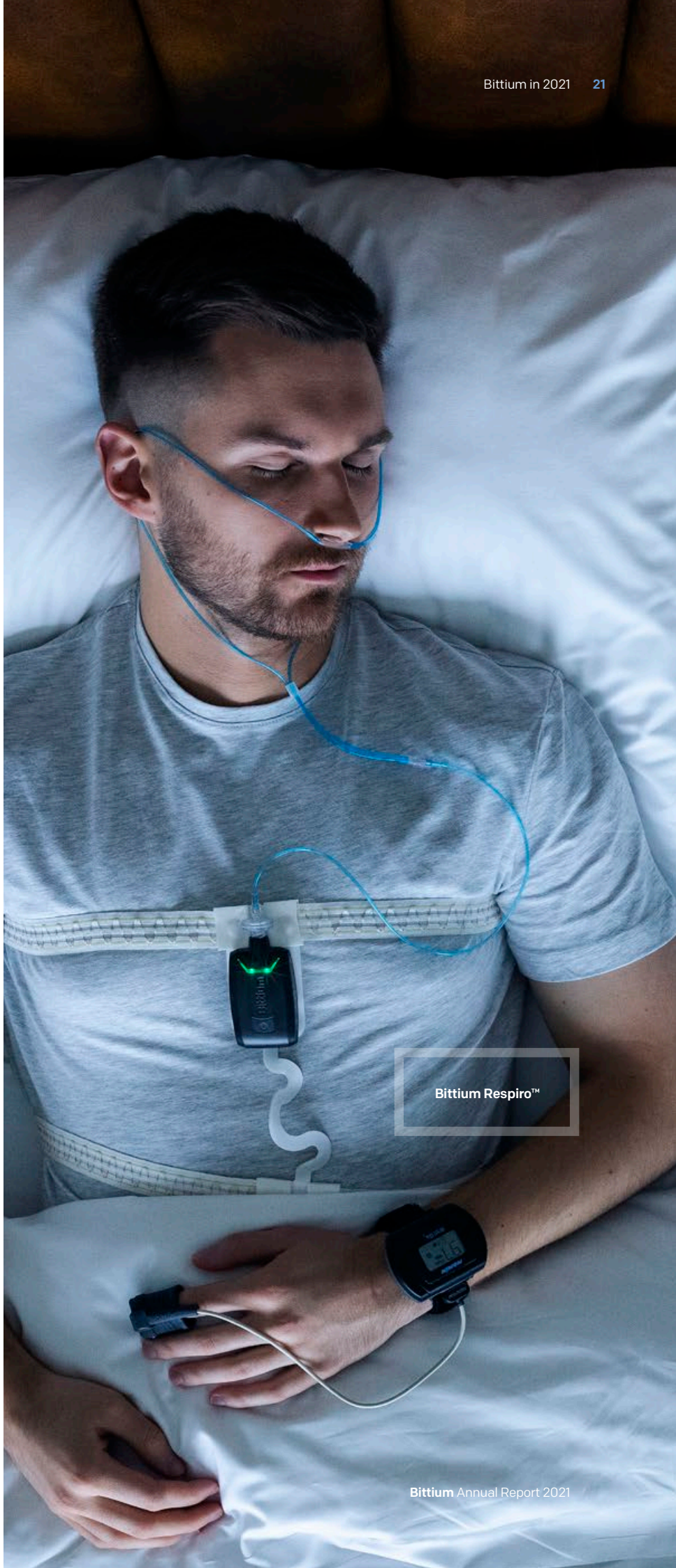
**Bittium BrainStatus™** is a wireless compact EEG amplifier, which is used together with a disposable easy and quick to wear Bittium BrainStatus electrode headband for example to diagnose epileptic seizures and brain stroke. Bittium BrainStatus enables quick measurement in field conditions as well as in hospitals, thus making the treatment process of the patient faster. Bittium BrainStatus can be used for wireless real-time remote EEG monitoring or data can be recorded to the device memory.

**Bittium BrainStatus™ with Cerenion C-Trend®** is the world's first practical method for measuring the brain function of intensive care patients. Bittium BrainStatus measures and monitors the electrical activity in the brain, and with the help of Cerenion C-Trend analysis tool, the brain's state is displayed as a straight-forward and simple-to-interpret numeric value by making use of machine learning algorithms and artificial intelligence.

**Bittium NeurOne™** is one of the quickest and most accurate EEG measuring devices in the world designed for clinical and research use. Bittium NeurOne system enables fully synchronized group measuring of up to 30 persons simultaneously for example in different types of psychological studies. The solution is optimized for use with transcranial magnetic stimulators (TMS-EEG), with an optional possibility to use it during magnetic resonance imaging procedures (fMRI-EEG).

**Bittium Respiro™** is a modern sleep apnea screening device and analysis service solution for service providers, hospitals, clinics, and health centers. It is focused on Home Sleep Apnea Testing (HSAT) and intended to record standard PG level data and analyze typical sleep-related breathing disorders, such as obstructive sleep apnea, central sleep apnea, mixed sleep apnea, hypopnea and Cheyne-Stokes breathing.

**Bittium Respiro Analyst™** software provides a web-based intuitive user interface which utilizes artificial intelligence to accelerate analysis work. The software pre-analyses the massive amount of measurement data and converts it to a more visual and informative format. This makes it easier and quicker for healthcare personnel to perform further analysis and diagnosis. Bittium MedicalSuite™ provides the same cloud backend system for all Bittium medical products and services and enables fast and location-independent data analysis.



Bittium Respiro™



Bittium Faros™  
Bittium OmegaSnap™

## Year 2021

During 2021, the medical technology market clearly began to recover from the downturn caused by the coronavirus pandemic. Demand from the service providers recovered, which was also clearly reflected in the development of net sales. During the past year, the medical remote diagnostics market was consolidated as major service providers merged, which might lead to higher device sales volumes, thus creating growth opportunities for device manufacturers.

The importance of remote care and remote monitoring has increased during the coronavirus pandemic due to insufficient medical resources and cost pressures. Remote monitoring and remote diagnostics solutions alleviate these problems, which was also reflected in increased sales of Bittium's medical remote diagnostics solutions. Component shortages limited the growth during the past year and component shortages are expected to continue at least until 2022. All of Bittium's cardiology and neurophysiology solutions operate on the cloud-based MedicalSuite service platform, enabling service operators to further digitize their remote diagnostic service processes. Along with an aging population, the coronavirus pandemic has provided a strong incentive to streamline and digitize primary care and specialist care. Together, these factors are driving demand for the device and total service solutions in the medical technology market.

The transitional periods for the application of the European Medical Device Safety Regulation (MDR) (EU 2017/745) expired and entered into force in full on May 26, 2021. The regulation harmonises European health legislation and replaces the old MD and AIMD directives on medical and implantable devices. The change has caused a backlog of quality system audits and product approvals and thus a significant delay in application lead times. Bittium has several medical device approvals underway in several countries.

Early in the year, Bittium launched a new home sleep apnea testing solution, Bittium Respiro™. MDR approval of the solution is still pending due to lead time delays. Based on current information, approval is expected in the second half of this year. The device, designed for home use, has received positive feedback, especially due to its compact size and ease of use. Deliveries of the product variant of the device that is targeted at the Finnish market, began during the autumn of 2021, and demand developed positively.

The temporary overload in intensive care units by the patients with coronavirus infection affected the ability of intensive care units to promote the introduction of new technologies and solutions. This slowed down the demand for Bittium's EEG devices designed for intensive care. Bittium BrainStatus™ EEG measuring devices were delivered to customers for pilot use, but the overload of patients with coronavirus slowed down the progress of the pilots.

Demand for Bittium Faros™ ECG measuring devices increased during the past year. The majority of product deliveries were made to Preventice, a provider of remote monitoring services in the U.S. ECG market. The global shortage of components declined the amount of product deliveries. Demand for disposable Bittium OmegaSnap™ patch electrodes designed for Faros devices for long-term ECG measurement increased and deliveries progressed well.

During the last year, Bittium launched new products and software versions and they have been very well received. Product management, product development and production organizations were strengthened, and the quality system and operating processes were developed in accordance with the new MDR requirements. To further increase the international sales, the sales organization was strengthened, and the international distribution network expanded.

In September, Bittium announced to have signed an agreement under which Bittium planned to buy a 25 percent stake in Technomed, a British provider of ECG diagnostic services. Since the technical conditions required for the share purchase were not met, Bittium canceled the agreement. However, the cooperation between Bittium and Technomed will continue in the measurement and monitoring of biosignals and the development of analysis software, and the companies signed a distributor agreement for Bittium Faros™ ECG measuring devices and Bittium Respiro™ home sleep apnea measuring devices and software. The agreement sets out the distribution rights for both devices. Technomed is granted an exclusive right to use Bittium Faros™ ECG devices to provide cardiology diagnostic services in the UK. In other respects, the agreement does not define exclusive rights related to sales rights. Under the agreement, Technomed will commit to minimum purchases of both devices for the period 2022–2024.

## Market Outlook

### Medical ECG and EEG Remote Monitoring Markets

The medical technology market is undergoing significant development in patient care, especially outside hospitals. There is an increasing focus on the prevention of diseases and health problems through early diagnosis and the discharge of patients at an earlier stage to reduce hospital and treatment days. These actions significantly increase efficiency in health care processes and lower costs.

A prerequisite for early hospital discharge is the enabling of accurate and precise follow-up and measurement opportunities in home conditions, which would be enabled through remote monitoring. Remote monitoring and remote diagnostics also enable specialists' diagnoses regardless of time

and place. Also, evolving artificial intelligence-based algorithms become more common in supporting physicians in making diagnoses. Remote monitoring and remote diagnostics make it possible and faster to obtain more accurate diagnoses, which, in turn, speeds up the start of the right kind of treatment. The market change will enable several new providers to join the overall care service chain, without compromising the quality of specialist services.

For remote monitoring and remote diagnostics, Bittium provides its Bittium Faros™ product family for remote heart monitoring, Bittium BrainStatus™ for measuring the electrical activity of the brain, home sleep apnea testing solution Bittium Respiro™, and different kinds of diagnostics software offered by Bittium.

As the coronavirus pandemic spread, the number of non-emergency patients going to treatments and tests to healthcare providers decreased. Several hospitals and medical care facilities have postponed their non-emergency tests and examinations and focused on the treatment of the pandemic patients as well as on the actions aimed to prevent the virus from spreading. The pandemic situation varies from country to country, but generally the market is beginning to get back to normal again. In the long-term, the pandemic will accelerate the use of remote services in hospitals and medical care facilities, and thus create positive development on the demand for remote monitoring products and services.

The global shortage of components affects the availability of various components used in products and can affect the company's ability to deliver products to its customers on time.

# Shares and Shareholders

## Shares

The shares of Bittium Corporation are quoted on the 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 Euroclear Finland Ltd's book-entry 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 and the total number of the shares was 35,702,264.

The accounting par value of the Company's share is EUR 0.10. The Company does not have its own shares in its possession.

## Share Price and Share Trading in 2021

The closing price of Bittium Corporation's share was EUR 5.30 at the end of 2021; the share reached a high of EUR 7.89 and a low of EUR 4.93. During the year, a total of 13.5 million shares with the value of EUR 83.2 million changed hands on the Nasdaq Helsinki. This is 37.7 percent of the share capital. Bittium Corporation's market capitalization on December 31, 2021 was EUR 189.2 million.

## Dividend and Dividend Policy

Bittium Corporation follows a dividend policy that takes into account the group's net income, financial situation, need for capital and financing growth.

### Dividend from 2020

Based on the shareholder vote concerning minority dividend, the Annual General Meeting decided in deviation from the proposal of the Board of Directors that a minority dividend corresponding to half of the profit for the financial period shall be paid in accordance with Chapter 13, Section 7 of the Companies Act. The Board of Directors of the company had proposed to the Annual General Meeting that no dividend be distributed by the Annual General Meeting based on the adopted balance sheet for the financial period of January 1, 2020–December 31, 2020. The total amount of the minority dividend to be distributed was EUR 1,110,327.74, corresponding to EUR 0.0311 per share.

The dividend was paid to shareholders who on the dividend record date April 16, 2021, were registered in the company's shareholders' register held by Euroclear Finland Oy. The dividend was paid on April 23, 2021. All the shares in the company were entitled to the dividend with the exception of shares possibly held by the Company on the dividend record date.

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

On December 31, 2021, the parent company's distributable funds amounted to EUR 117,996,832.83, of which EUR 127,479.11 is profit for the last financial year. The Board of Directors proposes that the Annual General Meeting resolve to pay EUR 0.04 per share as a dividend based on the balance sheet to be adopted for the financial period January 1, 2021–December 31, 2021.

The proposed dividend corresponds to a total of EUR 1,428,090.56 as of the date of the notice of the Annual General Meeting. The proposed dividend exceeds the amount of a minority dividend, which would be EUR 63,739,56, i.e. approximately EUR 0.0018 per share. The dividend will be paid to the shareholders who are registered in the company's register of shareholders as maintained by Euroclear Finland Ltd on the dividend record date, April 8, 2022. The Board of Directors proposes that the dividend be paid on April 19, 2022.

## Trading Codes

Bittium Corporation has been listed on Nasdaq Helsinki since 1998. Bittium Corporation's company code and trading code in the Nasdaq Helsinki INET system is BITTI and the trading code BITTI.

### Trading codes are:

Nasdaq Helsinki Oy	BITTI
Reuters	BITTI.HE
Bloomberg	BITTIFH

## Shareholders

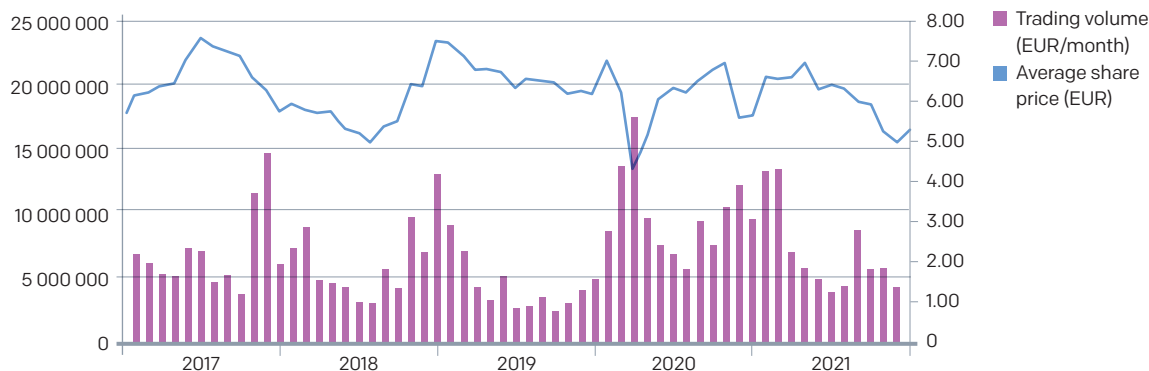
At the end of 2021, Bittium Corporation had 21,663 shareholders. The ten largest shareholders owned 28.6 percent of the shares. Private ownership was 70.2 percent. The percentage of foreign and nominee-registered shareholders was 3.0 percent at the end of 2021.

### Shareholding of the Board of Directors and the CEO

At the end of 2021, the shareholding of the Board of Directors, CEO and the companies controlled by them was 1,777,727 shares, corresponding to 5.0 percent of all shares.



## Trading Volume and Average Share Price 2017–2021



## Share Price Development in Nasdaq Helsinki 2017–2021



## Information to Shareholders

Press releases, reports, earnings estimates, share price ticker, contact details of analysts and other current investor material are available on the Company's website at [www.bittium.com/investors](http://www.bittium.com/investors). An email-based subscription service for press releases and publications can be found on the Company's website as well.

## Financial Reports in 2022

Bittium Corporation reports its financial development by publishing financial reports every half year. From the reporting periods of January–March and January–September the company publishes Business Reviews

with a lighter and narrower structure than those of the financial reports. The reports are published both in Finnish and in English at the company website [www.bittium.com/investors](http://www.bittium.com/investors).

### In 2022 the Financial Reports are published as follows:

- Financial Statement Bulletin 2021: February 10, 2022 at 8.00 am (CET+1)
- Half Year Financial Report January–June 2022: August 5, 2022 at 8.00 am (CEST+1)

### In 2022 the Business Reviews are published as follows:

- Business Review January–March 2022: on April 29, 2022 at 8.00 am (CET+1)
- Business Review January–September 2022: on October 21, 2022 at 8.00 am (CET+1)

## Silent Period

Bittium Corporation observes a three week silent period prior to announcing its financial reports. In 2022, the silent periods are as follows:

- January 20–February 10, 2022
- April 8–April 29, 2022
- July 15–August 5, 2022
- September 30–October 21, 2022

## Bittium Corporation's Annual General Meeting 2022

Notice is given to the shareholders of Bittium Corporation to participate in the Annual General Meeting to be held on Wednesday April 6, 2022 at 13.00 (CEST+1) in the Company's headquarters at Ritaharjuntie 1, 90590 Oulu, Finland. In order to prevent the spread of the coronavirus pandemic and to prepare for unpredictable changes in the pandemic situation, the Annual General Meeting will be held without shareholders' and their proxy representatives' presence at the meeting venue. Shareholders of the Company and their proxy representatives may participate in the meeting and exercise shareholder rights only through voting in advance as well as by making counterproposals and presenting questions in advance. Instructions for shareholders are presented in this notice under section C. "Instructions for the participants in the Annual General Meeting".

The Board of Directors of the Company has resolved on the exceptional procedure for the meeting based on the temporary legislative act (375/2021) to limit the spread of the coronavirus pandemic. The Company has resolved to take actions enabled by the act in order to hold the meeting in a predictable manner, taking into account the health and safety of the Company's shareholders, personnel and other stakeholders.

### Instructions for the Participants

In order to prevent the spread of the coronavirus pandemic and to prepare for unpredictable changes in the pandemic situation, the General Meeting will be organized so that the shareholders and their proxies are not allowed to be present at the General Meeting venue. Shareholders and their proxies cannot participate in the General Meeting through real-time telecommunications either. Shareholders and their proxies can participate in the General Meeting and use their shareholder rights only by voting

in advance and by submitting counterproposals and asking questions in advance in the manner instructed below.

#### 1. Shareholders registered in the shareholders' register

Each shareholder who is registered on the record date of the General Meeting, Friday March 25, 2022, in the shareholders' register of the Company kept by Euroclear Finland Ltd is entitled to participate in the General Meeting. A shareholder, whose shares are registered on his/her Finnish book-entry account, is registered in the Register of Shareholders of the Company. Shareholders cannot participate in the General Meeting by any other means than voting in advance in the manner instructed below as well as by submitting counterproposals and asking questions in advance.

#### 2. Registration and advance voting

Registration for the General Meeting and advance voting will begin on March 22, 2022, at 10.00 a.m. following the deadline for submitting counterproposals. A shareholder with a Finnish book-entry account, who wishes to participate in the General Meeting, must register for the General Meeting and vote in advance no later than by March 31, 2022, at 4.00 p.m. by which time the registration and votes need to have been received.

When registering, requested information such as the name, personal identification number, address, and telephone number of the shareholder as well as requested information on a possible proxy representative such as the name and personal identification number of the proxy representative must be provided. The personal data given by the shareholder to Bittium Corporation and Euroclear Finland Oy will be used only in connection with the General Meeting and with the processing of related registrations.

A shareholder, who has a Finnish book-entry account, may register and vote in advance on certain items on the agenda of the General Meeting from 10.00 a.m. on March 22, 2022 until 4.00 p.m. on March 31, 2022 by the following means:

- a) through the website at [www.bittium.com/agm](http://www.bittium.com/agm)

The Finnish personal identity code or business ID and book-entry account number of the shareholder is needed for voting in advance. When a shareholder who is individual logs in to Euroclear Finland Oy's service via the Company's website, he or she is directed to strong electronic identification. For shareholders that are legal persons strong electronic identification is not required. However, shareholders that are legal persons must notify their book-entry account number and other required information. If the shareholders that are legal persons use the electronic Suomi.fi e-authorization, registration requires a strong electronic authentication of the authorized person, which works with bank IDs or a mobile certificate.

- b) by mail or email

A shareholder may send the advance voting form available on the Company's website or corresponding information to Euroclear Finland Oy by letter to Euroclear Finland Oy, Yhtiökokous, P.O. Box 1110, FI-00101 Helsinki or by email at [yhtiokokous@euroclear.eu](mailto:yhtiokokous@euroclear.eu). If the shareholder participates in the General Meeting by sending the votes in advance by mail or email to Euroclear Finland Oy, this constitutes registration for the General Meeting, if the shareholder simultaneously provides the information required for registration mentioned above.

Instructions relating to the advance voting may be found on the Company's website [www.bittium.com/agm](http://www.bittium.com/agm). Further information is available by telephone at +358 40 344 3322 from Monday to Friday at 9.00 a.m. to 3.00 p.m.

#### 3. Proxy representatives and powers of attorney

A shareholder may participate in the General Meeting and use his/her rights by proxy. The proxy representative of a shareholder may participate in the General Meeting only by voting in advance on behalf of the shareholder in the manner instructed above.

A proxy representative shall produce a dated proxy document or otherwise in a reliable manner demonstrate his/her right to represent the shareholder. Should a shareholder participate in the General Meeting by means of several proxy representatives representing the shareholder with shares in different book-entry accounts, the shares by which each proxy representative represents the shareholder shall be identified in connection with the registration for the General Meeting.

Possible proxy documents should be delivered by regular mail to Euroclear Finland Oy, Yhtiökokous, PL 1110, FI-00101 Helsinki, Finland or by e-mail to [yhtiokokous@euroclear.eu](mailto:yhtiokokous@euroclear.eu) before the end of the registration period, by which time the documents must be received by Euroclear Finland Oy.

Shareholders that are legal persons can also use the electronic Suomi.fi authorization service instead of a traditional proxy authorization document in Euroclear Finland's general meeting service. In this case, the shareholder that is a legal person authorizes an assignee nominated by it in the Suomi.fi service at [www.suomi.fi/e-authorizations](http://www.suomi.fi/e-authorizations) using the authorization topic "Representation at the General Meeting". The assignee must identify himself or herself with strong electronic authentication in Euroclear Finland's general meeting service when registering, after which the electronic authorization is automatically checked. The strong electronic authentication works with personal banking IDs or a mobile certificate. More information on [www.suomi.fi/e-authorizations](http://www.suomi.fi/e-authorizations).

#### 4. Holders of nominee registered shares

A holder of nominee-registered shares has the right to participate in the General Meeting by virtue of such shares, based on which he/she on the record date of the General Meeting Friday March 25, 2022, would be entitled to be registered in the Register of Shareholders of the Company held by Euroclear Finland Oy. The right to participate in the General Meeting requires, in addition, that the shareholder on the basis of such shares has been registered into the

temporary shareholders' register held by Euroclear Finland Oy at the latest by Friday April 1, 2022 by 10.00 a.m. As regards nominee-registered shares this constitutes due registration for the General Meeting.

A holder of nominee-registered shares is advised to request without delay necessary instructions regarding the temporary registration in the Register of Shareholders of the Company, the issuing of proxy documents and registration for the General Meeting from his/her custodian bank. The account management organization of the custodian bank shall temporarily register a holder of nominee-registered shares into the Register of Shareholders of the Company at the latest by the time stated above. In addition, the account management organization of the custodian bank shall arrange advance voting on behalf of a nominee-registered shareholder within the registration period applicable to nominee-registered shares.

#### 5. Other instructions

Shareholders who hold at least one hundredth of all the shares in the Company have a right to make a counterproposal concerning the items on the agenda of the General Meeting to be placed for a vote. Such counterproposals are required to be sent to the Company by email to [yhtiokokous@bittium.com](mailto:yhtiokokous@bittium.com) no later than by March 21, 2022 at 12.00 noon. In connection with making a counterproposal, shareholders are required to provide adequate evidence of shareholding. The counterproposal will be placed for a vote subject to the shareholder having the right to participate in the General Meeting and that the shareholder holds at least one hundredth of all shares in the Company on the record date of the General Meeting. Should the counterproposal not be placed for a vote at the General Meeting, advance votes in favour of the proposal will not be taken into account. The Company will publish possible counterproposals to be put to a vote on the Company's website [www.bittium.com/agm](http://www.bittium.com/agm) by no later than March 22, 2022.

A shareholder has the right to ask questions referred to in Chapter 5, Section 25

of the Finnish Limited Liability Companies Act with respect to the matters to be considered at the General Meeting. Such questions must be sent by email to [yhtiokokous@bittium.com](mailto:yhtiokokous@bittium.com) no later than March 25, 2022, at 10.00 a.m. Such questions from shareholders, the Company's management's answers to them, and any counterproposals that have not been placed for a vote are available on the Company's website [www.bittium.com/agm](http://www.bittium.com/agm) on March 28, 2022, at the latest. In connection with asking questions and making counterproposals, shareholders are required to provide adequate evidence of shareholding.

Information on the General Meeting required by the Finnish Limited Liability Companies Act and the Securities Markets Act is available on the Company's website [www.bittium.com/agm](http://www.bittium.com/agm).

On the date of this notice, February 10, 2022, of the General Meeting the total number of shares in Bittium Corporation and votes represented by such shares is 35,702,264. On the date of this notice to the General Meeting the Company does not hold any of its own shares.

Changes in the number of shares held after the record date of the General Meeting shall not have an effect on the right to participate the General Meeting nor on the number of votes held by a shareholder in the General Meeting.

#### Documents of the General Meeting

The proposals for the resolutions on the matters on the agenda of the General Meeting, and the notice, the Company's Remuneration Report and the Annual Report of Bittium Corporation, which includes the Company's Annual Accounts, the Consolidated Annual Accounts, the Annual Report of the Board of Directors and the Auditor's Report, are available on the website at [www.bittium.com/agm](http://www.bittium.com/agm) latest on March 16, 2022. The minutes of the General Meeting will be available on the above-mentioned website latest on April 20, 2022.



Bittium Tough Mobile 2 C



Bittium Tough Mobile 2



# Corporate Governance



The governance of Bittium Corporation (hereinafter 'Company') is determined by the Company's Articles of Association, the laws of Finland (such as the Finnish Limited Liability Companies Act and Securities Market Act) and the Company's Corporate Governance Code. The Company follows the Finnish Corporate Governance Code 2020 prepared by the Finnish Securities Market Association and entered into force on January 1, 2020. The Governance Code may be viewed, inter alia, at the Finnish Securities Market Association website at [www.cgfinland.fi](http://www.cgfinland.fi).

This Statement is made separately from the Report by the Board. The Board's Audit Committee and the Company's auditor have reviewed this Statement. The statutory governing bodies of the Company are the Shareholders' meeting, Board of Directors, Chief Executive Officer and the Auditor. The Management Group supports the statutory governing bodies of the Company. The Company's domicile is Oulu.

This Statement is publicly available on the Company's website at [www.bittium.com](http://www.bittium.com).

## The Board of Directors

The Board of Directors is responsible for the Company's governance and proper organization of the operations. The Board of Directors comprises of three to seven (3–7) members and in addition it may have one to three (1–3) deputy members. The Annual General Meeting shall elect the members of the Board of Directors for a term which expires at the end of the following Annual General Meeting. The number of terms for

the members of the Board of Directors is not limited. The Board of Directors selects a Chairman among its members.

The Board conducts an annual evaluation of the independence of its members following recommendation 10. A member of the Board is required to submit to the Company the information necessary to evaluate independence. A Board member is also required to notify the Company of any changes in information relating to independence.

The Annual General Meeting held on April 14, 2021, decided that the Board of Directors shall comprise five (5) members. Mr. Erkki Veikkolainen, Ms. Riitta Tiuraniemi, Mr. Veli-Pekka Paloranta, and Mr. Pekka Kemppainen 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. Petri Toljamo was elected as a new member of the Board of Directors for a corresponding term of office. At its assembly meeting held on April 14, 2021, the Board of Directors elected Mr. Erkki Veikkolainen as the Chairman of the Board of Directors. Further, the Board has resolved to keep the Audit Committee. Ms. Riitta Tiuraniemi (Chairman of the committee), Mr. Petri Toljamo, and Mr. Veli-Pekka Paloranta were elected as members of the Audit Committee.

## Description of Activities

The Board of Directors has defined a working order and evaluates its performance annually. The Board of Directors shall implement the decisions of the General Meeting.

The Board of Directors supervises the operations and management. The Board of Directors makes decisions on the Company's guiding principles for operation, strategy, and budget. The Board of Directors decides on mergers and acquisitions and other strategic alliances as well as significant investments and significant matters regarding organization and finance. The Board of Directors supervises that the control of the Group companies' accounting and financial affairs are duly organized. The Board of Directors appoints the CEO and possible Deputy for him or her as well as approves the Company's organizational structure.

The CEO, CFO, and CLO (who acts as secretary of the Board of Directors) attend the meetings of the Board of Directors. Other management attends the meetings when necessary or upon invitation by the Board of Directors. The Chairman of the Board approves the agendas of the meetings of the Board of Directors. The agendas are prepared by the CEO and the CLO.

An annual clock, according to which the regular subjects to be handled are determined, is applied in the Board's work. In addition to the regular subjects of the annual clock, the most important subjects of the Board during the year were the business challenges posed by the global component shortage and prolongation of the coronavirus pandemic (SARS-CoV-2).

The Annual General Meeting decides on the compensation of the members of the Board of Directors and the compensations can be publicly reviewed on the Company's website at [www.bittium.com](http://www.bittium.com).

In 2021 the Board convened 13 times.

The Board members attended to the meetings as follows:

January 1–December 31, 2021	Board	Audit committee
Erkki Veikkolainen	13/13	
Veli-Pekka Paloranta	13/13	6/6
Seppo Mäkinen	3/13	
Riitta Tiuraniemi	13/13	6/6
Juha Putkiranta	3/13	2/6
Pekka Kemppainen	13/13	
Petri Toljamo	10/13	4/6

## Diversity Principles of the Board of Directors

In the Company, diversity is seen as an essential part of corporate responsibility and as a factor in success, that enables the achievement of strategic targets and continuous improvement of customer intimacy.

In planning the composition of the Board of Directors, the requirements of the Company's business operations, the phases of development, and the competence requirements of the Board committees are taken into account. In appointing members of the Board the target is to ensure that the Board as a whole supports the development of the Company's current and future business operations. The diversity plays a part in supporting this goal, so the Company aims to reach a situation where the facts supporting diversity are taken into account as significant criteria in planning the composition of the Board of Directors.

Diversity of the Board is considered from different perspectives. From the Company's point of view, it is important to have Board members with diverse backgrounds in terms of competence, training, and experience of differing business operations, of varying stages of business development, and leadership as well as diverse personal characteristics. Experience in international business environments and different cultures in addition to consideration of age and gender will support the diversity of the Board. The objective is that both genders are represented in the Board and the Company aims to maintain a good and balanced distribution of genders.

To fulfill the diversity principles, the diversity principles are taken into account in the process to find and assess member candidates and representatives of both genders are looked for in the process. The status of diversity and progress of the goal mentioned above is monitored in the self-assessment discussions of the Board. A person elected as a Board member of the Company must have the competence required for the position and be able to devote a suffi-

cient amount of time for the duties required. When forming the composition of the Board long-term needs and successor planning will be taken into account.

According to the Articles of Association of the Company, the Board of Directors comprises three to seven (3–7) members, and in addition, it may have one to three (1–3) deputy members. The composition of the Board and the number of members shall be such that they enable the Board to perform its duties efficiently. The members of the Board are appointed annually at the Company's Annual General Meeting.

