



# RoodMicrotec

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Chamber of Commerce number 33251008

## **ANNUAL REPORT 2018**

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## ROODMICROTEC OVERVIEW

### MESSAGE FROM THE CEO

It is with great excitement that I'm allowed to lead such an excellent organization as RoodMicrotec in the path we have set forth for the future. The combination of a well-established company and a new direction with supply chain management for our customers makes the company well positioned for the future in the ever-changing semiconductor business. This can be seen in 2018 where we reported the first year with positive net profit since 2011. Another key performance indicator, the book-to-bill ratio is again above 1 which gives us an excellent platform for the company's future growth.

The management team, that now has been in place three years, is working well together and is managing the company for growth, innovation and shareholder value. As can be seen in the results for 2018 where we have managed to turn the company around and are now looking into the future with the goal to continue to show growing sales revenue and net profits.

During 2019 we will celebrate 50 years anniversary, and this shows that high technology companies can live a long time also in Europe. We have of course changed the direction a couple of times, but this is normal in the semiconductor business. We continue to welcome new people to our organization to speed-up the transition and have said good-bye to some long-term employees that, well deserved, have retired.

The growth in sales was 11% which is very encouraging, especially the increase in Test Operations and Supply Chain Management. We continue to keep a very close eye on other operating expenses and were able to reduce those for the third year in a row. The personnel expenses are higher than the year before since we added people to our Test Operation department to be able to handle the increase in volume from our major customers. We continue to invest for the future by adding both capabilities and capacity. This allows us to take on new and exciting projects that will drive revenue as well as know-how in the company.

As CEO of the company I have three stakeholders that I work closely with:

- **C**ustomers
- **E**mployees
- **O**wners

All three are equally important to be able to run a successful company and my time is divided between them to be able to satisfy our customer needs, secure a well working environment for our employees and create shareholder value for our owners.

I'm looking forward to the upcoming years and I am confident that we have a platform with the current customer base and new opportunities to be able to continue the sales revenue increase and generate positive net profits.



Martin Sallenhag, CEO

Zwolle, 04<sup>th</sup> April 2019

## PROFILE ROODMICROTEC

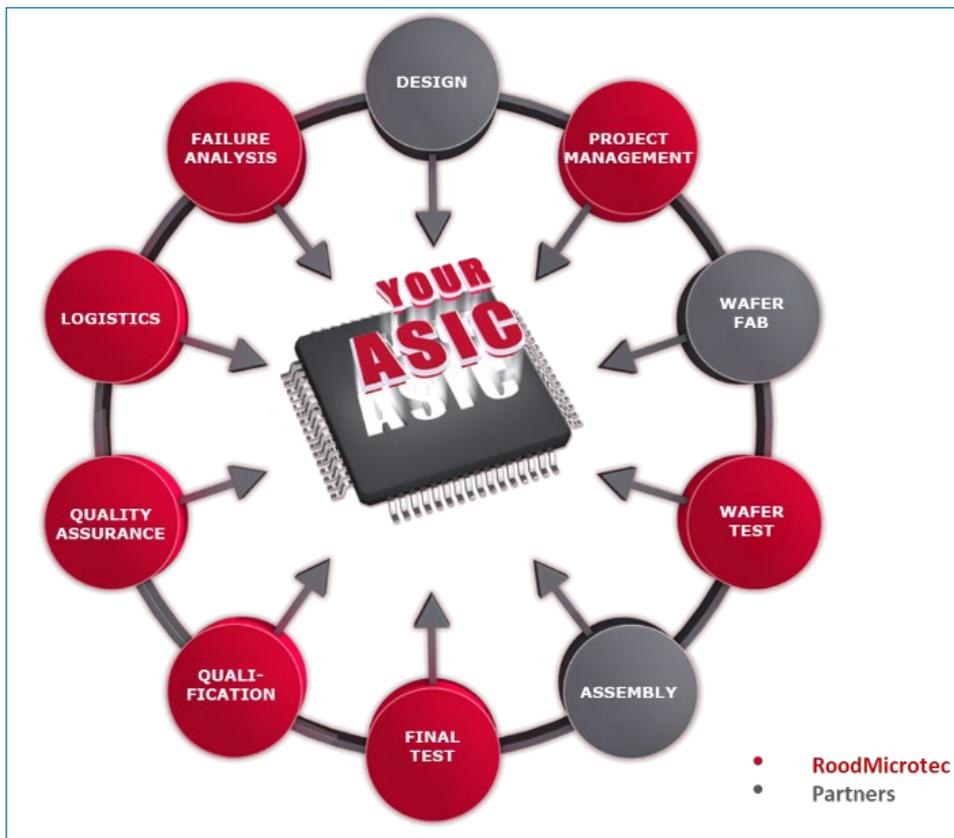
RoodMicrotec is the leading independent company for semiconductor supply and quality services. With 50 years' experience in the semiconductor and electronics industry, RoodMicrotec is well-established as a highly valued partner to many companies worldwide. We provide full-turnkey ASIC services for complex microchips that are fully customized to handle specific applications for individual customers. In co-operation with selected partners, we manage the complete development and production flow of the ASICs in the target volume, ranging from low quantities up to multiple millions per year. Our turnkey solution includes design, project management, wafer fab, wafer test, assembly, final test, qualification, logistics and failure analysis. Our flexible business model allows customers, based on their special needs, to choose each service individually. All our services comply with the industrial and quality requirements of the high reliability, space, automotive, healthcare and industrial sectors.

### How does it all fit together?

RoodMicrotec offers supply chain services, wafer & component testing, qualification & reliability investigations and failure analysis for companies that need application-specific integrated circuits (ASICs). All services are offered in a one-stop-shop package, whereby RoodMicrotec organizes and orchestrates all steps covering the full value chain of these chips or components; from the design of a semiconductor all the way to the delivery of the end-product (serial parts).

An ASIC is an integrated circuit that is built for a specific application or purpose that can be found in almost any electronic device. Compared to an off-the-shelf standard chip, an ASIC can improve speed because it is specifically designed to do one thing only and to do this well. It can also be made smaller with the benefit of using less electrical power. The disadvantage of this circuit is that it can be more expensive to design and manufacture, particularly if only a few units are needed. In this business intellectual property (IP) is an important asset and this is why a number of clients prefer to deal with partners that are based in Europe where IP is better protected, even though most of the semiconductor business is concentrated in Asia.

ASICs are mostly designed based on an idea of a customer; mostly an OEM or a fabless company. Once the design has been finalized, the product leaves the drawing board and can be turned into a physical product. The steps required, can best be illustrated by means of the following picture, which also provides a better insight into RoodMicrotec's activities.



The first step in turning the idea into a physical product is the production of wafers, which is normally made by specialized companies based in the Far East. The wafers are then sent back to Europe and will be submitted to a series of tests. The development of the test program, which is product specific as well, is done by RoodMicrotec using in-house engineers. The test is performed in Nördlingen where RoodMicrotec has the capability to test wafer sizes from 6 to 12 inches.

Once the wafer tests have shown satisfactory results, the next step consists of the chip assembly. This is also mostly outsourced to manufacturers in Asia. When a batch is ready, it is submitted to additional tests. In the case of RoodMicrotec this also happens in Nördlingen.

Once all these tests have been completed and produce the required outcome, the next step is qualification. This is the measurement of the performance of components under extreme conditions, like e.g., temperature tests, from cold to heat testing, in dry and damp atmospheres and adjustable temperature change rates. As part of this program, the ASIC is among others exposed to rapidly changing temperatures, varying from minus 40°C to plus 125°C for a time frame that can last 1,000 hours or even longer. Within RoodMicrotec, this happens both in Nördlingen and in Stuttgart.

The tests that are performed on ASICs made in a production environment separate the good from the bad components. After that, the well-functioning ASICs are packed, stored and sent to the clients at the right time (logistics and just-in-time-delivery). RoodMicrotec also keeps track of the failure rates and for which tests they failed.

Even when the ASIC passed the final tests, the chip or the finished product in which the ASIC is built into can fail. In some cases (e.g., a high fail rate or products in the HiRel segment (e.g., safety-related)) this can trigger the manufacturer of the product to investigate its cause and how it can be solved. This calls for failure analysis, which within RoodMicrotec happens at its Stuttgart unit.

A SCM contract is concluded for a specific period and for a certain estimated volume. During the life of the contract RoodMicrotec manages all the steps in the value chain from the development phase (design and prototyping) to the industrialization phase (prototype testing and qualification), all the way to production and logistics. In the first two phases, the amounts RoodMicrotec can invoice are relatively modest. Once the volume production starts, the revenues are expected to rise over time and generate significant recurring revenue after reaching the volume production phase. The main advantage of this approach is that the clients have one single company they are dealing with instead of a wide range of specialized companies. Apart from that, it helps to unburden the client.

In addition to these SCM contracts, the company will continue to secure contracts for the individual services it offers as well, because this can open the doors to new clients and/or to SCM contracts as well. Experience shows that client wins often happen through failure analyses as a first entry point. Besides, the industry as a whole needs a flexible layer to absorb shocks in the demand for testing and qualification. This can also help to bring new clients and/or partnerships.

The quality of services and handling speed have always been very important within this sector. For that reason, RoodMicrotec will continue to strengthen its internal quality system through maintaining the certification according the 2015 version ISO 9001 and ISO/IEC 17025, in addition with focus on risk assessment, which is especially important for automotive customers. Part of this, also consists of further investments in new hi-tech equipment.

## Where does it all fit together?

RoodMicrotec is focusing on the market segments automotive, industrial and healthcare which are still the drivers for the global semiconductor market and therefore they have the highest growth rates. Working in the HiRel /Aerospace segment is encouraging, and we still consider this area of importance to our business and foresee a future increase. The components with most high quality and reliability are being deployed.



Electronic components for vehicle applications are still one of the drivers for the global semiconductor industry. Devices in the automotive industry are a combination of high complexity, high quality demands and high volumes. Applications range from car infotainment and communication with the outside world up to self-driving cars.

New opportunities are seen by a specific trend that the industrial sector and the HiRel industry will upgrade / adapt their requirements to automotive standards.

### Industrial (Industry 4.0, IOT)



In the industry sector the main focus is on Industry 4.0 / Internet of Things. The rapid change and complete novel production possibilities make projects highly sophisticated.

Industry 4.0 / Internet of Things means extensive networking, using innovative IT systems which enable entirely new production methods, smart grids and smart metering. For example, starting an oven remotely, opening and shutting down windows when the temperature changes, etc.

### Healthcare



In the fields of healthcare electronic / biological chips the devices are subjected to special requirements and complexity. No matter if they are used afterwards within or outside the body, or whether they have physical connections between internal and external devices – they have to be reliable and long-lasting.

Healthcare projects are characterized by long lead times due to complex test environments, which contain a number of biological elements such as temperature, humidity, acidity and heart rate.

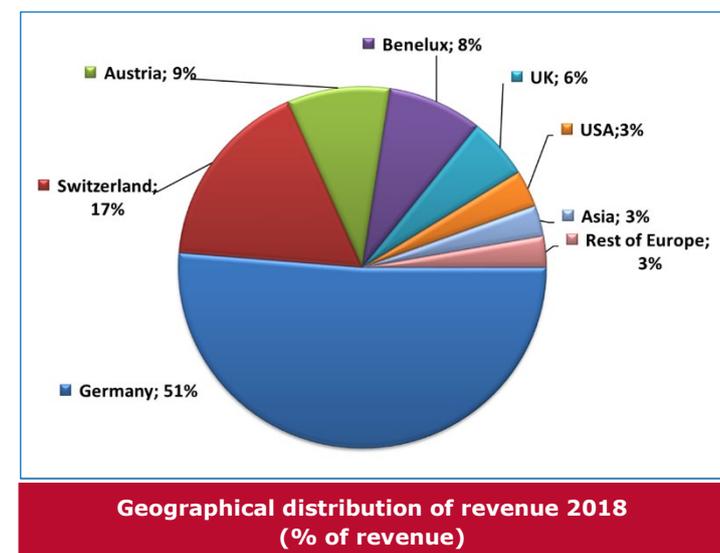
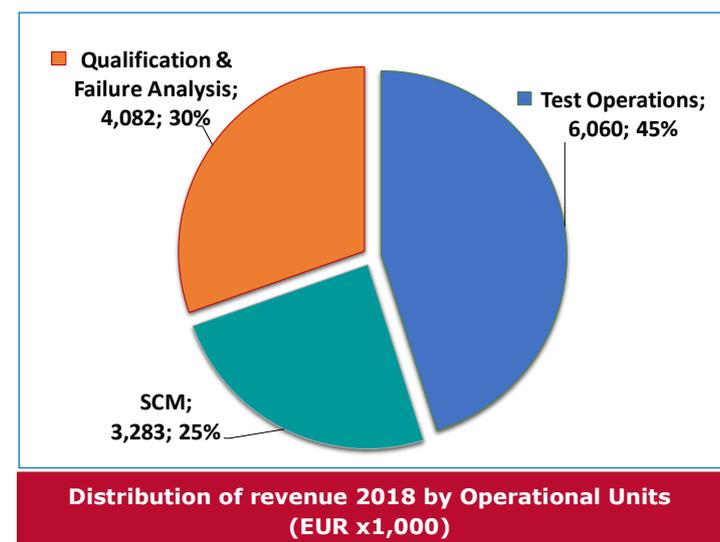
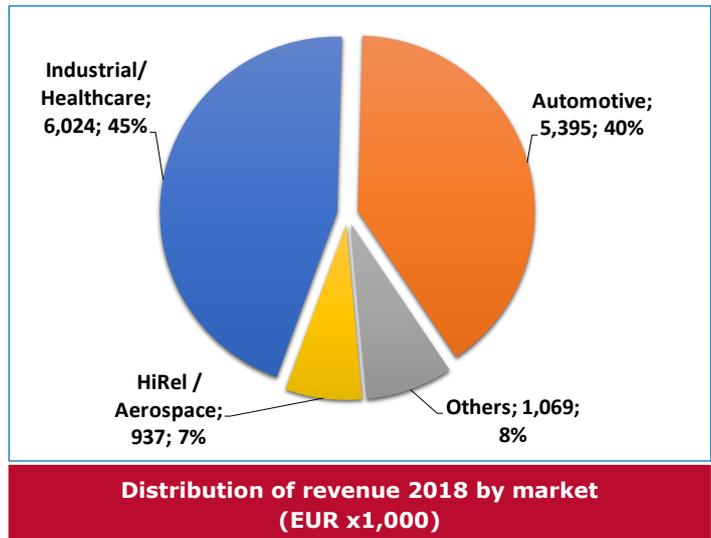
### HiRel / Aerospace

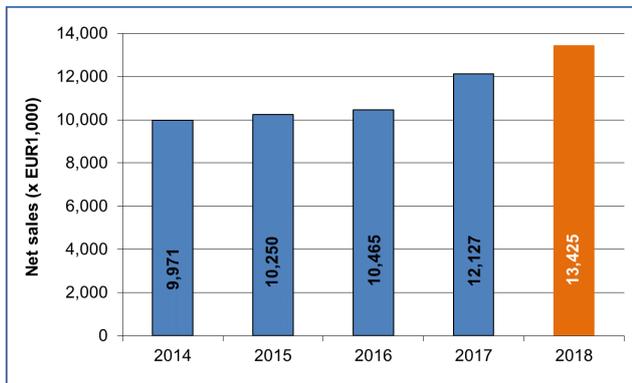


For the HiRel / Aerospace sector we serve space exploration, solar sensors for satellites, radio applications in (military) aviation, etc. The most possible quality and reliable components are needed – quite similar to the automotive sector. Also, more and more so-called components-off-the-shelf (COTS) are used. These are commercial and therefore less expensive products.

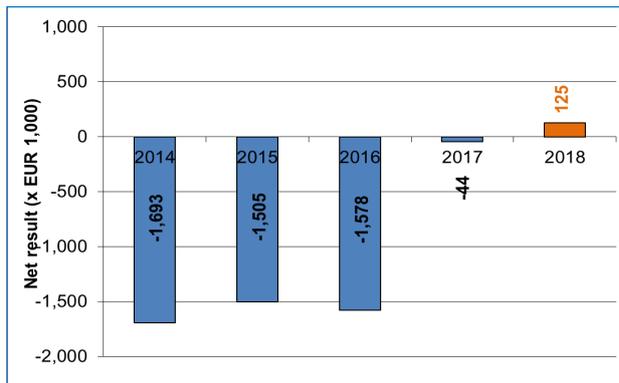
Long lead times and low volumes, but very high commercial value characterize these projects.

## ROODMICROTEC PERFORMANCE INDICATORS

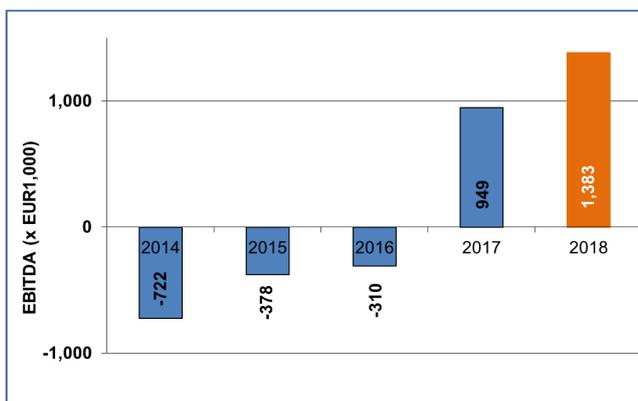




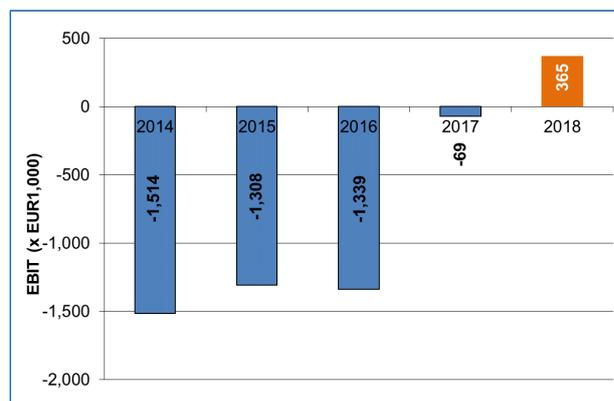
Net sales



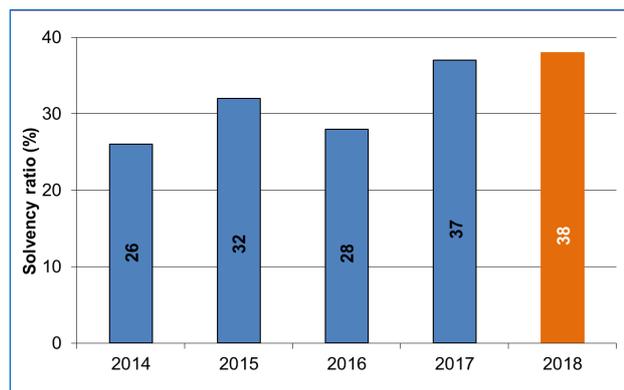
Net result



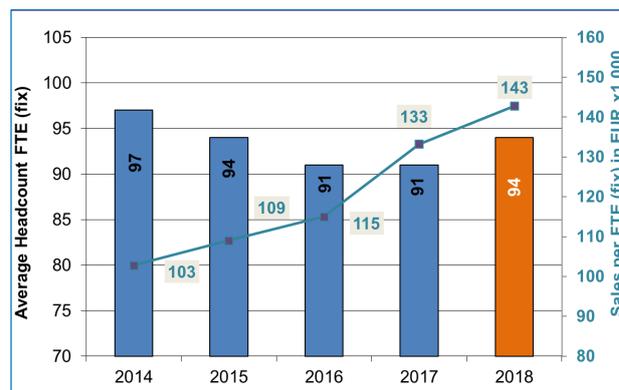
EBITDA



EBIT



Solvency



Sales per employee and head count

**KEY FIGURES + FIVE-YEAR SUMMARY****31 December 2018****(X EUR 1,000)**

<b>Result</b>	<b>2018</b>	<b>2017<sup>1</sup></b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Net sales	13,425	12,127	10,465	10,250	9,971
Gross margin	10,880	10,157	8,615	8,384	8,184
EBITDA	1,383	949	-310	-378	-722
EBIT (operating result)	365	-69	-1,339	-1,308	-1,514
EBT	124	-327	-1,587	-1,495	-1,675
Cash flow from operating activities	563	628	-452	-832	-246
Net result	125	-44	-1,578	-1,505	-1,693
<b>Capital, Debt &amp; Liquidity Ratios</b>					
Total assets	13,606	13,051 <sup>1</sup>	14,711	13,531	13,475
Group equity	5,209	4,767	4,053	4,321	3,564
Net debt	915	2,451	2,428	1,675	2,159
Capital (net debt + equity)	6,124	7,218	6,481	5,996	5,723
Gearing ratio (net debt/ capital)	15%	34%	37%	28%	38%
Solvency (group equity / total liabilities)	38%	37 <sup>1</sup> %	28%	32%	26%
Debt ratio (net debt / EBITDA)	0.7	2,6	-7,83	-4.43	-2.99
Net working capital	1,932	452	540	560	-125
Working capital ratio	1.78	1.17	0.97	1.27	0.95
<b>Assets</b>					
Tangible and intangible fixed assets	7,683	8,451	7,684	6,908	7,112
Investments in (in)tangible fixed assets	576	1,199	1,879	726	499
Depreciation of (in)tangible fixed assets	1,018	1,018	1,029	930	792
<b>Data per share (x EUR 1.-)</b>					
Group equity	0.072	0.071	0.060	0.080	0.080
Operating results	0.005	0.000	0.000	-0.020	-0.030
Cash flow	0.015	-0.001	-0.010	-0.020	0.000
Net result	0.002	-0.001	-0.020	-0.030	-0.040
Share price: year end	0.250	0.310	0.200	0.270	0.250
Share price: highest	0.390	0.380	0.280	0.300	0.350
Share price: lowest	0.234	0.190	0.190	0.210	0.150
<b>Issue of nominal shares</b>					
At year end (x 1,000)	72,779	66,716	63,411	54,411	43,519
<b>Number of FTE's (permanent)</b>					
At year end	93	91	94	92	94
Average	94	91	91	94	97
Sales (total)/ Average FTE's (permanent)	143	133	115	109	103

<sup>1</sup>We refer to changes in description on page 50.

## SHARES / SHAREHOLDER INFORMATION

### Listing

RoodMicrotec N.V. is a public limited liability company with its registered office in Zwolle, the Netherlands and has a listing on the Euronext Amsterdam Stock Exchange since 1986 for shares and warrants:

- Shares, ISIN CODE: NL0000440477
- Warrants series III, ISIN CODE: NL0011556972, exercisable until 31 December 2018, exercise price EUR 0.21

RoodMicrotec N.V. has secured bonds listed on NPEX The Hague since 2014 under ISIN code NL0010811030.

### Major Holdings in Listed Companies Disclosure Act

As at December 2018 RoodMicrotec has received the following reports, with positions equal to or greater than 3%, in the context of the disclosure requirements of the Major Holding and Capital Interests in Securities-Issuing Institutions pursuant to the (Dutch) Financial Supervision Act (Wft):

	Percentage	Date reported
Blikkenburg B.V.	12.35%	01 February 2018
P.C. van Leeuwen	5.53%	12 April 2018
Sitimo Ltd.	5.26%	02 Augustus 2018

### Changes in the number of shares (x 1,000)

As at 31 December 2018, 72,778,732 ordinary shares are issued (2017: 66,716,045). The company holds 4,100 ordinary shares (2017: 4,100) as treasury shares.

### Regulation to prevent insider trading

We comply with the disclosure and notification requirements in the rules on preventing market abuse and on operating in markets in financial instruments in accordance with Article 5.4 of the Wft (Financial Supervision Act) and the Decree on Market Abuse (Besluit marktmisbruik Wft). A broad circle of employees and consultants have signed a declaration binding them to abide by these insider rules. The members of the Board of Management and the Supervisory Board also comply with the disclosure requirements of Major Holdings and Capital Interests in Securities-Issuing Institutions pursuant to Wft. The Netherlands Authority for the Financial Markets (AFM) monitors compliance with these statutory provisions.

### Dividend

So far, we have not distributed any dividend since our financial position excluded it. The management prefers to use the company's own resources to grow, to further improve its financial health and strives to raise the market value of the share through such growth. In the next few years, we will seek a balance between the intended debt reduction, essential investment and a fair return for investors. The Board of Management proposes not to distribute any dividend for the 2018 financial year.

### Investor relations

We are well aware of the importance of active and open communication with our stakeholders. For this reason, since 2006 we have pursued an active investor relations policy through meetings and conference calls with press, analysts and investors.

This year and also in future, we focus on intensifying the communication with our shareholders and bondholders. This is partly in view of our bond loan issue in 2014, which has raised the number of stakeholders in RoodMicrotec greatly. In this context, we are organizing meetings for our shareholders and bondholders when expedient.

As in the past years, we will again raise our profile in 2019 by organizing seminars highlighting our core activities and the corresponding services to Fabless Companies and OEMs. The objective is to communicate our specific knowledge and share it with our customers and partners. We will further intensify our focus on publicity for all areas.

Communication with the various target groups is also done through the company's website, [www.roodmicrotec.com](http://www.roodmicrotec.com), and our newsletter.

**Liquidity provider**

In order to promote trade in the RoodMicrotec N.V. share and to optimize the company's relationship with its shareholders, NIBC Bank N.V. in Amsterdam has been engaged as liquidity provider.

**Annual general meeting of shareholders 2018**

The report of this meeting may be inspected on the website.

**Financial agenda**

11 April 2019	Publication agenda and invitation for the annual general meeting of shareholders
25 April 2019	Final registration date for annual general meeting of shareholders
23 May 2019	Annual general meeting of shareholders
24 May 2019	Annual bondholders meeting
04 July 2019	Publication sales figures first half 2019
01 August 2019	Publication interim report 2019
01 August 2019	Conference call for press and analysts

## REPORT OF THE BOARD OF MANAGEMENT

### MEMBERS OF THE BOARD OF MANAGEMENT



**Arvid Ladega, Martin Sallenhag, Reinhard Pusch**

#### **Martin Sallenhag, CEO & Director**

- Joined RoodMicrotec in March 2015 as CTO
- Appointment to CEO and Managing Director in June 2016
- Responsible for the overall management of the company together with COO Reinhard Pusch
- In addition, specifically managing the engineering departments, quality, human resources, purchasing and IT
- Experience in the semiconductor business in various management positions within Samsung Electronics, Dialog Semiconductor and Ericsson for more than 25 years
- Holding a Master of Science degree in Electrical Engineering from Lund University with focus on Mixed Signal ASIC design

#### **Reinhard Pusch, COO & Director**

- Joined RoodMicrotec in July 2004 as CSO and Managing Director
- Appointment to COO and Managing Director in June 2016
- Responsible for the overall management of the company together with CEO Martin Sallenhag
- In addition, specifically managing the sales organization, supply chain management and publicly funded projects
- Experience in qualification and test of electronic and optoelectronic components for the telecommunication market for more than 27 years
- Holding various management positions during his time at Alcatel

#### **Arvid Ladega, CFO**

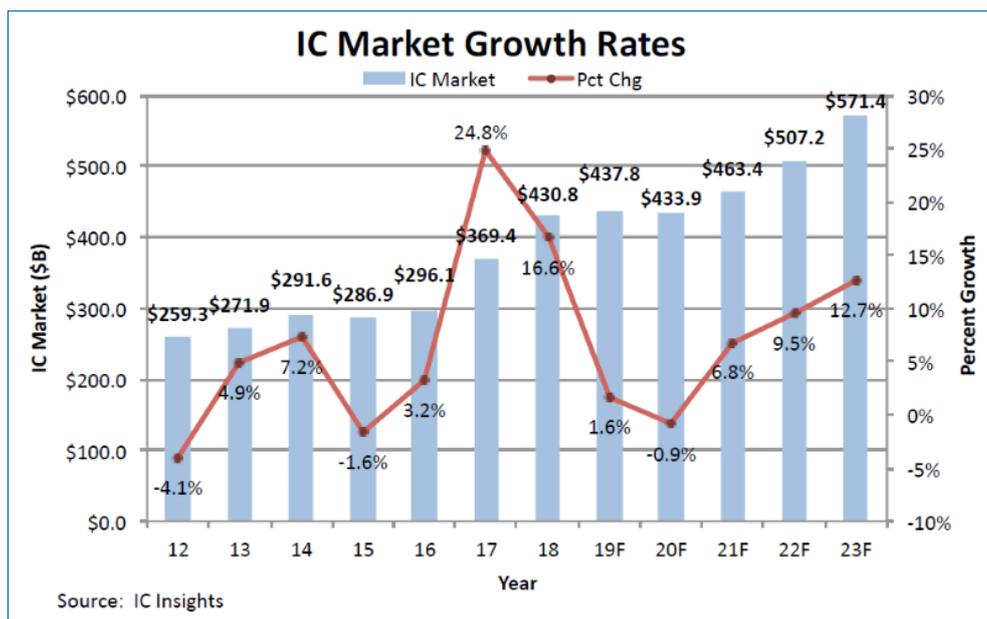
- Joined RoodMicrotec in November 2016 as CFO
- Responsible for the finance department with special focus on investor relationships with the main investors in Holland
- Extensive experience as CFO in the industrial sector, having served in that capacity for almost 12 years at Turn Key Pipeline Services B.V. and at Bartels Engineering, both in the Netherlands
- Holding a senior financial position at Wasco Coatings Europe, subsidiary to its Malaysian listed holder
- Holding a bachelor's degree in economics

## LOOKING TO THE FUTURE - MARKET DEVELOPMENT & TRENDS

The global economy seems to be unstable and is slowing down, discussions are ongoing of an impending global recession. There are many uncertainties, debts and risks in all parts of the world, examples are the US / China trade dispute, banks are getting twitchy (see "The Guardian" article "The global economy is slowing down. What can governments do about it?" - <https://www.theguardian.com/business/2019/feb/23/global-economy-slowing-down-what-can-governments-do>).

