Annual Report 2019

IR Milestones 2019

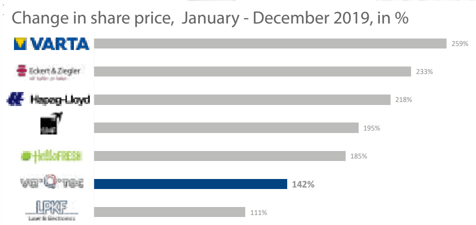
First Annual General Meeting at the va-Q-tec own event hall "Blaue Halle"

Capital Market Day

First participation in the Jefferies Healthcare Conference in London

27 Roadshow Days in 2019

TOP 10 Placement in Prime Standard



2019 the most important figures at a glance

464 Employees

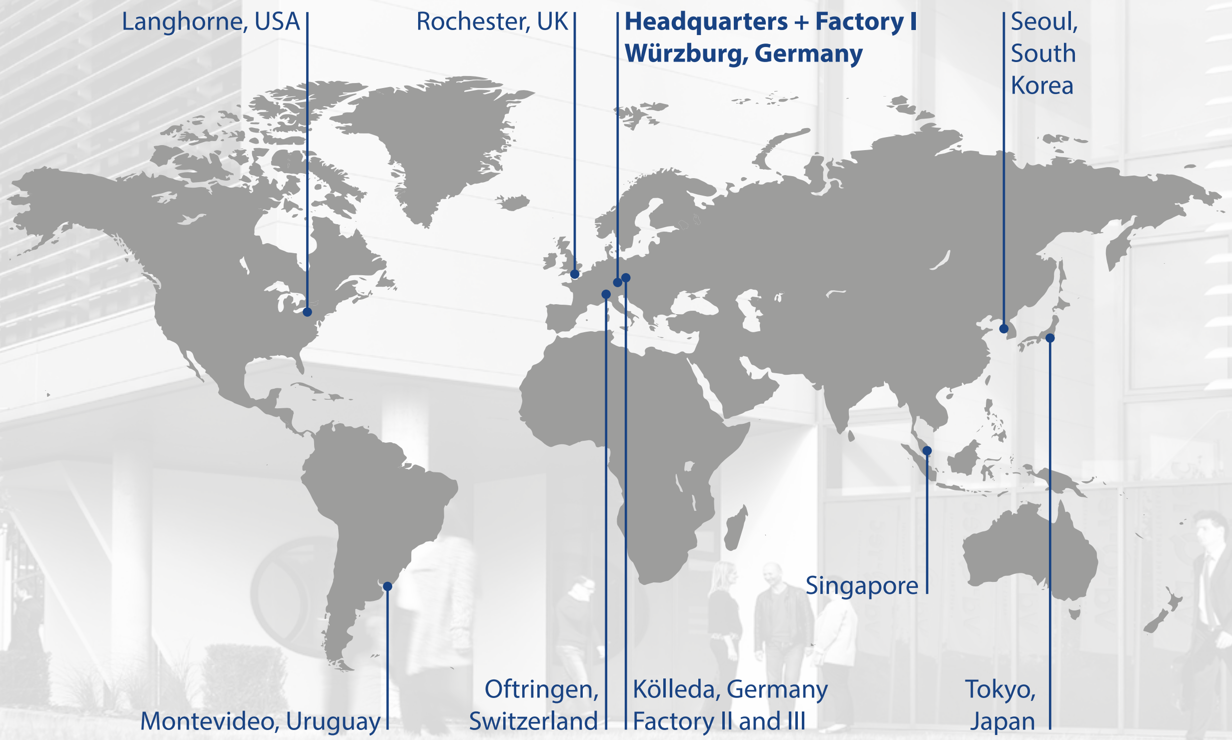
25 Nationalities

8 Group companies

1.8 Mio Vacuum Insulation Panels produced

>2,000 Container in the fleet

Global presence

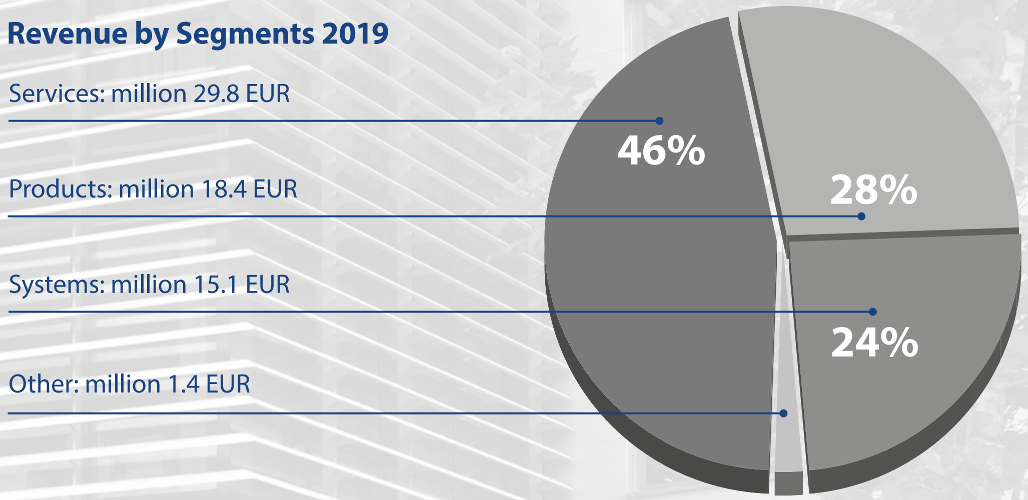


Revenue 2015 - 2019 EUR million

EBITDA 2015 - 2019 EUR million

*Adjusted for one-off expenses for the IPO.

Revenue by Segments 2019



Group financial figures

EUR millions (unless stated otherwise)	2019	2018	Change
Revenues	64.7	50.7	+28 %
EBITDA (IFRS)	9.7	3.0	+220 %
EBITDA margin (IFRS)	13 %	5 %	
Equity ratio	40 %	41 %	
Year-average number of employees	464	444	+20

CONTENT

1 TO OUR SHAREHOLDERS

1.1 LETTER FROM THE MANAGEMENT BOARD

Dr. Joachim Kuhn (CEO), Stefan Döhmen (CFO)

Ladies and gentlemen, dear shareholders, dear employees, partners, friends and customers

In view of the coronavirus pandemic, the presentation of this annual report takes place under special circumstances. The most important thing in this situation is to ensure the health and safety of people. The primary goal is to slow the spread of the coronavirus as far as possible. To this end, we have also decided upon a variety of measures at va-Q-tec. The coronavirus crisis also impressively demonstrates the importance of stable and secure supply chains. This is particularly true for the pharmaceutical industry, as the transportation of numerous medicines requires reliable transport solutions with stable temperatures. We feel a special obligation to ensure the production and provision of boxes and containers for the distribution of medical products in the best possible way. At the same time, we consider it important to inform you about our business trends and performance in the past financial year as planned:

2019 was a very successful year for va-Q-tec. We exceeded our original business and financial targets. At the same time, by consistently implementing our strategy, we have already laid important foundations our company's future success. Both nationally and internationally, va-Q-tec commands an excellent position and enjoys a very good reputation.

Thanks to our very positive business trend, we significantly raised our initial growth forecast over the course of the year. With 28% revenue growth for the full year, we even exceeded these expectations by a further two percentage points. Our revenue increased to EUR 64.7 million. It is particularly pleasing that this positive trend is also reflected in our earnings. Earnings before interest, taxes, depreciation and amortization (EBITDA) tripled in 2019 to around EUR 10 million. The EBITDA margin rose to 13% of total revenues, at the upper end of our expectations. Relative to revenue, this corresponds to an EBITDA margin of 15%. The progress made in our "Power 20+" program to further enhance our efficiency also contributed to this significant improvement.

Our positive business performance reflects fundamental trends such as climate protection and energy efficiency, which are of greater concern to society and business today than ever before. For us, as a pioneer in the energy efficiency area, and thanks to our vacuum insulation technology, we identify the greatest potential in the coming years in the "TempChain logistics" area – in other words, safe transport solutions for temperature-sensitive products. This includes, for example, medicines, and equipment for the semiconductor industry. Companies in these industries, in turn, need secure and globally temperature-controlled logistics chains, also known as "TempChains". With our TempChain portfolio, we create temperature stability for our customers during the transport, production and (interim) storage of products in what is currently the largest life science application area. As a consequence, va-Q-tec makes a significant contribution to product safety and quality. Business with customers from the healthcare and logistics sector now accounts for 69% of our revenue. However, va-Q-tec is not only a recognized partner of the life science industry. Our solutions can be deployed wherever sensitive goods of whatever type need to be transported or stored safely, and at a stable temperature. Accordingly, our Services division – in other words, the rental of our containers and boxes – grew by 62% in 2019. Services accounted for a considerable 46 % of our revenue in 2019.

We have further expanded our customer base in the Healthcare and Logistics area in 2019. We are already a recognized partner of numerous blue-chip customers and have entered into a number of extensive partnership agreements with other renowned customers and institutions worldwide. For example, with kohlpharma, Germany's largest importer of pharmaceuticals. With our va-Q-med thermal boxes, kohlpharma can guarantee secure logistics without temperature deviations directly to pharmacies. In Germany alone, almost 20,000 pharmacies need to be supplied with transport and temperature logistics in accordance with "Good Distribution Practices". With the va-Q-med box, we have the opportunity to play a decisive role in shaping the future of pharmacy and last-mile logistics. We are pleased to introduce you to this topic in this annual report by way of an interview with Dr. Christoph Frick, Head of Quality Assurance and Pharmaceutical Development at kohlpharma.

Technological progress, digitalization, the IoT and the use of artificial intelligence will significantly change the healthcare of the future. Given this, we have invested over EUR 2 million in research and development over the past financial year. Today, we are already investing in the technologies and applications of tomorrow, such as "TempChain 4.0" - the innovative combination of hardware, IoT and IT solutions in the temperature-controlled logistics area. Intelligent boxes, fleet data management and predictive analysis represent the cornerstones of "TempChain 4.0", and at the same time further enhance quality and safety. However, we are also working on thermal solutions for other areas, such as future mobility: thanks to their thin and flexible construction, our vacuum insulation panels can address completely new applications in the automotive and aviation industries. Important modern aviation challenges lie in boosting energy efficiency, saving space and improving passenger comfort. Here, va-Q-tec VIPs can contribute at various points.

We successfully continued on our internationalization course in 2019. The subsidiaries in the USA and Switzerland have performed well and are making growing contributions to revenue. Our new subsidiaries founded last year in Uruguay and Singapore are already contributing more than expected to Group revenue, as are the Asian companies in Korea and Japan. Overall, we have expanded our international network to seven subsidiaries, thereby positioning ourselves in the most important markets globally. As these companies were established within our Group, we do not have to account for any significant company acquisitions with corresponding goodwill and impairment risks. We already generated 68 % of our revenue outside Germany in the past year.

Our very significantly improved business results in 2019 underscore our very good position as a technology and market leader in our structural growth markets internationally. We continue to look with great optimism to the market potential for our technology and the resultant good prospects for va-Q-tec.

The Management Board would like to thank all investors, partners, customers and suppliers, as well as its employees, for their trust and confidence, and for our constructive discussions and good collaboration.

Dr. Joachim Kuhn
(CEO)

Stefan Döhmen
(CFO)

1.2 SUPERVISORY BOARD REPORT

Dr. Gerald Hommel, Chairman of the supervisory board

Dear shareholders,

The past financial year was marked by dynamic growth for va-Q-tec.

The Supervisory Board held six meetings in the 2019 financial year. The Supervisory Board's main task is to consult with and supervise the Management Board. The subject of our regular consultations in the plenary sessions was, among other matters, va-Q-tec's financial position and performance as well as its organizational structure. Other focus area of our activities in the period under review included, in particular, a critical assessment of the international orientation of va-Q-tec, corporate planning, and corporate financing and liquidity. In addition, we dealt intensively with the company's opportunities and risks.

The company's third Annual General Meeting (AGM) after its IPO was held on 29 May 2019. For the first time the company presented itself to more than 350 participants at its new location in Würzburg. As in the previous year, va-Q-tec welcomed numerous shareholders again from Würzburg and the surrounding region. A very high presence of shareholders also attended in 2019, representing 66 % of the share capital. All items on the agenda were accepted with significant approval by the shareholders present. The two founders and main shareholders, Dr. Joachim Kuhn (CEO) and Dr. Roland Caps (Head of Innovation and Quality) and their families, had underscored their long-term commitment to va-Q-tec by signing a pooling agreement for a majority of their shares prior to the 2019 Annual General Meeting. With this agreement, the partners have bundled more than 25 % of the shares in va-Q-tec AG.

In the year under review, the Supervisory Board of va-Q-tec AG duly performed the duties assigned to it by law, the company's bylaws and the rules of business procedure. We regularly consulted with the Management Board on the management of the company, and monitored its activities. The Supervisory Board was directly involved at an early stage in all decisions of fundamental importance to the company. The Management Board informed us regularly, promptly and comprehensively, both verbally and in writing, about corporate planning, the company's course of business, strategic development and current situation. On the basis of the Management Board's reports, the Supervisory Board discussed in detail the development of business, and decisions and events of importance to the company. Deviations in the course of business from the plans were explained to us in detail and dealt with intensively by the Supervisory Board. We – or the relevant Supervisory Board committees – thoroughly examined and discussed the Management Board's proposed resolutions. In addition, the Supervisory Board was in regular contact with the Management Board and was directly informed about the current development of the business situation and the most important business transactions.

As described in this annual report, with the investments va-Q-tec has realized, the company has created a strong foundation for its further development and growth. The Supervisory Board conducted a critical evaluation of business transactions central to the company's development, and contributed corresponding suggestions and ideas for discussion with the Management Board. Measures and transactions requiring approval were consulted about and suitably decided upon between the Management and Supervisory boards.

Personnel changes in the Supervisory and Management boards
No personnel changes occurred in the Supervisory Board in the reporting period. Dr. Joachim Kuhn continues as Management Board Chairman (CEO). In the past financial year, the Supervisory Board extended the appointment of Stefan Döhmen as the company's Chief Financial Officer (CFO) for a further three years until the end of 2022. With this contract extension, the Supervisory Board acknowledges Mr. Döhmen's important contributions within his department to the successful development of va-Q-tec AG since its IPO.

Due to the small number of Management Board members, the Supervisory Board has set the ratio of women on the Management Board at 0%. The ratio of women at the second management level amounts to 16.66%. For itself, the Supervisory Board set a proportion of women at 16.66% from 30 June 2017 (fulfilment date), corresponding to one in six members.

Meetings of the Supervisory Board and its committees
The Supervisory Board concerned itself with va-Q-tec's operative and strategic position as part of its regular consultations, with written and verbal reports by the Management Board providing it with extensive information about business and financial developments. For va-Q-tec, the 2019 financial year was marked by a return to dynamic growth in both revenue and EBITDA. In accordance with the bylaws, the Supervisory Board held a total of six plenary meetings. All meetings were held in Würzburg.

The central part of the **first meeting on 25 March 2019** comprised the presentation, discussion and resolution relating to the annual financial statements, the management report and the notes to the separate and consolidated financial statements of va-Q-tec AG for the 2018 financial year. At this meeting, the auditors reported in summary form on the results of their audit. Following in-depth discussion, the Supervisory Board passed a unanimous resolution concerning the approval and adoption of the 2018 separate annual financial statements as well as the approval of 2018 consolidated financial statements, including the management reports. The Management Board also reported on the gratifyingly dynamic business trend in the first two months of 2019, as well as the current status of the "Power 20+" program, which the Supervisory Board monitors closely. The corporate governance statement and the statement of conformity with the German Corporate Governance Code were also discussed and approved. The financing and liquidity trend at the start of the year against the backdrop of significantly reduced investment activity as well as risk management (including Brexit risks) were also discussed.

The **second meeting on 30 April 2019** focused on a discussion of current business trends and the Group's liquidity on the basis of the figures for the first quarter of 2019. Accordingly, the very good performance of the UK subsidiary led to a strong start to the year. In addition to the current progress of the "Power 20+" program, in its comments the Management Board also compared the original planning and current performance of the subsidiaries newly established since the IPO. Overall, the companies are performing well and are contributing to the expansion of va-Q-tec's international business, so that the Management and Supervisory boards continue to regard having founded these companies as having been the right decision. In addition to investor relations and the significant gain in the share price, the head of IT also reported at this meeting on IT strategy, and presented measures for data protection and IT security. Moreover, the Supervisory Board addressed the issue of financing and liquidity again. The committee also discussed proposals for adjusted rules of business procedure for the Management and Supervisory boards. Furthermore, the preparations for the forthcoming Annual General Meeting of va-Q-tec AG were presented to the Supervisory Board.

The **third meeting on 12 July 2019** focused on discussing the Group's current business performance based on the figures for the first five months of 2019. Accordingly, business trends continued to be very good, which is mainly thanks to the very positive performance of the container rental business in va-Q-tec Ltd. (UK) and the "Power 20+" measures. In addition, the Management Board addressed the current market and competitive trends in the refrigerator and food sector. A further focus of the Supervisory Board meeting was the topic of Global Business Development. The management of this area reported in detail on the tasks and structure of Global Business Development at va-Q-tec, as well as its separation from other functional areas. The main tasks of Global Business Development are to support the business units in entering the market, to define globally uniform standards and processes for the subsidiaries, to provide them with operational support and to identify market potential. The Management Board also explained the impending change in the IFRS valuation of the SUMTEQ investment from "at equity" to "fair value", due to the loss of significant influence over the company. Furthermore, the Management Board provided information on its current initiatives with financing partners regarding long-term and short-term debt financing.

At the **fourth meeting on 19 September 2019**, Group business trends up until the end of August were analyzed and discussed intensively. In addition, the Management Board presented the trend in quarterly key figures since Q1 2016. The presentation showed that strong investment activity in 2017 and 2018 was reflected in a significant decline in the EBITDA margin and the other key earnings metrics. With the conclusion of the investment phase and disproportionately high revenue growth in the high-margin Services business since the start of the 2019 financial year, key figures are once again on a clearly positive trend. At this meeting, the Management Board again presented the current status of the "Power 20+" program, remarking that the savings and efficiency targets associated with the program were met overall as of the end of August. In addition to current liquidity and financing issues, the Management Board also reported on the newly implemented factoring arrangements. The head of the Technics and Industry area presented product developments in this business unit by means of reference to numerous examples. These include projects aimed at expanding the VIP business with applications in the automotive, aviation and pipeline construction sectors. The Supervisory Board also discussed the new requirements of the German Corporate Governance Code (DCGK) and the German Act on the Implementation of the Second Shareholders' Rights Directive (ARUG II), and their current and future implementation.

At the **fifth meeting on 12 November 2019**, the sales organization's current global positioning was discussed. In particular, marketing and sales activities in the USA, the home of many market players in the thermal packaging sector, were discussed. The Global Head of Sales of va-Q-tec explained the company's personnel and operational situation in the USA to the Supervisory Board. In addition, the Supervisory Board discussed business trends during the first nine months. Accordingly, total revenue after nine months was still significantly higher than the previous year's revenue and the expectations for this financial year. Furthermore, profitability reported a very satisfactory trend. The "Power 20+" program made a significant contribution to the improvement in profitability. Business Development reported to the Supervisory Board on market opportunities and possible options for va-Q-tec in the Indian market. In addition, an external insurance expert explained current trends in the insurance market. Given potential new risks (such as cybercrime) and the company's growing internationality, the committee intensively discussed the current insurance structure for the Group.

The **sixth and last meeting** of the plenary Supervisory Board in the 2019 financial year was held on **13 December 2019**. The presentation and explanation of the planning figures for 2020 by the Management Board and the management of va-Q-tec UK formed a central topic. Overall, the company is expected to continue its very positive performance in 2019 into 2020 and beyond, generating sustained positive results and cash flows. After in-depth discussion, the Supervisory Board approved the Group budget including the investment budget for the 2020 financial year as well as the medium-term planning. The Management Board also provided information on the planned liquidity and financing measures. The status of investments in 2019 and the expected trend until the end of the financial year had already been addressed as part of the budget discussion. A further topic of the meeting was the very pleasing share price performance in 2019, which can be attributed quite considerably to the positive operating trend, as well as to numerous and intensive IR activities.

In the reporting year, all members of the Supervisory Board participated at more than half of the Supervisory Board meetings; all Supervisory Board members also participated in more than half of the meetings of committees of which they were members (section 5.4.7 DCGK). The Supervisory Board met regularly together with the Management Board, apart from when consulting about its compensation (section 3.6 DCGK).

The following table shows the individual participation of each member of the Supervisory Board:

Name	1. Meeting	2. Meeting	3. Meeting	4. Meeting	5. Meeting	6. Meeting
Dr. Gerald Hommel	✓	✓	✓	✓	✓	✓
Uwe Lamann	✓	✓	✓	✓	✓	✓
Winfried Klar	✓	✓	✓	✓	✓	✓
Uwe Andreas Kraemer	✓	✓	✓	✓	✓	✓
Dr. Barbara Ooms-Gnauck	✓	✓	✓	✓	✓	✓
Dr. Eberhard Kroth	✓	✓	✓	✓	✓	✓

The following table shows the individual attendance of the meetings of the Management Board members:

Name	1. Meeting	2. Meeting	3. Meeting	4. Meeting	5. Meeting	6. Meeting
Dr. Joachim Kuhn	✓	✓	✓	✓	✓	✓
Stefan Döhmen	✓	✓	✓	✓	✓	✓

For more information, please refer to the corporate governance report that forms part of this annual report.

Committees

The Supervisory Board has formed subcommittees in accordance with the German Corporate Governance Code (DCGK). Specifically, these are the Nomination, Audit and General committees.

No conflicts of interest occurred in the Supervisory Board during the reporting period.

Audit of the separate and consolidated financial statements

Pursuant to Section 315a of the German Commercial Code (HGB), the consolidated financial statements were prepared on the basis of International Financial Reporting Standards (IFRS) as applicable in the European Union. The auditors elected by the AGM, Rödl & Partner GmbH Wirtschaftsprüfungsgesellschaft, Steuerberatungsgesellschaft, Nuremberg, audited the separate financial statements of va-Q-tec AG as well as the consolidated financial statements, both for the financial year ending 31 December 2019, together with the respective management reports for va-Q-tec AG and the va-Q-tec Group, including the financial accounts, and in each case awarded them unqualified audit certificates on 19 March 2020. The auditors also assured themselves that the Management Board has established an internal control and risk management system appropriate in its implementation and design to provide early warning of developments jeopardizing the company as a going concern.

At the Audit Committee meeting and at the Supervisory Board meeting on 20 March 2020, the Supervisory Board discussed with the auditors and examined in depth the financial statements for va-Q-tec AG and for the va-Q-tec Group, the Management Board's proposal for the application of unappropriated profit, as well as the reports prepared by the auditor. The auditor participated in the consultations on the financial statements at this Supervisory Board meeting and informed the Supervisory Board of its audit findings and its findings concerning the internal control and risk management system.

The Supervisory Board concurs with the recommendation of its Audit Committee and approved the separate financial statements and management report as well as the consolidated financial statements and Group management report of va-Q-tec AG for the 2019 financial year. The separate financial statements of va-Q-tec AG have been adopted as a consequence. The Supervisory Board also concurs with the Management Board's proposal concerning the application of unappropriated net profit.

Thanks and outlook

The Supervisory Board remains convinced of the va-Q-tec's outstanding potential for success, and appreciates the trusting and open cooperation that it enjoys with the Management Board. The Supervisory Board's very special thanks are due to all staff at va-Q-tec. 2019 was characterized by very dynamic growth in the Services business and excellent operating performance. This would not have been possible without all employees' commitment and positive attitude.

Dr. Gerald Hommel
Chairman of the Supervisory Board of va-Q-tec AG

va-Q-tec - a Global Player and its worldwide TempChain network

Founded as a start-up from the University of Würzburg in 2001, va-Q-tec today is a globally positioned company with seven international subsidiaries. In 2011, the foundation for a successful international future was laid with the formation of a subsidiary in South Korea. Today, nine years on, va-Q-tec is represented on almost every continent with 40 TempChain service centers. This network enables temperature-controlled transports to be carried out worldwide on a secure, cost-efficient and environmentally compatible basis.

In order to store and transport temperature-sensitive goods securely, va-Q-tec offers its customers comprehensive services in the temperature-controlled logistics area, with its worldwide TempChain network consisting of 40 TempChain service centers forming the basis for its activities. This network ensures that each customer is no more than eight hours' drive from the nearest service center. va-Q-tec thereby ensures fast and secure global availability, including on a rapid-response and express basis.

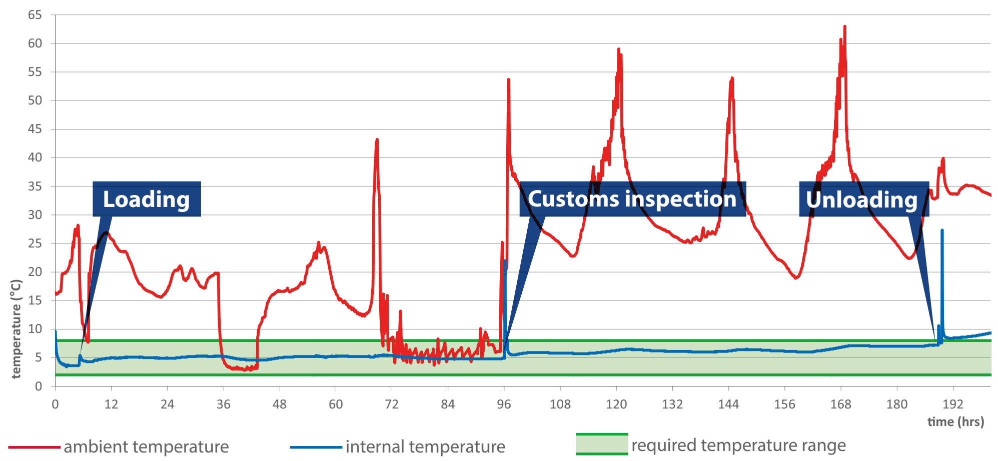
The TempChain service centers perform the pre-conditioning of the containers and boxes for "ready to load & go" delivery to customers, who thereby receive optimally pre-tempered containers which they have only to load with their goods. This service thereby ensures that customers are in compliance with legally prescribed TempChains. Thanks to the innovative technology its products comprise, va-Q-tec ensures its customers the maintenance of stable temperatures even over long transportation times, including if unforeseen delays arise.

The fact that va-Q-tec TempChain service transport containers are mostly rental boxes and containers ensures the uncomplicated return of the packaging to more than 500 drop points worldwide. These drop points perform the quality controlling and, if necessary, repair of the boxes. Only when the container meets va-Q-tec's stringent controls is it released for the next transport. After further preconditioning at a TempChain service center, it is on his way to the next customer. This reusable solution not only reduces costs: frequent reutilization means that fewer raw materials and energy are consumed, so they have a better net ecological impact and are more climate compatible.

It is also possible to purchase boxes that are already optimally pre-heated. In order to further improve availability and services, va-Q-tec opened a further branch operation in Shanghai, China, in 2019, from where the entire Asian continent can now be served. va-Q-tec plans to further extend the range of its TempChain fleet in the future: demand for transport solutions for the "last mile" right up to the patient's or industry customer's doorstep is increasing constantly and, with it, demand for an expansion of the TempChain network.

Live Shipment

Transport route: from Dublin (DUB) to Seoul (ICN)
Temperature range: +2 °C to +8 °C
Transport duration from release to receipt: over 7 days (189 hours)



Fabian Eschenbach, va-Q-tec **Dr. Joachim Kuhn, va-Q-tec** **Dr. Christoph Frick, kohlpharma**

Always the right temperature – always the right PARTNER

va-Q-tec AG received a strategically important order from kohlpharma for a fleet of thermal transport systems in the 2019 business year. kohlpharma is one of the largest importers of patented and prescription drugs in Europe and the long-standing market leader in Germany.

In the following interview, we asked Dr. Christoph Frick, pharmacist and head of quality as-surance and pharmaceutical development at kohlpharma, three questions about va-Q-tec as well as about the va-Q-med thermobox.

What led you to select va-Q-tec?
va-Q-tec impressed us from the outset with its professional expertise. With potential coop-eration partners in the "Good Distribution Practice" (GDP) area, it has been our experience repeatedly that kohlpharma is required to contribute the lion's share of the input when it comes to ensuring that transportation and storage processes, as well as the preparation of corresponding documents, comply with GDP. With va-Q-tec, by contrast, we found a partner that immediately understood kohlpharma's requirements and targets. In this respect, it was, and is, a very positive experience to work together at the same professional level, so to speak. The va-Q-med box that va-Q-tec has developed offers a very good alternative to the usual actively temperature-controlled cooling shipments: cold-storage medicines, which we send to pharmacies and pharmaceutical whole-salers at the necessary 2-8°C, are often very temperature-sensitive and can become in-effective or, in the worst case, even harmful in the event of temperature deviations. For this reason, it is of the utmost importance to ensure an uninterrupted cold chain. With the innovative va-Q-med box we can ensure the cold chain virtually independent of the influence of external temperatures and always deliver our temperature-sensitive preparations in perfect quality.

What was the reason for the switchover?
To start with, kohlpharma was aiming to become more independent in the distribution of its cold-chain pharmaceuticals. Instead of relying solely on actively temperature-controlled transport, we wished to further develop common passive shipping systems, such as EPS boxes with ice accumulators. This is because these offer several disadvantages: firstly, EPS boxes can only be used in a limited outdoor temperature range. That is to say: on very hot summer days and bitterly cold winter nights, we had to actively transport at a controlled temperature to ensure the safety of our medicines. EPS boxes also require different packing schemes: depending on the size of the box and the outside temperature, water accumulators must be added in varying quantities and specifications. All of this makes our favorite standardized processes quite difficult. Furthermore, such boxes only maintain a temperature of 2-8 °C for a very limited period of time. A possible misdelivery then becomes an immediate problem; the necessary 2-8 °C cannot be maintained, with the drug ultimately needing to be destroyed. And finally, polystyrene boxes can only be reused to a very limited extent, which means that they generate an enormous amount of packaging waste after only a short time. The va-Q-med box, which was developed for this purpose, required va-Q-tec not only to command a high level of technical expertise but also to be willing to respond to a pharmaceutical company's needs and requirements: risk analysis, validation and qualification were requirements that had to be fulfilled and implemented. In pilot projects and in its own climatic chambers, kohlpharma further examined the already-qualified va-Q-med box for its suitability in day-to-day practice. In the refrigerated distribution area – in other words, refrigerated transport to the pharmacy or to the pharmaceutical wholesaler – kohlpharma itself assumes responsibility for the transport using va-Q-med thermoboxes, and in the future, wher-ever possible, will dispense with active cooling solutions. However, on-going qualification and complete process validation will represent further tasks for kohlpharma in the future.

"With va-Q-tec we found a partner that immediately understood kohlpharma's requirements and targets."
Dr. Christoph Frick, Pharmacists, Head of quality assurance and Pharmaceutical development at kohlpharma

What advantages does the va-Q-med thermobox offer from your perspective?
The va-Q-med thermoboxes offer several advantages for us: thanks to their special thermal energy storage components and their insulation, the transport boxes maintain a constant temperature of 2-8 °C for about 48 hours with-out battery and without internal electricity, which is around twice the delivery time of within 24 hours that is usual for kohlpharma. Passive solutions without power supply during the transport of the refrigerated medicines make the delivery of the medicines much easier – simply because suitable transport vehicles without refrigeration units can now be used. This also helps to reduces city center traffic. In addition, va-Q-med thermoboxes are more environmentally compatible than other solutions. As the boxes can be reused almost indefinitely, they contribute to sustainability and are also a cost-effective solution for us.

ESG: va-Q-tec´s commitment to sustainability

Sustainability was one of the central social topics in 2019. This keyword includes not only environmental issues – va-Q-tec pursues a holistic approach: the company's own ESG sustainability aspects include ecological (E - Environment) and social (S - Social) areas of responsibility as well as ethical corporate governance (G - Governance).

va-Q-tec does not regard this holistic approach as consisting just of recommended actions to be undertaken on a voluntary basis, but rather as an essential part of its corporate DNA. Studies have shown that companies that integrate these points firmly into their corporate governance can exert a positive long-term influence on their business models, and ultimately on their financial performance and success.

E – Environmental
In industrialized countries, 60% of energy consumption is for thermal applications (heating and cooling). va-Q-tec has been benefiting from global efforts to combat climate change not only since the era of the energy efficiency and climate protection megatrends. With its innovative basic technologies, vacuum insulation panels (VIPs) and phase change materials (PCMs), va-Q-tec enables its customers to save a lot of thermal energy and thereby make an active contribution to climate protection. va-Q-tec developed thermally controlled boxes and containers from these two components, which can maintain temperatures at a constant level for up to 200 hours. These boxes are not only more cost-efficient than conventional thermal transport solutions, their reusability also reduces waste and conserves valuable resources.

va-Q-tec's production processes are also ecologically sustainable. For example, the power supply for the company's headquarters and for the plant in Würzburg is provided by the company's own combined heat and power plant, and the production site in Kölleda has its own photovoltaic system. Since 2017, va-Q-tec AG has had a certified environmental management system (ISO certification ISO 14001:2015) and since 2019 a certified energy management system (ISO 50001:2011).

S – Social
va-Q-tec is also aware of its social responsibility. Such awareness leads the company to make various positive contributions to society. va-Q-tec's social commitment nonetheless extends beyond its own business activities: partnerships with educational institutions such as the University of Würzburg and the University of Applied Sciences Würzburg-Schweinfurt are just as important to the company's management as supporting various youth education initiatives, such as the youth research organizations Initiative Junge Forscherinnen und Forscher and Jugend forscht.

The promotion of regional high-performance sports, such as regional team sports and an Olympic long-distance swimmer, as well as support for young startup companies, round out the company's efforts towards social sustainability. va-Q-tec's social commitment also includes the support of cultural institutions. In order to offer the Würzburg's city theater an alternative venue during the reconstruction of its premises, va-Q-tec has made available to the theater the company's own event hall for a two-year period. The sponsoring of the Würzburg Mozart festival also forms part of the company's annual cultural commitment.

G - Governance
In addition to ecological and social aspects, responsible corporate governance also forms part of va-Q-tec's holistic sustainability approach. The company's corporate governance is based on the guidelines of the Corporate Governance Code, to which it feels particularly committed. The corporate governance practices set out in the Code establish and strengthen the confidence of all stakeholders in the management and controlling of the Group. The aim is to create shared values for all of the Group's stakeholders in accordance with social market economy principles.

