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 technologically leading supplier of highly efficient products and global solutions in the thermal insulation area. The offerings of va-Q-tec in the Group's divisions of Products, Systems and Services are applied in thermo-logistics, the refrigeration 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 temperature control. PCMs are cold and heat storage materials that absorb and store thermal energy during a freezing or heating process. Various temperature ranges can be established through utilising various storage materials such as paraffins and salt solutions. In its Systems division, va-Q-tec also produces passive thermal packaging systems, containers and boxes through combining VIPs and PCMs, which maintain constant temperatures for up to 200 hours without recourse to external energy.

In its Services division, va-Q-tec operates a fleet of rental containers it produces itself, which allow temperature-sensitive transports to be operated cost-efficiently and securely. va-Q-tec has run this business through its UK subsidiary since 2011. For this purpose, va-Q-tec has established a comprehensive global partner network consisting of airlines, freight forwarding firms and service partners. Since 2015, va-Q-tec AG has also been operating a business for high-performance thermal transport boxes the company produces itself. These transportation solutions enjoy particularly strong demand from the healthcare industry.

To augment this, va-Q-tec offers consultancy services related to thermal insulation. This makes va-Q-tec a problem-solver in the cold chain logistics area and other thermal technology areas.

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

- Healthcare & Logistics; e.g. containers and transport boxes for temperature-sensitive transports, plus rental service
- Appliances & Food, e.g. insulation of refrigeration/ freezing equipment and food containers
- Technics & 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, automobiles, trains and aircraft

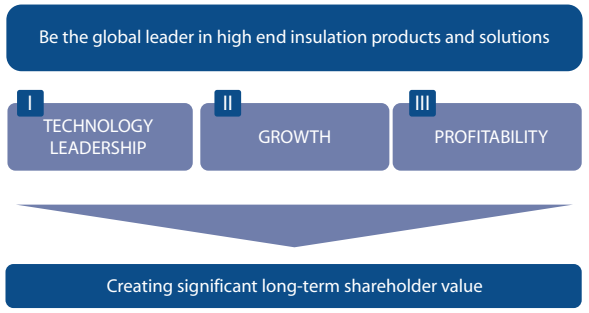
All applications in the respective target sectors are subject to high requirements in terms of the performance and durability of the thermal insulation. Moreover, space restrictions mostly exist in relation to installation.

The following market trends play a key role for the target market of Healthcare & Logistics. Clinical research and pharmaceuticals production is characterised by increasing globalisation. Demand for ever more complex and often temperature-sensitive biotech medications is rising constantly, the demands made of product safety ("good distribution practice of medicinal products for human use" – GDP) are becoming increasingly more stringent, and healthcare system expenditures are growing continuously. The Group's businesses in the target markets of Appliances & Food, Technics & Industry, Building and Mobility are particularly affected by the growth drivers of rising energy efficiency and urbanisation.

2.1.1.2 Strategic orientation

va-Q-tec operates in a very dynamic, innovation-driven and global market environment that is being developed further constantly in line with the aforementioned megatrends.

Three pillar strategy



Within this market environment, va-Q-tec pursues the objective of expanding its position as one of the globally leading providers of highly efficient productions and solutions in the thermal insulation area, and sustainably influencing cold chain logistics. To reach this goal, va-Q-tec pursues three strategic approaches:

I. Technology leadership
To benefit from the global trends, the Group focuses on securing and further expanding its leading innovation and technology position in the thermal insulation area with VIPs and PCMs. va-Q-tec stands for its "Always the Right Temperature" mission statement in the cold chain 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 cold chain logistics but also thermal insulation in many industries in the future. va-Q-tec aims to constantly enhance its own innovative strength and capability. Such efforts focus on advanced VIP types such as for higher temperatures, new thermal packaging and innovative materials. In accordance with this objective, the Group invests in highly qualified personnel, product development and fundamental research. Selective M&A activities, such as acquiring an interest in the Cologne-based materials start-up SUMTEQ 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
The technology platform of va-Q-tec offers high-growth possibilities through the broad application of its products, systems and services in the aforementioned target sectors. va-Q-tec is strongly oriented to growth. The company's processes, organisational structure and business model are aligned to scalability and consistent exploitation of growth opportunities. The company is on a clearly defined expansion path with its increasingly international presence, strengthening of its solid financing base and focus on business relationships with major customers.

va-Q-tec is oriented to high-growth markets that also offer the company attractive target margins. Pharmaceutical and biotech customers have long been of great significance for va-Q-tec: as its most important business pillar, the Healthcare & Logistics end-market accounts for around 62 % of the revenue of va-Q-tec in 2017 (previous year: 69 %). In the temperature-managed logistics area, the global healthcare industry is relying increasing-ly on high-quality solutions such as offered by va-Q-tec.

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 cold chains – under the "good distribution practices" motto – customers are substituting these types of basic solutions with high-performance thermal packaging. With its rental models ("Serviced Rental"), va-Q-tec is also targeting demanding customers that are particularly cost-sensitive in relation to packaging solutions. With precisely customised rental solutions for high-performance thermal packaging, va-Q-tec also offers them a product with attractive value for money. For this reason, va-Q-tec expects to grow further globally in the Healthcare & Logistics end-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 endeavouring 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 end-markets. In the short and medium term, va-Q-tec is aiming for significant growth in the Appliances & Food area. To a growing extent and with higher regulatory requirements made of the energy efficiency classes of refrigerators, such equipment increasingly needs to be insulated with VIPs. High-quality VIPs from va-Q-tec – with their insulation performance testable in the manufacturing processes of OEMs – will benefit particularly from this trend. Growth in VIP product sales is also anticipated in the end-market of Technics & Industry through introducing energy efficiency classes for water boilers, for example. Manufacturers are increasingly equipping their premium products with va-Q-tec VIPs to achieve the best energy-efficiency class. Here, too, the company expects that better insulated products will establish themselves increasingly in the mass market. Medium- and long-term, the end-markets of Mobility and Building offer additional growth drivers for the Group.

Overall, the company anticipates continued revenue growth in the low to mid double-digit percentage range year-on-year over the next three years.

III. Profitability
Profitability is indispensable to secure the company and its competitiveness. Profitability forms the third pillar of the corporate strategy and thereby represents a significant corporate steering metric.

Various measures in the operational excellence area are being continuously advanced to deliver profitable growth. Such Management Board initiatives relate primarily to measures to constantly optimise and harmonise quality, processes, the organisation, resource consumption as well as IT systems across the Group. Economies of scale derive from the significant expansion of the Group's business activities and corresponding sales revenue growth: the purchasing terms on which the Group can procure intermediate products and third-party services improve significantly with the expansion of business and sales revenues, and consequently rising purchasing volumes. The cost increases for Group support functions such as personnel, marketing, financial accounting and controlling do not match the top-line growth rate. Profitability is also improved by vertical integration into downstream stages of the value chain such as services and new business models including the rental of boxes and containers ("Serviced Rental"). This forwards integration and control of upstream value steps to improve profitability forms a central element of the corporate strategy. As a result of the aforementioned operative and strategic measures, the company is aiming for a medium- and long-term improvement in the EBITDA margin to in excess of 25 %.