In general, the worldwide semiconductor market is cyclical and volatile. Since 2015 it is the first time that analysts are forecasting a slowdown of growth, in some cases, even negative values for 2019. Unfortunately, the predictions are cautious and just for one or two years, no real long-term outlook is available.

In 2018 the worldwide semiconductor market showed a significant growth of 13,7%, already less growth as in the previous year (21.6% in 2017). Even in Europe the growth rate was 12.1%. For 2019 the WSTS (World Semiconductor Trade Statistics) predicts a decrease of -3.0%. These figures have been published by WSTS in a press release on February 20, 2019. Gartner forecasts the revenue growth with 2.6% in 2019, and expects a bounce back to 8.1% in 2020, followed by a contraction in 2021. The CAGR for 2017 – 2022 is expected at 5.1%. (Source: eetasia article "chip sector slowdown but no recession", Rick Merritt, 11 January 2019). It is expected that the memory market shrinks more than other product sectors.



Technical and technological innovations are driving the growth in the semiconductor industry. As more and more cutting-edge devices emerge, such as electric cars and hybrids, healthcare applications, smart homes, smart phones and wearable devices, the number of semiconductor components is ever expanding in the applications and will further increase the demand for semiconductor products. These factors will drive solid growth for the global semiconductor market over the next years.

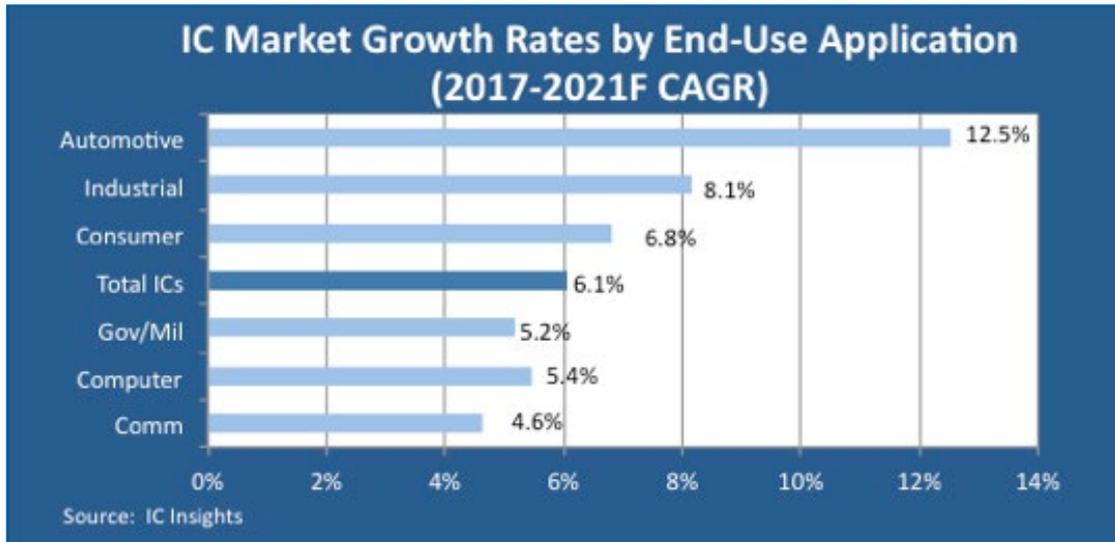
The following key findings in publicly available information of other research institutes support our strategic choice for our focused markets:

1. The automotive and industrial markets will both drive growth in demand for semiconductors.
2. The Internet of Things / Artificial Intelligence are the next growth engines for the semiconductor industry, particularly for the sensor, communications and industrial segments.
3. Power Electronics and GaN-technology are indispensable for the energy management systems, such as in electronic vehicles, solar energy networks, etc.

RoodMicrotec's management team is very positive about the future development of the company. RoodMicrotec is focusing on and serving the emerging technology sectors as described above. These sectors will continue definitely to grow in the future, so that the general semiconductor slowdown will not hurt the company significantly.

**Automotive**

RoodMicrotec is a recognized player in the automotive sector, which is the fastest growing market (Source: IC Insights Bulletin, May 31, 2018, Automotive IC Market on pace for third consecutive record growth year), and offers us a lot of exciting opportunities. The growth of this market will lead to additional demands for electronic equipment and create a positive impact on the semiconductor industry.



Although conventional cars are still selling well and are an important driver for the semiconductor industry, electric cars and hybrids are gaining ground. Furthermore, the semiconductor content of cars is not only growing quickly, as they rely on greater intelligence, connectivity and sophisticated electronics (autonomous drive, vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communications). In addition, growing interest in electric vehicles focuses on on-board safety, convenience and environmental features. Advanced automotive electronics become more widely available on mid-range and entry-level cars. However, the nature of the automotive industry model is also shifting in new directions. Concepts of product ownership will give way to service propositions to deliver mobility to consumers who will pay only for what they use. Creating and managing the systems to deliver that mobility will depend heavily on complex electronics.

The average value of semiconductors in cars will be about 400 Euro in 2020 but will grow in the years following with the advancement of navigation, infotainment, and connectivity systems. It is expected that the value will grow further, to about 1,500 Euro, if level 4/5 automation, electrification, and 5G networking are further developed for autonomous driving cars.

Semiconductor companies focusing on the automotive industry as a key market will need to have a laser-sharp focus on quality from product design through to production and will require stringent program change control in order to profit from the growth opportunity the automotive sector offers (source: PwC).

### Global Automotive Semiconductor Market Insights 2017 – 2023

**Expected share of electric vehicle in total car sales by 2020**

5-12%

The expected share of electric vehicles in overall car sales by 2020 will reach 5-12%

**Share of automotive ECU by 2023**

+50%

The cost share of automotive ECU in the total share of cars is expected to be 50.4% by 2023

**Revenue growth of safety segment**

109.55%

The revenue growth of safety segment from 2017-23 -109.55%

**Estimated amount of safety semiconductors used in vehicles**

- Level II-2-3
- Level III-10-11
- Level IV/V 19-20

Source: <https://www.arizton.com/market-reports/automotive-semiconductor-market> - The research report offer market size by products, application, vehicle type & geography. The report provides data on incremental growth, market size, latest trends and covers segment growth rates across the global market.

## Industrial (Industry 4.0, IoT) / Healthcare

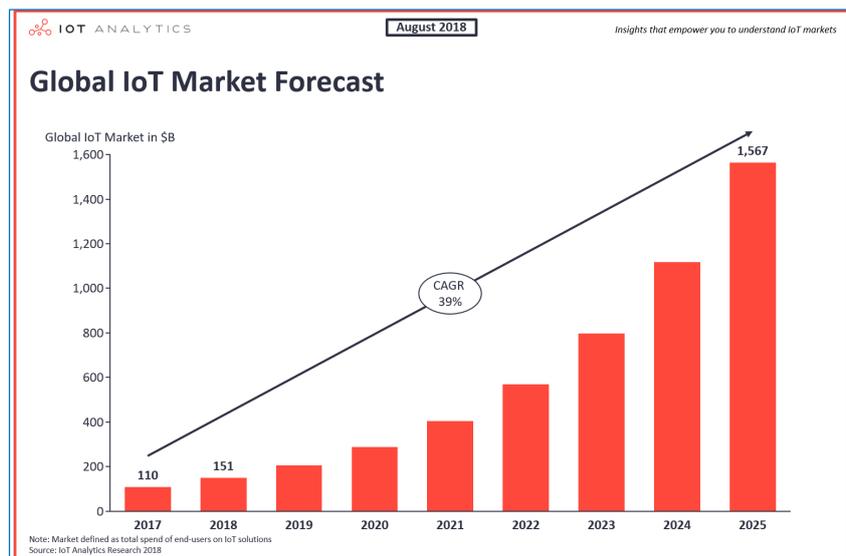
The expected growth rate of industrial semiconductors will be 8.1% CAGR in 2017-2021 (Source: IC Insights bulletin dated May 31, 2018). Artificial Intelligence, virtual reality, 5G, smarter homes and IoT, among others, hold tremendous promises for further growth.

The basic principle of Industry 4.0/IoT is that by connecting machines, equipment and systems, businesses are creating intelligent networks along the entire value chain that can control each other autonomously.

Characteristic for industrial production in an Industry 4.0 environment are strong customization of products under the conditions of high flexible (mass) production. The required automation technology is improved by the introduction of methods of self-optimization, self-configuration, self-diagnosis, cognition and intelligent support of workers in their increasingly complex work. Some examples for Industry 4.0 are machines that can predict failures and trigger maintenance processes autonomously or self-organizing logistics that react to unexpected changes in production.

Industry 4.0 is migrating into most of the industrial applications. It is mainly based on different sensors detecting all kind of information as current, voltage, magnetic field, light, temperature, shock, humidity, etc. combined with an intelligent integrated circuit and a transmission function RFID, etc. There is an increasing demand on such Mixed Signal integrated circuits to reduce space, save energy or create faster performing systems.

IoT will be the next growth engine for the semiconductor industry. It is expected that the number of installed devices will reach 75 billion by 2025 (Source: IHS Markit, IoT platforms, March 2016). In addition to Industry 4.0, IoT describes the complete world of different sensors within the electronics and is connected to detect and control temperature, humidity, light, electricity, etc. in all kind of different applications in the home (electricity, refrigerator, light, body, etc.), in cars (V2V-, V2I-, internal vehicle communication), in agriculture, in healthcare and elsewhere.



Based on IOT Analytics - <https://iot-analytics.com/state-of-the-iot-update-q1-q2-2018-number-of-iot-devices-now-7b/> - published in August 2018, the current market sentiment and short-term outlook is extremely positive. The global IoT market is forecasted to grow to 1,567 billion-\$ by 2025 from 151 billion-\$ in 2018.

In all cases, the connected devices that transmit information across the relevant networks rely on innovations from semiconductor players — highly integrated microchip designs, for instance, and very low-power functions in certain applications. The semiconductor companies that can effectively deliver these and other innovations to OEMs and others that are building IoT-products and applications will play an important role in the development of the market.

Within the industrial applications healthcare devices will also see a growth in demand and applications. With the development of connected healthcare devices, health services are gradually shifting from a clinical setting to the home environment. From fitness trackers that monitor activity to flexible patches that can detect heart rate, body temperature and more, these applications will fuel capital investment in healthcare and contribute to the growth in industrial applications of semiconductors.

The healthcare market has a highly promising future. Due to the extensive regulation efforts the time-to-market is long. Specifically the monitoring of life functions inside or outside the body is an increasing market.

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## VISION AND MISSION

### Vision

Two major changes in the world will be of great importance for the future of our company: increasing outsourcing of activities and the fact that we are living in a technology driven world. We anticipate that an increasing number of product design companies will focus on the segments in which they have a strong position, but also that many of these often vertically integrated companies will outsource non-core activities to rationalize their operations. Such activities would be supply chain management (SCM), turnkey solutions, testing, assembly and engineering.

Rapid technological innovation e.g. IoT (Internet of Things) is driving growth in the semiconductor industry. More and more people are connected to each other and to equipment. Equipment is also connected to and communicating with other equipment. And this is only the beginning. We are entering the fourth industrial revolution: Industry 4.0, the collective term for embracing a number of contemporary automations, data exchange and manufacturing technologies. In this context the automotive and industrial markets will be growth engines for the semiconductor market. In the automotive sector the main drivers are electric cars, connected cars, autonomous driving and car-to-car communication.

The developments described above will create a market for specialized service providers focusing on supporting leaner OEMs and Fabless Companies. We are such a specialized service provider, and we have the knowledge to offer these OEMs and Fabless Companies high-quality products, both independently and within our Supply Chain Management. This forms the basis for our growth potential.

### Mission

To be a knowledge and technology driven service provider in the field of modern devices that is able to handle the whole chain for complex requirements as well as individual services.

## STRATEGY

- We focus on automotive, industrial, healthcare and HiRel markets to grow further in these sectors. To strengthen our technical position, we will invest in new high-technological equipment to be able to service these markets.
- We work with Fabless Companies to show that RoodMicrotec is a competitive SCM partner and encourage them to strengthen the partnership with our company.
- We take full responsibility as a supply chain specialist for every step in the supply chain. This means that we will be involved on a long-term basis in the whole project, from the very beginning up to mass production.
- We will intensify our focus to look for smaller, faster turnaround opportunities in Qualification & Failure Analysis and Test Operations.
- We aim to be an important player in the automotive market, Industry 4.0 and IoT by becoming one of the preferred partners in various consortiums that are developing new technologies and applications and by increasing our scale through partnerships.
- We will extend our industry partnerships, since it is essential to be part of networks and being active in them. For that reason, we have strong partnerships or work very closely with inter alia institutes, like the Fraunhofer IIS, wafer fabs, assembly houses, design houses and universities as well as industry groups and clusters. Within each publicly funded project we are working with a consortium of partners, which opens doors to win them also as a customer
- We will strengthen our internal quality system through maintaining the certification according the version 2015 of ISO 9001 and ISO/IEC 17025, with focus on risk assessment. We work on the VDA 6.2 certification, which is especially important for automotive customers.

The above items will result in a good combination of long-term contracts with long lead times and short-term orders with shorter lead times. In future we certainly need short-term orders to generate cash flow while continuing to focus on long-term contracts, which will bring much more stable and predictable recurring revenues and underpin our role as the supply chain specialist.

Furthermore, we will:

- Establish direct contact with Tier 1 customers as an ASIC provider. This will enable us to take on more of the tasks in the complete flow, generating higher sales volumes.
- Strengthen relationships with customers, suppliers and appropriate partners (foundries, assemblers, design houses, OEMs and system houses). This will make us stronger as well as a better known and important player.
- Continue to focus on development of new technologies and special requirements from the market, such as optical sensors, high power and RF solutions for the automotive and industrial requirements.
- Strengthen our brand awareness in the market by organizing seminars on e.g. qualification, failure analysis and supply chain activities.

## SWOT ANALYSIS



## OPERATIONAL UNITS

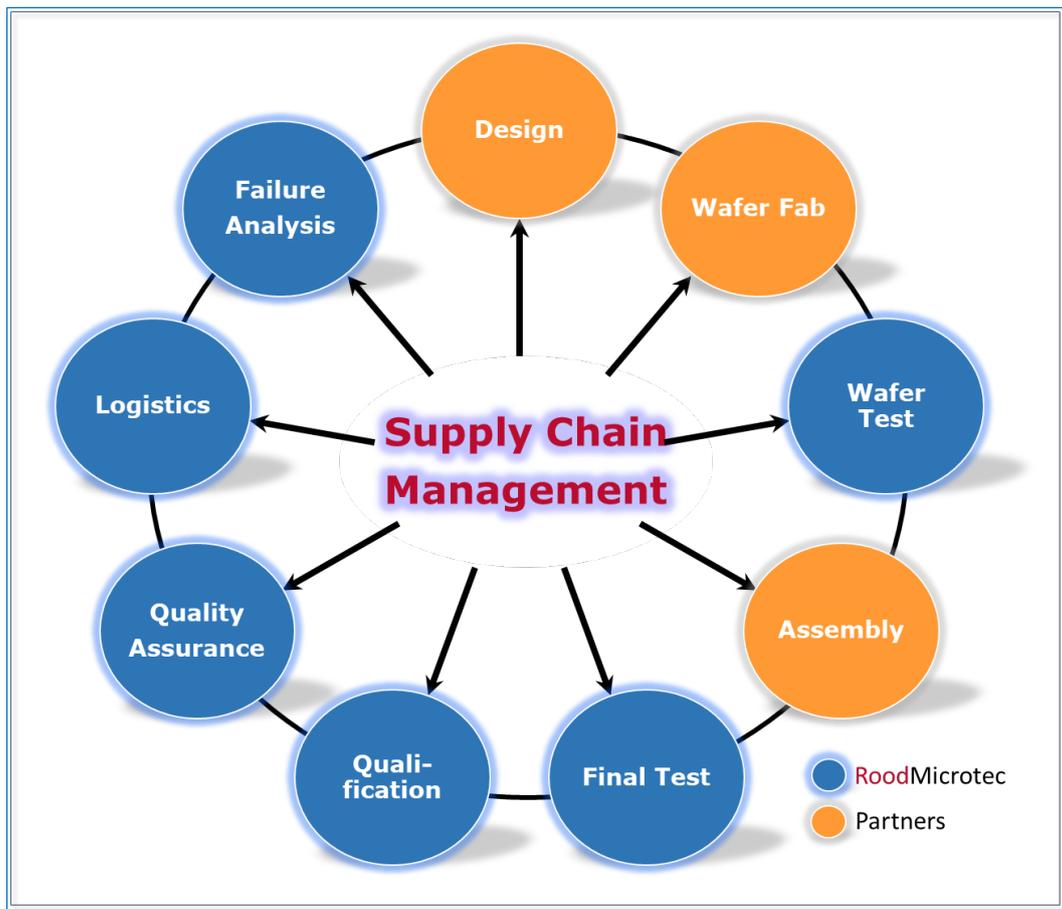
RoodMicrotec offers turnkey services to its customers through its three main units: Supply Chain Management, Test Operations and Qualification & Failure Analysis. These three units offer a complete set of services to meet the requirements for turnkey projects.

### Supply Chain Management (SCM)

In this business unit RoodMicrotec supports customers who wish to launch high-quality semiconductors, in particular ASICs, on the worldwide market. RoodMicrotec provides comprehensive services, from the beginning of the development process (together with design partners) all the way to production and delivery to its customers. The services provided to bring a product successfully to the market include engineering support, test engineering, wafer test, assembly (through partners), final test, qualification and reliability, failure analysis, field return management and logistics.

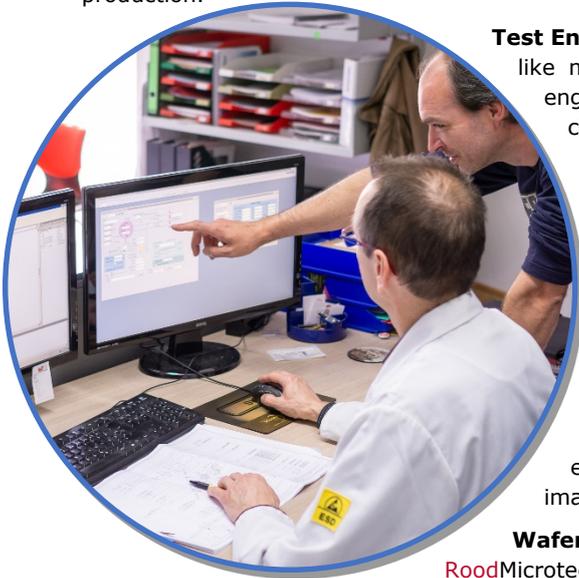
RoodMicrotec achieves this by qualifying and testing suppliers as well as products and, on request, executing the entire project management for such processes for the automotive and industrial markets.

RoodMicrotec handles the complete (turnkey) industrialisation of ASICs from the customer's idea up to the final product including all automotive-specific quality assurance activities. RoodMicrotec manages the process 'end-to-end' but can also provide each individual step separately. On request, RoodMicrotec can supply the complete packaged ASIC with peripheral devices on a board (through partners).



## Test Operations

This operational unit consists of two functional areas, test engineering and wafer & component testing. The test engineering area is a support function that provides the wafer & component testing area with solutions for high volume production.



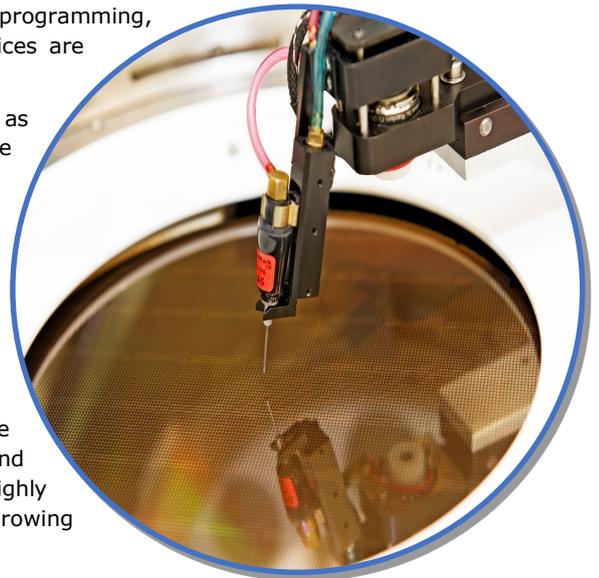
**Test Engineering** provides complete test solutions for a wide range of devices like mixed-signal, digital, analog and RF ICs. The team of highly skilled engineers develops test programs, probe cards and load boards for characterization, production and qualification to the highest standards as required by the automotive and high-reliability sectors (AEC-Q, ESCC, MIL-STD, JEDEC, TELCORDIA, IEC, and DIN). Services include design for test, test time reduction, yield improvement and data analysis. Our experts have experience of migrating complete test cells, production ramp-up and product validation. Test times in high test coverage are reduced by massive parallel testing. All these services are also available as on-site engineering support for customers.

Extensive know-how is available on several test platforms, e.g. Teradyne Flex, Xcerra (formerly LTXCredence) D10, Advantest/SZ, Advantest 93000 as well as LabView based solutions. The company has extensive expertise in mixed-signal, digital, analogue, memory, RF, image sensors, MEMS and PC applications developed over decades.

**Wafer & component testing** is the heart of the production function within RoodMicrotec running an automated test floor 24 hour per day, 7 days per week. In this area the services of wafer testing, component testing, component programming, straightening & scanning and end of line of the semiconductor devices are performed.

The test cells utilize state-of-the-art Automated Test Equipment (ATE) as well as specialized PC-based solutions. Test system limitations are compensated by integrating high performance external equipment such as network analyzers or RF signal sources into the test cell. This approach increases flexibility while limiting test costs.

The main goal is to provide service and support to our customers through the whole project by continuous improvement of the processes and systems related to it, offering excellent customer care, in-time delivery with highest quality. To ensure this, also a tight communication structure between the parties involved is essential, so that everything fits the customers' needs. Close relationships are the key in supporting the customer so that they meet their deadlines and commitments. The investments done show that RoodMicrotec is highly competitive in this area of growing technical demands and the growing semiconductor market in general.



## Qualification & Failure Analysis

In the operational unit Qualification & Failure Analysis we perform environmental tests to verify the reliability of electrical/electronic components as well as optical systems. We also perform mechanical stress test such as shock and vibration on single components as well as on board level. Additionally, the extensively equipped failure & technology analysis laboratory provides failure, construction and qualification-related analysis of all kinds of electronic parts like wafers, integrated circuits, discrete components, optoelectronic components, electromechanical components, printed circuit boards and complete printed board assemblies. The Qualification & Failure Analysis unit is accredited according ISO 17025.

**Electrical qualification** and robustness validation of customer components, semiconductors (die and package level), passives and PCBs, under extreme conditions such as climatic and temperature changes as well as vibration and mechanical shock. The investigations determine whether the components meet the required qualification standards. Burn-in is implemented in order to identify parts prone to premature failure. This process forces defective semiconductor devices to fail before they are incorporated into assemblies where they can cause reliability problems in the end product.

Based on the 'mission profile' (subsequent operating conditions/requirements) of our customers' products, we develop customized qualification/reliability concepts that incorporate the necessary stress tests – and ensure the successful

market launch of products. The electrical verification of the tested devices before, during and after (pre-test, interim test, post-test) stress treatment takes place using our in-house automated test systems. Test and product engineers perform test data analysis, failure analysis and data preparation.

**Optical qualification** focuses on image sensors and light emitting devices such as VCSELs and LEDs. Image sensors are needed for example in the digital photography, high speed image processing, X-ray technology and other applications.

RoodMicrotec will bring in the experience and its knowledge of LEDs and LED lamps in a new research and development project. In former projects our practical experience in failure & technology analysis combined with the capabilities in measurements and reliability tests on LED was highly appreciated.

**Failure Analysis** of defective devices is carried out using physical, chemical and metallurgical analytical methods. These methods are applied to confirm customer-complained failures, to identify the area of the defect and the failure mechanisms, and to initiate corrective actions for quality improvement.

In the area of integrated circuits, new technologies with reduced feature size require expensive expanded capabilities. Therefore, strategic partnerships have been agreed to share equipment and reduce investment.



**Construction Analysis** and **Destructive Physical Analysis (DPA)** can be performed as part of a reliability assessment. The objective of construction analysis is early identification of potential deficiencies that can cause zero-hour failures or reliability problems. These tests are required for all components used in aerospace applications. Request numbers for DPAs are very stable as the aerospace market is less sensitive to economic cycles. The lab has gained a certificate to perform DPAs for space applications according to the RA.0010.900.10 standard.

Qualification-related analyses are carried out before and after various qualification tests. The purpose of these investigations is to determine the influence of these environmental tests on package and chip-related problems.

With our focused ion beam (FIB) system, we offer our customers chip modifications, circuit editing, micro cross-sectioning, TEM lamella preparation, micro-machining and material science applications.

## Research and development

To remain a strategic supplier to our customers as well as being on the leading edge of technology it is necessary to invest in new technologies. This is done through internal research and development projects as well as through external publicly funded projects. In order remaining a well-recognized player it is necessary to increase the brand awareness, which is done by publishing technical articles, by giving presentations around Europe during exhibitions and conferences and by organizing seminars.

The internal research and development projects are mainly focused on new areas of capability. The decision has been taken to focus on three main areas; high power electronics, high frequency solutions and opto-electronic devices. In addition, the company invested in innovations by means of partnerships in publicly funded projects. In 2018 four projects in the field of Industry 4.0/IoT were running, two have been successfully finalized. The next project - APreMedI- starting in 2019 has been secured in 2018. Being a part and recognized partner in publicly funded projects gives RoodMicrotec many advantages, such as getting access to brand-new technologies and networking with the partners and other companies within the projects.

### Publicly funded projects:

**ParsiFAI4.0** – this national project ended in December 2018, and the aim of it was to realize a thin flex foil with integrated electronic chips for sensors, microcontrollers, wireless interfaces and energy harvesting components for Industry 4.0. Two applications were developed: A smart autarkic sensor system for process automation (Festo) and a flexible sensor label for logistics (Bosch). RoodMicrotec was responsible for the qualification of materials for flexible

printed circuit boards as well as for the supporting failure analysis during prototype development and production of both applications.

**ScaleIT@Shopfloor** project ended in December 2018. With 15 partners inclusive RoodMicrotec the project goal was the preparation of high-tech companies for the start of Industry 4.0, where production should have a high degree of automation and intelligent networking. The goal of RoodMicrotec was the integration of an intelligent test card which is integrated into one of our test systems and a modernized IT environment.

**EuroPAT-MASIP** (European Packaging Assembly and Test pilot for Manufacturing of Advanced System in Package) is a cooperation of 28 partners, which will make a significant contribution to European competitiveness and job creation in the electronics industry and belongs to the ECSEL program. The funded project involves the development of ASICs (Application Specific Integrated Circuits) for a MEMS gyroscope, for an image sensor, and for Radio Frequency (RF). Special task for RoodMicrotec in this project is the leadership of the work package for test, qualification & reliability and failure analysis.

**GaNScan**, (Mapping and modelling of industrial GaN/Si-wafer substrates for optimized yield production of GaN HEMT components in power electronics), where RoodMicrotec and its two partners will develop reliable processes for testing of Gallium Nitride-on-Silicon wafers as well as prototype high-power GaN devices. At the moment the GaN technology is going to be industrialized in the field of high frequency and power electronics.

**APreMedI** (Appropriate testing of electrically active medical implants) is a German funding project and the newest companion in RoodMicrotec's funding project portfolio. Together with a research institute and a small implant manufacturer, RoodMicrotec will develop test strategies for the validation of flexible encapsulated active implants, such as hearing aids or active electrodes. A test setup will be realized that performs accelerated life tests on implants to check their reliability.

## Quality Management - 'Quality First'

RoodMicrotec takes care of the provision of the products at the "right" time in agreed quality according to defined safety and reliability requirements. The basis for this is our quality management, which includes forward-looking quality planning and its implementation in all relevant business, service and production processes.

This requires a continuous improvement of quality management, its processes and procedures and demands a high level of dedication and commitment from our employees. The QM-System of RoodMicrotec is certified to ISO9001:2015. For 2019 the certification according to the automotive requirements VDA6.2 service provider is planned.