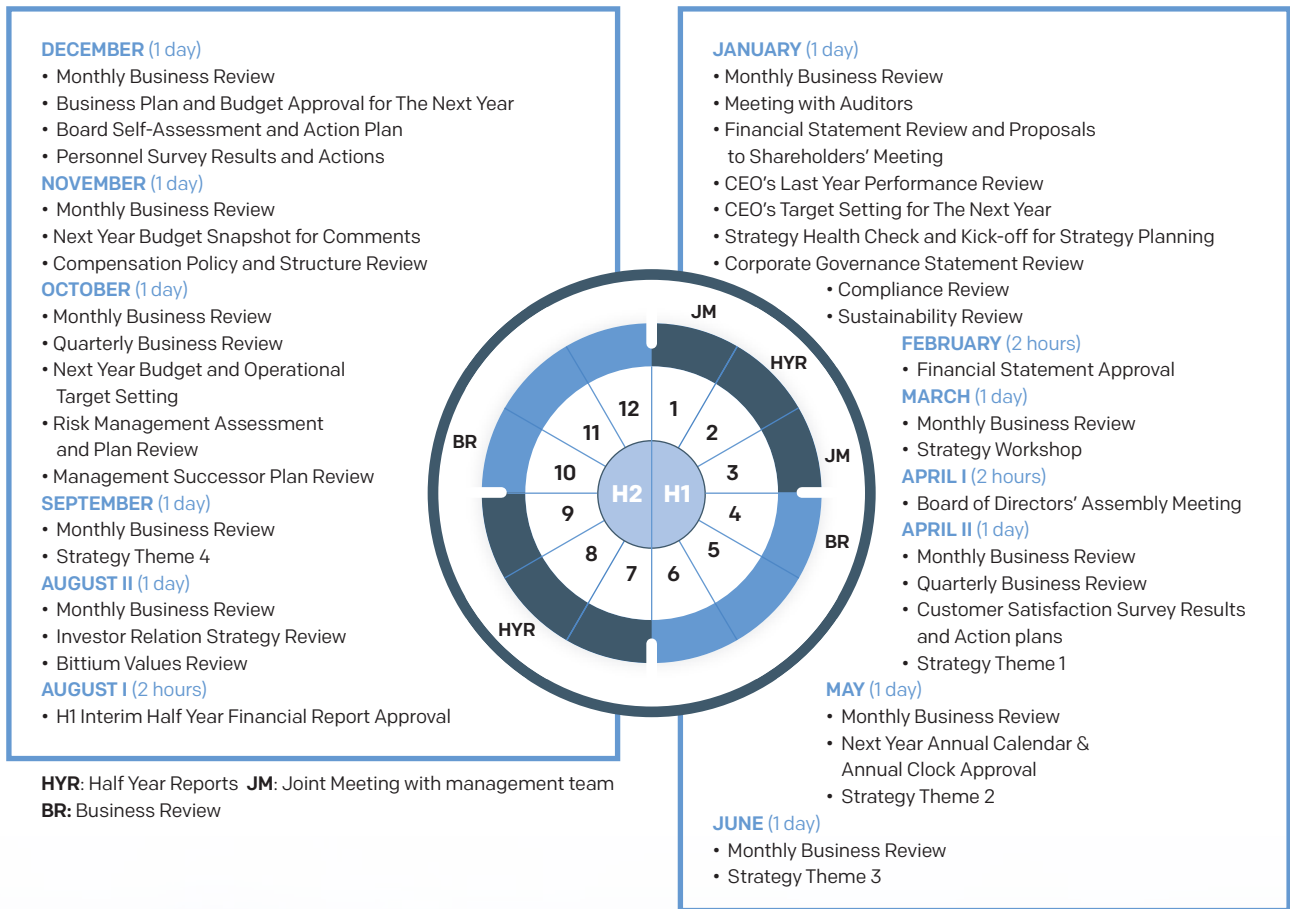
During the financial period of January 1, 2021–December 31, 2021, the Board of Directors has comprised five members. Four of the members have been males and one female. The self-assessment discussions of the Board have concluded that the members of the Board are so different in their special skills, backgrounds and age and gender that the Board as a whole has therefore been able to effectively support the business of the Company and its development.





# Board of Directors' Annual Clock 2021

Key topics covered during the year



# Bittium Corporation

## The Board of Directors



### Erkki Veikkolainen

b. 1952, M.Sc. (EE), eMBA  
Full-time occupation:  
Mevita Invest Oy, CEO

#### Positions of trust:

- Bittium Corporation (prev. Elektrobitt Corporation), Member of the Board 2008–2015, Chairman of the Board 2015–.
- KoskiRent Ltd, Member of the Board 2020–.
- Lumous lighting Ltd, Member of the Board 2019–.
- Elcoflex (Suzhou) Co. Ltd, Member of the Board 2007–.
- Elcoflex Oy, Member of the Board 2015–, Chairman of the Board 2006–2015.
- Maustaja Oy, Member of the Board 2006–.

#### Previous work history:

- Bittium Technologies Ltd (prev. Elektrobitt Technologies Ltd.), Member of the Board 2011–2015.
- Elektrobitt Corporation, Executive Vice President, Contract R&D and Test Business Units 2002–2003.
- Elektrobitt Technologies Ltd., Managing Director 2001–2003.
- Elektrobitt Ltd., Vice President, Business Development 1998–2001.
- Nokia Mobile Phones, various positions 1985–1998, latest Vice President.

#### Holdings Dec. 31, 2021:

Holds 1,741,908 Bittium Corporation shares.

Independent as regards both the Company and its significant shareholders.



### Pekka Kempainen

b. 1954, Lic.Sc. (Tech.)  
Full-time occupation:  
Professional Board Member

#### Positions of trust:

- Bittium Corporation, Member of the Board 2019–.
- Valmet Corporation, Member of the Board 2018–.
- Junttan Ltd, Member of the Board 2018–.
- Nestor Cables, Member of the board, 2020–, Chairman of the Board 2021–.

#### Previous work history:

- KONE Corporation, Executive Vice President, Service business 2010–2017.
- KONE Corporation, Executive Vice President & Area Director Asia Pacific, 2004–2010.
- KONE Corporation, Senior Vice President, New Elevator and Escalator Business, 1999–2004.
- KONE Corporation, various positions 1984–1999, last R&D and Technology Director.

#### Holdings Dec. 31, 2021:

Holds 3,655 Bittium Corporation shares.

Independent as regards both the Company and its significant shareholders.



### Veli-Pekka Paloranta

b. 1972, M.Sc. (Econ.)  
Full-time occupation:  
Lehto Group Oyj, Chief Financial Officer

#### Positions of trust:

- Bittium Corporation, Member of the Board and Member of the Audit Committee 2020–.

#### Previous work history:

- Bittium Corporation (former Elektrobitt Corporation), Chief Financial Officer, 2010–2015.
- Elektrobitt Corporation, Director, Finance, 2008–2010.
- JOT Automation Ltd, Chief Financial Officer, 2007–2008.
- Elektrobitt Group Corporation, Business Controller, 2000–2007.

#### Holdings Dec. 31, 2021:

Holds 3,891 Bittium Corporation shares.

Independent as regards both the Company and its significant shareholders.



### Riitta Tiuraniemi

b. 1962, M.Sc, Electrical Engineering  
Full-time occupation:  
Professional Board Member

#### Positions of trust:

- Bittium Corporation, Member of the Board 2018–, Member of the Audit Committee 2018–2020, Chairman of the Audit Committee 2020–.
- Skoggi Ltd, Founder and Chairman of the Board 2019–.
- Celltrum Ltd, Member of the Board 2020–.

#### Previous work history:

- HealthOperator Ltd., CEO, Founder and Member of the Board 2014–2019.
- DNA Ltd, CEO 2009–2013.
- DNA Finland Ltd, CEO 2005–2008.
- DNA Networks Ltd, CEO 2004–2005.
- DNA Networks Ltd, CTO, Member of Management Group 1999–2005.
- Omnitele Oy, Department Head, Mobile Communications Consultancy, Member of Management Group 1990–1999.
- Technology Development Centre, TEKES, Finland Senior Technical Adviser, Information Technology 1996–1997.
- Nokia Telecommunications, System Designer, Chief System Designer 1986–1990.

#### Holdings Dec. 31, 2021:

Holds 10,626 Bittium Corporation shares.

Independent as regards both the Company and its significant shareholders.



### Petri Toljamo

b. 1974, M.Sc, Radio Engineering, eMBA  
Full-time occupation:  
Keysight Technologies Inc., NEMO Wireless Network Testing, Vice President and Keysight Technologies Finland Oy, Managing Director and Chairman of the Board

#### Positions of trust:

- Bittium Corporation, Member of the Board, Member of the Audit Committee, 2021–.
- Bittium Corporation, Member of the Board, 2018–2020.
- Moontalk Oy, Member of the Board, 2020–2021, Chairman of the Board 2021–.
- Keysight Finland Oy, Chairman of the Board, 2017–.
- Manea Capital Oy, Chairman of the Board, 2016–.

#### Previous work history:

- Anite Finland Oy, Managing Director and Anite Network Testing Business Unit, Managing Director, 2013–2017.
- Pulse Electronics, Mobile Division Director and Pulse Finland, Managing Director 2011–2013.
- Elektrobit Wireless Communications, Vice President, Device and Network Solutions Business Area, 2010.
- Elektrobit Wireless Communications, Vice President, Mobile Device Solutions Business Area, 2008–2009.
- Elektrobit Wireless Communications, Cellular Terminal Solutions Business Area, Director, 2007–2008.
- Elektrobit Wireless Communications, Platform R&D and Head of Terminal Programs, Director, 2005–2006.
- Elektrobit GmbH, Business Development, Director, 2004–2005.
- Elektrobit Oy, various product development, project management and business positions, 1996–2004.

#### Holdings Dec. 31, 2021:

Holds 1,505 Bittium Corporation shares.

Independent as regards both the Company and its significant shareholders.

## The Board Committees

The proper function of the corporate governance of a company requires that Board work is organized as efficiently as possible. For this reason, the Company has established an Audit Committee.

The Directors on the Committee can concentrate on the matters delegated to the Committee more extensively than the entire Board of Directors. The purpose of the Committee is to enhance the efficient preparation of matters within the competence of the Board, increase transparency and ensure the quality and efficiency of the decision-making of the Board.

The Committee assists the Board by preparing matters falling within the competence of the Board. The Board remains responsible for the duties assigned to the Committee. The Committee has no autonomous decision-making power, and thus the Board makes the decisions within its competence collectively.

The Committee shall regularly report on its work to the Board. The reports shall include at least a summary of the matters, addresses, and measures taken by the Committee.

The central duties and operating principles of the Audit Committee are described in the next chapter. The Annual General Meeting decides on the compensation of the members of the Board Committee and such compensations can be publicly viewed on the Company's website at [www.bittium.com](http://www.bittium.com).

## Audit Committee

The Audit Committee has the following duties:

- to monitor and assess the reporting process of financial statements;
- to monitor and assess the financing reporting system;
- to supervise the financial reporting process and risk management process;
- to monitor and assess the efficiency of the Company's internal control, internal audit, if applicable, and risk management systems;
- to monitor and assess how agreements and other legal acts between the Company and its related parties meet the requirements of the ordinary course of business and arm's -length terms;
- to handle the Company's corporate governance statement and nonfinancial report;
- to monitor the Company's auditing;
- to monitor and evaluate the independence of the auditor and, in particular, the offering of services other than auditing services by the auditor; and
- to prepare the appointment of the Company's auditor.

The Chairman and the members of the Audit Committee are appointed by the Board of Directors of the Company. At least one member of the audit committee must have expertise in accounting or auditing. The Board of Directors elected in the Annual General Meeting held on April 14, 2021, decided in its assembly meeting held on the same day to elect Ms. Riitta Tiuraniemi (Chairman of the Committee), Mr. Petri Toljamo, and Mr. Veli-Pekka Paloranta as members of the Audit Committee. All members of the Committee are independent of the immediate interest of both the Company and its significant shareholders and they

have long-term experience in business management.

In addition to Committee members, other regular participants to the committee meetings are the CEO, CFO, and CLO who acts as the Committee's secretary and optionally external auditors. Further, the Committee members may meet the external auditors without the operative management being present in such meetings. In 2021, the Audit Committee convened six (6) times to ordinary meetings. The Committee has evaluated, prepared, and reviewed, inter alia, the following subject matters during the financial period of January 1, 2021–December 31, 2021:

- Financial Statements of 2020;
- Business Reviews and Half Year Financial Reports of 2021;
- Annual audit plan for 2021;
- Observations based on auditing during the financial period;
- Starting to prepare the appointment of the Company's auditor;
- Observation by the internal control;
- Cash flow monitoring and evaluation of the sufficiency of financing;
- M&A related issues and their effects on the result, balance sheet and financing status of the Group;
- Group legal structure related questions; and
- Impairment testing of the subsidiary shares and goodwill.

During 2022 the Committee's focus areas are:

- To monitor the working capital of the Defense & Security business area; and
- To review the risk management process.

## Chief Executive Officer (CEO)

The CEO is in charge of the operative management of the Company in accordance with the Finnish Limited Liability Companies Act, the Articles of Association as well as the instructions and orders given by the Board of Directors. The CEO is responsible for the preparation of the Board meetings and implementation of any decisions made therein. Further, the CEO is responsible for ensuring that the Company's accounting methods comply with the applicable law and that the financial matters are being handled in a reliable manner. The CEO prepares strategy, long-term planning, investments, mergers and acquisitions, financing, and makes decisions thereof to the extent that such decisions are not tasks of the Board of the Directors. The CEO is responsible for financial planning, the Group's communications, and investor relations.

The Board of Directors defines and approves the essential terms of the service of the CEO, including the CEO's remuneration, in the form of a written agreement. The CEO's service contract is effective until further notice and can be terminated by the Company with twelve (12) and the CEO with six (6) months' written notice.

The pension security of the CEO is statutory, and he does not have a supplementary pension. According to the pension legislation, the lowest limit of the pension age for a CEO is 65 years and 3 months at the moment.

## Hannu Huttunen

Chief Executive Officer, 2015–  
b. 1966, M.Sc. (Econ.)

### Positions of trust:

- Oulu University of Applied Sciences, Member of the Board, 2021–
- Advisory Board of Oulu University 2019–
- Technology Industries of Finland, Member of the Board 2017–

### Previous work history:

- Elektrobit Technologies Ltd., President, Wireless Business Segment 2010–2015.
- Tekniseri Oy, Member of the Board 2012–2016.
- EXFO Inc., Vice President, Wireless Division (previously NetHawk Oyj) 2010.
- NetHawk Oyj, CEO 2003–2010, NetHawk Oy, Executive Vice President 2002–2003.
- Nokia Mobile Phones Oy, Vice President, IP Convergence 2002, Vice President Special Products Business 1998–2002, NMT450 Business unit leader 1995–1998.

### Holdings Dec. 31, 2021:

Holds 16,142 shares in Bittium Corporation.



## Management Group

The management group supports the CEO in his tasks and consists of the CEO as the chairman, CFO, CLO, Vice President, Communications and Marketing, Directors responsible for product and service areas, and Vice President responsible for Engineering. In 2021, the Management Group also included the Senior Vice President responsible for Sales until May 31, 2021.

The management group supports the CEO in operative management, implementation, and follow-up of the CEO's competence area, in particular as regards the operative business, the management, and development of the business portfolio, asset management and taxation, internal audit, Corporate Governance of the Company, investor and marketing communications, and risk management.



### Jari-Pekka Innanen

Vice President, Engineering, 2015–  
b. 1968, M.Sc. (ME)

#### Previous work history:

- Elektrobit Wireless Communications Ltd., Vice President, Engineering, Wireless Business Segment, 2011–2015.
- Elektrobit, Senior Manager, WS Global Resourcing, 2007–2010.
- Elektrobit, Manager, Head of Global HW, 2006–2007.
- Elektrobit, Manager, Mobile Terminal Solutions, Head of HW Competence areas, 2006.
- Elektrobit, Manager, Mechanical Competence Center, 2003–2005.
- Elektrobit, Project Manager, 1999–2003.
- Elektrobit, Mechanical Designer, 1998–1999.
- Outokumpu Stainless Steel, Supervisor Cold Rolling Mills, 1994–1997.

#### Holdings Dec. 31, 2021:

Holds 6,496 Bittium Corporation shares.



## Kari Jokela

Chief Legal Officer, 2014–.  
b. 1969, LL.M., trained on the bench,  
Mag.lur. (Saarbrücken)

### Previous work history:

- Elektrobit Technologies Ltd., Senior Legal Counsel, 2012–2014.
- Elektrobit Corporation, Senior Legal Counsel, 2010–2012.
- Elektrobit Automotive GmbH, Senior Legal Counsel, 2008–2010.
- Elektrobit Corporation, Senior Legal Counsel, 2008.
- Polar Electro Ltd., Group Legal Counsel, 2000–2007.
- Asianajotoimisto Gilbert, Segall and Young Oy, Attorneys at Law Helsinki, attorney, 1998–2000.

### Holdings Dec. 31, 2021:

Holds 1,596 Bittium Corporation shares.



## Tommi Kangas

Senior Vice President,  
Connectivity Solutions, 2019–.  
b. 1971, Master of Engineering,  
Machine Automation

### Previous work history:

- Bittium, Sales Director, Connectivity Solutions Product and Service Area and Sales, 2015–2019.
- Elektrobit, Senior Account Manager, Wireless Solutions Business Segment, 2010–2014.
- Elektrobit, Key Account and Business Line Manager, Mobile Infra Solutions Business Area, 2009–2010.
- Elektrobit, Business Line Manager, Radio Network Solutions Business Unit, 2006–2008.
- Elektrobit, Project Manager, Radio Network base station project, 2004–2005.
- Elektrobit, Mechanical Chief Designer and Specialist, 2000–2004.
- Elektrobit, Mechanical Designer, 1998–2000.

### Holdings Dec. 31, 2021:

Holds 1,093 Bittium Corporation shares.



## Pekka Kunnari

Chief Financial Officer, 2015–.  
b. 1967, M.Sc. (Econ.), LL.M.

### Positions of trust:

- Partnera Corporation, Member of the Board 2019–2020, Chairman of the Board 2020–.

### Previous work history:

- Elektrobit Technologies Ltd., Vice President, Finance, 2011–2015.
- Elektrobit Corporation, Director, Finance, 2005–2011.
- Elektrobit Inc, Group Controller, 2004–2005.
- Elektrobit Group Corporation, Group Controller, 2003–2004.
- Elektrobit Ltd., Business Controller, 2001–2003.
- RPC Rapid Prototyping Center Oy, Finance Manager, 2000–2001.
- Tilintarkastajien Ltd. - Ernst & Young, Auditor, 1998–2000.
- Tuottotieto Ltd., Business Consultant, 1994–1998.

### Holdings Dec. 31, 2021:

Holds 3,496 Bittium Corporation shares.



### Karoliina Malmi

Vice President, Communications and Marketing, 2015–  
 b. 1977, M.A. International Business Communications

**Previous work history:**

- Elektrobit Corporation, Corporate Communications Manager, 2015.
- Elektrobit Automotive GmbH, Corporate Communications Manager, 2013–2015.
- Elektrobit Corporation, Corporate Communications Manager, 2009–2013.
- Elektrobit Corporation, Internal Communications, 2006–2008.
- Elektrobit Group Plc, Communications, 2002–2006.
- JOT Automation Group Plc, Investor Relations and Communications, 2001–2002.

**Holdings Dec. 31, 2021:**

Holds 2,096 Bittium Corporation shares.



### Arto Pietilä

Senior Vice President, Medical Technologies, 2016–  
 b. 1958, M.Sc. (Applied Electronics)

**Previous work history:**

- Bittium Wireless Ltd, Senior Vice President, Operations, 2015–2016.
- Elektrobit Wireless Communications Ltd., Senior Vice President, Operations, Wireless Business Segment, 2010–2015.
- Elektrobit Wireless Communications Ltd., Senior Vice President, Operations, Wireless Solutions Business Unit, 2008–2010.
- Elektrobit Wireless Communications Ltd., Executive Vice President, Mobile Terminal Solutions Business Unit, 2006–2008.
- Elektrobit Wireless Communications Ltd., Executive Vice President, Contract R&D Business Unit, 2004–2006.
- Elektrobit Technologies Ltd., Managing Director, 2004–2006.
- Elektrobit Ltd., Managing Director, 2002–2004.
- Elektrobit Ltd., Vice President, Contract R&D, 2001–2002.
- Polar Electro Oy, President & CEO, 1999–2001.
- Polar Electro Oy, Executive Vice President, 1996–1999.
- Polar Electro Oy, Technical Director, 1992–1996.
- Polar Electro Oy, Product Development Manager, 1986–1992.
- Polar Electro Ky/Oy, SW/HW Design Engineer, 1980–1986.

**Holdings Dec. 31, 2021:**

Holds 80,993 Bittium Corporation shares.



### Jari Sankala

Senior Vice President, Defense & Security, 2016–  
 b. 1966, M.Sc. (Electrical Engineering, Digital Communications)

**Previous work history:**

- Bittium Corporation, Senior Vice President, Sales, 2015–2016.
- Elektrobit Wireless Communications Ltd, Senior Vice President, Sales & Marketing, Wireless Business Segment, 2014–2015.
- Elektrobit Wireless Communications Ltd, Executive Vice President, Defence and Security, 2011–2014.
- NetHawk Group, Executive Vice President of Sales & Marketing, 2005–2011.
- NetHawk Germany, Managing Director, 2001–2005.
- Siemens AG, Sales Director Northern Europe, Mobile Networks, Germany, 1996–2001.

**Holdings Dec. 31, 2021:**

Holds 28,493 Bittium Corporation shares.



## Election and Remuneration of the Auditor

The Company shall have one (1) auditor that has qualified as Certified Public Accountant and if the auditor is not an auditing company as defined by the law, one (1) deputy auditor shall be elected. The term of office of the auditor expires at the end of the following Annual General Meeting.

The General Meeting 2021 re-elected Ernst & Young Oy as 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. Jari Karppinen, APA, will act as responsible auditor. It was decided that the remuneration to the auditor shall be paid against the auditor's reasonable invoice.

The auditor's fees in 2021 amounted to EUR 89,000 (EUR 102,000 in 2020). Of the aggregate fees, EUR 79,000 was attributable to auditing (EUR 85,000 in 2020), EUR 8,000 to tax advice (EUR 15,000 in 2020), and EUR 2,000 to other services (EUR 2,000 in 2020).

## Main Features of Internal Control and Risk Management Processes Related to Financial Reporting Processes

### Risk Management

The purpose of risk management is to secure positive development of earnings of the Company and the continuation of the business by implementing risk management cost-effectively and systematically throughout the different businesses.

Risk management is part of the Company's strategic and operative planning, daily decision-making process, and internal control system. Business objectives, risks, and

risk management operations are combined through risk management as one chain of events.

### Main Principles of Organizing Risk Management

Company adheres to the risk management policy approved by the Board.

Risk management contains all actions, which are connected to setting up targets, identification of risks, measurement, review, handling, reporting, follow-up, monitoring, and reacting to risks.

#### The Aim of Risk Management of the Company is to:

- systematically and thoroughly identify and assess all major risks, which threaten the achievement of objectives, including risks related to business operations, property, agreements, competence, currencies, financing, and strategy;
- optimize business opportunities and secure continuation of business;
- recognize and identify uncertainties and subsequently develop the prediction of risks and measures needed to manage risks;
- take only calculated and assessed risks with respect to e.g. expanding the business, increasing market share and creating new businesses;
- avoid or minimize liability risks;
- ensure the safety of products, solutions, and services;
- establish a safe working environment for the employees;
- minimize possibilities for unhealthy occurrences, crimes or misconduct by operating procedures, control, and supervision;
- inform interest groups of risks and risk management; and
- be cost-effective in risk management.

#### The Aim of Risk Management is not to:

- exclude all risks in their entirety;
- adopt unnecessary control and management procedures; or
- take bureaucratic processes and procedures into use.

### Main Principles of the Risk Management Process

In connection with the strategy process and annual planning the CEO reviews business risks which could endanger the achievement of strategic or financial targets. Risk assessment reports are produced to support the strategy process. Strategic and operative risks are monitored through monthly reporting by businesses in the Board of the Company. Businesses must produce assessments of risks in their designated areas of responsibilities and provide action plans to manage risks as well as to report on measures taken including the stage and effectiveness of such measures.

### General Description of Internal Control and Operational Procedures

Internal control is a process applied by the Board of Directors, management, and all levels of personnel in the Company to ensure that management has reasonable assurance that:

1. operations are effective, efficient, and aligned with strategy;
2. financial reporting and management information is reliable, complete and timely made; and
3. the Company complies with applicable laws and regulations as well as the Company's internal policies and ethical values including sustainability.

The first category addresses the basic business objectives, including performance and profitability goals, strategy, implementation of objectives and actions, and safeguarding resources. The second category relates to the preparation of reliable published financial statements, including half-year financial reports and condensed financial statements and selected financial data derived from such statements, such as earnings releases, reported publicly. The third category deals with complying with those laws and regulations to which the Company is subject to.



## Internal Control Framework of the Company

Bittium's internal control framework consists of:

- the internal control, risk management and corporate governance policies and principles set by the Company's Board of Directors;
- management overseeing the implementation and application of the policies and principles;
- finance function and business controllers monitoring the efficiency and effectiveness of the operations and reliability of the financial and management reporting;
- enterprise risk management process identifying, assessing, and mitigating risks threatening the realization of the Company's objectives;
- monitoring possible agreements and other legal acts between the Company and its related parties;
- compliance procedures making sure that all applicable laws, regulations, internal policies and ethical values (including sustainability) are adhered to;
- effective control environment at all organizational levels including control

activities tailored for defined processes and creating group minimum requirements for product and service areas as well as for geographical areas;

- shared ethical values and strong internal control culture among all employees; and
- internal audit assignments reviewing the effectiveness of the internal controls as needed.

## Risks and Controls in Core Business Processes

Risk management procedures are in place for business processes in the form of defined control points:

- relevant process risks are identified;
- common control points / Company's minimum requirement control points are identified;
- common control points are implemented in business processes; and
- additional control points can be determined as needed at business or functional levels.

Control activities are the policies and procedures that help ensure that management directives are carried out. They help

ensure that necessary actions are taken to address risks to the achievement of the Company's objectives. Control activities are set throughout the organization, at all levels, and in all functions. They include various range of activities including but not limited to approvals, authorizations, verifications, reviews of operating performance, securing of assets, and segregation of duties.

## Internal Controls over Financial Reporting

The Company's external financial reporting process, internal control, and risk management systems are briefly described in this section. The main focus is on financial accounting and related controls.

### Financial Reporting Organization

The financial management of the Company is responsible for organizing the accounting, money transactions, and other daily financial operations of the companies belonging to it as well as organizing the internal reporting that supports the business.

The tasks of the Company's financial administration consist of, inter alia, monthly consolidation of the Group entity, prepara-

tion of quarterly financial reports and consolidated financial statements, management and investment of monetary assets of the Group, management of liabilities, protection against exchange risk, and transfer pricing. The finance function of the Company implements operative supervision under the CFO who reports any supervisory findings to the Audit Committee. The tasks and responsibilities of the accounting function of the parent company and each subsidiary are included in the job descriptions of the teams and employees.

#### Financial Reporting Systems

Consolidated financial statements are prepared by using the chosen consolidation tool. The accounting of the Group's subsidiaries is done by using the local accounting systems from which the actual figures are reported either manually or by automatic transfer to the group consolidation system. The accounting system in use includes general ledger accounting, accounts payables, and accounts receivables. Current assets and payroll accounting are organized through various programs or purchased as an outsourced service. Purchase invoices are circulated through the electronic invoice processing system. Global forecasts and budgets are prepared by using the forecast and reporting program.

#### Internal Controls

The Company's internal control mechanisms are based on policies, instructions, limited process descriptions, authorization matrix, financial reporting review meetings, and segregation of key accounting duties.

#### Compliance Procedures

Compliance processes are in place at all levels of the organization to ensure that all applicable laws, regulations, internal policies, and ethical values, including sustainability, are adhered to. The management and businesses are responsible for following up on developments in legislation and regulations in their respective areas and communicating them to the organization. The members of the Management Group are responsible for setting up adequate compliance controls and compliance-related training in their units. CLO of the Company coordinates

the appropriateness and compliance of the compliance processes.

### Roles and Responsibilities Regarding Risk Management and Internal Control

The key roles and responsibilities regarding the Company's internal control, and risk management are defined as follows:

#### Board of Directors

The Board of Directors is ultimately responsible for the administration and the proper organization of the operations of the Company. According to good corporate governance, the Board also ensures that the Company has duly endorsed the corporate values applied to its operations. The Board approves the internal control, risk management and corporate governance policies. The Board establishes the risk-taking level and risk-bearing capacity of the Company and re-evaluates them regularly as part of the strategy and goal setting of the Company. The Board reports to the shareholders of the Company.

#### Audit Committee

Audit Committee is responsible for the following internal control related duties:

- to monitor the reporting process of financial statements;
- to supervise the financial reporting process;
- to monitor the efficiency of the company's internal control, internal audit, if applicable, and risk management systems;
- to review the description of the main features of the internal control and risk management systems of pertaining to the financial reporting process, which is included in the company's corporate governance statement; and
- to monitor the statutory audit of the financial statements and consolidated financial statements.

More detailed descriptions of how the Audit Committee is fulfilling its monitoring role are defined in the Committee's annual plan. The Audit Committee reports to the Board of Directors of the Company.

#### Chief Executive Officer

CEO is in charge of the day-to-day management of the Company following the instructions and orders given by the Board. The CEO sets the ground for the internal control environment by providing leadership and direction to senior managers and reviewing the way they are controlling the business. The CEO is in charge of the risk management process of the Company and its continuous development, allocation of resources to the work, review of risk management policies as well as defining the principles of operation and the overall process. The CEO reports to the Board on risk management as part of the monthly reporting. The CEO and the Management Group, which operates under the CEO, are responsible for the management of risks endangering the fulfillment of objectives set for the Company.

#### Management Group

The members of the Management Group are responsible for internal control implementation in their responsibility areas. More specific internal control policies and procedures are established within the principles set by the Board and CEO. Additionally, the management of the subgroup and the Group Management are responsible for implementing risk management practices in the planning cycle and daily operations, and ensuring the adherence of:

- laws;
  - regulations;
  - internal policies; and
  - ethical values
- in their designated responsibility areas.

The CFO:

- ensures a setup of adequate control activities for product and service areas in cooperation with the business management;
- follows the adequacy and effectiveness of control activities; and
- ensures that external reporting is correct, timely, and in compliance with regulations.

Finance function does not have a separate internal control function. CFO reports any supervisory findings to the Audit Committee.

CLO ensures that the Group's corporate governance practices comply with the law and that legal matters of the Group are handled appropriately, in particular the contractual risks relating to business operations.

#### Internal Audit

The Company has no specific internal audit organization. This is taken into account in the content and scope of the annual audit plan. On the one hand, external auditing focuses on specific areas, in turn, to be audited, and on the other hand, on separately agreed priority areas.

## Insider Guidelines

The Company adheres to the Insider Guidelines for Listed Companies prepared by Nasdaq Helsinki Ltd (previously NASDAQ OMX Helsinki Ltd, OMX Nordic Exchange Helsinki Ltd, and Helsinki Stock Exchange), the Central Chamber of Commerce, and the Confederation of Finnish Industries. The Company has complemented the Guidelines by its internal insider guidelines. The insider and trading guidelines approved by the Company include regulations on insiders, publication, and postponement of the publication of inside information, prohibited use of inside information, insider registers, a duty of notification of managers' and their closely associated persons' transactions, and personnel's own trading with the Company's financial instruments. The purpose of the guideline is to explain the content of the guideline published by Nasdaq Helsinki Ltd and other regulations and restrictions relating to the matter and to unify and coordinate the processing of insider and trading matters within the Company.

The managers of the Company must comply with the EU Market Abuse Regulation's prohibition on dealing in the Company's financial instruments (closed period). In accordance with the Company's Board of Directors' decision, the Company has, in addition, determined certain time periods during which persons taking part in the preparations of the Company's financial reporting and other persons who have access to information about the Company's financial status are prohibited to trade the Company's financial instruments. The purpose of the trade restrictions is to con-

trol the trading of the Company's financial instruments and thereby increase trust in the Company and the operation of the securities market. Trading with the Company's financial instruments is completely prohibited for the aforementioned persons for a period of 30 days before the publication of earnings information of the Company. The most common publications are the release of the business review and the half-year report as well as the release of the Company's financial statements. The restriction applies also to any possible preliminary information regarding the financial statements, and business review, and half-year report.

Persons included in a project-specific insider register are prohibited from all trading and business transactions until the project has expired or has been publicly announced. If the project falls upon another listed company or may affect the price of the financial instruments of another listed company, the project-specific insiders have no right to trade with such a company's financial instruments.

The Company voluntarily maintains on its website a list of the financial instruments owned by the Company's managers or by the institutions operating under the authority of the managers. The list is updated on the last day of each month.

## Related Party Transactions

The purpose of the Company's Guidelines on Related Party Transactions is to ensure that any business transactions involving persons belonging to the Company's related parties are made independently and based on market terms. This also applies to business transactions that otherwise may raise suspicions on whether the transaction was made on market terms. The Company assesses and monitors that any related party transactions promote the purpose and interests of the Company and are commercially justified and overall in the best interests of the Company and that any conflicts of interest are duly taken into account when making decisions on related party transactions.

According to the definition in the Limited Liability Companies Act, a related party transaction is not part of the company's ordinary course of business or is made in deviation from customary commercial terms. These kinds of related party transactions are uncustomary in the company's business. In addition to the general monitoring concerning related party transactions, the Company prepares a special report on transactions that are not part of the Company's ordinary course of business or are made in deviation from customary commercial terms.

The Company has defined its related parties according to the IAS 24.9 standard and maintains an up-to-date register of major business transactions between the Company and its related parties, the parties, and the key terms of such transactions. The information about the related parties is collected annually from the persons belonging to the Company's related parties and serving the Company. The Company monitors possible related party transactions as a part of its internal control. Roles and responsibilities regarding internal control are described on the Company's internet site. In addition, the above-mentioned persons are obliged to notify the Company's related party administration of any related party transactions which have come to their knowledge. Such notification must be made without delay after receiving such information. The transactions are considered major if their total amount exceeds € 20,000 during the financial period.

The Company's related party register is not public, and any information entered in it will not be disclosed to third parties, with the exception of any authorities and the auditor entitled to receive such information. Any major transactions to be performed with the Company's management and its related parties shall be approved by the Board of Directors.

The Company discloses the related party transactions relevant to the shareholders at the latest when the transaction is binding on the Company. The principles of the Guidelines on Related Party Transactions are observed throughout the Bittium Group and in the decision-making concerning all of the Group companies.