Group structure, employees, investments and steering
At the start of the period under review, the Group consisted of four companies. During the reporting period, subsidiaries were formed in Switzerland and in Japan. A total of six companies thereby formed the va-Q-tec Group as of the end of the reporting period, comprising the parent company and five foreign subsidiaries. From these six companies, the Group's three operating segments are derived – 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) and va-Q-tec Japan G.K. (Japan).

The parent company va-Q-tec AG ("German segment") wholly owned all five foreign subsidiaries as of 31 December 2017.

In the German segment, va-Q-tec AG covers all three divisions (Products, Systems and Services), whereby the "Services" division reflects the business with rental boxes since 2015. va-Q-tec Ltd (UK) primarily comprises the "Services" division with its focus on the rental business of (returnable) containers. The "Other" segment comprises the business activities of the subsidiaries va-Q-tec Ltd (South Korea), va-Q-tec USA Inc. (USA), va-Q-tec Switzerland AG (Switzerland) and va-Q-tec G.K. (Japan). The South Korean subsidiary is responsible for both the purchasing and the business development of all three of the Group's business areas in Asia. The subsidiary in the USA operated primarily as the Group's sales company in North America until the financial year elapsed. The company has invested to a greater extent in personnel and business development at the US subsidiary during 2017 compared with previous years. With the aim of establishing local production of thermal packaging systems, a repair station for rental containers and a local centre to rent small boxes, warehousing and office spaces were rented and a local management team was established on the US East Coast. va-Q-tec Switzerland AG renders services (conditioning and cleaning of rental boxes, "fulfilment services") for Swiss Post in the cold chain logistics area. Through its fleet of thermal distribution boxes, Swiss Post is making recourse to the outstanding technology and process experience of va-Q-tec. As a sales company, the subsidiary in Japan pursues the objective of enhancing the perception of va-Q-tec as a locally rooted and reliable provider in the world's third-largest economy, and of distributing va-Q-tec products and services there.

For the purposes of corporate management and controlling, the divisions are reflected in the three reporting segments, whereby va-Q-tec (Korea), va-Q-tec (USA), va-Q-tec Switzerland and va-Q-tec G.K. (Japan) are aggregated to form one reporting segment (Other).

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 intervene efficiently in 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 amortisation (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:

Sales revenue growth is the basic indicator of business performance and growth, and of the attractiveness of the Group's products, systems and services. This metric reflects the extent to which the company succeeds in exploiting the potential of its unique and very differentiated technology platform, and of underlying market growth. 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. Due to the special situation in the previous 2016 financial year, adjusted EBITDA and the adjusted EBITDA margin for the 2016 comparative period are additionally applied to explain and compare the 2017 reporting period. The adjustments relate exclusively to the one-off special effects due to the IPO in the financial year 2016. These are explained in more detail in section 2.2.4 Results of operations. As a fast-growing technology company, va-Q-tec AG invests significant shares of its financial resources in machinery, plant and its fleet of containers and boxes for rental services. Furthermore, in the 2017 reporting period the company started to aggregate its Würzburg locations into a single management, technology and logistics centre. An existing commercial property in Würzburg was acquired for this purpose, generating cost benefits compared with the original planning (building a new headquarters on a plot of land acquired by the company). 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 precise view of the company's performance.

The equity ratio informs the management and external shareholders 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 of > 40 % as representing a balanced relationship between debt and equity, and consequently of the risk distributed among equity investors and creditors. From the current financial year, the company plans to include return on capital employed (ROCE) as a further key indicator, as Management Board compensation will be additionally aligned to this metric in the future.

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 presents the growth in the relevant management metrics.

The section 2.2.4 "Financial position and performance" provides a detailed discussion of these key indicators.

kEUR unless stated otherwise	**2017**	2016	Delta
Revenues	46,926	35,529	+32 %
EBITDA (IFRS)	7,210	5,216	+38 %
EBITDA margin (IFRS)	13 %	12 %	
Adjustment*	-	1,737	
EBITDA (adjusted)*	7,210	6,954	+4 %
EBITDA margin (adjusted)*	*13 %*	*16 %*	
Equity ratio	55 %	64 %	
Year-average number of employees	358	267	

* Adjusted for one-off expenses for the IPO. For more information see section 2.2.4 on the results of operations.

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 organisation 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 that 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 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 vacuum insulation panel 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 2017 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. The significant 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 is the pilot testing and market launch of SUMTEQ's submicro-porous 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 their customers.

In the year under review, va-Q-tec worked mainly on expanding and improving its existing product portfolio: with va-Q-shell, va-Q-tec further developed a product to market maturity in partnership with customers from the water boiler area. va-Q-shell consists essentially of two polyurethane shell halves with integrated VIPs. Deploying va-Q-shell enables 50-60 % energy savings compared with traditional solutions with conventional insulation. With VIPs, water boilers achieve the A+ labelling according to the EU norm mandatory since September 2015.

In the Systems area, the va-Q-pal development project adds to the portfolio of passive thermal packaging systems that can maintain constant temperatures over several days without the addition of external energy. Pallet-sized thermal packaging is designed for the temperature-managed transportation of valuable biological pharmaceuticals. It consists of a surrounding packaging consisting of carbon, VIPs, and PCM batteries that protect from temperature fluctuations due to external temperatures. In this context, va-Q-pal is being developed as a particularly cost-efficient and marketable solution for single use, rounding out the offering of va-Q-tec in this area.

The "va-Q-box", one of the company's first systems, was extensively redesigned during the financial year elapsed. The related aims included improvements to design and handling as well as adjusting to standard market sizes, in order to expand the potential customer base for the va-Q-box in the gastronomy sector. The va-Q-box is being marketed through the company's own webshop directly to end-customers (B2C), among other channels, thereby also serving as the basis for an expanded portfolio in this sector.

va-Q-tec is diversifying its business activities by expanding its services (Serviced Rental of containers and boxes) along the vertical value chain. For this purpose, for its customers the Group defines processes for logistic processes for utilising boxes and containers. At the same time, customers are advised on the optimal implementation of the packaging solutions into existing systems. To manage such logistic processes, va-Q-tec is also increasingly developing progressive software solutions. For this purpose, resources in the IT area were boosted significantly in the reporting period, including to use IT support to manage logistics processes in Serviced Rental, for example.

The technology platform is secured through around 170 industrial property rights and applications 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 11 industrial property rights were issued in the reporting period, including two German patents and two European patents.

The company made further investments in its research and development area in the year under review. Expenditure for this area amounted to kEUR 1,938, up on the previous year's level (kEUR 1,246). Research and development costs of kEUR 104 (previous year: kEUR 52) were capitalised in total in the reporting period. Amortisation of development costs capitalised in previous years amounted to kEUR 119.

