RoodMicrotec N.V.

Annual Report 2017

RoodMicrotec N.V.

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GENERAL AND KEY FACTS

Preface by the CEO

Five reasons to choose RoodMicrotec

Over the last 48 years, RoodMicrotec has been one of the leading suppliers of semiconductors and advanced microchips. We provide the following benefits and core competences over other players in the market:

1.) eXtended Supply Chain Management
In comparison to sole suppliers, we support our customers in each phase of their ASIC project. We work together with reliable partners for those steps we don't execute in-house. We offer our customers the advantage of having only one competent contact person who cares about all steps within the supply chain – from the first idea to the delivery of serial parts including worldwide logistics, project management and quality assurance. With us, clients get one-stop solutions – either as turnkey solutions or as single services. No matter if they need test engineering, planning and execution of different tests, qualifications or failure analysis – we completely conform to their requirements.

2.) Independency, flexibility and efficiency
Because of our long-term experience in the market, we can provide quick, individual and cost efficient solutions. Besides, we guarantee transparency and can react quickly to changes in customer's requirements. We are able to do this together with our partners, since we can access many different state-of-the art as well as new technologies. Thereby, we are not bound to minimum quantities like others in the market. We can organise a test series via multi-project wafers (MPW). Our test engineering know-how for analogue, mixed-signal, sensor and HF circuits is one of our core expertises. Our experts develop test software and hardware or modify and optimise test solutions with the main goal of test time reduction – an important point for our customers and a competitive advantage.

3.) Special industry expertise
We have long-term experiences and specialist know-how in the automotive, industrial, healthcare and high reliability (HiRel) / aerospace sectors. For example, when it comes to very sophisticated automotive projects, we can quickly compile an interdisciplinary team and together with our customers develop individual and novel solutions. Furthermore, we support and consult our clients in complex projects like the PPAP production approval process or the APQP production quality forecast. Very few players in the market are able to do this. Qualifications according to sophisticated automotive or HiRel requirements are also among our core competences, for example in conducting complex qualifications according to standards like AEC-Q 100 or AEC-Q 101. A clear competitive advantage is that we not only execute those processes but also consult with our customers on planning and how they should be conducted. Consulting services concerning the AEC-Q standards include for example robustness validation – a special qualification strategy within the automotive sector. Thereby, our customers appreciate especially our know-how in processes 'from mission profile to qualification flow' other suppliers can't provide.

4.) Holistic processes and highly motivated experts
Our quality and reliability process is in great demand by our customers. In opposition to others in the market, we are able to provide a holistic improvement process including electrical and physical failure analysis. Customers appreciate our highly motivated team and experienced experts, who find the cause of failures to improve the quality and reliability of components and integrated systems.

5.) Solid basis and promising future
RoodMicrotec contributes its experience in various publicly funded projects like EuroPat-MASIP, ParsiFal 4.0, ScaleIT@Shopfloor or GaNScan in order to expand its know-how for future commercial projects. We are happy to provide you more details on these projects upon request.

All these advantages show, that RoodMicrotec is a sound investment and a flourishing company in a forward-looking business.

Zwolle, 28th March 2018

Martin Sallenhag, CEO

RoodMicrotec at a glance

- RoodMicrotec is a semiconductor company supplying products (chips and packaged devices) and services to its focus sectors.
- RoodMicrotec manages the entire turnkey ASIC supply chain.
- RoodMicrotec is increasingly focusing on consultancy, product engineering, project management and logistics.
- As an independent company RoodMicrotec is never in competition with its customers.
- RoodMicrotec focuses on Fabless Companies and OEMs (Original Equipment Manufucturers).
- The company is knowledge and technology driven.
- Certified by RoodMicrotec refers inter alia to qualification of products to stringent international standards such as the ISO/IEC 17025 in our accredited laboratory.
- Certified by RoodMicrotec is valid for all processes, services and products by working according version 2015 of the ISO 9001 and maintaining the certification according this version.
- RoodMicrotec's key values are:
  - knowledge
  - flexibility
  - creativity

  All within the stringent framework of the processes of its customers in inter alia the automotive industry.
- At year-end 2017, the company had 91 (2016: 91) full-time employees (FTE).
- In 2017, the company realised EUR 12.1 million sales (2016: EUR 10.5 million).

Main developments during 2017

Three new supply chain orders from new customers

We secured three new orders from new customers – design houses in Germany, Switzerland and the UK, covering industrial and high-reliability market areas. Revenue over five years is expected to be EUR 2.0 million

Major automotive supply chain management project ramped up for production

Industrialisation and qualification phase for a major automotive project we have finalised. Ramp-up for production started mid of 2017. Full production will be reached in early 2018 and is expected to run until 2025, revenue will be between EUR 1.2 and EUR 1.6 million.

Healthcare project released for production and life time extended to 15 years

We released this project for production; the ramp-up phase will take longer than originally planned, but the lifetime has been extended by 10 years.

Two new orders in the field of optoelectronics

New received orders with revenue of more than EUR 250,000 for reliability investigations and quality improvements for optoelectronics components and vertical-cavity surface-emitting laser diodes (VCSEL) are running.

Intensifying consulting services by building a "Reliability Competence Center" (RCC)

Automotive projects have challenges and the reliability demands are growing further on. Also transferring consumer products to automotive applications needs innovative solutions.
In 2017 we expanded the Automotive Competence Center (ACC) into a Reliability Competence Center (RCC) to support our customers in the area of reliability assessment and implementation.

Framework agreement signed with leading test equipment manufacturer

Supply Chain Management framework agreement with Rohde & Schwarz has been signed with further growth of our activities and future expansion of our relationship.

Cooperation ams, Fraunhofer IIS and RoodMicrotec

The new ams foundry ecosystem provides solutions for ASIC design service, testing and fabrication for Original Equipment Manufacturer (OEMs), system integrators and innovative start-ups which enable them to get their ASIC solutions more quickly and more easily to the market.

Publicly funded project

We gained an additional publicly funded project (funded by Germany). This project belongs to industrial power electronics. This enables us to build-up know-how for wafer test with high current and voltages and new reliability estimation methods within the GaN technology (Gallium Nitride-on-Silicon wafers).

Strengthened relationship with large players

We further strengthened our relationship with top global players in the area of main assembly houses, important European design houses and foundries.

Certification and accreditation

Accreditation of our laboratories according ISO/IEC 17025 has been renewed. Our ISO 9001 certification also has been renewed in 2017 and follows the new 2015 version of the standard.

Investment

To meet further demands and requirements of our customers the main investments were the Teradyne IntegraFlex, development and installation of various docking systems and a handling system for 8-times parallel test.