The Management and Supervisory boards set great store by an open corporate and management culture, as defined in the Corporate Compliance Policy. As part of this policy, the company also commits itself to creating good working conditions, a working environment characterized by a positive collaborative spirit, and equal treatment of all employees. A positive working atmosphere forms the basis for the company's performance and success, as well as the satisfaction of its customers, employees, partners and shareholders. Open internal communication fosters awareness of, and compliance with, statutory regulations, ethical standards, as well as economic and social principles. In order to ensure, among other objectives, that such internal and external communication is as transparent as possible, va-Q-tec committed itself to the Prime Standard of the Frankfurt Stock Exchange as part of its going public, and consequently to maximum transparency in the documentation of all decision-making processes and business transactions.

In this way, not only the Management and Supervisory boards but also all employees act in the spirit of sustainable corporate management.

1.3 CORPORATE GOVERNANCE-BERICHT

1.3.1 Corporate governance statement and conformity statement by the Management and Supervisory boards

The Management and Supervisory boards of va-Q-tec AG are always aware of the importance of national and international standards of good and responsible corporate governance, and are committed to such standards. Good corporate governance practice establishes and strengthens the trust and confidence of international and national stakeholders in the management and supervision of the Group. They underscore the Management and Supervisory boards' objective to create shared values for all the Group's stakeholders in accordance with the principles of the social market economy. Not least also in order to communicate with the capital market with a high degree of transparency, the IPO was implemented in the Prime Standard of the Frankfurt Stock Exchange – the segment entailing the highest transparency requirements.

The following subsections concern the corporate governance statement pursuant to Section 289f of the German Commercial Code (HGB). Specifically, the corporate governance statement comprises the conformity statement pursuant to Section 161 of the German Stock Corporation Act (AktG) and additionally relevant disclosures on corporate governance practices, a description of the Management and Supervisory boards' working methodology as well as the composition of the Supervisory Board's committees.

1.3.1.1 Conformity statement by the Management and Supervisory boards

"Since issuing the last declaration of compliance on 29 March 2019, va-Q-tec AG has complied with the recommendations of the "Government Commission on the German Corporate Governance Code" published by the German Federal Ministry of Justice and Consumer Protection (BMJZ) in the official section of the Federal Gazette in the version of 7 February 2017 published on 24 April/19 May 2017 with the deviations listed therein and will comply in the future with the exception of the deviations explained below:

Section 4.2.5 (3) and (4): "In addition, for each Management Board member, the compensation report shall present:

- the benefits granted for the year under review including fringe benefits, and including the maximum and minimum achievable compensation for variable compensation components,
- the allocation of fixed compensation, short-term variable compensation and long-term variable compensation in/for the year under review, analyzed the relevant reference years,
- for pension provisions and other benefits, the service costs in/for the year under review.

The model tables provided in the appendix shall be used to present this information."

Difference and reason: Management Board compensation is disclosed taking into account the resolution by the company's AGM on 31 May 2016. Accordingly, the disclosure of individualized Management Board compensation in the company's separate and consolidated financial statements, which are to be prepared for the 2016 - 2020 financial years (inclusive), are not presented. The company publishes a compensation report in the Group management report of the annual report.

Würzburg, 30 January 2020

For the Management Board

Dr. Joachim Kuhn

Stefan Döhmen

For the Supervisory Board

Dr. Gerald Hommel

1.3.1.2 Disclosures relevant to corporate governance practices

The Management and Supervisory boards set great store by an open corporate and management culture. Positive interaction within the company – a "good working climate" – is very important for the company's business and financial performance, and for satisfied customers, employees, partners and shareholders. This type of climate of interaction and open internal communication fosters awareness of, and compliance with, statutory regulations, ethical standards, as well as economic and social principles.

In order to ensure ethical behavior, va-Q-tec AG has established corresponding standards in a Group-wide corporate compliance policy. Core elements include, firstly, the basic values it codifies such as personal integrity, respect for diversity, and compliance in the context of business life. The Corporate Compliance Policy also sets out – in Group guidelines – instructions for business behavior in any ethically dubious situations. The compliance program is translated into practice and further developed in collaboration between the Management and Supervisory boards.

Apart from the exceptions specified and explained in the conformity statement, va-Q-tec AG complies with all statutory requirements in terms of good corporate governance as well as the recommendations of the German Corporate Governance Code. In the course of the capital market listing, the Management Board and the Supervisory Board inform the employees on the relevant issues of capital market law, including with related documents.

1.3.1.3 Description of the working methodology of the Management and Supervisory boards as well as the composition and working methodology of the Supervisory Board's committees

Management Board's working methodology

As a German public stock corporation, va-Q-tec AG operates a dual governance system in accordance with German stock corporation law regulations. This consists of the Management Board and the Supervisory Board.

The Management Board of va-Q-tec AG manages the company's business at its own responsibility. It is bound by the company's interest in this context, and is obligated to enhance the company's sustainable value. It develops the company's strategic orientation, coordinates it with the company's Supervisory Board, and ensures that it is implemented. The Management Board discusses the current status of strategy implementation at regular intervals with the Management Board. It also caters for appropriate risk management and risk controlling within the company. The Management Board members perform their tasks according to statutory provisions, the company's bylaws, AGM and Supervisory Board resolutions, their respective employment contracts as well as the rules of business procedure for the Management Board, and work to ensure that the company and its subsidiaries also comply with them.

The Management Board works together closely and on a basis of trust with the Management Board for the company's benefit. The Management and Supervisory boards' joint objective is to implement the growth strategy and exploit the various application possibilities on offer for the Group's technologies. The Supervisory Board appoints the Management Board members, recalls them from office and determines the allocation of their responsibilities. It can also appoint a Management Board Chair (CEO).

The Management Board of va-Q-tec AG comprises two members as of 31 December 2019:

Name	Function	Management Board member since	Contract end
Dr. Joachim Kuhn	Management Board Chairman, Chief Executive Officer	2001	31/12/2023
Stefan Döhmen	Chief Financial Officer	2017	31/12/2022

The Management Board is jointly responsible for managing the company's business for the Group's benefit. The Management Board members are individually responsible for the areas allocated to them. The business allocation plan allocates the tasks to the individual Management Board members as follows as of 31 December 2019:

Dr. Joachim Kuhn: Chief Executive Officer – CEO:

- Technology
- Production
- Sales and marketing
- Personnel

Stefan Döhmen: Chief Financial Officer – CFO:

- Finance
- Financial communication (IR)
- Purchasing
- IT
- Legal

Besides his activity on the Management Board of va-Q-tec AG, Dr. Kuhn is a member of the Advisory Board of SUMTEQ GmbH, a company in which va-Q-tec AG holds a minority interest. Dr. Kuhn is also Chairman of the Board of Trustees of ZAE Bayern, the research institute from which va-Q-tec emerged. The Management Board members do not engage in other secondary activities.

The Supervisory Board last updated and approved the rules of business procedure for the Management Board on 30 April 2019. These include, in particular, the regulations for the working methodology for the Management Board and the distribution of responsibilities between the Management Board members, as well as their collaboration with the Supervisory Board. They define a set of transactions requiring mandatory approval by the Supervisory Board. All Management Board resolutions are passed with a simple majority of the votes, unless the law requires another majority. Management Board meetings are held regularly several times per month. The Management Board also remains in close contact between its regular meetings, both with each other and with the Supervisory Board.

Due to the small number of Management Board members, the Supervisory Board has set the ratio of women on the Management Board at 0%. The proportion of women in the second management level is 16.66%.

Supervisory Board's working methodology

The Supervisory Board of va-Q-tec AG regularly consults with and supervises the Management Board in its management of the company. The Supervisory Board performs its activities according to statutory provisions, the company's bylaws, and its rules of business procedure. The recommendations of the German Corporate Governance Code concerning the Supervisory Board are complied with, unless stated otherwise in the statement by the Management and Supervisory boards pursuant to Section 161 of the German Stock Corporation Act (AktG) as published on the company's website. In performing its tasks, it works together closely and on a trusting basis with the Management Board for the company's benefit, and appoints and recalls from office the Management Board members. Moreover, it also pays attention to diversity in the Management Board's composition, especially striving for an appropriate inclusion of women in this context. The members of the Management Board should complement each other in terms of their background, professional experience and expertise, so that the Board can draw on the widest possible range of experience and specialist knowledge. Together with the Management Board, it caters for long-term corporate planning.

Supervisory Board resolutions are generally passed at its meetings. They can also be passed without convening a meeting, and voting can also occur verbally, in writing, by telephone, fax or email, if so ordered by the Supervisory Board Chair and to the extent that no Supervisory Board member immediately objects to such a procedure. Supervisory Board resolutions are passed with simple majorities, unless prescribed otherwise by law or the company's bylaws.

All Supervisory Board members are obligated to pursue the company's interests. In their decisions, the Supervisory Board members cannot pursue personal interests, or exploit the company's business opportunities for themselves, for related natural or legal persons, or for another institution or association in which, or for which, they act. All Supervisory Board members must immediately disclose to the Supervisory Board conflicts of interest, especially those arising on the basis of a consultancy or board function at customers, suppliers, lenders or other third parties.

Dr. Gerald Hommel, Winfried Klar, Dr. Barbara Ooms-Gnauck, Uwe Lamann, Dr. Eberhard Kroth, Uwe Kraemer

Pursuant to Section 2 (1) of the rules of business procedure for the Supervisory Board, the members in their entirety should possess the knowledge, capabilities and specialist experience to perform their tasks properly. Furthermore, pursuant to Section 2 (4) of the rules of business procedure, at least one independent member of the Supervisory Board must possess specialist expertise in the areas of financial accounting or auditing. The Supervisory Board sets specific targets for its composition, taking into consideration the recommendations of the German Corporate Governance Code.

Composition of the Supervisory Board

The Supervisory Board currently consists of the following six individuals:

Dr. Gerald Hommel, born: 21/01/1959, Supervisory Board Chairman (appointed until 2023)

- German citizenship
- Undergraduate study of economic sciences at the universities of Mainz and Würzburg, degree in business management (1985)
- 1985 – 1997 Pharmaceutical wholesaling, most recently Managing Director at PHOENIX Pharma Einkauf GmbH, Dreieich
- 1997 – 1999 Central regulation, Management Board member of GESKO eG, Gerlingen and Cologne
- Independent pharmaceuticals entrepreneur since 1999
- Doctorate in economic and social history from the University of Frankfurt am Main (2014)
- Supervisory Board Chairman since 2014
- Certified as a Qualified Supervisory Board member by the Deutsche Börse Group, Frankfurt am Main (2018)

Uwe Lamann, born: 17/11/1949, Deputy Supervisory Board Chairman (appointed until 2023)

- German citizenship
- Engineering degree in communications technology from Cologne University (1976)
- 1999 – 2012 Member of the Management Board of Leoni AG, Nuremberg, Head of Central R&D
- 2007 – 2019 Member of the Supervisory Board of Nedschroef Holding B.V.
- Member of the Advisory Board of Baumüller Nuremberg GmbH since 2013
- Deputy Supervisory Board Chairman since 2014

Uwe Andreas Kraemer, born: 27/10/1978 (appointed until 2023)

- German citizenship
- Degree in business information technology from the Technical University of Darmstadt (2006)
- 2006 – 2008: Investment Banking Division, Goldman Sachs, Frankfurt
- 2008 – 2014: Venture & growth capital investor focusing on software and internet technology, ViewPoint Capital, Frankfurt/Zürich
- 2016 – 2018: Managing Director & CFO/CCO of Fision AG, Zürich
- Since 2014 Growth capital investor focusing on cleantech, Zouk Capital, London
- Supervisory Board member since 2015
- Since 2018: Vice President Finance & Operations, Scandit AG, Zürich

Winfried Klar, born: 10/10/1954 (appointed until 2023)

- German citizenship
- Degree in business administration from the University of Münster (1979)
- Auditor and tax consultant PwC Düsseldorf (1980-1990)
- Member of the Institute of Public Auditors in Germany (IdW)
- 1991 – 1992 Head of Group development EVONIK (formerly RAG)
- 1993 - 2003 Managing Director, member of the Management Board, CFO of the RAG Group and other companies
- 2004 – 2009: Managing Director and CFO of VESTOLIT GmbH & Co KG, Marl
- 2009 – 2013: Managing Director and CFO of MAUSER Holding GmbH, Brühl
- Management consultant since 2013
- Supervisory Board member since 2013
- Audit Committee Chairman since 2016

Dr. Eberhard Kroth, born: 15/09/1956
(appointed until 2023)

- German citizenship
- Undergraduate studies and doctorate at the Technical University of Darmstadt (1985)
- 1986 – 1994 Company officer and Technical Director at Reis Robotics, Reis GmbH & Co KG
- 1994 – 2010 Managing Director at Reis Robotics, Reis GmbH & Co KG
- 2010 – 2016 Managing Director at Reis Group Holding GmbH
- 2014 – 2016 Managing Director & Chief Technical Officer (CTO) of KUKA Industries GmbH
- Since 2017 Managing Shareholder of RoPro4.0 GmbH
- Supervisory Board member since 2013

Dr. Barbara Ooms-Gnauck, born: 28/10/1957
(appointed until 2023)

- Belgian citizenship
- Study of chemistry and ecototrophology at the University of Bonn, degree in ecototrophology) (1983)
- Study of jurisprudence of the University of Göttingen, First State Examination (2001)
- Probationary Training Period at the District Court of Kassel, Second State Examination (2004)
- Lawyer, partner at GKMP Rechtsanwälte Steuerberater WirtschaftsprüferWirtschaftsprüfer
- Doctorate awarded by the University of Constance (2012)
- Specialist lawyer for administration law (2016)
- Shareholder of Gnauck Rechtsanwälte GbR since 2010
- Supervisory Board member since 2014

For itself, the Supervisory Board set a proportion of women at 16.66 % from 30 June 2017 (fulfilment date), corresponding to in of six members. In the interests of complementary collaboration, the Supervisory Board strives for sufficient diversity with regard to gender, internationality and different professional backgrounds, expertise and experience.

Composition and working methodology of the Supervisory Board committees

The Supervisory Board of va-Q-tec AG has currently set up three committees: an Audit Committee, a Nomination Committee and a General Committee.

The **Audit Committee** consists of the following members until the end of their respective period of office:

- Winfried Klar: Chair
- Dr. Gerald Hommel: Deputy Chair
- Dr. Eberhard Kroth: Member

The Audit Committee concerns itself especially with questions relating to financial accounting and supervising the financial accounting process, the efficacy of the internal control system, the risk management system, compliance and the internal audit system, as well as the audit of the financial statements. The latter relates especially to the auditor's independence, the services additionally rendered by the auditor, the awarding of the audit mandate to the auditor, determining the audit focus areas and agreeing the audit fee.

The **Nomination Committee** consists of the following members until the end of the respective period of:

- Dr. Gerald Hommel: Chair
- Uwe Lamann: Deputy Chair
- Dr. Barbara Ooms-Gnauck: Member
- Uwe Andreas Kraemer: Member

The Nomination Committee proposes suitable candidates to the Supervisory Board for its election proposals to the AGM.

The General Committee consists of the following members until the end of their respective period of office:

- Dr. Gerald Hommel: Chair
- Uwe Lamann: Deputy Chair
- Dr. Barbara Ooms-Gnauck: Member

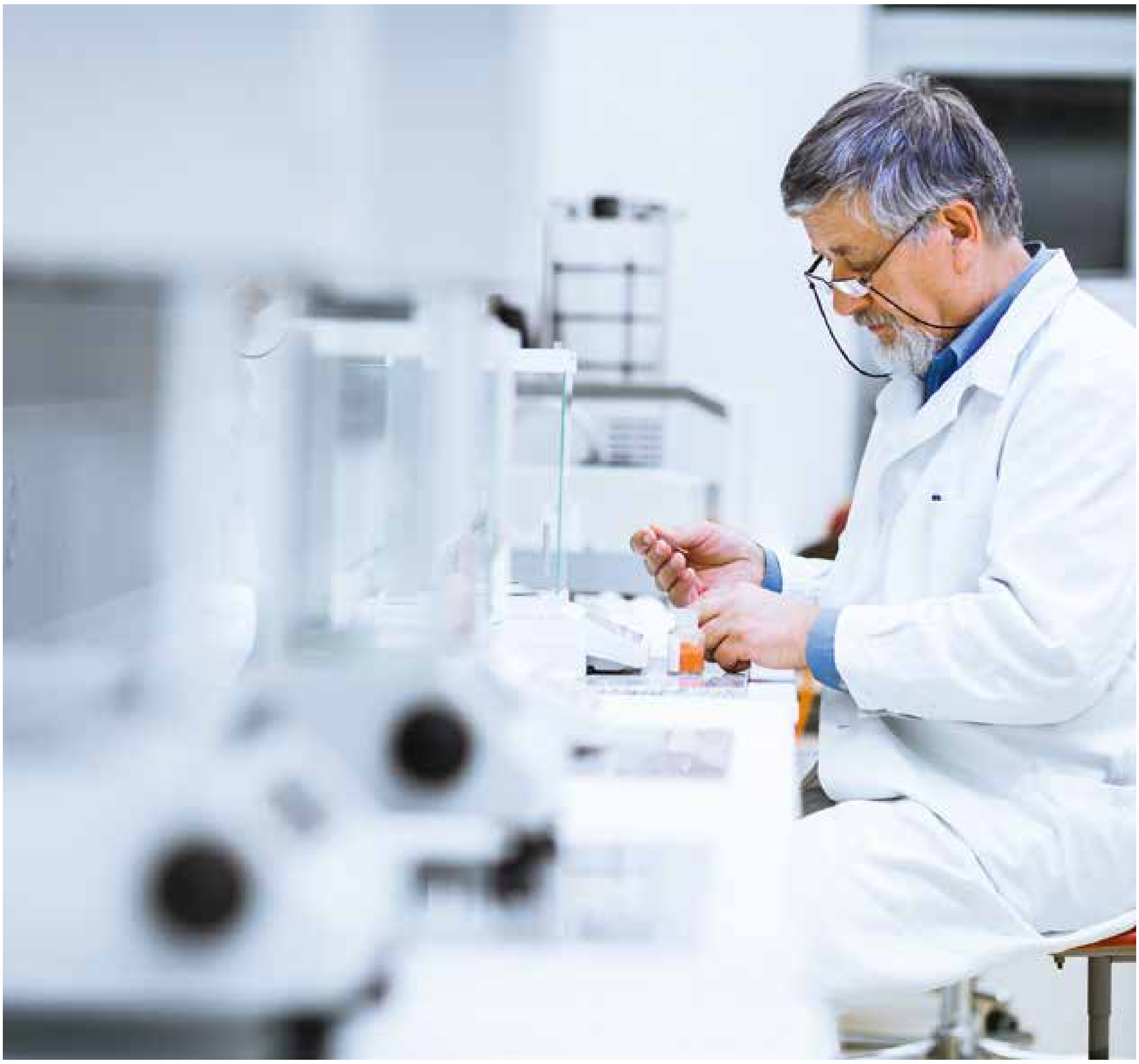
The Supervisory Board Chair chairs the General Committee. The General Committee consults on key corporate governance topics and prepares Supervisory Board resolutions. Along with long-term successor planning for the Management Board, the General Committee prepares Supervisory Board resolutions especially concerning the following matters:

- Appointment and recall from office of Management Board members as well as appointment of a Management Board Chair (CEO)
- Concluding, amending and terminating appointment contracts with Management Board members
- Structure of the Management Board compensation scheme including key contractual elements and total compensation of the individual Management Board members.

Interests held by the Management and Supervisory boards

As of the end of the 2019 financial year, the members of the Management Board, founders and members of the Supervisory Board held the following direct interests in the share capital of va-Q-tec AG:

Shareholder	Number of shares
Management Board members and founders	3,582,550
Supervisory Board	68,981



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GROUP MANAGEMENT REPORT

2 GROUP MANAGEMENT REPORT

2.1 BASIS OF THE VA-Q-TEC GROUP

2.1.1 Business model, market and strategic orientation

2.1.1.1 Business model and market

va-Q-tec is a worldwide technologically leading supplier of highly efficient products and global solutions in the thermal insulation area. va-Q-tec offers customers from a wide range of industries high-performance insulation solutions that enable them to significantly increase their energy efficiency. The offerings of va-Q-tec in the Group's divisions of Products, Systems and Services are applied in thermo-logistics, the refrigeration and food industry, in industrial and technical applications such as water boilers, the construction industry and in the mobility area.

In its Products division, the company develops, produces and markets innovative vacuum insulation panels ("VIPs") and phase change materials ("PCMs"). VIPs are high-performance insulation panels between 5 mm and 50 mm in diameter that are particularly suited to space-saving and energy-efficient thermal insulation. PCMs are cold and heat storage materials that absorb and store thermal energy. Various temperature ranges can be established through utilizing various storage materials such as paraffins and salt solutions.

In its Systems division, va-Q-tec manufactures passive thermal packaging, containers and boxes through combining VIPs and PCMs, which maintain constant defined temperature ranges for up to 200 hours without recourse to external energy.

In its Services division (Serviced Rental), va-Q-tec operates a fleet of rental containers which it produces itself and which allow temperature-sensitive transports to be operated securely and cost-efficiently compared with actively cooled containers. va-Q-tec has run this business through its UK subsidiary since 2011. For this purpose va-Q-tec has built up an extensive global partner network consisting of airlines, forwarders and service partners such as Lufthansa, IAG, Qatar Airways and Cathay Pacific. Since 2015, va-Q-tec AG has also been operating a business for thermal transport boxes the company produces itself. In addition, va-Q-tec assumes accompanying services in the area of preconditioning, preparation and dispatch preparation of thermal packaging systems for well-known customers such as Swiss Post. Such integrated transport solutions from a single source are increasingly in demand in the healthcare sector.

In addition, va-Q-tec offers consulting services for all aspects of thermal insulation, for example to bring technical equipment into higher energy efficiency classes.

With this portfolio, va-Q-tec serves customers from the following target sectors:

- Healthcare and Logistics; e.g. rental and sale of containers and transport boxes for temperature-sensitive transports
- Appliances and Food, e.g. insulation of refrigeration/freezing equipment and food containers
- Technics and Industry, e.g. insulating water boilers, pipelines, laboratory equipment and ultra-low temperature refrigeration units
- Building, e.g. building insulation (façades, roofs, floors)
- Mobility, e.g. insulation in refrigeration trucks, cars, trains and aircraft

In the target sectors, all solutions are subject to high demands on the performance and service life of the thermal insulation, usually with very limited installation space.

Growth potentials in the Healthcare and Logistics target market arise from the increasing globalization of clinical research and pharmaceutical production. At the same time, demand for temperature-sensitive biotech drugs is rising constantly. Demands made of product safety ("good distribution practice of medicinal products for human use" – GDP) are becoming increasingly more stringent. Growth drivers for the Group's businesses in the target markets of Appliances and Food, Technics and Industry, Building and Mobility especially include rising energy efficiency, regulation and urbanization.

2.1.1.2 Strategic orientation

va-Q-tec operates in a very dynamic, innovation-driven and global market environment.

Within this market environment, va-Q-tec pursues the objective of expanding its position as one of the globally leading providers of highly efficient products and solutions in the thermal insulation area, and helping to shape temperature-managed logistics long-term. To reach this goal, va-Q-tec pursues, in particular, three strategic approaches:

I. Technology leadership

va-Q-tec is focusing on securing and further expanding its innovation and technology leadership in the thermal insulation area. va-Q-tec stands for its "Always the Right Temperature" mission statement in the TempChain of the healthcare industry and many other end applications. The company works continuously on innovative technologies, process innovations and new business models that can change not only TempChain logistics but also thermal insulation in many industries in the future, such as in the mobility area and in the case of technical applications. va-Q-tec aims to constantly enhance its own innovative strength and capability. This approach focuses on advanced VIP types such as for higher temperatures, new thermal packaging and innovative materials. In addition, va-Q-tec strives to further improve thermologistics under the keyword "TempChain 4.0" with "intelligent" boxes and containers as well as accompanying software and simulation tools. In accordance with this objective, the Group invests in highly qualified personnel, product development and fundamental research. Selected investments, such as acquiring an interest in the Cologne-based materials start-up SUMTEQ GmbH in order to gain access to its new technologies, also form part of the strategy. Above and beyond this, va-Q-tec pursues cooperation ventures with technology partners in externally supported R&D projects. The medium-term target remains to defend the leading technology position and further expand it.

II. Growth

va-Q-tec's end markets offer great growth opportunities due to the wide range of applications of the technology platform consisting of Products, Systems and Services. va-Q-tec is strongly focused on growth: the company's processes, organizational structure and business model are aligned to scalability and to the consistent leveraging of growth opportunities. The company is on a clearly defined expansion path with its increasingly international presence, maintaining its solid financing base and focus on business relationships with major customers.

va-Q-tec is oriented to high-growth markets which at the same time offer the company attractive target margins, albeit also incurring high upfront costs. Pharmaceutical and biotech customers are of great significance for va-Q-tec: in its target market of Healthcare and Logistics, its most important pillar, va-Q-tec generated 69 % of its revenue in 2019 (previous year: 59 %). In the temperature-managed logistics area, the global healthcare industry relies increasingly on va-Q-tec's high-quality passive solutions.

At present, potential healthcare customers are still frequently using packaging solutions based on conventional insulation materials and basic water and ice mixtures. With the rising quality requirements made of TempChains – according to "good distribution practice" – customers are substituting these types of basic solutions with high-performance thermal packaging. At the same time, va-Q-tec's rental models ("Serviced Rental") are aimed at customers for which a purchase is not economically viable. With precisely customized rental solutions for high-performance thermal packaging, va-Q-tec also offers them a product with an attractive price/performance relationship. For this reason, va-Q-tec expects to grow further globally in the Healthcare and Logistics target market over the coming years, while outperforming the growth rates of the underlying markets for (healthcare) cold-chain logistics. The aim is to become the globally leading provider of services and packaging solutions in this market.

In the other target sectors, too, the company is endeavoring to benefit to an above-average extent from growth opportunities, such as the energy efficiency trend. The company's technology platform, which has grown over the past years, is to be established in defined target markets. In the medium term, va-Q-tec is aiming for further growth in the Appliances and Food area. With higher regulatory requirements made of the energy efficiency classes of refrigerators, such equipment is increasingly being fitted with VIPs. VIPs from va-Q-tec – with their insulation performance testable in the manufacturing processes of Original Equipment Manufacturers (OEMs) – will benefit particularly from this trend. In the e-commerce area, major international providers and start-ups are currently implementing new business models to deliver food products purchased online directly to end-consumers. We believe the transportation of frozen and easily perishable food to the end-customer will be regulated even more stringently in the future. The high-performance thermal packaging of va-Q-tec are particularly suited to such transports.

In addition, growth in VIP product sales is also anticipated in the target market of Technics and Industry through introducing energy efficiency classes for water boilers and piping insulation, for example. Here, too, manufacturers are equipping their premium products with va-Q-tec VIPs to achieve the best energy-efficiency class. The last three years reflect the medium-term phases typical for va-Q-tec's dynamic growth markets: for example, revenues in the Products division (the majority of which are in the technology and industry sectors as well as refrigeration appliances and food) have almost doubled since 2016 and have now settled at a high level.

The end markets of mobility and construction offer additional growth areas in the medium and long term. In Q1 2019, va-Q-tec underlined the strategically important expansion of its technology leadership in the mobility area, including by jointly applying for the “Crystal Cabin Award” with Airbus Operations GmbH. The international innovation award honors outstanding concepts in the area of aircraft cabin interiors. Here, too, va-Q-tec vacuum insulation panels ensure significantly enhanced energy efficiency.

Overall, the company anticipates – on the basis of normalized economic conditions – continued revenue growth in the mid to high percentage range year-on-year over the next three years, with such growth deriving mainly from the Services and Systems businesses.

III. Profitability

Profitability is indispensable in order to secure the company’s long-term success and performance as well as its competitiveness. EBITDA profitability forms the third pillar of the corporate strategy and represents a significant corporate steering metric. In view of very high development, set-up and other start-up costs, this objective is of particular importance.

Various measures in the operational excellence area are being continuously advanced to deliver profitable growth. The Management Board’s cost-cutting initiatives were bundled under the “Power 20+” performance program in the 2018 financial year and primarily concern measures to continuously optimize and harmonize quality, sales processes, organization, resource consumption and purchasing, and IT systems throughout the Group. Economies of scale accompany the expansion of the Group’s business activities and corresponding sales revenue growth: the terms on which the Group can purchase intermediate products and third-party services improve significantly with revenue growth, and the rising purchasing volumes that accompany such growth. The cost increases for Group support functions such as personnel, marketing, financial accounting and controlling do not match the top-line growth rate. However, the stock exchange listing requires the highest quality level, entailing corresponding expenditure. Various aspects of vertical integration into downstream stages of the value chain contribute to improving profitability. This includes services and business models such as the rental of boxes and containers (“Serviced Rental”). This forward integration and control of upstream value steps to improve profitability forms a central element of the corporate strategy. In the phase of the company’s development to date, the dominant focus continued to be on sales revenue growth.

As a result of the aforementioned operative and strategic measures, the company is aiming – on the basis of normalized economic circumstances – for a medium to long-term improvement in the EBITDA margin to in excess of 20%.

Group structure, employees, investments and steering

No new subsidiaries were established during the reporting period. A total of eight companies thereby formed the va-Q-tec Group as of the end of the reporting period, comprising the German parent company and seven foreign subsidiaries. The Group’s three reporting segments are derived from these eight companies – the German segment (va-Q-tec AG), the UK segment (va-Q-tec Ltd (UK) and the Other segment (va-Q-tec Ltd (Korea), va-Q-tec Inc. (USA), va-Q-tec Switzerland AG (Switzerland), va-Q-tec Japan G.K. (Japan), va-Q-tec Uruguay S.A. (Uruguay) and va-Q-tec SG Pte. Ltd. (Singapore)).

The parent company va-Q-tec AG wholly owned all seven foreign subsidiaries as of 31 December 2019.

In the German segment, va-Q-tec AG covers all three segments (Products, Systems and Services). Since 2015, the business with rental boxes has been reported in the “Services” segment. va-Q-tec Ltd (UK) primarily comprises the “Services” segment with its focus on the rental business of (returnable) containers. The “Other” segment comprises the business activities of the other subsidiaries, which are mainly allocated to the Systems and Services divisions. The South Korean subsidiary is responsible both for the procurement of raw materials and input materials for the Group and for the sale of va-Q-tec products in its domestic market. In addition to sales activities, the subsidiary in the USA is primarily engaged in business development in North America. The company continued to realize significant investments in personnel and business development at the US subsidiary during 2019. Warehousing and office spaces were rented, and a local management team was appointed on the US East Coast with the aim of establishing local production of thermal packaging systems, a repair station for rental containers and a local center to rent small boxes. va-Q-tec Switzerland AG renders services (conditioning and cleaning of rental boxes, “fulfilment services”) for Swiss Post and other customers in the cold-chain logistics area. Through its fleet of thermal boxes, Swiss Post makes recourse to va-Q-tec’s technology and process experience. As a sales company, the subsidiary in Japan pursues the objective of enhancing the perception of va-Q-tec as a locally rooted provider in the world’s third-largest economy, and of distributing va-Q-tec products and services there. With the subsidiaries in Uruguay and Singapore/Southeast Asia, the aim is to further intensify sales presence in Latin America and Singapore/Southeast Asia.

To manage the three reporting segments, the management monitors these areas individually and across the Group based on detailed and regular reports. The management steers the allocation of resources based on this information and institutes countermeasures where performance falls short of target. A streamlined Group structure ensures the Group management can effectively control and coordinate the subsidiaries' important business decisions.

Central metrics of the va-Q-tec Group that serve corporate steering by the management include revenue, earnings before interest, tax, depreciation and amortization (EBITDA) and the equity ratio. Compared with the previous year, the steering system at va-Q-tec AG has not changed. The Group's specific steering metrics are presented in greater detail below:

Revenue growth represents the basic indicator of business growth and the attractiveness of the Group's products, systems and services. Viewed at the level of the reporting segments and geographic distribution, revenue also serves as an indicator of the success and performance of the Group's business models.

EBITDA serves as the metric for profitability. To this is then added as a subsidiary measure the EBITDA margin measured in relation to total income as a benchmark for the Group's operative performance and profitability. As a fast-growing technology company, va-Q-tec invests significant proportions of its financial resources in machinery, plant and its fleet of containers and boxes for rental services. Furthermore, in the 2018 reporting period the company completed the aggregation of its Würzburg locations into a single management, technology and logistics center. A high level of depreciation during the current phase of establishing infrastructure and fleet distorts the actual picture of financial performance. For this reason, EBITDA, as an earnings figure before depreciation presents a more meaningful metric of the company's performance.

The equity ratio provides information about the strength of the va-Q-tec Group's balance sheet, its capacity to withstand crises, its creditworthiness and its credit risk. In the medium term, the company regards an equity ratio with a target range between 35 % and 40 % as representing a balanced relationship between debt and equity, and consequently of the risk distributed among equity investors and creditors.

In the area of non-financial performance indicators, the number of employees serves as an indicator and central steering metric of the growth in the Group's operating activities.

The following overview shows the growth in the relevant steering metrics. A detailed discussion of the key figures can be found in section 2.2.4 "Financial position and performance".

kEUR unless stated otherwise	**2019**	**2018**	**Δ 19 / 18**
Revenue	64,667	50,708	+28 %
EBITDA (IFRS)	9,673	3,027	+220 %
EBITDA margin (IFRS)	*13 %*	*5 %*	
Equity ratio	40 %	41 %	
Year-average number of employees	464	444	+20

2.1.2 Research and development

va-Q-tec is one of the leading technology innovators in the development and production of energy efficient and space-saving VIPs, high-performance PCMs and thermal packaging systems. The research and development area is of strategic importance to secure and further extend the company's technology leadership in the thermal insulation areas. Group research at va-Q-tec operates across the whole company, developing technologies for future-viable products and solutions for the Group companies.

va-Q-tec operates a portfolio of internal and external R&D projects that not only serve basic research on VIPs but also relate to five of the target sectors defined by va-Q-tec that require advanced thermal heat insulation and energy storage.

As a spin-off from a university – the Bavarian Centre for Applied Energy Research (ZAE Bayern) – va-Q-tec maintains partnerships with international associations, research institutions, universities and colleges. Internally, the company has established its own R&D organization with extensive capacities for basic research and, in particular, application-oriented research.

The past years' successful R&D activities have created a portfolio of patents which is reflected in the leading technology platform.