RoodMicrotec's laboratories for Qualification & Failure Analysis in Nördlingen and Stuttgart are accredited by the DAkkS, the German accreditation body, as compliant with ISO/IEC 17025, 'General requirements for the competence of testing and calibration laboratories'. This accreditation is valid only for the scope of accreditation which is listed in the appendix of the certificates (PL-12120-01-01 and PL-12120-01-02).

## Human Resources and Sustainability

An average unemployment rate of 5.2% in 2018 throughout Germany, 2.9% in Bavaria and 3.2% in Baden-Württemberg, in addition to the already significant changes in poverty, demographic change and globalization, youth unemployment and climate change, is a new aspect that has a strong impact on small to medium-sized companies such as RoodMicrotec. To succeed in growth, it is also necessary to attract suitable professionals, which is becoming increasingly difficult in times of low unemployment or full employment. In 2018, we therefore invested more in external training to encourage and motivate our employees and to update our knowledge. In 2019, we will internally distribute this newly acquired knowledge to other employees in order to remain competitive and continue to provide services of the highest quality.

The average number of full-time employees (FTE) was at 94 FTEs in 2018. We have been able to attract young engineers and we will continue to try to attract experienced people to our company. The company has a very healthy age structure with a good combination of experienced and young persons. Our motivated and ambitious team has committed itself to show high technical and personal competence. They will work innovative and to think and act in a proactive way to take over responsibility. By showing entrepreneurship they will focus on the highest quality and live as flexible as possible to meet the customer needs. They have also committed themselves to living according 5S standards and provide value added solutions.

## FINANCIAL RESULTS

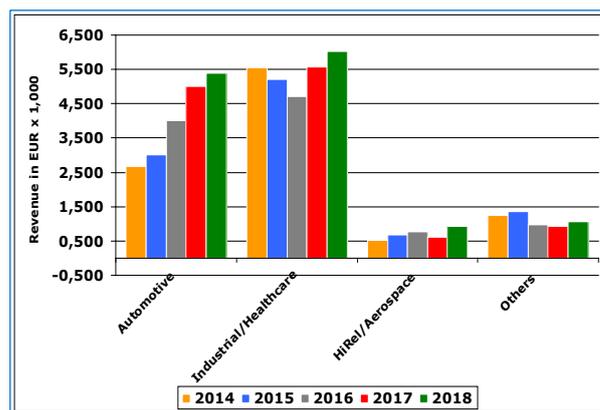
### Sales and result

Sales revenue rose by 11% to EUR 13.425 million in 2018 and is in line with the development of the European semiconductor industry. RoodMicrotec realized 94% of its total sales in European countries. According to the Semiconductor Industry Association (SIA) the total industry sales in Europe increased by 12.1% compared to the 2017 sales. Worldwide semiconductor industry showed a growth of 13,7% (2017: 21.6%).

The increase in revenue was largely attributable to the automotive market sector of 8% and shows that RoodMicrotec is well positioned in one of the fast-growing sectors for the future. The industrial/healthcare segment saw an increase of 8% compared to 2017 due to a clear focus to regain market shares in this segment. Some of the long-term customers have also returned with higher volumes in this segment. The HiRel / Aerospace segment showed an increase of 51%. It mainly consists of failure analysis and qualification work and this is very much depending on the design cycles at our customers. The order book at the end of 2018 is higher than the year before.

Net sales by market sector:

(x EUR 1,000)	2018	2017	change
Automotive	5,395	5,011	+8%
Industrial/Healthcare	6,024	5,563	+8%
HiRel / Aerospace	937	620	+51%
Others	1,069	933	+15%
<b>TOTAL</b>	<b>13,425</b>	<b>12,127</b>	<b>11%</b>



The unit Test Engineering has been merged into Test Operations, since Test Engineering is a supporting function enabling future test to be performed in Test Operations. Failure & Technology Analysis and Qualification & Reliability Investigations have been merged into the new unit Qualification & Failure Analysis. Both areas are part of the accredited laboratory.

The sales results per operational units were as follows:

(x EUR 1,000)	2018	2017	change
Supply Chain Management	3,283	2,448	+34%
Test Operations	6,060	4,964	+22%
Qualification & Failure Analysis	4,082	4,715	-13%
<b>Total</b>	<b>13,425</b>	<b>12,127</b>	<b>+11%</b>

The gross profit was up EUR 0.7 million or 7% primarily as a result of higher revenue levels. The gross margin reduced to 81% due primarily to the growth in the operational unit Supply Chain Management entailed an increase in the cost of sales.

(x EUR 1,000)	2018	2017	change
Gross profit	10,880	10,157	+7%
Gross profit as % of net sales	81%	84%	

The total operating costs rose by 3% mainly due to the increase in activity levels, total operating expenses were EUR 9.5 million against EUR 9.2 million in 2017 and reduced to 71% of net sales (2017: 76%). Personnel expenses increased by EUR 0.45 million, average number of employees on a full-time basis rose from 91 to 94 in 2018. The other operating expenses increased by EUR 0.25 million to 2.9 million. It was affected by one-time costs of EUR 0.39 million related to the legal case announced in a press release in 2018 and VAT corrections. In 2017 the total operating costs included a termination benefit costs of EUR 0.4 million for a former employee.

(x EUR 1,000)	2018	2017	change
Total operating expenses	9,497	9,208	+3%
Total operating expenses as % of net sales	71%	74%	
Financial expenses	241	258	-7%
Net profit	125	-44	

Financing costs decreased by 7%, mainly as a result of repayment of a loan.

The net profit in 2018 was EUR 0.1 million, an increase of EUR 0.2 million versus 2017 and primarily due to increase in revenue, gross profit and offset by an increase of the operational expenses.

## Financial position

The balance sheet total increased to EUR 13.6 million in 2018 (2017: EUR 13.0 million). The increase in balance sheet total is mainly due to the increased cash position. Equity increased by EUR 0.4 million, from EUR 4.8 million to EUR 5.2 million, which was due to the receipts from issued shares line and warrant plans and reduced due to remeasurement of Plentum bonds part of Plan assets. Solvency was 38% at year-end 2018, compared with 37% at year-end 2017. The net debt position is reduced to EUR 1.5 million. Working capital improved by EUR 1.5 million to EUR 1.9 million positive.

(x EUR 1,000)	2018	2017	change
Cash from operating activities	563	628	-10%
Capital expenditure	446	1,127	-60%
Net profit	125	-44	

Cash flow from operating activities totaled EUR 0,6 million, down 10% mainly as a result of increasing working capital caused by higher activity levels and financial settlement of EUR 0.4 million for termination benefits, partly offset by higher operational profit.

Capital expenditure amounted to EUR 0.6 million. The Capex amount is understated because EUR 0,7 million is committed in 2018 for delivery of equipment early 2019. Investments mainly comprised replacement and expansion investments in materials and resources to facilitate growth.

## Financial objectives

- Our long-term objective is a substantial growth in turnover.
- EBITDA at 10-15% of sales and EBIT at 6-12% of sales by continuously optimizing our operations through cost awareness and efficiency improvements.
- Profit before taxes between 4% and 10% of sales, which we only can achieve if we raise production volumes, sales and efficiency.
- A strong solvency ratio of between 38-50% helps us to strengthen confidence among customers, to guarantee continuity, to obtain loans and secure growth.
- We strive for a working capital ratio between 1.0 and 1.5. As a service provider and project organization this is a key element of our balance sheet. We must be able to secure sufficient funding to invest promptly in projects. Working capital is therefore vital to our future growth.
- The debt ratio (net interest-bearing debt divided by EBITDA), our target is between 1.0 and 4.0, is important for growth financing and for obtaining long-term projects. This ratio gives us a solid position that can be defended vis-à-vis the bank syndicates.

## MAIN DEVELOPMENTS DURING 2018

### Solid growth

Our realized sales of EUR 13.425 million (2017: EUR 12.1 million) shows a marked growth of 11%. Revenue was according our expectations. For sure 2018 was again a year marked by positive developments but also with some setbacks which we mastered extremely well. In 2018, the book-to-bill ratio was above 1.0 which gives us a higher order book at the end of 2018 compared to the year before. Our strategic move to larger and long-term projects is yielding more stable and predictable recurring sales and is bearing fruits although the market is slowing down.

## SCM projects

During 2018 we have moved additional SCM projects into production which contributed to the significant increase in SCM revenue with 44% year on year. Unfortunately, one big project has been cancelled by the end customer of our customer, so this will have a negative impact on the SCM revenue in the near future. The long-term strategy and planning remain unchanged since we have many new projects in the pipeline.

The increase in SCM revenue also brought additional business to the Test Operation unit which showed a growth of 22% year on year. Due to the project timing for the SCM projects we did not see the expected additional work to the Qualification and Failure Analysis business unit. This will change once the new projects are being industrialized.

## Collaboration/partnerships

To the existing major collaboration agreements with several European leading and successful Fabless Companies (design houses) we added additional partners. Due to their growth, the design houses felt a need to select a specialist supplier who could support them in manufacturing high-grade microchips (high-reliability chips). Our experience, knowledge and infrastructure, including our equipment, proved to be a perfect match to the design house's needs.

These developments and also the fact that we are really accepted by a number of big players in the market (assembly houses, wafer fabs and Electronic Manufacturing Services Companies) proves that we are recognized as a serious player. This, along with concluding contracts and receiving orders, is very important for our reputation and our visibility in the market, and therefore crucial for our future growth.

## Key partner for EnSilica, UK

RoodMicrotec was chosen from EnSilica as key partner for an automotive ASIC project for which we perform qualification and test services. Volume production will start in 2020.

## Publicly funded projects

Two projects in the industrial sector have been finalized end of 2018. We again gained a new publicly funded project in the field of healthcare. Within the next two years we will develop test strategies for the validation of flexible encapsulated active implants, such as hearing aids or active electrodes. In 2019 we have three running projects.

## Certification and accreditation

Accreditation of our laboratories according ISO/IEC 17025 has been successfully. Our ISO 9001:2015 certification also has been confirmed in 2018.

## Communication and seminars

A joint workshop about semiconductor supply chain management organized by BCS (Business Cluster Semiconductors Netherlands) and RoodMicrotec with about 30 interested participants. Special technical lectures about various failure analysis themes and a retrospective view on 40 years failure analysis have been presented during several conferences and workshops with about 450 listeners.

## Merging of business units

The unit Test Engineering has been merged into Test Operations, since Test Engineering is a supporting function enabling future test to be performed in Test Operations. Failure & Technology Analysis and Qualification & Reliability Investigations have been merged into the new unit Qualification & Failure Analysis. Both areas are part of the accredited laboratory.

## Legal proceedings

RoodMicrotec started legal proceedings against a debtor concerning a dispute about the (non)fulfilment of the contractual obligations as per agreement between the parties, € 130,000 has been accrued for in this matter.

## New shares issued

From Blikkenburg BV, Mr. Lindenbergh an additional funding of EUR 500,000 has been secured, so that we can invest into new equipment to enable the company to speed up the transition into new business areas.

## Warrants ISIN code NL0011556972

The above warrants are now closed, last exercising period ended on 31<sup>st</sup> December 2018.

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## FOCUS AND ACTIONS 2019

### Focus

We will continue to focus on the automotive and industrial markets since they are expected to grow significantly over the next years. Additionally, we will also intensify our efforts in the increasing healthcare market. Here we see a great need for new and innovative solutions to help the ever-aging population of the world. To continue offering ASIC turnkey services in conjunction with several fabless design houses and OEM customers is essential to win new projects for industrialization and recurring business.

In the markets where we operate it is mandatory to deliver high quality and we will continue to improve our internal processes to excel the already very high-quality standard that RoodMicrotec is operating under. This will increase our competitiveness and also give our customers an advantage in the market.

### Actions 2019

- Analyse and invest in new machinery where necessary. This can be for capacity, capability or technological reasons and will apply in all areas such as tester, prober, handler or end-of-line.
- Invest in knowledge and know-how in future technologies like high power electronics, high frequency and photonics (image sensors, optical transceivers, photonic chips, etc.) as well as on widening our emphasis to modern packages as these are Wafer Level Chip Scale Packages (WLCSPP) and chip-on-board requirements.
- Continue the development of increased stress coverage for our customers using mission profiles and other application specific conditions, in other words Robustness Validation.
- Qualify and characterize LEDs and VCSELs at wafer level on our automated test systems.
- To improve brand awareness of RoodMicrotec through professional valuable articles and seminars for customers and other stakeholders. Being present and hold presentations on well selected, dedicated fairs and conferences.
- Strengthen our customer base in our key market segments by approaching new strategic customers with high potentials with presentations on special subjects e.g. Failure Analysis at customer sites to convince them of our efficiency and trustworthiness.
- Further cooperation with partners in national / international publicly funded projects to be part in the development process of modern technologies and to enlarge our business potential.
- Improve and automate all process flows in order to realize the certification according VDA 6.2.

## OUTLOOK

Based on several new engagements as well as an increasing number of ASIC supply chain projects in the pipeline, RoodMicrotec expects a continuing revenue increase over the next years and the company expects to report yearly improving positive net results. With a softer market and geopolitical uncertainties revenue for 2020 is expected to be in the range of EUR 16 million till EUR 18 million.

### Board of Management

O.M. Sallenhag, CEO

R. Pusch, COO

A. Ladega, CFO

Zwolle, 04<sup>th</sup> April 2019

## SUPERVISION & RISK MANAGEMENT

### MEMBERS OF THE SUPERVISORY BOARD



Victor George Tee

#### Chairman

#### (1943) (British)

- Victor joined the Supervisory Board in 2009.
- He became Chairman in 2013.
- More than 40 years of experience in the Electronics and Semiconductor industries.
- He started his career as an electronic systems design engineer and has held senior management positions at Philips, Siliconix and most recently as CEO at Millennium Microtech.
- Vic lived and worked in Asia for 20 years and operated internationally.
- His wide network is based on both operational and board levels globally.



Herman Johan  
Bartelink

#### (1969) (Dutch)

- Herman joined RoodMicrotec in January 2017 as a member of the Supervisory Board.
- Herman has a bachelor's degree in economics.
- The first 7 years of his career, he worked for an accounting firm.
- The following three years he worked as a consultant in various management positions.
- He entered the Electronic Industry (EMS) and joined Benchmark Electronics in 2003.
- In 2012 he moved from the Financial Director position into the role of General Manager of the Dutch division of this US based company (NYSE:BHE).



Jeroen Bertil Tuik

#### (1973) (Dutch)

- Jeroen joined RoodMicrotec in January 2017 as a member of the Supervisory Board.
- He holds a Master of Science in Mechanical Engineering.
- Started working in the IT for 3 years at Stork TPS (Account Management, Consultant).
- 7 years at Pemstar Inc. (Program Director).
- 4 years at Benchmark Electronics Inc. (Managing Director).
- 3 years at Schuitemaker Machines & Industrial (Managing Director).
- 2 years at Stork IMM (Operations Director).
- Since 2016 he is holding the position of CEO at the Connect Group.

## REPORT OF THE SUPERVISORY BOARD

We hereby present the 2018 annual report as prepared by the Board of Management in accordance with Article 26 of the articles of association of the company.

The annual report, prepared by the Board of Management and including the 2018 financial statements, has been audited by Baker Tilly Berk N.V. The auditor's disclaimer of opinion relating to the financial statements is included on page 91 of this report. We discussed the annual report with the Board of Management in the auditor's presence. Based on this meeting, we are convinced that the annual report forms a solid basis for the Supervisory Board's accountability for its supervisory duties. We propose to the general meeting of shareholders on 23 May 2019 to:

- adopt the financial statements;
- discharge the sole member of the Board of Management from liability for his conduct of business in 2018;
- discharge the Supervisory Board from liability for its supervision of the management;
- approve that no dividend will be distributed.

### RoodMicrotec in 2018

Following the successful turnaround of both business and operations in 2017, the management team continued to build on their ability to take the company forward. Early in the year during the annual discussions between employees and the Supervisory Board, it was clear that motivation levels have improved largely through the improvements in internal communication. It was noted there is more engagement and shared ownership of the company's business interests. This is a crucial cultural change which is essential to support and master their growth plan. Leadership is key to success and the Supervisory Board can confirm this to be firmly in place and developing well.

On the business side, 2018 started in a good way with the company well on its plan. The first half was fairly robust with new projects on track. However, the second half began to soften due to global political uncertainties and general market trends not least in the automotive sector where issues regarding the long term move to electrification are proving difficult. This was clearly manifested in the results and it is a credit to the management team that they have proven their ability to manage a general market downturn and bring the company safely through it. We can see from the change and flow of projects that management have this soft period well under control and have sufficient breadth of business type to mitigate the normal risks associated with market sector downturns.

In the various and regular meetings with the Board of Management we continue to discuss strategy and how it fits in with the trends outlined in the report of the Board of Management. Responding to these or anticipating them as effectively as possible offers opportunities and it is encouraging that the two boards work well together to meet the challenges ahead. Overall, it was concluded that RoodMicrotec is on the right track. In 2019, the further rollout of the strategy and reaching the ambitious goals in revenue and profit is high on the agenda of the Board of Management and therefore also the Supervisory Board.

### Supervisory Board meeting schedule

The Supervisory Board gives the highest priority to good governance practice. The supervisory board met with the Board of Management 11 times during 2018. In addition to the regular meetings they met during the general shareholders meeting and the bondholders meeting. Additional two meetings were held between individual members of the management and the Supervisory Board.

These meetings were held in various locations of mutual convenience including corporate head office, at the production sites in Stuttgart and Nördlingen and at convenient locations close to other coinciding meetings such as visits to customers. They were held either face to face or by using teleconferencing.

In the Supervisory Board meetings, the following topics were reviewed and discussed extensively:

- the business update, operational and financial targets;
- development and changes in the management team and appointments;
- the financial position, liquidity & banking relations;
- relevant capital expenditures;
- strategic M&A options;
- the scope and strategy of the company and the related risk profile;
- corporate governance issues;
- communication with investors & analysts;
- succession planning and recruitment;
- risk management;

- remuneration;
- financial audit;
- publishing of press releases.

The Supervisory Board met with representatives of the Works Councils both in Stuttgart and Nördlingen in the absence of the Board of Management to discuss the position of the company. The meetings were very constructive, with the teams on both sites expressing their thoughts on areas of improvement.

The Supervisory Board was able to provide personal support on several occasions throughout the year for strategic business discussions both internally and externally with potential alliance partners.

### Supervisory Board composition and evaluation

With the exception of one remuneration committee meeting there were no separate committee meetings in 2018 as all topics were discussed in the joint meetings with the Board of Management following an independent review by the Supervisory Board.

The regular monthly meetings of the combined boards that operated through 2018 provided a continuous evaluative process and provided an open dialog platform for sound governance of the company.

The three members of the Supervisory Board and all procedures of the Board are considered adequate for a company of this size.

During the year the Supervisory Board considered their contribution to the company and its shareholders. It was concluded unanimously that we would align our term dates to end in 2019. From thereon and from a clean sheet of paper we would conclude the optimal nature and structure of a Supervisory Board for the next phase in the company's development.

	<b>Start Current Term</b>	<b>End Current Term</b>
<b>Victor George Tee (Chairman)</b>	2017	May 2019
<b>Herman Johan Bartelink</b>	2017	May 2019
<b>Jeroen Bertil Tuik</b>	2017	May 2019

Zwolle, 04<sup>th</sup> April 2019

#### The Supervisory Board

V.G. Tee, chairman

H.J. Bartelink

J.B. Tuik

## RISK AND RISK MANAGEMENT

### General

Our policy is aimed at growth in conjunction with a relative reduction of market risks. Operational, market-related and financial aspects play an ever-increasing role in achieving this.

### Operational

**Sales** in Test Operations inclusive Test Engineering make up approx. 45% (2017: 35%) of total sales. In this sector we have a strong reputation and we have built up a relationship of trust with our major customers. Sales in this sector as part of the total sales is stable over the last five years. In response to this trend – moving semiconductor manufacturing to Asia - we have strongly increased the spread within our total customer base over the past few years, which has reduced risk. While we have long-term contracts with many of our major customers, these contracts do not include purchase guarantees. Risks are mitigated by intensive communication with customers on anticipated volumes. Other sales are made in the sectors Supply Chain Management and in the merged department Qualification & Failure Analysis. We focus on high-end work and long-term projects specifically in Supply Chain Management, which further reduces operating risks.

**Costs** - Globalization is putting increasing pressure on prices in all areas, but particularly in our Test Operations. This requires constant focus on improving cost management, reducing costs, optimizing the test equipment load and intelligent solutions. Salaries and associated pension commitments are also monitored closely, as they make up more than half of our total costs. Using temporary staff is vital for RoodMicrotec's operations in Germany in order to reduce risks. Currently, there are many employees on permanent staff in our Test Operations. In other market sectors in which high-quality staff is being used, there is a limited staff surplus cost risk. There is a shortage of highly trained technical staff in Europe.

**Qualified staff** - In view of the advanced technological level of our operations, the company is highly dependent on qualified staff. As it is not always easy to find such staff in the employment market, we have opted to set up our own training program in order to reduce the risk of not being able to attract qualified staff. We also collaborate with engineering firms and are in close contact with universities in order to attract bachelor and master students. The fact that RoodMicrotec has a branch in the university city Stuttgart puts it in a better position to recruit high-quality staff.

### Market risks

We operate in a highly cyclical market, which shows a slowdown beginning mid 2018 but still with a significant growth rate in 2018. In general, the semiconductor market will grow in the future but with expected lower growth in the coming years. The demand of semiconductors, however, continues to rise, also in Europe. We have opted for this growth segment – the supply chain from Europe to Asia and back to Europe and the rest of the world – from the point of view of risk management as it better safeguards continuity.

In the past, various customers (IDMs) used RoodMicrotec as a way to generate additional sales in a short time span, which increased the company's exposure to market fluctuations. In view of this, we reduced our risk and are increasingly focusing on customers who wish to outsource their test activities on a long-term basis, such as Fabless Companies and OEMs. This exposes the company to the upswings and downturns of the market, but also allows it to generate sales during downturns to customers who opt for outsourcing.

RoodMicrotec's ideal and preferred form of outsourcing is for customers to contract out the entire supply chain to RoodMicrotec, including all their engineering, qualification & failure analysis and test activities. The company offers a turnkey solution to the automotive, industrial, healthcare and HiRel / Aerospace markets. Not being able to hire good engineers presents a significant risk. RoodMicrotec mitigates its risks through an active personnel policy seeking a balance between permanent and temporary staff on the one hand and young and experienced staff on the other.

### Competition

In Europe we face competition from a number of countries. We aim to minimize our risk as an independent European semiconductor company by basing our sales and operations in the Netherlands, Germany and Britain and having agents in France, Italy, Switzerland, Russia, Israel and India as our main partners.

## Finance

The companies' activities are exposed to a variety of financial risks: market risks (including currency risks), credit risks and liquidity risks. The companies' overall risk management program - with respect to the use of the main financial instruments - are described below.

**Financial markets and liquidity risks** - We operate in a capital-intensive market, where significant fluctuations are a normal phenomenon. Dealing with such fluctuations requires having enough available cash. The financial market circumstances may influence and/or damage the financing of our activities. Taking into account fluctuations in the financial markets, we prepare sensitivity analysis in our 5-years-rolling forecasts, cash flow prognosis, and investment budgets. Based on these analyses, we conclude in early stage equity line arrangements with our large investors and / or loan contracts.

**Currency risks** - So far, we have made most of our sales in Europe. Since most of our work is invoiced in Euros we have only limited exposure to currency fluctuations. We try to limit our currency risks as much as possible, and when transactions in other currencies increase will hedge our currency risks. We will continue to actively monitor this aspect, certainly in view of the international operations that are under development.

**Insurance** - We have taken out adequate liability insurance for production faults, which is particularly important for the automotive industry.

## Internal risk management and control system

For our IT systems we have opted for an integral tandem solution in one location. To control risks, the mainframes that are part of the tandem are physically separated and situated in special fireproof environments. All sites are connected to the integral tandem system, so as to reduce risks.

The various companies, including the holding company in the Netherlands, the branch offices and the operational units, work with the same system, which allows for better monitoring of financial results.

Based on what is summarized above, RoodMicrotec feels that its internal risk management and control systems provide a reasonable degree of assurance that the financial reporting does not contain any material inaccuracies and that this system has worked adequately in the year under review. There are no reasons to believe that the system should not work adequately in the current financial year.

## Strategic plans

Strategic plans are discussed annually and adjusted where necessary and then translated into budgets that are regularly compared to the actual state of affairs. Monthly reports are prepared that may give rise to corrective actions. The internal quoting process is subjected to a monthly (quality) audit, which investigates whether internal guidelines have been adhered to.

## Internal evaluations and external audits

A schedule is drawn up every year for internal evaluations and external audits. This schedule is then acted upon by our employees and external auditors. Both the internal evaluations and the external audits may result in corrective measures; the management letters arising from the external audits are discussed by the Supervisory Board (audit committee).

## Audit committee

The audit committee comprises all members of the Supervisory Board. The Supervisory Board meets at least four times per year.

## Letter of representation

Every year, the RoodMicrotec Board of Management signs a detailed statement concerning financial reports and external audits.

## CORPORATE SOCIAL RESPONSIBILITY

### 1. Introduction

Underpinning RoodMicrotec's commitment to responsible corporate citizenship and the pursuit of a sustainable future - economic, social and environmental - the Code of Conduct set out guiding principles on integrity and ethics in business conduct. They govern RoodMicrotec's business decisions and actions throughout the world and apply equally to corporate actions and to the behaviour of individual employees in conducting RoodMicrotec's business. They are subject to applicable laws.

The Code of Conduct are not all-encompassing but formulate minimum requirements of behavior. They leave free to specify further local rules of business conduct. The Code of Conduct, which have been adopted by the Board of Management and approved by its Supervisory Board, are reviewed on a regular basis and revised if necessary.

### 2. General commitment

RoodMicrotec's mission is to be a knowledge and technology driven service provider in the field of modern devices that is able to handle the whole chain for complex requirements as well as individual services. In a world where technology increasingly touches every aspect of our daily lives, RoodMicrotec aspires to be a leading solutions provider in the semiconductor industry in the areas of Automotive, Industrial, Healthcare and HiRel / Aerospace.

RoodMicrotec wishes to be a responsible partner in society, acting with integrity towards its shareholders, customers, employees, suppliers and business partners, competitors, governments and their agencies and others who can be affected by its activities. RoodMicrotec duly observes the applicable rules of the law of the countries in which it operates and regularly reviews its interests and those of affected persons or entities in order to ensure a healthy, long-term relationship with them. RoodMicrotec endeavors to adapt to local situations in order to take the most appropriate approach to possible problems within the bounds of applicable law and responsible conduct. In this respect RoodMicrotec supports the principle of dialogue and cooperation with all parties involved.

#### 2.1. Human rights

With due regard to the Universal Declaration of Human Rights, which states that all parties in society, including corporate persons, have a duty to respect and safeguard human rights, and within the framework of the legitimate role of businesses, RoodMicrotec supports and respects human rights and strives to ensure that its activities do not make it an accessory to infringements of human rights.

#### 2.2. Free market competition

RoodMicrotec supports the principle of free market competition as a basis for conducting its business and observes applicable competition laws and regulations.

#### 2.3. Product safety

RoodMicrotec aims, at all times, to supply safe products and services.

#### 2.4. Privacy

The privacy of personally identifiable information about customers, employees, business partners and other individuals will be protected.

#### 2.5. Environmental protection

Consistent with RoodMicrotec's commitment to sustainable development, it will do all that is reasonable and practicable to minimize any adverse effects of its activities on the environment.

### 3. Commitment towards customers

RoodMicrotec goal is to constantly delight each customer with breakthroughs both large and small. To this end, the company seeks to maintain an ongoing dialogue with its customers. RoodMicrotec is committed to listen to and learn from them, so that it is able to design and deliver the solutions they really want and need. RoodMicrotec will always deal with its customers in a fair and forthright manner, maintaining the highest levels of integrity.

### 4. Commitment towards shareholders

It is of central importance to RoodMicrotec to conduct its operations in accordance with the highest standards of internationally accepted principles of good corporate governance. RoodMicrotec aims to achieve long term value creation and a satisfactory return on equity, with the intention if possible, of providing a sustainable dividend payment to shareholders, while at the same time retaining sufficient funds in the company to generate profitable growth. RoodMicrotec attaches great value to its relations with its shareholders and the financial markets and provides timely, regular and reliable information on its activities, structure, financial position and performance.

## 5. Commitment towards employees

RoodMicrotec values its employees as a key resource. An atmosphere of good employee communication, involvement and responsibility is of central importance, and an employee's personal development and optimum use of talents is encouraged.

### 5.1. Employee relations

RoodMicrotec shall – within the framework of (local) law and common local practice – inform its employees at least once a year about the general course of the business.

### 5.2. General statement about Conventions of the ILO

The Conventions of the International Labor Organization are addressed to member states of the International Labor Organization, not to individuals or companies. RoodMicrotec supports the aim of the International Labor Organization to arrive at universally accepted labor standards. RoodMicrotec has adopted internal procedures and guidelines with respect to topics covered by the seven Fundamental Conventions of the International Labor Organization, such as forced labour, the right to organize, collective bargaining, discrimination and child labor.