2.2 BUSINESS REPORT

2.2.1 Macroeconomic environment and Group-specific conditions

The International Monetary Fund (IMF) estimates that the world economy expanded by 3.7 % in 2017. For 2018, the IMF anticipates a stronger global growth dynamic reflected in a 3.9 % growth rate. Developing and emerging economies will make an above-average contribution to global growth, according to the forecast. As in the previous year, the IMF identifies macroeconomic uncertainties in the economic consequences of the United Kingdom's decision to leave the European Union ("BREXIT"), for example. As of the previous year, va-Q-tec does not expect any significantly negative effects from the BREXIT decision on its business in the UK reporting segment, as although operative management occurs from the UK, actual value creation is generated across the globally distributed container fleet.

In the USA, the Federal Reserve took further steps to turn around the direction of its interest rates. Given extremely low interest rates in the other big currency zones – yen and euro – the interest-rate spread to the US dollar widens, which could lead to an appreciation of the US dollar in relation to the euro. Exports from US companies would become more expensive as a consequence. Imports, including products and services of the va-Q-tec Group, would become relatively less expensive. In its election campaign, the newly elected US government expressed a preference for protectionism ("America First") and a critical view of the healthcare system ("Obamacare"), which could negatively affect the business of the Group and its customers in the USA. At the same time, the US government is planning an extremely expansive fiscal policy due to tax reform and investments in defence and infrastructure, which in turn could lead to a depreciation of the US dollar compared with the euro, driving up the prices of imports into the USA. As a globally positioned 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 & Logistics as well as Appliances & Food, which together represent an 88 % share of consolidated revenue.

With its German and UK segments, va-Q-tec operates 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 IMARC takes an optimistic view of market growth over the coming years: over the 2015-2021 period, IMARC expects an average annual growth rate of 9.2 %, whereby va-Q-tec assumes the relevant market subsegments (high-performance packaging systems) will grow faster. High regulatory requirements made of cold chain logistics (under the motto "Good Distribution Practices") are making ever more efficient packaging systems necessary for pharmaceutical industry customers. Moreover, IMARC assumes that 27 of the 50 top-selling medications worldwide will require cold chain logistics in the 2-8°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 innovative 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.

After the healthcare industry, manufacturers of refrigeration and freezing equipment are the second most important customer. The market for vacuum insulation panels in refrigeration and freezing equipment is growing at an annual rate of almost 21 % in the 2014-2019 period, according to an estimate produced by LUX Research in 2015. va-Q-tec expects to enjoy somewhat higher growth rates in this end-market due to its particularly durable and high-quality products.

Overall, va-Q-tec addresses growing markets with its product business with VIPs: in Germany, approximately 60 % of primary energy is utilised for thermal purposes – refrigeration or heating in other words – according to the Working Group on Energy Balances (AGEB), a statistical office established by seven German energy sector associations. 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, and consequently in va-Q-tec products.

2.2.2 Business trends

In the 2017 financial year, the Group's business activities focused on managing the strong revenue growth and the creation of important organisational and construction preconditions for continued business expansion. The company also further advanced the internationalisation of its business and the expansion of its capacities in its production area and for rental containers.

Products division (sale of VIPs)
In the Products division, new customers were acquired in the target sectors of Appliances & Food and Technics & Industry. At the same time, business with existing customers was expanded further. This success reflects, firstly, the high quality, performance and durability of VIPs. Secondly, va-Q-tec is distinguished by a high degree of delivery reliability, which is of fundamental importance in the company's target markets. Regulatory changes also exerted a favourable impact on business. For example, hot water tanks in heating systems with volumes up to 2,000 litres have formed part of Europe-wide energy efficiency labelling since September 2017, as has already been standard for refrigerators for many years. The currently highest energy efficiency class of A+ is technically feasible only with VIPs in this context. Boilers with energy efficiency classes below the "C" category can no longer be produced. As a consequence of this additional driver, Products business growth with VIPs in 2017 was ahead of the Management Board's expectations. The Group's production capacities are largely fully utilised especially thanks to very high demand in this division, which led the company to start to expand its capacities in the reporting period.

Systems division (sale of thermal packaging systems)
The first customers were acquired in 2017 with the "va-Q-one" thermal box, which was launched in Q4 2016, a cost-efficient one-way solution for secure temperature-sensitive freight transportation. This product is particularly suitable for transports with no return transport for economic reasons. At the same time, the project business with existing major customers proved stable overall, reporting good growth. In contrast with the previous year, however, no new major customers were equipped with their own fleet, nor were existing major customers further developed. The previous year's level of revenue was nevertheless exceeded by regular orders.

Services division (rental and pre-cooling of thermal packaging systems)
The Services division reports solid and pleasing growth overall: in the German reporting segment, operating activities deriving from the pan-European rental of thermal boxes from the hub in Dublin increased significantly in the reporting period. Especially for the optimised management of box fleets, va-Q-tec has developed software and successfully tested and optimised it at the pilot hub in Würzburg. This software is now being rolled out to other hubs. In the domestic fleet area, service revenues from the partnership with Swiss Post also reported continuous growth.

In the UK reporting segment, va-Q-tec has succeeded in acquiring further globally operating customers, as well as two large biotech companies, including one from the APAC region and one from the USA. Business with already existing clients also remained on its positive track, reporting continuous volume growth overall. Many of these routes have not yet reached their full revenue volume, and consequently still bear further growth potential. Other customers, for example, are still in the early phases of the demanding qualification process with their routes. Further network stations opened during the course of the current year in Japan, India, Australia and Italy bolster the presence of va-Q-tec in the APAC region as well as Southern Europe, and the availability of services in the markets there. The fleet of temperature-controlled air freight containers reached a size of almost 1,500 as of the year-end, expanding by approximately 50 %. With just under 1,500 passively temperature-controlled containers, va-Q-tec thereby already commands the largest fleet of flight thermocontainers of its type today and the second largest of any type at all in the market. During the reporting period,

va-Q-tec has also added to its partner network of airlines, freight forwarding companies and other logistics partners. Extensive partnerships were arranged with additional airlines such as Lufthansa, Emirates SkyCargo, TAP Cargo and Egyptair Cargo during the 2017 financial year, for example. Such partnerships further enhance the availability of va-Q-tec rental containers for pharmaceutical customers, especially in Asia, Latin America and the Middle East. The measures undertaken in the 2017 reporting period form the foundation for further growth in the container rental business of va-Q-tec. The aforementioned progress achieved across the reporting segments has led to a positive trend in terms of two out of three of the Group's overriding strategic targets – growth and technology leadership.

Sales revenue across all divisions registered significant year-on-year growth of 32 %, and adjusted EBITDA was up by 4 %.

National and international business trends

A start was made in the period under review with integrating the five Würzburg locations into a central management, technology and logistics headquarters. This step serves to boost operating efficiency, expand capacities for production and logistics, and bundle technological competencies. For this purpose, an existing commercial property in Würzburg was acquired less expensively than the original planning (new construction), with the company being able to move into it and utilise it much faster than a new building. Development works were started immediately, and are planned to end in Q2 2018. The company also invested further in production capacities and personnel in order to secure the continuation of the dynamic growth path of va-Q-tec. Internal resources were significantly strengthened for this purpose, such as the IT, marketing and sales areas.