Communication and seminars

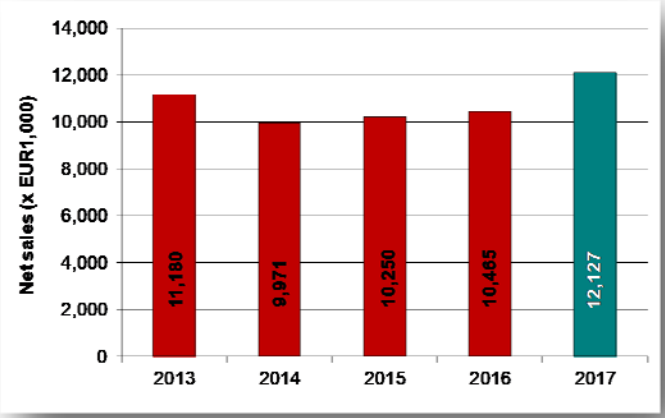
A joint event about eco-systems for qualified ASIC-development and Supply Chain Services organised by ams, Fraunhofer IIS and RoodMicrotec has been visited from about 20 designers and product managers.
A special technical lecture about failure analysis subjects has been presented as part of a conference organised by one of our customers (Fabless Design house) for about 40 participants.

New website

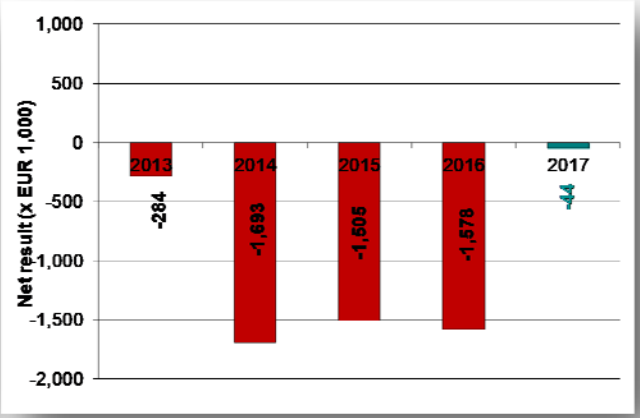
Our new website, launched end of the year, shows a modern, innovative, attractive and clear design.