### 5.3. Right to organize

RoodMicrotec recognizes and respects the freedom of employees to choose whether or not to establish or to associate with any organization of their own choosing (including labor unions) without RoodMicrotec's prior authorization. RoodMicrotec will not make the employment of a worker subject to the condition that he/she shall not join a union or shall relinquish trade union membership. Furthermore, RoodMicrotec will not cause the dismissal of – or otherwise prejudice – a worker by reason of union membership. RoodMicrotec will not interfere with or finance labor organizations or take other actions with the object of placing such organization under the control of RoodMicrotec.

### 5.4. Collective bargaining

RoodMicrotec respects – within the framework of law, regulations and prevailing labor relations and employment practices – the right of its employees to be represented by labor unions and other employee organizations. RoodMicrotec will engage in negotiations, either on its own behalf or through employers' associations, with a view to reaching agreement on employment conditions.

### 5.5. Employment conditions

Employees will be informed about the outcome of the negotiations on employment conditions with employee representatives, if applicable, and RoodMicrotec shall ensure that employment policies regarding pay and/or job grading, working hours, health and safety, are clear and transparent and fully compliant with all applicable national laws.

### 5.6. Discrimination

Every employee has equal opportunities and will be treated equally in employment and occupation. RoodMicrotec offers equal pay for equal work performed at equal levels at similar locations. No form of harassment or discrimination in respect of employment and occupation will be tolerated, such as discrimination based on race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.

### 5.7. Health and safety

RoodMicrotec will do all that is reasonable and practicable to protect the health and safety of its employees.

### 5.8. Equal and fair treatment

Every employee has equal opportunities and will be treated equally in employment and occupation regardless of personal background, race, gender, nationality, age, sexual preference or religious belief. The same applies to the recruitment of employees. RoodMicrotec strives to offer equal pay for equal work performed at equal levels at similar locations. No form of harassment or discrimination will be tolerated.

### 5.9. Wages and payment

Remuneration must be consistent with the provisions of all applicable wage laws, including those relating to minimum wages, overtime hours and legally mandated benefits. Any disciplinary wage deductions must be in conformity with local law. Wages will be paid regularly in check form, via bank account, or in exceptional cases, in cash. Employees will be informed about the composition of their pay and benefits in a detailed and clear manner.

### 5.10. Working hours

Working weeks are not to exceed the maximum set by local law and should not be more than 60 hours, including overtime, except in emergency or exceptional circumstances to meet short-term business demand. Employees will be allowed at least one day off per seven-day period. Overtime work shall be voluntary, unless agreed in a collective labor agreement or union contact, or, in emergency or exceptional circumstances, to meet short-term business demand.

### 5.11. Employee development

Both RoodMicrotec and its employees have a commitment to each other to make every effort to ensure high levels of performance and employability. To this end, RoodMicrotec will provide relevant training opportunities to its employees.

### **5.12. Harassment**

RoodMicrotec will not tolerate harsh and inhumane treatment, including sexual harassment, sexual abuse, corporal punishment, mental or physical coercion or verbal abuse of RoodMicrotec employees, or the threat of any such treatment.

## **6. Commitment towards suppliers and business partners**

RoodMicrotec pursues mutually beneficial relationships with its suppliers and business partners. It seeks to award business to suppliers and business partners who are committed to act fairly and with integrity towards their stakeholders and who observe the applicable laws of the countries in which they operate.

## **7. Assets and information**

### **7.1. Use and protection of assets**

Each employee is responsible for the proper use, protection and conservation of RoodMicrotec's assets and resources as well as confidential information disclosed to RoodMicrotec by its business partners. RoodMicrotec's assets and resources as well as any opportunities arising by virtue of one's position, are to be used solely to pursue and achieve RoodMicrotec's goals and not for personal benefit.

### **7.2. Improper disclosure**

RoodMicrotec regards information for the purpose of its business as a corporate asset that must be protected against loss, infringement and improper use and disclosure.

RoodMicrotec is committed not to make use of information disclosed to it by a third party if it is suspected that the discloser thereby violates an obligation of confidentiality, unless the information:

- is generally available to the public other than as a result of disclosure by RoodMicrotec;
- has been independently developed by RoodMicrotec;
- or becomes available to RoodMicrotec either on a non-confidential basis from a third party who is not bound by any confidentiality obligations or by operation of law.

### **7.3. Insider trading**

All employees shall comply with RoodMicrotec's insider trading rules. This means that non-public information which might influence the market price of RoodMicrotec shares shall be kept in strict confidence until publicly released by authorized management. Furthermore, employees who have sensitive information which could influence the price of RoodMicrotec shares and related rights, must refrain from directly or indirectly executing transactions in RoodMicrotec shares and related rights. Additionally, employees have to comply with statutory rules and regulations concerning insider trading with respect to securities of other listed companies.

## **8. Engagement outside RoodMicrotec**

RoodMicrotec expects its employees to be fully dedicated to the proper fulfilment of their jobs and to avoid any (potential) conflict of their personal or business activities and financial interests with such commitment. Any engagement outside RoodMicrotec and any financial interest (direct or indirect such as via a family member or acquaintance) which could give rise to a conflict of interest should always be promptly disclosed to the next level of management.

Financial reward received for services rendered to third parties should be made over to the Company. However, if the service in question is rendered largely in the employee's own private time, management may grant the employee permission to retain all or part of the compensation. Compensation received in respect of part-time posts held, professional not direct related to RoodMicrotec, with permission, may be retained. This provision does not apply to compensation for services rendered by a person in his private time, which are not related in any manner to his professional activities for RoodMicrotec.

## **9. Business integrity**

### **9.1. Bribery; records of transactions**

RoodMicrotec insists on honesty, integrity and fairness in all aspects of its business. Bribes in any form are unacceptable; commission payments and personal gifts or favors may only be made or accepted in strict accordance with these directives. RoodMicrotec strives to comply with the highest levels of transparency and accountability throughout the company. Records of transactions should be maintained in an accurate, complete and timely manner in accordance with RoodMicrotec accounting principles. No unrecorded funds or assets should be established or maintained.

## 9.2. Gifts

The acceptance of gifts or personal favors of commercial value is not acceptable. It is to be made clear to third parties that personal favors can only influence the business relationship negatively and that business decisions are based solely on benefits to the Company and not on considerations of past or future personal gain. In general, a gift (the value of which does not exceed € 50) may be accepted if given voluntarily and if there is no reasonable likelihood that it will influence your judgment or actions in performing duties for RoodMicrotec.

When refusing a gift would be discourteous, the gift must be promptly turned over to the compliance officer. RoodMicrotec will, in case that it happens, consider donating such gifts to charitable institutions. If you have any doubts in a given situation, please discuss with your management or the compliance officer.

Some other guidelines with regard to gifts:

- Personal financial assistance of any kind provided by a supplier or another business contact, other than a financial institution acting in the ordinary course of business, is prohibited.
- Attendance at sport events, restaurants, bars, shows, etc. as the guest of a business contact is permissible only up to two times a year per business contact and only if the hosting company representative is present.
- Travel and overnight accommodation paid for by a (potential) supplier is not allowed.

## 9.3. Third-party interests

Employees are not allowed to have any direct or indirect financial interest in a supplier or competing company with the exception of a financial interest in a publicly traded company.

## 9.4. Payments to third parties

Any payment for a company's products or services must be made to the company, not to an individual. All payments must be properly and fairly recorded in appropriate books of account available for inspection. There must be no 'off the books' or secret accounts. No payments will be channeled through an Agent. All payments made to an Agent should be intended for the Agent itself. Cash payments are not permitted; all payments should be made to a bank account designated in writing. Payments to a so-called numbered account with a bank are not permitted. RoodMicrotec only makes payment to the provider of goods or services received. A request to divert a payment to an entity or person offshore shall always be rejected

## 9.5. Commission payments

Commission payments to third parties is too difficult and complex a topic to be addressed exhaustively in specific guidelines. The objective is to make sure that the hard rule laid down in the Code of Conduct on the prohibition of bribes in any form is not circumvented by commission payments. Against this background, the acceptability of a commission payment has to be determined on the basis of a thorough evaluation and assessment, by responsible management, of all relevant information in respect of the proposed commission as well as the third party to whom it is to be paid. In this respect, it is recommended that Board of Management consult with Supervisory Board. In the event of reasonable doubt as to compliance to local and international laws and regulations and/ or the Code of Conduct, and if this doubt cannot be eliminated in consultation with a legal advisor, the payment should not be made, and the contract should not be concluded. Any commission payment to a third party should be justified by clear and demonstrable services rendered by that party to RoodMicrotec. In the event of the commission payment also covering a substantial part of the activities that are generally included in cost of sales, the level of the commission may vary from country to country. In this respect it is recommended that management compare the selling price of the order with quotations offered by competitors. If the RoodMicrotec price differs substantially from that of the competitors, management has to make sure that the difference is not due to a difference in the amount of commission to be paid. A commission payment equaling a double-digit percentage is not acceptable, except in the event of extreme circumstances and without prejudice to the above.

## 9.6. Agents, distributors, commissioners

The remuneration of an agent, distributor, commissioner and the like (hereinafter: Agent) may not exceed the normal and reasonable commercial rates for the legitimate service rendered by the agent. An Agent shall be appointed by virtue of a service contract in writing, which shall always incorporate a reference to the Code of Conduct. All such contracts shall be registered in the country. The background of the Agent must be reviewed thoroughly by the person proposing the Agent in close cooperation with the country management; evidence of such review must be available in the file. An Agent may not be a Government official. A record will be maintained of the names and terms of engagement of all Agents.

## 9.7. Facilitating payments

Facilitating payments are small payments made in money or in kind, which have to be made, in accordance with publicly known and widely followed local custom and practice, in connection with the performance, by officials in documentation, customs clearance and other matters, of their normal duties. A characteristic of facilitating payments is that the service obtained as the result of such payment represents the legitimate function of the official concerned and does not render undue advantage to the payer in comparison with other companies. Facilitating payments do not fall within the scope of the OECD Convention on Combating Bribery of Foreign Public Officials in International Business

Transactions. In some countries, however, the legislation to implement the Convention also covers facilitating payments, as a consequence whereof an officer (or, under certain circumstances, the company) who has made such payments abroad, could be prosecuted in his home country. In general, RoodMicrotec is opposed to the making of facilitating payments. The Company will promote measures to eliminate such practices; at all events applicable laws and regulations should be complied with.

#### **9.8. Political payments**

RoodMicrotec companies shall not pay advisory fees, make payments or donations, in money or in kind, to political parties, political organizations or individual politicians. Subject to applicable laws and regulations, exceptions to this prohibition may be made – where legally permissible – only if explicitly approved by the Board of Management. In those exceptional cases where payments or donations are made, all requirements regarding public disclosure of such payments or donations shall be complied with in full.

#### **9.9. Money laundering**

RoodMicrotec will not participate in "money laundering" by entering any arrangement which is known or there is reason to suspect that it will be used to facilitate any acquisition, retention, use or control of any property or money intended to disguise the proceeds of crime. An employee who suspects a situation of money laundering shall inform the Compliance Officer.

### **10. Internet, Intranet and e-mail use**

No RoodMicrotec employee may use RoodMicrotec's internal e-mail system, Intranet or Internet in any way that is illegal or might otherwise damage RoodMicrotec's reputation, such as by:

- deliberately accessing, creating, displaying, transmitting, soliciting, printing, downloading or otherwise disseminating messages, information or material that is or could be construed as threatening, fraudulent, pornographic, discriminatory, sexually oriented, abusive, libelous, derogatory, defamatory, obscene, harassing, disparaging or otherwise unlawful or inappropriate;
- deliberately copying, reproducing, transmitting, distributing, posting or otherwise disseminating or using materials in violation of intellectual property laws or any other applicable law or regulations;
- knowingly "spamming" (the practice of sending e-mail in bulk to (random) e-mail accounts), or using information captured via the Intranet or the Internet for "spamming";
- knowingly sending unsolicited e-mails, such as product promotions etc., to individual consumers unless they opted-in to such communications;
- using it for personal gain (e.g. through on-line gambling or non-RoodMicrotec business activities).

No RoodMicrotec employee may use RoodMicrotec's internal e-mail system, Internet (mail) or Intranet in any way that may interrupt its efficient and effective operation or compromise the security of RoodMicrotec's or third parties' systems, such as:

- purposely circumventing security measures to gain unauthorized access to systems or data, whether belonging to RoodMicrotec or a third party;
- purposely compromising any computer system, whether belonging to RoodMicrotec or a third party (e.g. through deliberate introduction of a virus or hacking);
- intentionally creating an excess volume of non-business communication that may impair operation of the messaging environment.

RoodMicrotec may take measures to monitor compliance with this Directive and with local laws.

### **11. Observance of the Code of Conduct**

#### **11.1. Sanctions**

All RoodMicrotec employees must comply with the Code of Conduct. Violation may lead to disciplinary action, including dismissal, notwithstanding any further civil or criminal action that may be taken.

#### **11.2. Whistle-blower policy**

In order to promote the reporting of violations of the Code of Conduct, a whistle-blower policy is in place, enabling employees to submit complaints on an anonymous basis without fear of the complaints leading to disciplinary action.

#### **11.3. Compliance**

Compliance with the Code of Conduct is monitored via a compliance officer, who regularly reports to the Board of Management and Supervisory Board on the deployment of the Code of Conduct and on ethical issues in general.

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Reporting on compliance with the Code of Conduct is also an integral part of the Corporate Governance statement issued annually by the Board of Management, Supervisory Board and Corporate Management Team as part of a cascade process leading to certification of the RoodMicrotec's annual accounts. Compliance processes and procedures are reviewed by RoodMicrotec's Supervisory Board.

**11.4. Compliance Officer**

It is recommended that the chief financial officer (CFO) should be appointed as Compliance Officer. In this capacity he/she reports to the Board of Management and Supervisory Board respectively

Further information and a downloadable version: [www.roodmicrotec.com](http://www.roodmicrotec.com)

## CORPORATE GOVERNANCE

RoodMicrotec N.V. respects the Dutch corporate governance code (hereinafter referred to as the Code) and considers its application in the light of the company's scale. In this context, RoodMicrotec has decided on a trend-follower position. The system of the Code will be leading in this chapter. The chapter numbers correspond to the chapters of the Code.

RoodMicrotec is very aware of the role it plays in society. Consequently, we judge ourselves by society's standards, thereby indirectly rendering account for our activities to all our stakeholders:

- customers
- investors
- employees
- our immediate social environment.

We also engage with these groups, for example through seminars with customers, investors and the press, regional business relations, and through open and transparent discussions with our employees. RoodMicrotec's General Business Principles and whistle blower policy may be inspected on our website.

Shareholders are free to pursue their own interests within the boundaries of reasonableness and fairness, yet mindful of corporate social responsibility. They are in principle not bound by the interests of the company and the business it runs. We are happy to enter into discussions with shareholders if they do not accept the company's explanation of why it has resolved to deviate from any best-practice provision.

### Chapter 1. Long-term value creation

#### 1.1.1 – 1.1.4 Long-term value creation strategy

The management board is responsible for the continuity of the company and its affiliated enterprise. The management board focuses on long-term value creation for the company and its affiliated enterprise and takes into account the stakeholder interests that are relevant in this context. The supervisory board monitors the management board in this.

The management board develops a view on long-term value creation by the company and its affiliated enterprise and formulates a strategy in line with this. Depending on market dynamics, it may be necessary to make short-term adjustments to the strategy.

The management board engages with the supervisory board early on in formulating the strategy for realizing long-term value creation. The supervisory board supervises the manner in which the management board implements the long-term value creation strategy.

In the management report, the management board gives a more detailed explanation of its view on long-term value creation and the strategy for its realization, as well as a description of which contributions were made to long-term value creation in the past financial year.

#### 1.2.1 – 1.2.3 Risk management

RoodMicrotec has adequate internal risk management and control systems in place. The management board is responsible for identifying and managing the risks associated with the company's strategy and activities. The majority of the risk management systems within the company is based on the structure from the ISO9001-2015 standard.

The management board will identify and analyze the risks associated with the strategy and activities of the company and its affiliated enterprise. Based on the risk assessment, the management board will design, implement and maintain adequate internal risk management and control systems.

The management board monitors the operation of the internal risk management and control systems and will carry out a systematic assessment of their design and effectiveness at least once a year. This monitoring covers all material control measures relating to strategic, operational, compliance and reporting risks.

#### 1.3.1 – 1.3.6 Internal audit function

Since RoodMicrotec does not have an internal audit function, the supervisory board will assess annually whether adequate alternative measures have been taken and will consider whether it is necessary to establish an internal audit department.

#### 1.4.1 – 1.4.3 Risk management accountability

The management board will render account of the effectiveness of the design and the operation of the internal risk management and control systems. The management board discusses the effectiveness of the design and operation of the internal risk management and control systems with the supervisory board. The management report will render account of the accountability as well as the insight made into the risk management.

### **1.5.1 – 1.5.4 Role of the supervisory board**

The supervisory board supervises the policies carried out by the management board and the general affairs of the company and its affiliated enterprise. In so doing, the supervisory board also focuses on the effectiveness of the company's internal risk management and control systems and the integrity and quality of the financial reporting.

RoodMicrotec does not have a separate audit committee due to the size of the company. The functions of the audit committee are handled by the supervisory board.

- The supervisory board will focus on monitoring the management board with regard to:
- relations with, and compliance with recommendations and following up of comments by, the external auditors;
- the funding of the company;
- the application of information and communication technology by the company, including risks relating to cyber security; and
- the company's tax policy.

### **1.6.1 – 1.6.5 Appointment and assessment of the functioning of the external auditor**

The supervisory board will submit the nomination for the appointment of the external auditor to the general meeting and supervises the external auditor's functioning.

The supervisory board gives the external auditor a general idea of the content of the reports relating to their functioning. The supervisory board will formulate the engagement for the external auditors to audit the financial statements. The management board plays a facilitating role in this process. In formulating the terms of engagement, attention must be paid to the scope of the audit, the materiality to be used and remuneration for the audit.

The main conclusions of the supervisory board regarding the external auditor's nomination and the outcomes of the external auditor selection process will be communicated to the general meeting. The company should publish a press release in the event of the early termination of the relationship with the external audit firm. The press release should explain the reasons for this early termination.

### **1.7.1 – 1.7.6 Performance of the external auditor's work**

The supervisory board and the external auditor will discuss the audit plan and the findings of the external auditor based on the work the external auditor has undertaken. The management board and the supervisory board should maintain regular contact with the external auditor.

The management board will ensure that the external auditor receives all information that is necessary for the performance of his work in a timely fashion. The external auditor will discuss the draft audit plan with the management board before presenting it to the supervisory board.

The supervisory board will determine whether and, if so, how the external auditor should be involved in the content and publication of financial reports other than the financial statements. The supervisory board should meet with the external auditor as often as it considers necessary, but at least once per year, outside the presence of the management board.

The supervisory board should be permitted to examine the most important points of discussion arising between the external auditor and the management board based on the draft management letter or the draft audit report. The external auditor should in any event attend the meeting of the supervisory board at which the report of the external auditor on the audit of the financial statements is discussed.

## **Chapter 2. Effective management and supervision**

### **2.1.1 – 2.1.10 Composition and size**

The management board and the supervisory board are composed such that the requisite expertise, background, competencies and – as regards the supervisory board – independence are present for them to carry out their duties properly. The size of these two bodies reflects these requirements.

The supervisory board should prepare a profile, taking account of the nature and the activities of the enterprise affiliated with the company. Information about each supervisory board member will be included in the report of the supervisory board.

RoodMicrotec does not have an executive committee due to the size of the company.

The supervisory board should draw up a diversity policy for the composition of the management board and the supervisory board.

The composition of the supervisory board is such that the members are able to operate independently and critically vis-à-vis one another, the management board, and any particular interests involved. RoodMicrotec is following the

definition in chapter 2.1.8 when defining independence of the supervisory board members. The chairman of the supervisory board should not be a former member of the management board of the company and should be independent.

The report of the supervisory board states that, in the opinion of the supervisory board, the independence requirements referred to in best practice provisions have been fulfilled.

### **2.2.1 – 2.2.8 Appointment, succession and evaluation**

The supervisory board ensures that a formal and transparent procedure is in place for the appointment and reappointment of management board and supervisory board members, as well as a sound plan for the succession of management board and supervisory board members, with due regard to the diversity policy. The functioning of the management board and the supervisory board as a collective and the functioning of individual members should be evaluated on a regular basis.

A management board member is appointed for a maximum period of four years. A member may be reappointed for a term of not more than four years at a time. A supervisory board member is appointed for a period of four years and may then be reappointed once for another four-year period. The supervisory board member may then subsequently be reappointed again for a period of two years, which appointment may be extended by at most two years.

A member of the supervisory board or the management board should retire early in the event of inadequate functioning, structural incompatibility of interests, and in other instances in which this is deemed necessary by the supervisory board.

RoodMicrotec does not have a separate selection and appointment committee due to the size of the company. The functions of the selection and appointment committee is handled by the supervisory board.

At least once per year, outside the presence of the management board, the supervisory board should evaluate its own functioning and that of the individual supervisory board members and should discuss the conclusions that are attached to the evaluation.

At least once per year, outside the presence of the management board, the supervisory board should evaluate both the functioning of the management board as a whole and that of the individual management board members and should discuss the conclusions that must be attached to the evaluation, such also in light of the succession of management board members.

### **2.3.1 – 2.3.11 Organization of the supervisory board and reports**

The supervisory board ensures that it functions effectively. It is the responsibility of the supervisory board as an organ and of the individual members of the supervisory board to obtain information and forming an independent opinion.

The supervisory board does not have any committees, all items are handled by the supervisory board. The company has appointed a company secretary, who ensures the usage of certain procedures and ensures that the company operates in accordance with legal obligations and the articles of association. The vice-chairman of the Supervisory Board, or, if no such person has been designated, one of the other supervisory directors, will replace the chairman as required. The vice-chairman will also serve as contact for individual supervisory directors and managing directors in matters regarding the functioning of the chairman.

A delegated supervisory board member is a supervisory board member who has a special task. The delegation may not extend beyond the responsibilities of the supervisory board itself and may not include the management of the company. A supervisory board member who temporarily takes on the management of the company, where the management board members are absent or unable to fulfil their duties, should resign from the supervisory board.

The annual statements of the company include a report by the supervisory board. In this report, the supervisory board renders account of the supervision conducted in the past financial year.

### **2.4.1 – 2.4.9 Decision making and functioning**

The management board and the supervisory board ensure that decisions are made in a balanced and effective manner whilst taking account of the interests of stakeholders. The management board ensures that information is provided in a timely and sound manner. The management board and the supervisory board keep their knowledge and skills up to date and spend sufficient time on their duties and responsibilities. They should ensure that, in performing their duties, they have the information that is required for effective decision-making.

The chairman of the supervisory board should act on behalf of the supervisory board as the main contact for the management board.

The management board and the supervisory board should each conduct an annual review for their own organ to identify any aspects with regard to which the supervisory board members and management board members require training or education.

**2.5.1 – 2.5.5 Culture**

The management board is responsible for creating a culture aimed at long-term value creation for the company and its affiliated enterprise. The supervisory board should supervise the activities of the management board in this regard. The management board has generated a code of conduct and monitor its effectiveness and compliance with this code, both on the part of itself and of the employees of the company.

**2.6.1 – 2.6.4 Misconduct and irregularities**

The management board and the supervisory board should be alert to indications of actual or suspected misconduct or irregularities. The management board should establish a procedure for reporting actual or suspicion of misconduct or irregularities and take appropriate follow-up action on the basis of these reports.

The supervisory board monitors the management board in this.

The external auditor should inform the chairman of the supervisory board without delay if, during the performance of his duties, he discovers or suspect an instance of misconduct or irregularity.

**2.7.1 – 2.7.6 Preventing conflicts of interest**

Any form of conflict of interest between the company and the members of its management board or supervisory board should be prevented. To avoid conflicts of interest, adequate measures should be taken. The supervisory board is responsible for the decision-making on dealing with conflicts of interest regarding management board members, supervisory board members and majority shareholders in relation to the company.

All transactions in which there are conflicts of interest with management board members or supervisory board members should be agreed on terms that are customary in the market. Decisions to enter into transactions in which there are conflicts of interest with management board members or supervisory board members that are of material significance to the company and/or to the relevant management board members or supervisory board members should require the approval of the supervisory board. All transactions between the company and legal or natural persons who hold at least ten percent of the shares in the company should be agreed on terms that are customary in the market.

The company should not grant its management board members and supervisory board members any personal loans, guarantees or the like.

**2.8.1 – 2.8.3 Takeover situations**

In the event of a takeover bid for the company's shares or for the depositary receipts for the company's shares, in the event of a private bid for a business unit or a participating interest, where the value of the bid exceeds the threshold referred to in Section 2:107a(1)(c) of the Dutch Civil Code, and/or in the event of other substantial changes in the structure of the organization, both the management board and the supervisory board should ensure that the stakeholder interests concerned are carefully weighed and any conflict of interest for supervisory board members or management board members is avoided. The management board and the supervisory board should be guided in their actions by the interests of the company and its affiliated enterprise.

**Chapter 3. Remuneration****3.1.1 – 3.1.3 Remuneration policy – management board**

The remuneration policy applicable to management board members should be clear and understandable, should focus on long-term value creation for the company and its affiliated enterprise, and take into account the internal pay ratios within the enterprise. The remuneration policy should not encourage management board members to act in their own interest, nor to take risks that are not in keeping with the strategy formulated and the risk appetite that has been established. The supervisory board is responsible for formulating the remuneration policy and its implementation.

RoodMicrotec does not have a separate remuneration committee due to the size of the company. The functions of the remuneration committee are handled by the supervisory board.

The remuneration of the Board of Management consists of a fixed salary plus a variable part that will be partially paid out in options. There is a balance between a fixed and variable part of the compensation. The calculation is transparent. The granting of options is subject to the achievement of targets set by the Supervisory Board in the context of the company's strategic plan. The achievement of the targets by the Board of Management will be evaluated every twelve months and new targets will be set. The targets for the Board of Management are not described in the annual accounts due to competitive reasons. Company objectives are described in this report.

Regarding ownership and transactions of shares by board members, other than those issued by the company itself, the Supervisory Board has resolved to deviate from the Code. Management Board members are not permitted to hold direct or indirect interests amounting to more than 5% in other listed companies or companies in the semiconductor industry, unless the Supervisory Board has granted specific permission. Furthermore, management board members

must report changes in shareholdings in other listed or semiconductor companies to the chairman of the Supervisory Board.

### **3.2.1 – 3.2.3 Determination of management board remuneration**

The supervisory board should determine the remuneration of the individual members of the management board, within the limits of the remuneration policy adopted by the general meeting.

The employment of the Management Board members may be terminated by giving six months' notice in writing before the end of each calendar month. In case of termination from RoodMicrotec the Management Board member is entitled to a severance pay equal to 100% of total annual gross salary.

### **3.3.1 – 3.3.3 Remuneration – supervisory board**

The supervisory board should submit a clear and understandable proposal for its own appropriate remuneration to the general meeting. The remuneration of supervisory board members should promote an adequate performance of their role and should not be dependent on the results of the company.

The remuneration of the supervisory board members should reflect the time spent and the responsibilities of their role. Supervisory board members may not be awarded remuneration in the form of shares and/or rights to shares. Shares held by a supervisory board member in the company on whose supervisory board they serve should be long-term investments.

In deviation from the Code, it has been determined that no member of the Supervisory Board will be permitted to hold direct or indirect interests of more than 5% in the share capital of other listed companies or companies in the semiconductor industry. Furthermore, supervisory directors must report changes in shareholdings in other listed or semiconductor companies to the chairman of the Supervisory Board.

RoodMicrotec has not provided any personal loans or guarantees to members of the Supervisory Board.

### **3.4.1 – 3.4.2 Accountability for implementation of remuneration policy**

In the remuneration report, the supervisory board should render account of the implementation of the remuneration policy in a transparent manner. The main elements of the agreement of a management board member with the company should be published on the company's website in a transparent overview after the agreement has been concluded, and in any event no later than the date of the notice calling the general meeting where the appointment of the management board member will be proposed.

## **Chapter 4. The general meeting**

### **4.1.1 – 4.1.10 The general meeting**

The general meeting should be able to exert such influence on the policies of the management board and the supervisory board of the company that it plays a fully-fledged role in the system of checks and balances in the company. Good corporate governance requires the fully-fledged participation of shareholders in the decision-making in the general meeting.

The chairman of the general meeting is responsible for ensuring the proper conduct of business at meetings in order to promote a meaningful discussion at the meeting. The agenda of the general meeting should list which items are up for discussion and which items are to be voted on. The following items should be dealt with as separate agenda items:

- material changes to the articles of association;
- proposals relating to the appointment of management board and supervisory board members;
- the policy of the company on additions to reserves and on dividends;
- any proposal to pay out dividend;
- resolutions to approve the management conducted by the management board (discharge of management board members from liability);
- resolutions to approve the supervision exercised by the supervisory board (discharge of supervisory board members from liability);
- each substantial change in the corporate governance structure of the company; and
- the appointment of the external auditor.