# Sustainability at Bittium in 2021

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# Sustainability Highlights in 2021

**COMPETENCE DEVELOPMENT**

Days of training  
3.8 days /  
employee / year



99.1%

**WASTE RECYCLING RATIO**

46.9

**CUSTOMER SATISFACTION SURVEY NPS**

70%

**EMPLOYEE SURVEY RESPONSE RATE**

45.5

**CUSTOMER PROJECT SATISFACTION SURVEY NPS**

↑ 3.0%

**ELECTRICITY CONSUMPTION**

↘ 719  
tCO<sub>2</sub>e

**TOTAL CARBON FOOTPRINT**  
1,096 kg CO<sub>2</sub>e  
/ person / year



**SHARE OF SOLAR POWER**

As high as 5% of the energy requirements of the Oulu office on a monthly basis





# CEO's Sustainability Review

Bittium acts as a responsible corporate citizen in the surrounding society. We are a reliable local partner and employer that operates in accordance with common operating principles and seeks policies and solutions that promote sustainable development. To support this, in the autumn of 2021 we prepared a new sustainability program for the years 2022–2025. Our sustainability will be based on three key themes: our employees, customers and information security, and the environment. This sustainability report, concerning the year 2021, is based on the indicators and targets of the existing sustainability program.

A responsible business practice lays the foundation for trust, which is nurtured by implementing Bittium's values in actions. Our operations are very regulated, so huge part of our sustainability is based on confidentiality and ensuring security. Our industry is full of ever-changing standards and regulations that we obey and be up to date with changes. This is one of the basic conditions for our operation.

The second year of the coronavirus pandemic has, in a good way, forced us to continue to reform the company's policies. Taking care of the well-being of our staff has been high on our work list, as about 70 per cent of our employees have been working remotely from home during the year. We have maintained our participatory and conversational culture through various measures and will continue to invest in good leadership.

The global shortage of components also affects Bittium. We have mapped numerous Finnish and European suppliers to obtain the necessary components for our products. For some critical components, deliveries have been relocated from afar to Europe and even Finland, closer to us.

At Bittium, ecology is the starting point for all product design and development, which is why we constantly pay more attention to the principles of the circular economy. We aim to comply with the EU's Ecodesign Directive, which aims to improve the energy efficiency of products by integrating en-

vironmental considerations and life-cycle thinking into the product design phase. The directive is now being extended to include the effects of software production on the life-cycle assessment of a product's ecological footprint. Bittium has participated in the authority work of this directive both at the Finnish and EU level.

In 2021, we achieved the goals we set for environmental sustainability. At its best, 13.5 per cent of the utilized electricity at the Oulu premises came from solar energy. Our total carbon footprint was 718,690 kg CO<sub>2</sub>e, which is a decrease of about 5% from a year ago. The reduction in the carbon footprint was due to a significant reduction in air travel caused by the coronavirus pandemic and a change in the calculation method for waste emissions.



**Hannu Huttunen**  
CEO

# Bittium in Brief

## Description of Operations

Bittium is a Finnish technology company that specializes in both the development of reliable and secure communication and connectivity solutions and the development of products and services for measuring and monitoring biosignals outside the hospital. Bittium has over 35 years of in-depth expertise in various technologies. Bittium offers its customers innovative products and solutions based on its product platforms, as well as product development services.

Sustainability is present in Bittium's operations throughout the life cycle of its products, in procurement chains and in the way the company creates value for the surrounding society.

## Strategy in a Nutshell

Bittium aims to be a significant global provider of secure and safe communications solutions in the defense and public safety markets and a leading provider of connectivity solutions and R&D services for different industries, as well as a significant provider of remote measuring and diagnostics solutions for measuring and analyzing biosignals.

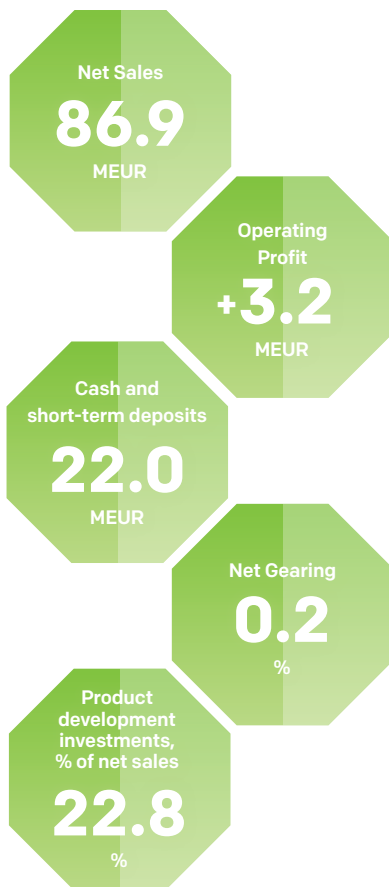
Bittium's business is divided into three product and service areas: Defense & Security, Connectivity Solutions and Medical Technologies.

**In the Defense & Security product and service area**, Bittium offers globally leading products and services for its customers in the defense, security and public safety markets, aiming at strengthening the national security of independent countries.

**In the Connectivity Solutions product and service area**, Bittium provides its customers with R&D services and wireless connectivity solutions for the development of new innovative products in a secure and evolving wireless environment.

**In the Medical Technologies product and service area**, Bittium aims at promoting better health in society by providing products and complete solutions for the healthcare market in biosignals remote monitoring and diagnostics. This is based on the company's long experience and deep knowledge of biosignal measurement, wireless communications and security technology.

Bittium has made significant investments in the future by considerably increasing R&D investments in in-house products and solutions. These investments provide an excellent foundation for future growth. The company will continue to invest in product development and the development of its operations in accordance with its strategy to enable international growth. Bittium also continues to search for inorganic growth opportunities in all of its product and service areas. The company is prepared to invest in acquisitions that strengthen its growth strategy.





## Our Value Creation Model

### Our Key Resources

#### People

- Almost 700 specialists
- Investments in employee well-being and competence development

#### Customer Relationships

- A wide customer base in the public and private sector

#### R&D and materials

- A corporate culture that supports innovation
- Investments in product development
- IPR management
- Sustainable materials purchasing

#### Profitable and Responsible Business

- Strong balance sheet
- Investments
- Sustainable approach to business
- Comprehensive quality, environment and safety systems
- Sustainable use of natural resources (energy and water)
- Compliance processes

#### Stakeholders

- R&D cooperation
- Cooperation with stakeholders and the authorities
- Trust-based partnerships

### Our Mission

We adapt our deep knowledge to deliver superior technology innovations to enhance connectivity, bring safety and improve health in the society.



Our product and service areas deliver solutions that enable our customers to respond to the changes and opportunities created in the operating environment by new technologies.



### Our Values

Trust. Courage. Innovation.

## Outputs and Impacts

### Customers, Products and Services

- Customer relationships based on trust
- Long-term partnerships
- Secure products with long life cycles featuring state-of-the-art technology
- Secure communication and connectivity solutions
- Reliable and advanced solutions for remote monitoring in healthcare
- Minimizing product life cycle impacts
- Quality, productivity and information security

### Society and the Environment

- Taxes, salaries and wages
- Active role in the partner network
- Added value created by R&D
- High-end technology solutions to meet the growing needs of society
- Optimizing energy and water consumption in our operations and in all stages of the life cycle of our products
- Enabling cost savings in healthcare through technology solutions

### Innovative Experts

- Innovative experts with a high level of well-being
- Continuous competence development
- Meaningful work and a supportive working environment

### Investors

- A profitable and stable investment

## The Megatrends Affecting the Business

Bittium's operations are strongly influenced by digitalization, the various phenomena of which create both threats and opportunities for the business. The digital revolution in society continues and investment in smart devices, people and processes is growing. Digitalization increases efficiency and allows for a better allocation of resources.

### Rapid Technological Development as an Enabler of Digitalization

The rise of embedded software, the management of complex systems, and the rapid development of technology create opportunities to provide added value to Bittium's customers. To maintain a competitive edge, Bittium must continue intensifying the in-house technological development.

### The Internet of Things (IoT)

The growing importance of IoT requires the integration of operating processes and secure IoT solutions to achieve efficiency advantages. The tools and approaches used in developing Bittium's operations include robotic process and testing automation as well as data visualization. The company develops challenging IoT solutions with high information security requirements for its customers.

### Digitalization and the Aging Population

The aging of the population and population growth make the digitalization of healthcare crucial for maintaining the productivity and coverage of services. Remote monitoring, wireless solutions, new home-based care methods as well as faster and more efficient health data analysis are among the technological solutions Bittium has developed for its customers.

### Information Security

The progress of digitalization and technologies brings with it an increase in information security threats. Cyber security is one of the most significant threats associated with digitalization. Stricter information security and regulatory requirements are reflected in the operations of the company and its customers. The requirements are also expanding to cover new sectors and applications, and the importance of information security certification is growing. Bittium recognizes these rapidly increasing sector-specific requirements and keeps itself on the leading edge of the industry in responding to them.

# Sustainability Management

## Sustainability Organization and Risk Management

Bittium has a specific sustainability working group, that develops, monitors and evaluates issues related to sustainability. The working group is responsible for managing and sounding sustainability risks, as well as reporting on the company’s sustainability. The working group has six (6) members: CEO; Chief Legal Officer; Vice President, Communications and Marketing; Director, Human Resources; CFO; and Head of Quality, the Environment and Technology Management. The sustainability working group holds quarterly meetings and prepares the sustainability report. The Bittium management and the Board of Directors review the sustainability report annually.

The Management Group of Bittium discusses sustainability issues, monitors the effectiveness of sustainability measures and sets sustainability targets in its twice-yearly management review. The Management Group is also responsible for implementing sustainability plans and actions in day-to-day operations.

The Audit Committee of Bittium Corporation’s Board of Directors discusses and prepares sustainability matters regularly and when necessary.

The Board of Directors of Bittium Corporation discusses sustainability issues on the basis of the Management Group’s proposals and approves annually the company’s sustainability report.

The sustainability report describes the applicable methods that guarantee a sufficient

level of diligence. The management of risks related to operations and the operating environment as well as the relevant processes are described in Bittium’s Corporate Governance Statement.

## Bittium’s Ethical Principles and Code of Conduct

Bittium’s ethical principles comprise the following areas of sustainability:

### 1) Anti-corruption

The nature of Bittium’s market area and business sector makes corruption one of the main risks related to social sustainability and human rights. Bittium does not condone any forms of bribery or corruption in its operations or those of its partners. Bittium updated its internal and external anti-corruption guidelines in 2017. The employees receive training on the guidelines.

Bittium expects its partners to comply with these guidelines. The company uses a monitoring tool for detecting corruption and other ambiguities in the operations of its partners.

The company provides both our external and internal stakeholders with a channel for reporting violations of anti-corruption rules. There were no cases of corruption reported to Bittium in 2021.

### 2) Information security and data protection

Bittium’s information security and data protection policies specify the methods employed in the classification, storage and disclosure of information.

### Sustainability Management at Bittium



### 3) Fair business, advertising and competition

Bittium follows the rules on fair business, advertising and competition. The company uses various methods to secure the customers' information in accordance with information security procedures.

### 4) Corporate citizenship

The company supports community involvement in order to promote social and economic development.

### 5) Protection of intellectual property rights

Bittium respects intellectual property rights and applies its IPR strategy and guidelines to all of its operations.

Sustainable procurement is also an essential part of our sustainable business operations. The principles of sustainable purchasing have been described in greater detail in section 'Confidential customer relationships and secure products'.

## Stakeholder Cooperation

Bittium's operations affect many different stakeholders. Understanding their views and expectations is important for our operations and success. Open dialogue with the stakeholders helps to develop Bittium's operations, products and solutions as well as a goal-driven approach to finding solutions to social challenges.

Bittium works in cooperation with national as well as international stakeholders. Our largest stakeholders include our employees, customers, different actors, partners, the authorities and other controlling

actors, shareholders, students and different schools and academies, as well as different communities. The company's stakeholder-related activities are guided by Corporate Governance and Code of Conduct.

In 2021, the coronavirus pandemic had a significant impact on the cooperation with stakeholders. The travel restrictions and quarantines have prevented face-to-face meetings, and communication over the internet has become the new norm.

### Personnel

Bittium arranges several different staff events each year where our employees get the opportunity to ask questions and give feedback. The management's physical presence at these events and the opportunity to ask questions have constituted an important part of communication. As the coronavirus pandemic has been prevailing, all personnel events were held online to safeguard the personnel's health and the continuity of business. The situation was made easier by the fact that Bittium is an international player. Therefore, online meetings have been routine for us for years. Thus, arranging online events for the entire staff did not involve much extra effort or costs. Despite the lack of physical presence, the dialogue between management and personnel on these occasions has remained active.

In addition to staff events, the employees can give feedback through the annual anonymous employee survey. Equal treatment and open interaction are important to the employees. They expect Bittium to offer interesting and meaningful work and opportunities for professional growth. In addition to the annual personnel surveys, the company surveys the well-being of its personnel with a once-a-month Pulse survey. Pulse allows

for a faster response to any grievances that have arisen. The results of both surveys are available for personnel to view on the company's intranet.

### Customers

Bittium receives constant feedback from the customers, primarily by continuously staying in touch with them and through various annual surveys. The surveys are arranged online. The used Scrum and Agile methods and the supporting online systems (as real-time as possible) allow ongoing monitoring and open dialogue. This enables Bittium to quickly react to potential problems. Bittium's customers value competitive and reliable products and services as well as sustainable and real-time approach to operations. The company's major customers are leading international players in their respective fields. Therefore, the travel restrictions imposed in 2021 as a result of the coronavirus pandemic have had some impact on Bittium's communications with them. The company has had to take care of many matters online that would normally be discussed face to face. These include, for instance, product and project inspections or approvals.

### Suppliers and partners

When it comes to our suppliers and other partners, Bittium has often worked with them in close cooperation for a long time following established rules and ways of working. Constant communication enables open dialogue. The company's suppliers and partners expect fair and sustainable operations and long-term cooperation. Bittium expects suppliers and partners to work in a sustainable way, and monitors this on a regular basis. The coronavirus pandemic did not have a material effect on cooperation with suppliers and partners.

### **Authorities**

Bittium maintains a regular line of communication with the authorities, for example, with regard to export control and information security issues. The company regularly monitors our compliance with the laws and regulations. Applying them to Bittium's business operations requires open and ongoing interaction with the authorities. The company has always mainly engaged in virtual communication with the authorities. Therefore, the coronavirus pandemic did not have a material effect on cooperation in 2021.

### **Local cooperation**

As part of Bittium's sustainable corporate citizenship, the company actively collaborates with different communities. Bittium meets the expectations of different communities in a variety of ways. The company regularly supports educational institutions and schools to introduce young students to working life – and not forgetting the teachers. Thanks to this collaboration, Bittium is also able to recruit new and enthusiastic graduates. Restrictions on gatherings and meetings caused by the coronavirus pandemic prevented the company from arranging workplace visits or admitting students to practical training during 2021. At the end of 2021, Bittium donated 50,000 euros to the University of Oulu's technical research.

Research and development cooperation with companies and research institutions broadens Bittium's expertise and makes it possible to mutually promote development. This cooperation is mainly carried out online, and the coronavirus pandemic had no material effect on the progress of cooperation.

### **Shareholders and investors**

Shareholders, investors and analysts expect Bittium to create long-term value and act responsibly. Bittium meets with analysts following the company on a regular basis and participates in events for various institutional investors. At the annual general meeting, shareholders have the opportunity to meet and discuss with the company's management and the members of the Board of Directors. Due to travel and gathering restrictions caused by the coronavirus pandemic, the 2021 Annual General Meeting was held again via the Internet instead of a physical opportunity. Similarly, other investor and analyst meetings and events were held online during the past year. In 2021, the company joined a moderated investor forum to improve and increase communication with investors. It is pursued that the open and transparent discussion will provide answers to the questions that concern investors and thus improve the understanding of the company's business.



# Sustainability Program 2020–2022

Bittium is a global technology company that aims to adapt its deep knowledge to deliver superior, socially beneficial technical innovations that enhance connectivity, bring safety and promote health-care in society. Bittium's sustainability program is based on the company strategy, values, stakeholders' expectations and the megatrends in the operating environment. It is part of the company's organizational culture, its way of acting and creating value for the surrounding society.

Bittium's sustainability program relies on the materiality analysis conducted in 2019, on the basis of which the focus areas of sustainability were defined. The program is composed of the development targets and actions of the focus areas as well as the related performance indicators. Bittium continuously monitors and improves its sustainability efforts. The achievement of the targets specified in the sustainability program is monitored annually against various performance indicators. Progress with the program and toward the targets is reported annually in Bittium's sustainability report.



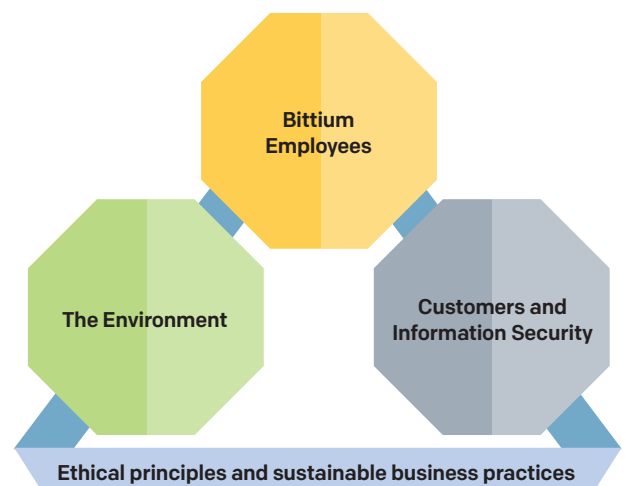
**The sustainability program and its targets are divided into focus areas.**

# Sustainability Program 2022–2025

In the second half of 2021, Bittium created a new sustainability program for the period 2022–2025. While the previously defined focus areas were not changed, they were regrouped. Going forward, Bittium's sustainability will be based on three key themes: Bittium employees, customers and information security, and the environment. Ethical principles and sustainable business practices create the foundation for trust, which is maintained by putting Bittium's values into action.

The sustainability program will be launched internally in the first quarter of 2022.

The sustainability actions taken in 2021 are reported in accordance with the sustainability program 2020–2022.



# Sustainability at Bittium

## Economic Impact

For Bittium, economic impact means ensuring the long-term profitability of the company's business. This creates added value for the company's various stakeholders and the surrounding society. Profitable operations create economic benefits for shareholders, employees, partners, subcontractors, distributors, customers, municipalities and governments.

Legal compliance is the basic premise of economic sustainability. However, in many respects, Bittium's sustainability and impact exceed the legal requirements.

### Creating Added Value for Stakeholders

With respect to Bittium's economic impact, the local dimension is what matters most. Local added value is generated especially through Bittium's direct and indirect employment impact. On a larger scale, Bittium's impact extends via tax payments, dividends and business impacts into the countries in which the company operates around the world.

Bittium is present in Europe, the Americas and Asia. The majority of the company's employees work in Finland, more than half of them in the city of Oulu.

Ensuring added value means securing long-term growth and financial stability, comprehensive risk management and a long-term commitment to the development of society and local communities. In addition to financial risks, risk management must take into consideration other risks related to the valuation of the company, such as reputational risks.

Bittium's business must respond to the changes in the operating environment to maintain profitability and future competitiveness. The technological transformation and the resulting technology solutions create both opportunities and threats for the company – changes that must be taken into account already during the product development stage.

## Tax Footprint

Taxes are part of Bittium's business process, and tax management supports the company's strategy. Bittium is present in five countries and its business profits and the resulting taxes are generated locally.

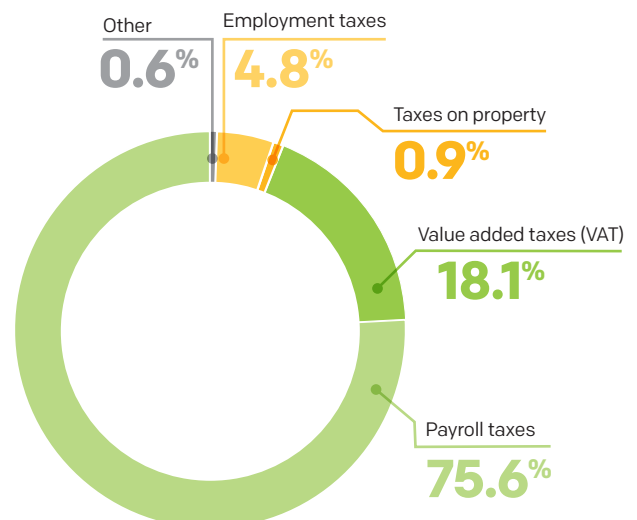
Bittium's tax strategy is to support business decisions and ensure their proper execution also from the perspective of taxes. Tax planning supports business efficiency and productivity, creating added value for shareholders and ensuring regulatory compliance. Bittium's tax planning is not aggressive and it is always based on actual business needs, instead of artificial arrangements.

Bittium's tax strategy aims to ensure that the company calculates, reports and pays taxes correctly to the authorities, in compliance with the regulations in effect. Bittium is committed to complying with the laws of its operating countries as well as lower-level regulations, such as the OECD transfer pricing guidelines. Good corporate citizenship is part of Bittium's values. Accordingly, the quality of the company's tax processes is

## Tax Footprint 2021

MEUR

	2021	2020
<b>Taxes collected</b>		
Value added taxes (VAT)	-2.4	-2.2
Payroll taxes	-10.0	-9.6
<b>Total</b>	<b>-12.4</b>	<b>-11.8</b>
<b>Taxes borne</b>		
Employment taxes	-0.6	-0.5
Taxes on property	-0.1	-0.1
<b>Total</b>	<b>-0.8</b>	<b>-0.7</b>
<b>Taxes total</b>	<b>-13.2</b>	<b>-12.5</b>



an important cornerstone of Bittium's tax strategy. The company's guiding principle is to be open and transparent with the tax authorities in all the countries in which it is present. In Finland, Bittium works in close cooperation with the Large Taxpayers' Office of the Finnish Tax Administration.

## R&D Investments

Bittium operates in a sector that creates products and services for the future through continuous development, innovations and cross-sector cooperation. The company plays an important role at the leading edge of technological development, and active cooperation with academic researchers increases understanding of significant new technologies and promotes the digitalization of society. Bittium has a close and long-established cooperation relationship with the University of Oulu.

In 2021, Bittium was involved in the role of a funding provider and research partner in several EU cooperation projects (for example, ITEA4, Horizon2020 and EDIDP) and national projects financed by Business Finland. The focus areas of these cooperation projects included technologies that are highly relevant to Bittium's future product and service business, such as various communications solutions for the defense industry and the public authorities, information security solutions related to products and future factories, the development of AI and machine learning methods in fields such as healthcare, and methods and operating practices related to regulatory software development.

In 2021, research and development expenses represented 22.8 percent of net sales (2020: 29.1%). They were mainly allocated to the development of a tactical communications system and related products targeted at the defense industry, the development of various devices and special terminal products for the authorities, including related security software, and the development of medical technology products. In 2021, the focus of investments has gradually shifted from tactical communications to the development of new health technology products.

## Stakeholders and Economic Impact in 2021

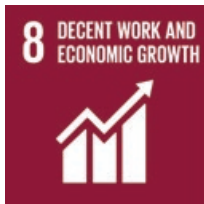


Share Price Average 2020-2021





# Sustainability Focus Areas



Bittium monitors the progress of each focus area using selected indicators in accordance with its sustainability program and continuously develops its operations and performance.

The most important resources of Bittium's business are highly competent people, a diverse work community free of discrimination, and taking care of employee well-being and competence. Bittium provides its employees with challenging and motivating jobs and is committed to supporting their development and investing in their well-being.

Bittium is a reliable operator for all of its stakeholders. Stakeholder engagement is guided by good corporate governance as well as the company's ethical principles and Code of Conduct. In customer relationships, sustainability is reflected in the way of working, the quality of products and the trust that characterizes the company's customer relationships. Trust is the starting point for Bittium's operations.

Sustainable business practices are a cornerstone of Bittium's operations. It provides a solid foundation for risk management and represents a core value as well as a competitive advantage. Sustainability helps the company with long-term value creation.

Sustainability for the environment, the mitigation of climate change and resource-efficient solutions are key aspects of Bittium's operations and their development. By maximizing the service life and recyclability of products, their total life cycle impact can

be influenced. The company also strives to minimize the environmental impacts of its operations. The company's performance is monitored through the environmental program.

## Alignment with the UN's Sustainable Development Goals

Bittium has evaluated the themes associated with the focus areas of its sustainability program with the UN Sustainable Development Goals and identified the goals that it has already taken into consideration and promotes in its operations. Based on the selected focus areas of sustainability, the following UN SDGs are of particular relevance to the company:

- 3** Good health and well-being
- 8** Decent work and economic growth
- 9** Industry, innovation and infrastructure
- 12** Responsible consumption and production
- 16** Peace, justice and strong institutions
- 17** Partnerships for the goals





**FOCUS AREA #1**

# Innovative and Developing People

Bittium’s values are trust, courage and innovation. These values are an integral part of everyday work and the company culture of participation and discussion. The company culture is characterized by a flat organization and a low level of hierarchy as well as agility and openness. Bittium’s employees share a passion for technology and learning. Bittium’s innovation requires motivated employees with a high level of well-being, good managerial work and a sense of community. Innovation is supported in various ways, including an

Goals	Performance Measures	Target 2021	Result 2021
Employee well-being and engagement	Results and scope of the employee satisfaction survey.	Developing the employee experience and a sense of community under exceptional circumstances and supporting managerial work.	The average overall score in the employee satisfaction survey decreased to 3.74 (2020: 3.80*).
			The response rate decreased to 70% (2020: 81%).
Competence development	Time spent on training per employee.	Increasing and enabling training and taking special competencies into consideration.	3.8 days/employee.
Developing the employer image	External employer image survey.	Increasing awareness of Bittium and communicating the company’s strengths.	The external employer image survey was postponed to 2022.
	Bittium Employee Survey (BES).	Developing the employer image internally.	In the BES survey, the score for the section “Bittium as a company and employer” was 3.36 on a scale of 1–5 (2020: 3.53).

\* In the sustainability report 2020, the average of 2020 was announced 3.83. The figures has been recalculated to be comparable with the 2021 figure.

encouraging and diverse company culture as well as effective working methods and business premises. Ultimately, Bittium's innovative approach is reflected in the company's R&D and work with customers.

In 2021, the company's personnel continued to work remotely under a model where approximately 70 percent of the employees worked remotely as a rule. Ensuring employee well-being and supporting active managerial work have remained key elements of HR management. Monthly Pulse surveys have been used to monitor remote work, the spirit among employees, the efficiency

of work and job satisfaction. The sense of community among the personnel has been strengthened by openly communicating the survey results and also by organizing lectures on well-being at work and sharing experiences. The restrictions concerning travel and visits have remained in place for the most part.

While most of Bittium's employees have continued to work remotely, the company has nevertheless been able to produce critical products and services for its customers in various industries.

Skilled, motivated and committed professionals constitute Bittium's most important resource. The company's strengths as an employer include diverse tasks and development opportunities through work on various technologies, products and projects. Bittium employees have a strong team spirit and feel that they are appreciated by their colleagues and the workplace community.



## THE GLOBAL GOALS

For Sustainable Development

### Alignment between the Focus Area and the UN's Sustainable Development Goals



#### Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

**8.7** Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers, and by 2025 end child labor in all its forms.

**8.8** Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

- Our Supplier Requirements include the observance of human rights in activities that are directly related to our operations. The Supplier Requirements are published on our website.
- We monitor employee well-being in various ways, and our company applies clearly defined practices to support work ability. We maintain up-to-date safety plans as well as an equality plan. Safety issues are taken into account in our orientation training program. The employee benefits provided by our company have been selected to support mental and physical well-being and build a strong sense of community.



#### Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

**9.5** Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.

- We make significant investments in our R&D activities to support our renewal and maintain an innovative and competitive portfolio of products. In 2021, R&D activities represented 22.8 percent of our net sales (2020: 29.1%).
- We create opportunities for our personnel to continuously develop their competence through studying as well as internal and external training. Our diverse and varying tasks enable continuous on-the-job learning and development. We encourage our employees to share their knowledge openly.

## Bittium's Remote Work Policy and Hybrid Work Model

Approximately 70 percent of Bittium's employees has been working primarily remotely due to the coronavirus pandemic. Employees who, due to the nature of their duties, cannot work remotely include those who work in production and laboratories as well as those whose job requires working in security-classified areas. Bittium has been able to prevent Covid-19 infections by continuing to work remotely as a rule. Bittium's Covid-19 working group, which focuses on monitoring the pandemic as well as planning, implementing and communicating pandemic-related measures has continued to hold status meetings at least once a week. In addition, the company continued close cooperation on occupational safety and health between offices as well as weekly meetings. Up-to-date internal communication on Covid-19 has been highlighted as a priority. The information website for employees, introduced in March 2020, is still in use. The website has proved to be a useful communication tool, especially for informing employees of Covid-19 infections and reminding everyone of infection prevention practices.

Bittium adopted a more permanent remote work policy in mid-October. Under the hybrid model, each project and team agree on the most suitable remote work practices for their work and the aim is to use an optimal combination of remote work and in-office work. When the policy was drafted, the views of employees and project managers were assessed by means of surveys, and collaborative workshops were organized with supervisors, project managers and guild managers to develop the policy. The effectiveness of the remote work model will be monitored and developed further as necessary. The new remote work model was in use for just over a month before new remote work recommendations were entered into effect.

Project meetings, staff events, joint coffee breaks and internal product demonstrations were mostly organized as virtual events.

## Bittium Employee Survey and the Employee Experience

The annual Bittium Employee Survey (BES) is an important tool for developing well-being at work and job satisfaction and enhancing the employee experience. The results of the survey are discussed at all levels of the organization, from the Board of Directors and Management Group to individual teams.

The survey consists of five sections with 50 statements in total. The sections are:

1. My work
2. Bittium as a working community
3. Bittium as a company and employer
4. Supervisory work
5. Projects

In the 2021 employee survey, the response rate decreased to 70 percent, compared with 81 percent in the previous year. The overall average score decreased slightly and came to 3.74 (2020: 3.80, 2019: 3.72). The survey results in 2021 were largely in line with the results in 2019. The year 2020 was exceptional, also in light of the survey results. Team spirit, support for colleagues and commitment to the working community were again highlighted as Bittium's strengths. The scores for supervisory work remained at an excellent level.

The employees evaluate the realization of the company's values in the employee survey. On a scale from 1 to 10, the scores for trust, courage and innovation were 7.75 (2020: 8.06), 6.87 (2020: 7.34) and 7.02 (2020: 7.38) respectively. These results are in line with the general trend seen in the survey responses from 2020 to 2021.

In addition to the BES survey, the employee experience was monitored by means of monthly Pulse surveys. During the exceptional circumstances created by the pandemic, the Pulse surveys are an important tool for monitoring the spirit among the company's employees. However, as the response rate has declined steadily, the survey imple-

mentation method and focus will be re-evaluated going forward.

Based on the previous year's BES survey, the focus areas selected for 2021 were tools, processes, the renewal of the organization's working methods, workload and the development of critical competencies. In addition to communications related to the exceptional circumstances, communications activity regarding the status of business operations and the general picture were increased.

The special development themes that were identified on the basis of the results of the BES survey in 2021 include engaging the commitment of employees and strengthening the employer image, competence development, managerial work and leadership. Process development will also continue. The challenges that are identified include engaging the commitment of newly recruited employees during the exceptional circumstances and remote work, and the employee experience of new recruits will be assessed in more detail by means of a separate survey.

## Supervisory Work and Strengthening the Employer Image

Remote work has changed the nature of supervisory work, making it necessary to pay particular attention to this area. Leadership coffee meetings held every three weeks are one example of the measures taken by Bittium to support supervisory work.

Bittium Leader for Projects, a training program that promotes coaching-style leadership for project managers and team leaders, was launched near the end of the year when the Covid-19 situation made it possible to carry out training events in person, which supports networking between the participants. The training program consists of five training modules. The training began as in-person training with three groups. The plan is to continue the training with two new groups next year. Each group has 15–20 participants.



Bittium’s external employer image is also strengthened by the open-for-all webinars launched in the fall. Four webinars were organized in the fall. Their themes focused on generating added value for customers in different industries. The plan is for the webinar series to continue in 2022.

The employees’ views of Bittium’s attractiveness as an employer were assessed by means of the BES survey in 2021. Communications materials related to recruitment were developed to better communicate Bittium’s strengths, internal culture and team

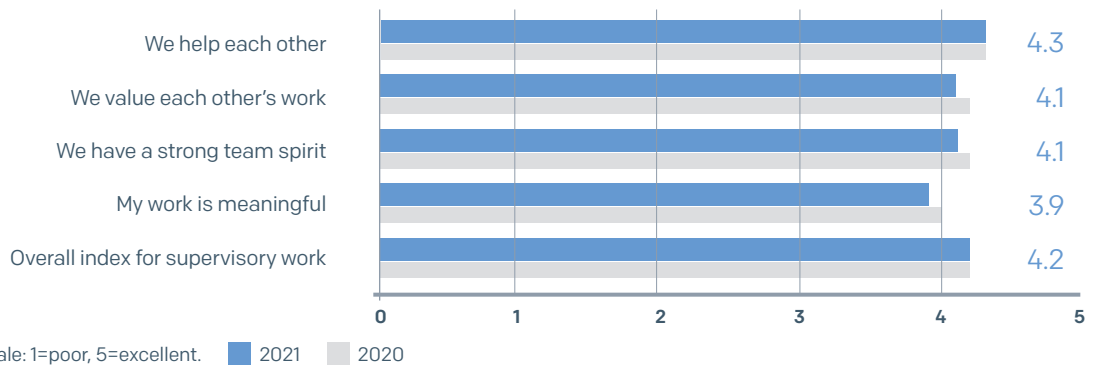
spirit. The employer image will also be measured by means of an external employer image survey in 2022.