RoodMicrotec in 2017

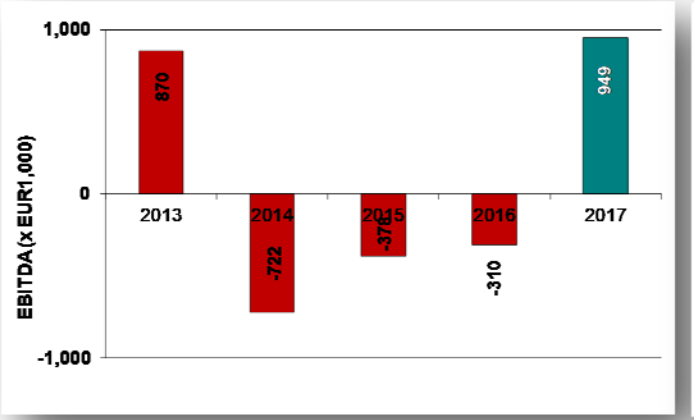
Net sales



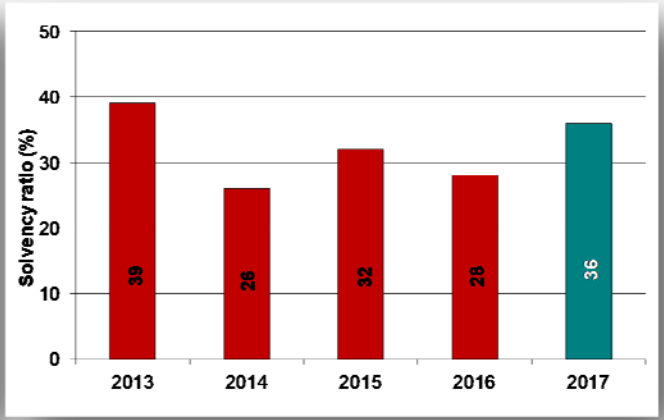
Net result



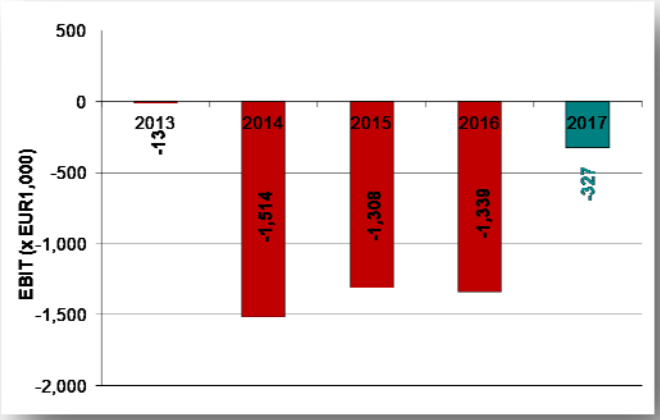
EBITDA



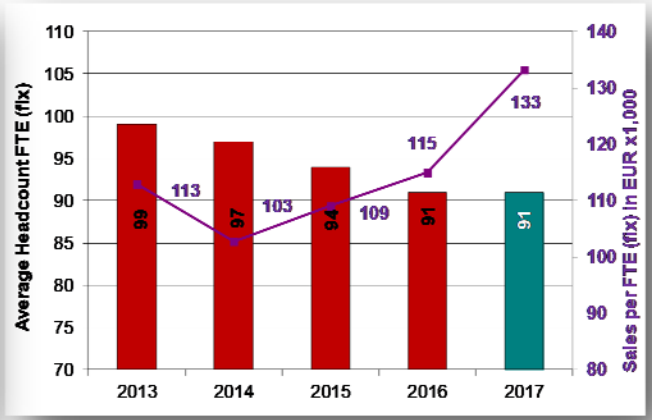
Solvency



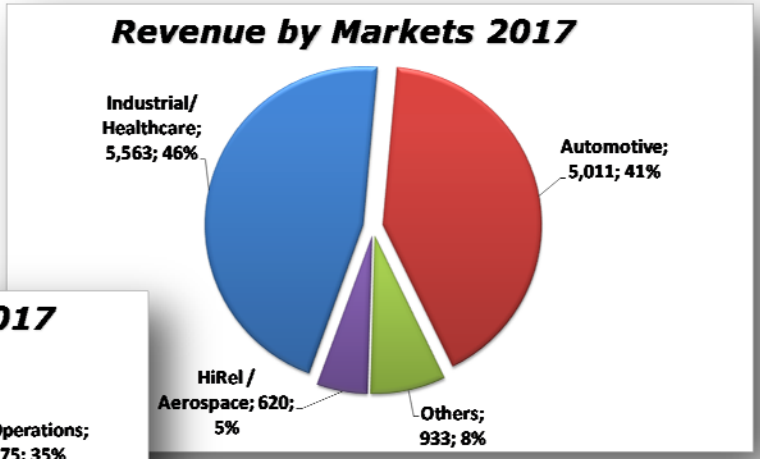
EBIT

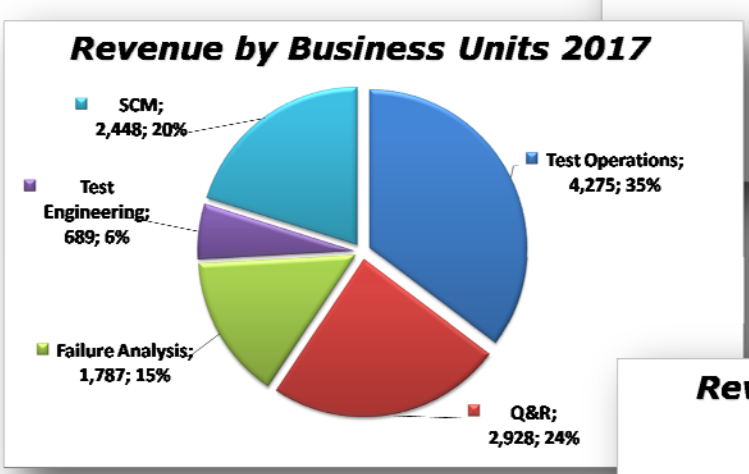


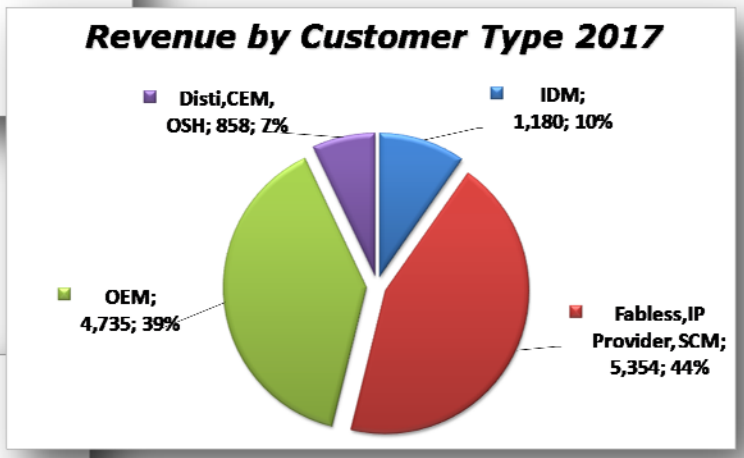
Sales per employee and head count

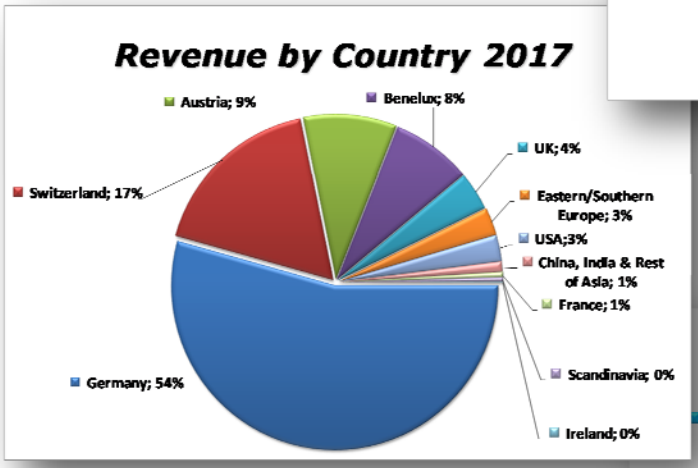


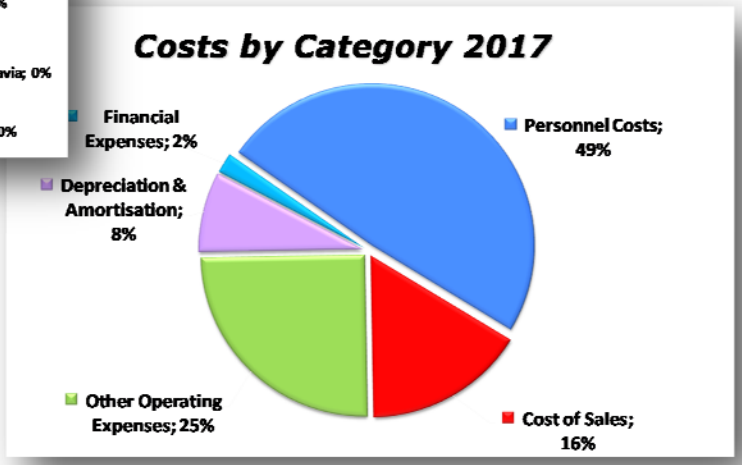
Key charts 2017











Key figures

31 December 2017
(X EUR 1,000)

	2017	2016	2015	2014	2013
Result					
Net sales	12,127	10,465	10,250	9,971	11,180
Gross margin	10,157	8,615	8,384	8,184	9,021
EBITDA	949	-310	-378	-722	870
EBIT (operating result)	-69	-1.339	-1,308	-1,514	-13
EBT	-327	-1,587	-1,495	-1,675	-243
Cash flow from operating activities	628	-452	-832	-246	17
Net result	-44	-1,578	-1,505	-1,693	-284
Capital, Debt & Liquidity Ratios					
Total assets	13,416	14,711	13,531	13,475	13,941
Group equity	4,767	4,053	4,321	3,564	5,396
Net debt	2,451	2,428	1,675	2,159	2,113
Capital (net debt + equity)	7,218	6,481	5,996	5,723	7,509
Gearing ratio (net debt/ capital)	34%	37%	28%	38%	28%
Solvency (group equity / total liabilities)	36%	28%	32%	26%	39%
Debt ratio (net debt / EBITDA)	2,6	-7,83	-4.43	-2.99	2.43
Net working capital	452	540	560	-125	-1.331
Working capital ratio	1.17	0.97	1.27	0.95	0.68
Assets					
Tangible and intangible fixed assets	8,451	7,684	6,908	7,112	7,187
Investments in (in)tangible fixed assets	1,199	1,879	726	499	535
Depreciation of (in)tangible fixed assets	1,018	1,029	930	792	883
Data per share (x EUR 1,-)					
Group equity	0.07	0.06	0.08	0.08	0.14
Operating results	-0.00	-0.00	-0.02	-0.03	0.00
Cash flow	0.00	-0.01	-0.02	-0.00	0.00
Net result	-0.00	-0.02	-0.03	-0.04	-0.01
Share price: year end	0.31	0.20	0.27	0.25	0.16
Share price: highest	0.38	0.28	0.30	0.35	0.18
Share price: lowest	0.19	0.19	0.21	0.15	0.14
Issue of nominal shares					
At year end (x 1,000)	66,716	63,411	54,411	43,519	38,674
Number of FTE's (permanent)					
At year end	91	94	92	94	96
Average	91	91	94	97	99
Sales (total)/ Average FTE's (permanent)	133	115	109	103	113