In February 2017, va-Q-tec formed a Swiss subsidiary, va-Q-tec Switzerland AG. With this subsidiary, the Group is strengthening its local presence and market position in Switzerland, one of the most significant pharmaceutical-producing countries worldwide. The va-Q-tec Switzerland AG subsidiary is allocated to the "Other" segment. For va-Q-tec, this important milestone also signifies the start of a strategic partnership with Swiss Post in its home market. The Swiss subsidiary renders services (conditioning and cleaning of rental boxes, "fulfilment services") for Swiss Post in the cold chain logistics area. Swiss Post makes recourse to the qualified technology and process experience of va-Q-tec for its box fleet to deliver to pharmacies. The subsidiary in Japan, which was founded in April, pursues the objective of enhancing the perception of va-Q-tec as a locally rooted and reliable provider in the world's third-largest economy. Significant investments were made in 2017 in personnel and business development at the US subsidiary, which has existed since 2013. Warehousing and office spaces were rented, and a local management team was established 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 centre to rent small boxes.

In June 2017, the company's first public Annual General Meeting since its IPO on the Frankfurt Stock Exchange was held. Personnel changes to the Management Board were also announced as part of the AGM. As planned, Dr. Roland Caps stepped down from the Management Board as of 30 June 2017. Christopher Hoffmann switched from the role of Chief Financial Officer to the newly created role for Business Development and Internationalisation. Stefan Döhmen assumed the CFO role from Mr. Hoffmann.

Greater use has been made of consultancy services following the IPO. Equally, IT consulting services that are indispensable for further growth have resulted in additional expenses, which are partly independent of the operating business.

In connection with the greater public awareness thanks to the IPO, the consolidated financial statements as of 31 December 2016 were audited by the German Financial Reporting Enforcement Panel (FREP). No erroneous financial accounting was found in the 2016 consolidated financial statements. Along with legal and consultancy services, especially the marked appreciation of the euro in the second quarter of 2017 led to foreign currency expenses significantly above expectations, and consequently higher other operating expenses.

The Group has hired significantly, adding a total of 91 individuals to its staff. Both experienced specialists and young career starters have been taken on worldwide to support the company's growth. Talented young individuals from the ranks of former working students from the University of Würzburg have also been taken on.

The cash inflow from the IPO in the previous year, which bolstered equity and attracted growth capital, was particularly important for liquidity and for the financing position. In the 2017 financial year, the equity ratio reduced by 9 percentage points, from 64 % in the prior-year period to 55 %. The refinancing terms have improved considerably thanks to the high equity ratio.

The company developed well overall in the 2017 financial year. The strong, purely organic growth was continued. Key characteristics of business trends included a very strong Products business and brisk Services business.

2.2.3 Non-financial performance indicators

Employees at va-Q-tec

As a technology company with broad 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 17 working students were employed at va-Q-tec (previous year: 18). The average of employees (excluding Management Board members and trainees) grew by 91, from 267 to 358 in the 2017 financial year.

2.2.4 Business results and analysis of the financial position and performance

Results of operations

Sales revenues reported positive performance overall thanks to the good order position. A high level of new order intake, up considerably on the previous year's level, was recorded in the 2017 financial year. The order book position as of 31 December 2017 increased compared with the previous year, supporting the company's positive outlook. Given this, va-Q-tec grew its revenues in the financial year elapsed by 32 % year-on-year to reach kEUR 46,926. The revenue growth in this context was driven particularly and to an extent extending beyond planning by the Products business (sale of VIPs), as well as by the Services business. The business with products was up by kEUR 6,744, from kEUR 11,287 to kEUR 18,031 (+60 %). In the Systems division, revenues grew by kEUR 394, from kEUR 10,426 to kEUR 10,820 (+4 %). With Services, the Group generated revenues of kEUR 17,366, compared with kEUR 13,189 previous year (kEUR 4,177, +32 %).

EUR millions unless stated otherwise	**2017** (IFRS)	**2016** (IFRS)	Adjustment	**2016** adjusted	**Δ 17 / 16** adjusted
Revenues	46,926	35,529	-	35,529	32 %
Total income	57,447	42,878	-	42,878	34 %
Cost of materials and services	-24,676	-17,325	-	-17,325	42 %
Gross profit	32,771	25,553	-	25,553	28 %
Personnel expenses	-15,616	-11,815	169	-11,646	34 %
Other operating expenses	-9,945	-8,522	1,568	-6,954	43 %
EBITDA	7,210	5,216	1,737	6,953	4 %
EBITDA margin	13 %	12 %		16 %	
Depreciation, amortisation and impairment losses	-7,528	-5,639	-	-5,639	33 %
EBIT	-318	-423	1,737	1,314	
Result from equity accounted investments	-79	-59	-	-59	
Net financial result	-513	-1,619	400	-1,219	
EBT	-910	-2,101	2,137	36	

* Adjusted for one-off expenses for the IPO

Despite the very strong revenue growth in 2017, various extraordinary operative effects in the fourth quarter of 2017 led to revenue shifts and foregone revenues in a low single-digit range in millions of euros. The on-boarding process for two major customers in the Services business is proving more time-intensive than expected, for example. For this reason, no significant revenues were yet achieved with these two customers in the fourth quarter of 2017. This is also delaying the planned revenue ramp-up with both customers in the 2018 financial year. Considerable revenue shifts into the 2018 financial year also arose because of one major customer's decision to prospectively purchase a box fleet in 2018, rather than in the fourth quarter of 2017 as originally planned. Additional revenue shortfalls occurred in Q4 2017 due to the extraordinarily severe hurricane damage in Puerto Rico, preventing the network station there from fulfilling numerous service contracts. One major pharmaceuticals customer receives its container services out of Puerto Rico. The network station resumed regular operation during the fourth quarter of 2017.

Because of these developments in the fourth quarter 2017, va-Q-tec failed to fully achieve its 35-40 % revenue growth target for the 2017 financial year. For this reason, as part of publishing its 2017 nine-month report, va-Q-tec forecast year-on-year revenue growth of between 28 % and 32 % for 2017. With 32 % revenue growth, the upper end of these adjusted expectations for 2017 was reached. For earnings before interest, tax, depreciation and amortisation (EBITDA), the company most recently forecast an increase compared with the previous year's adjusted EBITDA (originally: continued strong growth). With 4 % growth, the adjusted target was reached.

The German segment (va-Q-tec AG) contributed kEUR 32,613 to consolidated revenue (previous year: kEUR 27,991), and the UK segment (va-Q-tec UK) kEUR 13,987 (previous year: kEUR 11,613).

Total income was up by 34 % to kEUR 57,447 in the financial year elapsed, reflecting the revenue growth. Work performed by the company and capitalised of kEUR 6,702 in 2017 was generated mainly from the continued expansion of the container and box fleets (previous year: kEUR 4,507). Other operating income of kEUR 1,813 (previous year: kEUR 1,418) derived from releasing the special item deriving from container sale-and-leaseback transactions.

This special liability item arises 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).