## Competence Development and Performance Reviews

In accordance with the performance review model, the employee and supervisor have an informal quarterly discussion (Quarter Chat). A key objective of the switch to more frequent, regular discussions has been to

take into consideration individuality, support well-being at work and build trust in the relationships between supervisors and subordinates. The employees also have the option to agree to have a separate longer conversation, especially with regard to a long-term competence development plan. This actual performance review is held at a time that effectively supports competence development.

### Bittium Employee Survey 2021: highlights related to sustainability



Activities related to competence development emphasize the development of effective and agile working methods to ensure that competence development needs will be identified on a more business-driven and employee-driven basis in the future. This effort has been supported by, for example, change agent activities and the information obtained from the personnel survey and pulse surveys on how the employees perceive the current situation as regards competence development. Bittium has taken many measures and conducted assessments related to competence development, and these will continue in 2022.

Topical themes in competence development include data, analytics and artificial intelligence, cloud solutions and virtualization. Efforts related to software life-cycle process development and management, increased

use of efficient operating models, and programming languages and new technologies will also continue. When training is organized to support competence development, online learning methods and platforms are used where possible, but in-person events to support competence development are also organized as necessary. For example, a training program to support the product development and project competencies of employees who work with medical technologies was successfully carried out online, on a location-independent basis.

A new tool was introduced in 2020 to develop the orientation training process for new employees. The tool serves as a platform for the orientation training material and training sessions as well as various eLearning courses. The development of the orientation training path for various jobs and expanding

the use of eLearning solutions continued in 2021. Internal eLearning courses have also been created outside the actual orientation training path to serve broader competence development needs, and these types of solutions will also be taken advantage of in the future. A dedicated eLearning module created on the topic of strategic communication has been well received.

Employees are encouraged to discuss competence development needs with their supervisor, and self-development and training are also encouraged. In 2021, the average number of training days was 3.8 per employee. This includes both internal and external training as well as orientation training and independent study. Internal training may also involve learning on the job and the sharing of expertise, and external training may involve independent study.

## Well-being and Occupational Safety

At Bittium, the majority of work involves R&D and product (software) development. Therefore, the most significant disability risks include musculoskeletal diseases, coping at work and mental well-being. Project-based work is prevalent, and the schedules and workload may vary greatly depending on the situation. The need for occupational healthcare services at Bittium has increased slightly compared to the most recent pre-pandemic year. In particular, the number of medium-duration sickness-related absences related to mental health has increased. In response to this, supervisors and project managers have been encouraged to meet their team members face to face more frequently, at least via video calls. In 2022, the company will focus on early support to make it possible to address challenges in a timely manner and prevent stress.

Employee well-being is supported by occupational healthcare services that are more extensive than required by law, as well as other employee benefits. The occupational healthcare services also include a digital clinic and opportunities for remote consultations. Employees also have access to the services of an occupational physiotherapist and the Cuckoo Workout application. HR coffee breaks were organized in 2021. They are open virtual events for personnel, addressing topics related to well-being, such as the ergonomics of knowledge work and the importance of good sleep. At its highest, the number of attendees in these events was several hundreds of people representing various parts of the organization. A company bicycle benefit was introduced near the end of the first half of the year. Bittium has taken out remote work insurance for employees.

All Bittium offices have appropriate safety plans in place. Some of the employees perform duties in which it is of particular impor-

tance to ensure electrical safety. The risks associated with manufacturing and manual work are a relatively small concern.

The Close Call reporting channel in Bittium's intranet enables employees to report potential safety and 'close call' concerns. A total of three such concerns were reported in 2021.

Bittium's HR management and OHS function analyze occupational accidents at regular intervals and whenever particular risks emerge. In 2021, a total of three occupational accident reports were submitted in Bittium's companies in Finland. None of these accidents led to disability or liability under the Finnish legislation governing occupational accidents and diseases.

## Human rights, Equality and Diversity

From the aspect of managing and developing diversity, it is important to take into account different backgrounds and skills and to put them to good use. Participation-oriented and coaching style supervisory work plays an important role in this. All employees and job applicants are treated equally regardless of their gender, age, ethnic background, political views or other background factors. Bittium's equality plan is based on the Finnish Act on Equality Between Men and Women. The realization of equality at work is assessed in employee surveys from the perspectives of pay, career development and recruitment.

As the extensive annual employee survey enables Bittium to address the themes of equality and non-discrimination, the company does not carry out a specific equality survey each year. The next survey is planned for 2022.

The principles concerning the diversity of the Board of Directors are defined in the Corporate Governance Statement.

The vast majority of Bittium's employees work in countries with progressive human rights legislation. Subcontractors and partners are required to adhere to Bittium's Supplier Requirements, which also address the company's approach to human rights questions. Compliance with the Supplier Requirements was evaluated in 2021 based on self-assessments. In 2021, no violations or significant non-conformities related to the use of child labor, forced labor, inappropriate disciplinary action, physical punishment, or health-related discriminatory practices were observed in Bittium's or its subcontractors' operations.

## Active Engagement

Interaction between the employees and teams has been mainly virtual. Normally, the company promotes the employees' collective spirit and activity also outside working hours in the form of various clubs, physical exercise and activities. Club activities were resumed in 2021 and new clubs were established, which speaks to the value given to team spirit at Bittium. Several teams of Bittium employees also participated in the Kilometrikisa cycling challenge for the third time. Organizing team meetings was also possible during the year.

Bittium was not able to organize visits to educational institutions in 2021 due to the coronavirus pandemic.



## Personnel in 2021

At the end of 2021, Bittium had 653 employees in Finland, the United States, Mexico, Singapore and Germany. 99% of the company's employees are based in Finland. Most of the employees are R&D engineers.

### AVERAGE AGE

44

### YEARS AT BITTIUM

9.2

### RETIRED

3

### WOMEN

653

at the end of the year

667

on average

557

engineers

13%

total

10%

as supervisors

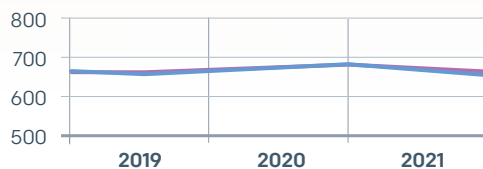
11%

in the Management Group

20%

on the Board of Directors

persons



### TRAINING

85.2%

Master's degree/  
Bachelor's degree

2.4%

Licentiate/  
PhD

### DAYS OF TRAINING

2,502

total

3.8

/employee



**FOCUS AREA #2**

# Trust-Based Customer Relationships and Secure Products

Confidentiality and ensuring information security are part of Bittium’s sustainability. Trust is one of Bittium’s values and a necessary condition for the company’s business. It is an essential element of Bittium’s customer relationships, products, services and working methods.

Trust and information security are key dimensions of Bittium’s ability to produce reliable and secure communications and connectivity solutions as well as mobile information security solutions, and provide health technology products and solutions for the company’s customers.

Bittium responds to the constantly growing and changing information security requirements by monitoring global information security threats in real time, by training employees and by participating in Finnish, European and international information security development projects.

Goals	Actions	Performance Measures	Situation in 2020	Result in 2021
Building deeper trust with customers	Continued development of trust-based and performance-driven operating methods.	Customer satisfaction survey NPS (Net Promoter Score).	46.9 (2019: 49.3)	46.9
		Project satisfaction survey NPS (Net Promoter Score).	58 (2019: 62)	45.5
Enhancing the added value of information security	Continuous development of the information security of products and operations.	Auditing and certification of products, business premises and business functions.		Annual certification audits and various information security certificates.
		The development of the number of observations concerning information security threats.		The employees have been trained to report any observations of potential information security threats. A total of 149 persons participated in the training in 2021.
	Information security management systems.			Training on practices and procedures to maintain a high level of information security, training rate above 90%.
	Highlighting information security threats and the importance of information security with various stakeholders and participating in information security development projects and forums.			Participation in the following development projects, for example: Post-Quantum Cryptography (Finland), T1oCPS (EU), CyberFactory#1 (EU).



**THE GLOBAL GOALS**  
For Sustainable Development

Alignment between  
the Focus Area and  
the UN's Sustainable  
Development Goals



**Ensure healthy lives  
and promote well-being  
for all at all ages.**

**3.4** By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.

- Our medical technology products improve the quality of modern healthcare and are safe to use. Our products emphasize prevention, for example, in the context of serious complications caused by cardiovascular and neurological disorders. Our product portfolio also supports remote diagnostics, which can help healthcare services to achieve considerable efficiency and savings. Remote services enable the diagnosis of illnesses also during times when face-to-face contacts should be avoided – such as during a pandemic.



**Promote sustained, inclusive and  
sustainable economic growth, full  
and productive employment and  
decent work for all.**

**8.7** Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers, and by 2025 end child labor in all its forms.

**8.8** Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

- We operate sustainably in our purchasing activities. We avoid the use of minerals from conflict zones and counterfeit materials. These issues are covered by our monitoring processes. The requirements related to purchasing as well as procedures related to minerals from conflict zones and counterfeit materials are published on our website.

## Customer Relationships Built on Trust

The cornerstone of trust-based customer relationships is to take into account the special requirements related to Bittium’s customers’ operating industry and technology. Bittium achieves this by carefully managing product information, among other things.

Bittium has continued the development of product information management that began in 2020 and the deployment of related tools. As the project involves checking that all existing product information is up-to-date, the work will continue in 2022. The plan is to also expand the use of the system in 2022.

Bittium’s working methods are characterized by a strong focus on information security and ensuring the confidentiality of the customers’ data. The products are designed to be secure, always taking the customers’ needs into account. Bittium’s Code of Conduct is also an integral element of the company’s secure and responsible way of working with customers and other stakeholders.

## Systems and Standards

Standards define the industry’s common operating methods that make life easier for the authorities as well as the companies in the industry. Standardization also makes it easier to promote global exports.

Certified integrated management systems are an important tool with which Bittium can improve its efficiency and reliability, transparency and customer satisfaction. Customers increasingly expect Bittium’s products and working methods to be standardized and certified.

Bittium had six certified systems in use at the end of 2021. All in all, 400 different standards, approximately 100 of them on a daily basis, are observed in the company’s operations. All of Bittium’s management systems are audited by an external party each year.

Bittium also applies product branch-specific product approval procedures, such as MDSAP (Medical Single Audit Program) in health technology products. The changes in procedures, products and approval processes arising from the EU Medical Device Regulation were taken into account in Bittium’s Medical Technologies business in 2021.

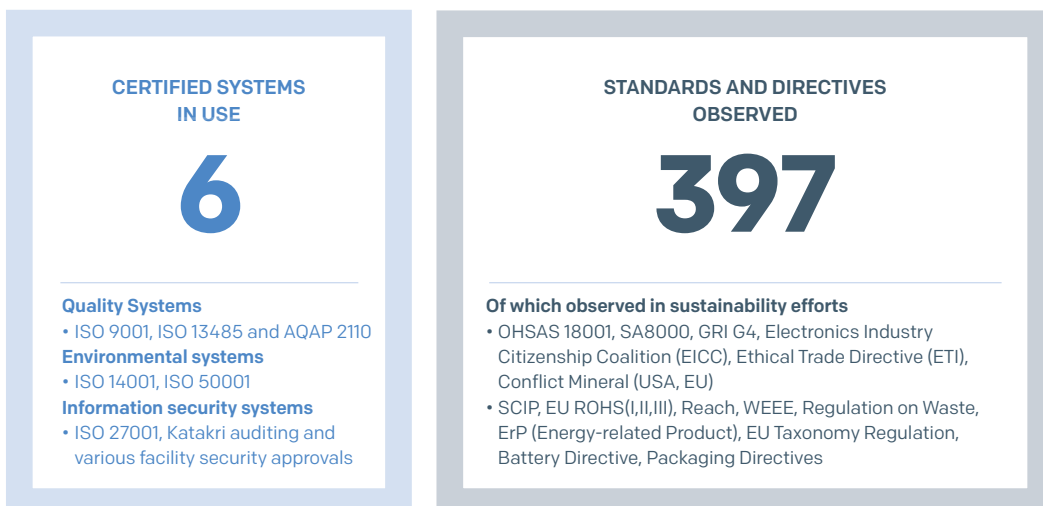
The relevant industry standards are applied in the design of the electrical safety and performance features of Bittium’s products. Customer, country and market-specific requirements are also taken into account in hardware development.

The products are tested, verified and approved as part of the R&D process by both internal and external auditors. For example, in Europe, the products are required to carry the CE label and the related Declaration of Conformity (DoC).

Product development projects are also audited in accordance with the PSSL (Product Safety, Security and Liability) audit procedures as part of Bittium’s End Product Process (EPP) requirements. Employees receive PSSL product liability training.

## Information Security Management System

Ensuring information security constitutes such an integral part of Bittium’s business that the company has developed a specific management system, including a management group, for this purpose. Information security objectives and responsibilities as well as the resourcing of operations are defined in the system.



The management system covers information security-related policies, guidelines and templates pursuant to the relevant standards and requirements (ISO 27001, Katakri 2015 and FSC) as well as the requirements set by the customers and by law. In practice, they completely cover the information security of the company's operations and also the information security of the physical premises and employees.

Bittium has a real-time monitoring system for information security threats, and the employees also report any information security threats they observe. Employees also receive training on the use of working methods and procedures that help maintain a high level of information security.

No serious information security non-conformities were observed in 2021.

Product and life cycle risks are systematically assessed as part of the product development process. With respect to products, Bittium takes into account the safety and information security of materials and components as well as compliance with product liability regulations in the company's target markets.

## Sustainable Purchasing

Bittium's products contain a range of electronic and mechanical components. The sustainability of the purchasing chain is ensured, for instance, through material and component supplier requirements and material assessments. Bittium maintains a database in which it records all the materials and substances contained in components.

Bittium conforms to sustainable business practices and requires the same of its suppliers. The company's partners must comply with Bittium's Code of Conduct as well as the Bittium Supplier Requirements. The Bittium Supplier Quality Manual was updated with details in 2021, and it is available on Bittium's website. Suppliers are always ex-

pected to comply with the latest version of the guidelines.

Suppliers are also audited according to pre-defined criteria. Audits are carried out as a self-assessment based on the Bittium Supplier Requirements or as an audit conducted by Bittium. Most of the audits conducted in 2021 were based on self-assessment. However, especially in Finland, conducting audits physically at the suppliers' premises was possible to some extent in spite of the pandemic. As regards international suppliers, local partners have been used for audits. This approach has enabled on-site audits in China, for example.

In 2021, Bittium started a development project entitled Marimin with the aim of finding more Finnish and European suppliers of critical components. A large number of suppliers has been evaluated under the project and, for certain critical components, it has been possible to move deliveries to Finland and Europe.

Employee training is also an important part of ensuring sustainable purchasing. Sustainable purchasing is part of the environmental training package that Bittium's employees complete independently.

### Identifying the origin of minerals

Bittium's products are made using minerals that may also come from countries that violate human rights or cause environmental destruction by mining such minerals. Bittium urges its suppliers to comply with the legislation on conflict minerals and the relevant recommended reporting practices. In this way, it can be ensured that the minerals used in Bittium's products do not originate from conflict or risk zones.

In practice, the legislation requires sustainable purchasing and transparent supply chains with respect to certain minerals, such as tin, tantalum, wolfram and gold from conflict areas. These minerals are typically used in household goods and their electronic components, such as mo-

bile devices and computers. External databases are used for monitoring.

In 2021, Bittium did not receive any reports on suspicions concerning minerals from conflict areas.

### Avoiding counterfeit materials

Counterfeit materials are any materials whose origin, age, composition, configuration, certification status or other feature is presented falsely and with misleading markings on the material, packaging or container.

Bittium is aware of the risks associated with counterfeit materials, both when purchasing materials as ready-to-use components and when using the previously mentioned raw materials. Bittium is committed to conducting the necessary assessments to avoid using counterfeit materials in its products. The company has developed a supplier reporting method to avoid the use of counterfeit materials. The procedures address different stages of the purchasing process, starting from the selection of suppliers. Bittium's employees are trained to identify counterfeit materials. By combining product information management with information in the material database, Bittium can respond to customer expectations regarding real-time information management in relation to counterfeit materials.

Due to the impact of the global component shortage on Bittium's operations, new suppliers have been added to the supply chain to ensure the availability of certain components. While this may only be a temporary arrangement, diligent assessments have been conducted on the new suppliers to ensure that the materials are authentic.

No counterfeit materials were found in Bittium's products in 2021.



### FOCUS AREA #3

## Corporate Citizenship and Sustainable Business Practices

Bittium operates as a responsible corporate citizen within the surrounding society. The company is a reliable local partner and employer. It engages in active and open dialogue with its stakeholders, acts in accordance with its harmonized operating principles, creates added value for its shareholders and seeks working methods and solutions that promote sustainable development.

Goals	Actions	Performance Measures	Examples of Results
Anti-corruption	Internal anti-corruption training.	Rate of participation in training.	Mandatory digital self-learning module for new employees, of whom 73% completed the training.
	Incorporating anti-corruption principles into cooperation agreements.		The requirements are available to all of the company's partners on the Bittium website.
	Using an external background evaluation tool to identify corruption or other ambiguities among business partners.	Observations of ambiguities or anti-corruption activities, number of observations per year.	No observations in 2021.
Responsible corporate citizenship	Bittium is actively involved in the development of local business and supporting schools and educational institutions.	Participation in various working groups, supporting non-profit organizations.	In 2021, Bittium had 8 research projects under way with universities and research institutes. Bittium donated EUR 50,000 to research in the field of technology at the University of Oulu.
		Number of visits to educational institutions, number of participants.	No visits to educational institutions were made during the year due to the pandemic.
	Reviewing the export control system from the perspective of internal process development.	Making the processing of export control applications more efficient.	Application filing procedures have become more efficient.
	Continuous monitoring and adoption of laws and regulations.	Monitoring laws and regulations that are of relevance to Bittium.	Monitoring and adoption of new and amended regulations; dozens of changed regulatory requirements in 2021.
Developing stakeholder cooperation	Further improving Bittium's understanding of stakeholder views and expectations.	Developing even more open dialogue between stakeholders.	The form of stakeholder engagement has been changed due to the pandemic, shifting the focus to webinars, for example.



Each year, Bittium participates in many different Finnish, European and international development projects. In 2021, Bittium was involved in significant development projects in the industry, including iMUGS and CyberFactory#1.

The iMUGS (integrated Modular Unmanned Ground System) project under the European Defence Industrial Development Programme (EDIDP) develops new capabilities for the defense forces of European countries based on autonomous systems.

In the project, Bittium is responsible for the execution of resilient and networked data transfer, including both tactical communications and data transfer over commercial 4G

and 5G cellular networks. The iMUGS project began in 2021 and its duration will be approximately 30 months.

CyberFactory#1 (CF#1) aims to design, develop, integrate and demonstrate a set of key capabilities to promote the optimization and resilience of the Factory of the Future. The project involves 28 parties from seven countries, including pilot users and suppliers as well as research and academic organizations. It thereby covers various technical, financial, human and societal dimensions. Bittium's role has been to develop cyber security architecture and capabilities in its products and manufacturing support systems, such as device management solutions.

There are constant changes in legislation and regulations in the industries that Bittium represents. For example, in 2021, regulations pertaining to medical devices entered into effect, such as the Medical Device Regulation (MDR), which has also affected Bittium's operations. Regulatory developments pertaining to cyber security and the environment are also on the horizon.

As in the previous year, due to the coronavirus pandemic, Bittium was unable to arrange visits to educational institutions, which the company considers important under normal circumstances.



**THE GLOBAL GOALS**  
For Sustainable Development

## Alignment between the Focus Area and the UN's Sustainable Development Goals



### Ensure sustainable consumption and production patterns.

**12.6** Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.

**12.7** Promote public procurement practices that are sustainable, in accordance with national policies and priorities.

- We set an example by reporting on the planning, implementation and results of our sustainability actions in our annual sustainability report. We take a systematic approach to the development of our sustainability efforts and the reliability of our reporting.
- We cooperate with our customers to ensure that we can take sustainability into consideration in our products and operations to the greatest possible extent, including environmental sustainability.
- We publish more detailed requirements for our partners on our public website with regard to quality, the environment and information security.



### Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

**16.5** Substantially reduce corruption and bribery in all their forms.

- We are committed to the prevention of corruption in accordance with our anti-corruption statement and we report corruption incidents as part of our sustainability reporting.



### Strengthen the means of implementation and revitalize the global partnership for sustainable development.

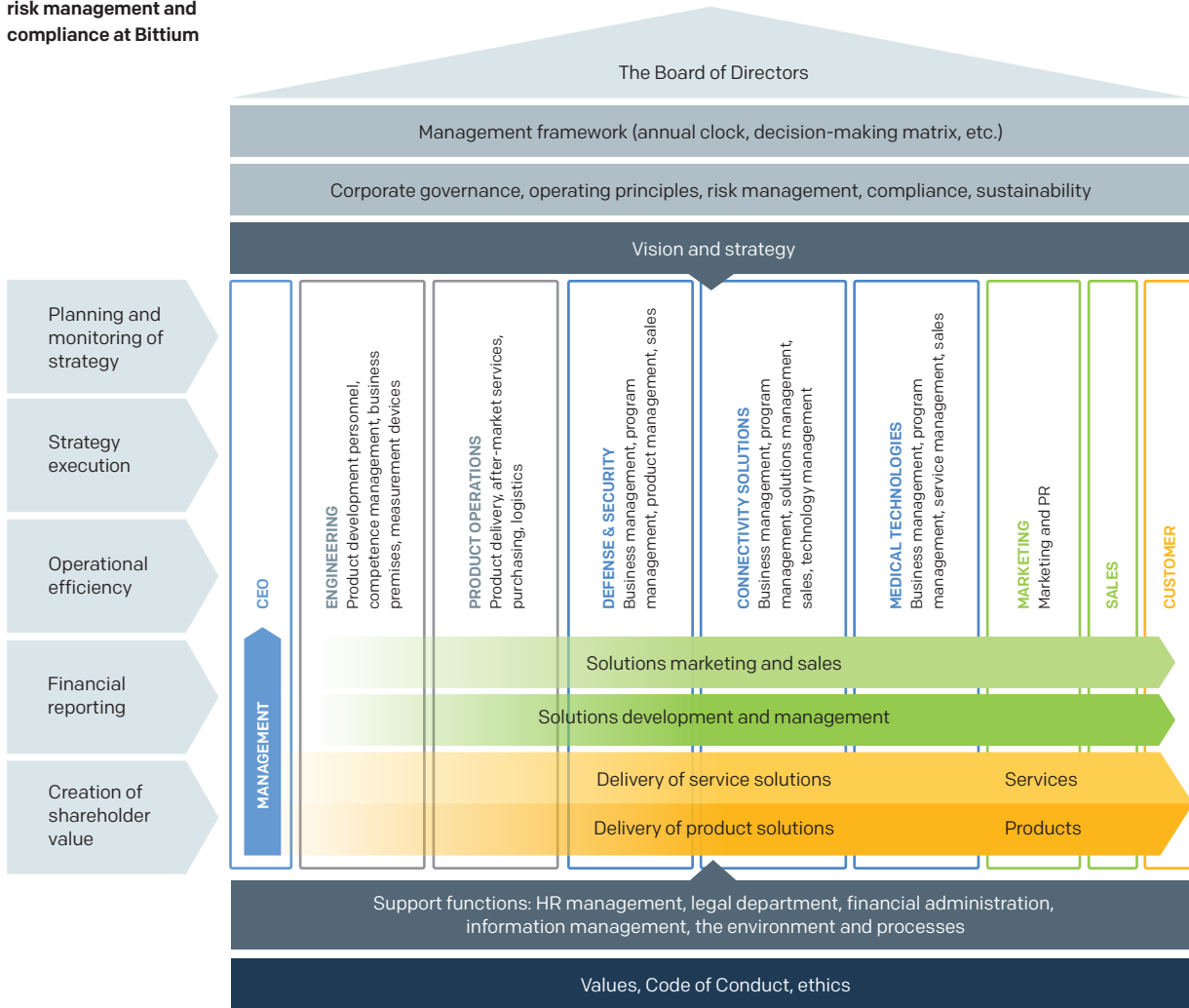
**17.17** Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.

- We engage in dialogue with our customers and partners regarding the solutions we develop so that we can produce appropriate and resource-efficient products that benefit our customers and society while reducing waste.



Bittium continuously monitors the impacts of the company's operations and the added value it creates for different stakeholders. The company's key stakeholders include shareholders, customers, employees, partners and other suppliers as well as the public sector. More information on stakeholder cooperation is provided under 'Sustainability management'.

**Corporate governance, risk management and compliance at Bittium**



## Good Corporate Governance Guides Sustainability

The management of Bittium Corporation is governed by the Articles of Association, Finnish law and Bittium’s governance guidelines. Bittium observes the Finnish Corporate Governance Code 2020 published by the Securities Market Association, which entered into force on 1 January 2020. Bittium’s Corporate Governance Statement is available at [www.bittium.com](http://www.bittium.com).

GRC (governance, risk management and compliance) refers to the skills and abilities that enable an organization to meet its targets, address uncertainties and operate with integrity. Bittium’s GRC measures also include the company’s framework for internal control.

## Export Control

With respect to Bittium’s customers, export control constitutes an important part of operations. Effective export control is a precondition for successful cooperation with the authorities as well as customers. Bittium is one of the first companies in its size category to incorporate a comprehensive export control system into its management system. Bittium closely monitors changes in legislation in different market areas. In 2021, the company continued to cooperate with the authorities on prior declarations, which has resulted in smoother processing of applications.



**FOCUS AREA #4**

# Environmental Sustainability

Actions	Performance Measures	Situation in 2020	Target 2021	Result in 2021
Continuous improvement of the waste recovery rate	Recovery rate (%)	Recovery rate 99.84%	Recovery rate over 95%	99.08%
Reducing the overall carbon footprint	Carbon footprint/employee (CO <sub>2</sub> e kg/employee).	1,130 CO <sub>2</sub> e kg/employee. Note! The figure is not entirely accurate due to incomplete data. For example, the estimate does not include all of the company's travel-related emissions because not all business travel was booked through the designated travel agency.	<2,900 CO <sub>2</sub> e kg/employee. This target is assessed for a three-year period based on the available data.	1,096 CO <sub>2</sub> e kg/employee. Note! The emission factors have changed from the previous calculation due to a change in statistical methods.
Maximize the use of renewable energy	Rate of solar power usage at the Oulu office.	The solar power plant generates approximately 10–13% of the energy consumed by the Oulu office from May to August. This represents approximately 5% of the annual energy consumption of the Oulu office.	Solar power represents over 10% of the Oulu office's energy consumption during the summer months.	The solar power plant generates approximately 9–13% of the energy consumed by the Oulu office from May to August. This represents approximately 5% of the annual energy consumption of the Oulu office.
Share of renewable energy of purchased energy	Evaluating energy consumption at each location.	Energy transmission files and energy profiles are available for each office to the extent required for the performance indicators.	Indicators are available for each office.	Energy transmission files and energy profiles are available for each office to the extent required for the performance indicators.
Increasing environmental awareness among Bittium's employees	The employees' rate of participation in training (%).	58% of new employees participated in the mandatory training. Voluntary further training was not organized.	Mandatory basic training: 60% of new employees. Voluntary further training: 50%. Core target groups: operation, product management, project management and device engineering.	58% of new employees participated in the mandatory training. Voluntary further training was not organized.



**THE GLOBAL GOALS**  
For Sustainable Development

Alignment between  
the Focus Area and  
the UN's Sustainable  
Development Goals



**Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.**

**8.4** Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead.

- We recognize the need for resource efficiency and respond by observing various environmental standards in our operations. Ecological design is the starting point of our product development.



**Ensure sustainable consumption and production patterns.**

**12.2** By 2030, achieve the sustainable management and efficient use of natural resources.

**12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

- We pay special attention to the use of renewable energy, our waste recovery rate and the reduction of waste at our operating locations and report them as part of our sustainability reporting.

## Management of Environmental Sustainability at Bittium

Responsibility for the environment, the mitigation of climate change and resource-efficient solutions are key aspects of Bittium's operations and their development. In accordance with its environmental policy, Bittium is committed to minimizing the environmental impacts of the production, use and disposal of products. The ISO 14001 standard is applied to Bittium's environmental management system and the principles of sustainable development are observed in accordance with the standard in the following ways, for instance:

- Monitoring and observing amendments to the laws and regulations concerning environmental protection. Also includes the use of energy-efficient solutions in R&D (ecological design) and at business premises.
- Minimizing the environmental impacts of the production, use and disposal of products. The development of instructions and practices related to ecological design supports these principles.

- Encouraging suppliers and partners to implement environmental management systems. This practice supports the realization of the principles aimed at limiting the use of hazardous substances.
- Developing energy efficiency through continuous improvement. Two energy auditors approved by the Energy Authority conduct annual on-site audits.

The Company regularly monitors the international environmental requirements that govern its products as well as the local regulations derived from these. The requirements also extend to our major suppliers. The provisions of the ROHS directives (I, II and III), the REACH regulation (on hazardous substances) as well as the WEEE (recycling of waste electronic and electrical equipment) directive have been applied in Bittium's product design since 2002. Companies are under the obligation to report any substances of very high concern (SVHCs) in their products to the SCIP database for information on Substances of Concern In articles as such or in complex objects (Products), maintained by the European Chemicals Agency (ECHA) effective from the beginning of 2021. SCIP has not had a significant impact on Bittium's operations.

Although regulations prohibiting the use of halogens in electronics have not been introduced yet, Bittium aims to offer halogen-free products whenever alternatives to halogen components that meet the relevant functional requirements are available. Bittium's halogen-free statement conforms to the IEC (International Electrochemical Commission) definition of halogen-free materials (IEC 61249-2-21).

### Circular economy principles are taken into account in Bittium's product design and product development

Bittium's business is mainly focused on product design, sales and marketing. Product assembly is performed by manufacturing partners. Bittium's share in the early part of the product life cycle only accounts for a small proportion of the products' life cycle impacts. The greatest environmental impact occurs during the last stage of the product life cycle, i.e. recycling. Eco-friendliness is a starting point for all product design and product development at Bittium. Accordingly, circular economy principles are increasingly taken into account in these activities.

Bittium's products are designed to have long life cycles and to be repairable and recyclable. In the case of many defence industry products, for example, the company must be able to guarantee operational reliability and delivery reliability for several decades. These products include a maintenance service that involves device maintenance and updates. Material cycles are created in relation to product repairs or returns related to the product life cycle, for example. The information security risks associated with the products are also taken into account in this context. Bittium disassembles decommissioned products, sorts the components and recycles them appropriately.

Bittium's product design and product development activities aim for compliance with the EU Ecodesign Directive, which is intended to improve the energy efficiency of products by integrating environmental perspectives and life cycle thinking into the product design stage. The Directive is in the process of being expanded to also address the impacts of software production on the life cycle assessment of a product's ecological footprint. Bittium has participated in the authorities' work on the Directive at the Finnish and EU levels.

## Environmental Program 2020–2022, Performance Measures and Results Achieved in 2021

Bittium started an environmental program in 2020 that will continue until 2022. In the program, it was determined that the areas that are the most relevant to reducing Bittium's carbon footprint include the recycling of waste generated by the company's operations, the use of renewable energy and increasing environmental awareness among Bittium's employees. Four targets were set for the environmental program:

1. Maintaining the waste recovery rate at over 95 percent
2. Maximizing the use of renewable energy
3. Increasing the share of renewable energy in energy purchasing
4. Increasing environmental awareness among employees.

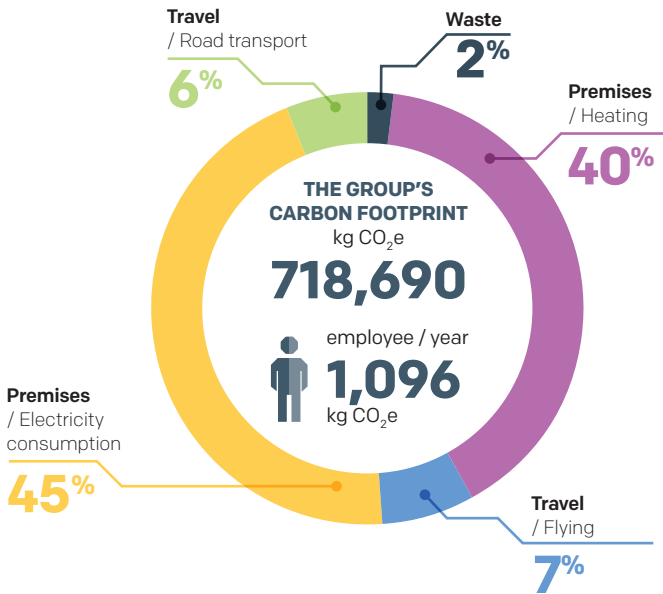
We achieved our environmental sustainability targets in 2021.