If a shareholder has arranged for an item to be put on the agenda, he should explain this at the meeting and, if necessary, answer questions about it. A shareholder should only exercise the right to put items on the agenda after they have consulted with the management board on this. If one or more shareholders intend to request that an item be put on the agenda that may result in a change in the company's strategy, for example as a result of the dismissal

of one or several management board or supervisory board members, the management board should be given the opportunity to stipulate a reasonable period in which to respond.

Management board and supervisory board members nominated for appointment should attend the general meeting at which votes will be cast on their nomination.

The external auditor may be questioned by the general meeting in relation to his report on the fairness of the financial statements. The external auditor should for this purpose attend and be entitled to address this meeting.

Within three months after the general meeting the minutes of the meeting are published in concept on the website of the company. The shareholders can react and after three months the minutes will be determined and finalized. The minutes are signed by the chairman and the secretary of the shareholders meeting. The final and signed version will be published on the company's website and replace the concept.

#### **4.2.1 – 4.2.6 Provision of information**

The management board and the supervisory board should ensure that the general meeting is adequately provided with information.

The company has formulated an outline policy on bilateral contacts with the shareholders and has posted this policy on its website. Analyst meetings, analyst presentations, presentations to institutional or other investors and press conferences are announced in advance on the company's website and by means of press releases.

The contacts between the management board on the one hand and the press and financial analysts on the other are handled and structured carefully and with due observance of the applicable laws and regulations.

#### **4.3.1 – 4.3.6 Casting votes**

Participation of as many shareholders as possible in the general meeting's decision-making is in the interest of the company's checks and balances. The company should, in so far as possible, give shareholders the opportunity to vote by proxy and to communicate with all other shareholders.

RoodMicrotec does not have any financing preference shares.

#### **4.4.1 – 4.4.8 Issuing depositary receipts for shares Casting votes**

Since no depositary receipts for shares have been issued, this part of the Code is not applicable to RoodMicrotec.

## **Chapter 5. One-tier governance structure**

### **5.1.1 – 5.1.5 One-tier governance structure**

Since RoodMicrotec is operating a two-tier structure, this part of the Code is not applicable.

Further information and a downloadable version: [www.roodmicrotec.com](http://www.roodmicrotec.com)

## MANAGEMENT STATEMENT

### Corporate Governance statement

This is a statement concerning corporate governance as referred to in Article 2a of the Decree on additional requirements for annual reports (Vaststellingsbesluit nadere voorschriften inhoud jaarverslag) effective as of 1 January 2017 (the 'Decree'). This statement forms part of RoodMicrotec's annual report 2018 (included in the chapter on corporate governance), which is available on RoodMicrotec's website: [www.roodmicrotec.com](http://www.roodmicrotec.com). The information required to be included in this corporate governance statement as described in Articles 3, 3a and 3b of the Decree can be found in the chapters, sections and pages of RoodMicrotec's annual report 2018 and are deemed to be included and repeated in this statement:

- the information concerning compliance with the Dutch Corporate Governance Code, as required by article 3 of the Decree, can be found in the chapter on 'Corporate Governance';
- the information concerning RoodMicrotec's main features of the internal risk management and control systems relating to the financial reporting process, as required by article 3a sub a of the Decree, can be found in the chapter on 'Risk and Risk Management';
- the information regarding the functioning of RoodMicrotec's general meeting, and the authority and rights of RoodMicrotec's shareholders and holders of certificates of shares, as required by article 3a sub b of the Decree, can be found in the chapter on 'Corporate Governance';
- the information regarding the composition and functioning of RoodMicrotec's Board of Management, the supervisory board and its committees, as required by article 3a sub c of the Decree, can be found in the relevant sections of the chapter on 'Corporate Governance', the 'Report of the Board of Management' and the 'Report of the Supervisory Board';
- the information concerning the inclusion of the information required by the decree Article 10 EU Takeover Directive, as required by article 3b of the Decree, can be found in the chapter on 'Corporate Governance'.

### True and fair view statement

This statement is an integral part of the annual report dated 04<sup>th</sup> April 2019. This statement is based on Article 5:25(c), paragraph 2 sub c of the Financial Supervision Act. Our opinion of the annual accounts is that it gives a true and fair view of the assets, liabilities, financial position and the result of RoodMicrotec N.V. and the companies included in the consolidation. The annual report gives a true and fair view of the situation on balance sheet date and the developments during the financial year of RoodMicrotec N.V. and the group companies for which the financial information is recognized in its financial statements. The most important risks confronting RoodMicrotec N.V. are described in the annual report. The members of the Board of Management have signed the annual report and financial statements in fulfilment of their legal obligations arising from Article 5:25(c), paragraph 2 sub c of the Financial Supervision Act.

#### Board of Management

O.M. Sallenhag, CEO  
R. Pusch, COO

#### Supervisory Board

V.G. Tee, Chairman  
H.J. Bartelink  
J.B. Tuik

Zwolle, 04<sup>th</sup> April 2019

## ANNUAL ACCOUNTS

### A. CONSOLIDATED FINANCIAL STATEMENTS

#### Consolidated Statement of Profit or Loss

<b>(x EUR 1,000)</b>	Notes	2018	2017
Net sales	<u>1</u>	<u>13,425</u>	<u>12,127</u>
Cost of sales	<u>2</u>	<u>-2,545</u>	<u>-1,970</u>
<b>Gross profit</b>		<b><u>10,880</u></b>	<b><u>10,157</u></b>
Personnel expenses	<u>3</u>	<u>-6,555</u>	<u>-6,105</u>
Other operating expenses	<u>4</u>	<u>-2,942</u>	<u>-2,703</u>
Termination benefit costs	<u>5</u>	<u>-0</u>	<u>-400</u>
<b>Total operating expenses</b>		<b><u>-9,497</u></b>	<b><u>-9,208</u></b>
<b>EBITDA</b>		<b><u>1,383</u></b>	<b><u>949</u></b>
Depreciation and amortisation	<u>6</u>	<u>- 1,018</u>	<u>- 1,018</u>
<b>EBIT</b>		<b><u>365</u></b>	<b><u>-69</u></b>
Financial expenses	<u>7</u>	<u>-241</u>	<u>-258</u>
<b>Profit (loss) before taxes</b>		<b><u>124</u></b>	<b><u>-327</u></b>
Taxes	<u>8</u>	<u>1</u>	<u>283</u>
<b>Net profit (loss)</b>		<b><u>125</u></b>	<b><u>-44</u></b>

#### Net profit attributable to:

Equity holders of the company	125	-44
Non-controlling interests	-	-
<b>Net profit (loss)</b>	<b>125</b>	<b>-44</b>

#### Earnings per share

Basic	17	0.00	-0.00
Diluted	17	0.00	-0.00

The figures following the various items refer to the notes on pages 49 to 81.

## Consolidated Statement of Comprehensive Income

(x EUR 1,000)	Notes	2018	2017
Net profit (loss)		125	-44
<b>Items that will not be reclassified to profit and loss:</b>			
Remeasurement of defined benefit obligations	20	-1,055	-286
Remeasurement of defined benefit obligations - DTL	11	32	-16
Revaluation of land and buildings	9	-	586
Revaluation of land and buildings - DTL	11	-	-133
Sale of revalued land - DTL	9	71	-
		-	
<b>Total comprehensive income</b>		<b>-827</b>	<b>107</b>
<b>Total comprehensive income attributable to:</b>			
Equity holders of the company		-827	107
Non-controlling interests		-	-
<b>Total comprehensive income</b>		<b>-827</b>	<b>107</b>

The figures following the various items refer to the notes on pages 49 to 81.

## Consolidated Statement of Financial Position

(x EUR 1,000)	Notes	31-12-2018	31-12-2017 <sup>1</sup>
<b>Assets</b>			
Property, plant and equipment	9	5,303	6,023
Intangible assets	10	2,379	2,428
Deferred tax assets	11	1,420	1,284
Financial assets	12	81	138
<b>Non-current assets</b>		<b>9,183</b>	<b>9,873</b>
Inventories	13	593	581
Trade and other receivables	14	2,092	1,980
Cash and cash equivalents	15	1,738	617
<b>Current assets</b>		<b>4,423</b>	<b>3,178</b>
<b>Total assets</b>		<b>13,606</b>	<b>13,051</b>
<b>Equity and liabilities</b>			
Issued share capital		8,006	7,339
Share premium		20,517	19,906
Revaluation reserve		1,943	2,216
Retained earnings		-27,751	-27,188
Equity, attributable to equity holders of the parent	16	2,715	2,273
Non-controlling interests		2,494	2,494
<b>Total equity</b>	<b>16</b>	<b>5,209</b>	<b>4,767</b>
Loans and borrowings	19	2,426	2,880
Defined benefit obligation	20	3,374	2,534
Provisions	21	107	144
<b>Non-current liabilities</b>		<b>5,907</b>	<b>5,558</b>
Loans and borrowings	19	227	188
Trade and other payables	22	2,205	2,480
Current tax liabilities	19	58	58
<b>Current liabilities</b>		<b>2,490</b>	<b>2,726</b>
<b>Total equity and liabilities</b>		<b>13,606</b>	<b>13,051</b>

<sup>1</sup> Two life insurance policies of EUR 365,000 were reclassified from financial assets to defined benefit obligation. We refer to changes in description on page 50.

The figures following the various items refer to the notes on pages 49 to 81.

## Consolidated Statement of Changes in Equity

(x EUR 1,000)	Number of shares x1,000	Issued share capital	Share premium	Revaluation reserve	Retained earnings	Equity attribut. to parent	Non- controlling interests	Total Equity
<b>Balance at 1 January 2017</b>	<b>63,441</b>	<b>6,979</b>	<b>19,659</b>	<b>1,763</b>	<b>-26,842</b>	<b>1,559</b>	<b>2,494</b>	<b>4,053</b>
Issuance of ordinary shares	3,275	360	248	-	-	608	-	608
Value of employee options granted	-	-	-1	-	-	-1	-	-1
<b>Transactions with equity holders of the company</b>	<b>66,716</b>	<b>7,339</b>	<b>19,906</b>	<b>1,763</b>	<b>-26,842</b>	<b>2,166</b>	<b>2,494</b>	<b>4,660</b>
Net profit (loss)	-	-	-	-	-44	-44	-	-44
<b>Other comprehensive income:</b>								
Remeasurement of defined benefit obligation	-	-	-	-	-302	-302	-	-302
Revaluation of land and buildings	-	-	-	453	-	453	-	453
<b>Total comprehensive income for the year</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>453</b>	<b>-346</b>	<b>107</b>	<b>-</b>	<b>107</b>
<b>Balance at 31 December 2017</b>	<b>66,716</b>	<b>7,339</b>	<b>19,906</b>	<b>2,216</b>	<b>-27,188</b>	<b>2,273</b>	<b>2,494</b>	<b>4,767</b>
Accounting policy changes - IFRS 9					-9	-9		-9
<b>Balance at 1 January 2018</b>	<b>66,716</b>	<b>7,339</b>	<b>19,906</b>	<b>2,216</b>	<b>-27,197</b>	<b>2,264</b>	<b>2,494</b>	<b>4,758</b>
Issuance of ordinary shares	6,063	667	591	-	-	1,258	-	1,258
Value of employee options granted	-	-	20	-	-	20	-	20
<b>Transactions with equity holders of the company</b>	<b>72,779</b>	<b>8,006</b>	<b>20,517</b>	<b>2,216</b>	<b>-27,197</b>	<b>3,542</b>	<b>2,494</b>	<b>6,036</b>
Net profit (loss)	-	-	-	-	125	125	-	125
<b>Other comprehensive income:</b>								
Remeasurement of defined benefit obligation	-	-	-	-	-1,023	-1,023	-	-1,023
Sale of revalued land	-	-	-	-184	255	71	-	71
Revaluation of land and buildings	-	-	-	-89	89	-	-	-
<b>Total comprehensive income for the year</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-273</b>	<b>-534</b>	<b>-827</b>	<b>-</b>	<b>-827</b>
<b>Balance at 31 December 2018</b>	<b>72,779</b>	<b>8,006</b>	<b>20,517</b>	<b>1,943</b>	<b>-27,751</b>	<b>2,715</b>	<b>2,494</b>	<b>5,209</b>

## Consolidated Cash Flow Statement

(X EUR 1,000)	Notes	2018	2017
EBITDA		1,383	949
Adjustments for:			
- Movements in net defined benefit obligations and provisions	20	-303	-141
- Share based payments	18	20	-1
- Accrued interest	7	-8	-25
Changes in working capital			
- Inventories	13	-12	-107
- Trade and other receivables	14	-121	-268
- Trade and other current liabilities	19 22	-236	409
<b>Cash generated from operating activities</b>		<b>723</b>	<b>816</b>
Interest paid	7	-160	-188
<b>Net cash from operating activities</b>		<b>563</b>	<b>628</b>
<b>Cash flows from investing activities</b>			
Investments in property, plant and equipment	9	-446	-1,127
Disposal of property, plant and equipment	9	326	-
Investments in intangible assets	10	-130	-72
Net investments in financial assets	12	-	4
<b>Net cash from investing activities</b>		<b>-250</b>	<b>-1.195</b>
<b>Cash flows from financing activities</b>			
Proceeds from issuance of share capital	16	1,258	608
Proceeds from borrowings	19	-	-
Repayment of borrowings	19	-450	-113
<b>Net cash flow from financing activities</b>		<b>808</b>	<b>495</b>
<b>Net cash flow</b>		<b>1,121</b>	<b>-72</b>
Cash -/- bank overdrafts at 1 January	15	617	689
Cash -/- bank overdrafts at 31 December	15	1,738	617
<b>Net cash flow</b>		<b>1,121</b>	<b>-72</b>

The figures following the various items refer to the notes on pages 49 to 81.

## B. NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

### General information

RoodMicrotec N.V. is a public limited liability company with its registered office in Zwolle, the Netherlands and publicly listed on the Euronext Amsterdam Stock Exchange since 1986. The consolidated financial statements of the company for the year ended 31 December 2018 comprises the company and its subsidiaries (jointly referred to as the 'Group').

Since 6 September 2012 the Group includes the following wholly-owned subsidiaries:

RoodMicrotec GmbH (Nördlingen, Germany)

RoodMicrotec International B.V. (Zwolle, the Netherlands)

As of 30 September 2018, the German subsidiary RoodMicrotec Dresden GmbH merged into RoodMicrotec GmbH.

The German subsidiary included in the consolidated financial statements of RoodMicrotec N.V. made use of the exemption provisions of section 264 (3) HGB in the 2018 financial year.

### Summary of significant accounting policies

The principal accounting policies used in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless stated otherwise.

### Basis of preparation

#### *Statement of compliance*

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRSs) and with Section 2:362(9) of the Netherlands Civil Code.

The consolidated financial statements were authorised for issue by the board of management on 4 April 2019.

#### *Basis of measurement*

The consolidated financial statements have been prepared on a historical cost basis, unless otherwise indicated.

The consolidated financial statements are presented in euros and all values are rounded to the nearest thousand (EUR000), except when otherwise indicated.

### Use of judgements and estimates

The preparation of the financial statements in accordance with EU-IFRSs requires management to make judgments, estimates and assumptions that affect the application of policies and reported amounts of assets and liabilities, income and expenses. The estimates and assumptions are based on historical experience and various factors that are believed to be reasonable under the circumstances, the result of which form the basis for making judgments about the carrying values of the assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The estimates and assumptions are reviewed in an on-going basis. Most significant estimates are made with regard to impairment test of goodwill, deferred tax assets and defined benefit obligations. For each of these items the assumptions used are disclosed in the applicable notes. Revisions of accounting estimates are recognised prospectively.

### Measurement of fair values

A number of the Group's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities. When measuring the fair value of an asset or a liability, the Group uses market observable data as far as possible. Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

Further information about the assumptions made in measuring fair values is disclosed in the applicable notes.

### Going Concern Basis of Accounting

The consolidated financial statements have been prepared on 'a going concern' basis. Management based its opinion for 'going concern' on the following elements:

- The Group's strategic move to larger and long-term projects leads to more predictable and recurring sales;
- In prior years the Group successfully concluded a number of long-term contracts in the automotive and industrial sector, which are expected to result in a substantial increase in sales in the coming years. A number of these projects has been ramped to production during 2018;
- The sales order book saw a year-on-year increase in 2018 of 13%. The Group has a strong forward order book; Positive cash flow from operating activities both in 2018 and 2017. The cash position remains at a relatively high level;
- Significant increase in sales in 2018 leading to a net profit for the year. The Group's forecast and business plans show the results will continue to improve in the coming years;

In particular, the sensitivity of goodwill for impairment as well as the deferred tax assets recognised at balance sheet date are heavily dependent on the aforementioned factors.

Obviously, there are some uncertainties, which by nature are embedded in forecasts and business plans. The forecasted future sales may differ from the actual sales and client orders may be postponed. This can have significant negative effects on the results and cash-flow. However, this is inherent to the business the company is acting in.

The RoodMicrotec management team remains positive about the future development of the company based on the considerable increase in revenue in the strategic important area of Supply Chain Management. This will also bring growth to the other areas within the company. We are also convinced that the focus on the automotive and industrial/healthcare sectors is the right strategy for the company.

Industry wide, growth of semiconductor businesses in Europe saw a 12.1% increase, with a projected 1.9% increase in 2019 (WSTS Forecast Summary November 2018). RoodMicrotec expects to outperform this since we focus on the automotive and industrial sectors where the electrification will continue to grow even in a softer economy.

Management is confident about the companies' ability to continue its operations as a going concern and the validity of the valuation of goodwill and the deferred tax assets.

### Accounting of errors: Changes in presentation

*In 2018, the Group concluded that two life insurance policies, in total EUR 365,000, qualify as fair value plan assets under IAS 19. These life insurance policies were previously presented as financial assets. In the consolidated financial statements 2018 these life insurance policies are reclassified and netted with the defined benefit obligations. This change of presentation does not have any impact on equity and/or statement of profit and loss. Comparative 2017 numbers are changed as follows:*

<i>Consolidated Statement of Financial Position (x EUR 1,000)</i>	<i>31-12-2017 revised</i>	<i>31-12-2017</i>
<i>Financial assets</i>	<i>138</i>	<i>503</i>
<i>Defined benefit obligation</i>	<i>2,534</i>	<i>2,899</i>

### Changes in accounting policies

#### A. Changed accounting policies in 2018

The following new standards have been adopted in 2018 and reflected in the consolidated financial statements:

##### *IFRS 9 Financial Instruments*

IFRS 9 includes revised guidance on classification and measurement of financial instruments, including a new expected credit loss model for calculating impairment of financial assets, and new general hedge accounting requirements. The standard replaces existing guidance in IAS 39 Financial Instruments: Recognition and Measurement. The Group has implemented IFRS 9 per 1 January 2018 using the modified retrospective approach, meaning that the 2017 comparative financial information is not restated. Any impact of IFRS 9 as of 1 January 2018 is recognised directly in equity.

The Group has assessed the impact of this new standard and has concluded that the impact is limited:

- With regard to the revised classification and measurement principles, IFRS 9 contains three classification categories: 'measured at amortised cost', 'fair value through other comprehensive income' (FVOCI) and 'fair value through profit and loss' (FVPL). The standard eliminates the existing IAS 39 categories: 'loans and receivables', 'held to maturity' and 'available-for-sale'. The change in categories within IFRS 9 has not resulted in changes in presentation and/ or measurement for the Group.
- With regard to the impact of the expected loss model on trade and other receivables the Group concluded that the impact is limited. The initial impact recorded in equity per 1 January 2018 amounted to EUR 9 thousand. The impact on the Groups future consolidated income statement is also expected to be limited as the standard requires provisions to be recorded earlier and the initial impact of this timing difference has been recorded in equity upon implementation.
- The new general hedging requirements of IFRS 9 did not have any impact on the Group, because the Group does not use hedging instruments.

#### *IFRS 15 Revenue from Contracts with Customers*

IFRS 15 establishes a framework for determining whether, how much and when revenue is recognised from contracts with customers. The framework involves five steps for recognition of revenue with the first steps being the identification of the contract with the customer (I) and the separate performance obligations it contains (II). The transaction price is then determined (III) and allocated to the performance obligations in the contract (IV). Finally (V), revenue is recognised for each performance obligation in the amount of the allocated portion of the transaction price as soon as the agreed-upon service has been provided or product delivered, or the customer receives control over it. Principles are set out for determining whether the service has been provided over time or at one point in time. IFRS supersedes IAS 18 and related standards and interpretations related to revenue. The Group has implemented IFRS 15 per 1 January 2018 using the modified retrospective method, meaning the 2017 comparative figures in the 2018 financial statements are not restated.

The Group has assessed the impact of this new standard and concluded that the impact is mainly limited to an extension of the disclosures in the financial statements:

- With respect to the recognition standards the Group has concluded that the majority of its contracts are contracts with customers in which the performance of the service or delivery of the serviced products is generally expected to be the only performance obligation of the Group's business units which are involved in the contract. Generally, the revenue recognition will still occur over time when the services are rendered or at a point in time when control of the assets is transferred to the customer.
- With respect to the measurement principles, the Group has concluded that the majority of its contracts have no variable considerations under IFRS 15. IFRS 15 requires the estimated variable consideration to be constrained to prevent over-recognition of revenue. The measurement principles under IFRS 15 do not have a significant impact on the Group's measurement of revenue.
- With respect to warranties, the Group does not provide extended warranties in its contracts with customers. The warranties serve to guarantee that the products function as intended and meet the agreed specifications. As such, these warranties are assurance-type warranties which will continue to be accounted for under IAS 37 'Provisions, Contingent Liabilities and Contingent Assets' consistent with previous practice.
- With respect to principal versus agent considerations, the Group has concluded that the Group is acting as a principal under IFRS 15 as was the case under IAS 18. A part of the services performed, and serviced products delivered is outsourced by the Group to subcontractors. The Group is acting as a principal, as the Group is primarily responsible for fulfilling the promise, the Group generally has discretion in establishing the prices and the Group generally controls the asset before the asset is transferred to the customer. The Group recognises revenue in the gross amount of consideration to which it expects to be entitled in exchange for the specified products or services transferred.
- IFRS 15 provides presentation and disclosure requirements, which are more detailed than under prior revenue recognition standards.

#### Transition

The Group has applied the following transitional reliefs in IFRS 15:

- it has not restated completed contracts that begin and end within the same annual reporting period; or were completed contracts at the beginning of the earliest period presented.

#### Practical exemptions

The Group has applied the following practical exemptions in IFRS 15:

- not to account for significant financing components where the time difference between receiving consideration and transferring control of products or services to its customer is one year or less; and
- expense the incremental costs of obtaining a contract when the amortisation period of the asset otherwise recognised is one year or less.

#### *Other new standards and interpretations*

Other new standards and interpretations effective in 2018 had no significant impact on the disclosures or amounts recognised in the Group's consolidated financial statements.

### **B. New standards and interpretations not yet adopted**

Certain new accounting standards and interpretations have been published that are not mandatory for 31 December 2018 reporting periods and have not been early adopted by the Group. The following new standards and amendments to standards will be effective in 2019 and will have a significant impact on the Group's consolidated financial statements:

#### *IFRS 16 Leases*

IFRS 16 'Leases' replaces existing guidance on leases, including IAS 17. Under the new standard, all operating lease contracts will be recognised on the Group's balance sheet, except for short-term and low value leases. Lease expenses currently recorded in the income statement will be replaced by depreciation and interest expenses for all lease contracts in scope of the standard.

The Group will implement IFRS 16 per 1 January 2019 by applying the modified retrospective method, meaning that the 2018 comparative numbers in the 2019 financial statements will not be restated. In addition, it has decided to measure right-of-use assets by reference to the measurement of the lease liability on that date. This will ensure there is no immediate impact to net assets on that date. The actual effect of applying IFRS 16 can still change because the newly applied accounting policies can still change up to the date of first publication of the consolidated financial report which includes the initial recognition. Based on current available information, the Group estimates that the effect on both the assets and the liabilities on the balance sheet as of January 1, 2019 will be approximately EUR 1 million. The Group also expects a shift within the cash flow statement from the cash flow from operating activities to the cash flow from financing activities of around EUR 0.3 million.

### **Basis of consolidation**

The consolidated financial statements comprise the financial statements of the Group and all subsidiaries that RoodMicrotec N.V. controls, i.e. when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. The existence and effect of potential voting rights are considered when assessing whether RoodMicrotec N.V. controls another entity. Subsidiaries are fully consolidated from the date that control commences until the date that control ceases. All intercompany balances and transactions have been eliminated in the consolidated financial statements. Unrealized losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

### **Foreign currency translation**

#### *Functional and presentation currency*

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The consolidated financial statements are presented in euros, which is the company's functional and presentation currency.

#### *Transaction and balances*

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translations at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement.

## Property, plant and equipment

### *Assets in ownership*

Property, plant and equipment are stated at cost, except for land and buildings, which are carried at fair value, based on periodic valuations by an external independent valuator, less subsequent depreciation. The cost of self-constructed assets includes the cost of materials, direct labour and an appropriate proportion of directly allocated overheads. Property that is under construction or being developed for future use is classified as property, plant and equipment and stated at cost until construction or development are complete.

Where an item of property, plant and equipment comprises major components having different useful lives, these components are accounted for as separate items of property, plant and equipment.

Increases in the carrying amount arising from revaluation of land and buildings are credited to other reserves in equity. Decreases that offset previous increases of the same asset are charged against other reserves directly in equity; all other decreases are charged to the income statement. Each year the difference between depreciation based on the revaluated carrying amount of the asset charged to the income statement and depreciation based on the asset's original cost is transferred from other reserves to retained earnings. When revalued assets are sold, the amounts included in revaluation reserves are transferred to retained earnings.

### *Lease assets*

Leases in which the Group substantially assumes all the risks and rewards of ownership are classified as finance leases. Plant and equipment acquired by means of a finance lease are stated at an amount equal to the lower of their fair value and the present value of the minimum lease payments at the inception of the lease, less accumulated depreciation and impairment losses.

### *Subsequent cost*

The Group recognises in the carrying amount of an item of property, plant and equipment the cost of replacing part of such an item when that cost is incurred if it is probable that the future economic benefits embodied in the item will flow to the Group and the cost of the item can be measured reliably. All other costs are recognised in the income statement as an expense as incurred.

### *Depreciation*

Depreciation on property, plant and equipment is calculated using the straight-line method to allocate the cost of each asset to its residual value over its estimated useful life. Land is not depreciated. The useful economical life of the different categories is set out below:

<b>Category</b>	<b>Years</b>
Buildings	20
Machinery and equipment	2-10
Other fixed assets	4-10

The asset's residual value and useful life are reviewed, and adjusted if appropriate, at each balance sheet date.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

## Intangible assets

### *Goodwill*

Acquisition of businesses is accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition date fair values of the assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree and the equity interests issued by the Group in exchange for control of the acquiree. Acquisition related costs are recognised in income statement as incurred. Goodwill is carried at cost less accumulated impairment losses.

Goodwill on acquisitions is tested annually for impairment. Impairment losses on goodwill are not reversed. Goodwill is allocated to the cash-generating units for the purpose of impairment testing. The allocation is made to those cash-generating units that are expected to benefit from the business combination in which the goodwill arose.

### *Development expenditure*

Expenditure on activities undertaken with the prospect of gaining new scientific or technical knowledge and understanding (research activities) is recognised as an expense in the period in which it is incurred. An intangible asset arising from the Group's development is recognised if, and only if, all of the following conditions are met:

- the asset is uniquely identified, and the costs can be determined separately; and
- the technical feasibility of the asset has been sufficiently demonstrated; and
- it is probable that the asset will generate future economic benefits; and
- the development cost can be measured reliably.

### *Amortisation*

Amortisation is charged to the income statement on a straight-line basis over the estimated useful lives of intangible assets unless such lives are indefinite. Development expenditure and other intangibles are amortised from the date when used over the estimated economic useful life, which is expected to be three to five years.

Goodwill is not amortised, and instead tested annually for impairment.

## **Financial instruments**

Financial instruments include the following financial assets: non-current financial assets, trade and other receivables, cash and cash equivalents and include the following financial liabilities: loans and borrowings and trade and other payables. The Group classifies financial assets into those measured at amortised cost and those measured at fair value. The Group classifies financial liabilities into those measured at amortised cost and those measured at fair value through profit or loss.

### Financial assets and financial liabilities – recognition and derecognition

The Group initially recognises loans and receivables issued on the date when they are originated. All other financial assets and financial liabilities are initially recognised on the trade date when the Group becomes a party to the contractual provisions of the instrument.

The Group derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred, or it neither transfers nor retains substantially all of the risks and rewards of ownership and does not retain control over the transferred asset. Any interest in such derecognised financial assets that is created or retained by the Group is recognised as a separate asset or liability.

The Group derecognises a financial liability when its contractual obligations are discharged or cancelled or expire.

Financial assets and financial liabilities are offset, and the net amount presented in the statement of financial position if, and only if, the Group has a legal right to offset the amounts and intends either to settle them on a net basis or to realise the asset and settle the liability simultaneously.