The worldwide unique va-Q-check® quality control system enables the insulation of VIPs to be controlled before use, or boxes and containers to be approved for reuse through measuring internal gas pressure. va-Q-tec VIPs are thereby the only heat insulation whose performance and efficacy can be measured and controlled at the place of use. This fosters confidence and trust in the VIP technology and enables va-Q-tec to meet its high-quality requirements of a demanding customer group, including complying securely, and on an evidenced basis, with the thermal protection requirements for cold chain transportation, for example. The patented va-Q-pro is a largely freely formable, powder-filled VIP, from which holes and sections can be cut on the production side and which can be manufactured in three-dimensional geometry. These properties and flexible structuring possibilities allow va-Q-pro to be deployed in very different application areas, including for batteries in e-vehicles or to insulate parts of aircraft, such as the galley, for example.

va-Q-tec conducted basic research in 2019 in applying VIPs in entirely new temperature ranges, for example. While conventional VIPs are typically deployed in the -80 to +80°C temperature range, va-Q-tec is working on expanding VIPs' deployment range through optimally combining various case materials and core materials, e.g. in temperature classes from 80 to 180°C as well as >400°C. The interest held in the Cologne-based start-up SUMTEQ is of strategic importance in the area of fundamental research for core VIP materials. The joint target of va-Q-tec and SUMTEQ remains the pilot testing and market launch of SUMTEQ's submicroporous foams as a further high-performance insulation material. This strategic partnership offers both companies the opportunity to contribute their respective specialist and technical research and development expertise, and thereby generate added value for customers. During the reporting period, SUMTEQ, supported by va-Q-tec's expertise, commenced small-series production, thereby reaching a significant milestone towards large-scale production and marketing.

In the year under review, va-Q-tec worked mainly on expanding and improving its existing product portfolio.

In the Products area (vacuum insulation panels), work was carried out on the further development of the existing portfolio and the new development of a panel class for medium and high temperatures. Such panels can be used wherever temperatures of up to approximately 400°C prevail on the one hand, and where very good insulation is required on the other hand, e.g. ovens for industry and food.

With the stackable "va-Q-tray", a thermal packaging system, food can be transported in such a way that it remains warm, cold or frozen for hours, or in some cases days. The temperature-holding time can optionally be extended by PCM rechargeable batteries. With the va-Q-tray, for example, bakery branches can be supplied efficiently with fresh produce: in contrast to existing styrofoam systems, va-Q-tray meets the highest hygiene and temperature chain requirements, can be used universally (e.g. as a portable refrigerator), and as a combinable system with non-insulated standard containers. In addition to the hygienic advantages, this also results in cost savings because additional refrigerated vehicles can be dispensed with.

"va-Q-med" was significantly further developed with external logistics partners in the past financial year. It ensures safe last-mile logistics without temperature deviations directly to the receiver. Unlike conventional, inefficient one-way packaging or CO_2-intensive extra transports with refrigerated vehicles in congested inner cities, the va-Q-med boxes enable environmentally compatible, traffic-reducing and at the same time safe transport logistics. The transport system consists to a large extent of vacuum insulation panels. va-Q-tec phase change materials ("PCMs") supplement the strong insulation performance of VIPs. They ensure reliable and energy-efficient temperature control in the required range.

In order to control these logistic processes, va-Q-tec is increasingly developing advanced software and simulation solutions under the key term "TempChain 4.0". In combination with va-Q-tec thermal packaging, these enable the smart control of TempChains. To this end, IT resources were strengthened further in the period under review.

The technology platform is secured through around 170 industrial property rights and filings for industrial property rights. These relate mainly to efficient manufacturing methods for powder-filled VIPs as well as the va-Q-check® quality control system, a sensor technology to measure vacuums in VIPs. A total of 8 industrial property rights were filed, including 4 patents and 4 registered designs.

The company made further investments in its research and development area in the year under review. Expenditure for this area amounted to kEUR 2,417, around the previous year's level (kEUR 2,451). Research and development costs of kEUR 300 in total (previous year: kEUR 144) were capitalized in the reporting period.

2.2 BUSINESS REPORT

2.2.1 Macroeconomic environment and Group-specific conditions

In many regions of the world, the general uncertainty dampened growth during the past financial year. Many companies postponed investments. In some countries, private households also increased their savings ratio. Especially for Germany, which is particularly dependent on exports, forecasts for macroeconomic growth in 2019 had to be significantly reduced. Above all, trading tensions and uncertainties, for example regarding Brexit, weighed on corporate sentiment. The United Kingdom left the European Union on 31 January 2020. However, with the completion of the political withdrawal, no future economic issues have been settled. va-Q-tec is closely monitoring possible effects of Brexit through a dedicated team close to the Management Board. Overall, assuming a constructive solution, va-Q-tec does not expect any significant negative effects, especially on business in the UK reporting segment. Although operational control derives from the UK, the real added value is generated by the globally distributed container fleet. For further information on the opportunities and risks arising from Brexit, please refer to the report on opportunities and risks.

The outbreak of coronavirus may give rise to macroeconomic risks that could lead to significant declines in the affected regions or the global economy. For further information on coronavirus in connection with va-Q-tec, please see the report on opportunities and risks.

The International Monetary Fund (IMF) estimates that the world economy expanded by 2.9 % in 2019. Provided political risks ease slightly in 2020, and US fiscal policy continues to exert a supportive effect, economic growth could accelerate again in the second half of 2020. Accordingly, the IMF expects growth of 3.3 % for 2020. Developing and emerging economies will make an above-average contribution to global growth, according to the forecast. As a globally active Group, va-Q-tec consequently sees itself exposed to both opportunities and risks in macroeconomic terms.

Key revenue drivers for the va-Q-tec Group include the two end-markets of Healthcare and Logistics as well as Appliances and Food, which together account for an 88 % share of consolidated revenue.

With its German and UK segments, va-Q-tec is active in the market for thermal packaging systems – particularly for the healthcare industry as the most important sales market for va-Q-tec. Market research agency MarketsandMarkets takes an optimistic view of market growth over the coming years: over the 2016 to 2021 period, MarketsandMarkets expects an average annual growth rate of 9.1 %, whereby va-Q-tec assumes the relevant market subsegments (high-performance packaging systems) will grow faster. More stringent regulatory requirements made of cold-chain logistics (according to "Good Distribution Practice") are making ever more efficient packaging systems necessary for pharmaceutical industry customers. Moreover, market research agency IMARC assumes that 27 of the 50 top-selling medications worldwide will require cold-chain logistics in the 2 to 8°C range by 2020. va-Q-tec is convinced it can grow faster than the market with its high-quality system solutions for sale as well as rental solutions ("Serviced Rental" of thermal packaging systems). Especially with groundbreaking rental solutions, va-Q-tec aims to enter markets that conventional thermal packaging systems have served to date.

Germany alone has almost 20,000 pharmacies that are increasingly subject to regulations for transport and temperature logistics according to "Good Distribution Practice" (GDP). Our va-Q-tec transport solutions, e.g. based on va-Q-med technology, guarantee secure last mile logistics directly to the recipient without temperature deviations. With the va-Q-med-Box, va-Q-tec has the opportunity to play a crucial role in shaping the future of pharmacy and last-mile logistics.

After the healthcare industry, manufacturers of refrigeration and freezing equipment are the second most important customer. According to an estimate by ResearchAndMarkets, the market for vacuum insulation panels will grow by 20 % annually between 2019 and 2026.

Overall, va-Q-tec addresses growing markets with its product business with VIPs. In Germany, approximately 60 % of primary energy is harnessed for thermal purposes – refrigeration or heating in other words – according to the Working Group on Energy Balances (AGEB). With a worldwide increase in primary energy prices for consumers, greater awareness among customers about energy saving and more stringent statutory regulation, the economic and political incentive is increasing to invest in energy efficiency. This is leading to very interesting business opportunities for va-Q-tec products.

2.2.2 Business trends

After a strong first half of the year, the Group's dynamic growth continued in the second half of the year, so a 28 % increase in revenues from kEUR 50,708 to kEUR 64,667 (kEUR +13,959) was achieved that in the 2019 financial year. The company benefited in particular from a significant expansion of its customer base in its strategically important Services business.

During the 2019 financial year, significant successes have been achieved as part of the Power 20+ program (see below), with cost efficiency improving in areas such as purchasing, network management and production. In addition to accelerated growth in the high-margin Services business, this contributed to the considerable earnings improvement. Earnings before interest, taxes, depreciation and amortization (EBITDA) more than tripled to kEUR 9,673 compared to kEUR 3,027 in the previous year, with a significant margin increase from 5 % to 13 %.

As a consequence, the revenue forecasts, which had already been raised in the course of the financial year, were even exceeded, and EBITDA reached the upper end of the range. Due to the positive business trend, with the publication of the 9M figures the Management Board decided to raise the revenue and EBITDA forecast, which for the H1 earnings release had been specified at the upper end of the range. The Management Board had previously assumed around 20 % year-on-year revenue growth for FY 2019. The expected revenue growth for the 2019 financial year was then raised to 23 % to 26 % compared to the previous year. In addition, va-Q-tec continued to expect an EBITDA margin of 11 % to 14 % for the 2019 financial year, compared with an EBITDA margin of 5 % in the 2018 financial year.

Products division (sale of vacuum insulation panels and phase change materials)

In its Products division (sale of vacuum insulation panels and phase change materials), va-Q-tec has benefited over recent years from increasing energy efficiency requirements, e.g. for refrigerators or hot water storage tanks. New customers from promising industries and end applications, such as the aviation sector, were acquired. In Q1 2019, va-Q-tec underlined this, including by jointly applying for the "Crystal Cabin Award" with Airbus Operations GmbH. The international innovation award honors outstanding concepts in the area of aircraft cabin interiors. Revenues in the Products business were slightly down on the strong prior-year basis at kEUR 18,440 (previous year: kEUR 20,122). Revenues in this area have almost doubled since 2016 and, when looking at the last three years, the medium-term cycles typical of va-Q-tec's dynamic growth markets are also reflected in this business segment. In the refrigerator and freezer segment, however, end markets are also feeling increasing competitive pressure from Asia and Eastern Europe.

Systems division (sale of thermal packaging systems)

In the Systems division, which is often influenced by large projects in individual quarters, revenue rose by 33 % year-on-year, from kEUR 11,307 to kEUR 15,054 (kEUR +3,746). Of particular significance for va-Q-tec in 2019 was a project order from kohlpharma, a pharmaceuticals reimporter. In future, transport systems deploying va-Q-med® technology will now ensure reliably constant transportation temperatures, so that kohlpharma's customers also receive their medicines at top quality in the particularly critical 2-8°C range. As early as 2017 va-Q-tec delivered to the Swiss Post the first high-performance thermoboxes for the transport of pharmaceutical products for pharmacies, and commands significant experience in handling large transport volumes. va-Q-tec supplied kohlpharma with a fleet of reusable transport systems in 2019. The company will also support kohlpharma in the design of a requalification concept.

Services division (Serviced Rental of thermal packaging systems)

In 2019, the Services division continued on the very positive trend that began in Q4 2018: in the reporting period, va-Q-tec generated revenues of kEUR 29,811, which corresponds to an increase of 62 % or kEUR 11,425 compared to the previous year. The Services business thereby comprised the most important growth area in the past financial year, contributing 46 % of Group revenue. The attractive rental business thereby replaced the product business as the highest-revenue business area in 2019. Revenues with existing major customers for the "Serviced

Rental" of containers continued to perform well, and with continuously growing volumes. In addition, the leasing of containers to customers with a formerly small contribution to revenue was expanded, in some cases very significantly. In the course of the strong expansion of business, the need for repositioning empty containers by air freight also grew, so that the gross profit margin failed to be improved in percentage terms, despite the significant increase in revenue. In the rental of small thermal transport boxes, the business with a large customer from the pharmaceutical industry in the USA was further expanded. Overall, the company benefited from a significant expansion of its customer base.

National and international business trends

In 2019, va-Q-tec made strategic progress in extending its technological leadership. The WirtschaftsWoche weekly business magazine ranks va-Q-tec second in its listing of "Germany's most innovative medium-sized companies in 2019". Innovative va-Q-tec insulation solutions are finding potential applications both in established regions as well as in the end markets of Appliances and Food (refrigerators and commercial refrigeration) and Technics and Industry (hot water tanks). The attractiveness for other areas, e.g. for mobility applications and in the construction sector, not only opens up additional growth prospects but also potential for technological differentiation.

The company also continued on its course of internationalization. The subsidiaries in the USA and Switzerland have performed well and are making substantial revenue contributions. The two new subsidiaries in Uruguay and Singapore founded just last year are already contributing more than expected to Group revenue. Overall, va-Q-tec has expanded its international network to seven subsidiaries and has thereby established strong positions for itself in the most important global markets.

va-Q-tec generates a total of 68 % of its revenues outside Germany (previous year: 65 %).

In China, va-Q-tec created a basis for market entry in Q4 2019 and opened a new TempChain Service Center (TSC) in Shanghai together with its partner Worldwide Logistics. The Chinese pharmaceutical market is the second largest in the world after the US market. Its volume is set to expand USD 200 billion by 2022, according to estimates. This market's annual growth rates for temperature-controlled transport and storage are the highest in the world. Thanks to the strategic partnership with Worldwide Logistics, va-Q-tec is able to offer Chinese customers optimal availability and access to its box and container rental fleet. In addition, customers worldwide are in a position to organize goods flows to China via the TSC in Shanghai. Following the establishment of new subsidiaries in Japan, South Korea and Singapore, the opening of the TSC underscores the company's growth ambitions in Asia.

"Power 20+ " performance program further advanced in 2019

The Management Board launched the "Power 20+" program in Q4 2018. This initiative has two clear strategic priorities: firstly, a focus on profitable sales revenue growth, e.g. by optimizing sales processes in the Services division; secondly, a focus on continuous cost efficiency in production, purchasing, logistics and supporting areas such as IT. Over 60 specific projects and measures in 2019 were in place for the two strategic priorities, which were regularly measured, monitored and adapted in terms of their effectiveness. In total, the program contributed over EUR 3 million to the earnings improvement in 2019. Many of the measures will continue to contribute to increased efficiency beyond 2019. For this reason, the program will be continued in 2020 and further developed as a constant endeavor for ideas for improvements and cost savings.

Extension of the appointment of Stefan Döhmen (CFO)

At its last meeting, the Supervisory Board of va-Q-tec AG appointed Stefan Döhmen, the company's CFO, to the Management Board for a further three years until the end of 2022. With this contract extension, the Supervisory Board acknowledges Mr. Döhmen's important contributions within his department to the successful development of va-Q-tec AG since its IPO. Mr. Döhmen has further professionalized and efficiently structured his department as a whole, and complements Dr. Kuhn very well in his role as CEO.

2.2.3 Non-financial performance indicators

Employees at va-Q-tec

As a technology company with extensive coverage of the value chain, va-Q-tec ascribes particular significance to its staff and their qualifications. The employees' knowledge, skills, further development and commitment are essential for the further success and performance of va-Q-tec. Staff received both in-house and external training measures during the year under review. Along with corresponding functional training sessions for employees, the focus was on the cross-functional topic of project management. va-Q-tec employs a high number of students, especially in research and development. A total of 14 working students were employed at va-Q-tec (previous year: 18). The average of employees (excluding Management Board members and trainees) grew in the previous by 20, from 444 in the previous year to 464 in the 2019 financial year.

2.2.4 Business results and analysis of the financial position and performance

Results of operations

kEUR unless stated otherwise	2019	2018	Δ 19/18
Revenues	64,667	50,708	+28 %
Total income	72,817	61,364	+19 %
Cost of materials and services	-28,993	-25,722	+13 %
Gross profit	43,824	35,642	+23 %
Personnel expenses	-22,389	-20,403	+10 %
Other operating expenses	-11,762	-12,212	- 4 %
EBITDA	9,673	3,027	+220 %
EBITDA margin on total income	*13 %*	*5 %*	-
EBITDA margin on revenue	*15 %*	*6 %*	-
Depreciation and amortization	-12,232	-9,864	+24 %
EBIT	-2,559	-6,837	+63 %
Result from equity accounted investments	-68	-110	-
Fair value measurement of SUMTEQ	1,771	-	-
Net financial result	-1,063	-828	+28 %
EBT	-1,919	-7,775	+75 %

Overall, new order intake in the 2019 financial year lay significantly above the previous year's level. The order book position

as of 31 December 2019 also increased further compared with the previous year, supporting the company's positive outlook. Given this, va-Q-tec grew its revenues in the past financial year by a very strong 28 % year-on-year to reach kEUR 64,667.

The revenue growth was driven to a particularly significant extent by the Services division ("Serviced Rental" of thermal packaging systems), which recorded an increase in revenue of kEUR 11,425, from kEUR 18,386 to kEUR 29,811 (+62 %). In the Systems division (thermal packaging systems), revenues grew by kEUR 3,747, from kEUR 11,307 to kEUR 15,054 (+33 %). Compared with a very strong prior-year basis, the business with Products was down by kEUR 1,682, from kEUR 20,122 in 2018 to kEUR 18,440 (-8 %).

In view of the positive business trend, the Management Board had decided, at the time of the publication of the 9M figures, to raise the revenue and EBITDA forecast which it had originally issued at the start of the year, and which at the time of the half-year results it had further specified at the upper end of the range. Until that time, the Management Board had assumed approximately 20 % year-on-year revenue growth for FY 2019. The expected revenue growth for the 2019 financial year was then raised to 23 % to 26 % compared to the previous year. In addition, va-Q-tec continued to expect an EBITDA margin of 11 % to 14 % for the 2019 financial year. This adjusted forecast was exceeded with the final figures in terms of revenue with growth of 28 %, and at the upper end of range in terms of EBITDA with a margin of 13 %.

The German segment (va-Q-tec AG) contributed kEUR 34,442 to consolidated revenue (previous year: kEUR 33,650), the UK segment (va-Q-tec UK) kEUR 24,917 (previous year: kEUR 14,737), and the Other segment kEUR 5,308 (previous year: kEUR 2,321).

Total income in 2019 reported weaker growth than the rate of revenue growth, and was up by 19 % to kEUR 72,817. Work performed by the company and capitalized (which is included in total income) of kEUR 3,947 in the reporting period was generated mainly from the continued expansion of the container and box fleets (previous year: kEUR 5,620). Other operating income of kEUR 4,498 (previous year: kEUR 3,748) arose largely from releasing the special item deriving from container sale-and-leaseback transactions. This special liability item arose by the end of 2018 from the sale of self-produced containers by the parent company va-Q-tec AG or by va-Q-tec UK Ltd to leasing companies, and subsequent finance leaseback by the UK subsidiary. It represents the difference between the market price of the container and its production cost, and is released over a five-year depreciation period and added to other operating income (please see note 3.2.1 "Sale and finance leaseback transactions" in the notes to the consolidated financial statements for more information). Due to the introduction of the new IFRS 16 accounting treatment of leasing transactions, no new special items on the liabilities side will be formed. Instead, the containers will only be capitalized at production cost at Group level.

The cost of materials and services was up by 13 % from kEUR 25,722 to kEUR 28,993, below the average rate of total income growth, and leading to a cost of materials ratio of 40 % (previous year: 42 %). At the same time, the cost of purchased services as part of the cost of materials rose by kEUR 4,196 to kEUR 12,642 (previous year: kEUR 8,446), mainly due to the necessary repositioning of empty air freight containers and other container rental business costs in the course of the strong expansion of business in this area.

Personnel expenses were up from kEUR 20,403 in the previous year to kEUR 22,389 in the 2019 financial year (+10 %), thereby decreasing significantly to 31 % in relation to total income (previous year: 33 %). The absolute increase is mainly due to new hires at the foreign subsidiaries, higher bonuses and management bonuses based on the significantly improved results compared to the previous year, as well as salary updates of hires from 2018.

Other operating expenses reduced from kEUR 12,212 in the previous year to kEUR 11,762 (-4 %) in the reporting period. Measured against total income, this results in a lower other operating expense ratio of 16 % (previous year: 20 %). The reason for the reduction was closely monitored cost control as part of the Power 20+ program. In addition, in 2019 the duplication and relocation costs incurred in the previous year in connection with the move to the new Group headquarters in Würzburg and the new production hall in Kölleda will no longer apply. The effect of the introduction of lessee accounting according to IFRS 16 and the associated initial recognition of lease liabilities in relation to other operating expenses was kEUR 1,018.

As a result of these developments, earnings before interest, tax, depreciation and amortization (EBITDA) reported a very sharp improvement, from kEUR 3,027 in the previous year to kEUR 9,673. This corresponds to a significantly better EBITDA margin of 13 % in relation to total income (previous year: 5 %). The Group forecast of an EBITDA margin on total revenues of between 11 % and14 %, which was adjusted in the context of the 9M publication, was thereby achieved at the upper end of the range. In relation to revenue, this represents a 15 % margin, compared to 6 % in the previous year.

Depreciation and amortization increased by 24 % to kEUR 12,232 (previous year: kEUR 9,864) due to the substantial investments realized in previous years and the significantly higher depreciation deriving from the first-time application of IFRS 16. The effect on depreciation of the introduction of lessee accounting according to IFRS 16, and the associated initial recognition of rights of use, amounted to kEUR 976.

Earnings before interest and tax (EBIT) improved by kEUR 4,278, from kEUR -6,837 in previous year to kEUR -2,559.

The attractiveness of the investment in SUMTEQ GmbH is clearly illustrated by the change from equity accounting to fair value accounting: in 2019, this results in non-recurring income of kEUR 1,771. The change was necessitated because va-Q-tec AG is no longer able to exercise significant influence over the investment company following the entry of new shareholders with, in some cases, higher shareholdings, changes in the articles of association of SUMTEQ GmbH, and the termination of the chairmanship of the advisory board of SUMTEQ GmbH.

The net financial result amounts to kEUR -1,063 after kEUR -828 in the previous year, which is attributable to the annualization of the costs of the external financing assumed.

For the 2019 reporting period, this leads to a significantly reduced pre-tax loss (EBT) of kEUR -1,919, compared to a loss of kEUR -7,775 in the same period of the previous year, driven by the significantly improved EBITDA and EBIT figures and additionally due to the one-time effect described above in connection with the accounting for the SUMTEQ investment.

German reporting segment (va-Q-tec AG)

kEUR unless stated otherwise	**2019 (IFRS)**	**2018 (IFRS)**	**Δ 19 / 18**
Revenues	44,028	44,565	-1 %
EBITDA	1,009	580	-74 %
Equity ratio	56 %	57 %	
Average number of employees	398	390	+8

In the German reporting segment (va-Q-tec AG), revenues decreased slightly by kEUR 537 (-1%), from kEUR 44,565 in the previous year to kEUR 44,028 in 2019. The decline in revenue was mainly attributable to the sharp reduction at the start of the year in the sale of containers to leasing companies and the UK subsidiary, and slight declines in revenue in the Products division. Revenues in this area have almost doubled since 2016 and, when looking at the last three years, the medium-term cycles typical of va-Q-tec's dynamic growth markets are also reflected in this business segment. In the refrigerator and freezer segment, however, end markets are also feeling increasing competitive pressure from Asia and Eastern Europe. EBITDA amounted to kEUR 1,009 (previous year: kEUR 580). The average number of employees rose by 8 to 398 (previous year: 390).

UK reporting segment (va-Q-tec UK Ltd.)

kEUR unless stated otherwise	**2019** (IFRS)	**2018** (IFRS)	**Δ 19 / 18**
Revenues	26,255	16,044	+64 %
EBITDA	8,665	4,334	+100 %
Equity ratio	16 %	15 %	
Average number of employees	41	37	+4

Revenues in this segment grew by 64 % from kEUR 16,044 in the previous year to kEUR 26,255 in 2019. In addition, service revenue generated with a major pharmaceutical customer, for which revenue was still declining in 2018, strengthened again. Revenues with existing major customers for the "Serviced Rental" of containers continued to perform well, and with continuously growing volumes.

In addition, the leasing of containers to customers with a formerly small contribution to revenue was expanded, in some cases very significantly. In the course of the strong expansion of business, the need for repositioning empty containers by air freight also grew, so that the gross profit margin failed to be improved in percentage terms, despite the significant increase in revenue. EBITDA was down up kEUR 4,331, from kEUR 4,334 in the previous year to kEUR 8,665 in 2019. The average number of employees rose from 37 to 41.

Other reporting segment

kEUR unless stated otherwise	**2019** (IFRS)	**2018** (IFRS)	**Δ 19/18**
Revenues	6,511	4,089	+59 %
EBITDA	-186	53	
Equity ratio	-7 %	10 %	
Average number of employees	25	17	+8

The subsidiaries in Uruguay, Korea, Japan, Switzerland, Singapore and the USA, which together form the Other reporting segment, reported a significant increase in revenue overall. This is driven by higher sales and purchasing commissions and mainly by significantly growing own revenues in the regions. The subsidiaries in the USA and Switzerland performed especially well and are now making substantial revenue contributions. Our two new subsidiaries founded just last year in Uruguay and Singapore are already contributing more than expected to Group revenue. All subsidiaries in the Other reporting segment are particularly important for local presence, the expansion of regional operating activities, and the perception of va-Q-tec as a reliable global and regional partner. EBITDA decreased to kEUR -186 after kEUR 53 in the previous year due to the start-up costs of the new foreign companies. The average number of staff amounted to 25 (previous year: 17).

Financial position

Principles and goals of financial management

The financing strategy of va-Q-tec is oriented to providing the funds required for strong growth. Recourse is made in this context to various financing instruments such as loans, leasing, factoring, overdrafts and government subsidies. Existing financing instruments were optimized continuously in terms of their structures and interest rates. In total, va-Q-tec has adequate liquidity for the needs of a rapidly growing company as of 31 December 2019 with bank balances plus open credit lines of more than EUR 10 million. Together with further financing facilities of up to EUR 5 million, which are in negotiation, the financial scope would amount to more than EUR 15 million. In connection with the expiration of the multi-bank master loan agreement on 31 December 2020, the company is also holding discussions with banks and financial institutions on short- and medium-term debt financing instruments.

Liquidity

kEUR	**2019**	**2018**
Net cash flow from operating activities	7,188	-3,653
Net cash flow from investing activities	-8,942	-11,965
Net cash flow from financing activities	-2,972	22,624
Net change in cash and cash equivalents	-4,664	6,953

Der Net cash flow from operating activities including working capital changes amounted to kEUR 7,188 in 2019, kEUR 10,841 above the adjusted level of kEUR -3,653 in the prior year. Before working capital changes, va-Q-tec generated a positive cash flow from operating activities of kEUR 5,808 as of the balance sheet date, compared with kEUR -419 in 2018.

The improvement in cash flow reflecting working capital changes is due to the reduction in inventories of kEUR 333 in 2019, among other factors. Inventories had continued to report a sharp increase in the previous year (kEUR 2,384), in particular to ensure the ability to deliver during the relocation-related standstill of the production lines and in part to increase safety stocks of materials required for production and the initial equipment of subsidiaries abroad. Cash flow from trade payables was also slightly positive in the reporting period (kEUR +127; previous year: kEUR -1,277). Despite the significant increase in revenue, trade receivables decreased considerably as of the balance sheet date as part of an expansion of factoring, so that here too a positive cash flow of kEUR 920 was generated (previous year: kEUR 427). The effect of the expansion of factoring on the cash flow from operating activities amounted to kEUR 498 in 2019. In addition, the first-time application of IFRS 16 led to a positive effect on cash flow from operating activities of kEUR 965. Cash flow from financing activities developed in the opposite direction accordingly.

Cash flow from investing activities changed from kEUR -11,965 in the prior-year period to kEUR -8,942 in 2019. The previous year's figure for actual investments was still influenced by the countervailing utilization or release of short-term time deposits (kEUR +9,000). The purchase of property, plant and equipment resulted in kEUR -8,746 of cash flow, compared with kEUR -19,789 in the previous-year period. The reason for this decrease is the planned decline in investments, since the most important investments and initiatives for further growth towards EUR 100 million in revenue were largely completed faster than originally planned in 2018.

Cash flow from financing activities in the amount of kEUR -2,972 (previous year: kEUR 22,624) arises from the scheduled net repayment of liabilities to banks and leasing companies compared to the significantly higher new borrowings to finance long-term investments and working capital requirements in the previous year.

The first-time application of IFRS 16 had no effect on the cash flow statement, as neither the capitalization of the rights of use of leased assets nor the accounting of the corresponding lease liabilities resulted in any cash inflow or outflow. As a result of the application of IFRS 16, the actual payment of the lease obligations is reflected as cash outflow from financing activities and no longer as cash outflow from operating activities as in the previous year. In the 2019 financial year, this effect of the payments of lease obligations of va-Q-tec amounted to kEUR 965.

Net assets and capital structure

Assets

kEUR	31/12/2019	31/12/2018
Non-current assets		
Intangible assets	2,233	2,437
Property, plant and equipment	68,879	69,390
Investment property	1,614	1,614
Contract assets	158	157
Equity accounted interests	-	580
Financial assets	2,474	184
Other non-financial assets	1,100	647
Deferred tax assets	2,319	2,961
Total non-current assets	**78,777**	**77,970**
Current assets		
Inventories	10,676	10,924
Trade receivables	6,666	7,557
Other financial assets - of which term deposits (6-12 months): kEUR 0 (previous year: kEUR 9,000)	586	334
Current tax assets	230	135
Other non-financial assets	1,364	1,073
Cash and cash equivalents	7,490	12,154
Total current assets	**27,012**	**32,177**
Total assets	**105,789**	**110,147**

Compared with 31 December 2018, property, plant and equipment decreased slightly by a total of kEUR 511 to a level of kEUR 68,879 as of 31 December 2019. Total non-current assets rose by kEUR 807 to kEUR 78,777 as of 31 December 2019. This is primarily due to the change in accounting necessitated for the SUMTEQ investment from equity accounted to the fair value method, as a significant influence on the financial and business policy decisions of the investment no longer exists following the changes in the agreements under company law and the entry of new shareholders as part of a capital increase. From 7 June 2019, the investment will instead be recognized at fair value under financial assets. Fair value measurement leads to the investment being recognized on the balance sheet in the amount of kEUR 2,283 compared with an equity accounted valuation of kEUR 580 as of 31 December 2018, which highlights the attractiveness of the investment in SUMTEQ GmbH.

Despite the revenue growth, inventories decreased by kEUR 248 to kEUR 10,676 (previous year: kEUR 10,924), which is also due to the normalization of safety stocks, which increased in the previous year, and pre-production ahead of the interruption of production in Würzburg due to the relocation. Despite the revenue growth, trade receivables also declined significantly, with a reduction of kEUR 891 to kEUR 6,666 as of 31 December 2019 compared to 31 December 2018 (previous year: kEUR 7,557). In addition to an improvement in the payment behavior of customers in the UK, this is also due to an expansion of factoring in the 2019 financial year beyond the factoring practiced exclusively on a selective basis with individual customers in previous years. Current other financial assets increased by kEUR 252 from kEUR 334 to kEUR 586 as of 31 December 2019, due to receivables from the factoring company, e.g. for deposits. Total current assets rose from kEUR 32,177 as of 31 December 2018 to kEUR 27,012 as of 31 December 2019. Total assets reduced from kEUR 110,147 to kEUR 105,789 as of 31 December 2019.

Investments

The main focus of investment activity, which was significantly reduced in 2019 compared with 2018 and 2017, was on continued investment in real estate in Kölleda, the slowdown in the expansion of the container fleet for the global container rental business, and the expansion of the thermobox fleet, as well as major IT projects. A total of kEUR 11,312 gross was invested in property, plant and equipment, of which kEUR 2,405 was invested in the container fleet (previous year: kEUR 10,517) and kEUR 525 in intangible assets (previous year: kEUR 1,623). In addition, the first-time application of IFRS 16 as of 31 December 2019 resulted in a balance sheet effect from the capitalization of rights of use in the amount of kEUR 2,183. Property, plant and equipment, net of depreciation and other movements, fell slightly from kEUR 69,390 to kEUR 68,879. Especially the investments already realized in 2017 and 2018 form the basis for the further expansion of the company towards a revenue level of EUR 100 million.

Equity and liabilities

kEUR	31/12/2019	31/12/2018
Equity		
Issued share capital	13,090	13,090
Treasury shares	-54	-54
Additional paid-in capital	46,158	46,158
Consolidated total other comprehensive income	-26	-39
Retained earnings	-16,461	-13,895
Total equity	**42,707**	**45,260**
Non-current liabilities		
Provisions	73	79
Bank borrowings	22,840	24,732
Other financial liabilities	5,333	6,814
Other non-financial liabilities	6,547	9,310
Total non-current liabilities	**34,793**	**40,935**
Current liabilities		
Provisions	130	62
Bank borrowings	11,404	9,400
Other financial liabilities	6,867	4,873
Liabilities from contracts with customers	308	19
Trade payables	4,485	4,594
Tax liabilities	42	79
Other non-financial liabilities	5,053	4,925
Total current liabilities	**28,289**	**23,952**
Total Equity and liabilities	**105,789**	**110,147**

Due to the loss incurred overall by the Group, the Group's equity decreased by kEUR 2,553 to kEUR 42,707, although this still corresponds to a very solid equity ratio of 40 % as of 31 December 2019 owing to the likewise significantly lower level of total assets (31 December 2018: 41 %).

Long-term bank borrowings consist primarily of real estate loans with terms of 15 to 20 years, and fixed interest rates at the current low level. Liabilities decreased from kEUR 24,732 to kEUR 22,840 due to the scheduled repayment of loans. Current bank borrowings reported a rise from kEUR 9,400 to kEUR 11,404, reflecting greater utilization of overdraft lines.

Non-current other financial liabilities reduced from kEUR 6,814 to kEUR 5,333. Within this item, the sale-and-finance-leaseback financing for the container fleet, in particular, declined significantly from kEUR 5,942 to kEUR 3,956. Due to the first-time recognition in accordance with IFRS 16 in the amount of kEUR 1,298, the total value of long-term leasing liabilities nevertheless only decreased by kEUR 688 to kEUR 5,254. Non-current other non-financial liabilities decreased significantly by kEUR 2,763 from kEUR 9,310 to kEUR 6,547, primarily due to the decline in special items for container profits. Development banks disbursed no funds for investments to va-Q-tec in the reporting period (previous year: kEUR 1,664). Other current financial liabilities rose from kEUR 4,873 to kEUR 6,867, primarily due to the first-time recognition of rights of use in accordance with IFRS 16 (kEUR 896) and the increase in liabilities for outstanding invoices by kEUR 477 in total. Other current non-financial liabilities changed on balance by only kEUR 128. Within this item, above all the special item for deferred container profits fell by kEUR 469, while liabilities for employee bonuses and profit-sharing increased by kEUR 572 as a result of the significantly improved results.