- Our total carbon footprint was 719 tCO<sub>2</sub>e, 1,096 kg CO<sub>2</sub>e/employee (2020: 753 tCO<sub>2</sub>e, 1,130 kg CO<sub>2</sub>e/employee; 2019: 1,153 tCO<sub>2</sub>e, 1,755 kg CO<sub>2</sub>e/employee; 2018: 1,219 tCO<sub>2</sub>e, 2,865 kg CO<sub>2</sub>e/employee). The lower carbon footprint was attributable to a significant reduction in air travel due to the coronavirus pandemic and a change in the calculation method concerning emissions generated by waste.
- At its highest, the share of solar power of the electricity consumed at the Oulu office was 13.5 percent (2020: 13%, 2019: 11.9%, 2018: 12%).
- Bittium utilizes in its carbon footprint calculations accurate information on the properties available and the information available from the properties where Bittium is for rent. This includes for example available waste information. In addition Bittium acknowledges for example the CO<sub>2</sub> emission co-efficiency factors published by the Finnish Statistical Center for the average district heating production from which the average of last three years is calculated. For this reason, benchmarks for the carbon footprint may vary slightly from year to year.
- Altogether 104 employees (15.9 percent of the personnel) completed the test included in the environmental training module.

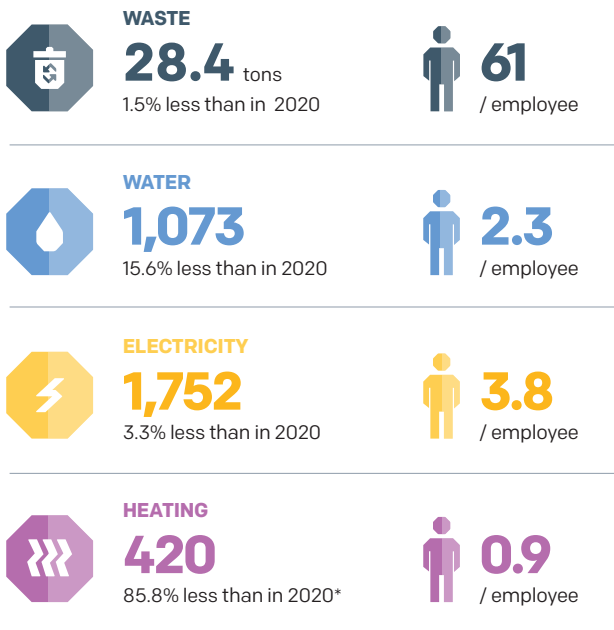
Most of the waste generated by Bittium is packaging waste. The waste volume has remained relatively stable since 2018 in spite of the delivery volumes of Bittium's products increasing over the years. This is due to Bittium's manufacturing partners taking a larger role in the supply chain and a larger share of manufactured components and partial assemblies being delivered directly to factories. The packaging modules have also been simplified.

**Environmental Sustainability Indicators**

The company is following the annual level of environmental protection continuously. The following indicators have been selected as essential environmental sustainability indicators.

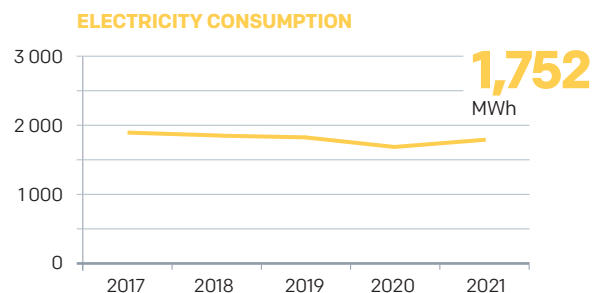
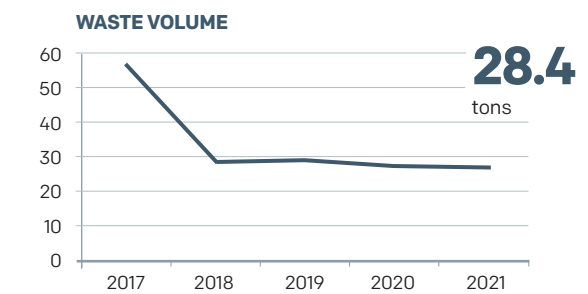


**Bittium's environmental sustainability indicators, Oulu Office**



\* The significant growth of heating consumption year-on-year resulted by the returning to work at office part-time as the coronavirus pandemic temporarily eased, as well as the failures of the heating capture system.

**Environmental Sustainability Indicators 2017–2021 (Trend), Oulu Office**



# Reporting

## Reporting Basics and Principles

### Scope of Reporting

This sustainability report, as a part of the annual report, is the fourth extensive report on the management and implementation of sustainability at Bittium. In 2021, Bittium has implemented actions on topics related to sustainability according to the sustainability program and developed its sustainability metrics, providing more information on the impacts. The sustainability program is based on the materiality analysis conducted in 2019, which aimed at gaining an understanding of stakeholders' views on previously selected sustainability focus areas. With the materiality analysis, the company updated its sustainability focus areas and created a sustainability program for the years 2020–2022.

In order to enable comparability, Bittium's sustainability report is based on the Global Reporting Initiative (GRI) Standards framework. The table at the end of the report contains references to the relevant elements of the GRI Standards framework. The report covers all four sustainability focus areas and a description of Bittium's financial effectiveness. The financial data is collected from Bittium's financial information systems, and the majority of personnel data is from HR management systems. The reported financial figures are based on Bittium's audited financial statements from 2020 and 2021.

Bittium selected its reporting model on the basis of Bittium's sustainability principles, taking into account the GRI framework and the focus areas of the Company's business: wireless, secure communications in B2B operations. Bittium has customers both in Finland and in other countries. However, the majority of operations and most of the personnel are located in Finland.

This report will be published in electronic form in connection with the Group's annual report at [www.bittium.com](http://www.bittium.com) and <https://annualreport.bittium.com>.

### Scope of the Report

The period covered by the sustainability report is the same as the financial period, January 1–December 31, 2021. Environmental data is not reported from offices where the Company only uses a part of the office premises.

The report does not cover all suppliers or service providers. In other respects, the report covers all the operations of Bittium Corporation and its subsidiaries.



## Reporting Principles and Instructions

Financial reports are governed by the International Financial Reporting Standards (IFRS), and governance reports comply with the legislation on listed companies and the Finnish Corporate Governance Code that applies to listed companies. The reported financial data is based on audited financial statements.

## Principles and Practices for External Verification

The 2021 sustainability report follows the core level of the GRI Standards guidelines. The sustainability report has not been verified by an independent third party. The figures presented in the 'Financial effectiveness' section are based on the Group's audited financial statements.

## Sustainability Contact at Bittium

Karoliina Malmi  
Vice President,  
Communications and Marketing  
karoliina.malmi@bittium.com

## GRI 102 GENERAL DISCLOSURES

G4	Title	Location	Additional info / comments
<b>Organization</b>			
102-1	Name of the organization	Bittium in Brief	Page 8
102-2	Industries, brands, products, and services	Bittium in Brief; Bittium Products and Services	Page 8 Page 13
102-3	Location of headquarters	Bittium in Brief	Page 8
102-4	Location of operations	Bittium in Brief	Page 8
102-5	Ownership and legal form	Bittium in Brief, Corporate Governance	Page 8 Page 24
102-6	Markets served	Bittium in Brief	Page 8
102-7	Scale of the organization	Bittium in 2021	Page 4
102-8	Information on employees and other workers	Innovative and developing people	Page 62
102-9	Supply chain	Suppliers and Partners; Sustainable Purchasing	Page 55 Page 71
102-10	Significant changes to the organization and its supply chain	Report by the Board of Directors; Customer Relations Built on Trust	Organization: Changes in the Management Group, Sales organization as part of Product and Services organizations Page 100 Supply chain: Deliveries of components transferred to Europe and Finland Page 71
102-11	Precautionary Principle or approach	Risk Management	Page 41
102-12	External initiatives		None
102-13	Membership of associations		Technology Industries of Finland
<b>Strategy</b>			
102-14	Statement from CEO	CEO Review	Pages 6–7
102-15	Key impacts, risks, and opportunities	Business and Operating Environment; Main features of Internal Control and Risk Management Processes related to Financial Reporting Processes; Report by the Board of Directors	Page 8 Page 41 Page 86

## GRI 102 GENERAL DISCLOSURES

G4	Title	Location	Additional info / comments
<b>Ethics and Integrity</b>			
102-16	Values, principles, standards, and norms of behavior	Corporate Citizenship and Sustainable Business Practices; Value Creation Model	Page 72 Pages 52–53
102-17	Mechanisms for advice and concerns about ethics	Corporate Citizenship and Sustainable Business Practices	Page 72 Pages 52–54
<b>Governance</b>			
102-18	Governance structure	Corporate Governance	Page 31
102-19	Delegating authority	Corporate Governance; Sustainability Management	Page 31 Page 54
102-20	Executive-level responsibility on economic, environmental, and social topics	Sustainability Management, Stakeholder Organization, and Risk Management	Page 54
102-21	Consulting stakeholders on economic, environmental, and social topics	Stakeholder cooperation; Corporate Citizenship and Sustainable Business Practices	Page 55 Page 72
102-22	Composition of the Board	Corporate Governance	Page 31
102-23	Chairman of the Board	Corporate Governance	Page 31
102-24	Election of the Board	Corporate Governance	Page 31
102-31	Review of economic, environmental, and social topics	Sustainability Management	Page 54
102-32	Highest governance body's role in sustainability reporting	Sustainability Management	Page 54
102-35	Remuneration of Board of Directors and Management	Corporate Governance; Remuneration Report	Page 30 <a href="http://www.bittium.com/investors/corporate-governance/salary-and-remuneration-report">www.bittium.com/investors/corporate-governance/salary-and-remuneration-report</a>
<b>Stakeholder Engagement</b>			
102-40	List of stakeholder groups	Stakeholder Cooperation	Page 55
102-42	Identifying and selecting stakeholders	Stakeholder Cooperation	Page 55
102-43	Approach to stakeholder engagement	Stakeholder Cooperation	Page 55
102-44	Key topics and concerns raised	Stakeholder Cooperation	Materiality analysis online: <a href="http://annualreport2019.bittium.com/sustainability_report/focus_areas_in_sustainability">annualreport2019.bittium.com/sustainability_report/focus_areas_in_sustainability</a> Page 55
<b>Reporting Principles</b>			
102-45	Entities included in the consolidated financial statements	Notes to the Consolidated Financial Statements; 32. Related Party Disclosures	Page 144
102-46	Defining report content and topic Boundaries	Sustainability at Bittium in 2021; Scope of reporting	Page 57 Page 80
102-47	List of material topics	Sustainability Program 2020–2022	Page 57
102-48	Restatements of information	GRI Standard Content Index, Environmental Sustainability	Page 81 The emission factors used have changed from the previous calculation due to a change in statistical methods.
102-49	Changes in reporting	GRI Standard Content Index, Environmental Sustainability	Page 76
102-50	Reporting period	Reporting Basics and Principles	Page 80
102-51	Date of most recent report	GRI Standard Content Index	19.3.2021
102-52	Reporting cycle	Reporting	The report is published annually.

## GRI 102 GENERAL DISCLOSURES

G4	Title	Location	Additional info / comments
102-53	Contact point for questions regarding the report	Reporting	Karoliina Malmi, Vice President, Communications and Marketing karoliina.malmi@bittium.com Page 81
102-54	Claims of reporting in accordance with the GRI Standards	Reporting Basics and Principles	Page 80
102-55	GRI content index	GRI Standard Content Index	Page 81
102-56	External assurance	Reporting Basics and Principles	Page 80

## GRI 103 MANAGEMENT APPROACH

103-1	Explanation of the material topic and its Boundary	GRI Standard Content Index; Focus Areas in Sustainability	Calculation boundary: Bittium Corporation Page 81 Page 60
103-2	The management approach and its components	Sustainability Management; Focus Areas in Sustainability	Page 54 Page 60
103-3	Evaluation of the management approach	Sustainability Management	Page 54

## TOPICAL CONTENT

## Financial Impacts

201 Economic Performance			
201-1	Direct economic value generated and distributed	Financial Influence	Pages 58–59
201-4	Financial assistance received from government	Notes to the Consolidated Financial Statements; 4. Other Operating Income	Page 117

205 Anti-corruption			
205-3	Confirmed incidents of corruption and actions taken	Corporate Citizenship and Sustainable Business Practices	No violations Page 72

## Environmental Impacts

301 Materials			
301-1	Materials used by weight or volume	Environmental Sustainability	Bittium does not use paper, carton, or metals to manufacture its products. Bittium reports material waste and the recycling rate associated with the use of materials at its operating locations. Pages 78–79

302 Energy			
302-1	Energy consumption within the organization	Environmental Sustainability	Pages 78–79
302-4	Reduction of energy consumption	Environmental Sustainability	Pages 77–79

303 Water			
303-1	Water withdrawal by source	Environmental Sustainability; Environmental Sustainability Indicators	Total and per-capita water consumption figures are reported for Bittium's operating locations. No water is used in the manufacture of products. Page 79

305 Emissions			
305-1	Direct (Scope 1) GHG emissions	Environmental Sustainability	Reported carbon footprint. Pages 78–79

306 Effluents and Waste			
306-2	Waste	Environmental Sustainability	Pages 78–79

307 Non-compliance with Environmental Laws and Regulations			
307-1	Environmental compliance	Environmental Sustainability	Database of applicable environmental laws and regulations

## Social Impacts

G4	Title	Location	Additional info / comments
<b>403 Occupational Health and Safety</b>			
403-1	Occupational health and safety management system	Innovative and Developing People; Well-being and Occupational Safety	Page 66
403-2	Hazard identification, risk assessment, and incident investigation	Innovative and Developing People; Well-being and Occupational Safety	Bittium continuously develops its occupational safety processes and risk management. More information pertaining to subcontractors is provided in Bittium's Supplier Manual: <a href="http://www.bittium.com/about-bittium/suppliers/supplier-manual">www.bittium.com/about-bittium/suppliers/supplier-manual</a> Page 66
403-3	Occupational health services	Innovative and Developing People; Well-being and Occupational Safety	Occupational health services beyond the scope of the statutory requirements cover 99% of the personnel. The provision of occupational health services as part of compliance with the Act on Contractor's Liability is part of Bittium's subcontracting process. Page 66
403-4	Worker participation, consultation, and communication on occupational health and safety	Innovative and Developing People; Well-being and Occupational Safety	Page 66
403-5	Worker training on occupational health and safety	Innovative and Developing People; Well-being and Occupational Safety	All Bittium operating locations have appropriate safety plans in place, and safety issues are addressed in Bittium's orientation training program. Occupational health information is regularly communicated to the personnel. Subcontractors are responsible for the occupational health and occupational safety training of their employees in accordance with their respective principles. Bittium provides orientation training to subcontractors who work on Bittium's premises. Subcontractors who work on the premises of Bittium's customers receive orientation training from the customer in question. In other respects, subcontractors are responsible for training their employees. Page 66
403-6	Promotion of worker health	Innovative and Developing People; Well-being and Occupational Safety	Page 66
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Customer Relationships Built on Trust and Secure Products; Sustainable Purchasing,  Innovative and Developing People; Statement of Non-financial Information	More information pertaining to subcontractors is provided in Bittium's Supplier Manual: <a href="http://www.bittium.com/about-bittium/suppliers/supplier-manual">www.bittium.com/about-bittium/suppliers/supplier-manual</a> Page 71 Page 62 Page 98
403-8	Workers covered by an occupational health and safety management system	Innovative and Developing People; Well-being and Occupational Safety	Bittium Employees. Page 67
403-9	Work-related injuries	Innovative and Developing People; Well-being and Occupational Safety	In 2021, there were 3 near misses and 3 occupational accidents reported at Bittium companies in Finland. None of them resulted in incapacity for work or an obligation to pay compensation under the Accidents at Work and Occupational Diseases Act. Page 66
403-10	Work-related ill health	Innovative and Developing People; Well-being and Occupational Safety	The sickness-related absence rate was 3% in 2021 (calculated from the occupational health service provider's data, day/employee vs. theoretical regular working hours). Bittium does not have access to this data with regard to workers from staffing services. Page 66
<b>404 Training and Education</b>			
404-1	Average hours of training per year per employee	Innovative and Developing People	Reported hours of training per employee Pages 62, 67
404-2	Programs for upgrading employee skills and transition assistance programs	Innovative and Developing People	Page 65
<b>405 Diversity and Equal Opportunity</b>			
405-1	Diversity of governance bodies and employees	Diversity Principles of the Board of Directors; Innovative and Developing People	Page 32 Page 66
<b>419 Socioeconomic Compliance</b>			
419-1	Non-compliance with laws and regulations in the social and economic area	Sustainable Purchasing; Statement of Non-financial Information	No violations • Anti-corruption: pages 54, 72, 99 • Conflict minerals: page 71 • Counterfeit materials: page 71



# Report by the Board of Directors 2021

Unless otherwise mentioned, the figures in brackets refer to the corresponding period in the previous year.

## Year 2021 in Short

### Net Sales Increased over 10% in 2021

- Net sales were EUR 86.9 million (EUR 78.4 million), representing a 10.8 percent increase year-on-year.
- The share of product-based net sales was EUR 63.1 million (EUR 53.1 million), representing 72.6 percent of the net sales. The share of Medical Technologies products was EUR 27.8 million (EUR 17.4 million) and the share of Defense & Security products was EUR 35.3 million (EUR 35.8 million).
- The share of services-based net sales was EUR 23.8 million (EUR 25.3 million), representing 27.4 percent of the net sales. The share of Connectivity Solutions R&D services was EUR 15.5 million (EUR 15.9 million).
- EBITDA was EUR 13.7 million (EUR 13.5 million).
- Operating result was EUR 3.2 million (EUR 2.1 million).
- Result for the period was EUR 3.3 million and earnings per share were EUR 0.093 (result for the period EUR 2.2 million and earnings per share EUR 0.061).
- Cash flow from operating activities was EUR 8.3 million (EUR 6.9 million).
- Net cash flow was EUR -2.6 million (EUR -10.5 million).
- The order backlog was EUR 29.5 million (EUR 27.6 million)
- The Board of Directors of Bittium Corporation proposes to the Annual General Meeting of shareholders to be held on April 6, 2022, resolve to pay EUR 0.04 per share as dividend based on the adopted balance sheet for the financial period of January 1–December 31, 2021.

Bittium's net sales in January–December 2021 increased by 10.8 percent year-on-year to EUR 86.9 million (EUR 78.4 million).

The share of product-based net sales was EUR 63.1 million (EUR 53.1 million), representing 72.6 percent of the net sales. The

share of Medical Technologies products was EUR 27.8 million (EUR 17.4 million) and the share of Defense & Security products and systems was EUR 35.3 million (EUR 35.8 million). The increase in product-based net sales resulted from the growth in the demand for Medical Technologies business' Faros ECG monitoring devices.

The share of services-based net sales was EUR 23.8 million (EUR 25.3 million), representing 27.4 percent of the net sales. The share of Connectivity Solutions R&D services was EUR 15.5 million (EUR 15.9 million), resulting mainly from R&D services for wireless telecommunication customers.

EBITDA for January–December 2021 was EUR 13.7 million (EUR 13.5 million). EBITDA was affected by increased production costs, which was mainly due to additional costs caused by the component shortages. The level of R&D investments decreased, which reflected as a decrease in R&D expenses capitalized in the balance sheet. Maintain-



ing the expanding product portfolio competitive increases the annual continuing product development costs.

Operating result in January–December 2021 was EUR 3.2 million (EUR 2.1 million).

Cash flow from operating activities was EUR 8.3 million (EUR 6.9 million). Net cash flow during the period was EUR -2.6 million, including as the most significant items EUR 7.0 million R&D investments into own products and EUR 1.1 million dividend payment (EUR -10.5 million, including as the most significant item EUR 13.6 million R&D investments into own products, no dividends was paid during the comparison period).

The equity ratio was 72.4 percent (73.1 percent).

Net gearing was 0.2 percent (-1.9 percent). The order backlog at the end of the year was EUR 29.5 million (EUR 27.6 million).

## Financial Performance in January–December 2021

<b>CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME, MEUR</b>	<b>2021 12 months</b>	<b>2020 12 months</b>
Net sales	86.9	78.4
Operating profit / loss	3.2	2.1
Financial income and expenses	-0.7	-0.4
Result before tax	2.5	1.6
<b>Result for the period</b>	<b>3.3</b>	<b>2.2</b>
<b>Total comprehensive income for the period</b>	<b>3.6</b>	<b>1.9</b>
Result for the period attributable to:		
Equity holders of the parent	3.3	2.2
Total comprehensive income for the period attributable to:		
Equity holders of the parent	3.6	1.9
Earnings per share from continuing operations, EUR	0.093	0.061

## Half Year Figures

<b>GROUP'S NET SALES AND OPERATING RESULT, MEUR</b>	<b>2H/21</b>	<b>1H/21</b>	<b>2H/20</b>	<b>1H/20</b>
Net sales	47.2	39.7	35.8	42.5
Operating profit (loss)	3.9	-0.7	-0.8	2.9
Result before taxes	3.6	-1.0	-0.9	2.5
Result for the period	4.4	-1.0	-0.4	2.5
<b>DISTRIBUTION OF NET SALES BY PRODUCT AND SERVICES, MEUR AND %</b>	<b>2H/21</b>	<b>1H/21</b>	<b>2H/20</b>	<b>1H/20</b>
Product based net sales	35.2 74.5%	27.9 70.3%	23.0 64.3%	30.1 70.7%
Services based net sales	12.0 25.5%	11.8 29.7%	12.8 35.7%	12.5 29.3%
<b>DISTRIBUTION OF PRODUCT-BASED NET SALES, MEUR AND %</b>	<b>2H/21</b>	<b>1H/21</b>	<b>2H/20</b>	<b>1H/20</b>
Defense & Security products	20.8 59.3%	14.5 51.8%	15.1 65.5%	20.6 68.6%
Medical Technologies products	14.3 40.7%	13.5 48.2%	8.0 34.5%	9.5 31.4%
<b>DISTRIBUTION OF SERVICES-BASED NET SALES, MEUR AND %</b>	<b>2H/21</b>	<b>1H/21</b>	<b>2H/20</b>	<b>1H/20</b>
Connectivity Solutions R&D services	7.7 63.8%	7.8 66.6%	8.0 62.4%	7.4 58.9%
Other service-based net sales	4.4 36.2%	3.9 33.4%	4.8 37.6%	5.1 41.1%
<b>DISTRIBUTION OF NET SALES BY MARKET AREAS, MEUR AND %</b>	<b>2H/21</b>	<b>1H/21</b>	<b>2H/20</b>	<b>1H/20</b>
Asia	0.3 0.6%	0.3 0.6%	0.2 0.5%	0.2 0.4%
Europe	32.0 67.9%	25.0 62.9%	29.3 81.7%	35.2 82.8%
Americas	14.9 31.5%	14.4 36.4%	6.4 17.8%	7.1 16.7%



## Quarterly Figures

<b>GROUP'S NET SALES AND OPERATING RESULT, MEUR</b>	<b>4Q/21</b>	<b>3Q/21</b>	<b>2Q/21</b>	<b>1Q/21</b>	<b>4Q/20</b>
Net sales	30.1	17.1	22.6	17.0	21.8
Operating profit (loss)	3.7	0.2	0.7	-1.5	0.3
Result before taxes	3.5	0.1	0.5	-1.6	0.2
Result for the period	4.3	0.1	0.5	-1.6	0.7
<b>DISTRIBUTION OF NET SALES BY PRODUCT AND SERVICES, MEUR AND %</b>					
	<b>4Q/21</b>	<b>3Q/21</b>	<b>2Q/21</b>	<b>1Q/21</b>	<b>4Q/20</b>
Product based net sales	23.0 76.5%	12.2 71.0%	16.7 73.8%	11.2 65.7%	14.5 66.5%
Services based net sales	7.1 23.5%	5.0 29.0%	5.9 26.2%	5.9 34.3%	7.3 33.5%
<b>DISTRIBUTION OF PRODUCT-BASED NET SALES. MEUR AND %</b>					
	<b>4Q/21</b>	<b>3Q/21</b>	<b>2Q/21</b>	<b>1Q/21</b>	<b>4Q/20</b>
Defense & Security products	15.5 67.6%	5.3 43.4%	11.2 66.8%	3.3 29.5%	10.7 73.6%
Medical Technologies products	7.4 32.4%	6.9 56.6%	5.6 33.2%	7.9 70.5%	3.8 26.4%
<b>DISTRIBUTION OF SERVICES-BASED NET SALES, MEUR AND %</b>					
	<b>4Q/21</b>	<b>3Q/21</b>	<b>2Q/21</b>	<b>1Q/21</b>	<b>4Q/20</b>
Connectivity Solutions R&D services	4.6 64.8%	3.1 62.5%	3.8 63.7%	4.1 69.6%	4.3 58.9%
Other service-based net sales	2.5 35.2%	1.9 37.5%	2.2 36.3%	1.8 30.4%	3.0 41.1%
<b>DISTRIBUTION OF NET SALES BY MARKET AREAS, MEUR AND %</b>					
	<b>4Q/21</b>	<b>3Q/21</b>	<b>2Q/21</b>	<b>1Q/21</b>	<b>4Q/20</b>
Asia	0.2 0.6%	0.1 0.5%	0.1 0.6%	0.1 0.7%	0.1 0.5%
Europe	21.1 70.2%	10.9 63.8%	15.3 67.5%	9.7 56.9%	18.8 86.2%
Americas	8.8 29.2%	6.1 35.7%	7.2 31.9%	7.2 42.5%	2.9 13.3%

## Statement of Financial Position and Financing

The figures presented in the statement of financial position of December 31, 2021, are compared with the statement of the financial position of December 31, 2020 (MEUR).

	Dec. 31, 2021	Dec. 31, 2020
Non-current assets	85.9	86.4
Current assets	80.3	71.7
<b>Total assets</b>	<b>166.1</b>	<b>158.0</b>
Share capital	12.9	12.9
Other capital	103.9	101.3
Total equity	116.8	114.2
Non-current liabilities	21.5	21.9
Current liabilities	27.8	21.8
<b>Total equity and liabilities</b>	<b>166.1</b>	<b>158.0</b>

<b>CASH FLOW OF THE REVIEW PERIOD</b>	<b>Dec. 31, 2021</b>	<b>Dec. 31, 2020</b>
+ profit of the period +/- adjustment of accrual basis items	15.2	14.1
+/- change in net working capital	-6.2	-6.8
- interest, taxes and dividends	-0.7	-0.5
= net cash from operating activities	8.3	6.9
- net cash from investing activities	-8.4	-15.9
- net cash from financing activities	-2.5	-1.5
= net change in cash and cash equivalents	-2.6	-10.5

The number of gross investments in the period under review was EUR 9.6 million. Net investments for the review period totaled to EUR 9.3 million. The total amount of depreciation during the period under review was EUR 10.5 million. The amount of interest-bearing debt, including finance lease liabilities, was EUR 22.3 million at the end of the reporting period (EUR 22.5 million). Bittium's equity ratio at the end of the period was 72.4 percent (73.1 percent).

The Group's liquidity remained good despite the uncertainty caused by the coronavirus pandemic and the global disruption in the availability of electronic components. Securing cash flow has not required any special adjustment measures and no significant changes have been identified in the credit risks of trade receivables.

Cash and other liquid assets at the end of the reporting period were EUR 22.0 million (EUR 24.7 million). Net cash flow during the period was EUR -2.6 million. The net cash flow resulted from EUR 7.0 million investments made into own product development and EUR 1.1 million dividend payment as the most significant items (EUR -10.5 million including EUR 13.6 million investments made into own product development as the most significant item, no dividends were paid in the corresponding period).

Bittium has a EUR 20.0 million senior loan and a EUR 10.0 million committed overdraft credit facility agreement with Nordea Bank Finland Plc. The maturity date for the senior loan is May 24, 2024, and the credit limit agreement is valid until May 24, 2024. Bittium has EUR 10.0 million commit-

ted overdraft credit facility agreement with OP Corporate Bank Plc valid until May 24, 2022. At the end of the review period, no limits from 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 based on accounts receivable, accounts payable, order book, and budgeted net currency cash flow.

## Research and Development

Bittium continued to make significant investments to develop its own products and product platforms. In January-December 2021, the R&D investments were EUR 19.8 million (EUR 22.8 million), representing 22.8 percent of the net sales (29.1 percent).

The R&D investments focused mainly on developing tactical communication system and its products for the defense industry, developing different types of special terminal products for authorities and their related security software, as well as developing medical technology products. During 2021, the focus of investments has gradually shifted from tactical communications to the development of new medical technology products.

The capitalized R&D investments are related to the investments in developing the software defined radio based tactical radios, Bittium Tough SRD™ product family, further development of tactical communication networks, and development of medical technology products.

<b>R&amp;D INVESTMENTS, (MEUR)</b>	<b>1-12/2021</b>	<b>1-12/2020</b>
<b>Total R&amp;D investments</b>	<b>19.8</b>	<b>22.8</b>
Capitalized R&D investments	-7.0	-13.6
Depreciations and impairment of R&D investments	5.5	6.1
Cost impact on income statement	18.3	15.4
R&D investments, % of net sales	22.8%	29.1%

<b>CAPITALIZED R&amp;D INVESTMENTS IN BALANCE SHEET, MEUR</b>	<b>1-12/2021</b>	<b>1-12/2020</b>
Balance sheet value in the beginning of the period	46.6	39.1
Additions during the period	7.0	13.6
Depreciations and impairment of R&D investments	-5.5	-6.1
Balance sheet value at the end of the period	48.1	46.6

## Market Environment and Business Development in January–December 2021

### Defense & Security Business

Cooperation with the Finnish Defence Forces continued closely during 2021. Deliveries of products required for tactical communication continued, however, the shortage of components delayed the delivery schedule. Despite the challenging availability of components in the fourth quarter, a significant number of products were delivered to the customers, which was reflected in fourth-quarter revenue growth in Defense and Security products.

Deliveries of the first phase of the Bittium Tough SDR™ handheld and vehicle radios and related accessories, agreed under the purchase agreement between the Finnish Defence Forces and Bittium, published in December 2018, were almost completed. The poor availability of components needed in production slowed down the final deliveries. The Finnish Defence Forces launched the Field Radio 2020 project, which serves the testing and operational implementation of Bittium Tough SDR products and their waveforms and is preparing the purchase of the next batch of products to expand the Defence Forces' testing activities and preparations for the commissioning of radios. Current understanding is that the annual order volumes stated in the letter of intent to acquire new tactical radios, published in August 2017, will be reached from 2024 onwards. The Defence Forces have been involved in defining the Bittium Tough SDR™ system from the beginning of the project and believe to achieve a significant

performance improvement through the system. Alongside the testing and introduction of the radios, the development of the waveforms used in the radios continued as planned.

The development of the Bittium Tactical Wireless IP Network™ software defined radio system continued in cooperation with the Finnish Defence Forces as planned. In March, the Defence Forces ordered products from the TAC WIN system and Bittium Tough Comnode™ products based on the existing framework agreements for the purchase of the products. The share of TAC WIN products was approximately EUR 8.5 million and the share of Bittium Tough Comnode was approximately EUR 1.7 million. All products have been delivered to the Defence Forces during 2021.

Cooperation with the Estonian Defence Forces continued closely in the supply of tactical communication products and systems, which complement the tactical communication system already delivered for the customer. The product deliveries are based on a framework agreement between Bittium's Estonian partner Telegrupp AS and the Estonian Defence Forces, and it covers the years 2021–2025. The deliveries, integration work and testing of tactical communication system products were also continued with the Austrian Defence Forces.

In November, a4ESSOR, a multinational joint venture developing secure European software defined radio technology, launched a new ESSOR New Capabilities (ENC) project to develop new ESSOR waveforms interoperable with partner countries' radios and to improve the existing system to enable the waveforms portability to the national radios. The new project aims to improve the interoperability and security of ground-to-ground, air-to-ground and satellite-based tactical data transmission.

In this project, Bittium will focus on the development of ground-to-ground and air-to-ground waveforms. Earlier in May, a4ESSOR received official approval for its ESSOR High Data Rate Base Waveform.

The importance of mobile security in communications has increased and the demand for the secure Bittium Tough Mobile™ 2 smartphones grew steadily over the past year. The security classification of the phone and its related system plays a key role, especially in the governmental market. Bittium actively applies for security classification certificates in various countries together with its customers. The customer experience of the Secure Call communication application, launched on the Tough Mobile 2 phone at the beginning of the year, has been positive and the delivery volumes of the Secure Call application increased.

Deliveries of Mexsat satellite phones designed for the Mexican state's Mexsat satellite communications system continued. The resale cooperation with the Mexican telecommunications solutions provider Inmosat has worked well and the products of the first order related to the distributor agreement have been delivered to the customer. The product deliveries to Mexico are expected to continue this year.

### Medical Technologies Business

During 2021, the medical technology market clearly began to recover from the downturn caused by the coronavirus pandemic. Demand from the service providers recovered, which was also clearly reflected in the development of net sales. During the past year, the medical remote diagnostics market was consolidated as major service providers merged, which might lead to higher device sales volumes, thus creating growth opportunities for device manufacturers.