The cost of materials was up from kEUR 17,324 to kEUR 24,676, faster than the rate of total income growth and leading to a deterioration in the cost of materials ratio to 43 % (previous year: 40 %). The cost of purchased services also formed part of costs of materials, and increased by kEUR 4,056 to kEUR 8,018 (previous year: EUR 3,962). This was due to the significantly greater utilisation of warehousing, logistics and fulfilment services at partner companies as part of "Serviced Rental". The cost ratio is burdened by the change in the product mix, despite greater efficiency in purchasing, and optimised fleet management. The effects from producing vacuum insulation panels, which is intensive in terms of cost of materials, outweighed due to the very strong growth in the Products division.

To better compare operating performance at va-Q-tec over the course of time, in the following section for expenses from the 2016 financial year, adjustments are made to reflect expenses incurred as part of the IPO. These expenses were only incurred at va-Q-tec AG (German reporting segment) (see table above for more information about the adjustment).

Personnel expenses were up from kEUR 11,646 in the previous year to kEUR 15,616 in the 2017 financial year (+34 %), thereby remaining at a constant level of 27 % in relation to total income. Above and beyond this, the absolute increase is attributable to the hiring of new employees to realise the planned growth and the recruiting of highly qualified specialist personnel to further optimise business processes. The current product mix especially necessitates the hiring of manufacturing employees.

Other operating expenses rose from kEUR 6,954 (adjusted) in the previous year to kEUR 9,945 (+43 %) in the reporting period. Along with the growth-related increase, reasons for the rise include, among other items, effects from foreign currency transactions as well as a higher level of costs as part of expanding business (IT consulting) and some one-off advisory services necessitated by the IPO. Moreover, extraordinary and one-off expenses of around kEUR 539 for rental boxes that have left the rental box network, but that are also offset by higher proceeds, led to an increase in other operating expenses. Measured against total income, this results in a slightly higher other operating expense ratio of 17 % for 2017 (previous year: 16 %).

In line with the sales revenue growth during 2017, earnings before interest, tax, depreciation and amortisation (EBITDA) rose from kEUR 6,953 (adjusted) in the previous year to kEUR 7,210, representing a 13 % EBITDA margin (previous year: 16 %). As a consequence, the Group forecast, which was adjusted as of Q3 2017, of a year-on-year increase in adjusted EBITDA (originally: continued strong growth) was fulfilled.

Depreciation, amortisation and impairment losses recorded a marked increase of 33 % to kEUR 7,528 (previous year: kEUR 5,639), reflecting a high level of investments in containers and boxes with respectively short depreciation periods.

Earnings before interest and tax (EBIT) reduced from kEUR 1,314 (adjusted) to kEUR -318. This is equally attributable to the higher level of depreciation and amortisation charges incurred in line with the business growth and the higher level of cost of materials, as well as an increase in other operating expenses.

The net financial result improved from kEUR -1,219 in the previous year to kEUR -513, thanks to considerably better borrowing terms as well as a one-off effect connected with the purchase of land and buildings for the new corporate headquarters in Würzburg. As part of the acquisition, obligations from existing mortgage loans were to be assumed with the purchase price. va-Q-tec AG subsequently refinanced these loans on more favourable terms compared with the original terms as the result of successful negotiations, generating income of kEUR 359 overall.

A pre-tax loss (EBT) of kEUR -910 is incurred for the 2017 reporting period, compared with a profit of kEUR 36 (adjusted) in the prior-year period.

The reporting segments performed as follows in the 2017 financial year:

German reporting segment (va-Q-tec AG)

EUR millions unless stated otherwise	**2017 (IFRS)**	**2016** (IFRS)	Adjustment	**2016** adjusted	**Δ 17/16** adjusted
Revenues	43,174	29,223	-	29,223	48 %
EBITDA	5,740	2,506	1,737	4,243	35 %
Equity ratio	71 %	81 %	-	n/a	
Average number of employees	317	238	-	n/a	

* Adjusted for one-off expenses for the IPO

The German reporting segment (va-Q-tec AG) grew its revenues by kEUR 13,951 (+48 %), from kEUR 29,223 in the previous year to kEUR 43,174 in the 2017 financial year. The sales revenue growth was generated mainly thanks to additional sales revenues from the sale of VIPs to manufacturers of refrigerators, hot water storage units, boilers and other equipment, as well as to the sale and rental of thermal packaging. The sale of containers to leasing companies and the UK subsidiary also boosted sales revenue. In the financial year elapsed, sales revenues also include payments from customers for thermal boxes unreturned within the rental network in an amount of kEUR 921 (previous year: kEUR 528). The establishment of box fleets was reflected in a significantly higher level of work performed by the company and capitalised. EBITDA was up by 35 % to kEUR 5,740 (previous year: kEUR 4,243). The equity ratio stood at 71 % as of 31 December 2017 (previous year: 81 %). The average number of employees rose by 79 to 317 (previous year: 238).

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

EUR millions unless stated otherwise	**2017 (IFRS)**	**2016** (IFRS)	Δ
Revenues	15,401	12,559	23 %
EBITDA	4,656	3,361	39 %
Equity ratio	15 %	19 %	
Average number of employees	32	25	

Sales revenues in this segment grew by 23 % from kEUR 12,559 in the previous year to kEUR 15,401 in 2017. Pure sales revenues from container rental increased at a stronger rate of 28 %, from kEUR 10,801 to kEUR 13,847. Thanks to stringent cost management and improved profitability on the container rental business, EBITDA in this segment also increased by +39 % from kEUR 3,361 in the previous year to kEUR 4,656. The average number of employees rose from 25 to 32. The equity ratio amounted to 15 % in 2017, compared with 19 % in the previous year. The parent company also extended kEUR 5,521 of loans in 2017. Given the current business situation – characterised by the constant expansion of the container fleet and of the operating business – it is anticipated that the parent company will continue to provide support for the capital backing of the UK subsidiary for two further years.

Other reporting segment

EUR millions unless stated otherwise	**2017 (IFRS)**	**2016** (IFRS)	Δ
Revenues	1,404	724	94 %
EBITDA	14	109	
Equity ratio	24 %	-12 %	
Average number of employees	9	4	

The subsidiaries in Korea, Japan, Switzerland and the USA together comprise the Other reporting segment. The subsidiaries in Switzerland and Korea generate sales revenues with third parties, whereas the business in Japan and the USA is billed almost exclusively by va-Q-tec AG or va-Q-tec Ltd (UK). The subsidiaries in the Other reporting segment are important for local presence, the expansion of regional operating activities, and the perception of va-Q-tec as a reliable global and regional partner. The Other reporting segment reports higher revenue overall, reflecting Services revenues (Swiss subsidiary), an increased level of sales and purchasing commissions, as well as the first-time inclusion of the Swiss and Japanese subsidiaries in the reporting period. EBITDA decreased to kEUR 14 in the 2017 financial year (previous year: kEUR 109). This is chiefly attributable to higher personal expenses and the establishment of the country companies. The average number of employees amounted to 9 individuals (previous year: 4), and the equity ratio stood at 24 % (previous year: -12 %).

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 reserves are invested on a neutral-interest basis and credit lines are optimised in terms of their interest rates. In this context, total liquidity based on unutilised credit lines of kEUR 9,000 significantly exceeds liquidity based on the company's own funds. Interest-rate risks and some currency risks are hedged with corresponding swaps.