Liabilities to banks plus equipment leasing (including leasing liabilities of kEUR 2,194 from the first-time recognition under IFRS) accounted for kEUR 42,382, or 40 % of total assets (previous year: kEUR 42,186, 38 %). At the level of the UK reporting segment, further financing transactions were concluded as part of the container fleet expansion, which, however, were allocated to bank borrowings due to contractual changes. For this reason, the total volume of finance leases decreased by kEUR 2,111, from kEUR 8,054 in the 2018 year to kEUR 5,943 in the 2019 financial year. Current liabilities and provisions stood at kEUR 28,289 in the financial year under review, representing 27 % of total equity and liabilities (previous year: kEUR 23,952, 22 %). The Group's non-current liabilities amounted to kEUR 34,793 as of 31 December 2019, corresponding to 33 % of total assets (previous year: kEUR 40,935; 37 %). Trade payables reduced slightly to kEUR 4,485, compared with kEUR 4,594 in the previous year.

Overall statement on business progress

va-Q-tec returned to its growth track with dynamic EBITDA and earnings performance in the most profitable financial year in the company's history. In 2019, the Group reported very strong revenue growth year-on-year. The Services division ("Serviced Rental" of thermal packaging systems) is driving this growth to a very significant extent. The Products division (sales of vacuum insulation panels and phase change materials) maintained the previous year's high level, and further growth, including project-based growth, was achieved in the Systems division (thermal packaging).

EBITDA more than tripled year-over-year thanks to growing service revenues with high EBITDA margin and disciplined cost control from the "Power 20+" program. It is particularly noteworthy that operating cash flow is clearly positive and that va-Q-tec continues to report a very good equity ratio.

2.3 FORECAST

2.3.1 Outlook

The following forecasts for the trend in management metrics were made under the assumption of the macroeconomic conditions for 2020 described in section 2.2.1. They are also based on the expected positive growth rates in the market for VIPs and insulation materials overall. A high growth dynamic is expected in the market for thermal packaging and services, particularly in the high-performance thermal packaging segment. These assumptions are underpinned by estimates produced by market research institutes IMARC and ResearchAndMarkets, which already expect growth in the low double-digit percentage range (see 2.2.1 Macroeconomic environment and Group-specific conditions). Above and beyond this, va-Q-tec expects to benefit to an above-average extent from the megatrends of energy efficiency, regulation of cold chains (product safety), and the globalization of value chains. Also taking into consideration the opportunities and risks entailed in operating activities as outlined in section 2.4.2, the company identifies growth levers in tapping new markets and application areas in terms of both products (e.g. last mile to the pharmacy, the utilization of rental containers for temperature-sensitive goods outside the pharmaceuticals industry, TempChain 4.0 applications) and geography (new and further developed country markets such as North America).

Overall statement

The spread of coronavirus is currently hitting the global economy hard. It is uncertain with which severity and duration this will also affect va-Q-tec. It is almost impossible to provide reliable guidance at the present time. After revenues reported very strong growth over the past five years at an average of 25 % per year, and again at a very strong rate of 28 % in 2019, va-Q-tec would expect, under normalized economic conditions, medium to strong revenue growth for the 2020 financial year compared to 2019, in its three reporting segments and underlying business areas. Strong to very strong revenue growth is expected especially in the Services division. However, in view of the current economic uncertainties caused by the coronavirus pandemic, on a precautionary basis we are at present assuming only moderate to medium growth. The Group generates around 70% of its revenues in the healthcare sector, which is likely to be one of the least affected sectors of the economy worldwide, as medical care for the population is likely to be a priority. In va-Q-tec products, vital drugs and raw materials for drugs with a market value of several billions of euros are transported annually.

As far as earnings before interest, tax, depreciation and amortization (EBITDA) are concerned, the company expects – on the basis of normalized economic conditions – strong year-on-year growth for the 2020 financial year thanks to operating economies of scale and a changed product mix reflecting a growing proportion of higher-margin services. On a precautionary basis, the company is not anticipating any margin improvement compared to 2019 due to possible additional costs and potential revenue losses caused by the coronavirus pandemic.

The company expects the equity ratio to reduce slightly in the 2020 financial year, but to remain within the target range of 35 to 40%.

Under normalized economic conditions, the number of employees will increase slightly in 2020 in the context of international business expansion , or remain constant in the context of the coronavirus pandemic.

As a consequence, the Management Board of va-Q-tec AG expects – under normalized economic conditions – above-average revenue growth compared with the target markets, accompanied by a further significant improvement in EBITDA profitability compared with 2019. In view of current developments, the Management Board assumes at present, on a precautionary basis, that the coronavirus pandemic will have a negative impact, thereby implying revenue growth in the moderate to medium range, accompanied by constant EBITDA profitability.

2.3.2 Forward-looking statements

This report includes forward-looking statements based on current assumptions and forecasts of the management of va-Q-tec AG. Such statements are subject to risks and uncertainties. These and other factors can lead the company's actual results, financial position, development or performance to differ significantly from the estimates provided here. The company assumes no obligation of any kind to update such forward-looking statements and adjust them to future events or developments.

This document is an English translation of an original German document; in the event of discrepancies, the original German version shall prevail and take precedence over the English translation of the document. For technical reasons, formatting differences may arise between the accounting documents contained in this document and those published due to legal requirements.

For reasons of better readability, the masculine form is predominantly used in this annual report. Nevertheless, the information refers to persons of any gender.

.2.4 REPORT ON OPPORTUNITIES AND RISKS

2.4.2 Risk management and internal control system

Risk management va-Q-tec is based on three main aspects:

- a risk-aware corporate culture
- a formalized risk management system
- the internal control system

Anchoring risk awareness within the corporate culture
All successful business activity is connected with the conscious assumption of risks. It is crucial to the corporate governance of va-Q-tec that existing and newly added risks be handled in such a way to enable them to be managed actively, and incur as few losses as possible. Opportunities in a business sense should also be exploited to enhance the company's value for all stakeholders. va-Q-tec enjoys a high degree of "risk awareness", which is communicated openly and transparently. From the Management Board's perspective, risk awareness that is translated into practice forms one of the most efficient instruments for handling risks. If employees are aware of risks and manage them professionally, the risk of losses being incurred because of risks materializing is diminished. Risks are disclosed and managed proactively and transparently in such an environment. The establishment and company-wide communication of compliance guidelines also fosters greater awareness of compliant behavior. A compliance management system is in place that defines a code of conduct for both internal and external business activity. The compliance officer appointed in this context records, processes and reports to the Supervisory Board and its Audit Committee on all relevant compliance cases.

Risk management system
Risk management at va-Q-tec refers to the systematic engaging with risks, understood as negative events whose occurrence can incur losses and/or unforeseen costs within the company. To meet this requirement, internal and external risks for all segments and subsidiaries are systematically surveyed, measured, steered, managed and reported to the Management and Supervisory boards with the risk management system.

To supplement the existing internal and external control system, the Group management of va-Q-tec already implemented a further developed and formalized risk management system (RMS) in the 2016 financial year for this purpose. The RMS is based on the experience gained in recent years in identifying risks, e.g. the findings of the risk inventory compiled during the preparation of the risk inventories since 2017. At the meetings of the Management Board, the Audit Committee and the Supervisory Board, the developments/changes in existing risks and the emergence of new risks regularly form the subject of consultations. As in the previous year, the risk situation in the 2019 financial year was evaluated on the basis of two risk inventories as of the reporting date. In the interim, a regular exchange of information on the risk situation also occurred between those responsible for risk officers, risk managers, the Management Board and the Supervisory Board. Furthermore, the RMS was continuously further developed during the course of the 2019 financial year.

The aims of the risk management system at va-Q-tec are, as a matter of principle, to avoid, reduce and transfer risks, including through corresponding insurance cover, for example. Along with compliance with regulatory requirements, systematic risk management secures long-term and sustainable competitiveness. Such risk management also aims to identify potential going concern risks at an early stage. Risk management at va-Q-tec is not only a security instrument but also a management instrument. Identified risks also offer new business opportunities and competitive advantages.

The RMS is based on a reporting process, a defined risk inventory and risk assessment during the course of the year. As part of the risk inventory, the respective decision-makers and experts within the specialist areas appraise all significant risks. Risks identified within the va-Q-tec Group are measured according to their potential loss and taking event probabilities into account. The risks identified as part of the risk analysis are categorized into risk classes according to their event probability and impact, by multiplying their respective effect by their respective event probability. The bandwidth of event probabilities and effects starts with "very low" and ends with "very high". Risks can thereby be differentiated and prioritized according to the resultant expected risk value. The specialist areas are required to identify and report new risks as part of risk appraisal during the course of the year. The information that is aggregated in this manner is summarized in risk files that are addressed and reported to the Management Board of the va-Q-tec Group.

All risks – newly added as well as existing – are also to be monitored and reported continuously. Requisite countermeasures are launched quickly, and subsequently monitored.

New risks and significantly changed risks also form fixed agenda items at all regular management meetings, at all Management and Supervisory board meetings. They are discussed as part of results briefings between the Management Board of the va-Q-tec Group and the managers of the specialist areas. A review is also conducted as to whether risk minimizing measures that have already been taken are sufficient, or whether further steps are to be initiated (such as in terms of ad hoc capital market communications). The Group risk management system enables the company's management to identify significant risks at an early stage and in order to initiate countermeasures and monitor their implementation. The auditor also examines the risk early warning system to ensure it is suited to the early identification of going concern risks.

Accounting-related internal control system

va-Q-tec operates a clear organizational, corporate, as well as control and supervision structure. Planning, reporting, controlling and early warning systems and processes exist across the company for the comprehensive analysis and management of earnings-relevant risk factors and going concern risks. The functions in all areas of the (Group) financial accounting process (e.g. financial accounting, financial bookkeeping and controlling) are clearly allocated. To date, va-Q-tec AG has refrained from operating a separate internal audit function due to the company's somewhat small dimensions and limited complexity.

Use is mainly made of standard software (Navision) as far as installed financial systems are concerned. Standard consolidation software is used to prepare separate and consolidated financial statements. Here, existing structures have to be adjusted constantly to reflect the company's growth and changing conditions, such as capital market requirements.

The IFRS consolidated financial statements are prepared based on a standard reporting format for submission by all Group companies to the central administration in Würzburg. The validation processes applied there and additional plausibility checks ensure that the separate financial statements of the subsidiaries and of va-Q-tec AG are complete and correct.

The internal control and risk management system relating to the financial accounting process ensures that business transactions are recorded, processed and appraised correctly from a financial accounting standpoint, before being transferred to external financial reporting.

Payment transactions are performed electronically with embedded control mechanisms (two sets of eyes principle with a selected group of individuals). External service providers implement payroll transactions.

The organizational, corporate as well as controlling and supervisory structure determines the framework of the ICS. Clear statutory and in-house regulations and guidelines ensure a standard and proper financial accounting process. Check mechanisms within the areas directly involved in the financial accounting process, review by the internal control function, backup from the independent auditors and early risk identification by the risk management function are designed to ensure that (Group) financial accounting is free of error.

2.4.2 Operating risks

va-Q-tec measures risks based on their estimated event probabilities and potential effects on the company's financial position and performance, as well as reputation. Measurement of risk loss levels and event probabilities leads to the following examples of key risk indicators.

Event probability	Loss level in EUR	Risk indicator
very low	0 - 50,000	1
low	50,000 - 500,000	4
medium	500,000 - 1,000,000	9
high	1,000,000 - 5,000,000	16
very high	> 5,000,000	25

The Management Board applies the following scheme to measure the characteristic of a risk based on its risk indicator:

Risk indicators	Risk characteristic
0 - 5	Gering
5 - 15	Mittel
> 15	Hoch

Overall, the following section presents risks after instituting countermeasures.

Risks in the value chain

As a manufacturing company, va-Q-tec has to make recourse to suppliers for intermediate products. va-Q-tec procures the main raw materials, consumables and intermediate products from a limited number of key suppliers. For some materials, only a few purchasing sources are available due to the specific characteristics. It is consequently the objective in the purchasing strategy of va-Q-tec to reduce dependency on individual or a few suppliers by qualifying and selecting new suppliers ("dual" or "multiple" sourcing). As in previous years, in 2019 the company continued to newly qualify and select second and third tier suppliers for intermediate products and materials. The company also consciously includes international suppliers in its selection in order to avoid regional dependency. A medium risk exists for va-Q-tec AG overall due to its limited number of suppliers.

Production stoppages and operational interruptions represent a further risk. The company depends on the continuous operation of its production systems to ensure it can meet delivery requirements, especially to major industrial customers whose value chains are closely intermeshed with that of va-Q-tec. va-Q-tec manufactures at two geographically separate sites in Würzburg and Kölleda. Stoppage at one site has no significant effects on the other site, where production can continue. Where possible and economically feasible, the individual production systems are also decoupled from each other through technical measures, so the stoppage of an individual system does not restrict the operation of other plants.

Besides the outage of existing systems, a risk can also arise in the insufficient overall capacity of the production systems. Along with productivity and efficiency improvements to the existing systems, the company's strong growth can also require early and forward-looking investment in capacity expansions, as the requisite plants sometimes require long delivery times. The company could nevertheless be surprised by sudden market developments, potentially being unable to satisfy all customer orders on the customers' requested dates. Through regular ad hoc reporting on new order trends between the sales areas and the Management Board, the company endeavors to identify such developments at an early stage and counteract them with appropriate measures. For example, such measures can temporarily consist of higher levels of security stocks, additional working shifts or the utilization of less appropriate plant for production, in order to bridge the time gap until additional capacities are commissioned. The Management Board also gauges the risk of long-lasting production outage from the aforementioned reasons as low, and also appraises the risk of insufficient capacity as low following the almost completed growth investments.

Rental services ("Serviced Rental") are particularly dependent on external logistics providers, which are not only responsible for operative processes at the network stations – for cleaning, warehousing and cooling processes, in other words – but also for transporting the preconditioned containers and boxes to the end-customers. This can lead to interruptions to operations, loss compensation claims and damage to reputation. Auditing and close-meshed controlling by the company's own logistics specialists serve to assure the quality of "Serviced Rental" for the pharmaceuticals industry globally. For this reason, the Management Board gauges this risk as medium.

Personnel risks

The company's operating activities and success depend on qualified managerial and key personnel. The company's very well-trained personnel has acquired specific knowledge, skills and commercial contacts, in part through working for the company for many years. va-Q-tec counters the risk of losing such staff not only through measures aimed at employee loyalty, but also through diversifying the knowledge base through the workforce: key staff departures at va-Q-tec are avoided through employee development, diversification of the knowledge base within the company, and compensation in line with the market. Employee motivation and satisfaction is also boosted through performance-based compensation components, regular further training and the good corporate culture with the possibility to help shape disruptive business models. The risks to which va-Q-tec is exposed due to a change of key staff are appraised as medium level risks.

Market and competition risks

The Group in its business activities has a strong focus on major industrial customers. This initially leads to a higher level of customer concentration. The company is constantly reducing the resultant risk through its growing number of customers, and diversification. Further protection exists thanks to a high level of customer loyalty, especially in the healthcare industry. The Group generally endeavors to establish and maintain a close, trusting and sustainable business relationship with all partners, employees and customers, and consequently gauges such risk as medium, and as a risk that can be reduced further.

As a fast-growing company, va-Q-tec might potentially be unable to effectively advance and shape its growth. The Group has almost completed a phase of significant investment in personnel, sales activities, rental fleets, infrastructure, and in research and development. To this extent, were actual growth to prove lower than planned, the risk exists of a negative effect on operating profits. As a matter of principle, the Management Board decides on such future investments with due objectivity and sense of proportion, and always based on specific expectations about market trends, as well as taking into consideration the ability to finance such investments. Insufficiently researched and/or excessively early investments are avoided as a consequence.

At the same time, significantly higher actual growth than planned generates the risk of a negative effect on the customer relationship due to non-compliance with delivery deadlines, delivery bottlenecks etc., and thereby also on the operating results. Here, too, sound judgement and the early identification of market developments through regular coordination with the sales areas constitute an important instrument to reduce risk, thereby identifying in good time the requirement for capacity expansions, with early decisions being made by the Management and Supervisory boards concerning the necessary investments in production plants and buildings. The Management Board assesses the residual risk as medium.

An intensification of the competitive environment also represents a significant risk. This can generate more pressure on prices and margins.

The company guards itself against such risk through two strategic levers, namely cost optimization measures and innovative products and services. Cost optimization includes, for example, increasingly automated production and the particularly efficient purchasing of intermediate products, with selective backwards integration to upstream value chain steps. The innovation topic includes research and development activities, which have already led to commercially successful, high-quality and particularly differentiated products since the company was formed. The company's range of products and services is distinguished from that of its competitors in many aspects: examples include the possibility to test the quality of the insulation in situ, or the production of VIPs with sections extracted and in three-dimensional form. Overall, the Group gauges the risk due to newly emerging competitors or a more aggressive competitive situation as medium.

Brexit

In order to prepare va-Q-tec constantly and continuously for the UK's withdrawal from the EU and to be able to respond immediately, a cross-divisional and cross-border Brexit team was formed. Together with operating units at va-Q-tec UK and with the other Group companies, customers and logistics partners, Brexit risks have been and are being identified, and measures to avoid disruptions in the supply chain have been and are being derived. This includes, for example, technical enhancements in our ERP systems in order to be able to respond to extended customs requirements on the system side. Brexit generates risks for our business, for example due to a possible weakening of the economy. Supply chains may also shift, and medicines or their preliminary products may no longer be transported to the UK but rather to France, Germany and the Netherlands. If the drugs or preliminary products originate in the USA, they still have to be transported across the Atlantic. va-Q-tec's TempChain service centers on the European mainland provide opportunities to deal with such changed logistics chains. Generally, less revenue is calculated in pounds sterling than costs are incurred in pounds sterling. If the pound depreciates against the euro, opportunities for va-Q-tec will arise as a consequence. Possible tax benefits could also create opportunities for va-Q-tec. Overall, va-Q-tec consequently considers Brexit-related risk to be low.

Coronavirus (COVID-19)

In contrast to other industries, va-Q-tec's supply chain is less designed for just-in-time processes. Short-term disruptions in the supply chain can be partially offset as a consequence. Current events in Asia and Europe, such as factory closures, and restrictions on public life in response to the spread of coronavirus, represent a potential risk if they can lead to significant declines in economic growth and private consumption worldwide. In addition, a pandemic outbreak of the virus could result in the closure of factories or network stations of the Group if its own employees or partner companies in the supply chain are affected by quarantine measures. Events and trade fairs where va-Q-tec takes part could also be affected by these effects. Based on a preliminary assessment of the consequences, the Management Board views this risk in a differentiated manner and assesses it as a major risk overall, taking into consideration the risks identified to date. Increasing drug deliveries due to the coronavirus outbreak may provide va-Q-tec with an opportunity for greater demand in the healthcare and logistics sector. As a consequence, a medium risk due to coronavirus (COVID-19) remains in the overall picture. Current developments and restrictions will continue to be closely monitored together with our employees, customers, suppliers and partners.

Cyclical target markets

Especially the target sectors of Appliances and Food, Technics and Industry, and Building are dependent on the economic situation. The Management Board gauges this risk as low, as the underlying drivers of va-Q-tec's business (increasing regulation and energy efficiency) are less susceptible to economic cycles.

Financial risks

va-Q-tec's central finance department utilizes revolving liquidity plans in order to monitor liquidity risk. The Group was solvent at all times. Interest risks deriving from existing long-term lending facilities are partly hedged through interest-rate swaps. The Group is exposed to interest-rate risk on its short-term overdrafts, although such risk is currently unlikely to materialize. Currency risks are also limited due to the fact that most invoicing occurs in euros (the company's functional currency) as well as by way of the company's internationalization. Overall, the Group consequently gauges risks in its financial area as low.

va-Q-tec has invested more than EUR 80 million in business development since its IPO. According to the Management Board's current assessment, however, the slowdown that has now occurred in the pace of investment exerts only an insignificant effect on the targeted growth, as most of the planned business expansion investments have already been realized and completed since the IPO.

Liquidity was secured at all times in the 2019 financial year and was adequate for the needs of a rapidly growing company. For this reason, the Management Board gauges liquidity risk as low at present.

In an overall view of risks, va-Q-tec is predominantly exposed to general business risks (performance risks) and financial risks. The Management Board does not identify any individual or aggregated risks as going concern risks. The company is positioned both strategically and financially to leverage the business opportunities on offer to it.

2.4.3 Future development opportunities

Increasing regulation

Increasing regulation in cold-chain logistics for pharmaceutical products is enhancing the requirements made of the reliability of thermal packaging and consequently demand for high-performance thermal packaging. In terms of their conformity with regulatory requirements, the passive packaging solutions of va-Q-tec offer significant benefits compared with conventional solutions based on styrofoam and ice. va-Q-tec possesses extensive knowledge concerning regulatory compliance in the respective countries and regions. Laborious and expensive qualification measures at healthcare industry customers – along with corresponding quality assurance and process documentation – deliver the requisite expertise for the successful implementation of packaging solutions for customers. Only a few companies are currently capable of successfully combining the necessary characteristics of thermal packaging within a complex, reliable and at the same time user-friendly offering. With its technology platform, va-Q-tec is one of the few companies worldwide to meet the high requirements. Increasingly complex regulation makes it necessary for a company to constantly further develop itself and research new technologies. In such an environment, high barriers to entering the market for thermal packaging are beneficial for va-Q-tec.

In other target sectors, too, demand for VIPs is increasing due to regulation: customers in the "Technics and Industry" target sector currently face a change in the regulatory environment in important core markets – like many household devices, heating system boilers have since recently been subject to the European Union's Ecodesign Directive – in other words, their energy efficiency is made transparent to the end-consumer through a labelling system consisting of energy efficiency classes. Moreover, equipment with high energy consumption and a low energy efficiency class is excluded from the European domestic market. Customers of va-Q-tec currently use VIPs mainly to position premium boilers in the highest efficiency classes. In future, and with more stringent regulation, we believe VIP-insulated boilers from the premium segment will also encounter demand in the mass market.

New markets

Since it was founded, va-Q-tec has worked on developing new products and services that open up additional markets and application possibilities for vacuum insulation. Along with basic research and product predevelopment – such as VIPs for entirely new temperature ranges – examples here include food logistics and the mobility area.

With va-Q-med-thermo-boxes, va-Q-tec can ensure safe logistics without temperature deviations directly to pharmacies. In Germany alone, almost 20,000 pharmacies need to be supplied with transport and temperature logistics in accordance with "Good Distribution Practices". With the va-Q-med-Box, va-Q-tec has the opportunity to play a crucial role in shaping the future of pharmacy and last-mile logistics. This also offers opportunities in the area of logistics for online pharmacies.

To date, both va-Q-tec's existing thermal packaging and thermal packaging in development, as well as its "Service Rental", are designed for deployment almost exclusively in the healthcare industry. However, a trend to increasingly temperature-sensitive goods and manufacturing processes is now identifiable in many industries. As a consequence, growth opportunities arise from the development of new application areas with va-Q-tec technologies, such as food transport and the opto-electronics industry.

In the e-commerce area, major international providers and start-ups are currently implementing new business models to deliver food products purchased online directly to end-consumers. We believe the transportation of easily perishable food to the end-customer will be regulated even more stringently in the future. va-Q-tec's high-performance thermal packaging are very well suited to such transports.

Strong growth opportunities are also on offer to va-Q-tec in the target sector of mobility: in the future, thermal management in vehicles with both conventional and electric engines will become increasingly significant. CO_2 can be saved in conventional vehicles through insulation measures in vehicle cabins and through storing heat energy from the cooling cycle. In vehicles with electric engines, range depends on the optimal working temperature of the vehicle battery as well as the electricity consumed by peripheral functions such as heating and interior air conditioning. In the opinion of va-Q-tec, Original Equipment Manufacturers (OEMs) can extend vehicle range in this context through deploying vacuum insulation.

In the building sector, the opportunity arises to benefit from the currently outstanding situation in the construction cycle, along with ever more stringent energy efficiency standards for new buildings and renovations. va-Q-tec VIPs could be deployed here to enhance energy efficiency.

Along with the aforementioned market opportunities in terms of products and services, the Management Board also identifies considerable future growth opportunities in geographic expansion. The internationalization of business activities and the company's entry into new global markets open up major sales opportunities for the Group. Equally, its international presence can be exploited to tap new sources of raw materials, consumables and intermediate products, and for efficient purchasing.

Innovative services and offerings

In the Products division (vacuum insulation panels), work was carried out on the further development of the existing portfolio and the new development of a panel class for medium and high temperatures. Novel high-temperature panels can be used wherever temperatures of up to approximately 400°C prevail on the one hand, and where very good insulation is required on the other hand, e.g. ovens for industry and food. With such VIPs, va-Q-tec can revolutionize the market for high-temperature insulation.

With the stackable “va-Q-tray”, a thermal packaging system, food can be transported in such a way that it remains warm, cold or frozen for hours, or in some cases days. The temperature-holding time can optionally be extended by PCM rechargeable batteries. With the va-Q-tray, for example, bakery branches can be supplied efficiently with fresh produce: in contrast to existing styrofoam systems, va-Q-tray meets the highest hygiene and temperature chain requirements, can be used universally (e.g. as a portable refrigerator), and as a combinable system with non-insulated standard containers. In addition to the hygienic advantages, this also results in cost savings because additional refrigerated vehicles can be dispensed with.

In the future, the innovative combination of hardware and IT solutions – referred to as “TempChain 4.0” – will become ever more important. Such new services and offerings, consisting of intelligent boxes, fleet data management, live tracking of temperature data, and predictive analysis in the area of temperature-controlled transports can be offered to customers with a premium.

By way of summary, the Management Board is of the opinion that the opportunities pertaining to the development and growth of the business outweigh the aforementioned risks.

2.4.4 Risk reporting on the deployment of financial instruments

The Group is exposed to various financial risks due to its operating activities. The Group’s risk management aims to minimize the potential negative effects on the Group’s financial position. Financial instruments are only deployed to a limited extent at va-Q-tec.

In the German reporting segment, almost 90% of sales and approximately 95% of purchases were processed in euros. In the UK reporting segment, some sales revenues were generated in US dollars. The costs attributable to such revenues are largely also incurred in US dollars. Risk-reducing natural hedging consequently exists for the US dollar. The Management Board gauges the remaining currency risk relating to the US dollar as medium.

Interest rate hedging instruments continue to be in place in order to hedge interest payments on long-term loans at a standard market interest rate level. None of these hedges is recognized as a hedge in the meaning of IAS 9. The real estate loans taken out in 2018 were largely financed on a long-term basis with fixed interest rates over the term on the basis of the current, low interest level. No interest-rate hedge was arranged for existing variable interest overdrafts.

No separate financial instruments are held to hedge against default on receivables. The risk of defaults on receivables is relatively low due to the high credit standing of the customer base. Factoring was implemented at va-Q-tec AG in 2019 in order to further increase liquidity. Reverse factoring is currently only implemented for a small number of customers with long receivables terms (e.g. in Italy) as is customary in the market.

Above and beyond the financial instruments described here, the Group holds no further financial instruments that are important for appraising the Group’s position or prospective development. Please refer to the sections on “Financial instruments” and “Risk management” in sections 4.4 and 4.6 of the notes to the consolidated financial statements for more details.

2.5 COMPENSATION REPORT

In accordance with its corporate government principles, va-Q-tec aims for performance-based and sustainable compensation for the work of the Management and Supervisory boards. Compensation comprises both basic and variable components.

Management Board

In accordance with the requirements of the German Stock Corporation Act (AktG), and the recommendations of the German Corporate Governance Code (DCGK), the compensation of the Management Board members consists of both basic and variable elements. Variable compensation comprises a cash component paid as an annual bonus. All compensation elements are appropriate both individually and in their entirety. The Supervisory Board concerns itself intensively with the appropriateness and standard nature of Management Board compensation, taking into account all criteria set out in Section 87 of the German Stock Corporation Act (AktG) and Section 4.2.2 Clauses 4 and 5 of the German Corporate Governance Code (DCGK), such as the individual Management Board members' tasks, personal performance as well as the financial situation, performance and future prospects of va-Q-tec AG.

In March 2017 and again in December 2019, external compensation experts confirmed to the Supervisory Board the fundamental appropriateness of the Management Board compensation. The basic compensation corresponds to the annual basic salary; in addition, both Management Board members made use of a company car. D&O insurance is in place for all va-Q-tec Group boards. The Management Board members themselves bear the cost of the 10 % deductible.

In the 2018 financial year, a remuneration system was defined for the members of the Management Board, in which the long-term component of bonuses is to be anchored and the German Corporate Governance Code is to be taken into account to an even greater extent. This compensation scheme is valid for all financial years from 1 January 2018. The current Management Board contracts were adjusted accordingly as of the 2018 financial year. The new compensation scheme was also examined by external experts, and consequently complies with the requirements of the German Corporate Governance Codex. In developing the new system, the Supervisory Board took as its starting point the basic features of the previous remuneration system, which was still considered to be reasonable, and aligned it to even greater extent to sustainable corporate development and growth. Consequently, the annual variable remuneration is now divided into a short-term and a long-term variable remuneration component. For both, a bonus target amount is defined for 100 % target achievement. Both components at the one hand are limited upward, at the other hand however can also reduce to zero. The short-term variable compensation is based on three key figures, each of which is given a one-third weighting: revenue, Group EBITDA and return on capital employed (ROCE). The Supervisory Board sets targets for each of these parameters, with the entry hurdle for receiving any short-term variable compensation at all being 80 % of the respective target values. In the area of target achievement between 80 % and 115 %, certain factors are determined for the calculation of the bonus, whereby the maximum factor is always 1.3 and the respective remuneration component is thereby capped. The exception is the EBITDA component of short-term variable compensation, where the factor can increase to 1.5 under certain circumstances. The long-term variable remuneration is based on the performance of the company's share price between two comparison periods. Here, too, an entry hurdle applies in such a way that a positive price performance of at least 5 % must have occurred. In addition, a cap applies if the share price performance exceeds 15 %. Of any gross compensation received as long-term variable compensation, the Management Board member must invest at least 50 % in the company's shares, which are subject to a four-year lock-up period. Remuneration amounts above the cap are not paid out but credited – again up to a certain maximum amount – to a virtual sustainability bonus account of the Management Board member and can be used within certain limits to offset stock market price increases in relevant comparison periods which are below 10 % but above 5 %. Portions of the long-term variable compensation resulting from such compensation are to be invested exclusively in shares of the company that are subject to the aforementioned vesting period.

The Supervisory Board approves the annual Group targets to measure the variable cash component. It also sets the targets.

The Management Board members' contracts include no separate payments for the instance of a termination of their contracts due to a change of control.

The total compensation of the Management Board amounted to kEUR 659 in the 2019 reporting year (previous year: kEUR 568). The basic compensation amounted to kEUR 416 (previous year: kEUR 440); this also includes payments for benefits in kind such as a company car. Variable cash compensation stood at a total of kEUR 228 (previous year: kEUR 112). Defined contribution pension commitments have existed for the Management Board members since 2014. To this end, kEUR 15 (previous year: kEUR 15) was paid into an external, congruently reinsured pension fund in the year under review. For this reason, no provisions for pensions have been formed on the balance sheet. Accordingly, fixed compensation including benefits in kind and pension fund contributions accounts for 65 % of total compensation (previous year: 80 %).

No loans or advances were granted to members of the Management Board.

kEUR	Management Board compensation 2019	Management Board compensation 2018
Fixed compensation	382	407
Ancillary payments	34	34
One-year variable compensation	47	112
Multi-year variable compensation	181	-
Defined contribution plans	15	15
Compensation, total	**659**	**568**

In accordance with the AGM resolution dated 31 May 2016, va-Q-tec discloses the total compensation of the Management Board, but not the individual shares for the individual members. This practice complies with section 314 (1) No. 6, 286 (5) of the German Commercial Code (HGB).

Supervisory Board

The AGM sets Supervisory Board compensation. The compensation of the Supervisory Board of va-Q-tec AG is regulated in Section 14 of the bylaws of va-Q-tec AG.

With effect as of 1 July 2017, the compensation of the members of the Supervisory Board was re-regulated by way of AGM resolution of 19 June 2017, in order to ensure that the compensation complies with the recommendations of the German Corporate Governance Code: Each member of the Supervisory Board who is not the Supervisory Board Chair or Deputy Supervisory Board Chair receives monthly fixed compensation of EUR 1,200 ("fixed compensation"). The Supervisory Board Chair received twice the fixed compensation and the Deputy Supervisory Board Chair receives 1.5 times this amount. To the extent that he or she is not also the Supervisory Board Chair or Deputy Supervisory Board Chair, the Audit Committee Chair receives 1.5 times the fixed compensation. To the extent that he or she is not also the Supervisory Board Chair or Deputy Supervisory Board Chair, the chair of a Supervisory Board committee that is not the Audit Committee receives 1.25 times the fixed compensation. Each member of the Supervisory Board who is also a member of the committee or of several committees of the Supervisory Board receives a meeting fee equivalent EUR 1,500 per committee meeting, albeit to a maximum of six committee meetings per financial year. If a member of the Supervisory Board is the chair of several Supervisory Board committees, he or she receives only the compensation for one committee, and specifically for the committee where the highest compensation is paid to the Supervisory Board member.

The Supervisory Board received compensation of kEUR 155 for the 2019 reporting year (previous year: kEUR 157). This total includes the reimbursement of the outlays incurred by each Supervisory Board member as well as the VAT incurred on his or her compensation and reimbursement of outlays. The company bore the cost of the premium for the existing D&O insurance concluded for the Supervisory Board members in the 2019 financial year. By AGM resolution of 19 June 2017, a deductible for the Supervisory Board members to be borne personally in relation to the D&O insurance was implemented in an amount of kEUR 100 for each member. The Supervisory Board members themselves bear the cost of the 10 % deductible. Consultancy and other services in an amount of kEUR 40 (previous year: kEUR 31) were also compensated. These were commissioned and provided to accompany the Power20+ program and the financing.

Financial year 2019

kEUR	Compen-sation	Ex-penses	Con-sulting
Dr. Gerald Hommel	36	2	-
Winfried Klar	29	5	15
Uwe Andreas Krämer	15	-	-
Dr. Eberhard Kroth	17	1	25
Uwe Lamann	26	3	-
Dr. Barbara Ooms-Gnauck	19	2	-
Total	**142**	**13**	**40**

Financial year 2018

kEUR	Compen-sation	Ex-penses	Con-sulting
Dr. Gerald Hommel	36	4	-
Winfried Klar	31	4	24
Uwe Andreas Krämer	14	-	-
Dr. Eberhard Kroth	20	2	7
Uwe Lamann	26	2	-
Dr. Barbara Ooms-Gnauck	16	2	-
Total	**143**	**14**	**31**

2.6 TAKEOVER LAW DISCLOSURES AND NOTES PURSUANT TO SECTION 315A HGB

The following section presents the disclosures as of 31 December 2019 pursuant to Article 9 (1) lit. c) (ii) of the Council Regulation (EC) No. 2157/2001 on the Statute for a European company (SE) (SE-VO), Section 22 (6) of the Act to Implement Council Regulation (EC) No. 2157/2001 on the Statute for a European company (SE) (SEAG) in combination with Section 289a, Section 315a (1) of the German Commercial Code (HGB). Matters relating to Section 289a (1), Section 315a (1) HGB, which are not fulfilled at va-Q-tec AG, are not related. The following subsection provides an insight into the takeover law relationships as of the 31 December 2019 balance sheet date, and explains them in greater detail.