The importance of remote care and remote monitoring has increased during the coronavirus pandemic due to insufficient medical resources and cost pressures. Remote monitoring and remote diagnostics solutions alleviate these problems, which was also reflected in increased sales of Bittium's medical remote diagnostics solutions. Component shortages limited the growth during the past year and component shortages are expected to continue at least until 2022. All of Bittium's cardiology and neurophysiology solutions operate on the cloud-based MedicalSuite service platform, enabling service operators to further digitize their remote diagnostic service processes. Along with an aging population, the coronavirus pandemic has provided a strong incentive to streamline and digitize primary care and specialist care. Together, these factors are driving demand for the device and total service solutions in the medical technology market.

The transitional periods for the application of the European Medical Device Safety Regulation (MDR) (EU 2017/745) expired and entered into force in full on May 26, 2021. The regulation harmonises European health legislation and replaces the old MDD and AIMD directives on medical and implantable devices. The change has caused a backlog of quality system audits and product approvals and thus a significant delay in application lead times. Bittium has several medical device approvals underway in several countries.

Early in the year, Bittium launched a new home sleep apnea testing solution, Bittium Respiro™. MDR approval of the solution is still pending due to lead time delays. Based on current information, approval is expected in the second half of this year. The device, designed for home use, has received positive feedback, especially due to its compact size and ease of use. Deliveries of the

product variant of the device that is targeted at the Finnish market, began during the autumn of 2021, and demand developed positively.

The temporary overload in intensive care units by the patients with coronavirus infection affected the ability of intensive care units to promote the introduction of new technologies and solutions. This slowed down the demand for Bittium's EEG devices designed for intensive care. Bittium Brain-Status™ EEG measuring devices were delivered to customers for pilot use, but the overload of patients with coronavirus slowed down the progress of the pilots.

Demand for Bittium Faros™ ECG measuring devices increased during the past year. The majority of product deliveries were made to Preventice, a provider of remote monitoring services in the U.S. ECG market. The global shortage of components declined the amount of product deliveries. Demand for disposable Bittium OmegaSnap™ patch electrodes designed for Faros devices for long-term ECG measurement increased and deliveries progressed well.

During the last year, Bittium launched new products and software versions and they have been very well received. Product management, product development and production organizations were strengthened, and the quality system and operating processes were developed in accordance with the new MDR requirements. To further increase the international sales, the sales organization was strengthened, and the international distribution network expanded. In September, Bittium announced to have signed an agreement under which Bittium planned to buy a 25 percent stake in Technomed, a British provider of ECG diagnostic services. Since the technical conditions required for the share purchase were not met, Bittium canceled the agreement. However,

the cooperation between Bittium and Technomed will continue in the measurement and monitoring of biosignals and the development of analysis software, and the companies signed a distributor agreement for Bittium Faros™ ECG measuring devices and Bittium Respiro™ home sleep apnea measuring devices and software. The agreement sets out the distribution rights for both devices. Technomed is granted an exclusive right to use Bittium Faros™ ECG devices to provide cardiology diagnostic services in the UK. In other respects, the agreement does not define exclusive rights related to sales rights. Under the agreement, Technomed will commit to minimum purchases of both devices for the period 2022–2024.

## Connectivity Solutions Business

Bittium provides R&D services in the areas of wireless telecommunications, medical technology, automotive and manufacturing industries. Outsourcing R&D services, in whole or in part, brings customers cost savings and enables the scaling of their product development volume to meet their current needs. Bittium has extensive expertise in the areas of wireless connectivity, information security, and various communication technologies (such as 5G).

The delivery of R&D services and connectivity solutions for the customers continued and the demand for Bittium's R&D services remained stable during 2021. The market for Open Radio Access Network (O-RAN) architecture developed further and the demand for O-RAN know-how increased. During the last year, Bittium has been investing in the development, sales and marketing of its own O-RAN business. New demand also arose in wireless satellite technology. The growth of these areas has provided the company with new international customers.

The coronavirus pandemic slowed down the start of new R&D service projects in the manufacturing industry and automotive markets, and the demand clearly declined. The demand for medical technology solutions remained stable despite the slowdown in the lead times of the new medical device approvals caused by the new European Medical Device Safety Regulation (MDR).

The exceptional circumstances caused by the pandemic strengthened the remote work practices with existing customers. However, despite the virtual meetings and events becoming more and more common, acquiring new customers was challenging. Also, the availability of professional workforce on the market weakened, and, in particular, there is an insufficient amount of software engineers available compared to the demand. The competition for the workforce also increased labor mobility.

## Significant Events after the Reporting Period

On January 18, 2022, Mr. Antti Näykki (45 years), B.Eng. Embedded Systems, was appointed as Senior Vice President, Medical Technologies Product and Service Area in Bittium Corporation and as a member of Bittium Corporation's Management Group, effective on February 1, 2022. Mr. Näykki has worked at Bittium since 2019, among other things, as responsible for business development, and as the head of the Medical Technologies product management. In his new position as Senior Vice President of Medical Technologies Product and Service Area, he reports to Mr. Hannu Huttunen, CEO of Bittium Corporation. Mr. Arto Pietilä, Senior Vice President of Medical Technologies Product and Service Area and a member of Bittium Corporation's Management Group, will retire in March 2022. He has agreed to

support a smooth transition of responsibilities to Mr. Antti Näykki in the first months of 2022.

As of February 1, 2022, Bittium Corporation's management group consists of the following persons: Mr. Hannu Huttunen, CEO (Chairman); Mr. Pekka Kunnari, CFO; Mr. Kari Jokela, CLO; Mrs. Karoliina Malmi, Vice President Communications and Marketing; Mr. Jari Sankala, Senior Vice President Defense & Security; Mr. Tommi Kangas, Senior Vice President Connectivity Solutions; Mr. Antti Näykki, Senior Vice President Medical Technologies; and Mr. Jari-Pekka Innanen, Vice President, Engineering.

On February 2, 2022, Bittium Biosignals Ltd, a subsidiary of Bittium Corporation, and Preventice Solutions, a wholly-owned subsidiary of Boston Scientific, announced to have signed an agreement by which Bittium will extend its supply of BodyGuardian® MINI devices for monitoring cardiac arrhythmias to Preventice Solutions. In addition, according to the agreement the parties continue to cooperate in the development of new tailored ECG technology for Preventice Solutions. When the minimum volumes required for the exclusive rights under the agreement are met, the total value of the agreement is approximately USD 40–45 million (approximately EUR 35–40 million based on an exchange rate of February 1, 2022), with revenues accruing during 2022, 2023, 2024 and 2025. The final total value is mainly affected by the purchase volumes of different product models. The cooperation between Bittium and Preventice Solutions began in February 2018 regarding the development and delivery of wireless ECG measurement devices. A continuation of the cooperation was announced on September 10, 2020. The agreement signed on February 2, 2022 replaces the extension agreement signed in September 2020 for the supply of ECG measuring devices for the years 2021–2024.

On February 8, 2022, the Finnish Defence Forces ordered the Bittium Tactical Wireless IP Network™ (TAC WIN) system's products based on a Framework Agreement on the purchase of the products. The value of the purchase order was approximately EUR 8.8 million. The ordered tactical routers and radio heads are related to several ongoing projects in the Finnish Defence Forces, where Bittium TAC WIN provides broadband IP network connections for mobile communication stations and command posts. Bittium TAC WIN system's products were ordered based on a Framework Agreement between Bittium and the Finnish Defence Forces, according to which the Finnish Defence Forces purchase Bittium TAC WIN system's products for tactical communications. The Framework Agreement covers the years 2021–2024, with a total value of approximately EUR 30 million at the maximum. According to the Framework Agreement, the Finnish Defence Forces will issue separate purchase orders for the products each year. Bittium announced on December 22, 2020 that the Finnish Minister of Defence, Mr. Antti Kaikkonen had authorized the Finnish Defence Forces to purchase the Bittium Tactical Wireless IP Network™ (TAC WIN) system's products. The ordered products will be delivered to the Finnish Defence Forces during the year 2022.

## Outlook for 2022

The global disruption in the availability of electronic components and the spread of new variants of the coronavirus are having a significant impact on the global market. More than 70 percent of Bittium's net sales accumulate from products and related systems, and the prevailing shortage of components is causing significant uncertainty to the development of Bittium's product-based net sales in 2022. Due to these uncertainties, at this point of the year, the company will exceptionally publish only the first half-year outlook instead of the full-year outlook.

Bittium expects the net sales in January–June 2022 to be at the same level as in the previous year (EUR 39.7 million in January–June 2021) and the operating result to be negative (operating loss of EUR -0.7 million in January–June 2021).

More information about Bittium's market outlook, risks and uncertainties are presented in this report in the sections "Market Outlook" and "Risks and Uncertainties" as well as on the company's internet pages at [www.bittium.com](http://www.bittium.com).

## Market Outlook and the Implications of the Coronavirus Pandemic for Bittium

Bittium's customers operate in various industries, each of them having its 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 competencies accrued over time and the long history in developing mobile communication

solutions, Bittium is in a good position to offer customized solutions to its customers. Over thirty years of experience and extensive competence in measuring biosignals also act as a basis for medical technology solutions.

In 2020 and 2021, the global coronavirus pandemic has significantly affected the global economy and market situation. Bittium's business sales cycles are long by their nature, but the pandemic has also affected Bittium's business, among others, by slowing down existing projects and postponing new projects. The market is slowly beginning to recover from the effects of the pandemic, but the global shortage of components will affect product manufacturing and thus the ability to deliver products to customers on schedule.

The factors affecting the demand for Bittium's products and services and the effects of the coronavirus pandemic on them are described below:

### Defense, Public Safety, and Information Security Markets

- In the defense market's tactical communications sector, the governments' defense forces and other authorities need networks that troops, who are more and more constantly on the move, can use and transfer growing amounts of data securely. This creates demand for Bittium Tactical Wireless IP Network™ (TAC WIN) broadband network, Bittium Tough SDR™ handheld and vehicular radios, and for other Bittium's IP-based (Internet Protocol) tactical communication solutions that fulfill the needs of data transfer of moving troops and 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 2022. Due to the long sales cycles driven by purchasing programs of national governments, it will take time to receive purchase orders. Exceptional circumstances due to the coronavirus pandemic have to some extent affected the progress of programs, which has slowed down the completion of larger deals.

- The financial difficulties caused by the coronavirus pandemic affect the budgets of public finances such as states and public authorities and have required postponing of procurement. This has somewhat delayed the launch of new projects and receiving orders. Especially in the defense and authorities' markets testing and piloting of products and systems are typical phases before receiving orders of larger entities, and current circumstances due to the pandemic situation have caused delays in them. However, the market has begun to recover from the effects of the pandemic. The global shortage of components affects the availability of various components used in products, which affects the company's ability to deliver products to its customers on time.
- The use of LTE technology, smartphones, and applications continue 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 in secure mobile devices is increasing. The sales of secure terminal products are expected to develop moderately according to the nature of public safety markets.
- The smartphone sales process often involves testing and piloting systems and equipment, possibly integrating third-party technologies, and possible local regulatory approvals, which are typically

lengthy processes. Exceptional circumstances caused by the coronavirus pandemic may have a significant impact on the progress of projects, which slows down the closings of larger transactions.

## Telecommunication and Digitalization

- In mobile telecommunications, the implementation of 5G is accelerating in pace. Investments in developing new features continue and the importance of software development in the 5G network development expands. This creates demand for Bittium's R&D services. There is a wide range of frequencies allocated for the 5G technology, thus creating the need to develop multiple products to cover the market and creating demand for R&D services for the development of product variants. The different kinds of needs for solutions in the open radio frequency network architecture, Open Radio Access Network (O-RAN), and satellite communication increase the demand for Bittium's R&D expertise as new players enter the traditional supplier network. Also, the development of new devices utilizing 5G technology increases the demand for Bittium's services.
- As digitalization evolves, secure IoT (Internet of Things) has become a significant development area in almost every industry. The increasing need for companies to digitalize their operations, collect data wirelessly, and transfer it to the internet and cloud services generate a need for Bittium's services and customized solutions. To this end, the market needs secure devices, for both demanding industrial and leisure applications, which collect information from the sensors used by the device and create a reliable wireless connection to the Internet and cloud services. The deployment of 5G technology is expanding and the number of digitalized devices increases continuously. The devices

will also feature new and more advanced features that will create demand for design services. Therefore, the integration of different systems and technologies play an important role in enabling complete digitalization services. There are several learning systems and devices under development that use different kinds of artificial intelligence (AI) technologies to ease and speed up the processing of large data amounts.

- Changes in the digitalization of the automotive industry and new business models as well as the automation of automotive operations create a need for technological development. Most significant technology trends, such as wireless connectivity, intelligent mobility, self-driving cars, and electric cars, are guiding needs for innovative software development. The share of software in cars quickly is increasing, and software is becoming a major enabler and a differentiator. The use of the Android™ Automotive operating system in the In-Vehicle Infotainment (IVI) systems is strongly entering the market. Several carmakers have announced the launch of cars with Android Automotive. Bittium's more than a decade of experience with the Android operating system and the Google ecosystem combined with wireless connectivity know-how create good business opportunities for this market.
- The coronavirus pandemic has slowed sales of product development services. Despite the fact that adaptation to new circumstances and practices has gone well, the pandemic has slowed down the progress of existing projects and the acquisition of new customers. However, the market has slowly begun to recover from the effects of the pandemic and new customer projects have been launched. The coronavirus pandemic and labor competition are expected to continue prevailing in the market during 2022. The goal is to further increase the number of product de-

velopment service projects and expand the international customer base.

## Medical ECG, EEG, and Sleep Apnea Remote Monitoring Market

- The medical technology market is undergoing significant development in patient care, especially outside hospitals. There is an increasing focus on the prevention of diseases and health problems through early diagnosis and the discharge of patients at an earlier stage to reduce hospital and treatment days. These actions significantly increase efficiency in health care processes and lower costs.
- A prerequisite for early hospital discharge is the enabling of accurate and precise follow-up and measurement opportunities in home conditions, which would be enabled through remote monitoring. Remote monitoring and remote diagnostics also enable specialists' diagnoses regardless of time and place. Also, evolving artificial intelligence-based algorithms become more common in supporting physicians in making diagnoses. Remote monitoring and remote diagnostics make it possible and faster to obtain more accurate diagnoses, which, in turn, speeds up the start of the right kind of treatment. The market change will enable several new providers to join the overall care service chain, without compromising the quality of specialist services.
- For remote monitoring and remote diagnostics, Bittium provides its Bittium Faros™ product family for remote heart monitoring, Bittium BrainStatus™ for measuring the electrical activity of the brain, home sleep apnea testing solution Bittium Respiro™, and different kinds of diagnostics software offered by Bittium.
- As the coronavirus pandemic spread, the number of non-emergency patients going to treatments and tests to healthcare pro-



viders decreased. Several hospitals and medical care facilities have postponed their non-emergency tests and examinations and focused on the treatment of the pandemic patients as well as on the actions aimed to prevent the virus from spreading. The pandemic situation varies from country to country, but generally the market is beginning to get back to normal again. In the long-term, the pandemic will accelerate the use of remote services in hospitals and medical care facilities, and thus create positive development on the demand for remote monitoring products and services.

- The global shortage of components affects the availability of various components used in products and can have an impact on company's ability to deliver products to its customers on time.

## Risks and Uncertainties

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

The coronavirus pandemic has caused changes in the company's operating environment. The company management has been actively following and anticipating the development of the pandemic and has taken measures to prevent and remedy the impacts of the pandemic. It is difficult to estimate the length of the situation or its impacts on business operations and financial results.

The global disruption in the availability of electronic components and their price development has caused fast changes in the company's operating environment. The company monitors the development of the situation and actively strives to ensure

the availability of components required for product deliveries. Poor availability of components can weaken the progress of customer projects and the ability to deliver products.

### 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 or in situations where there will be no orders in the forecast quantities, currency losses, elevated costs, or litigations and related costs.

As 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 and companies operating in the healthcare sector, the company is exposed to market changes in these industries.

A significant part of Bittium's net sales accumulate 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 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 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, a 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 also result in 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 the 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 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 also be 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. Bittium has EUR 20.0 million senior loan and EUR 10.0 million committed overdraft credit facility agreement with Nordea Bank Plc. The maturity date for the senior loan is May 24, 2024, and the credit limit agreement is valid until May 24, 2024. Bittium has EUR 10.0 million committed overdraft credit facility agreement with OP Corporate Bank Plc valid until May 24, 2022.

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 investments, networking capital needs, or 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 Non-Financial Information

Bittium is an international technology company that provides socially beneficial technological innovations that improve communications, create safety, and promote healthcare.

The company is committed to responsible and sustainable business through its sustainability program. The sustainability program is based on the company's strategy, values, stakeholder expectations and megatrends in the operating environment, which include digitalization and aging of the population, as well as information security.

Sustainability is part of Bittium's organizational culture and way of work. The company identifies and manages risks related to sustainability as part of the company's risk management, which emphasizes the role of the company's management group and the Board of Directors in implementing measures in day-to-day operations.

### Key Operating Principles

Bittium's operations are guided by good corporate governance, ethical principles, and Codes of Conduct. The Code of Conduct is part of the induction program for new employees.

Bittium's partners are expected to comply with the Bittium Code of Conduct principles, supplier guidelines and supplier requirements (Bittium Supplier Manual and Bittium Supplier Requirements), which set out, for example, Bittium's policies and supplier selection and quality control requirements. Bittium reviews the principles of responsible operations of suppliers and partners and

audits them in accordance with the defined criteria. In 2021, the company was able to carry out some audits at suppliers' premises in Finland, but due to the pandemic, the majority of foreign suppliers were assessed on the basis of self-assessments.

Export control is an important part of the company's operations and a prerequisite for cooperation between authorities and customers. The company has always followed the instructions and rules of export control when operating in areas such as the defense and information security industries and closely monitors changing legislation in various market areas. In 2021, Bittium has continued to cooperate with the authority in connection with preliminary investigations.

## Environmental Topics

In accordance with its environmental policy, Bittium is committed to minimizing the environmental impact of the production, use and disposal of the products it designs. Therefore, Bittium's products are designed to be long-lasting, repairable and recyclable. As Bittium's business is mainly focused on the beginning of the product life cycle, its environmental impact is very small. The greatest environmental impact is caused by the recycling of the product.

The Scope 1 carbon dioxide emissions of Bittium's Finnish sites in 2021 were 102.9 t CO<sub>2</sub>e (travel and waste) and the Scope 2 emissions were 615.7 t CO<sub>2</sub>e (heating and electricity). The share of renewable energy in the energy sources used in Finnish offices increased significantly to 35% (17% in 2020).

When working on the 2020–2022 environmental program, it was stated that the most important aspects in reducing Bittium's carbon footprint are the recycling of waste generated from operations, the utilization of renewable energy sources and increasing the

environmental awareness of personnel. The recovery rate of bitumen waste was 99.1% last year (target > 95%). In terms of office space in Oulu, approximately 5% of the energy used was generated by solar energy on an annual basis (target > 5%). 17% of the personnel participated in the training to increase the environmental awareness of the personnel.

## Social Responsibility and Employees

### Personnel

Bittium's equality plan is based on the Equality and Gender Equality Act. The Company does not allow discrimination or unequal treatment based on gender, age, origin, religion or belief, opinion, sexual orientation, disability, or any other personal reason. The implementation of equality is examined, for example, through personnel surveys and surveys from the perspective of pay, career development and recruitment. In addition to the annual personnel surveys, in 2020, the company introduced the bi-weekly Pulssi survey, which inspects personnel's resilience during the coronavirus pandemic.

The most typical work ability risks in the industry are musculoskeletal disorders, as well as coping at work and mental well-being. Bittium invests in good occupational ergonomics and occupational health care services that support the well-being of its employees, as well as other employee benefits. In 2020, three accidents at work were reported in Bittium's Finnish companies.

Bittium is an active player in its local community. The company cooperates with local educational institutions in the form of educational visits. Due to the Covid-19 pandemic in 2020, it has not been possible to organize student visits.

## Respect for Human Rights and the Fight against Corruption and Bribery

In all of its business activities, Bittium respects human rights, avoids violating human rights, and intervenes in the potential negative human rights impacts of its operations in accordance with the UN Guiding Principles on Business and Human Rights. At Bittium, the monitoring of the implementation of human rights is mainly related to the activities of subcontractors and suppliers. Bittium is responsible for the company's supply chain in terms of, among other things, supplier requirements and material clearances related to materials and components. Staff training is part of ensuring responsible sourcing. During 2021, no doubts have been reported to Bittium regarding minerals in conflict areas.

Due to Bittium's market and business areas, corruption is one of the key risks related to social responsibility. Bittium does not accept any form of bribery or corruption in its own activities or in the activities of its partners. The company has internal and external guidelines for preventing anti-corruption activities, and an electronic self-study module on anti-corruption activities has been implemented for new employees. In 2021, 73% of new employees completed training. The company has a monitoring tool in place to identify corruption or other ambiguities in its partners, and a channel is available to the company's stakeholders to report breaches of anti-corruption rules anonymously. In 2021, the company did not become aware of any suspicions of corruption.

Bittium does not have any activities covered by the classification system of the EU Taxonomy Regulation, so taxonomy-eligible activities account for 0% of net sales, investments and operating expenses.

## Personnel

The Bittium group employed an average of 664 people in January–December 2021. At the end of 2021, the company had 653 employees (684 employees at the end of 2020).

### Changes in the Company's Management

On May 17, 2021, Bittium announced that Mr. Sammy Loitto, Senior Vice President, Sales and a member of Bittium Corporation's Management Group, will transfer to another company. Mr. Loitto acted as Senior Vice President, Sales at Bittium for three years, and successfully developed Bittium's sales and sales management processes, environment, and systems during his career.

The company decided that it will divide its sales management and development into the Company's three product and service areas, which are Defense & Security, Medical Technologies, and Connectivity Solutions. Dividing the sales activities into product and service areas in this context enables even stronger sales management and development. After the change, Bittium has product and service area specific sales management, which reports to the heads of the product and service areas in their positions. As a result, sales development is better targeted to the needs of each product and service areas. The changes have taken effect on June 1, 2021.

As of June 1, 2021, Bittium Corporation's management group consisted of the following persons: Mr. Hannu Huttunen, CEO (Chairman); Mr. Pekka Kunnari, CFO; Mr. Kari Jokela, CLO; Mrs. Karoliina Malmi, Vice President Communications and Marketing; Mr. Arto Pietilä, Senior Vice President Medical Technologies; Mr. Jari Sankala, Senior Vice President Defense & Security; Mr. Tommi Kangas, Senior Vice President Connectiv-

ity Solutions; and Mr. Jari-Pekka Innanen, Vice President, Engineering.

## Incentive Systems

### Employee Profit-Sharing Plan

In 2021, Bittium had an employee profit-sharing plan that applies to all employees, excluding those covered by other short-term bonus plans. According to the 2021 profit-sharing plan, a separately defined part of Bittium's operating profit will be distributed to employees as a profit-sharing bonus in proportion to salaries. The goal of the system is to enable the company's success to be shared with employees and to engage employees.

### Variable Pay

The variable pay is paid based on the achievement of goals. In 2021, 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 and strategic targets of the Company. In 2020, operating result formed the financial targets. In addition, part of the targets may be other Company objectives or personal targets. Personal targets vary between duties.

### Management Share-Based Incentive Plan

The management of Bittium group share-based long-term incentive scheme which comprises a Performance Share Plan ("PSP"). The objectives of the Performance Share Plan are to align the interests of Bittium's management with those of the Company's shareholders and, thus, to promote

shareholder value creation in the long term, to commit the management to achieving Bittium's strategic targets and the retention of Bittium's management. The Performance Share Plan consists of three annually commencing three-year performance share plans, PSP 2020–2022, PSP 2021–2023 and PSP 2022–2024, each with a one-year performance period, which is followed by the payment of the share reward and a two-year transfer restriction period. The commencement of each plan is, however, subject to a separate Board decision. Further information can be found at the company's internet pages at the address [www.bittium.com](http://www.bittium.com).

On February 11, 2021, the Board of Directors of Bittium Corporation decided on the new period in the share-based long-term incentive scheme for the Bittium group's management. The members of Bittium's Management Group are eligible to participate in the second PSP 2021–2023 plan. The performance measures based on which the potential share reward under PSP 2021–2023 will be paid are the revenue growth and cash flow before financial items of Bittium. A precondition for the payment of the share reward is, in addition, that the employment relationship of the participant with Bittium continues at the time the reward is paid. The potential reward will be paid in shares of Bittium. If all the performance targets set for the second plan, PSP 2021–2023, are fully achieved, the aggregate maximum number of shares to be paid based on this second plan is approximately 111,900 shares (gross before the withholding of the applicable payroll tax). The aggregate gross value of PSP 2021–2023, estimated based on the volume-weighted average quotation of Bittium's share during the period H2/2020, is approximately EUR 0.7 million.

On March 24, 2021, the Board of Directors of Bittium Corporation decided on a directed

share issue without consideration for the payment of the share rewards based on the Company's share-based incentive scheme to the Company's management. The directed share issue without consideration decided was about the first Performance Share Plan (PSP 2020–2022) of the share-based incentive scheme. In the Share Issue 9,098 new shares of the Company was issued without consideration to the management entitled to share rewards according to the terms and conditions of the share-based incentive scheme. A total of nine persons of the Company's management group were in the target group of the payment.

On March 29, 2021, the new shares issued without consideration were registered in the Trade Register. After the registration, the total number of Bittium Corporation shares was 35,702,264. The newly registered shares were admitted to trading on the Nasdaq Helsinki stock exchange on March 30, 2021.

## 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 Annual General Meeting authorized the Board of Directors to decide on the repurchase of the Company's own shares as follows.

The number of own shares to be repurchased shall not exceed 3,500,000 shares, which corresponds to approximately 9.80 percent of all of the shares in the company as of the date of the Annual General Meet-

ing. Only the unrestricted equity of the company can be used to repurchase its 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 Annual General Meeting on June 15, 2020, to decide on the repurchase of the company's own shares.

The authorization is effective until June 30, 2022.

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

The Annual 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 number of shares to be issued shall not exceed 3,500,000 shares, which corresponds to approximately 9.80 percent of all of the shares in the company as at the date of the Annual General Meeting.

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 June 15, 2020 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, 2022.

## 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 35,702,264. The accounting par value of the Company's share is EUR 0.10. The Company does not have its own shares in its possession.

## Market Values of Shares

<b>MARKET VALUES OF SHARES (EUR)</b>	<b>1-12/2021 12 months</b>	<b>1-12/2020 12 months</b>
Highest	7.89	7.67
Lowest	4.93	3.40
Average	6.18	5.74
At the end of period	5.30	5.79
Market value of the stock. (MEUR)	189.2	206.7
Trading value of shares. (MEUR)	83.2	117.9
Number of shares traded (1,000 pcs)	13,464	20,557
Related to average number of shares, %	37.7	57.6

## Shareholders

<b>LARGEST SHAREHOLDERS</b>	<b>Number of shares</b>	<b>% of shares</b>
1. Veikkolainen Erkki	1,741,908	4.88%
2. Ponato Oy	1,501,300	4.21%
3. Hulkko Juha	1,419,379	3.98%
4. Mutual Pension Insurance Company Varma	1,365,934	3.83%
5. Mutual Pension Insurance Company Ilmarinen	1,296,529	3.63%
6. OP-Suomi Mikroyhtiöt - special investment company	752,757	2.11%
7. Hilden Kai Jalmari	658,000	1.84%
8. Mutual Pension Insurance Company Elo	500,000	1.40%
9. Investment Fund Taaleritehdas Mikro Markka	500,000	1.40%
10. Citibank Europe PLC	479,789	1.34%

At the end of 2021, Bittium Corporation had 21,663 shareholders. The ten largest shareholders owned 28.6 percent of the shares. Private ownership was 70.2 percent. The percentage of foreign and nominee-registered shareholders was 3.0 percent at the end of 2021.

### Flagging Notifications

On September 29, 2021, Bittium Corporation received a notification under Chapter 9, Section 5 of the Finnish Securities Market Act (FSMA), according to which Jbit Oy, a company 100% owned by Juha Hulkko has acquired 159,000 shares in Bittium Corporation. In connection with the completion of the share purchase, Juha Hulkko's aggregate amount of direct and indirect holdings in Bittium Corporation's shares and votes exceeded the five percent limit on 28.9.2021.

According to the notification, the aggregate holdings of Juha Hulkko in Bittium Corporation on September 28, 2021 amounted to a total of 1,783,450 shares, corresponding to 5.00 percent of the total number of shares and voting rights of Bittium Corporation. The share stock of Bittium Corporation consists of 35,702,264 shares, each entitling one vote.

## The Board, Board Committees and the Auditor

The Annual General Meeting decided that the Board of Directors shall comprise five (5) members. Mr. Erkki Veikkolainen, Ms. Riitta Tiuraniemi, Mr. Veli-Pekka Paloranta, and Mr. Pekka Kemppainen 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. Petri Toljamo was elected as a new member of the Board of Directors for a corresponding term of office.

At its assembly meeting held on April 14, 2021, the Board of Directors elected Mr. Erkki Veikkolainen as the Chairman of the Board of Directors. Further, the Board has resolved to keep the Audit Committee. Ms. Riitta Tiuraniemi (Chairman of the committee), Mr. Petri Toljamo, and Mr. Veli-Pekka Paloranta were elected as members of the Audit Committee.

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. Jari Karppinen, authorized public accountant, will act as responsible auditor.

## Corporate Governance Statement

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

## Dividend from 2020

Based on the shareholder vote concerning minority dividend, the Annual General Meeting decided in deviation from the proposal of the Board of Directors that a minority dividend corresponding to half of the profit for the financial period shall be paid in accordance with Chapter 13, Section 7 of the Companies Act. The Board of Directors of the company had proposed to the Annual General Meeting that no dividend be distributed by the Annual General Meeting based on the adopted balance sheet for the financial period of January 1, 2020–December 31, 2020. The total amount of the minority dividend to be distributed was EUR 1,110,327.74, corresponding to EUR 0.0311 per share.

The dividend was paid to shareholders who on the dividend record date April 16, 2021, were registered in the company's shareholders' register held by Euroclear Finland Oy. The dividend was paid on April 23, 2021. All the shares in the company were entitled to the dividend with the exception of shares possibly held by the Company on the dividend record date.