### Financial assets at amortised cost

These assets are initially recognised at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, they are measured at amortised cost using the effective interest method, less loss allowances.

### Financial assets at fair value through profit or loss

A financial asset is classified as at 'fair value through profit or loss' if it is classified as held for trading or is designated as such on initial recognition. Directly attributable transaction costs are recognised in the income statement as incurred. Financial assets at fair value through profit or loss are measured at fair value and changes therein taking into account any loss allowances, interest or dividend income, are recognised in the income statement.

### Financial liabilities – measurement

Financial liabilities are initially recognised at fair value less any directly attributable transaction costs. Subsequent to initial recognition, these liabilities are measured at amortised cost using the effective interest method.

### Impairment of financial assets

Loss allowances for financial assets are based on assumptions about risk of default and expected loss rates. The Group uses judgement in making these assumptions and selecting the inputs to the impairment calculation, based on the Group's past history, existing market conditions as well as forward looking estimates at the end of each reporting period. Financial assets are measured through a loss allowance at an amount equal to:

- the 12-month expected credit losses (expected credit losses that result from those default events on the financial instrument that are possible within 12 months after the reporting date); or
- full lifetime expected credit losses (expected credit losses that result from all possible default events over the life of the financial instrument).

A loss allowance for full lifetime expected credit losses is used for a financial instrument if the credit risk of that financial instrument has increased significantly since initial recognition, as well as to trade receivables.

For all other financial instruments, expected credit losses are measured at an amount equal to the 12-month expected credit losses.

The loss allowance for financial instruments is measured at an amount equal to lifetime expected losses if the credit risk of a financial instrument has increased significantly since initial recognition, unless the credit risk of the financial instrument is low at the reporting date in which case it can be assumed that credit risk on the financial instrument has not increased significantly since initial recognition. The credit risk is considered low if there is a low risk of default, the borrower has a strong capacity to meet its contractual cash flow obligations in the near term and adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil its contractual cash flow obligations. It is rebuttable presumed the credit risk has increased significantly when contractual payments are more than 30 days past due. If a significant increase in credit risk that had taken place since initial recognition and has reversed by a subsequent reporting period (cumulatively credit risk is not significantly higher than at initial recognition) then the expected credit losses on the financial instrument revert to being measured based on an amount equal to the 12-month expected credit losses.

The Group applies the simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables. The loss allowance is determined based on historical data of credit losses and updated periodically to incorporate forward looking information.

### **Trade and other receivables**

Trade and other receivables are initially recognised at fair value and subsequently measured at amortised cost using the effective interest method, less allowances for credit losses.

### **Inventories**

#### *Inventories*

Inventories are stated at the lower of cost and net realisable value. Costs comprise direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is calculated using the weighted average method. Net realisable value represents the estimated selling price less all estimated costs for in marketing, sale and distribution.

#### *Work in progress*

Work in progress concerning services rendered on work not yet completed is stated at cost plus a mark-up for directly attributable overheads. Costs include all expenditures related directly to specific projects and an allocation of fixed and variable overheads incurred in the Group's contract activities based on normal operating capacity.

### **Cash and cash equivalents**

Cash and cash equivalents include cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less, and bank overdrafts. Bank overdrafts are shown separately on the balance sheet.

### **Impairment of non-financial assets**

The carrying amounts of non-financial assets are reviewed at each balance sheet date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is calculated. Goodwill is tested annually for impairment.

The recoverable amount is the higher of an asset's fair value less cost to sell and its value in use.

An impairment loss is recognised whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognised in the income statement.

### **Share capital**

#### *Ordinary shares*

Ordinary shares are classified as equity. The Group has not issued preference shares.

#### *Share premium*

The share premium is the consideration paid for shares in excess of the nominal value.

#### *Dividends*

Dividends are recognised as a liability in the period in which they are declared by the shareholders.

#### *Non-controlling interests*

Non-controlling interests consist of perpetual bonds and is classified as equity at its nominal value.

### **Loans and borrowings**

Interest-bearing loans and borrowings are recognised initially at fair value, less attributable transaction costs. Loans and borrowings are subsequently stated at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognised in the income statement over the period of the loans and borrowings using the effective interest method.

### **Deferred taxes**

Deferred taxes are stated in full, using the liability method, on temporary differences arising between the tax base of assets and liabilities and their carrying amounts in the consolidated financial statements. However, the deferred tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects either accounting or taxable profit or loss. Deferred taxes are determined using tax rates (and laws) that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Deferred tax assets are recognised to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised. Deferred taxes are calculated on temporary differences arising from investments in subsidiaries and associates, except where the timing of the reversal of temporary differences is controlled by the Group and it is probable that temporary differences will not be reversed in the foreseeable future. Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred taxes relate to the same tax authority.

### **Employee benefits**

#### *Defined benefit plans*

The Group's net obligation in respect of defined benefit pension plans and related plans is calculated separately for each plan by calculating the present value of future benefits that employees have earned in return for their service in current and prior periods; that benefit is discounted to determine the present value and the fair value of any plan assets. The discount rate is the yield at balance sheet date on high-quality corporate or government bonds that have maturity dates approximating the terms of the Group's obligations. The calculation is performed by qualified actuaries using the projected unit credit method.

Actuarial gains and losses are recognised in other comprehensive income.

#### *Share-based payment transactions*

The share option program allows employees of the Group to acquire shares in the company. The fair value of options is recognised as an employee expense with a corresponding increase in equity. The fair value is measured at grant date and spread over the period during which the employees become unconditionally entitled to the options. At each balance sheet date, the Group revises its estimates of the number of options that are expected to vest. It recognises the impact of the revision to original estimates, if any, in the income statement, with corresponding adjustments to equity.

The proceeds received net of any directly attributable transaction costs are credited to share capital (nominal value) and share premium when the options are exercised. The share options are valued using the Black & Scholes Model.

#### *Profit-sharing and bonus plans*

The Group recognises a liability and an expense for bonuses and profit-sharing based on a formula that takes into consideration the profit attributable to the company's equity holders after certain adjustments. The Group recognises a provision where contractually obliged or where there is a past practice that has created a constructive obligation.

### **Provisions**

A provision is recognised in the balance sheet when the Group has a legal or constructive obligation arising from a past event, and it is probable that an outflow of economic benefits will be required to settle the obligation. If the effect is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability.

### **Trade and other payables**

Trade and other payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

### **Revenue recognition**

The Group's revenue from contracts with customers is measured at the fair value of the consideration received or receivable and represents the amounts for services provided and serviced products delivered in the course of business during the current year, net of all related discounts and sales taxes.

The Group provides quality services and delivers serviced products (chips and packaged devices) in the semiconductor industry through their business units Test Operations, Supply Chain Management and Qualification & Failure Analysis. The Group's customers consist of Fabless Companies, OEMs and other companies in the automotive, telecommunications, healthcare, industrial and electronic sectors. In addition, the Group is participating in publicly funded projects.

The characteristics of revenue recognition in Test Operations is generally based on the services performed to the customers for the actual number of pieces tested and based on fixed prices per tested piece.

The characteristics of the projects in Supply Chain Management include a life cycle of 1-3 months to several years, whereby the development phase takes between 1 to 2 years, followed by the series delivery. Prices in the development phase are generally fixed and prices for the series delivery are generally based on fixed prices per piece.

The characteristics of revenue recognition in Qualification & Failure Analysis is generally based on the services performed to the customers based on the actual hours spent of the personnel and machines involved.

Revenue is recognised when a performance obligation is satisfied, in accordance with the terms of the contractual agreement. Typically, performance obligations are satisfied over time as services are rendered. Revenue recognised over time is based on the proportion of level of service performed.

#### Performance obligations and timing of revenue recognition

The Group determines at contract inception whether each performance obligation will be satisfied (that is, control will be transferred) over time or at a point in time. The Group satisfies a performance obligation and recognises revenue over time, when the asset has no alternative use to the Group and the Group is entitled to an enforceable right to payment for performance-to-date. The asset for each project is produced to a customer's specification and the asset can only be used by the specific customer.

If this condition is not satisfied, the Group recognises revenue at a point in time. For each performance obligation that is satisfied at a point in time, the revenue is recognised when the performance obligation is met, and control is transferred to the customer.

For each performance obligation that is satisfied over time, revenue is recognised by measuring progress towards completion of that performance obligation. The project revenue and costs are recognised as net revenue and costs in the statement of profit or loss in proportion to the services provided as at the balance sheet date, based on the percentage stage of completion of the contracts, calculated on the basis of costs incurred.

If profit on the project can be determined reliably, revenue is recognised in proportion to the services at reporting date. Otherwise, revenue is recognised based on the cost incurred.

Where the total project costs exceed the project revenue, the loss is recognised in cost of sales in the statement of profit or loss. The provision for this loss is included in the work in progress.

The Group applies the following practical exemptions in IFRS 15:

- not to account for significant financing components where the time difference between receiving consideration and transferring control of products or services to its customer is one year or less; and
- expense the incremental costs of obtaining a contract when the amortisation period of the asset otherwise recognised is one year or less.

Revenue is recognised when the revenue recognition criteria as disclosed above for each contract have been met.

### **Cost of sales**

Cost of sales represents the cost of raw materials and consumables that are attributable to the services provided or products delivered.

### **Expenses**

#### *Operating lease payments*

Payments made under operating leases are recognised in the income statement on a straight-line basis over the term of the lease. Lease incentives are recognised in the income statement as an integral part of the total lease expenses.

#### *Finance lease payments*

Minimum lease payments are proportionally divided between the finance charge and the reduction of the outstanding liability. The finance charge is allocated to each period in such way that this results in a constant periodical interest rate on the remaining balance of the liability during the lease term.

#### *Net financing costs*

Net financing costs comprise interest payable on loans and borrowings calculated using the effective interest rate method. The interest expenses component of finance lease payments is recognised in the income statement using the effective interest rate method.

### **Income taxes**

Income taxes on the profit or loss for the year comprises current and deferred taxes. Income tax is recognised in the income statement except to the extent that it relates to items recognised directly in equity, in which case it is recognised in equity. Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantially enacted at the balance sheet date and any adjustment to tax in respect of previous years.

### **Cash flow statement**

The cash flow statement is prepared using the indirect method. It distinguishes between operating, investing and financing activities. Payments and receipts of corporate taxes and interest are included as cash flow from operating activities. Cash flow arising from divestment of financial interests in Group companies and subsidiaries is included as cash flow from investing activities, taking into account the available cash in these interests. If applicable dividends paid are part of the cash flow from financing activities.

## Financial risk management and sensitivity analysis

The Group's activities are exposed to a variety of financial risks: market risks (including currency risk and interest rate risk), credit risks and liquidity risks. The Group's overall risk management program focuses on the unpredictability of markets (debtor management) and tries to minimise potential adverse effects on the Group's financial performance. The Group makes limited use of derivative financial instruments to hedge certain risk exposures.

### *Credit risk*

The activities of Group entail various credit risks. The maximum credit risk is equal to the carrying amount of the trade receivables and other receivables. Trade receivables are generally on terms of 30 days. With some debtors other payment terms are agreed upon varying from 14 to 60 days. The management has set up credit control policies to reduce the credit risk. The average credit rating of the Group's customers is comparable to the industry. There is no significant concentration of credit risks within the Group, as the Group has a large number of customers. No customers comprise 10% or more of sales.

### *Allowances for impairment of trade and other receivables*

The Group establishes allowances for impairment of trade and other receivables using an expected credit losses model. The loss allowance is determined based on historical data of credit losses and updated periodically to incorporate forward looking information. Due to the low levels of write-offs of trade and other receivables in the past, the Group decided to apply a single loss-rate. The trade and other receivables are written off when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include, amongst others, the failure of a debtor to engage in a repayment plan with the Group. The amount of the allowance is equal to the difference between the carrying amount of the receivable and the present value of estimated future cash flows.

### *Foreign currency risks and sensitivity analysis*

Within the Group's customer portfolio, the Group is exposed to currency risk. The foreign exchange risk is mitigated by exchange rate clauses in most of the Group's contracts and sales. The Group has sales in US dollar currency however this has minimal effect. The table below summarises the sales in different currencies:

(x EUR 1,000)	2018	2017
Euro denominated net sales	12,129	11,450
US dollar denominated net sales	1,296	677
<b>Balance at 31 December</b>	<b>13,425</b>	<b>12,127</b>

### *Borrowing risks and sensitivity analysis*

Generally, the Group raises long-term borrowings at fixed rates. In 2014, the Group issued a bond loan of EUR 2.5 million with mortgage cover and maturity date June 2020. The annual fixed coupon rate is 6% and the effective return rate is 7.44%. The interest (coupon rate) is fixed until June 2020.

In March 2016, investors provided a loan of EUR 750,000 with mortgage cover of EUR 500,000 and EUR 250,000 right of pledge on equipment. The total duration of the loan is 48 months with yearly repayments in March (2017: 10%, 2018: 20%, 2019: 30%, 2020: 40%) The annual payable interest is 5% on the outstanding gross amount and the effective return rate is 8.33%. The interest is fixed until March 2020.

Therefore borrowing risks for this instrument are low.

### *Liquidity risk*

Prudent liquidity risk management implies maintaining sufficient cash and the availability of funding through an adequate credit facility. Management monitors rolling forecasts of the Group's liquidity reserve and cash and cash equivalents. Furthermore, liquidity planning is one of the major elements in the Group's budget cycle. Due to company's working capital ratio and market conditions, management has tight monitoring procedures in place regarding direct cash flows. Both the cash position and sales forecasts are frequently reviewed. Managing the working capital position is important in managing our liquidity risk.

As per 31 December 2018 the working capital position is as follows:

(x EUR 1,000)	Current	Non-current	1 to 2 Years	2 to 5 Years	More than 5 years
Inventories	593				
Trade receivables	1,677				
Other receivables	415				
Total interest-bearing loans and borrowings	-227	-2,426		-2,426	
Trade payables	-892				
Other payables	-1,313				
Current tax liabilities	-58				
Cash at bank	1,738				
<b>Liquidity position (working-capital)</b>	<b>1,933</b>	<b>-2,426</b>		<b>-2,426</b>	<b>-</b>

Current liabilities with regard to payments of financing and interest costs are relatively small. The risk of strong fluctuating interest rates is limited and the company has no interest swaps outstanding. The main part of the interest is related to the outstanding bond loan and the 2016 loan. This interest rate is fixed until 30 June 2020 respectively 31 March 2020.

#### *Market interest rates and pensions*

Changes in discount rates used in pension calculations are related to the changes in capital market interests. Changes in discount rates will result in actuarial gains or losses. According to IAS 19R, these actuarial gains and losses are immediately recognised in other comprehensive income. Disregarding this mitigation a 0.5% decrease in the market interest rate at year-end would increase the pension obligation by approximately EUR 332,000. A 0.5% increase of the market interest rate at year-end would lead to a decrease of the pension obligation by approximately EUR 304,000.

#### **Capital risk management**

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimum capital structure to reduce the cost of capital. In order to maintain or adjust the capital structure, the Group may, if and when applicable, adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt. Consistent with other parties in the industry, the Group monitors capital based on the gearing ratio. This ratio is calculated as net debt divided by total capital. Net debt is calculated as total borrowings (including 'current and non-current borrowings' as shown in the consolidated balance sheet) less cash and cash equivalents. Total capital is calculated as 'equity' as shown in the consolidated balance sheet plus net debt. Below the gearing ratio of 2017 is stated compared to 2016.

(x EUR 1,000)	2018	2017
Total interest-bearing borrowings	2,652	3,068
Less cash and cash equivalents	-1,738	-617
<b>Net debt</b>	<b>915</b>	<b>2,451</b>
Total equity	5,209	4,767
<b>Total capital</b>	<b>6,124</b>	<b>7,218</b>
<b>Gearing ratio (net debt/capital x 100%)</b>	<b>15%</b>	<b>34%</b>

## 1. Net sales

The Group does not have separate segments as referred to in IFRS 8. IFRS 8 requires the financial statements to present segment information that is in accordance with the internal information used by management of the Group (chief operating decision maker) to assess performance and allocate resources.

The Group focuses on a single operating segment considering the nature of its services and the type of class of customer for these services. This operating segment consist of three business units, namely: Test Operations, Supply Chain Management and Qualification & Failure Analysis; to help the development of business level strategies. Management uses the consolidated results of operations to come up with informed business decisions.

Consequently, the disclosures for segment information are limited to net sales and non-current assets per country. In accordance to management reporting, net sales for the business units Test Operations, Supply Chain Management and Qualification & Failure Analysis are also disclosed.

Non-current assets amounting to EUR 6,000 (2017: EUR 98,000) is located in the Netherlands and the bulk of the non-current assets are located in Germany.

### Net sales by business unit

(x EUR 1,000)	2018	2017 <sup>1</sup>
Test Operations	6,060	4,964
Supply Chain Management (SCM)	3,283	2,448
Qualification & Failure & Analysis	4,082	4,715
<b>Total</b>	<b>13,425</b>	<b>12,127</b>

<sup>1</sup> In 2018, Test Operations and Test Engineering are combined into the business unit Test Operations, since Test Engineering is a supporting function enabling future tests to be performed in Test Operations. In addition, Failure & Technology Analysis and Qualification & Reliability Investigations are combined into the business unit Qualification & Failure Analysis, since they are part of the accredited laboratory and perform services in these areas. The 2017 net sales by business units are presented accordingly.

### Net sales by country

(x EUR 1,000)	2018	2017
Germany	6,621	6,139
Rest of Europe	5,667	5,154
Asia	831	518
Rest of the world	306	316
<b>Total</b>	<b>13,425</b>	<b>12,127</b>

The basis for attributing net sales from external customers to individual countries, is the country where the customer is based. No individual customer meets the 10% criteria.

The Group is participating in publicly funded projects. In 2018 approximately EUR 585,000 (2017: EUR 341,000) have been recognised in net sales which concerns two German publicly funded projects. These projects are related to the development of a smart probe cart and the development of a test strategy of flexible integrated circuit boards.

## 2. Cost of sales

(x EUR 1,000)	2018	2017
Change in work in process capitalised	-	129
Cost of raw materials and consumables	-2,545	-2,099
<b>Total</b>	<b>-2,545</b>	<b>-1,970</b>

## 3. Personnel expenses

(x EUR 1,000)	2018	2017
Salaries	5,456	5,043
Social securities	971	961
Share options	20	-1
Pension charges	108	102
<b>Total</b>	<b>6,555</b>	<b>6,105</b>

In 2018, capitalized internal hours are deducted from salaries amounting to EUR 82,000 (2017: EUR 113,000).

The professional categories of the employees are as follows:

Category	2018	2017
Business units	65	63
Management and administrative	15	15
Sales and support	14	13
Total average number of employees	94	91

The average number of persons employed by the Group in 2018 on a full-time basis was 94 (2017: 91). In 2018 an average of 3 persons are employed in the Netherlands on a full-time basis (2017:3).

At year-end 2018, the Group employed 93 persons (2017: 91).

## 4. Other operating expenses

(x EUR 1,000)	2018	2017
Housing and equipment costs	1,553	1,430
Selling and administrative expenses	1,389	1,273
<b>Total</b>	<b>2,942</b>	<b>2,703</b>

The selling and administrative expenses includes an accrual of EUR 130,000 for legal proceedings against a former employee concerning a dispute about the (non) fulfilment of the contractual obligations as per agreement between the parties.

The selling and administrative expenses include an accrual of EUR 200,000 for withholding VAT expenses, based on a best estimate for the outcome of a tax audit in the Netherlands. Lease expenses included in other operating expenses amounts in 2018 consist of lease expenses for equipment and vehicles amounting to EUR 187,000 and rental costs of buildings amounting to EUR 216,000.

*Auditor fees*

The total costs for the services rendered by Baker Tilly N.V. consist of:

(x EUR 1,000)	2018			2017		
	Baker Tilly NV	Other Baker Tilly network	Total	Baker Tilly NV	Other Baker Tilly network	Total
Audit of annual accounts	42	48	90	36	43	79
Other assurance services	-	-	-	-	-	-
Non audit	-	-	-	-	-	-
<b>Total</b>	<b>42</b>	<b>48</b>	<b>90</b>	<b>36</b>	<b>43</b>	<b>79</b>

**5. Termination benefit costs**

(x EUR 1,000)	2018	2017
Termination benefit costs	-	400
<b>Total</b>	<b>-</b>	<b>400</b>

The termination benefits in 2017 were related to a former employee of the company. The termination benefits have been fully paid in 2018.

**6. Depreciation and amortisation**

(x EUR 1,000)	2018	2017
Intangible assets	195	45
Land and buildings	136	116
Machinery and equipment	509	521
Other property, plant and equipment	178	336
<b>Total</b>	<b>1,018</b>	<b>1,018</b>

**7. Financial expenses**

(x EUR 1,000)	2018	2017
Interest	233	233
Interest accrued	8	25
<b>Total</b>	<b>241</b>	<b>258</b>

(x EUR 1,000)	2018	2017
Interest expenses:		
- bond loan	195	191
- other loans	44	57
- other financial expenses /income (-)	2	10
<b>Total</b>	<b>241</b>	<b>258</b>

(x EUR 1,000)	2018	2017
Interest paid:		
- bond loan	150	150
- other loans	8	-
- other financial expenses /income (-)	2	38
<b>Total</b>	<b>160</b>	<b>188</b>

The interest expenses 2018 include amortisation costs amounting to EUR 72,000 (2017: EUR 64,000), which relate to discount and bond issuance cost of the bond loan and 2016 loan.

## 8. Taxes

(x EUR 1,000)	2018	2017
Recognition of deferred tax assets carried forward	5	260
Changes in deferred tax liabilities	-4	23
<b>Taxes in Consolidated Statement of Profit and Loss</b>	<b>1</b>	<b>283</b>

Income taxes paid in 2018 is EUR 0 (2017: EUR 0).

As the major part of the activities is in Germany, the Group uses the German domestic tax rates of 27.5% (2017: 27.5%) in the reconciliation of the effective tax rate below:

(x EUR 1,000)	2018	2017
Profit (loss) before taxes	144	-44
Taxes based on the weighted average applicable rate	-40	12
Unrecognised deferred tax assets carried forward	45	248
Changes in deferred tax liabilities	-27	25
Capitalisation of deferred tax liabilities	23	-2
<b>Taxes in Consolidated Statement of Profit and Loss</b>	<b>1</b>	<b>283</b>

## 9. Property, plant and equipment

(x EUR 1,000)	Land and buildings at fair value	Machinery and equipment	Others	Total
<b>1 January 2017</b>				
Cost or valuation	4,620	25,721	3,950	34,291
Accumulated depreciation	-1,747	-23,885	-3,376	-29,008
<b>Carrying amount</b>				
<b>1 January 2017</b>	<b>2,873</b>	<b>1,836</b>	<b>574</b>	<b>5,283</b>
Additions	2	1,111	15	1,128
Disposals	-	-1	-	-1
Revaluation	586	-	-	586
Depreciation charge	-116	-521	-336	-973
<b>Carrying amount</b>				
<b>31 December 2017</b>	<b>3,345</b>	<b>2,425</b>	<b>253</b>	<b>6,023</b>
<b>31 December 2017</b>				
Cost or valuation	5,208	26,831	3,965	36,004
Accumulated depreciation	-1,863	-24,406	-3,712	-29,981
<b>Carrying amount 31 December 2017</b>				
	<b>3,345</b>	<b>2,425</b>	<b>253</b>	<b>6,023</b>
<b>1 January 2018</b>				
Cost or valuation	5,208	26,831	3,965	36,004
Accumulated depreciation	-1,863	-24,406	-3,712	-29,981
<b>Carrying amount 1 January 2018</b>				
	<b>3,345</b>	<b>2,425</b>	<b>253</b>	<b>6,023</b>
Reclassification to Intangible Assets – Cost	-	-228	-31	-259
Reclassification to Intangible Assets – Accumulated Depreciation			243	243
Additions	9	158	279	446
Disposals – Cost	-326	-688	-82	-1,096
Disposals – Accumulated Depreciation	-	688	82	770
Revaluation	-	-	-	-
Depreciation charge	-136	-509	-179	-824
<b>Carrying amount 31 December 2018</b>				
	<b>2,892</b>	<b>1,846</b>	<b>565</b>	<b>5,303</b>
<b>31 December 2018</b>				
Cost or valuation	4,891	26,073	4,131	35,095
Accumulated depreciation	-1,999	-24,227	-3,566	-29,792
<b>Carrying amount 31 December 2018</b>				
	<b>2,892</b>	<b>1,846</b>	<b>565</b>	<b>5,303</b>
Useful economic life in years	20	2-10	3-10	

*Land and buildings at historical cost*

(x EUR 1,000)	2018	2017
Initial costs land and buildings	4,528	4,528
Prior year correction	5	
Disposals	-72	
Accumulated depreciation	-4,249	-4,237
<b>Net book amount</b>	<b>212</b>	<b>291</b>

In 2018, the Company disposed certain land and building recognized at fair value. The disposed asset with carrying value amounting to EUR 326,200 at the time of sale were sold at no gain or loss to the Company.

The valuation report dated 4 December 2017 prepared by Diplom-Betriebswirt Friedrich Kiefer state the fair value of the land and building is EUR 3,345,000 (valuation in 2014: EUR 3,110,000).

The valuation of land and building is based on a market valuation of land and rental value in combination with the technical life of the building. The land has been valued against EUR 50 per square meter.

According to IFRS 13 fair value measurement hierarchy, the revalued land and building belongs to Level 3 – Significant Unobservable Inputs. The most significant input, all of which are unobservable is the estimated rental value and the land has been valued against EUR 50 per square meter.

*Valuation of land*

	Total square meters	EUR/square meter	Total value in EUR
Built land	14,780	50	739,000
Unbuilt land	-	50	-
Total land	14,780		739,000

*Valuation of building*

Valuation of the building is based on rental-market prices for office and production space per square meter. The range of market prices per square meter is between 2.00 and 6.5 EUR /square meter.

The total square meters of the building, which has been used to determine the rental value is 5,714 square meters. The total annual rental value amounts EUR 294,624 (this includes the value of the built land).

A multiplier is used (according to valuation techniques in the real estate market) to calculate the value which amounts 10.46. The multiplier 10.46 x annual rental value EUR 294,624 = value of buildings including built land = EUR 3,082,583.

The value of the built land including the unbuilt lands is EUR 3,082,583 plus EUR 313,350 = EUR 3,395,933.

The valuator has rounded the taxation value to EUR 3,345,000.

*Impairment loss and subsequent reversal*

The company neither incurred nor reversed any impairment losses in 2018 (2017: zero).

*Assets under construction*

Assets under construction are included in the category 'others'. As at December 31, 2018, no assets are under construction (2017: EUR 120,000).

*Security*

Land and buildings amounting to EUR 2.5 million is provided as a mortgage right for the holders of the bond loan issued in June 2014. The lenders of the 2016 loan are provided a mortgage cover on land and buildings for the outstanding loan amount with a maximum of EUR 500,000. The right of pledge on machinery and equipment has expired in April 2018.

## 10. Intangible assets

(x EUR 1,000)	Goodwill	Development expenditure	Other intangible assets	Total
<b>Cost</b>				
<b>Balance at 1 January 2017</b>	<b>1,741</b>	<b>678</b>	<b>140</b>	<b>2,559</b>
Investments	-	113	18	131
Disinvestments	-	-59	-	-59
<b>Balance at 31 December 2017</b>	<b>1,741</b>	<b>732</b>	<b>158</b>	<b>2,631</b>
<b>Accumulated amortisation</b>				
<b>Balance at 1 January 2017</b>	-	<b>18</b>	<b>140</b>	<b>158</b>
Amortisation	-	45	-	45
<b>Balance at 31 December 2017</b>	-	<b>63</b>	<b>140</b>	<b>203</b>
<b>Carrying amount</b>				
<b>Balance at 1 January 2017</b>	<b>1,741</b>	<b>660</b>	-	<b>2,401</b>
<b>Balance at 31 December 2017</b>	<b>1,741</b>	<b>669</b>	<b>18</b>	<b>2,428</b>

(x EUR 1,000)	Goodwill	Development expenditure	Other intangible assets	Total
<b>Cost</b>				
<b>Balance at 1 January 2018</b>	<b>1,741</b>	<b>732</b>	<b>158</b>	<b>2,631</b>
Reclassification from Other Assets	-	-	259	259
Investments	-	82	48	130
Disinvestments	-	-	-1	-1
<b>Balance at 31 December 2018</b>	<b>1,741</b>	<b>814</b>	<b>464</b>	<b>3,019</b>
<b>Accumulated amortisation</b>				
<b>Balance at 1 January 2018</b>	-	<b>63</b>	<b>140</b>	<b>203</b>
Reclassification from Other Assets	-	-	243	243
Amortisation	-	167	28	195
Disinvestments	-	-	-1	-1
<b>Balance at 31 December 2018</b>	-	<b>230</b>	<b>410</b>	<b>640</b>
<b>Carrying amount</b>				
<b>Balance at 1 January 2018</b>	<b>1,741</b>	<b>669</b>	<b>18</b>	<b>2,428</b>
<b>Balance at 31 December 2018</b>	<b>1,741</b>	<b>584</b>	<b>54</b>	<b>2,379</b>

*Goodwill*

Goodwill is tested annually for impairment. The goodwill is allocated to RoodMicrotec GmbH as the cash-generating unit. The recoverable amount of this cash-generating unit is determined using value in use calculations.