2.6.1 Composition of the subscribed share capital

The share capital of va-Q-tec AG amounts to EUR 13,089,502.00, and is divided into 13,089,502 ordinary registered shares. The share capital is fully paid in. The shares carry the same rights and obligations. Each share grants one vote at the general meeting of shareholders. Exceptions to this include shares the company itself holds (treasury shares), from which no rights accrue to va-Q-tec AG, such as the right to vote at the general meeting of shareholders. As of the balance sheet date, va-Q-tec AG held 13,566 treasury shares (previous year: 13,566). For information about changes in the treasury share position, please refer to the notes to the consolidated financial statements in this annual report.

2.6.2 Restrictions affecting voting rights or the transfer of shares

The Management Board is not aware of any currently valid restrictions affecting voting rights or the transfer of shares.

2.6.3 Interests in the share capital exceeding 10 % of the voting rights

Pursuant to the German Securities Trading Act (WpHG), all investors reaching, exceeding or falling short of voting rights thresholds pursuant to Section 21 WpHG through purchase, sale, or in another manner, are required to report such transactions to the respective company and to the German Federal Financial Supervisory Authority (BaFin). To this extent, the Management Board of va-Q-tec AG is aware of the following individuals and companies whose interests exceed 10 % of the voting rights:

Name	Country	Number of shares	Interest in the share capital
Share pool of the families of Dr. Joachim Kuhn and Dr. Roland Caps	Germany	3,275,000	25.02 %
TOTAL		**3,275,000**	**25.02 %**

Rules concerning the appointment and recall from office of Management Board members
Pursuant to Section 84 of the German Stock Corporation Act (AktG), and the bylaws of va-Q-tec AG, the Supervisory Board appoints the members of the Management Board. Pursuant to the company's bylaws, the Management Board consists of one or several individuals. The Supervisory Board determines the number of Management Board members. If the Management Board consists of several members, Management Board resolutions are passed with a simple voting majority. If the Supervisory Board has appointed a Management Board Chair and if the Management Board consists of at least three members the vote of the Management Board Chair is decisive given an equal number of votes on a resolution.-

Rules concerning bylaw amendments
Amendments to the bylaws require a resolution of the general meeting of shareholders. Resolutions by the general meeting of shareholders require a simple voting majority unless a greater majority is imperative by law.

Management Board authorizations relating to the issuing and repurchase of shares
va-Q-tec AG has both approved share capital and contingent share capital as follows:

Approved share capital
Based on an AGM resolution of 31 May 2016, the Management Board is authorized to increase the share capital, with Supervisory Board assent, once or on several occasions until 30 May 2021 against cash and/or non-cash capital contributions by a total of up to EUR 4,278,187, whereby shareholders' subscription rights can be excluded.

Contingent capital
Pursuant to Section 6.5 of the company's bylaws, the share capital is conditionally increased by EUR 1,000,000 through issuing up to 1,000,000 new ordinary registered shares (Contingent Capital 2016). The Contingent Capital 2016 serves exclusively to grant shares on the exercise of conversion and option rights.

Significant agreements in the case of a change of control due to a takeover offer and compensation agreements in the case of a takeover offer
No significant agreements on the part of the company exist that are subject to a change of control following a takeover offer.

2.7 CORPORATE GOVERNANCE STATEMENT

The corporate governance declaration pursuant to Sections 289 f and 315 d of the German Commercial Code (HGB) includes, among other items, the declaration of compliance pursuant to Section 161 of the German Stock Corporation Act ("Declaration of Compliance"), relevant information on corporate governance practices and a description of the working methods of Management Board and Supervisory Board. The Corporate Governance Report, which forms part of the Annual Report, contains the Corporate Governance Statement.

The Corporate Governance Report is also available on the Internet at www.va-Q-tec.com in the Investor Relations section under the link https://ir.va-q-tec.com/websites/vaqtec/German/530/erklaerung-zur-unternehmensfuehrung.html zur Verfügung.


JYP20534VQ
JYP20546VQ
JYP20553VQ
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CONSOLIDATED FINANCIAL STATEMENTS AND NOTES

3 CONSOLIDATED FINANCIAL STATEMENTS OF VA-Q-TEC AG FOR THE 2019 FINANCIAL YEAR

CONSOLIDATED INCOME STATEMENT

kEUR	Notes	2019	2018
Revenues	**4.1.1**	**64,667**	**50,708**
Change in inventories		-295	1,288
Work performed by the company and capitalised	4.1.2	3,947	5,620
Other operating income	4.1.3	4,498	3,748
Total Income		**72,817**	**61,364**
Cost of materials and services	4.1.4	-28,993	-25,722
Gross profit		**43,824**	**35,642**
Personnel expenses	4.1.5	-22,389	-20,403
Other operating expenses	4.1.6	-11,762	-12,212
EBITDA		**9,673**	**3,027**
Depreciation, amortization and impairment losses	4.1.7	-12,232	-9,864
Earnings before interest and tax (EBIT)		**-2,559**	**-6,837**
Result from equity accounted investments	**4.1.8**	**-68**	**-110**
Result from fair value valuation of investments	**4.1.9**	1,771	
Finance income		16	31
Finance expenses		-1,079	-859
Net financial result	**4.1.10**	**-1,063**	**-828**
Earnings before tax (EBT)		**-1,919**	**-7,775**
Income tax	4.1.11	-647	47
Net income		**-2,566**	**-7,728**
Consolidated net income attributable to owners of va-Q-tec AG		**-2,566**	**-7,728**
Earnings per share – basic / diluted in EUR	**4.1.12**	**-0,20**	**-0,59**

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

kEUR	Notes	2019	2018
Net Income		**-2,566**	**-7,728**
Consolidated other comprehensive income			
Currency translation differences	4.2.2.1	13	-11
Total other comprehensive income that will be reclassified to profit or loss		**13**	**-11**
Consolidated total comprehensive income		**-2,553**	**-7,739**
Consolidated total comprehensive income attributable to owners of va-Q-tec AG		**-2,553**	**-7,739**

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

Assets

kEUR	Notes	31/12/2019	31/12/2018
Non-current assets			
Intangible assets	4.2.1.1	2,233	2,437
Property, plant and equipment	4.2.1.2	68,879	69,390
Investment property	4.2.1.3	1,614	1,614
Contract assets	4.2.1.9	158	157
Equity accounted interests	4.2.1.4	-	580
Financial assets	4.2.1.5	2,474	184
Other non-financial assets	4.2.1.6	1,100	647
Deferred tax assets	4.1.10	2,319	2,961
Total non-current assets		**78,777**	**77,970**
Current assets			
Inventories	4.2.1.7	10,676	10,924
Trade receivables	4.2.1.8	6,666	7,557
Other financial assets	4.2.1.5	586	334
Current tax assets		230	135
Other non-financial assets	4.2.1.6	1,364	1,073
Cash and cash equivalents	4.2.1.10	7,490	12,154
Total current assets		**27,012**	**32,177**
Total assets		**105,789**	**110,147**

Equity and liabilities

kEUR	Notes	31/12/2019	31/12/2018
Equity	**4.2.2.1**		
Issued share capital		13,090	13,090
Treasury shares		-54	-54
Additional paid-in capital		46,158	46,158
Consolidated total other comprehensive income		-26	-39
Retained earnings		-16,461	-13,895
Total equity		**42,707**	**45,260**
Non-current liabilities			
Provisions	4.2.2.2	73	79
Bank borrowings	4.2.2.3	22,840	24,732
Other financial liabilities	4.2.2.4	5,333	6,814
Other non-financial liabilities	4.2.2.5	6,547	9,310
Total non-current liabilities		**34,793**	**40,935**
Current liabilities			
Provisions	4.2.2.2	130	62
Bank borrowings	4.2.2.3	11,404	9,400
Other financial liabilities	4.2.2.4	6,867	4,873
Liabilities from contracts with customers	4.2.2.7	308	19
Trade payables	4.2.2.6	4,485	4,594
Tax liabilities		42	79
Other non-financial liabilities	4.2.2.5	5,053	4,925
Total current liabilities		**28,289**	**23,952**
Total Equity and liabilities		**105,789**	**110,147**

CONSOLIDATED STATEMENT OF CASH FLOW

kEUR	2019	2018
Cash flow from operating activities		
Net income	-2,566	-7,728
Current income taxes recognised income statement	3	52
Income taxes paid	-161	-
Net finance costs recognised income statement	1,063	828
Interest received	-	2
Interest paid	-1,055	-819
Depreciation on contract assets	70	42
Non-cash losses from equity accounted investments	68	110
Non-cash gain from fair value valuation of investments	-1,771	
Depreciation, amortisation and impairment losses	12,232	9,864
Gain/loss from disposal of non-current assets	-555	-370
Change in other assets	-644	269
Change in other liabilities	1,702	-174
Change in provisions	61	65
Other non-cash expenses or income	-2,639	-2,560
Cash flow from operating activities before working capital changes	**5,808**	**-419**
Change in inventories	333	-2,384
Change in trade receivables	920	427
Change in trade payables	127	-1,277
Net cash flow from operating activities	**7,188**	**-3,653**
Cash flow from investing activities		
Payments for investment in intangible assets	-1,162	-1,391
Proceeds from disposal of property, plant and equipment	1,037	661
Payments for investments in property, plant and equipment	-8,746	-19,789
Proceeds from the release from of short-term deposits	-	9,000
Payments for investments in contract assets	-71	-124
Payments for acquisition of interests in associates	-	-322
Net cash flow from investing activities	**-8,942**	**-11,965**

kEUR	2019	2018
Payments to purchase treasury shares	-	-
Proceeds from bank loans	9,375	26,994
Repayments of bank loans	-9,270	-6,971
Proceeds from sale-and-finance-leaseback transactions	-	7,887
Proceeds from government grants	-	1,664
Payments for leases liabilities	-3,077	-6,950
Net cash flow from financing activities	**-2,972**	**22,624**
Change in cash and cash equivalents before exchange rate effects	**-4,726**	**7,006**
Effect of exchange rate changes on cash and cash equivalents	62	-53
Net change in cash and cash equivalents	**-4,664**	**6,953**
Cash and cash equivalents at start of period	**12,154**	**5,201**
Cash and cash equivalents at end of period	**7,490**	**12,154**

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

kEUR	Issued share capital	Treasury shares	Additional paid-in capital
01/01/2018	**13,090**	**-54**	**46,158**
Net income	-	-	-
Consolidated other comprehensive income	-	-	-
Consolidated total comprehensive income	**-**	-	-
Purchase of treasury shares	-	-	-
Issue of treasury shares	-	-	-
31/12/2018	**13,090**	**-54**	**46,158**
01/01/2019	**13,090**	**-54**	**46,158**
Net income	-	-	-
Consolidated other comprehensive income	-	-	-
Consolidated total comprehensive income	**-**	**-**	**-**
Purchase of treasury shares	-	-	-
Issue of treasury shares	-	-	-
31/12/2019	**13,090**	**-54**	**46,158**

	Retained earnings	Cumulative other comprehensive income	Equity attributable to parent company owners	Total equity
		Currency translation reserves		
	-6,174	**-28**	**52,992**	**52,992**
	-7,728	-	-7,728	-7,728
	7	-11	-4	-4
	-7,721	**-11**	**-7,732**	**-7,732**
	-	-	-	-
	-	-	-	-
	-13,895	**-39**	**45,260**	**45,260**
	-13,895	**-39**	**45,260**	**45,260**
	-2,566	-	-2,566	-2,566
	-	13	13	13
	-2,566	**13**	**-2,553**	**-2,553**
	-	-	-	-
	-	-	-	-
	-16,461	**-26**	**42,707**	**42,707**

1GENERAL INFORMATION

1.1 INFORMATION ABOUT THE COMPANY

The company va-Q-tec AG, which has its headquarters at Alfred-Nobel-Strasse 33, 97080 Würzburg, Germany, is entered in the commercial register of Würzburg under commercial register sheet number 7368. Along with va-Q-tec AG itself, the consolidated financial statements of va-Q-tec AG also include its subsidiaries (hereinafter also referred to as "va-Q-tec", the "va-Q-tec Group" or the "company"). va-Q-tec is a technologically leading provider of highly efficient products and solutions in the thermal insulation area. The company develops, produces and markets innovative products for reliable and energy-efficient temperature control and insulation – vacuum insulation panels ("VIPs") and phase change materials ("PCMs"). Furthermore, va-Q-tec produces passive thermal packaging systems (containers and boxes) through the optimal combination of VIPs and PCMs. To implement temperature-sensitive logistics chains, va-Q-tec offers within a global partner network the rental of containers and boxes that meet demanding thermal protection standards. Along with healthcare & logistics as the main market, va-Q-tec addresses the following further markets: Appliances & Food, Technics & Industry, Building and Mobility.

The present consolidated financial statements of va-Q-tec for the financial year from 1 January to 31 December 2019 were approved for publication by the Management Board on 18 March 2020.

1.2 BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS

va-Q-tec AG is the ultimate parent company of the va-Q-tec Group and consequently prepares the consolidated financial statements for the smallest and largest group of companies. va-Q-tec AG has been listed on the stock market since 30 September 2016 and has consequently been capital market oriented since this date. Despite falling short of the size criteria pursuant to Section 293 of the German Commercial Code (HGB), it is obligated pursuant to Section 293 (5) HGB to prepare consolidated financial statements as a consequence. va-Q-tec prepares its consolidated financial statements as of 31 December 2019 based on International Financial Reporting Standards (IFRS), as applicable in the EU, and the commercial law regulations to be applied additionally pursuant to Section 315e (1) HGB. The term IFRS also comprises all still valid International Accounting Standards (IAS) as well as all interpretations and amendments of the International Financial Reporting Standards Interpretations Committee (IFRS IC) – formerly the International Financial Reporting Interpretations Committee (IFRIC) – and of the former Standing Interpretations Committee (SIC).

These consolidated financial statements were prepared on the basis of historical cost. Exceptions to this include derivative financial instruments and investments that were recognised at fair value on the reporting date. The corresponding note is provided as part of the respective accounting policies.

Historical cost is generally based on fair value, which represents the consideration rendered in exchange for the asset.

Fair value is the price that would be received to sell an asset or be paid to transfer a liability in an orderly transaction between market participants at the measurement date. This applies irrespective of whether the price is directly observable, or has to be estimated by applying a valuation method.

The fair value that is to be determined for certain disclosures and calculation methods is not always available as a market price. Frequently, it has to be calculated on the basis of various measurement parameters. Depending on the availability of observable parameters and the significance of such parameters for fair value measurement overall, the fair value is allocated to one of the levels 1, 2 or 3 (fair value hierarchy). This allocation is implemented on the following basis:

- Level 1 inputs comprise quoted prices (unadjusted) on active markets for identical assets or liabilities to which va-Q-tec can access at the measurement date.
- Level 2 inputs comprise inputs other than Level 1 quoted prices, for which the value of the asset or liability is either directly observable, or can be derived indirectly from other prices.
- Level 3 inputs are unobservable inputs for the asset or liability.

As a rule, the Group classifies assets and liabilities as current if they will be realised or settled prospectively within twelve months after the reporting date. If assets and liabilities comprise both a current and a non-current element, they are divided into their term components and reported as current and non-current assets or liabilities in accordance with the balance sheet structure.

The consolidated income statement is prepared according to the nature of expense method.

The consolidated financial statements are prepared in thousands of euros (kEUR), which is both the functional and the reporting currency of va-Q-tec. Differences of up to one unit (EUR, %) relate to arithmetic rounding differences.

1.3 EFFECTS OF NEW ACCOUNTING STANDARDS

The va-Q-tec Group has applied uniform accounting methods for all the periods presented in its IFRS consolidated financial statements. These comply with IFRS entailing mandatory application in the EU in the 2019 financial year.

The accounting policies applied correspond to those applied in the previous year, as a matter of principle.

The following new standards and interpretations or amendments to existing standards and interpretations required mandatory application for financial years commencing from 1 January 2019, and were applied for the first time by the company.

Standard	Title	Mandatory application for financial years commencing from
Annual Improvements to IFRSs	Cycle 2015 – 2017	1 January 2019
IFRS 16	Leases	1 January 2019
Amendments to IFRS 9	Prepayment Features with Negative Compensation	1 January 2019
IFRIC 23	Uncertainty over Income Tax Treatments	1 January 2019
Amendments to IAS 28	Investments in Associates	1 January 2019
Amendments to IAS 19	Plan Amendment, Curtailment or Settlement	1 January 2019

The first-time application of IFRS 16 had effects on the consolidated financial statements, which is described in detail below. All other new accounting policies presented in the table did not have a material effect on the consolidated financial statements.

Effects of IFRS 16

In January 2016, the IASB published IFRS 16 "Leases". IFRS 16 replaces IAS 17 "Leases", IFRIC 4 "Determining whether an Arrangement contains a Lease", SIC 15 "Leases – Incentives" and SIC 27 "Assessment of the substance of transactions in the legal form of leases" for financial years beginning on or after 1 January 2019. On 31 October 2017, the EU adopted the standard on lease accounting into European law.

IFRS 16 is the new standard relating to the accounting treatment of leases, which va-Q-tec AG has applied retrospectively on a modified basis for the first time without restating the previous year's figures as of 1 January 2019.

Since 1 January 2019, payment obligations from contracts previously classified as operating leases have been discounted at the marginal interest rate, recognized as a lease liability and carried in accordance with the effective interest method. The average marginal borrowing rate used to discount the lease liabilities at the transition date was 2.0%

The right to use the leased asset was capitalized in proportion to the lease liability. At the time of initial application, the value of the right of use corresponds to the present value of the corresponding lease liability and is amortized straight-line over the term of the lease agreement.

The Group has utilized the relief provisions of IFRS 16 for short term leases (leases with terms of less than 12 months) and low value assets. A benchmark of kEUR 5 is applied for low-value assets. Payments from leasing obligations with a remaining term of no more than twelve months as of 31 December 2018 were recognized as expenses at the time of payment in accordance with the option. Moreover, va-Q-tec did not present the leasing and service components separately in accordance with the option in the standard.

As part of the transition to IFRS 16, assets of EUR 2.9 million and lease liabilities of the same amount were recognized for rights to use leased assets at the time of first-time application as of 1 January 2019. Based on the operating lease obligations as of 31 December 2018, the following reconciliation arose in relation to the opening balance of the lease liabilities as of 1 January 2019:

Consolidated statement of financial position

kEUR	**01/01/2019**
Obligations from contracts classified as operating leases as of 31/12/2018 [1)]	3,025
Current leases	27
Leases on assets of minor value	8
Concluded contracts with right-of-use assets not yet acquired	-
Other	-
Discounting with the incremental borrowing rate at the first application of IFRS 16	106
Lease liabilities newly accounted due to IFRS 16 as of 01/01/2019	**2,884**
Existing finance lease liabilities as of 31/12/2018	8,054
Total lease liabilities	**10,938**

[1)] Adjusted value

Due to a new information basis at the time of preparation of the annual report, the obligations from operating leases at the transition date diverge from the estimates made at the end of the first half of the year.

The right to use the leased asset in question is reported under the same item of property, plant and equipment as the underlying asset would have been reported if it had been acquired. The rights of use recognized relate to the following types of assets:

Right-of-uses and lease liabilities

kEUR	31/12/2019	01/01/2019
Land and buildings Land and buildings - Right-of-use	1,012	1,400
Production equipment and machinery Production equipment and machinery - Right-of-use	1,038	1,991
Andere Anlagen, Betriebs- und Geschäftsausstattung Other plant, operating and office equipment – Right-of-use	1,171	1,484
Container fleet Container fleet - Finance Lease	10,199	15,996
Total right-of-use assets	**13,420**	**20,871**
of which first-time application due to IFRS 16	**2,183**	**2,884**

Non-current financial liabilities Lease liabilities newly accounted due to IFRS 16	1,298	2,014
Existing lease liabilities from finance leases	3,956	5,942
Current financial liabilities Lease liabilities newly accounted due to IFRS 16	896	870
Existing lease liabilities from finance leases	1,987	2,112
Total lease liabilities	**8,137**	**10,938**
of which first-time application due to IFRS 16	**2,194**	**2,884**

The following standards and interpretations and amendments to existing standards and interpretations were approved by both the IASB and the EU, and come into force for financial years commencing after 1 January 2020. The company has not applied these regulations early.

Standard	Title	Mandatory application for financial years commencing from
Amendments to IAS 39 and IFRS 9	Interest Benchmark Reform	1 January 2020
Amendments to IAS 1 and IAS 8	Definition of Material	1 January 2020
Revision of the framework and changes to cross-references to the framework in various IFRS		1 January 2020

All standards listed are applied by va-Q-tec only from the date of mandatory first-time adoption. According to the analyses that have been conducted, no significant effects arise for accounting and measurement for the 2020 financial year.

The following standards will become effective in the forthcoming years, but have not yet been endorsed by the EU:

Standard	**Title**	**Mandatory application for financial years commencing from**
Annual Improvements to IFRSs	Cycle 2016 – 2018	1 January 2020
Amendments to IFRS 3	Definition of a Business	1 January 2020
IFRS 17	Insurance Contracts	1 January 2021
Amendments to IAS 1	Classification of Liabilities as Current or Non-current	

The company is currently examining the potential effects on va-Q-tec's consolidated financial statements from standards or amendments to standards that have not yet been endorsed by the EU.

1.4 ACCOUNTING JUDGEMENTS AND ESTIMATES

In applying the accounting policies, the Group's management has made discretionary decisions that affect the amounts reported in the consolidated financial statements. Accordingly, assumptions and estimates are to be made to a certain extent when preparing consolidated financial statements that affect the amount and the reporting of recognized assets and liabilities, income and expenses, and contingent liabilities in the reporting period.

The assumptions and estimates are based on premises that in all cases reflect the currently available status of information at the time of each case. The expected future business trend also particularly reflects the circumstances prevailing at the time when the consolidated financial statements were prepared, as well as a realistically imputed future trend in the environment. As a result of developments in these overall conditions differing from the management's assumptions and lying outside its sphere of influence, the resultant amounts can differ from the originally expected estimated values.

The estimates and assumptions that are applied are presented in the notes to the individual items of the statement of financial position and income statement in section 3 "Accounting policies". The main effects impacting the amounts arise in the following areas:

- Determining useful economic lives for intangible assets and for property, plant and equipment, including assets leased as part of finance leases.
- Assessment of the lease term and determination of the relevant discount rate for the accounting treatment of leases.
- Impairment testing of assets based on appraisal of identifiable risks.
- Impairment testing of deferred tax assets in relation to tax loss carryforwards.
- Assessing the derecognition criteria of trade receivables as part of factoring agreements.
- Estimating market yield curves as part of measuring derivative financial instruments.
- Best possible estimate of the most probable settlement amount as part of the recognition and measurement of provisions.
- Assessing any requirement to separate, and measuring, embedded derivatives.
- Recognition of additional costs during the period of initiation of contracts with customers.
- Determination of the expected credit loss using the simplified approach for trade receivables and contract assets.

2 CONSOLIDATION

2.1 CONSOLIDATION SCOPE

The consolidation scope is derived by applying IFRS 10 (Consolidated Financial Statements). In the consolidated financial statements of va-Q-tec AG as of 31 December 2019, the following subsidiaries were fully consolidated:

Name	Headquarters	Equity interest 31/12/2019	Equity interest 31/12/2018
va-Q-tec Ltd. (UK)	Rochester, UK	100 %	100 %
va-Q-tec Inc. (USA)	East Rutherford, NJ, USA	100 %	100 %
va-Q-tec Ltd. (Korea)	Joong-gu, Incheon, Republic of Korea	100 %	100 %
va-Q-tec Switzerland AG (Switzerland)	Zurich, Switzerland	100 %	100 %
va-Q-tec Japan G.K. (Japan)	Tokyo, Japan	100 %	100 %
va-Q-tec Uruguay S.A. (Uruguay)	Montevideo, Uruquay	100 %	100 %
va-Q-tec SG Pte. pLtd. (Singapore)	Singapore	100 %	100 %

va-Q-tec AG and its subsidiaries together form the va-Q-tec Group. Please refer to the segment reporting for key financial information about the subsidiaries.

2.2 CONSOLIDATION SCOPE CHANGES AND OTHER ACQUISITIONS AND DISPOSALS

No changes occurred in the fully consolidated subsidiaries of va-Q-tec in the 2019 financial year. The 15.22 % interest in SUMTEQ GmbH, Cologne, as of the 31 December 2019 reporting date (previous year: 18.50 %) was no longer classified as an associated company and is no longer equity accounted in the consolidated financial statements. A significant influence on the financial and business policy decisions of the investment can no longer be clearly demonstrated following the changes in the agreements under company law and the entry of new shareholders in the context of a capital increase. Since 7 June 2019, the investment has instead been recognised at fair value under financial assets.

2.3 CONSOLIDATION PRINCIPLES

The consolidated financial statements are based on uniform accounting principles. The annual financial statements of the companies included in the consolidation scope were adjusted where required in order to align them with the accounting policies applied in the Group. All of the annual financial statements of the companies included in the consolidated financial statements are prepared on the basis of the reporting date of the consolidated financial statements.

Subsidiaries are those companies where the Group holds existing rights that endow it with the current capability to manage the companies' relevant activities. Relevant activities are those activities that significantly affect the companies's profitability. For this reason, control exists if the Group is exposed to variable returns from its relationship to a company, and as a result of its power over the relevant activities it has the capability to influence these returns. In the va-Q-tec Group, the ability of control is based in all cases on a direct voting majority held by va-Q-tec AG. Inclusion of companies in the consolidated financial statements of va-Q-tec AG begins on the date from which the possibility of control exists. It ends if such control ceases.

As part of capital consolidation (consolidation of the investment account), the carrying amounts of the participating interests are offset with the subsidiary's proportional equity. As all subsidiaries comprise companies that va-Q-tec has founded, initial consolidation has not resulted in any differential amount.

Intragroup transactions are fully adjusted. This entails the offsetting of significant receivables, liabilities and provisions between the consolidated companies, and the elimination of intercompany profits and losses. Intragroup revenues are offset with the corresponding expenses. Tax deferrals required pursuant to IAS 12 are applied to any temporary differences on consolidation.

An associate is a company where va-Q-tec exerts significant influence. Significant influence is defined here as the ability to collaborate in the financial and business policy decisions of the participating interest without controlling it, or managing it jointly. If va-Q-tec AG directly or indirectly holds between 20 % and 50 % of the voting rights in the participating interest, the assumption exists that significant influence can be exercised. Given a directly or indirectly held voting rights interest of less than 20 %, no significant influence is assumed unless it can be proven clearly.

Equity accounted investments are initially recognised at acquisition cost, before being recognised in subsequent periods at the proportionate value of their amortised net assets. This entails increasing or reducing the carrying amounts annually to reflect the proportionate profits and losses, dividend distributions, and all further equity changes. Unrealised gains based on transactions with associates are eliminated against the carrying amount of the participating interest according to the scope of the va-Q-tec interest. Unrealised losses are eliminated in the same manner, although only to the extent that no indications of impairment exist. Goodwill is not reported separately, but is instead included in the valuation of the participating interest. Goodwill is not amortised. Disclosed hidden reserves are amortised. Impairment losses are applied to equity accounted investments if their recoverable amount falls below their carrying amount.

2.4 FOREIGN CURRENCY TRANSLATION

The consolidated financial statements have been prepared in accordance with the functional currency concept. The functional currency of va-Q-tec AG is the primary currency of the economic environment in which the va-Q-tec Group operates. This corresponds to the euro, which also corresponds to the reporting currency for the consolidated financial statements. The functional currency of the subsidiaries in the USA, South Korea, Switzerland Japan and Singapore is in each case the national currency, as these subsidiaries conduct their business independently in their respective markets. The functional currency of the UK company corresponds to the euro. The functional currency of the subsidiary in Uruguay is the US dollar.

In the financial statements of each Group company, business transactions denominated in foreign currencies are translated into the functional currency applying the rates valid on the transaction date. Monetary assets and liabilities denominated in foreign currencies are translated applying the rate prevailing on each reporting date. Non-monetary assets and liabilities measured at cost are translated at the exchange rate prevailing on the date when they are initially recognised on the statement of financial position. The foreign currency gains and losses arising from these translations are recognised in the consolidated income statement under other operating income or other operating expenses.

To prepare the consolidated financial statements, the assets and liabilities of the Group's foreign subsidiaries whose functional currency is not the euro are translated into euros applying the exchange rates on the reporting date. Income and expenses are translated at the average rate for the period, unless translation exchange rates during the period are subject to sharp fluctuations. In such cases, the exchange rates on the transaction date would be applied. Translation differences from the translation of foreign operations into the Group currency are recognised under consolidated other comprehensive income, and accumulated within equity.

The exchange rates into euros for the significant currencies in the Group applied for the translation are presented in the following table:

	Closing rate		Average rate	
	31/12/2019	**31/12/2018**	**2019**	**2018**
British pound	0,8508	0,8945	0,8773	0,8847
US dollar	1,1234	1,1450	1,1196	1,1815
South Korean won	1.296,2800	1.277,9300	1.304,8974	1.299,2272
Swiss Francs	1,0854	1,1269	1,1127	1,1549
Japanese Yen	121,9400	125,8500	122,0561	130,4079
Singapore-Dollar	1,5111	1,5591	1,5272	1,5926

3 ACCOUNTING POLICIES

3.1 CONSOLIDATED INCOME STATEMENT

Revenues
Revenue from the sale of goods is recognized when an asset is transferred and the customer obtains control of the asset, a transaction price has been agreed or can be determined, and payment is probable. Sales revenues from services are recognised to the extent that the service has been rendered, and the amount of the revenue can be measured reliably. Payments for unreturned thermal boxes in connection with rental services rendered are reported as revenue. Rebates, bonuses, VAT and other taxes associated with the service are deducted from sales revenues. All reported revenues represent revenues from contracts with customers.

Sales revenues are recognised at the transaction price of the consideration received or to be received, and reflect the amounts that are to be received for goods and services as part of ordinary business activity.

Sector-typical payment terms with customers not include any significant financing components. Warranty obligations under contracts between the company and its customers do not constitute separate performance obligations and are recognised as a provision.

With regard to the opening and closing balances and impairments of receivables from contracts with customers, we refer to the notes on trade receivables. For the composition of revenues by business segment, please refer to the notes on revenues, and for the composition by region please refer to the segment reporting.

Net financial result
Interest income and interest expenses reported under the net financial result are deferred and accrued in accordance with their respective terms, taking the outstanding loan sum and the applicable interest rate into account. The effective interest method is applied in this context.

Income tax
The expense for taxes on income represents the sum of current income tax expense and deferred tax. The current income tax expense is calculated on the basis of taxable income for the year. Taxable earnings differ from the earnings before tax reported in the consolidated income statement, as these do not include income and expense items that were taxable or tax-deductible in other years, as well as items on which no tax is generally incurred, or which are generally not tax-deductible.

Deferred taxes are recognised in accordance with the balance sheet liability method as presented in IAS 12 (Income Taxes). This entails forming deferred tax items for temporary differences between tax valuations and valuations on the consolidated balance sheet, as well as for tax loss carryforwards. Deferred tax assets are only taking into consideration if it is probable that the corresponding tax benefits will also be realised. Loss carryforwards for which deferred tax assets have been formed are expected to be utilised within the five-year planning period. The carrying amount of deferred tax assets is reviewed each year on the reporting date, with an impairment loss being applied if it is no longer probable that sufficient taxable income will be available to fully or partially realise the asset.

Deferred tax liabilities are formed for taxable temporary differences arising from interests in subsidiaries, unless the Group can control the reversal of the temporary differences, and it is probable that the temporary difference will not reverse within the foreseeable future.

Deferred tax assets and deferred tax liabilities are offset to the extent that they relate to the same taxpayer, and exist in relation to the same tax authority.

To measure deferred tax, future years' tax rates are applied if the related legislation has already been enacted, or the legislative process has essentially been concluded. Deferred taxes are recognised in profit or loss, as a matter of principle. To the extent that the charges or reliefs underlying deferred taxes are carried directly to equity, the formation or release of deferred taxes also occurs directly in equity.

Earnings per share
Earnings per share (basic earnings per share) are calculated on the basis of IAS 33 (Earnings per share). Basic earnings per share are calculated by dividing the after-tax profits attributable to the parent company shareholders by the weighted average number of shares in issue during the financial year under review. At the end of the fiscal year under review, as in the previous year, only ordinary shares were issued, so that the consolidated net income does not have to be allocated to different classes of shares. Diluted earnings per share are not shown separately as, as in the previous year, no potentially diluting instruments were outstanding as of 31 December 2019.

3.2 CONSOLIDATED STATEMENT OF FINANCIAL POSITION

3.2.1 Assets

Intangible assets
Pursuant to IAS 38, intangible assets are capitalised if a future economic benefit is expected from utilisation of the asset, and the costs of the asset can be calculated reliably.

Individually purchased intangible assets are recognised at purchase cost on initial recognition, and intangible assets that the company has generated itself are recognised at production cost. In subsequent periods, intangible assets are measured at cost less cumulative amortisation and any cumulative impairment losses. Research costs are expensed in the period in which they are incurred.

Intangible assets with limited useful life are amortised straight-line over their useful life, and impairment-tested as soon as any indications emerge that they might have become impaired. The estimated useful life and amortisation method are reviewed at the end of the annual reporting period, and any changes to the estimated value are taken into account in subsequent measurement. Amortisation is based on the following useful lives

Software	3 – 5 years
Internally generated intangible assets	6 years

Gains or losses on the derecognition of intangible assets are calculated as the difference between net disposal proceeds and the asset's carrying amount, and recognised in profit or loss within other operating income or other operating expenses in the period in which the asset is derecognised.

An intangible asset arising from internal development (or the development phase of an internal project) is recognised if the corresponding criteria of IAS 38.57 are shown to have been met. Capitalised production costs of internally generated intangible assets comprise costs directly attributable to the development process, and development-related overheads.

Property, plant and equipment
Property, plant and equipment are utilised for business purposes, and measured at cost less cumulative depreciation and cumulative impairment losses.