# Consolidated Statement of Comprehensive Income

Continuing operations, 1000 EUR	Notes	Jan. 1– Dec. 31, 2021	Jan. 1– Dec. 31, 2020
<b>NET SALES</b>	1, 3	<b>86,868</b>	<b>78,385</b>
Other operating income	4	2,594	852
Change in work in progress and finished goods			
Work performed by the undertaking for its own purpose and capitalized		530	342
Raw materials		-23,311	-21,189
Personnel expenses	7	-38,992	-32,484
Depreciation	6	-10,452	-11,400
Other operating expenses	5	-13,923	-12,459
Share of results of the associated companies	15	-90	33
<b>OPERATING PROFIT</b>		<b>3,223</b>	<b>2,079</b>
Financial income and expenses	9	-688	-434
<b>PROFIT BEFORE TAX</b>		<b>2,535</b>	<b>1,644</b>
Income tax	10	790	537
<b>PROFIT FOR THE YEAR FROM CONTINUING OPERATIONS</b>		<b>3,324</b>	<b>2,181</b>
Profit for the year from discontinued operations	2		
<b>PROFIT FOR THE YEAR</b>		<b>3,324</b>	<b>2,181</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		231	-237
<b>TOTAL COMPREHENSIVE INCOME FOR THE YEAR</b>		<b>3,556</b>	<b>1,944</b>
<b>Profit for the year attributable to</b>			
Equity holders of the parent		3,324	2,181
<b>Total</b>		<b>3,324</b>	<b>2,181</b>
<b>Total comprehensive income for the year attributable to</b>			
Equity holders of the parent		3,556	1,944
<b>Total</b>		<b>3,556</b>	<b>1,944</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		0.093	0.061
Diluted earnings per share		0.093	0.061
<b>Earnings per share from discontinued operations, EUR</b>			
Basic earnings per share			
Diluted earnings per share			
<b>Earnings per share from continuing and discontinued operations, EUR</b>			
Basic earnings per share		0.093	0.061
Diluted earnings per share		0.093	0.061
Average number of shares, 1000 pcs		35,700	35,693
Average number of shares, diluted, 1000 pcs		35,700	35,693



# Consolidated Statement of Financial Position

1000 EUR	Notes	Dec. 31, 2021	Dec. 31, 2020
<b>Non-current assets</b>			
Property, plant and equipment	12	20,891	22,810
Goodwill	13	5,823	5,807
Intangible assets	13	49,943	48,953
Investments in associated companies	15	1,283	1,507
Other financial assets	16	112	112
Non-current receivables	19	1,081	1,207
Deferred tax assets	17	6,745	5,961
<b>Total</b>		<b>85,878</b>	<b>86,358</b>
<b>Current assets</b>			
Inventories	18	18,837	20,939
Trade and other receivables	19	39,396	26,080
Financial assets at fair value through profit or loss	20	5,732	5,689
Cash and short-term deposits	21	16,306	18,968
<b>Total</b>		<b>80,272</b>	<b>71,676</b>
<b>Total assets</b>		<b>166,150</b>	<b>158,033</b>
<b>Equity and liabilities</b>			
Equity attributable to equity holders of the parent	22		
Share capital		12,941	12,941
Translation differences		1,106	874
Invested non-restricted equity fund		25,953	25,953
Retained earnings		76,814	74,478
<b>Total</b>		<b>116,815</b>	<b>114,247</b>
Non-controlling interests			
<b>Total equity</b>		<b>116,815</b>	<b>114,247</b>
<b>Non-current liabilities</b>			
Deferred tax liabilities	17	208	273
Interest-bearing loans and borrowings (non-current)	25	21,111	21,391
Other non-current liabilities, non-interest bearing	27	200	281
<b>Total</b>		<b>21,519</b>	<b>21,945</b>
<b>Current liabilities</b>			
Trade and other payables	27	23,140	18,131
Provisions	24	3,524	2,580
Interest-bearing loans and borrowings (current)	25	1,152	1,130
<b>Total</b>		<b>27,816</b>	<b>21,841</b>
<b>Total liabilities</b>		<b>49,335</b>	<b>43,786</b>
<b>Total equity and liabilities</b>		<b>166,150</b>	<b>158,033</b>

# Consolidated Statement of Cash Flows

1000 EUR	Notes	Jan. 1– Dec. 31, 2021	Jan. 1– Dec. 31, 2020
<b>Cash flow from operating activities</b>			
<b>Profit for the year from continuing operations</b>		<b>3,324</b>	<b>2,181</b>
<b>Profit for the year from discontinued operations</b>			
Adjustments			
Effects of non-cash business activities	29	12,018	12,056
Finance costs	9	760	579
Finance income	9	-71	-144
Income tax	10	-790	-537
Change in net working capital			
Change in short-term receivables	19	-13,063	-5,503
Change in inventories	18	1,905	-2,395
Change in interest-free short-term liabilities	27	4,928	1,139
Interest paid on operating activities		-753	-579
Interest and dividend received from operating activities		71	144
Income taxes paid		-51	-38
<b>Net cash from operating activities</b>		<b>8,278</b>	<b>6,903</b>
<b>Cash flow from investing activities</b>			
Purchase of property, plant and equipment	12	-954	-1,388
Purchase of intangible assets	13	-7,457	-14,537
Sale of property, plant and equipment	12		
Sale of intangible assets	13		
Purchase of investments/associated companies	15	0	0
<b>Net cash from investing activities</b>		<b>-8,410</b>	<b>-15,925</b>
<b>Cash flows from financing activities</b>			
Proceeds from borrowings	25		
Payment of finance lease liabilities	25, 26	-1,375	-1,475
Dividend paid and capital repayment		-1,110	
<b>Net cash from financing activities</b>		<b>-2,486</b>	<b>-1,475</b>
<b>Net change in cash and cash equivalents</b>	21	<b>-2,618</b>	<b>-10,497</b>
Cash and cash equivalents at 1 January		24,657	35,154
Change in fair value of investments			
<b>Cash and cash equivalents at the end of the year</b>		<b>22,039</b>	<b>24,657</b>

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

# Consolidated Statement of Changes in Equity

<u>Equity attributable to equity holders of the parent</u>						
1000 EUR	Share capital	Invested non- restricted equity fund	Translation difference	Retained earnings	Non- controlling interests	Total
<b>Shareholders' equity Jan. 1, 2021</b>	12,941	25,953	874	74,478	0	114,247
<b>Comprehensive income for the period</b>						
Profit for the period				3,324		3,324
Exchange differences on translating foreign operations			231			231
<b>Total comprehensive income for the period</b>	0	0	231	3,324	0	3,556
<b>Transactions between the shareholders</b>						
Dividend distribution				-1,110		-1,110
Share-related compensation				114		114
<b>Total transactions between the shareholders</b>				-996		-996
<b>Other changes</b>				8		8
<b>Shareholders' equity Dec. 31, 2021</b>	12,941	25,953	1,106	76,814	0	116,815
<b>Shareholders' equity Jan. 1, 2020</b>	12,941	25,953	1,112	72,321	0	112,327
<b>Comprehensive income for the period</b>						
Profit for the period				2,181		2,181
Exchange differences on translating foreign operations			-237			-237
<b>Total comprehensive income for the period</b>	0	0	-237	2,181	0	1,944
<b>Transactions between the shareholders</b>						
Share-related compensation				40		40
<b>Other changes</b>				-64		-64
<b>Shareholders' equity Dec. 31, 2020</b>	12,941	25,953	874	74,478	0	114,247

# 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 Ritaharjuntie 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, 2021. 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 Groups' share of changes in the associated companies' equity after the date of acquisition. If the Groups' 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 unre-

alized profits or losses between the Group and the associated companies are eliminated according to the share of Groups' ownership.

The Groups' 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 Groups' 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 business combination over the acquirer's interest in the net fair value of the identifiable assets. The goodwill arising from the busi-

ness 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 according to the IFRS standards.

## 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

According to the IFRS 16 Leases standard, in principle all lease contracts of the Group are recognized as assets and liabilities in Group's Balance Sheet. When the Group is a lessee, lease liabilities are recognized at the present value of the future lease payments at the contact date which the leased asset is available for use by the group. Lease payments are discounted by using lessee's incremental borrowing rate. Corresponding asset to the lease liability is recognized on

the historical cost basis. According to the historical cost basis model, depreciation and amortization costs are deducted from the initially recognized right-of-use asset. When adjustments to lease payments take effect, the lease liability is reassessed and adjusted against the right-of-use asset.

The Group determines the lease term as a period when a lease contract cannot be terminated. In determining the lease term, all facts and circumstances are considered that create an economic incentive to exercise an extension option, or not exercise a termination option. The Group adjusts the lease term if the period when a lease contract cannot be terminated changes. Payments associated with short-term leases and all leases of low-value assets may be recognized on a straight-line or other systematic basis as an expense in profit or loss.

The right-of-use assets are presented within the same line item as the corresponding underlying assets would be presented if they were owned. Lease liabilities are included in interest-bearing liabilities.

## 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 in which part of the remuneration for the Board of Directors is paid in shares of Bittium. The managing directors of the Group also have an incentive plan in which 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 recog-

nized 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. 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

Bittium identifies and reviews the customer contracts and the revenue recognition principles for the different contract elements using the five step method presented in IFRS 15. According to Bittium principles, the signed contracts and purchase orders are customer contracts in accordance with IFRS 15. Frame contracts and Letters of intent can be classified as customer contracts only when the conditions of the contract are otherwise fully in accordance with the IFRS 15.

Bittium has recognized following IFRS 15 contract elements: product and license sales, sales of R&D services, maintenance and support services of products and extended warranties of the products. Bittium has listed prices for the products and their maintenance and support services as well as for their extended warranties. If the contract does not define a single price of a contract element, the price can be estimated using the market price method or using a cost base method. The prices for the sales of services are defined in each service contract. Bittium has not activated any costs of gaining a contract nor has it allocated them for the projects or products as part of the revenue to be recognized. These additional costs have been minor and the possible assets borne as a result would have a depreciable lifetime of less than one year.

The revenue of the services is recognized as the service has been performed. In this case, the contract element is delivered over

time. 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.

This requires an accurate forecasting of future sales and costs during the lifetime of the contract. The forecasts are a basis for the revenue recognized and they contain the latest estimates of the contract sales, costs, and the risks related to the contract. The forecasts are also subject to remarkable changes due to possible changes in contract scope, cost estimate changes and change in customers' plans as well as other factors affecting the forecast.

The revenue of product sales is recognized when the significant risks and rewards normally 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 these goods. In this case, the contract element is transferred in a point in time. Sales are presented net of indirect sales taxes and discounts.

In case Bittium receives prepayments from customers, the income related to them is recognized according to abovementioned principles. For the product warranties Bittium makes warranty provisions that are reversed over time during the warranty periods. The extended warranties paid separately are accrued as income over time during the warranty period.

The following matrix states the different aspects of estimating and classifying the revenue recognition of different contract elements:

Type of Contract	Contract Element	The Principle for Revenue Recognition and Possible Estimates
Sales of services	Customer contract, fixed price	Percentage of completion defined as the ratio of costs incurred to total estimated costs.
Sales of services	Customer contract based on time, price per hours	Revenue based on the work performed, recognition based on regular invoicing.
Product/licence sales	Product, off the shelf	The revenue based on product delivery as the customer has achieved the control of the goods delivered.
Product/licence sales	Product, customized	The revenue based on product delivery as the customer has achieved the control of the goods delivered. The customization work is accrued over time according to the percentage of completion or based on the time as mentioned above in the sales of services.
Product/licence sales	Product + maintenance	The revenue based on product delivery as the customer has achieved the control of the goods delivered. Maintenance accrued over the maintenance period.
Product/licence sales	Product support services	Over time, based on the work done.
Other contracts	Rental agreements	During the rental period, according to the rental agreement.

## 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

The hedge accounting according to the IFRS 9 Financial Instruments standard has not been applied for the financial statement period or for the comparative period.

As presented in IFRS 9, Bittium has three classes of financial assets and liabilities: those measured at amortized cost, financial assets and liabilities at fair value through other comprehensive income and financial assets, and liabilities at fair value through statement of income. The classification is made based on the business models and based on the analysis of cash flows. The financial assets and liabilities are classified as they are initially recorded. After this no reclassifications are made unless the business model of asset management changes. At the financial statement date Bittium had a marginal amount of financial assets other than those measured at amortized cost.

As an exception to this, the cash and short-term deposits include a low risk short-term investment portfolio that is assessed at fair value through statement of income.

The financial assets are written off when:

- The agreement based right for the cash flows of the financial asset is terminated or;
- The group has either transferred all the relevant risks and rewards related to the financial assets or it has transferred their control outside the group.



## The Impairment of Financial Assets

IFRS 9 has a small effect on assessment of group financial assets. Based on the simplified approach allowed by IFRS 9 standard the group assesses and writes off the amount of expected credit losses from accounts receivables. There are no significant financing components contained into Bittiums' accounts receivables.

For assessing the expected credit losses, Bittium applies a provision matrix that is based on historical realized loss rates adjusted by forward looking estimates of lifetime of accounts receivables. All the components of the provision matrix are updated for each reporting date. The expected credit losses are presented in the group of provisions in the balance sheet. The changes in the expected credit losses are presented in the profit and loss statement.

## Cash and Short-Term Deposits

Cash comprises cash on hand, bank deposits and other highly liquid investments with low risk. Assets classified as cash and short-term deposits have a maximum maturity of three months from the date of acquisition. Cash and bank deposits are measured at amortized cost, the short-term investment portfolio is assessed at fair value through statement of income.

## Financial Liabilities

Financial liabilities include trade and other payables, loans and other financial liabilities. All financial liabilities are measured at amortized cost. The loans are initially recognized at fair value. Transaction costs are entered in the profit and loss. Subsequently the loans are measured at the amortized cost by using the effective interest rate.

Financial liabilities are not reclassified after the initial recognition. Non-current financial liabilities are due after one year whereas the current financial liabilities are due within one year.

Financial liabilities are disposed as the liability related to the contract is declared void, cancelled or due. As the terms of the financial liability are substantially changed or when a new contract with the existing creditor is made, the change is entered as disposal of the old liability and as an entry of a new liability. The changes in the balance sheet values are entered through profit and loss.

## 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 over their expected useful lives. Part of the capitalized R&D investments is depreciated based on 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. The other forthcoming revisions or amendments of the standards are not expected to have significant impact on the consolidated financial statements.

# 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 techno-

logy solutions for biosignal measuring. For its customers Bittium 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 Directors 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, 2021

1000 EUR	Finland	Other Europe	Americas	Asia	Eliminations	Group total
<b>Net sales</b>						
Sales to external customers	41,391	15,615	29,334	528		86,868
Non-current assets	78,924		208			79,133
<b>Total non-current assets *)</b>	<b>78,924</b>		<b>208</b>			<b>79,133</b>
*) does not include deferred tax assets						
<b>Capital expenditure</b>						
Tangible assets	-1,879		-41			-1,919
Intangible assets	989					989
Investments	-224					-224
Goodwill			16			16
Non-current receivables	-125					-125

### Geographical areas

Jan. 1–Dec. 31, 2020

1000 EUR	Finland	Other Europe	Americas	Asia	Eliminations	Group total
<b>Net sales</b>						
Sales to external customers	38,315	26,209	13,499	362		78,385
Non-current assets	80,163		233			80,396
<b>Total non-current assets *)</b>	<b>80,163</b>		<b>233</b>			<b>80,396</b>
*) does not include deferred tax assets						
<b>Capital expenditure</b>						
Tangible assets	-1,321		-107			-1,428
Intangible assets	7,151					7,151
Investments	-154					-154
Goodwill			-18			-18
Non-current receivables	-146					-146

### Information of primary customers

Group's revenues from the 10 largest customers in period 1.1–31.12.2021 were EUR 71.5 million (EUR 64.2 million in 2020) representing 82.3 per cent of the net sales (82.0 per cent in 2020).

# Notes to the Consolidated Financial Statements

## 2. DISCONTINUED OPERATIONS

In 2021 or in the comparative period 2020 the Group did not have discontinued operations to be reported according to the IFRS standards.

## 3. NET SALES

1000 EUR	2021	2020
Services	23,815	25,261
Products	63,053	53,124
Other		
<b>Total</b>	<b>86,868</b>	<b>78,385</b>

The services include the project sales with fixed prices and with hourly rates.

The product sales includes all the sales affected by products:

the sales of products, the product maintenance, extended warranties and licence sales.

### Construction contracts

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. The turnover of construction contracts is, depending on the contract elements, recognized over time or at point in time. The principles of revenue recognition based on IFRS 15 are presented in detail in the accounting principles of the consolidated financial statements.

Income recognized from construction contracts	9,245	11,246
Net sales other	77,623	67,138
<b>Total</b>	<b>86,868</b>	<b>78,385</b>
Income recognized over time based on the stage of completion of long-term construction contracts	9,245	11,246
Revenue recognized from long-term construction contracts in progress amounted to	7,785	7,364
Advances received from long-term construction contracts recognized in the balance sheet amounted to	435	661
Receivables recognized from long-term construction contracts amounted to	1,421	2,539

The net sales by geographical areas is presented in the Note 1.

**4. OTHER OPERATING INCOME**

<b>1000 EUR</b>	<b>2021</b>	<b>2020</b>
Government grants	2,526	792
Other income	67	59
<b>Total</b>	<b>2,594</b>	<b>852</b>

**5. OTHER OPERATING EXPENSES**

External services	1,647	1,792
Voluntary staff expenses	963	794
Premises expenses	965	870
Travel expenses	422	381
IT expenses	3,287	3,001
Other expenses	6,640	5,622
<b>Total</b>	<b>13,923</b>	<b>12,459</b>
Expense relating to short-term leases under IFRS 16	150	100
<b>Auditor's charges</b>		
<b>Ernst &amp; Young</b>		
Auditing	58	65
Tax advice	0	12
Other services	2	2
<b>Total</b>	<b>60</b>	<b>79</b>
<b>Others</b>		
Auditing	21	20
Tax advice	8	3
Other services		
<b>Total</b>	<b>29</b>	<b>23</b>

# Notes to the Consolidated Financial Statements

1000 EUR	2021	2020
<b>6. DEPRECIATIONS AND IMPAIRMENTS</b>		
<b>Depreciations</b>		
Intangible assets		
Capitalized development expenditure	5,503	6,145
Intangible rights	351	442
Customer relations and technology	234	234
Other intangible assets	352	352
Tangible assets		
Buildings and constructions	735	829
Machinery and equipment	3,277	3,398
<b>Total</b>	<b>10,452</b>	<b>11,400</b>
<b>Depreciation on property, plant and equipment acquired by leases</b>		
Buildings and constructions	395	434
Machinery and equipment	1,033	1,028
<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	664	673
<b>Personnel expenses 1000 EUR</b>		
Personnel expenses		
Managing Director	320	274
Board of Directors *	169	214
Other salaries and wages	37,146	36,440
Salaries capitalized to development expenses	-5,776	-10,766
<b>Total</b>	<b>31,860</b>	<b>26,163</b>
Pension expenses, defined contribution plans	5,854	5,150
Other personnel expenses	1,278	1,171
<b>Total</b>	<b>38,992</b>	<b>32,484</b>

\*Including the share-based incentives. Further information in the Note 32.

1000 EUR	2021	2020
<b>8. RESEARCH AND DEVELOPMENT EXPENSES</b>		
The research and development expenses total	19,848	22,821
Capitalized to the balance sheet	-7,009	-13,579
Recognition as an asset	5,503	6,145
<b>The expensed research and development expenses recognized in the income statement amounted to</b>	<b>18,342</b>	<b>15,388</b>
<b>9. FINANCIAL EXPENSES (NET)</b>		
Interest expenses	-352	-321
Interest income		
Dividend income	0	0
Exchange gains and losses	-343	-35
Change of financial assets and liabilities at fair value through profit or loss		3
Other financial expenses	-65	-223
Other financial income	71	141
<b>Total</b>	<b>-688</b>	<b>-434</b>
Interest expenses on lease liabilities under IFRS 16	-21	-25
<b>10. INCOME TAXES</b>		
Income taxes, current year	-1	-87
Other taxes	-8	-12
Income taxes, previous years	-21	-16
Deferred taxes	819	651
<b>Total</b>	<b>790</b>	<b>537</b>
A reconciliation between the effective tax rate and domestic tax rate (20.0 percent) of the Group:		
<b>Profit before taxes</b>	<b>2,535</b>	<b>1,644</b>
Tax at the domestic tax rate	-594	-665
Effect of tax rates of foreign subsidiaries	-8	-2
Taxes for prior years	-21	-16
Tax free income	262	214
Non-deductible expenses	-541	-605
Utilization of deferred tax assets from previous years	957	971
Reassessment of deferred tax assets	819	651
The deferred tax assets from tax losses		
Others	-83	-12
<b>Income taxes in the consolidated income statement</b>	<b>790</b>	<b>537</b>

# Notes to the Consolidated Financial Statements

	2021	2020
<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 (1,000 EUR)	3,324	2,181
Profit attributable to the equity holders of the parent, discontinued operations (1,000 EUR)	0	0
Profit attributable to the equity holders of the parent, continuing and discontinued operations (1,000 EUR)	3,324	2,181
Weighted average number of ordinary shares during the financial year (1,000 PCS)	35,700	35,693
<b>Basic earnings per share, continuing operations, EUR</b>	<b>0.093</b>	<b>0.061</b>
<b>Basic earnings per share, discontinued operations, EUR</b>	<b>0.000</b>	<b>0.000</b>
<b>Basic earnings per share, continuing and discontinued operations, EUR</b>	<b>0.093</b>	<b>0.061</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. 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 (1,000 EUR)	3,324	2,181
Profit attributable to the equity holders of the parent, discontinued operations (1,000 EUR)	0	0
Profit attributable to the equity holders of the parent, continuing and discontinued operations (1,000 EUR)	3,324	2,181
Weighted average number of ordinary shares during the financial year (1,000 PCS)	35,700	35,693
Effect of dilution (1,000 PCS)		
Weighted average number of ordinary shares during the financial year (1,000 PCS)	35,700	35,693
<b>Diluted earnings per share, continuing operations, EUR</b>	<b>0.093</b>	<b>0.061</b>
<b>Diluted earnings per share, discontinued operations, EUR</b>	<b>0.000</b>	<b>0.000</b>
<b>Diluted earnings per share, continuing and discontinued operations, EUR</b>	<b>0.093</b>	<b>0.061</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	Dec. 31, 2021	Dec. 31, 2020
<b>Land and water</b>		
Acquisition cost Jan. 1	1,091	1,091
Additions during the period		
<b>Acquisition cost at the end of the period</b>	<b>1,091</b>	<b>1,091</b>
<b>Carrying amount at the end of the period</b>	<b>1,091</b>	<b>1,091</b>
<b>Buildings and constructsures</b>		
Acquisition cost Jan. 1	19,436	19,081
Translation differences	11	-30
Additions during the period	2	385
Disposals during the period		
Acquisition of business unit		
Transfer to assets		
<b>Acquisition cost at the end of the period</b>	<b>19,450</b>	<b>19,436</b>
Accumulated depreciations Jan. 1	-5,094	-4,265
Translation differences	-10	16
Depreciation for the period	-735	-845
Depreciations on disposals		
<b>Carrying amount at the end of the period</b>	<b>13,610</b>	<b>14,342</b>
No revaluations or capitalizations of interest costs have been done.		
<b>Machinery and equipment</b>		
Acquisition cost Jan. 1	60,197	57,744
Translation differences	-18	12
Additions during the period	2,117	2,442
Acquisition of business unit		
Disposals during the period		
Transfer to assets		
<b>Acquisition cost at the end of the period</b>	<b>62,297</b>	<b>60,197</b>
Accumulated depreciations Jan. 1	-52,908	-49,503
Translation differences	16	-17
Depreciation for the period	-3,303	-3,388
Depreciations on disposals		
<b>Carrying amount at the end of the period</b>	<b>6,102</b>	<b>7,289</b>
<b>Other tangible assets</b>		
Acquisition cost Jan. 1	88	88
Additions during the period		
Disposals during the period		
<b>Acquisition cost at the end of the period</b>	<b>88</b>	<b>88</b>
Translation differences		
Accumulated depreciations Jan. 1		
Depreciation for the period		
<b>Carrying amount at the end of the period</b>	<b>88</b>	<b>88</b>

# Notes to the Consolidated Financial Statements

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
<b>Property, plant and equipment total</b>		
Acquisition cost Jan. 1	80,812	78,003
Translation differences	-7	-18
Additions during the period	2,120	2,827
Acquisition of business unit	0	0
Disposals during the period	0	0
Transfer to assets	0	0
<b>Acquisition cost at the end of the period</b>	<b>82,925</b>	<b>80,812</b>
Accumulated depreciations Jan. 1	-58,002	-53,767
Translation differences	6	-2
Depreciation for the period	-4,038	-4,233
Depreciations on disposals	0	0
<b>Carrying amount at the end of the period</b>	<b>20,891</b>	<b>22,810</b>
<b>Leases</b>		
The Group had the following amounts of property, plant and equipment acquired by finance leases:		
<b>Machinery and equipment</b>		
Acquisition cost	10,971	9,856
Accumulated depreciations	-9,356	-8,322
Carrying amount at the end of the period	1,615	1,533
<b>Buildings and constructsures</b>		
Acquisition cost	1,835	1,826
Accumulated depreciations	-1,214	-868
Carrying amount at the end of the period	621	958

Additions of property, plant and equipment include assets acquired by leases of EUR 1.1 million in 1.1.–31.12.2021 (EUR 1.4 million in 2020).

## 13. INTANGIBLE ASSETS

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
<b>Capitalized development expenses</b>		
Acquisition cost Jan. 1	60,945	47,366
Additions during the period	7,009	13,579
Acquisition of business unit		
<b>Acquisition cost at the end of the period</b>	<b>67,954</b>	<b>60,945</b>
Accumulated depreciations Jan. 1	-14,385	-8,239
Depreciation for the period	-5,503	-6,145
<b>Carrying amount at the end of the period</b>	<b>48,067</b>	<b>46,560</b>
<b>Intangible rights</b>		
Acquisition cost Jan. 1	5,313	5,107
Additions during the period	406	206
Disposals during the period		
Acquisition of business unit		
Transfer to assets		
<b>Acquisition cost at the end of the period</b>	<b>5,719</b>	<b>5,313</b>
Accumulated depreciations Jan. 1	-4,335	-3,893
Depreciation for the period	-351	-442
<b>Carrying amount at the end of the period</b>	<b>1,032</b>	<b>978</b>
<b>Customer relations and technology</b>		
Acquisition cost Jan. 1	1,780	1,780
Acquisition of business unit		
<b>Acquisition cost at the end of the period</b>	<b>1,780</b>	<b>1,780</b>
Accumulated depreciations Jan. 1	-1,122	-888
Depreciation for the period	-234	-234
<b>Carrying amount at the end of the period</b>	<b>425</b>	<b>659</b>

## Notes to the Consolidated Financial Statements

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
<b>Other intangible assets</b>		
Acquisition cost Jan. 1	4,855	4,317
Translation differences	8	-9
Additions during the period	14	546
Transfer to assets		
<b>Acquisition cost at the end of the period</b>	<b>4,876</b>	<b>4,855</b>
Accumulated depreciations Jan. 1	-4,098	-3,747
Translation differences	-8	9
Depreciation for the period	-352	-360
<b>Carrying amount at the end of the period</b>	<b>418</b>	<b>757</b>
<b>Intangible assets total</b>		
Acquisition cost Jan. 1	72,893	58,570
Translation differences	8	-9
Additions during the period	7,429	14,332
Acquisition of business unit	0	0
Disposals during the period	0	0
Transfer to assets	0	0
<b>Acquisition cost at the end of the period</b>	<b>80,329</b>	<b>72,893</b>
Accumulated depreciations Jan. 1	-23,940	-16,767
Translation differences	-8	9
Depreciation for the period	-6,439	-7,181
<b>Carrying amount at the end of the period</b>	<b>49,943</b>	<b>48,953</b>
<b>Goodwill</b>		
Acquisition cost Jan. 1	5,807	5,825
Translation differences	16	-18
Additions during the period		
Disposals during the period		
<b>Carrying amount at the end of the period</b>	<b>5,823</b>	<b>5,807</b>

### Impairment Test

The cash flow forecasts employed in impairment test calculations are based on the budgets for 2022 and the Long Range Plans (LRP) for 2023-2025 approved by management for the strategical period and management estimations for 2026. 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 structure. WACC calculated according to these parameters amounted to 9.8% (9.8% in 2020).

In 2021 business did not reach the forecasted cash flow. This was mainly because of increase in working capital and slower than expected growth and profitability in the business. The growth in business was still delayed due to Covid-19-Pandemic and the global shortage of components during the fiscal year. That results with lower expectations of future operating cash flows.

The impairment test is done when needed, but at least once a year. Impairment tests made in December 2021 did not indicate need for impairment bookings. Recoverable amounts exceed significantly the book

value of goodwill and other assets. The terminal value represents 81% of business value. The growth in business was slower than expected due to Covid-19-Pandemic, which moves 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% or the discount factor was increased by 5%. 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 2021

In 2021 or in the comparative period 2020 the Group did not have acquisitions to be reported according to the IFRS standards.

## 15. SHARES IN ASSOCIATED COMPANIES

Bittium Group owns 25 % of Coronaria Analyysipalvelut Oy shares in the end of 2021. 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 using the information that was available for the Bittium financial statements. The domicile of the company is Oulu.

Bittium Group owns 25 % of evismo AG shares in the end of 2021. evismo AG provides medical remote diagnostics services in Switzerland. evismo AG has been consolidated using the equity method using the information that was available for the Bittium financial statements. The domicile of the company is Zurich.

1000 EUR	2021	2020
<b>Shares in associated companies</b>		
Coronaria Analyysipalvelut Oy	1,104	1,241
evismo AG	157	244
Other associated companies	22	22
<b>Assets total</b>	<b>1,283</b>	<b>1,507</b>
Coronaria Analyysipalvelut Oy		
Current assets	1,047	1,525
Non-current assets	1,523	1,216
Non-current liabilities	102	127
Turnover	5,563	5,315
Net profit	578	663
evismo AG		
Current assets	775	69
Non-current assets	72	74
Non-current liabilities	1,013	39
Turnover	361	215
Net profit	-264	-177
<b>Shares in associated companies</b>		
Acquisition cost Jan. 1	1,507	1,661
Translation differences	-6	0
Additions during the period	144	99
Disposals during the period	-363	-253
<b>Carrying amount at the end of the period</b>	<b>1,283</b>	<b>1,507</b>

# Notes to the Consolidated Financial Statements

## 16. OTHER FINANCIAL ASSETS

1000 EUR	2021	2020
At 1 January	112	112
Additions		
Disposals		
<b>At the closing date</b>	<b>112</b>	<b>112</b>

## 17. DEFERRED TAX LIABILITIES AND ASSETS

1000 EUR	Jan. 1, 2021	Recognized in the income statement	Acquisitions and disposals of subsidiaries	Dec. 31, 2021
<b>Deferred tax assets</b>				
Unutilized losses in taxation	526			526
Other items	5,435	784		6,219
<b>Total</b>	<b>5,961</b>	<b>784</b>	<b>0</b>	<b>6,745</b>

On December 31, 2021 the Group had 69.2 million euros tax losses and non-depreciated depreciations of which it had not booked deferred tax receivables in full amount due to the uncertainty of the future profits, their timing, taxation or location. The amount of these non booked deferred tax receivables is approximately 13.8 million euros. The aging of these tax losses begins from year 2022.

1000 EUR	Jan. 1, 2021	Recognized in the income statement	Acquisitions and disposals of subsidiaries	Dec. 31, 2021
<b>Deferred tax liabilities</b>				
Customer and technology assets	273	-64	0	208
<b>Total</b>	<b>273</b>	<b>-64</b>	<b>0</b>	<b>208</b>



1000 EUR	Jan. 1, 2020	Recognized in the income statement	Acquisitions and disposals of subsidiaries	Dec. 31, 2020
<b>Deferred tax assets</b>				
Unutilized losses in taxation	526			526
Other items	4,947	488		5,435
<b>Total</b>	<b>5,473</b>	<b>488</b>	<b>0</b>	<b>5,961</b>

On December 31, 2020 the Group had 72.8 million euros tax losses and non-depreciated depreciations of which it had not booked deferred tax receivables in full amount due to the uncertainty of the future profits, their timing, taxation or location. The amount of these non booked deferred tax receivables is approximately 14.6 million euros. The aging of these tax losses begins from year 2021.

1000 EUR	Jan. 1, 2020	Recognized in the income statement	Acquisitions and disposals of subsidiaries	Dec. 31, 2020
<b>Deferred tax liabilities</b>				
Customer and technology assets	337	-64	0	273
<b>Total</b>	<b>337</b>	<b>-64</b>	<b>0</b>	<b>273</b>

# Notes to the Consolidated Financial Statements

## 18. INVENTORIES

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
Raw materials and supplies	15,326	13,419
Work in progress	2,145	4,785
Finished products	1,133	2,065
Other inventories	233	669
<b>Total</b>	<b>18,837</b>	<b>20,939</b>

## 19. TRADE AND OTHER RECEIVABLES (CURRENT)

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
Non-current receivables	1,081	1,207
<b>Non-current receivables total</b>	<b>1,081</b>	<b>1,207</b>
Current receivables:		
Trade receivables	34,536	20,486
Receivables from construction contracts	1,421	2,540
Prepaid expenses and accrued income	2,272	2,047
Other receivables	1,167	1,008
<b>Current receivables total</b>	<b>39,396</b>	<b>26,080</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 0.6 million (EUR 0.0 million 2020).

Age distribution of accounts receivable		
Current	32,614	18,417
Aged Overdue Amounts		
0-3 months	1,770	1,529
4-6 months	107	19
7-12 months	44	218
> 12 months	0	302
<b>Total</b>	<b>34,536</b>	<b>20,486</b>

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

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
<b>Interest rate funds</b>		
Balance sheet value on Jan. 1	5,689	5,675
Disposals		
Changes in fair value	44	14
<b>Balance sheet value at the end of the period</b>	<b>5,732</b>	<b>5,689</b>
<b>Financial assets at fair value through profit or loss total</b>		
Balance sheet value on Jan. 1	5,689	5,675
Disposals		
Changes in fair value	44	14
<b>Balance sheet value at the end of the period</b>	<b>5,732</b>	<b>5,689</b>
<b>21. CASH AND SHORT-TERM DEPOSITS</b>		
Cash and short-term deposits	16,306	18,968
<b>Total</b>	<b>16,306</b>	<b>18,968</b>
<b>Cash and cash equivalents at consolidated cash flow statement consist of:</b>		
Interest rate funds	5,732	5,689
Cash and short-term deposits	16,306	18,968
<b>Total</b>	<b>22,039</b>	<b>24,657</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, 2020	35,693	12,941	0	25,953	38,894
On December 31, 2021	35,702	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 35,702,264. 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 0,04 per share as dividend based on the adopted balance sheet for the financial period of January 1, 2021–December 31, 2021.

## 23. SHARE-BASED PAYMENT PLANS

### Share-based Remuneration of the Board of Directors

During the financial year 2021 the group has paid a part of the total remuneration of the board of directors of Bittium Corporation 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	May 14, 2021
Total amount of the executed shares	8,655
Share price at the grant date, EUR	6.57
Total expenses of the reward, EUR million	0.057
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

### Share-based Remuneration of the Management

During the financial year 2021 the group has paid share-based incentive scheme remuneration for the Management of Bittium Corporation by the shares of Bittium. The half of the remuneration was paid by cash and half by the new shares issued in directed share issue without consideration. The main terms of the remuneration arrangement are presented in the table below.

#### Share-based Remuneration of the Management, PSP 2020–2022

Form of the reward	Shares
Grant date	March 24, 2021
Total amount of the executed shares	9,098
Share price at the grant date, EUR	6.40
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 for two years.
Execution	In shares and in cash

#### Share-based Remuneration of the Management, PSP 2021–2023

The Management of Bittium group has a Share-Based Incentive Scheme. The Performance Share Plan (PSP) consists of three annually commencing three-year performance share plans, PSP 2020–2022, PSP 2021–2023 and PSP 2022–2024, each with a one-year performance period, which is followed by the payment of the share reward and a two-year transfer restriction period. The commencement of the following two plans, PSP 2021–2023 and PSP 2022–2024, is, however, subject to a separate Board decision. The performance measures based on which the potential share reward under PSP 2020–2022 will be paid are the revenue growth and cash flow before financial items of Bittium. A precondition for the payment of the share reward is, in addition, that the employment relationship of the participant with Bittium continues at the time the reward is paid. The potential reward will be paid in shares of Bittium.