These calculations use cash flow projections based on financial budgets approved by management covering a five-year period. Cash flows beyond the five-year period are extrapolated at a flat sales growth. In net present value it is common use to use a perpetual value in the closing value.

The discount rate used is post-tax and reflects specific (market) risks and represents the current WACC. The proportion of the equity and debt used in the WACC calculation is based on the optimum capital structure. The WACC post tax used is 12.57% (2017: 12.76%).

The discounting rate applied in accordance with IAS 36.55 corresponds to a WACC pre-tax of 17.33% (2017: 17.61%).

The following data have been used for the WACC calculation:

WACC post tax	12.57%
Risk free rate	1.00%
Beta unlevered	1.04
Beta levered	1.12
Market risk premium	6.0%
Company specific size premium	5.4%
Spread	2.1%
Tax rate	27.5%
Cost of debt (post tax)	5.39%
Equity to Enterprise Value	92.80%
Debt to Enterprise Value	7.20%

The recoverable amount for 2018 amounts to EUR 9.6 million. The headroom in the impairment test scenario amounts to EUR 1.6 million. There are no indications for a reasonably possible change in the key assumptions mentioned above. Sensitivity analyses were prepared to determine the point where an impairment loss would be necessary. The headroom would be zero in case a WACC post tax is used of 14.60%.

*Development expenditure*

In 2018, the Group invested in internally generated intangible assets amounting to EUR 82,000 (2017 EUR 113,000). These investments mainly relate to the Group's Automotive Competence Centre (ACC) to add automotive competencies to the Group's existing portfolio in order to be able to offer new services that are required for automotive projects. Development expenditure will be amortised during the expected economic lifetime of 4 years starting when the project is finished. In 2018 the amortisation of development expenditure amounts to EUR 167,000 (2017 EUR 44,000). In 2018 no disinvestment took place (2017 EUR 60,000).

Amortisation is accounted for in the income statement within depreciation. Loss on disinvestments is accounted for in the income statement within other operating expenses.

**11. Deferred tax assets**

Deferred tax assets and liabilities are offset, because there is a legally enforceable right to offset current tax assets against current tax liabilities and the deferred taxes relate to the same tax authority. Deferred taxes comprise the following:

(x EUR 1,000)	2018	2017
Deferred tax assets to be recovered > 12 months	1,830	1,825
Deferred tax assets to be recovered < 12 months	-	-

<b>Deferred income tax assets (unnetted)</b>	<b>1,830</b>	<b>1,825</b>
Deferred tax liabilities to be recovered > 12 months	-410	-541
Deferred tax liabilities to be recovered < 12 months	-	-
<b>Deferred income tax liabilities (unnetted)</b>	<b>-410</b>	<b>-541</b>
<b>Deferred tax assets (netted)</b>	<b>1,420</b>	<b>1,284</b>

The movement in deferred tax assets is as follows:

*Deferred tax assets*

(x EUR 1,000)	Total capitalised carry forward losses
<b>Balance at 1 January 2017</b>	<b>1,565</b>
Charges for the book year	260
<b>Balance at 31 December 2017</b>	<b>1,825</b>
<b>Balance at 1 January 2018</b>	<b>1,825</b>
Charges for the book year	5
<b>Balance at 31 December 2018</b>	<b>1,830</b>

The deferred tax asset recognised on the balance sheet is calculated as follows:

Tax losses	EUR 20.8 million
Potential deferred taxes assets regarding carry forward	EUR 5.5 million
Deferred tax assets carry forward recognised	EUR 1.8 million
Recognised tax assets of potential total deferred tax assets	33%

As per year-end 2018, RoodMicrotec GmbH had approx. EUR 20.8 million tax losses which are indefinite in time. Consequently, these tax losses can be carried forward and be compensated with future payable taxes without any time limitation. The corresponding amount of possible tax savings depends on the applicable tax rate, which for RoodMicrotec is 27.5%, being 20.5% on EUR 20.8 million concerning corporate tax losses and 7% on EUR 18.2 million concerning trade tax losses. This results in a potential deferred tax asset in the amount of EUR 5.5 million.

Consistent with past practice, recognition of deferred tax assets is based on the company's (taxable) profits shown in its internal business plan, made on a five-year rolling forecast. The company's business planning for the financial years 2019-2023, results in a EUR 1.8 million deferred tax asset to be recognised in the company's balance sheet.

IAS 12 prescribes that deferred taxes arising from available tax losses are recognised, if the entity has sufficient taxable temporary differences or there is convincing evidence that sufficient taxable profit will be available (IAS 12.35). Entities may look forward for a number of future accounting periods to determine whether they will have sufficient taxable profit to justify recognising a deferred tax asset. In these circumstances, there is no specific restriction on how many years the entity may look forward, unless there is a date which the availability of the tax losses expires. Generally, evidence supporting or indicating future profits in later financial years will generally not be as convincing as that for earlier periods, but there is no rule as to the duration of the lookout period.

No deferred tax assets have been recognised for tax losses in the Netherlands which are definite in time. These unrecognised tax losses in total approximately EUR 0.4 million as per 31 December 2018 (2017: EUR 0.8 million).

The year-end tax position relates to the prior financial year concerned.

*Deferred tax liabilities*

(x EUR 1,000) revised	1 January 2017	Recognised in profit and loss	Recognised in other comprehensive income	31 December 2017
Re-valued land and building	707	-	133	840
Pension obligations	-611	48	16	-547
Lease assets & other	136	-72	-	64
Development expenditure	182	2	-	184
<b>Total</b>	<b>414</b>	<b>-22</b>	<b>149</b>	<b>541</b>

	1 January 2018	Recognised in profit and loss	Recognised in other comprehensive income	31 December 2018
Revalued land and building	840	-	-32	808
Sale of land	-	-	-71	-71
Pension obligations	-547	48	-32	-531
Lease assets & other	64	-18	-	46
Provision jubilee	-	-3	-	-3
Development expenditure	184	-23	-	161
<b>Total</b>	<b>541</b>	<b>4</b>	<b>-135</b>	<b>410</b>

As a result of the revaluation of land and buildings, the capitalisation of development expenditure, different valuation pension obligation and others a provision for deferred tax liabilities has been recognised amounting to 27.5% of the difference between the HGB and IFRS valuation. All deferred tax liabilities are within the same jurisdiction.

In 2018, no deferred tax liability is formed on the remeasurement of the Plentum assets of EUR 938,000 included in the other comprehensive income movements of the pension obligations (note 20), there is no difference between the HGB and IFRS valuation.

**12. Financial assets**

(x EUR 1,000)	2018	2017 <sup>1</sup>
<b>Cost</b>		
Balance at 1 January	138	3,001
Net investments	-57	-4
Reclassification life insurances policies <sup>1</sup>	-	-365
Reclassification Plentum bonds	-	-2,494
<b>Balance at 31 December</b>	<b>81</b>	<b>138</b>

<sup>1</sup>Two life insurance policies of EUR 365,000 were reclassified from financial assets to defined benefit obligation. A reference is made to 'changes in description on page 50.

The financial assets comprise of a life insurance policy in total EUR 81,000 (2017: EUR 138,000), which are based on the level input 2, where the insurance company has calculated the value of the assets based on the common used insurance calculation techniques. The financial assets for which fair value (through the profit and loss statement) is measured or disclosed in the financial statements are categorised within the fair value hierarchy.

In 2017, the Group concluded that Plentum bonds qualified as plan assets under IAS 19, and consequently these bonds were reclassified from financial assets to defined benefit obligations.

### 13. Inventories

(x EUR 1,000)	2018	2017
Raw materials and consumables	144	111
Work in progress	449	470
<b>Total</b>	<b>593</b>	<b>581</b>

No expenses are included in the income statement in 2018 (2017: zero) with respect to write-downs of inventory to lower net realisable value.

### 14. Trade and other receivables

The Group's trade and other receivables are specified as follows:

(x EUR 1,000)	2018	2017
Not overdue	1,199	1,126
< 30 days overdue	376	416
> 30 days and < 60 days overdue	116	44
> 60 days overdue	12	18
Allowance for credit losses	-26	-15
Trade receivables	1,677	1,589
Other receivables	415	391
<b>Total</b>	<b>2,092</b>	<b>1,980</b>

The carrying amount of the trade and other receivables approximates the fair value, due to their short-term nature.

The other receivables include a wage tax claim of EUR 185,000 on a former employee, which are part of legal proceedings concerning a dispute about the (non) fulfilment of the contractual obligations as per agreement between the parties.

Information regarding the group's exposure to credit risk, foreign currency risk and interest rate risk can be found in note 'Financial risk management and sensitivity analysis'.

#### *Allowance for credit losses*

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables. The loss allowance is determined based on historical data of credit losses and updated periodically to incorporate forward looking information. As per year-ending 2018, the Group applies a single-loss rate of 1.5% of trade receivables.

The movement in the allowance for credit losses during the year is as follows:

(x EUR 1,000)	2018	2017
Balance at 1 January	-15	-117
Accounting policy changes IFRS 9	-9	-
Release/addition to the allowance for credit losses	-2	26
Utilised during the period	-	76
<b>Balance at 31 December</b>	<b>-26</b>	<b>-15</b>

The total amount of undiscounted expected credit losses at initial recognition of trade and other receivables initially recognised during 2018 is EUR 2.000.

## 15. Cash and cash equivalents

(x EUR 1,000)	2018	2017
Cash at bank and on hand	1,738	617
<b>Total</b>	<b>1,738</b>	<b>617</b>

## 16. Share capital

### Authorised share capital

At 31 December 2018 the authorised share capital comprised 100,000,000 ordinary shares (2017: 80,000,000). The shares have a nominal value of EUR 0.11 each.

In 2018, the movement of the ordinary shares issuances are as follows:

Date of Issuance	Originating from	Nominal Value	Number of Shares	Share Capital	Share Premium
11/01/2018	Warrants III	0.11	2,303,963	253,436	230,396
05/02/2018	Equity Line	0.11	1,530,785	168,386	330,650
15/02/2018	Options	0.11	110,000	12,100	-
28/02/2018	Options	0.11	300,000	33,000	-
06/03/2018	Options	0.11	1,050,000	115,500	-
08/03/2018	Options	0.11	468,440	51,528	-
11/04/2018	Warrants III	0.11	108,166	11,898	10,817
11/07/2018	Warrants III	0.11	191,333	21,047	19,133
<b>Total</b>			<b>6,062,687</b>	<b>666,896</b>	<b>590,996</b>

As at 31 December 2018, 72,778,732 ordinary shares are issued (2017: 66,716,045). The company holds 4,100 ordinary shares (2017: 4,100) as treasury shares. The number of shares held by the company at the end of the year under review was less than 0.01% of the issued and paid-up capital (2017: < 0.01%).

As at 31 December 2018, RoodMicrotec N.V. has 4,026,434 warrants Series III (2017: 6,629,896). The ISIN code is NL0011556972 and the exercise price of each warrant is EUR 0.21. These warrants are exercisable each first week of each new quarter in a year. The final exercise day of these warrants was 31 December 2018.

As at 31 January 2018, RoodMicrotec N.V. has issued 1,530,785 warrants to Blikkenburg B.V.. The exercise price of each warrant is EUR 0.42. These warrants are exercisable as of the date of issuance. The expiration date of these warrants is 31 January 2023.

In the past the company has issued warrants to shareholders and investors as an incentive to attract new investors or to reward long-term shareholders. In the future, the company may consider issuing warrants again, but will decide on this on a case by case basis.

More details on the exercised options in 2018 is provided in note 18.

### Share premium

The share premium reserve relates to the issuance of shares above par and granting of options to employees and management.

### Revaluation reserves

As a result of the revaluation of land and buildings a revaluation reserve has been recognised. The revaluation reserve cannot be used for dividend payments.

In 2018, the Company disposed certain land and buildings recognized at fair value. The sale transaction resulted to the transfer of corresponding revaluation reserve to retained earnings amounting to EUR 184,000, net of applicable tax amounting to EUR 71,000.

#### *Non-controlling interests*

In November 2010 the Group issued a perpetual bond of EUR 1,994,000. On 27 December 2012 the Group issued additionally a perpetual bond of EUR 500,000 for the financing of the pension liabilities of RoodMicrotec GmbH. This capital was received and placed on deposit with the UBS Bank.

The compensation to be paid results from the multiplication of 11,70% annually with the par value per security and the actual number of calendar days in the month for which the compensation is implemented divided by the actual number of days (365 or 366) in the respective calendar year.

RoodMicrotec GmbH is not obligated to pay under one of the following conditions (in this case a claim does not arise):

if, and insofar as, such a claim would lead to or increase an annual net loss of RoodMicrotec GmbH in the business year to which the determining profit period refers, and insofar as the profit distributions from free equity capital cannot be paid simultaneously,

The term "free equity" is the amount that can be normally distributed to the shareholders after dissolution of all "free" reserves.

Compensations become due only if, and insofar as, RoodMicrotec GmbH decides on such a payment. If RoodMicrotec GmbH decides against a payment, it is not obliged to pay compensation. If RoodMicrotec GmbH decides on a payment and there are unpaid compensations ("compensation arrears"), then payment of these compensations must occur before any dividends or capital can be paid or distributed to the normal shareholders. As per 31 December 2018, the total unpaid compensation amounts to zero.

There is no contractual obligation for redemption, as the securities are without due date (no redemption period or maturity agreed upon). Furthermore, it is at the discretion of the issuing party when a termination is made.

The securities conditions do not have any redemption triggers that are out of the control of RoodMicrotec GmbH.

Only the company can unilaterally call in this bond. The bond does not entitle the owner to any RoodMicrotec N.V. shareholder rights. If an annual compensation payment leads to an annual net loss for the company in the business year to which the determining profit period refers, or increases a net loss, the claim to this compensation does not arise for the accounting period.

#### *Proposal for result appropriation*

In accordance with article 27 of the articles of association, the Group proposes to add the entire result to the reserves.

## **17. Earnings per share**

#### *Basic*

Basic earnings per share are calculated by dividing the profit attributable to equity holders of the company by the weighted average number of ordinary shares in issue during the year.

(x EUR 1,000)	2018	2017
Net result attributable to equity holders of the company	125	-44
Weighted average number of ordinary shares in issue (in thousands)	72,241	65,617
<b>Basic earnings per share (x EUR 1)</b>	<b>0.00</b>	<b>-0.00</b>

*Diluted*

Diluted earnings per share are calculated by adjusting the weighted average number of ordinary shares outstanding to take into account conversion of all potentially dilutive ordinary shares, consisting of warrants and share options which are in the money.

(x EUR 1,000)	2018	2017
Net result attributable to equity holders of the company (x EUR 1,000)	125	-44
Weighted average number of ordinary shares in issue	72,241	65,617
Adjustments for:		
- Warrants (in the money)	4,026	6,630
- Share options (in the money)	-	1,928
Weighted average number of ordinary shares for diluted earnings per share	76,268	74,175
<b>Diluted earnings per share (x EUR 1)</b>	<b>0.00</b>	<b>-0.00</b>

## 18. Options

*Share options*

Share options are granted to the members of the board of management and to selected employees. Mr. O.M. Sallenhag and Mr. R. Pusch will be granted a maximum of 100,000 options per half year per person depending on the achievement of certain targets related to individual goals and the Group's performance. In general the options will be granted in half-yearly portions. The targets are defined by the supervisory board.

The exercise price of the granted options to Mr. O.M. Sallenhag, Mr. R. Pusch and the employees is 20% below the market price of the shares on granting date. Options are conditional on the employee completing three years' service (vesting period). The share options granted to Mr. O.M. Sallenhag and Mr. R. Pusch have no vesting period. Option rights that will not have been exercised as of the day the employee agreement will have been terminated, will lapse three months after that day.

The Group has no legal or constructive obligation to repurchase or settle the options in cash. The share options are valued using the Black and Scholes valuation model.

The following data have been used for the calculation:

- 39.15% volatility, 60 days
- Fair value of share price at grant date: 0.248
- 0% dividend yield
- 1% annual risk-free interest rate
- Expected option life of 2.15 years

The value of the accrued options in 2018, 250,000 pieces against a weighted average fair value of 8 cents, was EUR 20,000 (2017: EUR 0).

Option holder	Balances as at 31-12-2017	Granted 2018	Exercised 2018	Balances as at 31-12-2018	Exercise price in EUR
<i>Mr. M. Sallenhag</i>	-	-	-	-	-
<i>Mr. R. Pusch</i>	-	-	-	-	-
<i>Mr. Ph.M.G. Nijenhuis</i>					
2010	190,000	-	-190,000	-	0.11
2011	370,000	-	-370,000	-	0.11
2012	333,440	-	-333,440	-	0.11
2013	375,000	-	-375,000	-	0.11
2014	320,000	-	-320,000	-	0.11
2015	240,000	-	-240,000	-	0.11
2016	100,000	-	-100,000	-	0.11
<b>Total</b>	<b>1,928,440</b>	<b>-</b>	<b>-1,928,400</b>	<b>-</b>	

No option rights are outstanding as per 31 December 2018 (31 December 2017: 1,928,440 options). The former CEO of the Group, Mr. Ph. M.G. Nijenhuis, exercised 1,928,440 options in 2018 against an exercise price of EUR 0.11.

## 19. Loans and borrowings

This note provides information on the contractual terms of the Group's interest-bearing loans and borrowings.

(x EUR 1,000)	2018	2017
Secured bond loan	2,426	2,381
Secured loan	217	639
Loans from credit institutions	10	48
Total loans and borrowings	2,653	3,068
Less: current portion of long-term loans	-227	-188
<b>Total non-current loans and borrowings</b>	<b>2,426</b>	<b>2,880</b>

*Terms and debt repayment schedule*

(x EUR 1,000)	Total	Current liabilities	Non-current liabilities	1 to 2 Years	2 to 5 Years	More than 5 years
Secured bond loan	2,426	-	2,426	-	2,426	-
Secured loan	217	217	-	-	-	-
Loans from credit institutions	10	10	-	-	-	-
<b>Total interest-bearing loans and borrowings</b>	<b>2,652</b>	<b>227</b>	<b>2,426</b>	<b>-</b>	<b>2,426</b>	<b>-</b>
Trade and other payables	2,205	2,205	-	-	-	-
Current income tax liabilities	58	58	-	-	-	-
<b>Total other current liabilities</b>	<b>2,263</b>	<b>2,264</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>4,916</b>	<b>2,490</b>	<b>2,246</b>	<b>-</b>	<b>2,426</b>	<b>-</b>

The fair values of the interest-bearing loans and borrowings approximates the nominal value (book value).

*Interest expenses repayment schedule as per 31 December 2018*

(x EUR 1,000)	Total	Current Liabilities	Non-current liabilities	1 to 2 Years	2 to 5 Years	More than 5 years
Secured bond loan	299	198	101	101	-	-
Secured loan	3	3	-	-	-	-
<b>Total</b>	<b>302</b>	<b>201</b>	<b>101</b>	<b>101</b>	<b>-</b>	<b>-</b>

*Secured bond loan*

On 30 June 2014, the Group issued EUR 2,500,000 bond loan with mortgage cover. The bond loan is composed of 2,500 bonds with EUR 1,000 nominal value at an issue price EUR 2,350,000. Maturity date is June 2020. Upon issuance, the bond was discounted at 94% (EUR 150,000). The annual coupon rate is 6% and the effective interest rate is 7.44%. Upon issuance, the Group capitalised bond issuance cost amounting to EUR 100,000 which will be amortised in six years. The amortisation in 2018 related to the discount and bond issuance cost amounted to EUR 45,000 (2017: EUR 41,000). As at 31 December 2018, the secured bond loan amounted to EUR 2,426,000 (2017: EUR 2,381,000).

*Secured loan*

In March 2016, a group of investors provided a loan of EUR 750,000 with mortgage cover of EUR 500,000 and right of pledge on machinery and equipment of EUR 250,000. Upon issuance, the loan was discounted at 90% (EUR 75,000). The total duration of the loan is 48 months with an annual payable interest of 5% on the outstanding gross amount. The effective interest rate is 8.33%. In March of 2017 the Group repaid 10% and in 2018 60% of the loan. The right of pledge on machinery and equipment has expired in April 2018. In March 2019 the final 30% is repaid.

*Loans from credit institutions*

In 2016 the Group signed an agreement with a credit institution for a short-term loan of EUR 115,000 for the upgrade of a machine. The loan is repaid in 36 equal monthly installments with a monthly payable interest of 0.33% on the outstanding gross amount (annually effective interest rate of 4.04%).

*Interest rates*

The average interest rates were as follows:

	2018	2017
Bank overdrafts	8.50%	8.50%
Secured bond loan	6.00%	6.00%
Secured loan	5.00%	5.00%
Loans from credit institutions	4.04%	4.04%

## 20. Defined benefit obligations

### Defined benefit plans

The Group funds defined benefit plans for qualifying employees at RoodMicrotec GmbH. These plans are subject to German laws and are administered by a separate fund that is legally separated from the company. The trustee(s) of these funds are appointed by the company. The pension benefits are based on the pensionable salary (or in some cases on the ratio of salary and social security contribution ceiling) and the worked service years. Since the 1990's the pension schemes are closed for new members. At the moment the pension schemes have 55 participants of which 12 are active participants.

The plans expose the Group to actuarial risks such as interest rate risk. The schemes do not expose the Group to any unusual scheme-specific risk. The defined benefit pension plan comprising defined benefit arrangements and arrangements congruently matched by insurance policies are partly reinsured. The reserves required for these obligations are recognised, net of plan assets, in the balance sheet.

The most recent actuarial valuations of plan assets and the present value of the defined benefit obligation were carried out on 31 December 2018 by Mercer Deutschland GmbH, Mülheim an der Ruhr. The present value of the defined benefit obligation and the related current service costs and past service costs have been measured using the projected unit credit method. The charge for the year is included in the employee benefits expense in the income statement.

The principal assumptions used for the purposes of the actuarial valuations at 31 December are as follows:

	2018	2017
Discount rate at 31 December	2.02%	1.93%
Expected duration in years, active employees	20 years	20 years
Expected duration in years, pensioners	10 years	10 years
Expected duration in years, mixed	15 years	15 years
Mortality	RT Heubeck 2018 G	RT Heubeck 2005 G
Disability	RT Heubeck 2018 G	RT Heubeck 2005 G
Marriage	RT Heubeck 2018 G	RT Heubeck 2005 G
Withdrawal	Mercer Inhouse-Tables	Mercer Inhouse-Tables

The movement in the present value of the defined benefit obligations and in the fair value of the plan assets is as follows:

(x EUR 1,000)	2018	2017 <sup>1</sup>
<b>Defined benefit obligations and plan assets</b>		
Defined benefit obligations at 1 January	6,346	6,563
Current service costs	16	16
Interest costs	117	108
Actuarial gains (-) or losses	152	-23
Pension payments	-399	-318
<b>Defined benefit obligations at 31 December</b>	<b>6,232</b>	<b>6,346</b>
Fair value of plan assets at 1 January	3,447	1,316
Reclassification life insurance policies <sup>1</sup>	-	365
Reclassification Plentum plan assets	-	2,494
Remeasurement recognised in OCI	-938	-346
Expected return on plan assets	25	22
Actuarial gains or losses (-)	35	37
Benefits paid	-76	-76
<b>Fair value of plan assets at 31 December</b>	<b>2,858</b>	<b>3,812</b>
<b>Net defined benefit obligations at 31 December</b>	<b>3,374</b>	<b>2,534</b>

<sup>1</sup>Two life insurance policies of EUR 365,000 were reclassified from financial assets to defined benefit obligation. A reference is made to 'changes in description on page 50.

*Plan assets*

Plan assets as per year end are composed of life insurance policies amounting to EUR 1.7 million (2017: EUR 1.7 million), which are held at insurance companies and Plentum bonds amounting to EUR 1.2 million (2017: EUR 2.1 million).

The fair values of these life insurance policies are determined based on quoted market prices in active markets. The actual return on plan assets was EUR -35,000 (2017: EUR -37,000). The plan assets do not include any of the Group's own financial instruments, nor any property occupied by or other assets used by the Group.

As per 30 November 2010 the Group owns a EUR 2.0 million high-yield (10.9%) Bond in the Plentum Fund VI SCS issued by Plentum Luxembourg S.a.r.l. As per 27 December 2012 RM purchased another similar Bond from the fund at a 10.5% rate with a size of EUR 0.5 million. The bonds are held in deposit at the UBS Bank. The fair value of the Plentum bonds are based on level 3 (unobservable) inputs, relevant observable inputs are not available for the fund. The Group assessed the performance of the Plentum fund participants. The financial assets balance of the fund has been impacted negatively as a result of the insolvency of one of the funds participants. The net present value approach on the expected cash flows from the bonds using an average fair value based on the outcome of various scenarios resulted in an impairment of EUR 0.9 million in 2018, which is recognised through OCI. The discounted cash flow is used as the valuation technique and for the significant unobservable input the following range: interest rate 10.5%-10.9%, probability of default between 5% and 20%. Consequently, the fair value of the Plentum plan assets amounts to EUR 1.2 million as per 31 December 2018.

A sensitivity analysis on the probability of payment for the Plentum bonds at 31 December 2018 is as shown below:

Assumption	Probability of payment	
	10% increase	10% decrease
Sensitivity level		
Impact on defined benefit obligation in EUR	121	-121

Amounts recognised in the income statement related to the Group's defined benefit plans are as follows:

(x EUR 1,000)

	2018	2017
Current service costs	16	16
Net interest expenses	92	86
<b>Expenses (income) recognised in profit and loss</b>	<b>108</b>	<b>102</b>

Amounts recognised in other comprehensive income (OCI) related to the Group's defined benefit plans are as follows:

(x EUR 1,000)

	2018	2017
Effect of changes in financial assumptions	-58	-142
Effect of changes in demographical assumptions	110	-
Effect of experience adjustments	100	119
Return on plan assets or reimbursement rights excl. interest income	-35	-37
Remeasurement recognised in OCI	938	-346
<b>Expenses (income) recognised in OCI</b>	<b>1,055</b>	<b>-406</b>

A quantitative sensitivity analysis for the discount rate as at 31 December 2018 is as shown below:

Assumption	Discount rate	
	0.5% increase	0.5% decrease
Sensitivity level		
Impact on defined benefit obligation in EUR	-304	332

The sensitivity analysis is prepared at the end of the reporting period using the same methods as applied in the defined benefit obligation in the balance sheet. The sensitivity analysis may not be representative of the actual change in the defined benefit obligation.

The Group's expected pension payments for 2018 are EUR 0.5 million (2017: EUR 0.5 million).

## 21. Provisions

(x EUR 1,000)	2018	2017
Warranty provisions	68	104
Other provisions	39	40
<b>Total</b>	<b>107</b>	<b>144</b>

Warranty provisions are related to warranties issued contractually on products supplied and services rendered as at balance sheet date. The purpose of the provision is to cover costs arising if products and services supplied do not meet the agreed specifications. The provision is based on estimates using the historic warranty data relating to comparable products and services. The provision for warrant obligations are expected to have a duration between one and five years.

The other provisions relate to employee liabilities such as defined jubilees and are in general long term. Remeasurements are recognised in the income statement in the period in which they arose.

## 22. Trade and other payables

(x EUR 1,000)	2018	2017
Suppliers and trade creditors	892	960
Other payables	1,313	1,520
<b>Total</b>	<b>2,205</b>	<b>2,480</b>

The carrying amount of the trade and other payables approximates the fair value, due to their short-term nature.

Other payables consist of non-trade payables and accrued expenses.

## 23. Off-balance sheet commitments

*Operating leases as lessee*

(x EUR 1,000)	2018	2017
Less than one year	105	380
Between one and five years	72	228
More than five years	-	-
<b>Total</b>	<b>177</b>	<b>608</b>

The Group leases a number of vehicles and equipment under various operating lease agreements. The leases typically run for an initial period of between two and five years, with an option to renew the lease after that date. Lease payments are increased annually to reflect market rentals. None of the leases includes contingent rentals. The operating lease expenses in 2018 were EUR 187,000 (2017: EUR 520,000). There are no sublease contracts or conditional lease payments. The Group does not, in principle, act as a lessor.

#### *Rental commitments*

The Group rents its office in Zwolle (the Netherlands) and in Stuttgart (Germany) for a period of five years with renewal rights. End of 2018 the Group entered into an agreement for rent of an office in Deventer (the Netherlands) starting from May 2019 for a period of 2 years with renewal rights. In 2018 the rent for the office in Stuttgart is renewed with 5 years. The total rental commitment is EUR 946,000 (2017: EUR 226,000).

#### *Capital commitments*

As at 31 December 2018 the Group entered into a contract to purchase equipment. Total purchase commitment is EUR 700,000 (2017: nil).