Shareholder information

Dear Shareholders,

in 2017 we continued to focus on the automotive and industrial markets. We gained new valuable customers and increased our business with existing customers. The growing semiconductor market together with our efforts and operational excellences drove increases in the number of requests and orders. The six SCM projects we booked during 2015/2016 develop well and are going into production latest 2018. The estimated revenues will be reached during 2019 and on-wards. An increasing number of new SCM projects are currently in the quoting and negotiation phases. We expect to book some of those additional projects to load our operations over the next years. We also continue to push the traditional businesses such as Qualification, Test Operations and Failure Analysis to a wider range of customers and enlarge the fields of technologies in our target markets.

Through publicly funded and customer projects RoodMicrotec sees a great chance to increase its market share in advanced semiconductor business in Europe. It is therefore encouraging that we are able to participate in key projects in various areas and we will continue this strategy to select the projects that make sense for the RoodMicrotec business, such as:

- Radar technology where we are to test devices at 60GHz and above for automotive and industrial applications.
- Photonics and optoelectronic ASICS for applications in communications and sensor areas.

We are also extremely pleased to have been able to get Jan de Koning Gans on-board as Senior Sales & Marketing Manager. He is highly experienced in the market and will help the sales team to further grow the business in the right areas.

The management board of RoodMicrotec appreciates the support we get from the shareholders and the communication we regularly have with you. We will continue to drive enterprise value within the company to put ourselves in a strong position for the future.

Zwolle, 28th March 2018
Reinhard Pusch, COO

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 2017 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
P.C. van Leeuwen	5.48%	2 November 2015
D. Lindenbergh	5.15%	9 June 2017
Ph.M.G. Nijenhuis	4.97%	29 December 2016
Sitimo Ltd.	4.7%	01 November 2017

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

Position as at 1 January 2017	Position as at 31 December 2017
63,411	66,716

At 31 December 2017, the company held 4,100 of its own shares (2016: 4,100).

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 allow the company to grow and further improve its financial health over the next few years. The management prefers to use the company's own resources to finance growth, 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 in view of the negative results not to distribute any dividend for the 2017 financial year. Our priority is balanced debt management without jeopardising growth.

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.

High on the agenda not only for this year but also the next few years is 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 organising meetings for our shareholders and bondholders when expedient.

As in the past years, we will again raise our profile in 2018 by organising 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, and our newsletter.

Liquidity provider

In order to promote trade in the RoodMicrotec N.V. share and to optimise the company's relationship with its shareholders, NIBC Markets N.V. (former SNS Securities N.V.) in Amsterdam has been engaged as liquidity provider.

Annual general meeting of shareholders 2017

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

Financial agenda

17 May 2018	Annual general meeting of shareholders
18 May 2018	Annual bondholders meeting
05 July 2018	Publication sales figures first half 2018
02 August 2018	Publication interim report 2018
02 August 2018	Conference call for press and analysts

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 rationalise 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 automation, 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 specialised service providers focusing on supporting leaner OEMs and Fabless Companies. We are such a specialised 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.

SWOT analysis

Strengths

- A leading position as SCM partner for Fabless Companies and OEMs in Europe within the automotive and industrial sectors.
- Good market penetration in Europe
- Highly experienced, excellent knowledge, flexible and creative employees
- Customer IP is very well protected
- Open for partnerships and collaboration throughout the whole supply chain
- State-of-the-art equipment

Weaknesses

- Size of the company
- Presence outside Europe
- Limited brand awareness

Opportunities

- Growing importance of technological applications and technology based connectivity
- Growing automotive and industrial markets
- Long-term contracts in our focus sectors
- Consortiums created in order to develop new technologies and applications
- Publicly funded projects

Threats

- Projects delayed by customers
- The risk that the development of new products also moves to Asia
- General semiconductor production in Europe will continue to decline in relation to Far East
- The cyclical nature of the semiconductor market
- The tight labour market for highly qualified specialised personnel

Targets

Quantitative

- Sales growth allows us to invest in the expert knowledge in the company and so bring about essential cost reductions.
- Our long-term objective is a substantial growth in turnover, whereby we expect that in 2020 our turnover will be approximately EUR 18 million.
- EBITDA to rise to at least 10-15% of sales.
- Working as we do in a high-tech environment, investments in production equipment and innovation are vital in order to be able to provide the desired technological solutions.
- EBIT to rise to 6-12% of sales by continuously optimising 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 organisation 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.

Qualitative

- To 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. This will bring us far more predictable and stable recurring revenues.
- We will strengthen our focus to gain for revenue with smaller and faster turnaround projects especially in the business units Failure & Technology Analysis, Qualification & Reliability Investigation and Test Operations.
- To improve brand awareness of RoodMicrotec. Being a relatively small company is not a problem as long as the company is well known and recognised in the market.
- 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 can achieve this by holding on to our key values (knowledge, flexibility and creativity.
- Our company's success is the success of our customers, employees and investors. To secure the good quality of our work our guiding principle for 2018 and beyond is ”Quality First”.

Strategy

- We will remain focussing on automotive, industrial and healthcare markets to grow further in these three sectors.
- We will continue to work with Fabless Companies to show that RoodMicrotec is a competitive SCM partner and encourage them to strengthen the partnership with our company.
- We will continue to work with OEMs to show that RoodMicrotec can offer competitive eXtended SCM in conjunction with design companies.
- We will intensify our focus to look for smaller, faster turnaround opportunities in Failure & Technology Analysis, Qualification & Reliability Investigation and Test Operations.
- We will continue to strengthen our internal quality system through maintaining the certification according the version 2015 of ISO 9001 and ISO/IEC 17025, in addition with focus on risk assessment, which is especially important for automotive customers.
- For further strengthening our technical position for automotive, industrial and healthcare we will invest in new high-technological equipment to be able to service the market.