Form of the reward	Shares
Grant date	February 10, 2021
Total amount of the shares at the most	111,900
Share price at the grant date, EUR	6.87
Total expenses of the reward at the most, EUR million	0.8
Execution	In shares and in cash

# Notes to the Consolidated Financial Statements

## Share-based Remuneration of the Board of Directors

During the financial year 2020 the group has paid a part of the total remuneration of the board of directors of Bittium Corporation 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	May 25, 2020
Total amount of the executed shares	4,776
Share price at the grant date, EUR	5.94
Total expenses of the reward, EUR million	0.028
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

Form of the reward	Shares
Grant date	June 26, 2020
Total amount of the executed shares	9,356
Share price at the grant date, EUR	6.41
Total expenses of the reward, EUR million	0.060
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

## Share-based Remuneration of the Management

### Share-based Remuneration of the Management , PSP 2020–2022

The Management of Bittium group has a Share-Based Incentive Scheme. The Performance Share Plan (PSP) consists of three annually commencing three-year performance share plans, PSP 2020–2022, PSP 2021–2023 and PSP 2022–2024, each with a one-year performance period, which is followed by the payment of the share reward and a two-year transfer restriction period. The commencement of the following two plans, PSP 2021–2023 and PSP 2022–2024, is, however, subject to a separate Board decision. The performance measures based on which the potential share reward under PSP 2020–2022 will be paid are the revenue growth and cash flow before financial items of Bittium. A precondition for the payment of the share reward is, in addition, that the employment relationship of the participant with Bittium continues at the time the reward is paid. The potential reward will be paid in shares of Bittium.

Form of the reward	Shares
Grant date	March 2, 2020
Total amount of the shares at the most	110 000
Share price at the grant date, EUR	5.63
Total expenses of the reward at the most, EUR million	0.6
Vesting conditions	Ownership of the shares was transferred to the recipients at once but the recipients have agreed the lock-up undertaking for two years.
Execution	In shares and in cash

**24. PROVISIONS**

1000 EUR	Guarantee provisions	Expected credit losses	Others	Total
December 31, 2020	2,379	202	0	2,580
Increase in provisions	1,223	117		1,340
Utilized provisions	-168			-168
Reversal of utilized provisions	-229			-229
<b>December 31, 2021</b>	<b>3,205</b>	<b>319</b>	<b>0</b>	<b>3,523</b>
Current provisions	3,205	319	0	3,523
<b>Total</b>	<b>3,205</b>	<b>319</b>	<b>0</b>	<b>3,523</b>

**25. FINANCIAL LIABILITIES**

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
<b>Non-current loans</b>		
Non-current loans from financial institutions	20,000	20,000
Finance lease liabilities	1,111	1,391
<b>Total</b>	<b>21,111</b>	<b>21,391</b>
<b>Current loans</b>		
Lease liabilities	1,152	1,130
<b>Total</b>	<b>1,152</b>	<b>1,130</b>
Repayment schedule of long-term loans:		
2022		761
2023	640	296
2024	20,263	20,171
2025	122	83
Later	86	81
<b>Total</b>	<b>21,111</b>	<b>21,391</b>

## Notes to the Consolidated Financial Statements

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

<b>1000 EUR</b>	<b>Dec. 31, 2021</b>	<b>Dec. 31, 2020</b>
EUR	21,111	21,391
<b>Total</b>	<b>21,111</b>	<b>21,391</b>

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

<b>1000 EUR</b>	<b>Dec. 31, 2021</b>	<b>Dec. 31, 2020</b>
EUR	1,152	1,098
MXN		32
<b>Total</b>	<b>1,152</b>	<b>1,130</b>

Maturities of the finance lease liabilities:

<b>1000 EUR</b>	<b>Dec. 31, 2021</b>	<b>Dec. 31, 2020</b>
Lease liabilities - Minimum lease payments		
Within one year	1,190	1,176
After one year but no more than five years	1,060	1,350
After five years	100	104
Lease liabilities - Present value of minimum lease payments	2,263	2,521
Within one year	1,152	1,130
After one year but no more than five years	1,033	1,311
After five years	78	81
Future finance charges	86	108
<b>Total amount of finance lease liabilities</b>	<b>2,350</b>	<b>2,630</b>



## 26. CHANGES IN LIABILITIES ARISING FROM FINANCING ACTIVITIES

1000 EUR	Jan. 1, 2021	Cash flows	New leases	Dec 31, 2021
Lease and financing contracts	22,521	-1,375	1,117	22,263
<b>Total</b>	<b>22,521</b>	<b>-1,375</b>	<b>1,117</b>	<b>22,263</b>

## 27. TRADE AND OTHER PAYABLES

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
<b>Non-current liabilities</b>		
<b>Other non-current liabilities, non-interest bearing</b>		
Non-current advances received		
Other non-current liabilities, non-interest bearing	200	281
<b>Total</b>	<b>200</b>	<b>281</b>
<b>Current liabilities</b>		
<b>Trade and other payables</b>		
Trade liabilities	3,997	6,028
Accrued liabilities, deferred income	10,396	8,434
Other liabilities	8,746	3,669
<b>Total</b>	<b>23,140</b>	<b>18,131</b>

Material of accrued expenses and deferred income consists 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.

**Financial liabilities at fair value through profit or loss**

Liabilities based on derivatives		
Balance sheet value on Jan. 1		
Changes in fair value		
<b>Balance sheet value at the end of the period</b>	<b>0</b>	<b>0</b>

# Notes to the Consolidated Financial Statements

## 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% to 100% of the forecasted net position when net position exceeds EUR 1 million. The Group could also apply hedge accounting as defined in the IFRS 9 standard. Hedge accounting was not applied during 2021. At the end of the financial period the counter value of the hedged net position was EUR 5.0 million. During the financial year the amount of the hedged position has been changing between EUR 0.6–5.0 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, 2021 was EUR 3.5 million (EUR 2.6 million in 2020) from which dollar denominated equities of foreign subsidiaries was EUR 3.2 million (EUR 2.3 million in 2020).

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	2021	2020
Forward contracts		
Market value	21	17
Nominal value	5,000	600

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

1000 EUR	2021	2020
Long-term assets	0	0
Long-term liabilities	0	0
Current assets	8,688	4,590
Current liabilities	5,439	2,275

The table below describes the 10% 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	
	2021	2020	2021	2020
EUR appreciates	-300	-200	-300	-200
EUR depreciates	400	300	400	300

# Notes to the Consolidated Financial Statements

## 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	2021	2020
Fixed interest rate debts	2,263	2,521

The table below describes the interest rate risk of debts should there have been a  $\pm 1\%$  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	
	2021	2020	2021	2020
Loan stock January, 1	22 500	22 600		
Loan stock December, 31	22 300	22 500		
Average loan stock	22 400	22 600		
Change in interest	+/- 200	+/- 200	+/- 200	+/- 200

## 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.

	2021	2020
Stock shares	0.0%	0.0%
Bonds	46.1%	69.3%
Money market investments	53.9%	30.7%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>

The combined value of the above instruments during the financial period has been approximately EUR 5.7 million. At closing date their value was approximately EUR 5.7 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  $\pm 1\%$  change in a market rate of interest, other variables remain-ing 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 calculations 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	
	2021	2020	2021	2020
Interest investments	+/- 0	+/- 0	+/- 0	+/- 0

#### 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 89% 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 0.0 million which represents approximately 0.1% of the total accounts receivable.

During the past financial year the amount of recognized credit losses was approximately EUR 0.6 million (EUR 0.0 million in 2020). The amount of loans granted to affiliated companies were EUR 0.0 million at

the end of 2021 (EUR 0.0 million in 2020). Group did not have capital loans granted outside of the Group at the end of 2021 (EUR 0.0 million in 2020).

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. Bittium has EUR 20.0 million senior loan and EUR 10.0 million committed overdraft credit facility agreement with Nordea Bank Finland Plc. Maturity date for the senior loan is May 24, 2024 and the credit limit agreement is valid until May 24, 2024. Bittium has EUR 10.0 million committed overdraft credit facility agreement with OP Corporate Bank Plc valid until May 24, 2022. These agreements include customary covenants related to, among other things, equity ratio,

interest bearing debt to EBITDA, and transferring property and pledging. 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 2021 was EUR 0.2 million (EUR -2.1 million in 2020) and net gearing was 0.2% (-1.9% in 2020). The Group's solvency ratio at the end of 2021 was 72.4% (73.1% in 2020).

# Notes to the Consolidated Financial Statements

## 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 2021	Fair value 2021	Book value 2020	Fair value 2020
Financial assets					
Other financial assets	16	112	112	112	112
Deferred tax assets	17	6,745	6,745	5,961	5,961
Non-current receivables	19	1,081	1,081	1,207	1,207
Trade receivables and other receivables	19	39,396	39,396	26,080	26,080
Financial assets at fair value					
through profit or loss	20	5,732	5,732	5,689	5,689
Cash and cash equivalents	21	16,306	16,306	18,968	18,968
Currency forwards	20	21	21	17	17
Financial liabilities					
Bank loans	25	20,000	20,000	20,000	20,000
Finance lease liabilities	25	2,263	2,263	2,521	2,521
Trade payables and other debts	17, 24, 26	27,072	27,072	21,265	21,265
Currency forwards	27	0	0	0	0

### 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.

**29. ADJUSTMENTS TO NET CASH FROM OPERATING ACTIVITIES**

<b>1000 EUR</b>	<b>Dec. 31, 2021</b>	<b>Dec. 31, 2020</b>
Business transactions without payments		
Depreciations	10,452	11,400
Share of profits in associated companies	90	-33
Other adjustments	1,476	690
<b>Total</b>	<b>12,018</b>	<b>12,056</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:

<b>1000 EUR</b>	<b>Dec. 31, 2021</b>	<b>Dec. 31, 2020</b>
Not later than one year	34	54
Later than one year and not later than five years		
After five years		

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. IFRS 16 Leases standard has come into force on 1st of January 2019. According to the standard in principle all lease contracts of the Group are recognized as assets and liabilities in Group's Balance Sheet.

# Notes to the Consolidated Financial Statements

## 31. SECURITIES AND CONTINGENT LIABILITIES

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
Against own liabilities		
Floating charges		
Guarantee limits	3,032	117
Other contractual liabilities		
Falling due in the next year	1,427	2,281
Falling due after one year	1,368	1,175
Mortgages are pledged for liabilities totaled		
Other liabilities (guarantees issued)		
Material purchase commitments	18,240	11,483

## 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	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 Singapore Pte. Ltd.	Singapore	0.00	100.00

Information on the associated companies is presented in the Note 15.

### Related party transactions and balances:

1000 EUR		2021	2020
Associated companies			
	Net sales	1121	493
	Receivables	1,483	1,458
	Debts	250	300



1000 EUR	2021	2020
<b>Employee benefits for key management</b>		
Salaries and remuneration		
Managing director of the parent		
Hannu Huttunen 1.1.–31.12.2020, 1.1.–31.12.2021	280	241
<b>Total</b>	<b>280</b>	<b>241</b>
Remuneration of the members of the board of the parent, the financial committee and the managing directors of the business segments		
Erkki Veikkolainen 1.1.–31.12.2020, 1.1.–31.12.2021	30	31
Riitta Tiuraniemi 1.1.–31.12.2020, 1.1.–31.12.2021	21	20
Pekka Kemppainen 1.1.–31.12.2020, 1.1.–31.12.2021	17	18
Petri Toljamo 1.1.–15.6.2020, 14.4.–31.12.2021	14	6
Juha Putkiranta 1.1.–31.12.2020, 1.1.–14.04.2021	5	22
Seppo Mäkinen 1.1.–31.12.2020, 1.1.–14.04.2021	5	20
Veli-Pekka Paloranta 15.6.2020–31.12.2020, 1.1.–31.12.2021	20	10
<b>Total</b>	<b>112</b>	<b>127</b>
<b>Share-based incentives</b>		
Board of Directors	174	88
Management	117	0
<b>Total</b>	<b>291</b>	<b>88</b>
There have not been any business transactions or open balances between the related parties.		
<b>Members of the group executive board</b>	<b>1,044</b>	<b>1,064</b>

**Loans and guarantees to related party**

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

## Notes to the Consolidated Financial Statements

### 33. KEY RATIOS

	IFRS 2021	IFRS 2020	IFRS 2019	IFRS 2018	IFRS 2017
<b>INCOME STATEMENT, MEUR</b>					
Net sales, MEUR	86.9	78.4	75.2	62.8	51.6
Net sales change, %	10.8	4.2	19.7	21.7	-19.6
Operating profit/loss, MEUR	3.2	2.1	6.3	2.8	-6.2
% of net sales	3.7	2.7	8.4	4.5	-12.0
Profit/loss for continuing operations before taxes, MEUR	2.5	1.6	5.9	2.7	-5.8
% of net sales	2.9	2.1	7.9	4.3	-11.3
Profit for the year from continuing operations, MEUR	3.3	2.2	7.6	4.0	-4.8
% of net sales	3.8	2.8	10.2	6.4	-9.2
Profit after tax for the year from discontinued operations, MEUR					1.7
% of net sales	0.0	0.0	0.0	0.0	3.2
Profit for the year attributable to equity holders of the parent, MEUR	3.3	2.2	7.6	4.0	-3.1
% of net sales	3.8	2.8	10.2	6.4	-6.0
<b>BALANCE SHEET, MEUR</b>					
Non-current assets	85.9	86.4	80.5	65.9	46.7
Inventories	18.8	20.9	18.2	14.6	10.6
Current assets	61.4	50.7	55.6	51.9	81.1
Shareholders' equity	116.8	114.2	112.3	110.0	116.7
Non-current liabilities	21.5	21.9	22.1	1.9	1.5
Current liabilities	27.8	21.8	19.9	20.5	20.2
Balance sheet total	166.1	158.0	154.2	132.4	138.4

	IFRS 2021	IFRS 2020	IFRS 2019	IFRS 2018	IFRS 2017
<b>PROFITABILITY AND OTHER KEY FIGURES</b>					
Return on equity % (ROE)	2.9	1.9	6.9	3.6	-3.9
Return on investment % (ROI)	2.3	1.6	5.0	3.7	-4.5
Interest-bearing net liabilities, (MEUR)	0.2	-2.1	-12.6	-29.4	-61.7
Net gearing, %	0.2	-1.9	-11.2	-26.7	-52.9
Equity ratio, %	72.4	73.1	73.4	84.7	85.6
Gross investments, (MEUR)	9.6	17.4	21.3	21.2	20.1
Gross investments, % of net sales	11.1	22.2	28.3	33.8	38.8
R&D costs, (MEUR)	19.8	22.8	25.1	21.6	15.0
R&D costs, % of net sales	22.8	29.1	33.4	34.4	29.1
Average personnel during the period, parent and subsidiaries	664	673	665	660	614
<b>STOCK-RELATED FINANCIAL RATIOS</b>					
Earnings per share from continuing operations, EUR					
Basic earnings per share	0.093	0.061	0.214	0.113	-0.133
Diluted earnings per share	0.093	0.061	0.214	0.113	-0.133
Earnings per share from discontinued operations, EUR					
Basic earnings per share					0.046
Diluted earnings per share					0.046
Earnings per share from continuing and discontinued operations, EUR					
Basic earnings per share	0.093	0.061	0.214	0.113	-0.087
Diluted earnings per share	0.093	0.061	0.214	0.113	-0.087
Equity per share, EUR	3.27	3.20	3.15	3.08	3.27
Dividend per share EUR *)	0.04	0.03		0.15	0.3
Dividend per earnings, %	43.0	50.9		133.0	-344.6
P/E ratio	56.9	94.8	30.4	67.5	-64.9
Effective dividend yield, %	0.8	0.5		2.0	5.3
Market values of shares (EUR)					
Highest	7.89	7.67	8.03	8.10	7.88
Lowest	4.93	3.40	5.91	4.71	5.55
Average	6.18	5.74	6.70	5.98	6.55
At the end of period	5.30	5.79	6.50	7.61	5.65
Market value of the stock, (MEUR)	189.2	206.7	232.0	271.6	201.7
Trading value of shares					
MEUR	83.2	117.9	51.5	75.4	83.1
1000 PCS	13,464	20,557	7,689	12,608	12,684
Related to average number of shares %	37.7	57.6	21.5	35.3	35.5
Adjusted number of the shares at the end of the period (1000 PCS)					
	35,702	35,693	35,693	35,693	35,693
Adjusted number of the shares average for the period (1000 PCS)					
	35,700	35,693	35,693	35,693	35,693
Adjusted number of the shares average for the period diluted with stock options (1000 PCS)					
	35,700	35,693	35,693	35,693	35,693

\*) Proposal of the Board of Directors for 2021.

# 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>	=	$\frac{\text{Dividend per share} \times 100}{\text{Share issue adjusted share price at the end of the period}}$

### 34. SHAREHOLDINGS AND SHARES

#### Breakdown of Shares by Shareholding, December 31, 2021

Number of shares	Number of shareholders	Percentage of shareholders	Number of shares	Percentage of shares and votes
1 - 100	9,807	45.3	444,749	1.2
101 - 500	6,760	31.2	1,781,239	5.0
501 - 1000	2,172	10.0	1,709,143	4.8
1001 - 5000	2,182	10.1	4,901,504	13.7
5001 - 10000	371	1.7	2,698,400	7.6
10001 - 50000	302	1.4	5,956,743	16.7
50001 - 100000	32	0.1	2,129,711	6.0
100001 - 500000	30	0.1	7,344,977	20.6
500001 - 999999999999	7	0.0	8,735,798	24.5
<b>Total</b>	<b>21,663</b>	<b>100.0</b>	<b>35,702,264</b>	<b>100.0</b>
Nominee-registered	10		989,609	2.8

#### Breakdown of Shareholders by Shareholder Type, December 31, 2021

Shareholders by shareholder type	Number of shareholders	Percentage of shareholders	Number of shares	Percentage of shares and votes
Non-financial corporations	514	2.4	3,720,191	10.4%
Financial sector and insurance corporations	22	0.1	2,573,954	7.2%
General government	5	0.0	3,162,817	8.9%
Non-profit institutions	24	0.1	108,824	0.3%
Households	21,010	97.0	25,073,648	70.2%
Foreign owners	78	0.4	73,221	0.2%
Nominee-registered shares	10	0.0	989,609	2.8%
<b>Total</b>	<b>21,663</b>	<b>100.0</b>	<b>35,702,264</b>	<b>100.0%</b>

# Notes to the Consolidated Financial Statements

## Major Shareholders, December 31, 2021

	Number of shares	Percentage of shares and votes
<b>Number of shares total</b>	<b>35,702,264</b>	<b>100.0</b>
1. Veikkolainen Erkki, Chairman of the Board	1,741,908	4.9
2. Ponato Oy	1,501,300	4.2
3. Hulkko Juha	1,419,370	4.0
4. Varma Mutual Pension Insurance Company	1,365,934	3.8
5. Ilmarinen Mutual Pension Insurance Company	1,296,529	3.6
6. OP-Suomi Mikroyhtiöt Special Investment Fund	752,757	2.1
7. Hilden Kai	658,000	1.8
8. Special Investment Fund Aktia Mikromarkka	500,000	1.4
9. ELO Mutual Pension Insurance Company	500,000	1.4
10. Citibank Europe Plc	479,789	1.3
<b>Total</b>	<b>10,215,587</b>	<b>28.6</b>
Others (incl. nominee-registered shares)	25,486,677	71.4

## The Board and CEO

Veikkolainen Erkki, Chairman of the Board	1,741,908	4.9
Kemppainen Pekka, Member of the Board	3,655	0.0
Mäkinen Seppo, Member of the Board until April 14, 2021	0	0.0
Paloranta Veli-Pekka, Member of the Board	3,891	0.0
Putkiranta Juha, Member of the Board until April 14, 2021	0	0.0
Tiuraniemi Riitta, Member of the Board	10,626	0.0
Toljamo Petri, Member of the Board, from April 14, 2021 onwards	1,505	0.0
Huttunen Hannu, CEO	16,142	0.0
	<b>1,777,727</b>	<b>5.0</b>

# Income Statement, Parent

1000 EUR	Notes	2021	2020
<b>NET SALES</b>	1, 2	<b>808</b>	<b>894</b>
Other operating income	3	0	0
Personnel expenses	4	-1,177	-1,293
Depreciation and reduction in value	5	-14	-13
Other operating expenses	6	-823	-767
<b>OPERATING PROFIT</b>		<b>-1,205</b>	<b>-1,178</b>
Financial income and expenses	7	1,335	1,398
<b>PROFIT (LOSS) BEFORE APPROPRIATIONS AND TAXES</b>		<b>131</b>	<b>221</b>
<b>Appropriations</b>	8	<b>0</b>	<b>2,000</b>
<b>PROFIT (LOSS) BEFORE APPROPRIATIONS AND TAXES</b>		<b>131</b>	<b>2,221</b>
<b>Taxes</b>	9	<b>-3</b>	<b>0</b>
<b>NET PROFIT FOR THE FINANCIAL YEAR</b>		<b>127</b>	<b>2 221</b>

## Balance Sheet, Parent

1000 EUR	Notes	Dec. 31, 2021	Dec. 31, 2020
<b>ASSETS</b>			
Non-current assets			
Intangible assets	9	87	93
Tangible assets	10	71	71
Investments	11	39,750	39,750
Non-current assets total		39,908	39,914
Current assets			
Receivables			
Current receivables	12	98,508	92,939
Receivables total		98,508	92,939
Financing securities	13	5,732	5,689
Cash and bank deposits		9,957	16,243
Current assets total		114,198	114,871
<b>TOTAL ASSETS</b>		<b>154,105</b>	<b>154,785</b>
<b>SHAREHOLDERS' EQUITY AND LIABILITIES</b>			
Shareholders' equity			
Share capital	14	12,941	12,941
Invested non-restricted equity fund		25,953	25,953
Retained earnings		91,916	90,806
Net profit/loss for the year		127	2,221
Shareholders' equity total		130,938	131,921
Provisions			
Provisions, non-current	15		
Provisions, current			
Liabilities			
Non-current liabilities	16	20,000	20,000
Current liabilities		3,167	2,864
Liabilities total		23,167	22,864
<b>SHAREHOLDERS' EQUITY AND LIABILITIES TOTAL</b>		<b>154,105</b>	<b>154,785</b>



# Cash Flow, Parent

1000 EUR	2021	2020
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>		
Profit (loss) before taxes +/-	131	2,221
Adjustments		
Depreciation according to plan +	14	13
Effects of non-cash business activities	0	-2 136
Financial income and expenses +/-	-1,335	-1,398
Cash flow before change in net working capital	-1,191	-1,300
Change in net working capital		
Change in interest-free short-term receivables	40	94
Change in interest-free short-term payables	-68	-109
Cash flow before financing activities	-1,219	-1,316
Interest paid -	-773	-568
Dividends received +	0	0
Interest received +	2,105	1,966
<b>Net cash from operating activities</b>	<b>113</b>	<b>82</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>		
Purchase of tangible and intangible assets -	-8	-14
<b>Net cash used in investing activities</b>	<b>-8</b>	<b>-14</b>
<b>CASH FLOW FROM FINANCIAL ACTIVITIES</b>		
Change in interest-free short-term financial receivables in Group	-7,610	-20,674
Change in interest-free short-term financial payables in Group	372	-1,210
Received Group contributions	2,000	11,100
Dividend paid and capital repayment	-1,110	0
<b>Net cash used in financial activities</b>	<b>-6,348</b>	<b>-10,784</b>
<b>NET CHANGE IN CASH AND CASH EQUIVALENTS</b>	<b>-6,243</b>	<b>-10,716</b>
Cash and cash equivalents at beginning of period	21,932	32,648
Cash and cash equivalents at end of period	15,690	21,932
Change in cash and cash equivalents in balance sheet	-6,243	-10,716

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

# Accounting Principles for the Preparation of Financial Statements, Parent Company

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	2021	2020
<b>1. NET SALES BY SEGMENTS</b>		
Other functions	808	894
<b>Total</b>	<b>808</b>	<b>894</b>
<b>2. NET SALES BY MARKET AREAS</b>		
Europe	691	809
Americas	117	85
Asia		
<b>Total</b>	<b>808</b>	<b>894</b>
<b>3. OTHER OPERATING INCOME</b>		
Other operating income	0	0
<b>Total</b>	<b>0</b>	<b>0</b>
<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	320	241
Board of Directors	169	214
Other salaries and wages	551	678
<b>Total</b>	<b>1,040</b>	<b>1,133</b>
Pension expenses	117	140
Other social expenses	20	20
<b>Total</b>	<b>1,177</b>	<b>1,293</b>
* The Board of Directors salaries include the share-based compensation.		
<b>5. DEPRECIATION AND REDUCTION IN VALUE</b>		
Intangible rights	14	13
Other capitalized long-term expenditures	0	0
Machinery and equipment	0	0
<b>Total</b>	<b>14</b>	<b>13</b>

# Notes to the Financial Statements of the Parent Company

1000 EUR	2021	2020
<b>6. OTHER OPERATING CHARGES</b>		
IT equipment and SW expenses	42	78
Premises expenses	17	17
Administrative services	292	263
Travel expenses	14	21
Voluntary staff expenses	14	13
Other business expenses	444	376
<b>Total</b>	<b>823</b>	<b>767</b>
Auditor's charges		
Auditing	28	23
Tax advice	0	2
Other services	2	0
<b>Total</b>	<b>30</b>	<b>25</b>
<b>7. FINANCIAL INCOME AND EXPENSES</b>		
Income from investments		
From Group companies		
From others	48	143
<b>Total</b>	<b>48</b>	<b>143</b>
Other interest and financial income		
From Group companies	2,005	1,717
From others	43	107
<b>Total</b>	<b>2,048</b>	<b>1,824</b>
Other interest and financial expenses		
To Group companies	0	0
To others	761	569
<b>Total</b>	<b>761</b>	<b>569</b>
Reduction in value of investment	0	0
<b>Net financial income and expenses</b>	<b>1,335</b>	<b>1,398</b>
Net financial income and expenses including exchange gains and losses	-13	-24
<b>8. APPROPRIATIONS</b>		
Received Group contributions	0	2,000

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
<b>9. INTANGIBLE ASSETS</b>		
<b>Intangible rights</b>		
Acquisition cost Jan. 1	334	320
Investments during the period	6	14
Disposals during the period		
<b>Acquisition cost at the end of the period</b>	<b>340</b>	<b>334</b>
Accumulated depreciations Jan. 1	-241	-228
Depreciation for the period	-14	-13
<b>Book value at the end of the period</b>	<b>86</b>	<b>93</b>
<b>Other capitalized long-term expenditures</b>		
Acquisition cost Jan. 1	6	6
Investments during the period		
<b>Acquisition cost at the end of the period</b>	<b>6</b>	<b>6</b>
Accumulated depreciations Jan. 1	-6	-6
Depreciation for the period		
<b>Book value at the end of the period</b>		
<b>Intangible assets total</b>		
Acquisition cost Jan. 1	340	340
Investments during the period	6	14
<b>Acquisition cost at the end of the period</b>	<b>347</b>	<b>354</b>
Accumulated depreciations Jan. 1	-247	-247
Depreciation for the period	-14	-13
<b>Book value at the end of the period</b>	<b>86</b>	<b>94</b>

# Notes to the Financial Statements of the Parent Company

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
<b>10. TANGIBLE ASSETS</b>		
<b>Machinery and equipment</b>		
Acquisition cost Jan. 1	6	6
Investments during the period		
Disposals during the period		
<b>Acquisition cost at the end of the period</b>	<b>6</b>	<b>6</b>
Accumulated depreciations Jan. 1	-5	-5
Depreciation for the period	0	0
<b>Book value at the end of the period</b>	<b>0</b>	<b>0</b>
<b>Other tangible assets</b>		
Acquisition cost Jan. 1	71	71
<b>Acquisition cost Dec. 31</b>	<b>71</b>	<b>71</b>
<b>Book value at the end of the period</b>	<b>71</b>	<b>71</b>
<b>Tangible assets total</b>		
Acquisition cost Jan. 1	77	77
Investments during the period		
<b>Acquisition cost at the end of the period</b>	<b>77</b>	<b>77</b>
Accumulated depreciations Jan. 1	-5	-5
Depreciation for the period	0	0
<b>Book value at the end of the period</b>	<b>71</b>	<b>71</b>
<b>11. INVESTMENTS</b>		
<b>Investments in subsidiaries</b>		
Acquisition cost Jan. 1	39,749	39,749
<b>Book value at the end of the period</b>	<b>39,749</b>	<b>39,749</b>
<b>Investments in other shares</b>		
Acquisition cost Jan. 1	1	1
<b>Book value at the end of the period</b>	<b>1</b>	<b>1</b>
<b>Investments total</b>		
Acquisition cost Jan. 1	39,750	39,750
<b>Book value at the end of the period</b>	<b>39,750</b>	<b>39,750</b>

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
<b>12. CURRENT RECEIVABLES</b>		
Accounts receivable		
From Group companies	1	27
<b>Total</b>	<b>1</b>	<b>27</b>
Other receivables		
From Group companies	98,455	90,845
From others	25	15
<b>Total</b>	<b>98,480</b>	<b>90,860</b>
Prepaid expenses and accrued income		
From Group companies	0	2,000
From others	27	51
<b>Total</b>	<b>27</b>	<b>2,051</b>
<b>Current receivables total</b>	<b>98,508</b>	<b>92,939</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	5,732	5,689
<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	25,953
Share issue		
<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	91,916	90,806
Dividend distribution	0	0
Net profit for the period	127	2,221
<b>Retained earnings at the end of the period</b>	<b>92,044</b>	<b>93,026</b>
Distributable earnings at the end of the period	117,997	118,980
<b>Shareholders' equity total</b>	<b>130,938</b>	<b>131,921</b>

# Notes to the Financial Statements of the Parent Company

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
<b>15. PROVISIONS</b>		
Provisions		
Provisions, current		
<b>Total</b>		
<b>16. LIABILITIES</b>		
<b>Current liabilities</b>		
Accounts payable		
To Group companies	7	0
To others	30	77
<b>Total</b>	<b>37</b>	<b>77</b>
Other short-term liabilities		
To Group companies	2,822	2,450
To others	33	35
<b>Total</b>	<b>2,854</b>	<b>2,485</b>
Accrued expenses and deferred income		
To others	276	303
<b>Total</b>	<b>276</b>	<b>303</b>
<b>Current liabilities total</b>	<b>3,167</b>	<b>2,864</b>



1000 EUR	Dec. 31, 2021	Dec. 31, 2020
<b>17. SECURITIES AND CONTINGENT LIABILITIES</b>		
On behalf of Group companies		
Guarantee limits	3,032	117
of which guarantees in use total		
Leasing liabilities		
Falling due in the next year	1,113	1,133
Falling due after one year	1,072	1,318
Rental liabilities		
Falling due in the next year	9	8
Contractual liabilities		
Falling due in the next year	13	32
Falling due in 1–5 years		

1000 EUR	Dec. 31, 2021	Dec. 31, 2020
<b>18. NOMINAL VALUE OF CURRENCY DERIVATES</b>		
Foreign exchange forwards		
Market value	21	17
Nominal value	5,000	600

	Owned by Parent, %	Owned by Group, %	Book value 1000 EUR
<b>19. SHARES AND HOLDINGS</b>			
Subsidiaries			
Bittium Technologies Oy	100.00	100.00	39,749
Other holdings by Parent			
Partnera Oy			

## 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, 2021, the distributable assets of the parent company are EUR 117,996,832.83 of which the profit of the financial year is EUR 127,479.11.

The Board of Directors proposes that the Annual General Meeting to be held on April 6, 2022 resolve to pay EUR 0.04 per share as additional dividend based on the adopted

balance sheet for the financial period of January 1, 2021–December 31, 2021.

Bittium Corporation follows a dividend policy that takes into account the Corporation's net income, financial status, need for capital and financing of growth.

In Oulu, February 9, 2022



Erkki Veikkolainen  
Chairman of the Board



Pekka Kempainen  
Member of the Board



Veli-Pekka Paloranta  
Member of the Board



Riitta Tiuraniemi  
Member of the Board



Petri Toljamo  
Member of the Board



Hannu Huttunen  
CEO

### Auditor's Note

Auditor's Report has been issued today.

In Oulu February 9, 2022

Ernst & Young Oy  
Authorized Public Accountant Firm



Jari Karppinen, Authorized Public Accountant

# Auditor's Report

(Translation of the Finnish original)

## To the Annual General Meeting of Bittium Oyj

### 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, 2021. 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 accordance 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.

**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 2021 the revenue recognized from these projects was 9.2 million euro, which is 11 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. During the performance phase, 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 is 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 537/2014, point (c) of Article 10(2), because of the risk related to correct timing of revenue.

**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:

- assessment 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.

## 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.

## 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, individually 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 detecting 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 20 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.

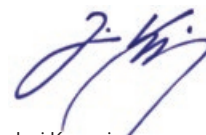
In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears 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 on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Oulu, February 9, 2022

Ernst & Young Oy  
Authorized Public Accountant Firm



Jari Karppinen  
Authorized Public Accountant





# Bittium

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

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