#### *Security*

The "Stichting Obligatiehoudersbelangen" in Amstelveen in the Netherlands representing the bondholders received a German mortgage right that is called "Buchgrundschuld" amounting to EUR 2,500,000. The "Buchgrundschuld" is registered in Augsburg with the land registry number 10988. In 2017, the registered property is valued at EUR 3,345,000 by an officially recognised valuer - Diplom-Betriebswirt (FH) Friedrich Kiefer and concerns the property in Nördlingen, Germany. In 2017, the mortgage right for the secured loan with mortgage cover of EUR 500,000 is registered in Augsburg, in addition, the secured loan contains a right of pledge on machines and equipment of EUR 250,000. The right of pledge on machinery and equipment has expired in April 2018. The "Stichting Obligatiehoudersbelangen" represents the lenders of the secured loan.

The holding company has issued a guarantee for EUR 7,500 to a third party concerning the rent of the office in Zwolle.

The holding company and the Dutch subsidiary company form a tax unity for corporate tax. Each of the operating companies is severally liable for tax to be paid by all companies that belong to the tax unity.

## 24. Related parties

The Group has related party relationships with its associates and with the board of management and supervisory board.

#### Remuneration of board of management

	Total regular income		Bonus		Pension		Valuation options		Total	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
(x EUR 1,000)										
Mr. O.M. Sallenhag	124	120	2	-	-	-	8	-	134	120
Mr. R. Pusch	120	120	2	-	-	-	8	-	130	120
<b>Total</b>	<b>244</b>	<b>240</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>16</b>	<b>-</b>	<b>264</b>	<b>240</b>

The remuneration of the board of management is determined by the supervisory board.

Regarding the options for the board of management no options had been granted and approved for 2018 by the supervisory board as of 31 December 2018. In this context, an accrual has been made for 250,000 potential options rights for the board of management. A scheme has been put in place for exercising the share options, which stipulates that the exercise price of the share options must be paid at the time when they are cashed in.

At the end of 2018 Mr. O.M. Sallenhag holds 365,000 shares and Mr. R. Pusch holds 40,000 shares.

Mr. O.M. Sallenhag participates in the secured loan to RoodMicrotec NV for an amount of EUR 27,000. Mr. R. Pusch participates in the secured 2016 loan to RoodMicrotec N.V. for an amount of EUR 4,500.

*Remuneration of the supervisory board*

(x EUR 1,000)	2018	2017
Mr. V.G. Tee	13	13
Mr. H.J. Bartelink	10	10
Mr. J.B. Tuik	10	10
<b>Total</b>	<b>33</b>	<b>33</b>

There are no loans outstanding to the members of the supervisory board, nor have any guarantees been given on behalf of members of the supervisory board.

At the end of 2018, the members of the supervisory board did not hold any options on shares in the company.

At the end of 2018, the members of the supervisory board did not hold any shares in the company.

*Other related party transactions*

In 2018, the Group has not entered into any other related party transactions except for intercompany charges between RoodMicrotec N.V. and RoodMicrotec GmbH.

## 25. Events after balance sheet date

In the beginning of 2019, the following events after balance sheet date occurred:

- Exercise of warrants Series III that resulted in an increase of 2,117,535 shares (exercise price: EUR 0.21) on 15 January 2019
- In March 2019 the final installment of EUR 225,000 of the secured loan is repaid
- In February 2019, the court in the Netherlands has pronounced an interim ruling for legal proceedings against a former employee. The court decided that the former employee is held liable to pay wage taxes. In addition, the court decided that the former employee is entitled to a compensation of EUR 5,000. A final ruling of the court is expected in the coming months. More details are provided in note 4 and note 14.

## C. COMPANY FINANCIAL STATEMENTS

### Company Statement of Financial Position

(x EUR 1,000)	Notes	2018	2017
<b>ASSETS</b>			
Property, plant and equipment		6	98
Investments in subsidiaries	1	-	-
Loans to group companies	2	2,049	3,755
<b>Non-current assets</b>		<b>2,055</b>	<b>3,853</b>
Loan to group companies	2	4,888	4,232
Trade and other receivables		213	53
Cash and cash equivalents		1,183	165
<b>Current assets</b>		<b>6,284</b>	<b>4,450</b>
<b>Total assets</b>		<b>8,339</b>	<b>8,303</b>
<b>EQUITY AND LIABILITIES</b>			
Issued share capital		8,006	7,339
Share premium		20,517	19,906
Revaluation reserve		1,943	2,216
Retained earnings		-27,876	-27,144
Result for the year		125	-44
<b>Equity, attributable to equity holders</b>	<b>3</b>	<b>2,715</b>	<b>2,273</b>
Perpetuals		2,494	2,494
<b>Total risk-bearing capital</b>	<b>3</b>	<b>5,209</b>	<b>4,767</b>
Loans and borrowings		2,430	2,878
<b>Non-current liabilities</b>		<b>2,430</b>	<b>2,878</b>
Loans and borrowings		217	150
Trade and other payables		483	508
Current income tax liabilities		-	-
<b>Current liabilities</b>		<b>700</b>	<b>658</b>
<b>Total equity and liabilities</b>		<b>8,339</b>	<b>8,303</b>

The figures following the various items refer to the notes on pages 84 to 89.

## Company Statement of Profit or Loss

<b>(x EUR 1,000)</b>	Notes	2018	2017
Net sales	4	475	474
<b>Gross profit</b>		<b>475</b>	<b>474</b>
Personnel expenses	5	-284	-290
Other operating expenses	6	-1,820	-492
Termination benefit costs	7	-	-400
<b>Total operating expenses</b>		<b>-2,104</b>	<b>-1,182</b>
<b>EBITDA</b>		<b>-1,629</b>	<b>-708</b>
Depreciation and amortisation	8	-25	-26
<b>EBIT</b>		<b>-1,654</b>	<b>-734</b>
Financial income or expenses (-)	9	238	301
<b>Profit (loss) before taxes</b>		<b>-1,416</b>	<b>-433</b>
Taxes	10	-	-
<b>Parent company income or loss (-)</b>		<b>-1,416</b>	<b>-433</b>
Net profit or loss (-) from group companies	11	1,541	389
<b>Net profit (loss)</b>		<b>125</b>	<b>-44</b>

The figures following the various items refer to the notes on pages 84 to 89.

## D. NOTES TO THE COMPANY FINANCIAL STATEMENTS

### Accounting policies relating to valuation principles and determination of the result

The company financial statements have been prepared in accordance with Title 9, Book 2 of the Dutch Civil Code. In accordance with article 2:362 (8) of the Dutch Civil Code, the accounting policies for the parent company are identical to the policies that RoodMicrotec N.V. applies with regard to the consolidated financial statements. Information on the accounting policies is given in the notes to the consolidated financial statements.

### Investments in Subsidiaries

In accordance with article 2:362 (8) of the Dutch Civil Code, subsidiaries that are included in the consolidation are stated at net asset value. The equity and results of the subsidiaries have been determined in accordance with the accounting policies of the Group.

### Loans to group companies

Long-term receivables included here are stated at nominal value less any provisions considered necessary.

## 1. Investments in subsidiaries

This item relates to wholly owned subsidiaries. Movements in this item in the year under review were as follows:

(x EUR 1,000)	2018	2017
<b>Balance at 1 January</b>	-2,481	-3,021
Profit of group companies	1,541	389
Accounting policy changes - IFRS 9	-9	-
Remeasurement of defined benefit obligations	-117	60
Remeasurement of defined benefit obligations - DTL	32	-16
Remeasurement return on plan assets	-938	-346
Revaluation of land and building	-	586
Revaluation of land and building - DTL	-	-133
Sale of Land - DTL	71	-
	<b>- 1,901</b>	<b>- 2,481</b>
<b>Provision subsidiaries</b>		
Provision at 1 January	2,481	3,021
Changes	-580	-540
<b>Provision at 31 December</b>	<b>1,901</b>	<b>2,481</b>
<b>Balance at 31 December</b>	<b>-</b>	<b>-</b>

## 2. Loans to group companies

This item relates to subordinated loans issued to the subsidiaries. The subordinated loans amounted to EUR 1,580,000 with an interest rate of 8%, a EUR 2,700,000 loan with an interest rate of 7%, and a 5,250,000 loan with an interest rate of 5%.

Movements in this item were as follows:

(x EUR 1,000)	2018	2017
<b>Balance at 1 January</b>	10,468	9,608
Addition (Payments)	-1,630	860
<b>Balance at 31 December</b>	<b>8,838</b>	<b>10,468</b>
<b>Provision subsidiaries</b>		
Provision at 1 January	-2,481	-3,021
Changes	580	540
<b>Provision at 31 December</b>	<b>-1,901</b>	<b>-2,481</b>
Current portion	-4,888	-4,232
<b>Loans at 31 December</b>	<b>2,049</b>	<b>3,755</b>

For the negative equity of the German subsidiaries, a provision on the non-current loans to group companies is recognised. This provision amounts EUR 1,901,000 as per 31 December 2018 (31 December 2017: EUR 2,481,000). RoodMicrotec N.V. is liable for these subsidiaries.

### 3. Equity attributable to equity holders

(x EUR 1,000)	Issued share capital	Share premium	Revaluation	Retained earnings	Result for the year	Total equity, share holders	Perpetuals	Total risk- bearing capital
<b>Balance at 1 January 2017</b>	<b>6,979</b>	<b>19,659</b>	<b>1,763</b>	<b>-26,842</b>	-	<b>1,559</b>	<b>2,494</b>	<b>4,053</b>
Issue ordinary shares	360	248	-	-	-	608	-	608
Valuation options granted		-1	-	-	-	-1	-	-1
Loss on participation			-	-	-	-	-	-
<b>Transactions with equity holders</b>	<b>7,339</b>	<b>19,906</b>	<b>1,763</b>	<b>-26,842</b>	-	<b>2,166</b>	<b>2,494</b>	<b>4,660</b>
Profit and Loss	-	-	-	-	-44	-44	-	-44
<b>Other comprehensive income</b>								
Remeasurement of defined benefit obligation	-	-	-	44	-	44	-	44
Remeasurement return on plan assets	-	-	-	-346	-	-346	-	-346
Revaluation of land and buildings	-	-	453	-	-	453	-	453
<b>Total OCI for the year</b>	<b>-</b>	<b>-</b>	<b>453</b>	<b>-302</b>	<b>-44</b>	<b>107</b>	<b>-</b>	<b>107</b>
<b>Balance at 31 December 2017</b>	<b>7,339</b>	<b>19,906</b>	<b>2,216</b>	<b>-27,144</b>	<b>-44</b>	<b>2,273</b>	<b>2,494</b>	<b>4,767</b>
Accounting policy changes - IFRS 9	-	-	-	-9	-	-9	-	-9
<b>Balance at 1 January 2018</b>	<b>7,339</b>	<b>19,906</b>	<b>2,216</b>	<b>-27,188</b>	-	<b>2,264</b>	<b>2,494</b>	<b>4,758</b>
Issue ordinary shares	667	591	-	-	-	1,258	-	1,258
Valuation options granted	-	20	-	-	-	20	-	20
Loss on participation	-	-	-	-	-	-	-	-
<b>Transactions with equity holders</b>	<b>8,006</b>	<b>20,517</b>	<b>2,216</b>	<b>-27,197</b>	-	<b>3,542</b>	<b>2,494</b>	<b>6,036</b>
Profit and Loss	-	-	-	-	125	125	-	125
<b>Other comprehensive income</b>								
Remeasurement of defined benefit obligation	-	-	-	-1,023	-	-1,023	-	-1,023
Sale of revalued land	-	-	-184	255	-	71	-	71
Revaluation of land and buildings	-	-	-89	89	-	-	-	-
<b>Total OCI for the year</b>	<b>-</b>	<b>-</b>	<b>-273</b>	<b>-679</b>	<b>125</b>	<b>-827</b>	<b>-</b>	<b>-827</b>
<b>Balance at 31 December 2018</b>	<b>8,006</b>	<b>20,517</b>	<b>1,943</b>	<b>-27,876</b>	<b>125</b>	<b>2,715</b>	<b>2,494</b>	<b>5,209</b>

#### Legal reserves

The legal reserves within equity which is attributable to the equity holders of the company are specified as follows:

(x EUR 1,000)	2018	2017
<b>Balance as at 1 January</b>	<b>2,600</b>	<b>2,242</b>
Revaluation of land and buildings	-374	484
Revaluation of land and buildings - DTL	103	-133
Capitalised development expenditure	-85	9
Capitalised development expenditure - DTL	23	-2
<b>Balance as at 31 December</b>	<b>2,267</b>	<b>2,600</b>

A legal reserve has been formed for the revaluation reserve which is the result of the revaluation of land and buildings of RoodMicrotec GmbH. In 2015 a statutory reserve has been formed for capitalised development expenditure of RoodMicrotec GmbH, which is included within retained earnings in equity.

These reserves are regarded legal reserves pursuant to Article 2:373 of the Dutch Civil Code and, consequently, are not available for dividend payments to equity holders.

#### 4. Net sales

Net turnover comprises charges to group companies with regard to management fees.

#### 5. Personnel expenses

(x EUR 1,000)	2018	2017
Salaries	239	268
Social securities	25	23
Share options	20	-1
<b>Total</b>	<b>284</b>	<b>290</b>

#### 6. Other operating expenses

(x EUR 1,000)	2018	2017
Housing and equipment costs	59	30
Selling and administrative expenses	1,761	462
<b>Total</b>	<b>1,820</b>	<b>492</b>

RoodMicrotec N.V. waived RoodMicrotec Dresden GmbH the claim in the total amount of EUR 1,021,000 in the intercompany loan including accrued interest.

The selling and administrative expenses includes an accrual of EUR 130,000 for legal proceedings against a former employee concerning a dispute about the (non) fulfilment of the contractual obligations as per agreement between the parties.

The selling and administrative expenses include an accrual of EUR 200,000 for withholding VAT expenses, based on a best estimate for the outcome of a tax audit in the Netherlands.

#### 7. Termination benefit costs

(x EUR 1,000)	2018	2017
Termination benefit costs	-	400
<b>Total</b>	<b>-</b>	<b>400</b>

The termination benefits in 2017 were related to a former employee of the company. The termination benefits have been fully paid in 2018.

**8. Depreciation and amortisation**

(x EUR 1,000)	2018	2017
Machinery and equipment	22	22
Other fixed assets	3	4
<b>Total</b>	<b>25</b>	<b>26</b>

**9. Financial income or expenses**

(x EUR 1,000)	2018	2017
Interest income / expenses (-)	230	276
Interest accrued income / expenses (-)	8	25
<b>Total</b>	<b>238</b>	<b>301</b>

(x EUR 1,000)	2018	2017
Interest income:		
- intercompany loan	474	547
- other financial income	-	-
Interest expenses:		
- bond loan	-192	-189
- other loans	-44	-57
<b>Total</b>	<b>238</b>	<b>301</b>

The interest expenses 2018 include amortisation costs amounting to EUR 69,000 (2017: EUR 64,000), which relate to discount and bond issuance cost of the bond loan and 2016 loan.

**10. Taxes**

(x EUR 1,000)	2018	2017
Profit (loss) before taxes	-1,396	-433
Taxes based on the weighted average applicable rate	-	-
<b>Taxes in Company Statement of Profit and Loss</b>	<b>-</b>	<b>-</b>

**11. Net profit or loss (-) from group companies**

(x EUR 1,000)	2018	2017
Net profit (loss) from affiliated companies:		
- RoodMicrotec Dresden	997	-40
- RoodMicrotec GmbH	544	429
<b>Total</b>	<b>1,541</b>	<b>389</b>

**Employees**

RoodMicrotec N.V. has an average of 3 employees in 2018 (2017:3)

**Commitments**

RoodMicrotec N.V and the Dutch subsidiary company form a tax unity for corporate tax. Each of the operating companies is severally liable for tax to be paid by all companies that belong to the tax unity.

**Events after balance sheet date**

For information on the events after balance sheet date, reference is made to note 25 in the consolidated financial statements.

Zwolle, 4<sup>th</sup> April 2019

**Board of management**

O.M. Sallenhag, CEO

R. Pusch, COO

**Supervisory board**

V.G. Tee, Chairman

H.J. Bartelink

J.B. Tuik

## **OTHER INFORMATION**

### **PROFIT APPROPRIATION**

Article 27 of the articles of association includes the following provisions for profit appropriation:

1. the company may pay dividends and make other distributions only to the extent that its equity exceeds the amount of the paid-up and called-up portion of the share capital plus the reserves which must be maintained by law and under these articles;
2. subject to the prior approval of the supervisory board, the board of management is authorised to add any profit in whole or in part to the reserves;
3. any profit remaining after reservation referred to in the preceding paragraph will be at the disposal of the annual general meeting of shareholders;
4. to the extent that the general meeting of shareholders does not resolve to distribute the profit for any financial year, such profit will be added to the reserves.

## INDEPENDENT AUDITOR'S REPORT

To: The shareholders and supervisory board of RoodMicrotec N.V.

### A. Report on the audit of the Annual Accounts 2018 included in the annual report

#### Our opinion

We have audited the Annual Accounts 2018 of RoodMicrotec N.V., based in Zwolle. The Annual Accounts include the consolidated financial statements and the company financial statements.

In our opinion:

- the accompanying consolidated financial statements give a true and fair view of the financial position of RoodMicrotec N.V. as at 31 December 2018, and of its result and its cash flows for 2018 in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and with Part 9 of Book 2 of the Dutch Civil Code.
- the accompanying company financial statements give a true and fair view of the financial position of RoodMicrotec N.V. as at 31 December 2018, and of its result for 2018 in accordance with Part 9 of Book 2 of the Dutch Civil Code.

The consolidated financial statements comprise:

1. the consolidated statement of financial position as at 31 December 2018;
2. the following statements for 2018:  
the consolidated statements of profit or loss, comprehensive income, changes in equity and cash flows; and
3. the notes comprising a summary of the significant accounting policies and other explanatory information.

The company financial statements comprise:

4. the company statement of financial position as at 31 December 2018;
5. the company statement of profit or loss for 2018; and
6. the notes comprising a summary of the significant accounting policies and other explanatory information.

#### Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the 'Our responsibilities for the audit of the financial statements' section of our report.

We are independent of RoodMicrotec N.V. in accordance with the EU Regulation on specific requirements regarding statutory audit of public-interest entities, the Wet toezicht accountantsorganisaties (Wta, Audit firms supervision act), the Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore we have complied with the Verordening gedrags- en beroepsregels accountants (VGBA, Dutch Code of Ethics).

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Materiality

Based on our professional judgement we determined the materiality for the financial statements as a whole at EUR 200.000. As the company is sales driven and reached a sales level that makes the company profitable the materiality is based on approximately 1.5% of net sales. We have also taken into account misstatements and/or possible misstatements that in our opinion are material for the users of the financial statements for qualitative reasons.

We agreed with the supervisory board that misstatements in excess of EUR 10.000, which are identified during the audit, would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative grounds.

#### Scope of the group audit

RoodMicrotec N.V. is at the head of a group of entities. The financial information of this group is included in the consolidated financial statements of RoodMicrotec N.V.

We are responsible for directing, supervising and performing the group audit. In this respect we have determined the nature and extent of the audit procedures to be carried out for group entities. Decisive were the size and/or the risk

profile of the group entities or operations. On this basis, we selected group entities for which an audit or review had to be carried out on the complete set of financial information or specific items.

Our group audit mainly focused on RoodMicrotec GmbH (Germany) as this is the most significant component within the group. Substantially all of the company's business activities take place in Germany. Baker Tilly GmbH & Co. KG, our member firm in Germany, was engaged to perform the audit for consolidation purposes, this in line with our audit instructions.

With regard to the audit work performed by the component auditors, we determined our level of involvement necessary to be able to draw a conclusion whether sufficient appropriate audit evidence regarding these components is obtained as a basis for our audit opinion on the consolidated financial statements as a whole. We visited the auditors of Baker Tilly GmbH & Co. KG in Germany at year end. We also consulted with our colleagues throughout the audit at different times to match the audit strategy and audit findings. The consolidation of the group, the disclosures in the financial statements and a number of specific elements are audited by the group audit team. These elements include the classification of the plan assets and perpetual bonds.

Through the above work with (group) elements, combined with additional work at the group level, we have obtained sufficient appropriate audit evidence regarding the financial information of the group to report on the consolidated financial statements.

### **Our key audit matters**

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements. We have communicated the key audit matters to the supervisory board. The key audit matters are not a comprehensive reflection of all matters discussed.

These matters were addressed in the context of our audit of the financial statements as a whole and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

#### *Going concern*

The poor financial performance of RoodMicrotec over the past years gave rise to the inclusion of an emphasis of matter paragraph in our audit opinion. Such a paragraph highlights the existence of a material uncertainty relating to the event or condition that may cast significant doubt on the entity's ability to continue as a going concern and draws attention to the note in the financial statements that discloses these matters.

Based on the increase in revenues, operational cash flows and the order portfolio in the last two years management and the Supervisory Board are confident about the companies' ability to continue its operations as a going concern.

In order to verify the robustness of the budgets, cash flow prognoses and plans as prepared by management we have performed audit procedures on the accurateness of the calculations made and the assumptions applied. Furthermore we performed sensitivity analyses and back testing on prior year budget and cash flow prognoses. As the company has a significant repayment obligation in June 2020 we took into consideration a longer period than 12 months after balance sheet date.

Based on the discussions we had with management, the outcome of our audit procedures with regard to the Company's ability of going concern we concur with management's conclusion that there is no material uncertainty with respect to the company's ability to continue as a going concern.

#### *Valuation and classification of plan assets*

We consider the valuation and impairment of the plan assets as a key audit matter due to the complexity of the instrument and the fact that no information with regard to the fair value was available in prior years.

As part of the financing of RoodMicrotec the company issued mezzanine capital in the years 2010 and 2012. The received amount related to the issued mezzanine capital amount to € 2.5 million and was invested in the Plentum Opportunity Fund VI. The acquired share in this portfolio of Plentum was used to fund the pension obligation that RoodMicrotec has to its (former) employees. The Plentum Opportunity Fund VI consists of a number of mezzanine capital bonds of companies of which most are not listed.

The valuation of this portfolio is depending on the ability of the companies that issued mezzanine capital to fulfil their interest payment obligations. This is due to the fact that the mezzanine contracts state that compensation payment is conditional and depending on the result of the issuing company.

In 2018 RoodMicrotec obtained underlying documentation regarding the value of the mezzanine capital of the companies that are participating in the fund as per 31 December 2018. Based on the total value of the fund and

RoodMicrotec's share in this fund resulted in an impairment of the assets and made it possible for RoodMicrotec to perform a discounted cash flow calculation.

We have performed, amongst other audit procedures, the following test work:

- Obtaining an understanding of the way the assets are used in order to settle the employee benefit obligations;
- Reconciling the used underlying asset value data to third party confirmations;
- Comparing input data used in the RoodMicrotec's valuation models to independent sources and externally available data;
- Considering the appropriateness of disclosures in relation to the level 3 valuation techniques applied and the netting of the plan assets with the employee benefit obligation.

Besides the above RoodMicrotec changed the presentation of two life insurance policies to plan assets as per the end of 2018. These life insurance policies were previously classified as financial fixed assets. This reclassification is done since the company concluded that all requirements regarding the classification as plan assets were fulfilled. Since the terms of these policies did not change in 2018 this is treated as an adjustment of a prior period error in accordance with IAS 8.

For the valuation techniques applied and related disclosures we refer to note 20 in the annual report.

#### *Valuation of goodwill and other intangible assets*

The carrying value of Goodwill, Customer Relations and Development Expenditure as at December 31, 2018 is € 2.3 million.

In 2018, the Company tested the goodwill and other intangible assets for impairment at year end. The impairment tests were considered to be significant to our audit due to the loss making situation (also in previous years) and the complexity of the assessment process and judgements and assumptions involved which are affected by expected future market and economic developments.

We challenged the cash flow projections included in the goodwill impairment tests by considering the historical trends and reasonableness of forecasts made by the management. Additionally, we critically assessed and tested management's key assumptions, methodologies, the weighted average cost of capital and information used, for example by comparing them to external and historical data, such as external market growth expectations and by analyzing sensitivities in the group's valuation model. We specifically focused on the sensitivity in the available headroom for the cash generating units which included evaluating whether a reasonably possible change in assumptions could cause the carrying amount to exceed its recoverable amount and assessed the historical accuracy of management's estimates. We also assessed the adequacy of the Company's disclosures included in note 10 in the financial statements.

Based on the procedures performed, we consider management's key assumptions for the valuation of goodwill to be within a reasonable range and determined that the Company's disclosures meet the requirements of EU-IFRS.

## **B. Report on the other information included in the annual accounts**

In addition to the financial statements and our auditor's report thereon, the annual report contains other information that consists of:

- RoodMicrotec Overview
- Report of the Board of Management;
- Supervision + Risk Management;
- Other information as required by Part 9 of Book 2 of the Dutch Civil Code;

Based on the following procedures performed, we conclude that the other information:

- is consistent with the financial statements and does not contain material misstatements;
- contains the information as required by Part 9 of Book 2 of the Dutch Civil Code.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements.

By performing these procedures, we comply with the requirements of Part 9 of Book 2 of the Dutch Civil Code and the Dutch Standard 720. The scope of the procedures performed is substantially less than the scope of those performed in our audit of the financial statements.

Management is responsible for the preparation of the other information, including the management report in accordance with Part 9 of Book 2 of the Dutch Civil Code and other information as required by Part 9 of Book 2 of the Dutch Civil Code.

## **C. Report on other legal and regulatory requirements**

### **Engagement**

We were engaged by the supervisory board as auditor of RoodMicrotec N.V. on 29 September 2015, as of the audit for the year 2015 and have operated as statutory auditor ever since that date.

### **No prohibited non-audit services**

We have not provided prohibited non-audit services as referred to in Article 5(1) of the EU Regulation on specific requirements regarding statutory audit of public-interest entities.

## **D. Description of responsibilities regarding the financial statements**

### **Responsibilities of management and the supervisory board for the financial statements**

Management is responsible for the preparation and fair presentation of the financial statements in accordance with EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code. Furthermore, management is responsible for such internal control as management determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, management is responsible for assessing the company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, management should prepare the financial statements using the going concern basis of accounting unless management either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so.

Management should disclose events and circumstances that may cast significant doubt on the company's ability to continue as a going concern in the financial statements.

The supervisory board is responsible for overseeing the company's financial reporting process.

### **Our responsibilities for the audit of the financial statements**

Our objective is to plan and perform the audit engagement in a manner that allows us to obtain sufficient and appropriate audit evidence for our opinion.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

We have exercised professional judgment and have maintained professional scepticism throughout the audit, in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. Our audit included e.g.:

- Identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or error, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control;

- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management;
- Concluding on the appropriateness of management's use of the going concern basis of accounting, and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company to cease to continue as a going concern;
- Evaluating the overall presentation, structure and content of the financial statements, including the disclosures; and
- Evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Because we are ultimately responsible for the opinion, we are also responsible for directing, supervising and performing the group audit. In this respect we have determined the nature and extent of the audit procedures to be carried out for group entities. Decisive were the size and/or the risk profile of the group entities or operations. On this basis, we selected group entities for which an audit or review had to be carried out on the complete set of financial information or specific items.

We communicate with the supervisory board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant findings in internal control that we identify during our audit.

We provide the supervisory board with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the supervisory board, we determine the key audit matters: those matters that were of most significance in the audit of the financial statements. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

Zwolle, 4 April 2019

Baker Tilly Berk N.V.

Signed by:

G. Frühling

## GROUP STRUCTURE



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Chamber of Commerce number 33251008103

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## ABBREVIATIONS USED

AFM	Netherlands Authority for the Financial Markets
AI	Artificial Intelligence
ASIC	Application Specific Integrated Circuit
ATE	Automatic Test Equipment
BCS	Business Cluster Semiconductors
CAGR	Compound Annual Growth Rate
COTS	Components Of The Shelf
DPA	Destructive Physical Analysis
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interests, Taxes, Depreciation and Amortization
EBT	Earnings Before Taxes
FIB	Focused Ion Beam
FTE	Full Time Employee
FVOCI	Fair Value through Other Comprehensive Income
FVPL	Fair Value through Profit and Loss
GaN	Gallium Nitride-on-Silicon wafers
HiRel	High Reliability
IC	Integrated Circuit
IDM	Integrated Device Manufacturer
IFRS	International Financial Reporting Standards as adopted by the European Union
IoT	Internet of Things
IP	Intellectual Property
LED	Light Emitting Diode
MEMS	Micro-Electro-Mechanical System
OCI	Other Comprehensive Income
OEM	Original Equipment Manufacturer
PCB	Printed circuit board
PwC	Pricewaterhouse Coopers
QM	Quality Management
RF	Radio frequency
RFID	Radio Frequency Identification
SCM	Supply Chain Management
SIA	Semiconductor Industry Association
V2I	Vehicle-to-Infrastructure
V2V	Vehicle-to-Vehicle
VCSEL	Vertical-Cavity Surface-Emitting Laser diodes
Wft	Financial Supervision Act
WLCSP	Wafer Level Chip Scale Package
WSTS	World Semiconductor Trade Statistics



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