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, MEMS and RF solutions for the automotive and industrial requirements.
- Strengthen our brand awareness in the market by organising seminars on qualification, failure analysis, outsourcing and supply chain activities.

Board of Management

Martin Sallenhag, CEO & Director

Martin Sallenhag joined RoodMicrotec in March 2015 as CTO and was appointed CEO and Managing Director in June 2016. He is responsible for the overall management of the company together with COO Reinhard Pusch and specifically managing the engineering departments, quality, human resources, purchasing and IT. He has over 25 years of experience in the semiconductor business in various management positions within Samsung Electronics, Dialog Semiconductor and Ericsson. He holds a Master of Science degree in Electrical Engineering from Lund University with focus on Mixed Signal ASIC design.

Reinhard Pusch, COO & Director

Reinhard Pusch joined RoodMicrotec in July 2004 as CSO and Managing Director and was appointed COO and Managing Director in June 2016. He is responsible for the overall management of the company together with CEO Martin Sallenhag and specifically managing the sales organization, supply chain management and publicly funded projects. He has 27 years of experience in qualification and test of electronic and optoelectronic components for the telecommunication market. During his time in Alcatel he has experience in various management positions.

Arvid Ladega, CFO

Arvid Ladega joined RoodMicrotec in November 2016 as CFO. He is responsible for the finance department with special focus on investor relationships with the main investors in Holland. He has extensive experience as CFO in the industrial sector, having served in that capacity for almost seven years at Turn Key Pipeline Services B.V. and five years at Bartels Engineering, both in the Netherlands. He also held a senior financial position at Wasco Coatings Europe, subsidiary to its Malaysian listed holder. Arvid has a bachelor degree in economics.

REPORT OF THE BOARD OF MANAGEMENT

Market development and trends

The worldwide semiconductor market showed a strong growth of 21.6% in 2017, even in Europe the growth was 15.4% (Basis: Historical Billing Report 2017 from the Semiconductor Industry Association (SIA)).

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, medical 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.

In January 2018 Gartner predicted an increase of 7.5% for the worldwide semiconductor revenue in 2018 (Source: https://www.gartner.com/newsroom/id/3845163), whereas Future Horizons sees again a growth of 16% (Industry Forecast October 2017). For 2019 Gartner expects the forecast declining slightly due to lower demand for memory chips.

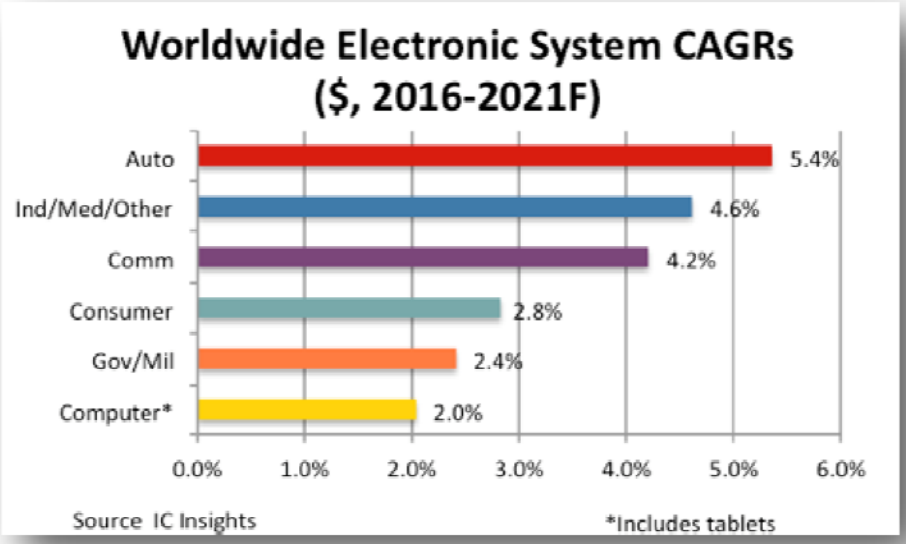
IC Insights reported a compound annual growth rate (CAGR) 2016 - 2021 of 7.9% for the entire IC market (Source: IC Insights Research Bulletin dated December 6, 2017 based on the 2018 Integrated Circuit market Drivers Report). Integrated Circuits sales for automotive systems and Internet of Things are forecasted to grow 70% faster than total IC revenues between 2016 and 2021. In March 2018 IC Insights raised the total IC market forecast for 2018 from 8% to 15% (Source: IC Insights Research Bulletin dated March 13, 2018).

The following key findings in the research bulletin and publicly available information of other research institutes support our strategic choice for our focussed markets:

1. The automotive and industrial markets will both drive significant growth in demand for semiconductors.

2. The IoT is the next growth engine for the semiconductor industry, particularly for the sensor, communications and industrial segments.

The RoodMicrotec management team is very positive about the future development of the company, as five of six important projects in the key strategic focus automotive, industrial and healthcare sectors have entered the industrialisation or production phase in 2017. These projects will generate a combined turnover of up to EUR 10 million per year when they have all been ramped up for full production. The management therefore reinforces its outlook for an increase in sales turnover to approximately EUR 18 million in 2020.

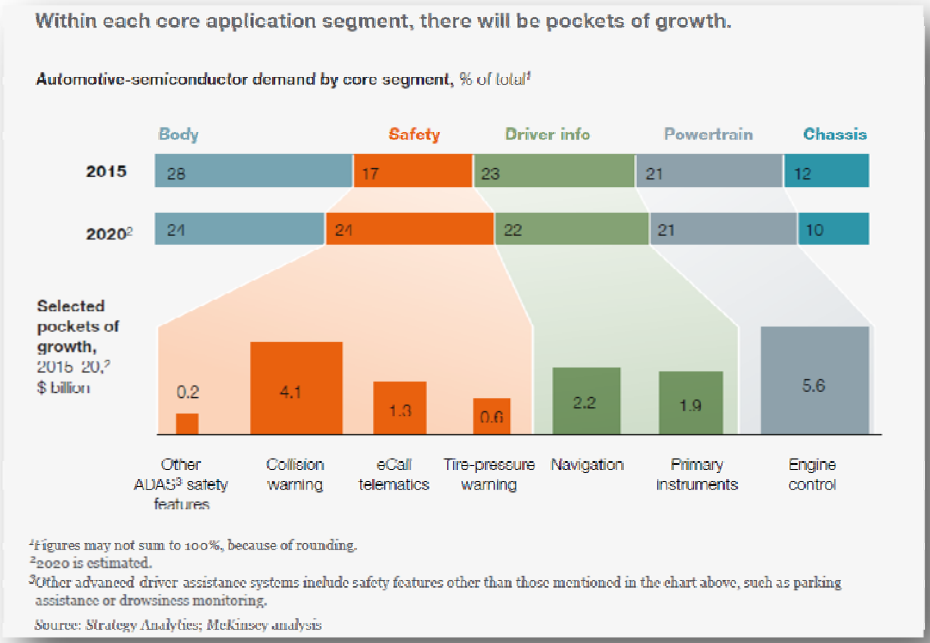


Automotive

Although conventional cars are still selling well and are an important driver for the semiconductor industry, electric cars and hybrids are rapidly 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. The automotive electronics becomes more widely available on mid-range and entry-level cars. But the nature of the automotive industry model is also shifting in new directions. Conventional cars will eventually disappear. 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.