The purchase costs of an item of property, plant and equipment comprise all costs attributable to the purchase of the asset. Repair and maintenance charges are expensed in the income statement in the financial year in which they are incurred. Internally generated assets are initially measured at directly attributable production cost plus production-related overheads.

Borrowing costs that are directly attributable to the acquisition, construction or production of a so-called qualifying asset as part of the cost of that asset are capitalised as part of cost pursuant to IFRS.

Property, plant and equipment is depreciated straight-line in accordance with its type of use and duration of use. Depreciation starts on the date on which the assets are available for their intended use. Depreciation is based mainly of the following useful lives:

Buildings, outdoor and other facilities	
Buildings	33 – 40 years
Outdoor and other facilities	5 – 20 years
Production equipment and machinery	
Production plants	8 – 21 years
Other production equipment and machinery	3 – 25 years
Operating and office equipment	3 – 15 years
Container fleet	5 years
Box fleet	2 – 5 years

If any indications of impairment exist, property, plant and equipment are tested for potential impairment accordingly.

Gains or losses arising from the disposal or derecognition of an item of property, plant and equipment are calculated as the difference between disposal proceeds and the asset's carrying amount, and recognised in profit or loss among other operating income or other operating expenses.

Investment property
Investment property comprises land and buildings held to generate rental income and for the purposes of value appreciation, rather than being utilised for the company's own production, to deliver goods or render services, for administrative purposes or for sale as part of ordinary operating activities. Investment property is measured at cost less accumulated depreciation and impairment losses.

If indications of impairment exist, investment property is tested for potential impairment accordingly.

Contract assets
Deferred contract assets include development costs that do not already meet the criteria for capitalisation in accordance with other standards. These are primarily customer-specific developments that are performed during the contract initiation period, are directly related to an expected contract, and are expected to recover the related costs. Firstly, such costs are incurred for the modification or qualification of products from the company's existing product range according to customer-specific requirements, and, secondly, for the implementation of va-Q-tec products or services into the customer's processes. In addition, these costs create new or improve existing resources for the company that will be used for the future fulfilment of performance obligations.

Additional costs for customer-specific developments during the contract initiation. for which the amortization period would not exceed one year are expensed immediately.

Capitalised contract assets are amortized simultaneously with the transfer of the goods or services to which the contract assets relate.

Impairment testing
Intangible assets with indefinite useful lives, as well as intangible assets that are not yet ready for utilisation, are not amortised, but are instead tested annually for impairment. Assets that are amortised are impairment-tested where an indication exists that the asset's carrying amount may no longer be recoverable. An impairment loss is recognised equivalent to the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount of an asset is the higher of an asset's fair value less costs to sell, and its value in use. The value in use in this context is calculated on the basis of the estimated future cash flows from the utilisation and disposal of the asset, applying the discounted cash flow method. A pre-tax interest rate in line with market conditions is applied as the discounting rate in this context. If no recoverable amount can be calculated for an individual asset, the recoverable amount is calculated for the smallest identifiable group of assets (cash-generating unit) to which the respective asset can be allocated.

If the reasons for the impairment loss no longer apply at a later date, a reversal of the impairment loss is realised up to the level of the new recoverable amount, as a matter of principle. Such reversals of impairment losses are limited to the amortised carrying amount that would have arisen without the impairment loss applied in the past.

No indicators of potential impairment were identified. Accordingly, no impairment losses or reversals of impairment losses pursuant to IAS 36 were applied in either the period under review, or in the previous year.

Leases
Leasing
Leases comprise all agreements that transfer the right to use a specific asset for a fixed period of time in return for payment. This also applies to contracts where the transfer of such a right is not expressly described. As a lessee, va-Q-tec uses real estate and vehicles, in particular.

Group as lessee
Based on the opportunities and risks associated with a leased asset, an assessment was made until 31 December 2018 as to whether economic ownership of the leased asset was attributable to the lessee (so-called finance leases) or the lessor (so-called operating leases) in accordance with IAS 17.

In the case of an operating lease, the lease instalments or rental payments were expensed straight-line in the income statement. Assets accounted for under a finance lease are recognized at the inception of the lease at the lower of the present value of the lease payments or the fair value of the leased property or equipment, and, in subsequent periods, less accumulated depreciation and other accumulated impairment losses. Depreciation was calculated applying the straight-line method, taking into account the asset's residual value. The payment obligations resulting from the future lease installments were discounted and carried under financial liabilities.

As of 1 January 2019, the Group as lessee generally recognizes rights of use for leased assets in property, plant and equipment and liabilities for payment obligations entered into at present values under other financial liabilities. The leasing liabilities include the following leasing payments:

- fixed payments, including de facto fixed payments, less lease incentives still to be paid by the lessor,
- variable payments linked to an index or interest rate,
- expected amounts that are likely to be paid due to residual value guarantees,
- the exercise price of a purchase option, if exercise is considered sufficiently certain, and
- contractual penalties for terminating the lease, if the assumed term of the lease takes into account that a termination option is exercised.

Lease payments are discounted at the marginal borrowing rate. The interest rate is calculated on the basis of the risk-free reference interest rate, taking into account the term of the leases in the relevant Group currency (in EUR thousands) plus a risk premium corresponding to va-Q-tec's rating. If necessary, country- and currency-specific adjustments to the base rate are applied. The risk premium is structured uniformly throughout the Group, as no significant differences in credit risk exist within the Group. In the financial year under review, leasing-specific adjustments were not necessary as, for example, collateral had no material impact on the interest rate. Changes in leases and revaluations of lease liabilities are generally recognised directly in equity against the right of use. The lease is recognised in the income statement if the carrying amount of the right of use has already been reduced to zero, or if it derives from a partial or early termination of the lease.

The right to use the leased asset was capitalized in proportion to the lease liability. At the start of the lease, the value of the right of use corresponds to the present value of the corresponding lease liability. In subsequent periods, the right of use is measured at amortised cost. The Group also conducts impairment tests if corresponding indicators exist.

The Group utilises the relief provisions of IFRS 16 for short term leases (leases with terms of less than 12 months) and low value assets. A benchmark of kEUR 5 is applied for low-value assets. Payments from leasing obligations with a term of no more than twelve months are expensed at the time of payment in accordance with the option. In addition, va-Q-tec does not generally present the leasing and service components separately from one another in accordance with the option offered by the standard.

Sale-and-finance-leaseback transactions

As part of sale-and-finance-leaseback transactions, until 31 December 2018 the Group sold containers to leasing companies, and then leased them back. As a result of the leaseback, the Group re-assumed all significant risks and rewards connected with ownership, and classified the lease as a finance lease. The revenues from these sale-and-finance-leaseback transactions were eliminated in full. As all containers are produced and leased back via sale-and-finance-leaseback transactions in the same period, the related additions from own work performed by the enterprise and capitalised were offset with the same disposals of equal amount, and reported under changes to the cost of the container fleet under property, plant and equipment. Initial recognition of the finance lease asset was according to the general regulations of IAS 17, and resulted in a capitalisation of the leased asset and the corresponding liability.

The excess of the cash accruing to va-Q-tec (sales price) resulting from the sale of containers over the carrying amount or the own work capitalised could not be recognised immediately in profit or loss in the case of sale-and-finance-leaseback transactions, but was instead recognised on the liabilities side of the balance sheet under non-financial liabilities as deferred income (special item for deferred container profits). This deferred income is released through profit or loss over the 5-year lease duration, and reported under other operating income in the consolidated income statement. The existing special item will be released by 31 August 2023.

Since 1 January 2019, a sale-and-leaseback transaction must first be examined on the basis of the criteria of IFRS 15 to determine whether the transfer of an asset constitutes a sale. If the transfer of an asset does not meet the requirements for accounting for a sale as set out in IFRS 15, the asset continues to be recognised, and the proceeds received are recognised as a financial liability, in accordance with IFRS 9. If the transfer of the asset constitutes a sale, the leased-back assets are recognised in the consolidated financial statements in accordance with the principles of lessee accounting described above.

Group as lessor

The Group acts as lessor in operating leases. This concerns the short-term rental of containers to third parties. Such leases are generally short-term in nature, and the risks and rewards connected with ownership do not transfer to the lessee. The leased containers are reported under non-current assets, and the lease income is presented within sales revenue.

Inventories

Inventories are measured at the lower of cost and net realisable value. When calculating purchase costs, ancillary purchase costs are added, and purchase price reductions are deducted. Production costs include direct materials and manufacturing costs, as well as the production-related share of fixed and variable overheads. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale. The loss-free valuation entails applying inter alia discounts accounting for marketability.

Financial instruments and financial assets

Financial assets comprise especially receivables and cash. Recognition and measurement is performed in accordance with IFRS 9. Financial assets are recognised if the Group is contractually entitled to receive cash or other financial assets from third parties. Purchases and sales of financial assets are recognised as of the settlement date, as a matter of principle. Financial assets are initially recognised at fair value, plus transaction costs where relevant. Transaction costs of financial assets that are measured at fair value through profit or loss are expensed. Subsequent measurement is performed in accordance with allocation to the categories of financial assets pursuant to IFRS 9.

The classification and measurement of financial assets is based, firstly, on the so-called cash flow condition (exclusively cash flows from interest and capital repayments) in accordance with the specific form of the contractually agreed cash flows from an individual financial asset. Secondly, this also depends on the business model according to which portfolios of financial assets are managed. va-Q-tec's business model for managing portfolios of financial assets reflects how the company manages its financial assets to generate its cash flows. Depending on the business model, cash flows arise from the receipt of contractual cash flows, the sale of financial assets, or both.

On the basis of these criteria, va-Q-tec applies the following valuation categories for financial assets:

Financial assets measured at amortised cost include all assets whose contractual provisions result in cash flows at specified dates that exclusively represent interest and principal payments on the outstanding principal amount in accordance with the cash flow condition of IFRS 9, provided that such assets are held with the intention to receive the contractual cash flows expected over their respective terms. Trade receivables, receivables included among other financial assets, and cash and cash equivalents are allocated to this measurement category. These assets are initially measured at fair value. This is regularly equal to the transaction price at the time of acquisition. Subsequent measurement through profit or loss is based on the effective interest method.

Financial assets at fair value through profit or loss include all financial assets whose cash flows are not collected via sale or that do not represent exclusively interest and principal payments in accordance with the cash flow condition established in IFRS 9. Changes to the fair values of financial assets in this category, including derivative financial instruments, are expensed. The gain or loss arising from measuring derivative financial instruments is expensed under the net financial result, unless the derivative is included as a hedging instrument as part of the hedge (hedge accounting), and is effective as such. No hedge accounting was applied either in the current year or in the previous year.

Pursuant IFRS 9, individual financial assets are tested for potential impairment on each reporting date. If any objective indications of impairment exist, an impairment loss is expensed equivalent to the difference between the asset's carrying amount and the present value of its expected future cash flows, and recognised within a separate impairment account. If the level of the impairment reduces in subsequent periods due to events that have occurred objectively after the date when the impairment was recognised, the impairment is reversed in the equivalent amount through profit or loss. Impaired receivables are derecognised if they are assessed as uncollectible. In accordance with IFRS 9, the simplified approach is also applied to the determination of expected credit losses on trade receivables, and expected credit losses are recognized as an impairment loss over the entire term of the receivable. The Group also applies the simplified approach to contract assets.

The Group derecognises a financial asset if the contractual rights to the cash flows from an asset expire, or it receives rights to receive cash flows in a transaction in which all significant risks and opportunities connected with the ownership of the financial asset are also transferred. A portion of such transferred financial assets that originate or remain within the Group is recognised as a separate asset or separate liability.

3.2.2 Equity and liabilities

Equity

Equity comprises cash and non-cash capital contributions that substantiate a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments are recognised at the issue proceeds received, less directly attributable transaction costs. Transaction costs comprise costs that would not have been incurred without the issue of the equity instrument. These are deducted from additional paid-in capital taking all tax effects into account. The consolidated statement of changes in equity presents the development of the consolidated equity of the va-Q-tec Group for the 2019 and 2018 financial years.

Treasury shares

va-Q-tec applies the cost method to recognise the treasury shares it acquired for the first time in 2016, whereby the costs to purchase the treasury shares are reported within a separate item within equity.

Share-based payment

The company currently has no arrangements for equity-settled share-based payment transactions with employees.

The "Other disclosures" section provides further information about share-based payment within the va-Q-tec Group.

Government grants

A government grant is not recognised until there is reasonable assurance that the company will comply with the conditions attaching to it, and that the grant will be received. They are recognised in profit or loss in the period in which the Group bears the corresponding expenses that are to be offset by the grants. Government grants whose most important condition is the purchase, construction or other type of acquisition of long-term assets are recognised as non-financial liabilities on the statement of financial position. They are released through profit or loss within other operating income based on the corresponding asset's useful life. In 2019, va-Q-tec AG received no public grants to purchase non-current assets (previous year: kEUR 1,664).

Provisions

Provisions are reported if a current legal or constructive obligation has arisen for the Group from a past event that is likely to result in a future outflow of resources embodying economic benefits, and the level of this obligation can be estimated reliably.

The amount recognised as a provision corresponds to the best possible estimate of the consideration required to settle the current obligation as of the reporting date, whereby risks and uncertainties connected with the obligation are taken into account. All significant cost factors are included in the measurement of provisions. If the interest effect is material, non-current provisions with a remaining term of more than one year are reported at the discounted settlement amount as of the balance sheet date. If it is to be expected that the economic benefit required to settle an obligation for which a provision has been formed will be reimbursed wholly or partly by third parties, the receivable is recognised as an asset if it is as good as certain that the reimbursement will occur, and the level of the receivable can be measured reliably.

Provisions for warranties are formed on the date when the respective goods are sold, or the corresponding services are rendered. The level of the provision is based on historical trends, and an estimate of future warranty cases.

Financial liabilities

Financial liabilities comprise mainly bank borrowings, trade payables, and other financial liabilities. They are measured at fair value on initial recognition, and subsequently – except derivative financial instruments measured at fair value – at amortised cost applying the effective interest method, less directly attributable transaction costs where relevant.

4 NOTES

4.1 CONSOLIDATED INCOME STATEMENT

4.1.1 Revenues

The revenues are composed as follows:

kEUR	2019	2018
Products	18,440	20,122
Systems	15,054	11,307
Services	29,811	18,386
Other	1,362	893
Group, total	**64,667**	**50,708**

The Products division comprises the production and sale of vacuum insulation panels and heat storage components. These products are sold in the following sectors: Healthcare & Logistics, Appliances & Food, Technics & Industry, Building and Mobility. Revenues in this area have almost doubled since 2016 and, when looking at the last three years, the medium-term cycles typical of va-Q-tec's dynamic growth markets are also reflected in this business segment. In the refrigerator and freezer segment, however, end markets are also feeling increasing competitive pressure from Asia and Eastern Europe. Given this, revenues in the Products division declined.

The Systems division comprises the sale of thermal packaging to customers in the Healthcare and Logistics sector. The 33 % increase in revenue in the Systems division was influenced in the financial year under review not only by the acquisition of new customers, but also particularly by major project business.

The Services division comprises the container and box rental business for the transportation of temperature-sensitive goods, predominantly products from the pharmaceuticals and biotech sectors. Compared to the previous year, the positive revenue trend, which was already apparent in the fourth quarter of 2018, was successfully continued. The expansion of the container and box rental business with formerly small or new customers, and the fundamental broadening of the customer base, led to a 62 % jump in revenue. Other revenues are generated through thermal consulting and government-subsidised research projects.

Compared with the previous year, the business in the three main divisions of Products, Systems and Services together generated 27 % sales revenue growth. The revenues of the Services division also include compensation payments from customers for thermal boxes unreturned within the rental network in an amount of kEUR 784 (previous year: kEUR 629).

Please refer to the section on segment reporting for more information.

4.1.2 Work performed by the company and capitalised

The following table shows the trend in work performed by the company and capitalised in the 2018 and 2019 financial years. Due to the high investments realized in the past in the container and box fleets, it was possible to reduce the investment volume in this area in 2019

kEUR	2019	2018
Work performed by the company and capitalised arising from expansion of rental-container-fleet	2,173	3,780
Work performed by the company and capitalised arising from expansion of rental-boxes-fleet	806	647
Other work performed by the company and capitalised	968	1,193
Group, total	**3,947**	**5,620**

Of the total research and development costs of kEUR 2,417 incurred in 2019 (previous year: kEUR 2,451), kEUR 300 (previous year: kEUR 144) meet IFRS capitalisation criteria. The other research and development costs were recognised in the corresponding items of the consolidated income statement, mainly under personnel expenses.

4.1.3 Other operating income

kEUR	2019	2018
Income from release of special item for deferred container profits	2,866	2,581
Income from release of special item for grants	442	414
Exchange rate gains	417	354
Income from other accounting periods	235	114
Renewable energy subsidies	26	22
Gains on fixed asset disposals	213	31
Other income	299	232
Group, total	**4,498**	**3,748**

Other operating income of kEUR 4,498 (previous year: kEUR 3,748) derives mainly from scheduled and continuous releases from the special item from sale-and-finance-leaseback transactions and government grants, as well as foreign currency transactions, gains on asset disposals, and income relating to other accounting periods.

4.1.4 Cost of materials and services

kEUR	2019	2018
Cost of raw materials and supplies	16,351	17,276
Cost of purchased services	12,642	8,446
Group, total	**28,993**	**25,722**

The cost of materials was up from kEUR 25,722 to kEUR 28,993 (+13 %), slightly less than the rate of total income growth, leading to a reduction in the cost of materials ratio of 2 % to 40 % (previous year: 42 %). Along with costs for raw materials and for purchased services, costs of materials include especially logistics services in the container rental business. The cost of purchased services includes expenses from short-term leasing agreements of kEUR 16.

4.1.5 Personel expenses

The following table shows the trend in personnel expenses in the 2019 and 2018 financial years:

kEUR	2019	2018
Wages and salaries	18,900	17,174
Social security contributions	3,489	3,229
Group, total	**22,389**	**20,403**

Personnel expenses increased from kEUR 20,403 in the previous year to kEUR 22,389 in the 2019 reporting period (+10%), with the personal expense ratio in relation to total thereby reducing from 33% to 31%. The absolute increase is mainly due to new hires in the foreign subsidiaries, higher bonuses and management bonuses based on the significantly improved results compared to the previous year, as well as salary updates of hires from 2018. Social security contributions contain mainly employer contributions to statutory social security. A defined contribution pension scheme exists as part of German statutory pension insurance for employees in Germany, to which the va-Q-tec Group is required to make payments at the contribution rate prevailing during the period under review of 9.3% (previous year: 9.3%) (employer component) of pension compensation. The contributions rendered amounted to kEUR 1,269 in the reporting year (previous year: kEUR 1,196). In addition, va-Q-tec AG renders contributions of kEUR 119 (previous year: kEUR 83) to direct insurance as part of its company pension scheme. A defined contribution pension plan also exists at the subsidiaries in the UK, Korea, Japan and Singapore. Contributions of kEUR 69 (previous year: kEUR 60) were expensed at the UK company, kEUR 17 (previous year: kEUR 20) at the Korean company, kEUR 15 (previous year: kEUR 9) at the Japanese company and kEUR 22 (previous year: kEUR 0) at the Singapore company. Defined contribution commitments have also existed for the Management Board members since 2014, for which kEUR 15 (previous year: kEUR 15) was paid into an external, congruently reinsured, pension fund in the current financial year. As a consequence, kEUR 1,526 (previous year: kEUR 1,386) of expenses for defined contribution pension plans were recognised. Wages and salaries for the 2019 financial year again do not include any costs from granting options to staff (previous year: kEUR 0). See section 5.3 for more information about share-based payment.

The average number of employees in the 2018 and 2019 financial years is presented below:

	2019	2018
Male employees	329	318
Female employees	135	126
Group, total	**464**	**444**

4.1.6 Other operating expenses

kEUR	2019	2018
Legal, patents and consulting costs	2,322	2,652
Marketing and sales	1,904	1,962
Freight	1,421	1,200
Repair and maintenance	1,317	1,072
Rent and leasing	984	1,934
IT and other office costs	846	728
Other personnel expenses	520	546
Insurance and contributions	478	402
Expense for asset disposal (boxes)	433	250
Exchange rate losses	342	278
Expenses relating to other accounting periods	217	35
Supervisory Board compensation	155	157
Other	823	996
Group, total	**11,762**	**12,212**

Other operating expenses decreased by 4% to kEUR 11,762 in the 2019 reporting period (previous year: kEUR 12,212). This was due, in particular, to savings in legal, patent and consulting costs and the change in the presentation of rental and lease payments for operating leases, which after the first-time application of IFRS 16 are reported as depreciation of capitalised rights of use and as interest expense from the compounding of the corresponding lease liabilities. Other operating expenses also include expenses from leasing contracts with a term of less than 12 months in the amount of kEUR 43, as well as kEUR 3 for low-value assets. This was mainly offset by higher freight costs and higher expenses for repairs and maintenance, reflecting the increase in revenue. As a result of the company's growth and the expanding rental business with boxes, insurance and premiums as well as expenses for asset disposals also show an increase.

4.1.7 Depreciation, amortisation and impairment losses

Depreciation and amortisation charges of kEUR 12,232 were expensed in the 2019 financial year (previous year: kEUR 9,864). No impairment losses or reversals of impairment losses occurred in either of these financial years. The increase of 24% is mainly attributable to growth-related investments in the container and box fleets as well as the application of IFRS 16 and related depreciation of rights of use under leases. The additional depreciation on rights of use under leases amounted to kEUR 976 in the financial year under review.

4.1.8 Result from equity accounted investment

The investment in SUMTEQ GmbH, which was still equity accounted at the start of the year, generated a pro rata negative result of kEUR 68 in the financial year under review (previous year: kEUR 110). Since 7 June 2019, the investment has been recognised at fair value due to the fact that significant influence no longer exists (see section 4.1.9).

4.1.9 Result from fair value measurement of investments

Due to the loss of significant influence over the financial and business policy decisions of SUMTEQ GmbH, va-Q-tec AG no longer applies the equity method, and instead for the first time measures the investment as a financial asset at fair value.

The gain arising as the difference between the carrying amount of the investment at the date when the application of the equity accounting method was discontinued and its initial measurement at fair value was kEUR 1,771 and was recognised in profit or loss in accordance with IAS 28.

4.1.10 Net financial result

kEUR	2019	2018
Interest income	-	13
Income from derivative financial instruments	16	18
Financial income	**16**	**31**
Interest expense	-770	-521
Interest expense from finance lease	-309	-338
Financial expenses	**-1,079**	**-859**
Net financial result	**-1,063**	**-828**

The increase in interest expenses is especially attributable to the loans additionally taken out in the second half of 2018.

4.1.11 Income tax

kEUR	2019	2018
Actual tax expense (tax income)		
Current period	3	22
Prior periods	-	30
Deferred tax expense (tax income)	**644**	**-99**
Group, total	**647**	**-47**

Deferred tax is calculated applying tax rates that are valid or expected to be valid based on current legislation in the individual countries as of the realisation date.

The tax reconciliation account explains the connection between the expected tax expense and the actually reported tax expense, which derives from the IFRS consolidated result before income tax, applying a 30.3 % income tax rate (previous year: 30.3 %). In each case, the income tax rate applied corresponds to the average domestic tax rate of va-Q-tec AG comprised of corporation tax (plus the solidarity surcharge) and trade tax.

kEUR	2019	2018
Consolidated earnings before tax	**-1,920**	**-7,776**
Expected income tax expense	30.3 %	30.3 %
Expected income tax expense (tax income)	**-581**	**-2,353**
Tax-free income	-526	-13
Non-tax-deductible operating expenses	104	51
Non-capitalised deferred taxes on temporary differences and tax loss carryforwards	1,321	1,312
Not recognised deferred taxes for current income/loss (IAS 12.15b)	-31	158
Effects from tax rate changes	-1	-1
Utilisation of non-capitalised loss carryforwards	0	394
Reported tax expense	-10	-30
Divergent foreign tax rates	377	388
Other effects	-6	46
Reported tax expense (tax income)	**647**	**-47**

The following overview shows to which balance sheet items the deferred tax assets and deferred tax liabilities are to be allocated:

kEUR	Deferred tax assets 31/12/2019	Deferred tax liabilities 31/12/2019
ASSETS		
Intangible assets	-	647
Property, plant and equipment	740	503
Contract assets	-	48
Interests in subsidiaries, joint ventures and associates	-	-
Non-current financial assets	-	50
Inventories	229	25
Trade receivables	-	-
Other current financial assets	-	-
Other current non-financial assets	-	-
EQUITY AND LIABILITIES		
Non-current provisions	-	-
Non-current bank liabilities	-	-
Non-current financial liabilities	182	-
Other non-current non-financial liabilities	1,115	133
Current provisions	13	8
Current bank liabilities	-	2
Trade payables	-	-
Other current financial liabilities	98	-
Other current non-financial liabilities	740	-
Loss carryforwards	618	-
Total before offsetting	**3,735**	**1,416**
Offsetting	-1,416	-
As reported	**2,319**	-

kEUR	Deferred tax assets 31/12/2018	Deferred tax liabilities 31/12/2018
ASSETS		
Intangible assets	-	543
Property, plant and equipment	435	681
Contract assets	-	48
Interests in subsidiaries, joint ventures and associates	-	-
Non-current financial assets	-	19
Inventories	179	33
Trade receivables	-	-
Other current financial assets	-	-
Other current non-financial assets	-	-
EQUITY AND LIABILITIES	-	-
Non-current provisions	-	-
Non-current bank liabilities	-	2
Non-current financial liabilities	10	-
Other non-current non-financial liabilities	1,875	153
Current provisions	12	11
Current bank liabilities	-	2
Trade payables	-	-
Other current financial liabilities	-	-
Other current non-financial liabilities	883	-
Loss carryforwards	1.058	-
Total before offsetting	**4.452**	**1,492**
Offsetting	-1.492	**-**
As reported	**2.960**	**-**

Deferred tax assets are only recognised if such tax benefits can be realised. This entails taking into account all currently known positive and negative factors affecting future taxable results. Of the deferred tax assets, kEUR 618 (previous year: kEUR 1,058) are attributable to individual companies that have incurred tax losses in either the current reporting period or in the previous period. Due to the largely positive business trend, the Group generally assumes that its deferred tax assets can be utilised. Especially at the production company (va-Q-tec AG) and in the container service business (va-Q-tec Ltd. (UK)), extensive investments in personnel, technology and capacities were realised in the years from 2012 to 2019. These investments are prerequisites for growth. Sustained profitability is assumed in the medium term, thereby allowing the deferred tax assets to be utilised.

As of 31 December 2019, tax loss carryforwards for which no deferred taxes were capitalized increased to kEUR 13,394 (previous year: kEUR 4,583) due to a conservative approach and risk discounts applied within the Group. These tax loss carryforwards derive from the subsidiaries in the UK and the USA as well as the German parent company. In 2019 at the UK subsidiary, deferred tax assets were formed in relation to tax loss carryforwards after offsetting with deferred tax liabilities in an amount of kEUR 58 based on the expectation of future profits.

The tax loss carryforwards at all companies can be utilised on an unlimited basis.

4.1.12 Earnings per share

The calculation of basic (undiluted) earnings per share is based on the earnings attributable to the holders of ordinary shares and a weighted average of the number of ordinary shares in issue.

A dilution of earnings per share it is not reported in the past financial year, as the stock options were already fully exercised in 2017. No new options have been issued since then.

Earnings per share are as follows:

Earnings per share	**2019**	**2018**
Consolidated net result (kEUR)	**-2,566**	**-7,728**
Weighted average number of shares	13,075,936	13,075,936
Earnings per share (in EUR)	-0.20	-0.59

Weighted average number of shares

in shares	**2019**	**2018**
Shares issued as of 1 January	13,075,936	13,075,936
Retrospective effect of capital increase from company funds (share split)	-	-
Effect of purchase of treasury shares	-	-
Weighted average number of ordinary shares (undiluted / basic) / (diluted) as of 31 December	**13,075,936**	**13,075,936**

Please refer to the remarks about equity in section 4.2.2.1 for information about the composition of issued share capital.

4.2 CONSOLIDATED STATEMENT OF FINANCIAL POSITION

4.2.1 Assets

4.2.1.1 Intangible assets

Non-current assets

kEUR	Aquisition and production cost: Balance on 01/01/2019	Exchange rate differences	Additions	Reclassifica-tions	Disposals	Balance on 31/12/2019
1. Software and other purchased intangible assets	1,345	-	248	-	-	1,593
2. Internally generated intangible assessts	2,137	-	462	-	-	2,599
3. Internally generated intangible assessts in production stage	12	-	-	-	12	-
Intangible assets, total	**3,494**	**-**	**710**	**-**	**12**	**4,192**

Non-current assets

kEUR	Depreciation, amortisation and impairment losses: Balance on 01/01/2019	Ex-change rate diffe-rences	Depre-ciation, amortisati-on and impair-ment losses in the fiscal year	Reclas-sifica-tions	Dispo-sals	Balance on 31/12/2019	Carrying amount: Balance on 31/12/2019	Balance on 31/12/2018
1. Software and other purchased intangible assets	669	-	250	-	-	919	674	676
2. Internally generated intangible assessts	388	-	652	-	-	1.040	1.559	1.749
3. Internally generated intangible assessts in pro-duction stage	-	-	-	-	-	-	-	12
Intangible assets, total	**1.057**	**-**	**902**	**-**	**-**	**1.959**	**2.233**	**2.437**

Non-current assets

kEUR	Aquisition and production cost Balance on 01/01/2018	Exchange rate differences	Additions	Reclassifica-tions	Disposals	Balance on 31/12/2018
1. Software and other purchased intangible assets	840	-	500	5	-	1.345
2. Internally generated intangible assests	427	-	1.111	599	-	2.137
3. Internally generated intangible assests in production stage	179	-	12	-179	-	12
Intangible assets, total	**1.446**	**-**	**1.623**	**425**	**-**	**3.494**

Non-current assets

	Depreciation, amortisation and impairment losses						Carrying amount	
kEUR	Balance on 01/01/2018	Ex-change rate diffe-rences	Depre-ciation, amortisati-on and impair-ment losses in the fiscal year	Reclas-sifica-tions	Dispo-sals	Balance on 31/12/2018	Balance on 31/12/2018	Balance on 31/12/2017
1. Software and other purchased intangible assets	523	-	146	-	-	669	676	317
2. Internally gen-erated intangible as-sests	38	-	350	-	-	388	1.749	389
3. Internally generated intangible ass-ests in produc-tion stage	-	-	-	-	-	-	12	179
Intangible assets, total	**561**	**-**	**496**	**-**	**-**	**1.057**	**2.437**	**885**

The additions to the internally generated intangible assets item include the company's product and software development work, which it has capitalised.

No indicators of potential impairment were identified. Accordingly, no impairment losses or reversals of impairment losses pursuant to IAS 36 were applied in either the period under review, or in the previous year.

4.2.1.2 Property, plant and equipment

Non-current assets

	Aquisition and production cost					
kEUR	Balance on 01/01/2019	Exchange rate differences	Additions	Reclassifi-cations	Disposals	Balance on 31/12/2019
1. Land and buildings	34.702	4	3.416	18	-	38.140
2. Production equipment and machinery	19.382	-	1.079	668	93	21.036
3. Other plant, operating and office equipment	8.602	13	3.150	124	984	10.905
4. Containerflotte	33.140	-	2.404	-	5.935	29.609
5. Plant under construction	3.340	-	1.261	-810	135	3.656
Property, plant and equipment, total	**99.166**	**17**	**11.310**	**-**	**7.147**	**103.346**

Non-current assets

	Depreciation, amortisation and impairment losses						Carrying amount	
kEUR	Balance on 01/01/2019	Ex-change rate diffe-rences	Depre-ciation, amortisa-tion and impair-ment losses in the fiscal year	Reclassi-fications	Dispo-sals	Balance on 31/12/2019	Balance on 31/12/2019	Balance on 31/12/2018
1. Land and buildings	1,790	-2	1,347	-	-	3,135	35,005	32,912
2. Production equipment and machin-ery	8,060	-	1,665	-	86	9,639	11,397	11,322
3. Other plant, operating and office equipment	4,313	2	1,806	-	625	5,496	5,409	4,289
4. Container fleet	15,613	-	6,512	-	5,928	16,197	13,412	17,527
5. Plant under construc-tion	-	-	-	-	-	-	3,656	3,340
Property, plant and equipment, total	**29,776**	**-**	**11,330**	**-**	**6,639**	**34,467**	**68,879**	**69,390**

Non-current assets

kEUR	Aquisition and production cost Balance on 01/01/2018	Exchange rate differences	Additions	Reclassifications	Disposals	Balance on 31/12/2018
1. Land and buildings	19,836	-	10,855	4,035	24	34,702
2. Production equipment and machinery	14,843	-	2,221	2,318	-	19,382
3. Other plant, operating and office equipment	7,323	16	1,552	341	630	8,602
4. Container fleet	26,396	-	10,517	-	3,773	33,140
5. Plant under construction	8,334	-1	1,707	-6,694	6	3,340
Property, plant and equipment, total	**76,732**	**15**	**26,852**	**-**	**4,433**	**99,166**

Non-current assets

	Depreciation, amortisation and impairment losses						Carrying amount	
kEUR	Balance on 01/01/2018	Exchange rate differences	Depreciation, amortisation and impairment losses in the fiscal year	Reclassifications	Disposals	Balance on 31/12/2018	Balance on 31/12/2018	Balance on 31/12/2017
1. Land and buildings	1,312	-	487	-	9	1,790	32,912	18,525
2. Production equipment and machinery	6,584	-	1,477	-1	-	8,060	11,322	8,260
3. Other plant, operating and office equipment	3,341	2	1,355	1	386	4,313	4,289	3,983
4. Container fleet	10,095	-	6,050	-	532	15,613	17,527	16,300
5. Plant under construction	-	-	-	-	-	-	3,340	8,334
Property, plant and equipment, total	**21,332**	**2**	**9,369**	**-**	**927**	**29,776**	**69,390**	**55,402**

Additions to property, plant and equipment primarily resulted from the first-time application of IFRS 16 and the investment in the container fleet. The composition of the rights of use, as they are to be accounted for as of 1 January 2019, and the change in the rights of use in the reporting period is presented in the following table:

Non-current assets - rights of use

	Aquisition and production cost					
kEUR	Balance on 01/01/2019	Exchange rate differences	Additions	Reclassifica-tions	Disposals	Balance on 31/12/2019
1. Land and buildings	-	5	1,515	-	-	1,520
2. Production equipment and machinery	2,428	-	13	-1,085	-	1,356
3. Other plant, operating and office equipment	-	3	1,674	-	45	1,632
4. Container fleet	30,573	-	-	-	5,911	24,662
Property, plant and equipment, total	**33,001**	**8**	**3,202**	**-1,085**	**5,956**	**29,170**

Non-current assets - rights of use

	Depreciation, amortisation and impairment losses						Carrying amount	
kEUR	Balance on 01/01/2019	Ex-change rate diffe-rences	Depre-ciation, amortisati-on and impair-ment losses in the fiscal year	Reclassi-fications	Dispo-sals	Balance on 31/12/2019	Balance on 31/12/2019	Balance on 31/12/2018
1. Land and buildings	-	-1	509	-	-	508	1,012	-
2. Production equipment and machinery	437	-	128	-247	-	318	1,038	1,991
3. Other plant, operating and office equipment	-	1	467	-	7	461	1,171	-
4. Container fleet	14,577	-	5,796	-	5,911	14,462	10,200	15,996
Property, plant and equipment, total	**15,014**	**-**	**6,900**	**-247**	**5,918**	**15,749**	**13,421**	**17,987**

Rights of use are assets from finance leases, which were reported under property, plant and equipment as of 31 December 2018. As of 31 December 2019, these are attributable in a net carrying amount of kEUR 10,200 to the container fleet (previous year: kEUR 15,996). Technical plant and machinery includes assets from finance leases with a net carrying amount as of 31 December 2019 of kEUR 1,038 (previous year: kEUR 1,991).