Liquidity

EUR millions unless stated otherwise	2017	2016
Net cash flow from operating activities	1,470	-1,104
Net cash flow from investing activities	-1,099	-35,333
Net cash flow from financing activities	294	39,850
Net change in cash and cash equivalents	**601**	**3,414**

Net cash flow from operating activities before working capital changes stood at kEUR 3,190 in the period under review. In the prior-year period, this figure was kEUR 1,085 lower at kEUR 2,105. The change is partly attributable to the better consolidated net result and the higher level of depreciation and amortisation. Including working capital changes, net cash flow from operating activities rose to a total of kEUR 1,470, kEUR 2,574 above the previous year's level of kEUR -1,104. Adjusted for kEUR 1,568 of additional expenses reported under net cash flow from operating activities in the 2016 financial year in connection with the IPO, net cash flow from operating activities reduced by kEUR 1,006 in 2017.

EUR millions	2017	2016
Net cash flow from operating activities (IFRS)	1,470	-1,104
Adjustment	-	1,568
Net cash flow from operating activities (adjusted)	1,470	464

Cash flow from investing activities changed from kEUR -35,333 in the prior-year period to EUR -1,099 in the financial year under review. This includes kEUR 21,000 of proceeds from liquidating short-term deposits (previous year: outgoing payment of kEUR 30,000). The purchase of property, plant and equipment resulted in kEUR -22,439 of this amount, compared with kEUR -5,412 in the previous-year period. This is particularly attributable to outgoing payments to purchase the new building complex in Würzburg and to establish the container and box fleets. The purchase costs for the land and buildings amounted to kEUR 10,450 based on IFRS. In the context of the acquisition, an existing loan liability with a fair value of kEUR 7,024 thousand (non-cash) was assumed. The cash flow from financing activities of kEUR 294 (previous year: kEUR 39,850) derives from the net increase in bank borrowings and from the finance leasing for the container fleet, with the previous year's figure reflecting the cash inflow from the IPO.

Net assets and capital structure

Assets

EUR	31/12/2017	31/12/2016
Non-current assets		
Intangible assets	885	441
Property, plant and equipment	55,402	31,411
Investment property	1,614	-
Equity accounted investments	357	436
Financial assets	283	67
Other non-financial assets	634	234
Deferred tax assets	2,880	2,839
Total non-current assets	**62,055**	**35,428**
Current assets		
Inventories	8,942	5,684
Trade receivables	8,005	7,142
Other financial assets - of which term deposits (6-12 months): kEUR 9,000 (previous year: kEUR 30,000)	9,117	30,184
Tax assets	67	378
Other non-financial assets	2,104	748
Cash and cash equivalents	5,201	4,600
Total current assets	**33,436**	**48,736**
Total assets	**95,491**	**84,164**

To construct an integrated production and administration site at the Würzburg Heuchelhof location, a space including warehouse hall was acquired in February 2017, adjoining the plot of land already acquired in 2016. Due to a market opportunity arising short-term, a further plot of land along with existing production and administrative buildings was acquired in Alfred-Nobel-Strasse 33 in Würzburg in April 2017. The company intends to use this existing property as the company's central and sole location in Würzburg. The investment volume for both properties amounted to a total of kEUR 16,782. Secondly, significant growth continued in the financial year elapsed in the container fleet of the UK reporting segment and the box fleets of the German reporting segment to meet growing demand and expected future demand. Compared with 31 December 2016, this increased property, plant and equipment by kEUR 23,991 to kEUR 55,402 as of 31 December 2017. Total non-current assets rose from kEUR 35,428 as of 31 December 2016 to kEUR 62,056.

Inventories reported a sharp rise of kEUR 3,258, from kEUR 5,684 as of the 2016 year-end to kEUR 8,942, attributable not only to strong revenue growth but also a higher level of security stocks and improved purchasing terms. The revenue growth also led to a 12 % increase in trade receivables compared with 31 December 2016. The trade receivables have increased from kEUR 7,142 as of the 2016 year-end to kEUR 8,005 as of 31 December 2017. Current other financial assets, which also include the IPO proceeds invested on a neutral-interest basis, reduced by kEUR 21,067, from kEUR 30,184 as of 31 December 2016 to kEUR 9,117 as of the 31 December 2017 balance sheet date. This is chiefly attributable to the aforementioned investments, for which the company's own funds were also deployed. Total current assets rose from kEUR 48,736 as of 31 December 2016 to kEUR 33,436 as of the 2017 year-end. Total assets grew from kEUR 84,164 to kEUR 95,491 over the same period.

The cash inflow from the IPO in the previous financial year led to a marked increase in liquid assets. These funds were invested in deposits with terms of between six and twelve months on a neutral interest basis and are now being gradually invested in accordance with the IPO plans. Overall, the Group's liquidity position improved thanks to the better refinancing terms, reflecting the IPO. The high level of investments and the company's strong growth during the financial year elapsed nevertheless led to significant cash outflows. Other current financial assets and the cash position, which reflects cash inflows from the IPO, reduced accordingly from kEUR 34,784 to kEUR 14,318.

Investments

Investment activity in the 2017 financial year focused on expanding production capacities, real estate and the fleets of air freight containers and thermal boxes. A total of kEUR 36,570 was invested in property, plant and equipment (previous year: kEUR 9,274 million). The existing production capacities at both plants in Würzburg and Kölleda almost fully utilised, especially in peak periods, thanks to the higher demand in all target sectors – and especially thanks to the very high demand in the Products area. For this reason, the planning and partial realisation of new capacities was continued in 2017. For example, an existing commercial property in Würzburg was acquired as a management, technology and logistics centre, and expansion works started at the Kölleda site. To this extent, investments in land and buildings of kEUR 14,842 were significantly above the previous year's level (kEUR 1,656). Investments in technical equipment increased from kEUR 302 to kEUR 1,563. A total of kEUR 11,099 was invested in the container fleet (previous year: kEUR 4,565). This includes non-cash amounts of kEUR 3,401 from the container sale-and-finance-leaseback transaction. Investments in operating and office equipment of kEUR 2,725 due to the build-up of the rental box fleets in the German reporting segment were markedly above the previous year's level of (kEUR 1,824). An amount of kEUR 499 was invested in intangible assets the company itself has created (previous year: kEUR 52).

Equity and liabilities

EUR	31/12/2017	31/12/2016
Equity		
Issued share capital	13,090	13,090
Treasury shares	-54	-471
Additional paid-in capital	46,158	46,666
Cumulative other comprehensive income	-28	-33
Retained earnings	-6,174	-5,316
Equity attributable to parent company owners	52,992	53,936
Total equity	**52,992**	**53,936**
Non-current liabilities and provisions		
Provisions	39	17
Bank borrowings	11,146	2,173
Other financial liabilities	3,949	4,012
Other non-financial liabilities	8,438	7,151
Deferred tax liabilities	-	-
Total non-current liabilities and provisions	**23,572**	**13,353**
Current liabilities and provisions		
Provisions	38	38
Bank borrowings	2,958	5,410
Other financial liabilities	6,507	5,791
Trade payables	5,244	2,347
Tax liabilities	15	215
Other non-financial liabilities	4,165	3,074
Total current liabilities and provisions	**18,927**	**16,875**
Total assets	**95,491**	**84,164**

Compared with 31 December 2016, changes to the capital structure occurred as of 31 December 2017 due to debt-financed investments. Consolidated equity reduced by kEUR 944 as of 31 December 2017, equivalent to an equity ratio of 55 % in relation to total assets (31 December 2016: 64 %).