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)*.

Within our Reliability Competence Center we have established our own competencies in the automotive field to fulfil the high reliability and safety requirements automotive clients are asking for. We are a partner in the EuroPAT-MASIP-project which is dedicated towards the automotive market which will gain further experience, knowledge and further contacts within this market segment.



Industrial (Industry 4.0, IoT) / Healthcare

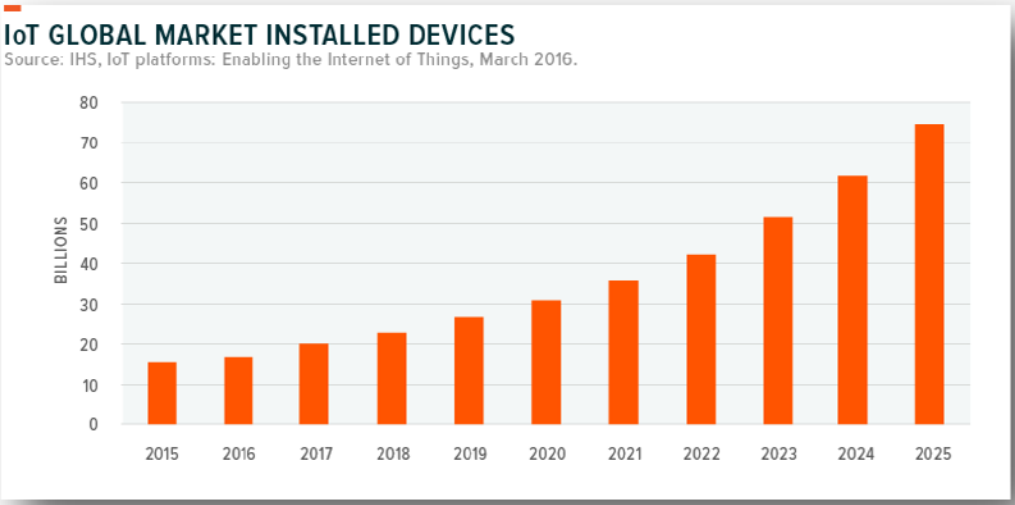
The expected growth rate of industrial semiconductor will be 4.6% CAGR in 2016-2021 (Source: IC Insights 9th November 2017). The growth of industrial semiconductor sales is generally accepted to show a high degree of correlation to GDP growth. As the economic recovery progresses in the period to 2019, it is therefore likely to see high growth in the industrial segment.

Within the industrial applications medical devices will also see a growth in demand and applications. With the development of connected medical 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 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.

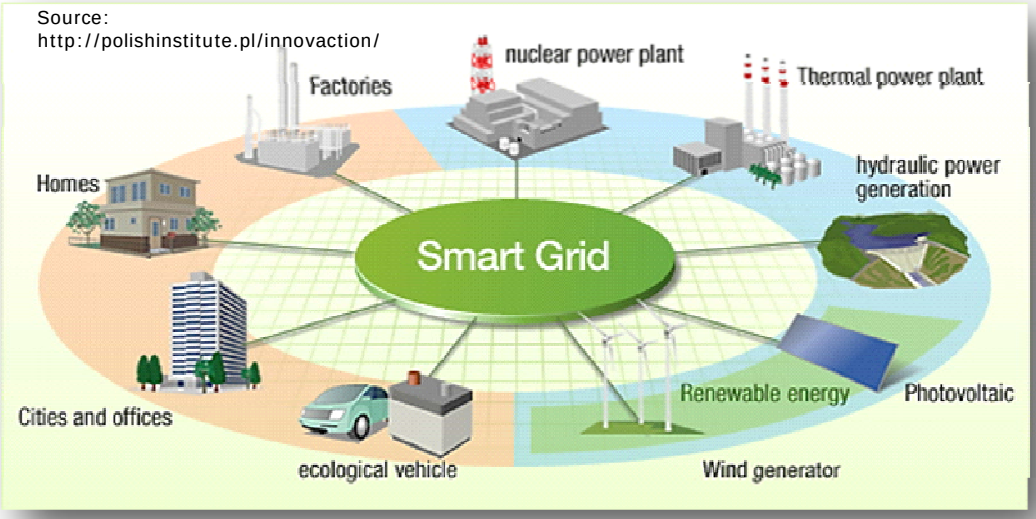
Characteristic for industrial production in an Industry 4.0 environment are strong customisation of products under the conditions of high flexible (mass) production. The required automation technology is improved by the introduction of methods of self-optimisation, self-configuration, self-diagnosis, 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-organising logistics that react to unexpected changes in production.

IoT will be the next growth engine for the semiconductor industry. It is expected that the number of installed devices will reach billion 75 by 2025 (Source: IHS, 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.



In each case, 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.

Together with one of its main customers RoodMicrotec is active working in the field of smart metering/smart grid. For us this is also a strong expanding market.



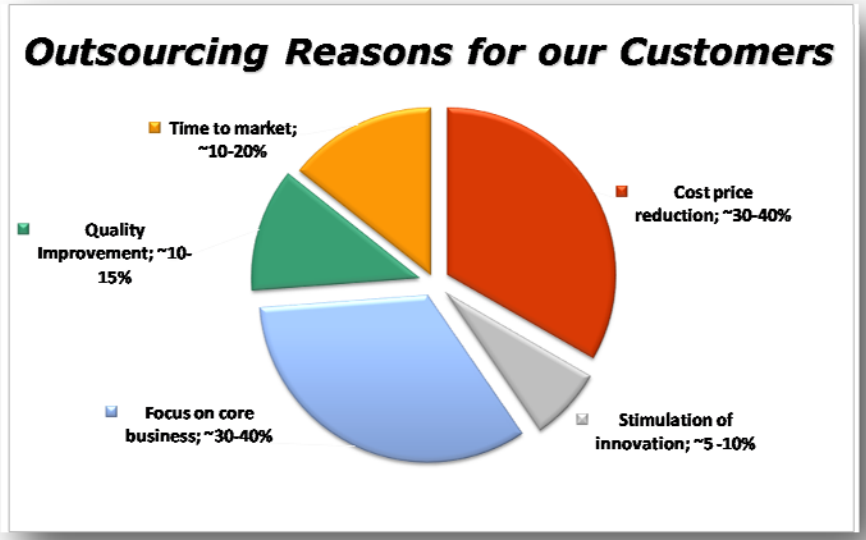
Outsourcing

To best combat competition from Asia more and more medium-sized companies are working together to raise their joint products and services to a higher level. OEMs still developing ASICs or other chips in-house will increasingly outsource this work to independent service providers like RoodMicrotec. We expect that this outsourcing trend continues. Partly due to our infrastructure, we are in an excellent position to profit from this with our turnkey service.