Plant under construction increased to kEUR 3,656 as of the balance sheet date (previous year: kEUR 3,340).

The following items of property, plant and equipment serve to collateralise financial liabilities:

- All buildings and land in Kölleda serve as collateral for long-term bank loans (land charge of kEUR 6,672).
- The AN33 property in Würzburg serves as collateral for two long-term bank loans with a land charge of kEUR 14,300.
- The “Heuchelhof” buildings and land in Würzburg serves as collateral for two long-term bank loans with a land charge of kEUR 4,280.
- The photovoltaic plant and a production plant at the Kölleda site with a carrying amount of kEUR 1,039 (previous year: kEUR 1,153) serve as collateral for the financing from the bank and from the leasing company respectively. Of the company’s other technical plant and machinery, a proportion with a carrying amount of kEUR 8,010 (previous year: kEUR 8,910) serves as collateral for long-term bank loans.
- From the “Other equipment” category, assets amounting to kEUR 939 (previous year: kEUR 1,009) serve as collateral for the company’s long-term bank loans.
- The block-type thermal power station at the Würzburg site with a carrying amount of kEUR 605 (previous year: kEUR 569) was pledged as security for the bank’s long-term financing.
- The entire container fleet deriving from sale-and-finance-leaseback transactions serve the leasing companies as collateral for the financing they grant.
- Of the plant under construction, a proportion with a carrying amount of kEUR 1,861 serves as collateral for long-term loans.

No indicators of potential impairment were identified. Accordingly, no impairment losses or reversals of impairment losses pursuant to IAS 36 were applied in either the period under review, or in the previous year.

4.2.1.3 Investment Property

Non-current assets

	Aquisition and production cost					
kEUR	Balance on 01/01/2019	Exchange rate differences	Additions	Reclassifica-tions	Disposals	Balance on 31/12/2019
Investment Property	1,614	-	-	-	-	1,614

Non-current assets

	Depreciation, amortisation and impairment losses						Carrying amount	
kEUR	Balance on 01/01/2019	Ex-change rate diffe-rences	Depre-ciation, amortisati-on and impair-ment losses in the fiscal year	Reclassi-fications	Disposals	Balance on 31/12/2019	Balance on 31/12/2019	Balance on 31/12/2018
Investment Property	-	-	-	-	-	-	1,614	1,614

Non-current assets

	Aquisition and production cost					
kEUR	Balance on 01/01/2018	Exchange rate differen-ces	Addi-tions	Reclassifi-cations	Dispo-sals	Balance on 31/12/2018
Investment Property	1,614	-	-	-	-	1,614

Non-current assets

	Depreciation, amortisation and impairment losses						Carrying amount	
kEUR	Balance on 01/01/2018	Ex-change rate diffe-rences	Depre-ciation, amortisati-on and impair-ment losses in the fiscal year	Reclassi-fications	Disposals	Balance on 31/12/2018	Balance on 31/12/2018	Balance on 31/12/2017
Investment Property	-	-	-	-	-	-	1,614	1,614

In February 2017, a plot of land including warehouse adjacent to the plot of land that was already acquired in 2016 was purchased in Würzburg to construct an integrated production and administration site there. Due to a market opportunity arising short-term, a further large plot of land along with existing production and administrative buildings was acquired in April 2017 in Alfred-Nobel-Strasse 33 in Würzburg, in order to use it to aggregate the Würzburg locations into a management, technology and logistics headquarters. The merger of the Würzburg locations was completed in 2018.

By contrast with the original planning, the undeveloped land plots acquired in 2016 are held for value appreciation purposes as of 31 December, as the company is currently examining to which future utilisation the land plots are to be allocated. For this reason, these land plots were recognised as of the balance sheet date as "investment property" with a carrying amount of kEUR 1,614. Given the prices that can be achieved at present for this type of land, the land plots' fair value corresponds to their reported carrying amount. The fair value of investment property is measured according to hierarchy Level 2 in the meaning of IFRS 13.

No indicators of potential impairment were identified. Accordingly, no impairment losses pursuant to IAS 36 were applied in the period under review.

4.2.1.4 Equity accounted investments

In June 2019, the interest of va-Q-tec AG in SUMTEQ GmbH decreased to 15.22% due to the entry of new shareholders with partly higher participation ratios in the context of a further capital increase of SUMTEQ GmbH, in which va-Q-tec AG did not participate. For this reason, as well as due to changes in the articles of association of SUMTEQ GmbH and the discontinuation of the chairmanship of the advisory board at SUMTEQ GmbH, va-Q-tec AG no longer exerts a significant influence over the investment interest. Since this date, the interest in SUMTEQ GmbH is therefore no longer accounted for using the equity method, and instead at fair value.

The following table summarises the financial information for SUMTEQ, adjusted for fair value on the respective acquisition date, and extrapolating the effects to the reporting date. The table also provides a reconciliation of the summarised financial information with the reported carrying amount of the va-Q-tec interest in SUMTEQ. The information in the table below includes the results of SUMTEQ up to the time of the reduction in the shareholding of va-Q-tec AG for the 2019 financial year prior to fair value measurement, and for 2018.

Financial information for Sumteq GmbH

kEUR	30/06/2019	31/12/2018
Non-current assets	1,863	1,585
Current assets	1,649	1,484
Non-current liabilities	-377	-391
Current liabilities	-493	-313
Net assets (100 %)	**2,642**	**2,364**
Carrying amount of equity accountes investments	**512**	**580**

Financial information for Sumteq GmbH

kEUR	01/01/ – 30/06/2019	2018
Group share of total comprehensive income	**-68**	**-110**

4.2.1.5 Other non-current and current financial assets

Other financial assets

kEUR	Non-current	Current	Balance on 31/12/2019
Investments	2,283	-	2,283
Suppliers with debit balances	-	79	79
Deposits	165	20	185
Miscellaneous	26	487	513
Group, total	**2,474**	**586**	**3,060**

Other financial assets

kEUR	Non-current	Current	Balance on 31/12/2018
Fixed term deposits > 3 months	-	-	-
Suppliers with debit balances	-	51	51
Deposits	158	16	174
Marketable securities	-	-	-
Miscellaneous	26	267	293
Group, total	**184**	**334**	**518**

As of 31 December 2019, other financial assets include for the first time the interest in SUMTEQ GmbH, which was accounted for at fair value in the amount of kEUR 2,283 (previous year: kEUR 0), and which was equity accounted until the loss of significant influence in the financial year under review. The other financial assets are neither overdue nor impaired.

4.2.1.6 Other non-current and current non-financial assets

Other non-financial assets

kEUR	Non-current	Current	Balance on 31/12/2019
Advance payments on intangible assets	813	-	813
Advance payments on inventories	-	40	40
VAT receivables	-	875	875
Advance payments and accrued income	200	355	555
Miscellaneous	87	94	181
Group, total	**1,100**	**1,364**	**2,464**

Other non-financial assets

kEUR	Non-current	Current	Balance on 31/12/2018
Advance payments on intangible assets	368	-	368
Advance payments on property, plant and equipment	-	-	-
Advance payments on inventories	-	42	42
VAT receivables	-	614	614
Advance payments and accrued income	194	365	559
Miscellaneous	84	52	136
Group, total	**646**	**1,073**	**1,719**

Besides prepayments rendered in relation to intangible assets, other non-financial assets comprise mainly claims to reimbursement of energy tax as well as claims arising from customer relationships.

4.2.1.7 Inventories

Despite the significant growth in va-Q-tec's business activities, the company optimized the purchasing of raw materials and supplies, thereby achieving a reduction in inventories of kEUR 248 compared to the previous year (previous year: increase of kEUR 1,982).

Inventories

kEUR	31/12/2019	31/12/2018
Raw materials and supplies	4,730	5,213
Work in progress	210	99
Finished products and goods	5,736	5,612
Group, total	**10,676**	**10,924**

Inventories as of 31 December 2019 include kEUR 679 of impairment losses (previous year: kEUR 765). All of the changes in valuation allowances were recognised in profit or loss under changes in inventories. No reversals of valuation allowances were applied in either the reporting year or the previous year. The carrying amount of inventories recognised at net realisable value stands at kEUR 1,051 as of 31 December 2019 (previous year: kEUR previous 1,925).

4.2.1.8 Trade receivables

Trade receivables fell by kEUR 891, from kEUR 7,557 to kEUR 6,666, as part of the expansion of the va-Q-tec AG factoring program, despite the significant revenue growth.

Where a risk of default relates to a customer, specific valuation allowances are applied. The respective business unit head assesses the risk level on the basis of an analysis of specific cases.

In addition, trade receivables are written down applying the simplified model of expected credit losses for receivables in accordance with IFRS 9.

Changes in valuation allowances to trade receiveables

kEUR	2019	2018
Balance at 1 January	**134**	**46**
Effects due to first application of standard IFRS 9	-	45
Balance at 1 January after application of new accounting standards	**134**	**91**
Consumption	-	-
Release	73	41
Addition	110	84
Balance at 31 December	**171**	**134**

A total of kEUR 105 (previous year: kEUR 106) of the impairment losses presented are impairment losses on receivables that are attributable to individual circumstances. Lifetime expected credit losses of trade receivables amounted to kEUR 66 as of the balance sheet date (previous year: kEUR 29).

In addition, va-Q-tec AG sold trade receivables with a carrying amount of kEUR 632 (previous year: kEUR 0) to third parties on the basis of factoring agreements, for which no significant opportunities and risks remain for the Group.

These receivables were therefore derecognised in accordance with IFRS 9.3.2.6 (a). Temporary deposits are reported as other current financial assets in the amount of kEUR 154 as of 31 December 2019 (previous year: kEUR 0). Due to the short-term nature of the trade receivables sold, their fair value approximates to their carrying amount.

For further information about the trade receivables, please refer to the remarks concerning financial instruments (section 4.4) and risk management (section 4.6).

4.2.1.9 Contract assets

In the financial year under review, the company recognized contract assets as follows in addition to trade receivables for contract costs (contract fulfilment costs).

Assets from contracts with customers

kEUR	31/12/2019	31/12/2018
Assets from contracts with customers	**158**	**157**

No significant changes occurred to the balances of contract assets. Depreciation relating to contract assets amounted to kEUR 70 in the 2019 reporting period (previous year: kEUR 42). No indications existed of impairment to the capitalized assets on the balance sheet date. Due to the small number of individual circumstances, no value adjustment had to be made due to significant expected credit losses.

4.2.1.10 Cash and cash equivalents

The cash and cash equivalents comprise cash balances as well as cash accounts and short-term deposits at banks that had a remaining term of up to three months on addition.

kEUR	31/12/2019	31/12/2018
Current account balances	7.478	12.141
Savings account balances	10	10
Cash balances	2	3
Group, total	**7.490**	**12.154**

4.2.2 Equity and liabilities

4.2.2.1 Equity

The consolidated statement of changes in equity provides a separate presentation of the changes in equity and comprehensive income. The components of comprehensive income are presented on an aggregated basis in the statement of comprehensive income.

Issued share capital
The share capital of the parent entity va-Q-tec AG is reported as the issued share capital in the consolidated financial statements. The share capital of va-Q-tec AG amounts to kEUR 13,090 and is divided into 13,089,502 ordinary no par registered shares. The share capital is fully paid in. The shares are listed in the "Prime Standard" stock market segment of the Frankfurt Stock Exchange. All of the shares carry the same rights and obligations. Each share grants one vote at the general meeting of shareholders. Exceptions to this are shares that the company itself holds (treasury shares), from which no rights accrue to va-Q-tec AG, such as the right to vote at the general meeting of shareholders. As of the balance sheet date, va-Q-tec AG held 13,566 treasury shares. For this reason, the company's issued capital amounts to 13,075,936 shares as of the balance sheet date.

	Number of shares	Nominal value kEUR
Ordinary shares	13,089,502	13,090
Balance on 31/12/2019	**13,089,502**	**13,090**
Ordinary shares	13,089,502	13,090
Balance on 31/12/2018	**13,089,502**	**13,090**

Approved share capital
Based on an AGM resolution of 31 May 2016, the Management Board is authorised to increase the share capital, with Supervisory Board assent, once or on several occasions until 30 May 2021 against cash and/or non-cash capital contributions by a total of up to kEUR 4,278, whereby shareholders' subscription rights can be excluded.

Contingent capital
The contingent capital serves to grant shares on the exercise of conversion and warrant rights, or in the satisfaction of conversion or warrant obligations, to the holders or creditors of convertible bonds, bonds with warrants, participation rights and/or participation bonds, or a combination of such instruments, based on the authorisation resolution of the AGM of 31 May 2016. An increase in the share capital from the contingent capital was not implemented in 2019.

Treasury shares
No changes occurred to treasury shares in 2019 and the number remains at 13,566 shares.

Additional paid-in capital
Additional paid-in capital mainly comprises shareholders' cash and non-cash capital contributions. Additional paid-in capital amounted to kEUR 46,158 as of the balance sheet date (previous year: kEUR 46,158).

Consolidated total other comprehensive income
Consolidated total other comprehensive income includes the reserve arising from the foreign currency translation of the foreign subsidiaries' financial statements.

Retained earnings
Retained earnings mainly comprise cumulative profits carried forward, differential amounts arising from the first-time application of IFRS, and the share of periodic consolidated earnings that is attributable to the owners of va-Q-tec AG.

4.2.2.2 Non-current and current provisions

Provisions

kEUR	Warranties	Archiving	Litigation costs	other	Total
Balance on 01/01/2019	35	17	45	44	141
Addition	20	-	72	50	142
Utilisation	35	-	45	-	80
Release	-	-	-	-	-
Balance on 31/12/2019	**20**	**17**	**72**	**94**	**203**
Non-current	**20**	**17**	**-**	**36**	**73**
Current	**-**	**-**	**72**	**58**	**130**

Provisions

kEUR	Warranties	Archiving	Litigation costs	Other	Total
Balance on 01/01/2018	-	17	25	35	77
Addition	35	-	45	9	89
Utilisation	-	-	12	-	12
Release	-	-	13	-	13
Balance on 31/12/2018	**35**	**17**	**45**	**44**	**141**
Non-current	**35**	**17**	**-**	**27**	**79**
Current	**-**	**-**	**45**	**17**	**62**

Provisions for litigation costs include the expected costs from both current and pending litigation. The other provisions are mainly provisions for pending losses arising from sales of products to customers where such sales have failed to cover their costs, and provisions for open services by suppliers.

The company refrained from discounting non-current provisions for reasons of materiality

4.2.2.3 Non-current and current bank borrowings

The bank borrowings consist of long-term investment loans to finance land, buildings and plants, and short-term current account overdrafts to finance current assets.

Non-current investment loans are secured through land charges and the collateral assignment of machinery and fixtures. Most of the long-term loans have terms of between 15 and 20 years with fixed interest rates. The risk arising from variable-interest loans was partly hedged through interest-rate swaps. Hedge accounting according to IFRS 9 is not applied in this context.

A multibank agreement was concluded with the house banks of va-Q-tec AG in September 2016, which bundles and expands the existing overdrafts and creates a unified and scalable facility for the short-term financing of current assets. This financing facility amounts to kEUR 11,000 and covers the overdrafts of both the parent company and the UK subsidiary. The contract was last extended in August 2019 on different terms and is currently limited until 31 December 2020. In connection with the expiration of the multi-bank master loan agreement on 31 December 2020, the company is also holding discussions with banks and financial institutions on short- and medium-term debt financing instruments.

The inventories of va-Q-tec AG serve as collateral for the credit lines. The company has also committed itself to maintaining a minimum equity ratio of 30 %.

4.2.2.4 Non-current and current financial liabilities

Financial liabilities

kEUR	Non-current	Current	Balance on 31/12/2019
Lease liabilities[1)]	5.254	2.883	8.137
Derivative financial instruments	19	-	19
Deferred liabilities for outstanding invoices	-	2.975	2.975
Accrued liability for financial auditors	-	114	114
Debtors with credit balance	-	155	155
Miscellaneous	60	740	800
Group, total	**5.333**	**6.867**	**12.200**

[1)] With the first-time application of IFRS 16, additional former operating leases were included as of 1 January 2019. In the previous year, only liabilities from finance leases were included in accordance with IAS 17.

Financial liabilities

kEUR	Non-current	Current	Balance on 31/12/2018
Finance leases	5,942	2,112	8,054
Derivative financial instruments	35	-	35
Deferred liabilities for outstanding invoices	-	2,498	2,498
Accrued liability for financial auditors	-	195	195
Debtors with credit balance	-	45	45
Miscellaneous	837	23	860
Group, total	**6,814**	**4,873**	**11,687**

The leasing liabilities arise mainly from leases to finance the UK subsidiary's container fleet assets, which to date have been financed chiefly through sale-and-finance-leaseback transactions, as well as production plants at the locations in Kölleda and Würzburg. Also included are liabilities from leasing agreements for office and warehouse space and for company and service vehicles. The leased assets are reported as rights of use assets under non-current assets.

The table below presents the previous year's lease payments due in the future, with their present values:

31/12/2018 kEUR	Future minimum lease payments	Interest	Present value (finance lease liabilities
up to one year	2,368	256	2,112
longer than one year and up to five years	6,128	319	5,809
over five years	134	1	133
Total minimum lease payments	**8,630**	**576**	**8,054**

The derivative financial instruments position includes the negative market values from interest-rate swaps to hedge variable-interest non-current bank borrowings in an amount of kEUR 19 (previous year: kEUR 35).

4.2.2.5 Other non-current and current non-financial liabilities

Non-financial liabilities

kEUR	Non-current	Current	Balance on 31/12/2019
Special items for grants	3,734	360	4,094
Special items for deferred container profits	2,813	2,397	5,210
Employee bonuses	-	880	880
Liabilities for unutilised vacation	-	147	147
Prepayments received for orders	-	443	443
Liabilities from other taxes	-	273	273
VAT liabilities	-	164	164
Miscellaneous other non-financial liabilities	-	389	389
Other personnel liabilities	-	*246*	*246*
Liabilities for social insurances	-	*85*	*85*
Miscellaneous	-	*58*	*58*
Group, total	**6,547**	**5,053**	**11,600**

Non-financial liabilities

kEUR	Non-current	Current	Balance on 31/12/2018
Special items for grants	4,100	436	4,536
Special items for deferred container profits	5,210	2,866	8,076
Employee bonuses	-	308	308
Liabilities for unutilised vacation	-	174	174
Prepayments received for orders	-	276	276
Liabilities from other taxes	-	371	371
VAT liabilities	-	16	16
Miscellaneous other non-financial liabilities	-	478	478
Other personnel liabilities	-	*348*	*348*
Liabilities for social insurances	-	*60*	*60*
Miscellaneous	-	*70*	*70*
Group, total	**9,310**	**4,925**	**14,235**

Government grants
In 2017 and 2018, the company received investment grants from the government of Lower Franconia for investments in the new location in Würzburg. The investment grants served the construction investments, machinery and facilities as well as the overall investment for the building in Würzburg. In addition, the company received investment grants from Thüringische Aufbaubank between 2008 and 2018 for the various construction phases, machinery and equipment at the Kölleda site. These grants do not need to be repaid as long as the conditions are complied with, as expected.

Special item for grants

kEUR	2019	2018
Balance at 1 January	4,536	3,983
Addition	-	967
Release	442	414
Neutral release	-	-
Balance at 31 December	**4,094**	**4,536**
- of which non-current	3,734	4,100
- of which current	360	436

Deferred income from sale-and-finance-leaseback transactions
Until 31 December 2018, containers used in the container fleet were sold by means of sale-and-finance-leaseback transactions. Profit margins in excess of manufacturing costs arising from the sale of containers were recognised as deferred income under liabilities (special item for deferred container profits). Until the end of 2023, this deferred income will be released to other operating income over the containers' respective five-year useful life. With the application of the new standard on accounting for leases IFRS 16, no profits arose from 1 January 2019 that may be deferred as special items on the liabilities side.

4.2.2.6 Trade receivables

Trade payables are recognised at amortised cost. Their balance sheet values essentially correspond to their market values. They are due within one year.

4.2.2.7 Contractual liabilities

In the financial year under review, the company accounted for obligations arising from contracts with cus-tomers as follows:

Liabilities from contracts with customers

kEUR	31/12/2019	31/12/2018
Liabilities from contracts with customers	308	19

Contract liabilities include in particular obligations from advance payments received and provisions for customer bonuses.

4.3 CONSOLIDATED STATEMENT OF CASH FLOWS

The cash flow statement shows how the cash position has changed at va-Q-tec over the course of the reporting year due to cash inflows and outflows. Pursuant to IAS 7 (Statement of Cash Flows), a distinction is drawn between cash flows from operating, investing and financing activities. The change in liquid assets due to changes in exchange rates is presented separately.

The cash and cash equivalents in the cash flow statement comprise all cash positions reported on the statement of financial position, as well as cash accounts and short-term deposits at banks that have a remaining term of up to three months on addition, are subject to only minor value fluctuations, and their availability is not restricted.

The cash inflows and outflows from investing and financing activities are presented in accordance with the direct method. The cash inflows and outflows from investing activities comprise additions to intangible assets as well as disposals of, or additions to, property, plant and equipment. Financing activities include cash inflows from real estate and plant financing, cash outflows from the repayment of bank borrowings, as well as ingoing and outgoing payments for finance leases. In the previous year, cash inflows from sale-and-finance-leaseback transactions as well as investment allowances and grants received are shown within separate items within cash flows from financing activities.

By contrast, cash inflows and cash outflows from operating activities are derived indirectly, starting from the consolidated net profit. To this end, the consolidated net profit is adjusted to reflect non-cash expenses and income, primarily depreciation, amortisation, impairment losses, deferred tax, the release of special items, the measurement of financial instruments, and changes in provisions. These adjustments are supplemented by changes in other assets and liabilities, as well as working capital.

Investing and financing processes that have not resulted in a change in cash and cash equivalents are not reflected in the cash flow statement.

Reconciliation of liabilities from financing activities in accordance with IAS 7

	Carrying amount 31/12/2018	Cash transactions	Non-cash transactions			Carrying amount 31/12/2019
kEUR			Currency translation	Change in valuation	Other	
Bank borrowings	34,132	105	-	-	7	34,244
Finance leases	8,054	-3,077	-	-	3,160	8,137
Financial liabilities	42,186	-2,972	-	-	3,167	42,381

Reconciliation of liabilities from financing activities in accordance with IAS 7

	Carrying amount 31/12/2017	Cash transactions	Non-cash transactions			Carrying amount 31/12/2018
kEUR			Currency translation	Change in valuation	Other	
Bank borrowings	14,104	20,023	-	-	5	34,132
Finance leases	7,117	937	-	-	-	8,054
Financial liabilities	21,221	20,960	-	-	5	42,186

The virtually unchanged level of lease liabilities despite the substantial repayments made for the sale-and-finance-leaseback financing is attributable to the countervailing effect from the first-time application of IFRS 16.

The first-time application of IFRS 16 had no effect on the cash flow statement, as neither the capitalisation of the rights of use of leased assets nor the accounting of the corresponding lease liabilities resulted in any cash inflow or outflow. As a result of the application of IFRS 16, the actual payment of the lease obligations is reflected as cash outflow from financing activities and no longer as cash outflow from operating activities as in the previous year. In the 2019 financial year, this effect of the payments of lease obligations of va-Q-tec amounted to kEUR 965.

4.4 FINANCIAL INSTRUMENTS

The following table presents financial instruments with their carrying amounts and fair values, analysed by IFRS 9 measurement categories. All of the fair values are allocated to one of the measurement levels of the fair value hierarchy. Where no corresponding allocation has occurred, it is assumed that the carrying amount corresponds to fair value. This relates mainly to trade receivables, cash and cash equivalents, miscellaneous current financial assets, trade payables and miscellaneous current financial liabilities, all of which have short remaining terms.

Section 1.2 "Basis of preparation of the financial statements" provides a definition of the fair value hierarchy levels. All allocations to levels are reviewed at the end of the reporting period. No reclassifications between levels occurred in either the reporting year or the previous year.

The following table shows the carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy.

Values by measurement categories per 31/12/2019

	Measu-rement category as per IFRS 9	**Carrying amount**		**Fair value**	**Of which: fair value**		
		Aquisition cost	**Fair value**				
kEUR		**31/12/2019**	**31/12/2019**	**31/12/2019**	**Level 1**	**Level 2**	**Level 3**
Financial Assets							
Investments	FVtPL	-	2.283	2.283	-	2.283	-
Trade accounts receivables	AC	5.228	-	5.228	-	-	-
Trade accounts receivables	FVtPL	-	1.438	1.438	-	1.438	
Other financial assets	AC	777	-	772	-	-	-
Cash and cash equivalents	AC	7.490	-	7.490	-	-	
Total							-
Financial liabilities							-
Bank borrowings	AC	34,244	-	35,008	-	35,008	
Trade payables	AC	4,485	-	4,485	-	-	
Other financial liabilities	-	-	-	-	-	-	-
of which: finance lease liabilities	FVtPL	-	19	19	-	19	-
of which: derivative financial instruments without hedging relationship	AC	4,352	-	4,340	-	4,340	-
Total		**43,082**	**19**	**43,852**			

Of which aggregated by measurement category as per IFRS 9

kEUR		Carrying amount	Fair value
Amortised Cost (asset)	AC	13.495	13.490
At fair value through P&L (asset)	FVtPL	3.721	3.721
Amortised Cost (liability)	AC	43.082	43.833
At fair value through P&L (liability)	FVtPL	19	19

Values by measurement categories per 31/12/2018

	Measu-rement category as per IFRS 9 / IAS 17	Carrying amount		Fair value	of which: fair value		
		Aquisition cost	Fair value				
kEUR		31/12/2018	31/12/2018	31/12/2018	Level 1	Level 2	Level 3
Financial Assets							
Trade accounts receivables	AC	7,557	-	7,557	-	-	-
Other financial assets	AC	518	-	513	-	-	-
Cash and cash equivalents	AC	12,154	-	12,154	-	-	-
Total		**20,229**		**20,224**			
Financial liabilities							
Bank borrowings	AC	34,132	-	34,936	-	34,936	-
Trade payables	AC	4,593	-	4,593	-	-	-
Other financial liabilities	-	-	-	-	-	-	-
of which: finance lease liabilities	IAS 17	8,054	-	8,125	-	8,125	-
of which: derivative financial instruments without hedging relationship	FVtPL	-	35	35	-	35	-
of which: miscellaneous other financial liabilities	AC	3,598	-	3,582	-	3,582	-
Total		**50,377**	**35**	**51,271**			

Of which aggregated by measurement category as per IFRS 9

kEUR		Carrying amount	Fair value
Amortised Cost (asset)	AC	20,229	20,224
Amortised Cost (liability)	AC	42,323	43,111
At fair value through P&L (liability)	FVtPL	35	35

The fair value of Level 2 interest-bearing bank borrowings and, in the previous year, finance lease liabilities is derived as the present value of the expected future cash flows. They are discounted at market interest rates on the balance sheet date. In the case of variable interest liabilities, the carrying amounts generally correspond to fair values. The fair value of the investment in SUMTEQ GmbH was measured at the time of loss of significant influence as well as at 31 December 2019 on the basis of the evident transaction of the capital increase carried out with new investors and consequently on the basis of observable market prices (measurement level 2).

The fair value of Level 2 interest-rate swaps is calculated by discounting expected future cash flows on the basis of market interest rates valid on the respective reporting date for the contracts' remaining terms.

4.5 NET RESULT FROM FINANCIAL INSTRUMENTS

The net result relating to financial instruments as presented in the consolidated income statement is composed as follows:

2019 net results from

Measurement category as per IFRS 9 / IFRS 16	Interest income	Interest expense	Impairment losses	Reversals of impairment losses	Currency translation
Amortised Cost (asset)	-	-	-	-	104
At fair value through P&L (assets)	-	-	-	1,771	-
Amortised Cost (liability)	-	-705	-	-	-31
At fair value through P&L (liability)	-	-		16	-
IFRS 16	-	-309	-	-	-1
Other	-	-65	-	-	2
Total	**-**	**-1,079**	**-**	**1,787**	**74**

2018 net results from

Measurement category as per IFRS 9 / IAS 17	Interest income	Interest expense	Impairment losses	Reversals of impairment losses	Currency translation
Amortised Cost (asset)	-	-	-	-	46
At fair value through P&L	-	-	-	18	-
Amortised Cost (liability)	13	-521	-	-	28
IAS 17	-	-338	-	-	-
Other	-	-	-	-	2
Total	**13**	**-859**	**-**	**18**	**76**

4.6 RISK MANAGEMENT

As a company active internationally, va-Q-tec is exposed to credit, liquidity, and market risks during the course of its ordinary business activities. Market risks particularly result from changes to exchange rates and interest rates. Financial risk management measures are designed to manage and limit these market risks within the scope of operating and financial activities. Depending on the risk assessment, derivative hedging instruments are deployed, although generally only cash flow risks are hedged. Derivative financial instruments are used for operational hedging purposes, and are consequently not held for trading. Hedge accounting according to IFRS 9 is not applied in this context. To reduce default risk, hedging transactions are entered into only with financial institutions with excellent credit ratings.

The basic principles of the financial policy are regularly controlled by the Management Board and monitored by the Supervisory Board.

Credit risks

Credit risk is the risk that business partners will not be able to meet their contractual obligations, and that the va-Q-tec Group will incur a financial loss as a consequence. In the course of its operating activities, the Group is exposed to default risk, especially in the case of trade receivables, as well as risks as part of its financing activities, including its derivative financial instruments.

The credit risk from trade receivables is managed at the company level (i.e. locally), and monitored constantly. Identifiable default risks applying to financial assets are reflected through impairment losses.

The maximum credit risk on the financial assets corresponds to the carrying amount recognised on the statement of financial position. The maximum credit risk stood at kEUR 7,443 as of the 31 December 2019 reporting date (previous year: kEUR 8,075).

In accordance with IFRS 9, valuation allowances for expected credit losses ("expected loss model") are recognised for all financial assets measured at amortized cost and for debt instruments measured at fair value through equity.

In principle, IFRS 9 provides for a three-stage procedure for this purpose. Risk provisions are formed either on the basis of the expected 12-month credit losses (stage 1) or on the basis of the expected credit losses over the term if the credit risk has increased significantly since initial recognition (stage 2) or if an impaired credit quality is determined (stage 3). For the majority of financial assets, including trade receivables that do not contain a significant financing component, the simplified procedure is applied. In this context, expected credit losses are always determined over the entire term of the financial instruments.

The application of the simplified procedure results in the following default risk classifications for the financial assets:

Credit risk exposure of financial assets 2019

kEUR	**Trade receivables**	**Contract assets**	**Other financial assets**	**Cash and cash equivalents**
Credit risk rating grade 1	-	-	586	7,490
Credit risk rating grade 2	6,728	158	191	-
Credit risk rating grade 3	109	-	-	-
Total	**6,837**	**158**	**777**	**7,490**

Credit risk exposure of financial assets 2018

kEUR	Trade receivables	Contract assets	Other financial assets	Cash and cash equivalents
Credit risk rating grade 1	-	-	334	12,154
Credit risk rating grade 2	7,520	157	184	-
Credit risk rating grade 3	66	-	-	-
Total	**7,586**	**157**	**518**	**12,154**

Individual value adjustments are made in the event of corresponding individual circumstances and risk indications. Both historical data, such as historical default rates, and forward-looking information, such as individual and macroeconomic conditions, are included in determining the amount of valuation allowances. For the initial determination of the default rates, data from external providers was utilised, and also determined based on actual defaults. In future, this information will be determined solely on the basis of expected defaults.

The default of a counterparty results in the value adjustment of all open positions with the counterparty. In this context, the default is determined on the basis of an individual assessment, for example in the event of conspicuous changes in payment behaviour or insolvency filing. A financial instrument is derecognised when a reasonable evaluation cannot assume that a financial asset will be recoverable in whole or in part, for example after insolvency proceedings have ended or subject to other local conditions.

For the unimpaired trade receivables, value adjustments were made in accordance with IFRS 9 in the amount of the expected credit losses of kEUR 66 (previous year: kEUR 29). The recoverability of receivables that are not overdue is regarded as very high. This assessment is due, above all, to the long-standing business relationships with most buyers, and our customers' credit ratings. The other financial assets are neither overdue nor impaired.

Due to the relatively high concentration of sales revenue on a few major customers, the sales function focuses to a great extent on acquiring new customers in all market areas addressed by va-Q-tec.

Liquidity risks

Liquidity risk i.e. the risk that va-Q-tec is unable to meet its financial obligations, is limited through the creation of the requisite financial flexibility, and through an effective cash management system. To manage its future liquidity position, va-Q-tec employs corresponding liquidity planning instruments. No liquidity bottlenecks were identifiable as of the reporting date. Unutilised overdraft lines existed were available to a sufficient extent.

Specific liquidity risks for the Group arise from the relatively high proportion of individual major customers with which no long-term contracts exist, and such customers' theoretical default risks or risks of departure, as well as from potential repayment obligations to banks given non-compliance with covenants, and in relation to development agencies, given non-compliance with subsidy terms. The management steers these potential liquidity risks through targeted commercial, financial and organisational measures.

The following lists show the contractually agreed, undiscounted interest and principal payments for the non-derivative and derivative financial liabilities as per IFRS 7. If the maturity date is not fixed, the liability is related to the earliest due date. Interest payments with variable interest yield are taken into account according to the terms applicable as of the reporting date. We mainly assume that the cash outflows will not occur earlier than shown.

