

Bittium

Where R&D is fundamental to business impact

Bittium was first established in 1985 as Elektrobit, following a number of evolutionary stages. Since 2015 Bittium has been a stock-listed company headquartered in Oulu, employing around 500 people and with offices in Finland, Germany and the USA. Jari Partanen, Head of Quality and Research, sketches a potted history.

Leveraging expertise

"Bittium's origins lie in Elektrobit as dedicated services for telecom development and over the years, two lines evolved: automotive and wireless businesses. In 2004 Elektrobit Automotive employed some 120 people with turnover of some 16 million euros annually. Growth skyrocketed over the next decade to nearly 1300 employees and close to 180 million euros in revenue. At that point the two parts of the company separated and now the Bittium we are talking about today specialises in the development of reliable, secure communications and connectivity solutions that can leverage over 35 years of expertise in advanced radio communication technologies. "Nowadays, Bittium is a high-tech company specialising in tactical and secure communications, engineering services and medical technologies, providing innovative products and services, customising solutions based on its product platforms and offering R&D services."

Trust, courage and innovation

R&D is high on Bittium's agenda; recent years bear witness to a significant investment in R&D for the company's own products and solutions. Jari: "R&D is essential to our business. Last year, for example, 27% of our net sales went to R&D. That's really high compared to

European level figures. What we are talking about is having certain core competencies so that we are able to design, produce, modify and maintain the secure embedded technology that is inside a lot of products. We want to become a global player for solutions with complex environments for which trust, courage and innovation are the core values and fundamental as a key business driver, especially given the recent geopolitical uncertainty. We are expecting that it will truly support the growth of our company later on. We are witnessing the acceleration of technology development and IoT. This is visible in our engineering services."

End-to-end medical technology solutions

In the Medical segment, Bittium provides healthcare technology products and services for bio-signal measuring in the areas of cardiology and neurophysiology as well as contributes to digitalising healthcare and services for an ageing population. It is interesting to note that a majority of the revenue actually comes from outside Finland. "End-to-end diagnostics is what we aim to achieve," Jari explains. "We measure symptoms, the data coming from your heart or brain or sleep and by using medically approved devices and systems, we are able to summarise that data in a form that

a doctor can examine for potential symptom areas and use the data history to make an analysis. In other words, information that can be used to target solutions. We see a really large market potential for that."

Defence and security

Another key business line is Defence and Security. "Of course," Jari concedes, "that's not an area about which we are able to go public, as it were, on all the innovations in which we are involved. It's sometimes very challenging for us to talk about those services since there is quite a degree of secrecy. But I can say that we are dealing with the defence and security, not with the warfare itself. We focus on Communications – making software-based, software-defined radios, providing the tactical communications solutions for a number of customers such as the Finnish Defence Forces and located in Estonia, Austria and lately in Croatia."

Complementing its tactical communication solutions, Bittium offers proven information security solutions for mobile devices and portable computers such as information security-related innovations like a smartphone that is one of the few security-certified mobile devices around.



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Connectivity to be trusted

A common denominator for all of the business lines is the role of R&D – it enables leverage. “We started to invest more in R&D in 2017, seeing this as a vehicle to be able to make scalable solutions for products. In terms of R&D investments, on a European corporate level we are in the top thousand, number 541 actually, which is very high for the size of our company. From a perspective of R&D intensity, we are number three in Finland. This has helped us triple product-based sales during the last six years.” Bittium has participated over the years in various research project collaborations and funding schemes within EU, including Eureka, Chips JU and Horizon. The key themes have been RF technology evolutions, biosignals measurement, software, digitalisation from an end-to-end perspective (from device up to cloud) and cybersecurity. Hardly surprising then that Bittium’s slogan,

‘Connectivity to be trusted’, should prove to be a perfect fit for ITEA. Not only has Bittium been involved in ITEA for more than 15 years through participation in several ITEA projects but recent accession to the ITEA Board will enable Bittium to play an important role in the industry-driven RD&I landscape of software innovation, which can also contribute to Bittium’s international growth and a better go-to-market strategy in particular.

Measurable outcomes

The first ITEA project in which Bittium took part was Flexi, in April 2007, which aimed for flexible global product development. In the ACCELERATE project, Bittium deployed an innovation management information system tool for collecting innovation ideas and covering the innovation process from idea harvesting to business validation. However, it was the CyberFactory#1 project that signalled the highlight in

Bittium’s participation when it received the 2022 ITEA Award of Excellence for Business Impact. “The benefits of this kind of collaborative research are manifold: the link between technology and business creates possibilities and opportunities to validate the ideas and concepts with academia and industry, especially within the software innovation environment of ITEA. Also, the technology and ideas we develop there enable potential for revenue and export growth in the long term. So, it was natural for us to want to be involved in this major collaborative platform. Bringing us new capabilities, new types of innovations and improving in a very important area as well as having good outcomes. It’s something we are always looking for – measurable outcomes from projects that can have a real tangible impact.”

More information:

<https://www.bittium.com/>