We are highly experienced in a wide range of services, such as test engineering, failure & technology analysis and qualification & reliability investigations. With shock proofing, thermal load and electrostatic discharge tests, we are uniquely able to investigate whether products will function under all conditions and predict their expected life.

Another benefit is that as an independent service provider we are never in competition with the Intellectual Property (IP) of other companies; in fact we can protect our customers' IP.

Outsourcing of activities by OEMs creates a win-win situation for both parties. By transferring ASIC development and production to us, OEMs can focus on their core activities: application and sales of mechanical and electro-technical products. For OEMs, outsourcing also means considerable cost savings, quality improvements and shorter time-to-market. The projects outsourced to us will run several years, providing us with a solid base and predictable sales.



High customer expectations

In the semiconductor industry, and especially the sectors we focus on, customers have high expectations not only for reliability and quality. They also expect excellent service, on-time delivery, know-how and support. And in addition to our strategy in which we contribute more actively to new product development and in which we are responsible for the entire supply chain management, they also expect us to come up with pro-active solutions during the whole process. For these customers we are the experts. As a consequence we are responsible for each step in the process. We are fully aware of this and are acting accordingly.

Networking

In our industry 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 (Ulm, Stuttgart, Karlsruhe, Regensburg, Duisburg) 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 each have a great deal of experience and knowledge and by sharing this it makes everyone stronger and this may lead to more innovations.

Developments within RoodMicrotec

Our total sales increased by 16% which is higher than the development of the European semiconductor industry. RoodMicrotec realised 96% of its total sales in European countries. According the Semiconductor Industry Association (SIA) the total industry sales in Europe were $ 37.7 billion in 2017, an increase of 15.4% compared to the 2016 sales. Worldwide semiconductor industry showed a growth of 21.6%.

Our realized sales of EUR 12.1 million (2016: EUR 10.5 million) was according our expectations and we mastered the many different challenges extremely well. For sure 2017 was again a year marked by positive developments. We could close 2017 with a historically high order backlog for 2018, meaning 55% higher than the year before. The quote portfolio remains on a high level and a major part of the offers are converted into orders and contracts (hit rate). In 2017, the book-to-bill ratio was above 1.0 in three of the four quarters. Our strategic move to larger and long-term projects is yielding more stable and predictable recurring sales and is bearing fruits

A contract is concluded for a specific period and for a certain estimated volume. During the term of the contract we receive specific orders for work to be performed by us, which we subsequently invoice. It starts during the development phase with an order for e.g. engineering. At that stage we already send invoices for work completed, but these concern relatively small amounts. Completing the development phase the projects enter the industrialisation phase with e.g. qualification processes. Finalising theses phase then volume production starts. In this phase turnover will vary, but is expected to rise year-on-year. We estimate that each contract concluded so far will generate significant recurring revenue per year after reaching the volume production phase.

Overall there are three phases in ASIC (Application Specific Integrated Circuits) projects – the development phase, the industrialisation phase and the production phase. This shows why these projects are running much longer not only after mass production has been reached, but also for the development and industrialisation of the customized products. Our goal is, to attend the customer competently in each phase of his ASIC project and to guarantee always only one contact person.

Thus, with our "eXtended Supply Chain Management" RoodMicrotec offers straightforward processes and turnkey solutions and this with many years of industry expertise. Our know-how especially in the sectors industrial, automotive, healthcare and high reliability (HiRel)/aerospace we use to offer the customer the best support.

Despite to the overall growth of sales in SCM, it was still below our expectations. Unfortunately several projects have been timely shifted into the next year by our customers. The missing revenue has been mainly compensated by our traditional business due to new customers and the significant growth in the industry.

On the other hand several projects became ready for production in the reporting year, some of them with a significant higher demand as expected or with a longer lifetime.

Automotive

Key / general facts

- Electronic components for vehicle applications are further one of the drivers for the global semiconductor industry.
- Automotive devices are a combination of high complexity, high quality demands and high volumes: car infotainment and communication with the outside world up to self-driving cars.
- We are fully equipped with the fundamentals required for automotive projects.
- New opportunities are seen by a specific trend that the industrial sector and the HiRel industry will upgrade / adapt their requirements to automotive standards.
- We develop complex solutions and are a partner in publicly funded projects.

RoodMicrotec aims to be the first point of contact for automotive customers wishing to subcontract individual services such as component qualification, or searching for a component manufacturer to develop a new component and deliver it to the corresponding customer's site under agreed accountability. The selection of suitable subcontractors for the manufacturing of wafers, assemblies (enclosures) and component testing can be coordinated together with our specialists.
Our Reliability Competence Center (RCC), a virtual group, consisting of specialists of all RoodMicrotec competence departments and experts from outside, is able to offer a new and enlarged service portfolio especially for the demands to quality, reliability and safety for automotive projects.

Full quality assurance, from quality planning and component release through to customer feedback/complaints processing is being handled in cooperation with all competence centers at RoodMicrotec and – as required – any partners brought in to deal with specialist areas.

Taking over the full responsibility for supplier management which can also include on-site process audits, consultancy services, training courses and workshops to automotive customers is a further element in our portfolio.

Industrial

Key / general facts

- Main focus is on Industry 4.0. / Internet of Things.
- 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, etcetera.
- We are developing (complex) solutions and are partner in three publicly funded projects: ParsiFAL 4.0, ScaleIT@Shopfloor and GaNScan.

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, light, temperature, shock, humidity, etc. combined with an intelligent integrated circuit and a transmission function RFID, ZigBee, etc.

There is an increasing demand on such Mixed Signal integrated circuits to reduce space, save energy or create faster performing systems.

Beside the framework agreement signed with Rhode & Schwarz for Supply Chain Management several additional SCM projects for new and existing customers could be secured.