The following table includes the repayment amount (including assumed future interest payments to be rendered) at the respective stated maturity date:

2019 | Repayment amounts on respective due date

kEUR	Bank borrowings	Other financial liabilities: Finance lease liabilities[1]	Other financial liabilities: Derivative financial instruments	Other financial liabilities: Miscellaneous other financial liabilities	Trade payables	Total
2020	11,963	3,074	10	3,980	4,469	**23,496**
2021	3,997	1,880	4	60	-	**5,941**
2022	2,806	2,114	-	-	-	**4,920**
2023	1,854	1,052	-	-	-	**2,906**
2024	1,442	391	-	-	-	**1,833**
2025 and later	15,973	11	-	-	-	**15,984**
Total 31/12/2019	**38,035**	**8,522**	**14**	**4,040**	**4,469**	**55,080**

[1)] With the first-time application of IFRS 16, additional former operating leases were included as of 1 January 2019. In the previous year, only liabilities from finance leases were included in accordance with IAS 17.

2018 | Repayment amounts on respective due date

kEUR	Bank borrowings	Other financial liabilities: Finance lease liabilities	Other financial liabilities: Derivative financial instruments	Other financial liabilities: Miscellaneous other financial liabilities	Trade payables	Total
2019	9,972	2,368	16	2,807	4,572	**19,735**
2020	3,217	2,154	10	836	-	**6,217**
2021	3,100	1,811	4	-	-	**4,915**
2022	2,793	1,463	-	-	-	**4,256**
2023	1,842	701	-	-	-	**2,543**
2024 and later	17,403	134	-	-	-	**17,537**
Total 31/12/2018	**38,327**	**8,631**	**30**	**3,643**	**4,572**	**55,203**

Collateral in the form of land charges on land and buildings at the Kölleda site and at the new headquarters in Würzburg, collateral assignments of machinery and installation items, as well as collateral for finance leases in the form of production plants exist for va-Q-tec loans and bank overdrafts utilised as of the reporting date. Above and beyond this, the UK subsidiary's containers, which are leased as part of the container fleet, are assigned as collateral for finance leases. The current account lines used under the multi-bank agreement are collateralised by inventories as of the balance sheet date. Furthermore, va-Q-tec AG has committed itself to maintaining a minimum equity ratio.

Currency risks

Foreign currency exchange rate risk is the risk that the fair value or future cash flow of a financial instrument will fluctuate due to changes in foreign currency exchange rates. va-Q-tec is exposed to this risk mainly from its operating activities (if revenues and/or expenses denominated in a currency differing from the functional currency of the respective Group company). Where financially feasible, va-Q-tec hedges its significant exchange rate risks by employing forward currency transactions. The hedging of value fluctuations of future cash flows from expected transactions involves planned costs denominated in foreign currency. Differences caused by exchange rates when financial statements are translated into the Group currency are not taken into consideration.

For the disclosure of market risks, IFRS 7 requires sensitivity analyses that show how changes to relevant risk variables (e.g. exchange rates, interest rates) might affect earnings and equity. To gauge periodic effects, a potential change in the risk variables is applied to the financial instruments position on the reporting date. This approach assumes that this year-end position is a representative for the financial year concerned.

The following sensitivity analysis is based on USD, GBP, CHF and KRW as the significant foreign currencies for the va-Q-tec Group. The analysis is based on the status as of 31 December 2019 of the positions of receivables, liquid assets and liabilities denominated in USD, GBP, CHF and KRW. Effects on consolidated results and equity were calculated that are derived from the simulated USD, GBP, CHF and KRW exchange rates as of the reporting date.

The following currency scenarios arise: If the value of the USD had been 10 % higher against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 287 (previous year: kEUR 269) higher, and consolidated equity would have been kEUR 287 (previous year: kEUR 269) higher. If the value of the USD had been 10 % lower against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 287 (previous year: kEUR 269) lower, and consolidated equity would have been kEUR 287 (previous year: kEUR 269) lower. If the value of the GBP had been 10 % higher against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 30 (previous year: kEUR 78) higher, and consolidated equity would have been kEUR 30 (previous year: kEUR 78) higher. If the value of the GBP had been 10 % lower against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 30 (previous year: kEUR 78) lower, and consolidated equity would have been kEUR 30 (previous year: kEUR 78) lower. If the value of the CHF had been 10 % higher against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 99 (previous year: kEUR 76) higher, and consolidated equity would have been kEUR 99 (previous year: kEUR 76) higher. If the value of the CHF had been 10 % lower against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 99 (previous year: kEUR 76) lower, and consolidated equity would have been kEUR 99 (previous year: kEUR 76) lower.
If the value of the KRW had been 10 % higher against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 19 lower (previous year: kEUR 15 higher), and consolidated equity would have been kEUR 19 lower (previous year: kEUR 15 higher). If the value of the KRW had been 10 % lower against the EUR as of the reporting date, consolidated profit/loss would have been kEUR 19 higher (previous year: kEUR 15 lower), and consolidated equity would have been kEUR 19 higher (previous year: kEUR 15 lower).

Interest rate risks

Interest rate risk is the risk that the fair value or future cash flow of a financial instrument will fluctuate due to changes in market interest rates. The risk of fluctuations in market interest rates to which the Group is exposed results primarily from variable rate loans and overdrafts. To a minor extent, the Group manages its interest rate risk in relation to financial liabilities through employing interest rate derivatives in the form of interest rate swaps for long-term loans, whereby no hedge accounting is applied.

Interest rate risks according to IFRS 7 are calculated by means of a sensitivity analysis. The following sensitivity analysis includes both the effects on the net interest result due to variable interest financial instruments existing on the respective reporting date, and the value changes of the interest-rate swaps that have been concluded. The effects of variable market interest rates on consolidated results in equity were calculated.

If the market interest-rate level as of the reporting date had been 100 basis points higher, the consolidated profit/loss would have been kEUR 46 lower (previous year: kEUR 13 lower), and consolidated equity would have been kEUR 46 lower (previous year: kEUR 13 lower). If the market interest-rate level as of the reporting date had been 100 basis points lower, the consolidated profit/loss would have been kEUR 41 higher (previous year: kEUR 13 higher), and consolidated equity would have been kEUR 41 higher (previous year: kEUR 13 higher).

Capital management

The primary objective of capital management at va-Q-tec is the continuous and long-term enhancement and growth of the company's value, and the securing of its liquidity. A high credit rating and a good equity ratio represent important building blocks to this end. The Group manages its capital structure and implements adjustments while taking changes in economic conditions into account.

va-Q-tec regularly monitors its capital on the basis of various key figures. The equity ratio represents an important key indicator in this context. The Management Board has defined a range for the equity ratio of between 35 and 40 % as the medium-term target. The equity ratio stood at 40 % as of the balance sheet date (previous year: 41 %), thereby meeting in the 2019 financial year the target set by the Management Board. According to current plans, it is assumed that the company's equity ratio will fall slightly below 40 % in the coming years, albeit remaining within the aforementioned 35 – 40 % range.

With the IPO, the long-term financing facilities for the real estate and plants, and current account overdrafts available as part of the multibank agreement arranged in September 2016, va-Q-tec AG has created a solid liquidity basis for the next years' business planning.

As of 31 December 2019, financial liabilities of the parent company va-Q-tec AG in amount of kEUR 1,096 (previous year: kEUR 1,595) were subject to financial covenants relating to the separate and consolidated financial statements of va-Q-tec AG. The corresponding loan agreements were adjusted to the company's situation in the financial year under review with regard to their covenant regulations and stipulate a minimum equity ratio of 30 % in addition to land charges and other collateral. This covenant was complied with. As part of adjusting a syndicated agreement, new conditions have been negotiated according to which va-Q-tec makes its inventories available to the syndicate banks as collateral for the credit lines and commits itself to maintaining a minimum equity ratio of 30 %. Financial liabilities of va-Q-tec Ltd. (UK) from finance leases and loans of kEUR 6,019 as of 31 December 2019 (previous year: kEUR 6,404) have been subject to a covenant based on the separate financial statements of va-Q-tec Ltd. (UK). This covenant requires equity as recognised on the balance sheet of at least kEUR 2,500 as of the balance sheet date. This covenant was met as of the balance sheet date, as in the previous year.

5 OTHER DISCLOSURES

5.1 SEGMENT INFORMATION

For the purpose of segment reporting, the activities of the va-Q-tec Group are separated by operating segments based on the regulations of IFRS 8 (Operating Segments). The structure is based on internal management and reporting on the basis of legal entities. The va-Q-tec Group operates in the three reporting segments of " va-Q-tec AG", "va-Q-tec Ltd. (UK)" and "Other".

The activities of the German and UK reporting segments are unchanged compared with the previous year. A fulfilment centre (conditioning and cleaning of rental boxes) is operated in Switzerland. In addition to purchasing and sales services, the Korean subsidiary also generates independent third-party sales for the Group. In addition to sales services, the subsidiaries in the USA, Uruguay, Singapore and Japan generate independent third-party sales.

The reporting and reporting management of the individual segments at va-Q-tec is directly according to IFRS. Insofar they are material, the supply and service relationships between the reporting segments are presented on a consolidated basis.

Starting from the total sum of the reporting segments, intragroup transactions are eliminated in the "Consolidation" column, particularly taking into account effects from the sale-and-finance-leaseback transactions.

Segment reporting FY 2019

kEUR	va-Q-tec AG	va-Q-tec Ltd. (UK)	Other	Operating divisions, total	Conso-lidation	Group
	IFRS	IFRS	IFRS			
External revenue	34,442	24,917	5,308	64,667	-	64,667
Internal revenue	9,586	1,338	1,203	12,127	-12,127	-
Total sales revenue	**44,028**	**26,255**	**6,511**	**76,794**	**-12,127**	**64,667**
At a point in time	40,232	-	3,979	44,211	-9,355	34,856
Over time	3,796	26,255	2,532	32,583	-2,772	29,811
Total income	48,717	26,790	6,635	82,142	-9,325	72,817
Cost of materials and services	-19,591	-12,171	-3,828	-35,590	6,597	-28,993
Personnel expenses	-18,772	-2,605	-1,601	-22,978	589	-22,389
Other operating expenses	-9,345	-3,349	-1,392	-14,086	2,324	-11,762
EBITDA	**1,009**	**8,665**	**-186**	**9,488**	**185**	**9,673**
Depreciation, amortisation and impairment losses	-4,636	-7,804	-526	-12,966	734	-12,232
EBIT	**-3,627**	**861**	**-712**	**-3,478**	**919**	**-2,559**
Result from equity accounted investments	**-**	**-**	**-**	**-**	**-68**	**-68**
Result from fair value valuation of investments	**-**	**-**	**,**	**,**	**1,771**	**1,771**
Financial income	282	-	-	282	-266	16
Financial expenses	-738	-559	-49	-1,346	267	-1,079
EBT	**-4,083**	**302**	**-761**	**-4,542**	**2,623**	**-1,919**
FY 2019 investments	7,298	7,825	1,557	16,680	-4,398	12,282
Assets 31/12/2019	101,723	27,649	5,004	134,376	-28,587	105,789
Non-current assets 31/12/2019	54,919	18,648	1,369	74,936	-3,824	71,112
Equity accounted investments 31/12/2019	-	-	-	-	-	-
Liabilities 31/12/2019	44,958	23,258	5,347	73,563	-10,480	63,083
employees [1)]	398	41	25	464	-	464

[1)] The number of employees includes members of the Management Board and trainees (2019: 17, previous year: 16)

Segment reporting FY 2018

	va-Q-tec AG	va-Q-tec Ltd. (UK)	Other	Operating divisions, total	Conso-lidation	Group
kEUR	IFRS	IFRS	IFRS			
External revenue	33,650	14,737	2,321	50,708	-	50,708
Internal revenue	10,915	1,307	1,768	13,990	-13,990	-
Total sales revenue	**44,565**	**16,044**	**4,089**	**64,698**	**-13,990**	**50,708**
At a point in time	40,973	42	3,507	44,522	-12,200	32,322
Over time	3,592	16,002	582	20,176	-1,790	18,386
Total income	49,294	16,381	4,109	69,784	-8,420	61,364
Cost of materials and services	-20,752	-7,194	-1,736	-29,682	3,960	-25,722
Personnel expenses	-17,263	-2,390	-1,011	-20,664	261	-20,403
Other operating expenses	-10,699	-2,463	-1,309	-14,471	2,259	-12,212
EBITDA	**580**	**4,334**	**53**	**4,967**	**-1,940**	**3,027**
Depreciation, amortisation and impairment losses	-3,565	-6,908	-56	-10,529	665	-9,864
EBIT	**-2,986**	**-2,574**	**-3**	**-5,563**	**-1,275**	**-6,838**
Result from equity accounted investments	-	-	-	-	-110	-110
Financial income	267	-	-	267	-236	31
Financial expenses	-497	-575	-23	-1,095	236	-859
EBT	**-3,216**	**-3,149**	**-26**	**-6,391**	**-1,385**	**-7,776**
FY 2018 investments	17,202	15,928	141	33,271	-4,797	28,474
Assets 31/12/2018	107,218	27,515	2,530	137,262	-27,115	110,147
Non-current assets 31/12/2018	53,003	20,621	322	73,946	-2,118	71,828
Equity accounted investments 31/12/2018	-	-	-	-	580	580
Liabilities 31/12/2018	46,224	23,483	2,281	71,988	-7,100	64,888
employees [1)]	390	37	17	444	-	444

[1)] The number of employees includes members of the Management Board and trainees (2018: 16; previous year: 17)

In the 2019 financial year, va-Q-tec AG had one customer accounting for more than 10% of total consolidated revenue. Sales revenues of kEUR 8,425 (previous year: kEUR 6,356) were generated with these customers.

The revenues are distributed geographically as follows:

kEUR	2019	2018
Germany	20,827	17,833
Rest of European Union	19,156	14,620
Other	24,684	18,255
Group, total	**64,667**	**50,708**

The allocation of revenues with external customers to a geographic region is based on the customer's location. The geographic allocation of non-current assets is based on the domicile of the asset's owner, and is shown in the segment reporting according to legal entities presented above.

The allocation of revenues to Products, Systems and Services is as follows: Sales revenues of kEUR 18,440 (previous year: kEUR 20,122) were generated with Products (vacuum insulation panels and individually sold heating storage components) in the financial year under review. The Group generated kEUR 15,054 of sales revenue with Systems (thermal packaging and related components) in the reporting year (previous year: kEUR 11,307). Sales revenues of kEUR 29,811 were generated from Services in the financial year under review (previous year: kEUR 18,386). Other sales revenues amounted to kEUR 1,362 in the financial year (previous year: kEUR 893).

5.2 CONTINGENCIES AND OTHER FINANCIAL OBLIGATIONS

Other financial obligations exist that mainly arise from purchase commitments and marketing costs. The previous year's figure also included, in particular, operating leases for IT equipment and company cars as well as rental obligations for buildings.

The due dates of the other financial obligations are as follows:

Other financial obligations (contingent liabilities)

kEUR	31/12/2019	31/12/2018
Group, total	**1,746**	**4,488**
due within one year	1,207	1,944
due between one and five years	539	2,533
due after five years	0	11

Moreover, a bill guarantee line in an amount of kEUR 24 (previous year: kEUR 24) exists with Commerzbank AG, under which va-Q-tec AG is liable for lending to third parties.

The stock option program for va-Q-tec staff introduced in December 2017, which includes the rendering of part of the price paid for demonstrably purchased va-Q-tec shares, led to outgoing payments of kEUR 8 in 2019 (previous year: kEUR 18). The program was extended until 31 December 2020, which also leads to a minor scope of contingent liabilities in 2020. The "va-Q-share" share purchase program of va-Q-tec AG forms part of the additional benefits for company employees aimed at the company's sustained a positive development and growth with individual contractual target agreements. The va-Q-share Plus 2020 program creates a long-term incentive for participants to commit themselves to the company's performance and success. For this purpose, program participants are granted a monetary subsidy for them to independently purchase the company's shares in the market. The program has no material effects or payment obligations.

5.3 SHARE-BASED PAYMENT

va-Q-tec currently has no arrangements for equity-settled share-based payment transactions with employees.

5.4 RELATED PARTIES

IAS 24 requires the disclosure of the existence of related companies, and transactions with, and outstanding balances in relation to, related companies, if they are not already included as consolidated companies in the consolidated financial statements, as well as related individuals. va-Q-tec AG is the Group's ultimate parent entity.

As a matter of principle, key management personnel and their close relatives are regarded as related individuals at the va-Q-tec Group. Key management personnel comprised the members of the Management and Supervisory Boards of va-Q-tec AG, as well as the managing directors of the foreign subsidiaries in Korea and the UK.

Related companies within the va-Q-tec Group are regarded as those companies over which va-Q-tec AG, the Management and Supervisory Board members and their close family relatives, can at least exercise significant influence, or which, for their part, can exert significant influence over va-Q-tec. The 15.22% interest in SUMTEQ GmbH, Cologne, as of the 31 December 2019 reporting date (previous year: 18.50%) was no longer classified as an associated company and is no longer equity accounted in the consolidated financial statements. A significant influence on the financial and business policy decisions of the investment can no longer be clearly demonstrated following the changes in the agreements under company law and the entry of new shareholders in the context of a capital increase. With regard to the interest in SUMTEQ GmbH, we refer to the information on equity accounted investments in section 4.2.1.4 of the notes to the financial statements.

Key management personnel of the va-Q-tec Group

Management Board	
Dr. Joachim Kuhn	since 01/04/2001
Stefan Döhmen	since 01/07/2017

Supervisory Board	
Dr. Gerald Hommel Vorsitzender	since 27/06/2014
Uwe Lamann Stellv. Vorsitzender	since 27/06/2014
Dr. Barbara Ooms-Gnauck	since 27/06/2014
Winfried Klar	since 20/03/2013
Uwe Krämer	since 01/10/2015
Dr. Eberhard Kroth	since 20/03/2013

Managing Directors of the subsidiaries in the UK, Korea and Japan	
Insook Yoo – va-Q-tec Ltd. (Korea)	seit 07/07/2011
Insook Yoo – va-Q-tec G.K. (Japan)	seit 05/04/2017
Sven Larsen – va-Q-tec Ltd. (UK)	seit 01/01/2017
Roland Rappl – va-Q-tec Ltd. (UK)	seit 01/03/2018

Total compensation of key management members of the va-Q-tec Group

kEUR	2019	2019
Short-term employee benefits	1,370	1,229
Post-employment benefits	24	24
Total compensation of key management members of the va-Q-tec Group	**1,394**	**1,253**

Management Board compensation

kEUR	2019	2018
Short-term employee benefits	644	553
Post-employment benefits	15	15
Total Management Board compensation	**659**	**568**

Compensation totaling kEUR 659 was paid to the Management Board in 2019 (previous year: kEUR 568). This compensation consisted of basic compensation of kEUR 416 (previous year: kEUR 441), performance-based one-year compensation of kEUR 47 (previous year: kEUR 112), multi-year variable compensation of kEUR 181 (previous year: kEUR 0) and contributions to the company's pension scheme. Defined contribution pension commitments have existed for the Management Board members since 2014. To this end, kEUR 15 (previous year: kEUR 15) was paid into an external reinsured pension fund in the year under review.

As in the previous year, no advances or loans were extended to Management Board members in the year under review.

As of 31 December 2019, one member of the Management Board had a personal guarantee outstanding to the Thüringer Aufbaubank in an amount of kEUR 200 (previous year: kEUR 200). This guarantee was issued in 2011 without consideration being granted in return by va-Q-tec AG.

va-Q-tec does not disclose the total compensation of the individual Management Board members specifying their names, as Section 314 (3) Clause 1, 286 (5) of the German Commercial Code (HGB) makes this expressly subject to a differing AGM resolution with a qualified majority of the share capital represented at the resolution. The AGM of va-Q-tec AG on 31 May 2016 passed a corresponding resolution with the requisite majority.

Supervisory Board compensation

Total remuneration of the supervisory board 2019

kEUR	Renumeration	Expenses	Consulting
Dr. Gerald Hommel	36	2	-
Winfried Klar	29	5	15
Uwe Andreas Krämer	15	-	-
Dr. Eberhard Kroth	17	1	25
Uwe Lamann	26	3	-
Dr. Barbara Ooms-Gnauck	19	2	-
Total	**142**	**13**	**40**

Total remuneration of the supervisory board 2018

kEUR	Renumeration	Expenses	Consulting
Dr. Gerald Hommel	36	4	-
Winfried Klar	31	4	24
Uwe Andreas Krämer	14	-	-
Dr. Eberhard Kroth	20	2	7
Uwe Lamann	26	2	-
Dr. Barbara Ooms-Gnauck	16	2	-
Total	**143**	**14**	**31**

Compensation of kEUR 155 was granted to the Supervisory Board members for the 2019 financial year (previous year: kEUR previous 157). In both the previous year and in the year under review, compensation included only a short-term component, and consists of compensation for normal Supervisory Board activity and expenses. In addition, consultancy services in an amount of kEUR 40 (previous year: kEUR 31) were compensated, rendered especially as part of the Power20+ program and in connection with the financing strategy.

As of 31 December 2019, this Supervisory Board compensation generates kEUR 36 of payment obligations for the company (31 December 2018: kEUR 28).

As in the previous year, no advances or loans were extended to Supervisory Board members in the year under review.

Other transactions with related parties
No transactions were conducted with related parties in the 2019 financial year.

5.5 EVENTS AFTER THE REPORTING DATE

At the end of December 2019, an outbreak of the new respiratory disease "COVID-19", commonly referred to as the coronavirus, was first identified in the city of Wuhan in the Chinese province of Hubei. At the end of January 2020, the World Health Organization (WHO) declared an international health emergency. Currently, the virus has spread to more than 100 countries and around 4,000 people have died as a consequence of the virus infection. China and the other more severely affected countries (Italy, Korea, Iran) are attempting, sometimes with drastic means, to limit or delay the spread of the virus as far as possible. These include the closure of affected areas or regions, the discontinuation of flight connections, travel restrictions and entry bans, bans and cancellations of trade fairs, seminars, sporting events and other gatherings, the temporary closure of public institutions, universities, schools, kindergartens and companies.

The economic effects for va-Q-tec AG cannot be gauged at this time. Overall, the Group generates around 70% of its revenues in the healthcare sector, which is likely to be one of the least affected sectors of the economy worldwide, as medical care for the population is likely to be a priority. Including due to the very low level of revenue gereated in China in the past, the revenue effects for va-Q-tec are at first sight minimal. The TempChain Service Center in Shanghai, which was opened as recently as October 2019 and temporarily closed at the end of January, has since resumed operations. In the supply chain, too, the effects appear manageable at this point in time, with slight delays in delivery for relatively non-critical materials. For this reason, va-Q-tec remains cautiously optimistic about its business growth despite the coronavirus. However, since it is becoming apparent that the global macroeconomic consequences for the world economy may assume enormous proportions, it cannot be ruled out that va-Q-tec AG will not be able to completely avoid the direct and indirect consequences of these effects. Compared with its annual high, Germany's DAX index has shed around 35% of its value since the outbreak of the coronavirus. In the last week of February alone, a value of USD 5 trillion was destroyed on stock markets worldwide, and the downward trend continued in March. These figures also reflect the considerable uncertainty about the possible short, medium and long-term effects of the virus on the global economy.

5.6 AUDITOR'S FEES

The fees for the services of the auditor Rödl & Partner GmbH Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft, Nuremberg, of kEUR 168 (previous year: kEUR 180) comprise the following amounts:

kEUR	2019	2018
Financial statements audit (previous year: 15 kEUR)	123	135
Tax advisory services (previous year: 2 kEUR)	16	10
Other services	29	35
Group, total	**168**	**180**

5.7 DECLARATION OF CONFORMITY TO THE GERMAN CORPORATE GOVERNANCE CODE / CORPORATE GOVERNANCE STATEMENT

On 30 January 2020, the Management and Supervisory boards of va-Q-tec AG issued the declaration of conformity with the German Corporate Governance Code pursuant to Section 161 AktG.

The declaration is permanently available on the website **www.va-q-tec.com** in the Investor Relations section under:

https://ir.va-q-tec.com/websites/vaqtec/English/530/corporate-governance-declaration.html

Würzburg, 18 March 2020

va-Q-tec AG

Der Vorstand

Dr. Joachim Kuhn   Stefan Döhmen

RESPONSIBILITY STATEMENT

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated nancial statements give a true and fair view of the assets, liabilities, nancial position and prot or loss of the Group, and the Group management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Würzburg, 18 March 2020

Dr. Joachim Kuhn
(Management Board
Chairman, CEO)

Stefan Döhmen
(Management Board
Chairman, CFO)

INDEPENDENT AUDITOR'S REPORT

To va-Q-tec AG, Würzburg

Report on the audit of the consolidated financial statements and Group management report

Audit opinions

We have audited the consolidated financial statements of va-Q-tec AG and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2019, the consolidated income statement, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the financial year from 1 January to 31 December 2019, and the notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the Group management report of va-Q-tec AG for the financial year from 1 January to 31 December 2019. In accordance with German legal requirements, we have not audited the contents of the section "Corporate governance statement" in the Group management report, which refers to the corporate governance report as part of the annual report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Section 315e (1) of the German Commercial Code (HGB) and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2019, and of its financial performance for the financial year from 1 January to 31 December 2019, and

- the accompanying Group management report as a whole provides an appropriate view of the Group's position. In all material aspects, this Group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks entailed in future development. Our audit opinion on the Group management report does not cover to the contents of the aforementioned parts of the group management report not included within the scope of our audit.

Pursuant to Section 322 (3) Clause 1 HGB, we declare that our audit has not led to any reservations concerning the legal compliance of the consolidated financial statements and the Group management report.

Basis for the audit opinions

We conducted our audit of the consolidated financial statements and of the Group management report in accordance with Section 317 HGB and the EU Audit Regulation (No. 537/2014, referred to hereinafter as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits as promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the Group management report" section of our auditor's report. We are independent of the Group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the Group management report.

Key audit matters in the audit of the consolidated financial statements
Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2019. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon we do not provide a separate audit opinion on these matters.

In our view, the matters presented below were the most significant as part of our audit.

Effects from the first-time application of IFRS 16 (Leases)

- Reasons for designation as a particularly important audit subject

In the consolidated financial statements of va-Q-tec AG, the first-time application of the new accounting standard for the recognition of leases (IFRS 16) had effects on the opening balance sheet values and the financial accounting in the financial year under audit. In preparation for the change in the accounting treatment of leases, it was necessary in this context to record the relevant contracts in full and to assess the contractual basis with regard to the new accounting requirements, which involved discretionary decisions. The subsequent determination of the effects of first-time application also required assumptions and estimates by the Company. As a consequence, this led to the recognition of new rights of use and lease liabilities in the amount of kEUR 2,884 as of 1 January 2019. In addition, major container sale and finance leaseback transactions existed at the transition date, which were transferred to the new IFRS 16 accounting standard. The va-Q-tec Group applied IFRS 16 as of 1 January 2019 using the modified retrospective approach, i.e. without retrospective adjustment of the comparative period.

In our opinion, this audit issue is of particular importance as the first-time application of IFRS 16 in the 2019 financial year is particularly complex due to the necessary Group-wide assessment of contractual bases in relation to the new accounting criteria and the discretionary decisions and estimates to be made.

- Our approach in the audit

Within the scope of our audit of the consolidated financial statements, we examined the methods, procedures and control mechanisms established within the Company for the assessment of leases as well as the procedure of va-Q-tec AG in connection with the first-time application of IFRS 16. We carried out the full recognition of leases at the date of transition to IFRS 16 by comparing the number of contracts with those previously classified as operating leases. With regard to the container sale and finance leaseback transactions existing at the transition date, the accounting treatment of the presentation in accordance with IFRS 16 was reconciled. Our audit also included a comparison of the data used for the valuation of rights of use and lease liabilities with the underlying contract data. The determination of our selection was risk-oriented and based on qualitative and quantitative characteristics. We retraced the procedure of the tool applied by va-Q-tec to determine the value of the rights of use and the leasing liabilities. We have verified the resulting accounting entries with our own calculations and checked the plausibility of the discount rates applied by comparing them with market data. We also satisfied ourselves that the assumptions made have been adequately documented.

Moreover, we assessed whether va-Q-tec AG had adequately presented the first-time application of IFRS 16, including the significant discretionary decisions and estimates, in the notes to the financial statements.

- Reference to related information

For information on first-time application, please refer to the sections entitled "Changes in accounting policies", "Significant accounting judgements and estimates" and "Significant accounting policies", and, with regard to the accounting policies applied, to the notes to the consolidated financial statements in the section entitled "Summary of significant accounting policies". Information on rights of use and lease liabilities is provided in the sections "Property, plant and equipment" and "Non-current and current financial liabilities" in the notes to the consolidated financial statements.

Periodic revenue recognition from contracts with customers

- Reasons for designation as a particularly important audit subject

In the financial year under audit, the va-Q-tec Group realized revenue of kEUR 64,667 (previous year: kEUR 50,708). This corresponds to a 28% increase in revenue at Group level, to which the Services segment (rental of containers and boxes) made a disproportionately high contribution with a 62% increase in revenue to EUR 29.8 million. The va-Q-tec Group's revenues are heterogeneous and comprise the sale of transport containers, vacuum insulation panels and phase change materials as well as the short-term rental of order-specific pre-tempered transport containers. This is complemented by consulting and other services, which also form part of the sales and rental business. Following the completion of the relocation at the Würzburg site and the completion of the extension at the Kölleda production site, va-Q-tec AG has also further revised its processes, completed procedural organizational changes and has been fully implementing an electronic warehouse management system to control goods movements and goods issues since the 2019 financial year.

This audit issue is of particular importance from our perspective, as the va-Q-tec Group will continue to partially rely on adjusted and revised processes in the 2019 financial year, with continued and dynamic overall growth in the area of revenue recognition.

- Our approach in the audit

We have analyzed across the Group the process flows implemented for the sales and rental business, including the warehouse management system which has now been fully introduced at the parent company. We have identified Group-wide control mechanisms in the sales process for the accrual accounting of sales revenues, assessed their appropriateness and usefulness in a risk-oriented manner and performed functional audits. Moreover, we examined the IFRS-compliant accounting treatment of selected contracts with new customers as well as contract adjustments made with existing customers. In addition to analytical audit procedures, we have examined a selection of sales transactions shortly before and after the balance sheet date with regard to correct accrual accounting. In order to evidence the existence of trade receivables and thereby the recognition of sales revenues, we obtained balance confirmations for a selection of customers, or assessed corresponding incoming payments or further documents. The determination of our selection was risk-oriented and based on qualitative and quantitative characteristics. Furthermore, we verified compliance with the reporting requirements of IFRS 15 in the notes to the consolidated financial statements.

- Reference to related information

For details, please refer to the section "Summary of significant accounting policies" in the notes to the consolidated financial statements. Information on sales revenues and receivables is provided in the sections "Revenues" and "Trade receivables" in the notes to the consolidated financial statements.

Other information

The Management and Supervisory boards are responsible for the other information. The other information comprises:

- the statement on corporate governance in accordance with Section 289f HGB in conjunction with Section 315d HGB, to which reference is made in the "Corporate governance statement" section in the Group management report,
- the Corporate governance report in accordance with No. 3.10 of the German Corporate Governance Code, to which reference is made in the "Corporate governance statement" section in the Group management report
- the confirmation pursuant to Section 297 (2) Clause 4 HGB regarding the consolidated financial statements and the confirmation pursuant to Section 315 (1) Clause 5 HGB regarding the Group management report.
- the remaining parts of the annual report, with the exception of the audited consolidated financial statements and Group management report, which has been audited in relation to its contents, and our auditor's report,

Our audit opinions on the consolidated financial statements and on the Group management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the Group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that a material misstatement of this other information exists, we are required to report such a fact. We have nothing to report in this context.

Management and Supervisory boards' responsibility for the consolidated financial statements and Group management report

The Management Board members are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB and for ensuring that the consolidated financial statements, in compliance with such requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, the Management Board members are responsible for such internal controls as they have deemed necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Management Board members are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to the Company as a going concern. In addition, they are responsible for preparing the accounts on a going concern basis unless an intention exists to liquidate the Group, or to cease operations, or no realistic alternative exists.

Furthermore, the Management Board members are responsible for the preparation of the Group management report which, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the Management Board members are responsible for such arrangements and measures (systems) as they have deemed necessary to enable the preparation of a Group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the Group management report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the Group management report.

Auditor's responsibility for the audit of the consolidated financial statements and Group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the Group management report as a whole provides an appropriate view of the Group's position and is consistent in all material respects with the consolidated financial statements and the knowledge obtained in the audit, complies with German legal requirements, and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the Group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this Group management report.

We exercise professional judgement and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement in the consolidated financial statements and the Group management report, whether due to fraud or error, we design and perform audit procedures responsive to those risks, and we obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. 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 controls.
- Obtain an understanding of internal the internal control system relevant to the audit of the consolidated financial statements, and of arrangements and measures (systems) relevant to the audit of the Group management report, in order to design audit procedures that are appropriate in the circumstances, albeit not for the purpose of expressing an audit opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies applied by the Management Board members and the reasonableness of estimates made by the Management Board members as well as related disclosures.
- Conclude on the appropriateness of the Management Board members' application of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists relating to events or conditions that may cast significant doubt on 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 the auditor's report to the related disclosures in the consolidated financial statements and in the Group management report or, if such disclosures are inadequate, to modify our respective audit opinions. 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 Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in such a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group in order to be able to express audit opinions on the consolidated financial statements and on the Group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- Evaluate the consistency of the Group management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by the Management Board members in the Group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions applied by the Management Board members as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. A substantial unavoidable risk exists that future events will differ materially from the prospective information.

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 the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the 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 consolidated financial statements of the current period and therefore comprise the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other legal and regulatory requirements

Further information pursuant to Article 10 of the EU Audit Regulation

We were elected as Group auditor by the Annual General Meeting on 24 May 2019. We were engaged by the Supervisory Board on 12 December 2019. We have been the auditor of the separate annual financial statements of va-Q-tec AG since the 2011 financial year and of its consolidated financial statements since the 2014 financial year.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

German Public Auditor responsible for the engagement

The German Public Auditor responsible for the engagement is Thomas Rattler.

Nuremberg, 19 March 2020

Rödl & Partner GmbH
Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft

sgd. Fehlauer Wirtschaftsprüfer (German Public Auditor)	sgd. Rattler Wirtschaftsprüfer (German Public Auditor)

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FINANCIAL CALENDAR

11/05/2020	Publication quarterly financial report (call-date Q1)
29/05/2020	Annual General Meeting
13/08/2020	Publication half-yearly financial report
12/11/2020	Publication quarterly financial report (call-date Q3)