Non-current bank borrowings rose from kEUR 2,173 to kEUR 11,146 due to new loans to finance the acquisition of the commercial property in Würzburg. Current bank borrowings decreased from kEUR 5,410 to kEUR 2,958 reflecting less utilisation of overdraft lines.

Non-current other financial liabilities decreased slightly from kEUR 4,012 to kEUR 3,949. Non-current other non-financial liabilities increased by kEUR 1,287, from kEUR 7,151 to kEUR 8,438. Development banks disbursed kEUR 795 of funds to va-Q-tec in the reporting period for investments. Current other non-financial liabilities rose from kEUR 3,074 to kEUR 4,165 as a consequence of the further appreciation of the special item for container profits.

Bank borrowings plus plant leasing of kEUR 21,220 comprised 22 % of total equity and liabilities (previous year: kEUR 15,460; 18 %). At the level of the UK reporting segment, further container-sale-and-leaseback transactions were concluded as part of expanding the container fleet. The volume of finance leasing reduced by kEUR 760, from kEUR 7,877 in the 2016 year to kEUR 7,117 in the 2017 financial year elapsed. Current liabilities and provisions stood at kEUR 18,927 in the financial year under review, representing 20 % of total equity and liabilities (previous year: kEUR 16,875, 20 %). The Group's non-current liabilities amounted to kEUR 23,572, corresponding to 25 % of total assets previous year: kEUR 13,353; 16 %). Trade payables totalled kEUR 5,244, compared with kEUR 2,347 in the previous year. Due to the strengthened equity backing, lending terms for newly drawn down borrowings, especially finance leasing, were improved significantly.

Overall statement on business progress

Overall, the Management Board appraises the business progress during the 2017 financial year positively. Very strong demand in the Products area (sale of VIPs) and the marked growth in the Services business contributed to the strong revenue growth overall. In the Services business, numerous routes have not yet reached their full revenue volume. Other customers, for example, are still in the early phases of the demanding qualification process with their routes, and bear growth potential for following years. At the same time, the Systems business (projects with existing major customers) proved stable overall. In contrast to the previous year, however, no new major customers were equipped with their own fleet of thermal boxes, nor were existing major customers significantly further developed. The previous year's revenue level was nevertheless exceeded by regular orders.

The previous year's revenues were exceeded nevertheless.

The previous year's revenues were exceeded nevertheless. Despite the very strong revenue growth of 42 % during the first nine months of 2017, the aforementioned extraordinary operating effects in the fourth quarter of 2017 and a very strong fourth quarter (2016) in a year-on-year comparison led full-year revenue growth to weaken to 32 %.

The gross profit proved stable given the current product mix of lower-margin product revenues. The Group also further enhanced its purchasing efficiency. The Group's profitability has nevertheless failed to improve significantly following the IPO. For example, greater utilisation of external advisory services and of IT consulting services indispensable to further growth, as well as expenses incurred as part of expanding the business in the USA, resulted in additional costs for the development of future business, some of which are independent of the operating business. Along with legal and consultancy services, especially the marked appreciation of the euro in relation to many currencies in the second and third quarters of the financial year led to foreign currency expenses significantly above expectations. Strong demand in the Products business and related capacity utilisation (peak utilisation) additionally incurred higher expenses, such as in the temporary help area. The increase in the number of employees – indispensable to the further growth trend – also generated higher personal expenses than anticipated.

The Group has significantly expanded its capacities for VIP production as well as box and container rental in accordance with expected sales opportunities. The management is of the view that va-Q-tec is thereby very well positioned to sustainably exploit the growth opportunities offered by its end-markets long-term and expand its technology position.

2.3 FORECAST

2.3.1 Outlook

The following forecasts for the trend in management metrics were made under the assumption of a continuation of robust macroeconomic growth in 2018. Moreover, they are also based on the expected positive growth rates in the market for VIPs and insulation materials overall. Furthermore, 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 institute IMARC and Lux Research, 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 globalisation 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 all the utilisation of rental containers for temperature-sensitive goods outside the pharmaceuticals industry) and geography (new and further developed country markets such as North America).

Overall statement

For the 2018 financial year, the company expects revenue to report further strong growth compared to 2017 to reach a range of between EUR 56 million and EUR 63 million in the three reporting segments and in the underlying divisions. Somewhat moderate growth is planned in the first quarter of the current financial year due to the very strong start to the previous year. Marked sales revenue growth is especially expected in the Services and Products divisions, as we expect demand for energy-efficient high-performance products and reliable transportation solutions to expand further along with greater environmental awareness and increasing regulation.

For earnings before interest, tax, depreciation and amortisation (EBITDA), the company expects strong year-on-year growth for the 2018 financial year due to operating economies of scale and a changed product mix with a greater proportion of higher-margin services.

The equity ratio is planned to reduce to prospectively 45 % in the 2018 financial year due to the continued intended utilisation of favourably priced debt funding for investments.

The number of employees will increase further significantly to facilitate the anticipated growth, albeit not as fast as the expected revenue growth rate.

As a consequence, the Management Board of va-Q-tec AG expects above-average revenue growth compared with the target markets, accompanied by rising 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.

2.4 REPORT ON OPPORTUNITIES AND RISKS

2.4.1 Risk management and internal control system

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

- a risk-aware corporate culture
- a formalised 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 risk. It is crucial to the corporate governance of va-Q-tec that existing and newly added risks are 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 utilised 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 put into practice is one of the most efficient instruments for handling risks. If employees are aware of risks and handle them entrepreneurially, the risk of losses being incurred because of risks being realised 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 behaviour. A compliance management system was introduced in 2016 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 implemented a further developed and formalised risk management system (RMS) in the 2016 financial year for this purpose. The past years' experience in risk identification has been included in the new RMS. The insights gained as part of preparing the listing prospectus and first-time preparation of IFRS financial statements at the time of the IPO in 2016 were also included in the risk inventory. Furthermore, the RMS was continuously further developed during the course of the 2017 financial year.

A new data protection concept was implemented, and a new IT security manager was appointed to improve the protection of critical company data. Thanks to strengthening processes in central purchasing (end-to-end dual control principle in invoice approvals) and the reformulation of the signatures regulation, cost control and approvals processes were structured more transparently and validly. A legal department was also created for the Management Board, to efficiently support the legal evaluation of business matters in-house. Moreover, the RMS was integrated into the overarching quality management system according to ISO, and now forms part of the ISO-based auditing process.

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 sustainable competitiveness long-term. 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, taking event probabilities into account. The risks identified as part of the risk analysis are categorised 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 at "very low" and ends at "very high". Risks can thereby be differentiated and prioritised 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 summarised 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 monitored subsequently.

New risks and significantly changed risks also form fixed agenda items at all regular management meetings, at each Management Board meeting and at each Supervisory Board meeting. 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 minimising 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, to launch countermeasures and to supervise 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 organisational, 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, 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. Recourse is made to standard consolidation software 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 (dual control principle with a selected group of individuals). External service providers implement payroll transactions.

The organisational, 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 should 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	Low
5 - 15	Medium
> 15	High

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. The purchasing strategy of va-Q-tec consequently aims to reduce dependency on individual or a few suppliers by qualifying and selecting new suppliers ("dual" or "multiple" sourcing). As in previous years, in 2017 the company continued to newly qualify and select second- and third-tier suppliers for intermediate products and materials. The company also intentionally includes international suppliers in its selection 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 produces 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. The individual production systems, where possible and economically feasible, are also decoupled from each other through technical measures, so the stoppage of an individual system does not restrict the operation of other plants.

Along with 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 endeavours to identify such developments at an early stage and counteract them with appropriate measures. For example, these can temporarily consist of higher levels of security stocks, additional working shifts or the utilisation of less appropriate plant for production, in order to bridge the time gap until additional capacities are commissioned. The Management Board gauges the risk of long-lasting production outage from the aforementioned reasons as a low, whereas it appraises the risk of insufficient capacity as medium.

The 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 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 have acquired specific knowledge, skills and commercial contacts, partly 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 greater 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 endeavours 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 young, fast-growing company, va-Q-tec might potentially be unable to effectively advance and shape its growth. The Group is in a phase of significant investment in personnel, sales activities, rental fleets, infrastructure and research & development. To this extent, were actual growth to prove lower than planned, the risk exists of a negative effect on operating results. 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. 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 remaining 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 protects itself from such risk through two strategic levers, namely cost optimisation measures and innovative products and services. Cost optimisation includes, for example, increasingly automated production and 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 distinguishes itself from that of its competitors in many aspects: examples include the unique 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.

Cyclical target markets

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

Financial risks

The central finance department of va-Q-tec utilises revolving liquidity plans to monitor liquidity risk. The Group was solvent at all times. The company enjoys an excellent financial position after the IPO. Its current liquidity, improved rating and positive business development enable further improvements in borrowing opportunities and terms. Interest risks deriving from existing long-term lending facilities are 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 materialise. 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 internationalisation. Overall, the Group consequently gauges risks in its financial area as low.

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 exploit 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 & 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 penetrate 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 in this context include food logistics and the mobility area.

Both existing thermal packaging and thermal packaging in development, as well as the "service rental" of va-Q-tec, are currently designed for deployment almost exclusively in the healthcare industry. A trend to increasingly temperature-sensitive goods and manufacturing processes is now identifiable in many industries, however. As a consequence, growth opportunities are arising in new application areas for va-Q-tec technology. Examples include utilising rental containers for temperature-sensitive goods outside the pharmaceuticals industry (such as manufacturing resources in the opto-electronic 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. The high-performance thermal packaging of va-Q-tec 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: carbon dioxide 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, OEMs can extend the related vehicle range by 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 internationalisation 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.

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 minimise the potential negative effects on the Group's financial position. Financial instruments are deployed to only a limited extent at va-Q-tec.

Currency risk within the Group was medium in 2017. In the German reporting segment, almost 100 % of sales and approximately 96 % 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 exist to hedge interest payments on long-term loans at a standard market interest rate level. An interest-rate hedge was also arranged for a long-term loan drawn down in 2016. No interest-rate hedge was arranged for existing variable interest overdrafts. None of these hedges is recognised as a hedge in the meaning of IAS 39.

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. No receivables factoring is conducted apart from classical reverse factoring for customers with very high credit ratings. For one further major customer, reverse factoring was arranged through a major European bank in 2016.

The financial investments reported under other financial assets in the consolidated financial statements exclusively comprise euro-denominated deposits with a term of up to twelve months held at German banks belonging to a German deposit guarantee fund.

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 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. A long-term share-based compensation component (option program) existed for one Management Board member. With the IPO va-Q-tec AG, the beneficiary's exercise terms were met as part of the option program. The beneficiary exercised his options in time as of 30 September 2017.

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 consideration 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, external compensation experts confirmed to the Supervisory Board the fundamental appropriateness of the Management Board compensation. The fixed compensation corresponds to the annual fixed salary; in addition, to Management Board members utilised a company car until 30 June, and three until 1 July. 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. The annual basic salary is set for the entire duration of an employment contract and is paid in twelve monthly instalments. Factors on which it is based include the individual Management Board members' tasks, and on the Group's current business and financial position, performance and future prospects. The variable compensation element of the cash component paid in the

form of an annual bonus is based on reaching the Group's sales and earnings targets; it is limited in terms of amount to 1.4 times the amount payable on 100 % target attainment.

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 740 in the 2017 reporting year (previous year: kEUR 638). The basic compensation amounted to kEUR 593 (previous year: kEUR 501); this also includes payments for benefits in kind such as a company car. Variable cash compensation stood at a total of kEUR 126 (previous year: kEUR 115). Defined contribution pension commitments have existed for the Management Board members since 2014. To this end, kEUR 21 (previous year: kEUR 22) 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 83 % of total compensation (previous year: 82 %).

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

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 159 for the 2017 reporting year (previous year: kEUR 125). 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 D&O insurance concluded for the Supervisory Board members in the previous 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. Consultancy and other services in an amount of kEUR 27 (previous year: kEUR 75) were also compensated. These were rendered especially as part of real estate purchasing and renovations, as well as in connection with the establishment of the international business.

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

The following section presents the disclosures as of 31 December 2017 pursuant to Article 9 (1) lit. c) (ii) SE-VO, Section 22 (6) SEAG in combination with Section 289a, Section 315a (1) of the German Commercial Code (HGB). Facts relating to Section 289a (1), Section 315a (1) HGB, which are not met at va-Q-tec AG, are not mentioned. The following subsection provides an insight into the takeover law relationships as of the 31 December 2017 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: 134,466). 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

Above and beyond the time-delimited lock-up regulations for the Management Board, Supervisory Board and previous shareholders, which were agreed as part of the IPO and which have meanwhile expired during the financial year elapsed, the Management Board is not aware of any restrictions affecting voting rights all 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	No. of shares	Interest in the share capital
Dr. Joachim Kuhn	DE	1,978,667	15.12 %
Dr. Roland Caps	DE	1,606,433	12.27 %
Total		**3,585,100**	**27.39 %**

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 an AGM resolution. AGM resolutions require a simple voting majority unless a greater majority is imperative by law.

Management Board authorisations 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 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 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 company has published the corporate governance statement pursuant to Sections 289f and 315d of the German Commercial Code (HGB), including the statement relating to the German Corporate Governance Code pursuant to Section 161 of the German Stock Corporation Act (AktG), on its website at www.va-Q-tec.com within the Investor Relations area, under the link https://ir.va-q-tec.com/websites/vaqtec/German/530/erklaerungen-und-dokumente.html.