The sales channel agreement with the Swiss company Altec Electronic AG is bearing fruits. The projects are running with increasing tendency.

The 10-year contract with a sales volume over this life cycle of approx. EUR 9 million which we signed in 2015 with an OEM (Original Equipment Manufacturer) to engineer a new product, is in mid of the industrialisation phase. The volume production, mainly testing, will start in the second half 2019. The speciality in this project is the long industrialisation phase combined with a product life time with more than 20 years.

Healthcare

Key / general facts

- High quality and high reliability demand as well as device complexity are combined within healthcare applications / biological chips.
- Distinction between devices inside and outside the body, sometimes with a physical connection between the internal and external devices.
- Projects with long lead times due to complex test environments, which contain a number of biological elements such as temperature, humidity, acidity and heart rate.
- Our experience with image sensors offers excellent opportunities.
- We are working with partners on future solutions.

The order we received for test development for a first biological chip in a series of new products has passed the development phase and is entering the industrialisation phase. In addition the lifetime has been enlarged from five to 15 years.

Throughout the year we kept track on activities regarding intelligent implants, especially developing new test methods for encapsulated ASICs for in-body applications which we started in 2016. Together with an industrial and a scientific partner we received an additional project due to start by mid of 2018. Focus is to develop a lifetime test set for encapsulated devices for commercial usage.

HiRel / Aerospace

Key / general facts

- Space exploration, solar sensors for satellites, radio applications in (military) aviation.
- Very high quality and reliability demands.
- Long lead times and low volumes, but very high commercial value.
- We are working in a wide range of projects, mainly in Europe.

At the end of the reporting year we started a huge hirel/aerospace project for a US customer of about EUR 250,000.

Due to the cyclical behaviour of the hirel/aerospace contracts several projects ran out in 2016/2017. Together with this new project we expect additional projects to start in 2018.

Publicly funded projects

Key facts

- Being partner in a consortium with leading technology companies enables us to new market potentials and know-how, also we have short ways to key players of the market.
- RoodMicrotec is able to develop new services and attract potential customers.
- We won 50% of projects we applied for – a standard value is around 30%.

In the reporting year we could gain one German funded project GaNScan and four additional projects are still pending for approval. For two pending projects we are awaiting the acceptance of our applications, one for start in the first half and one starting end of 2018.

One European funded project EuroPAT-MASIP has been started successfully. Two publicly funded projects reported earlier are successfully running at RoodMicrotec. Towards developing of industrialisation of technologies we are making big steps forward.

For the year 2018 we aim to gain several new publicly funded projects in the fields of Automotive, Industry 4.0, biotechnology and photonics. Beside the named application fields we will focus on photonic technologies for communication and sensory applications. Goal is to widen our possibilities in developing new technologies in order to expand its service portfolio to the named market but also especially for biotechnology or healthcare.

Collaboration / partnerships

To the existing major collaboration agreements with several European leading and most successful Fabless Companies (design houses) we added additional five European and one Indian partner. These design houses develop many high-grade microchips every year. 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. Depending on the product (the chip) from Analogue, Mixed Signal, Digital and high complexity, we will provide both individual services and backend manufacturing services.

In 2017 the framework agreement regarding Supply Chain Management with Rohde & Schwarz for future expansion of our long-lasting relationship has been signed. New orders for reliability investigations and quality improvements for optoelectronics components and vertical-cavity surface-emitting laser diodes (VCSEL) we have won and are running. Both customers are among the leading international companies in the automotive and industrial industry. Further well-known companies and institutes showed interest in forming a partnership with us.

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 recognised 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.

Research and development

We strengthened our know-how in different areas such as project management, design and management and the Reliability Competence Center. We also have some new highly experienced and talented people on board. All in all we have a strong, dedicated and ambitious team.

In order to become a well recognised player it is necessary to increase our brand awareness. Last year we worked hard on increasing our visibility by launching our new and modern website, publishing several technical articles, by giving presentations around Europe during exhibitions and conferences and by organising seminars.

In order to be competitive in our business, RoodMicrotec invests relatively large amounts in (technical) innovations. In 2015 till 2017, RoodMicrotec invested in high technological test systems, internally generated assets in the Automotive Competence Center (ACC) / Reliability Competence Center (RCC). The ACC has been set up by the company in 2014 in order to be able to offer new services that are required and expected for automotive projects. Also focussing on commercial projects within the automotive field we upgraded the ACC to the RCC mid 2017. Our internal experts will be supported by external advisors, who have extended know-how about reliability in all market fields. In 2017 the total investments in capitalised development expenditure amounts to EUR 0.1 million.

In addition the company invested in innovations by means of partnerships in publicly funded projects. In 2017 two projects in the field of Industry 4.0/IoT were running, two next projects - EuroPAT-MASIP & GaNScan – starting in 2017 have been secured.

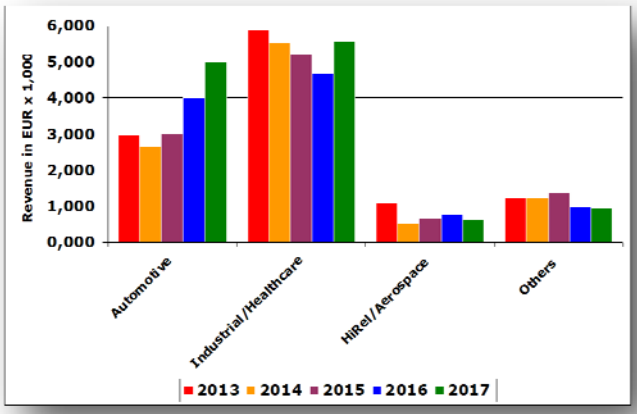
Financial development

Sales and result

Sales saw a significant increase to EUR 12.1 million, confirming the positive trend as forecasted. The cost of sales of EUR 1.97 million is a bit higher than the year before (2016: EUR 1.85 million) but relatively decreasing to 16% (2016: 18%). Resulting in a gross margin of EUR 10.1 million (2016: 8.6 million). Total operating expenses were EUR 9.2 million, against EUR 8.9 million in 2016. Personnel expenses increased by EUR 0.1 million mainly explained by a lower capitalisation of internal hours compared to 2016. The operating expenses also include non-recurring restructuring costs of in total EUR 0.4 million related to an extraordinary payment to a former advisor.

Net sales are presented below, broken down by end-user application.

(x EUR 1,000)	2017	2016	approx. change
Automotive	5,011	4,013	+25%
Industrial/Healthcare	5,563	4,700	+18%
HiRel/Aerospace	620	779	-20%
Others	933	973	-4%
Total	**12,127**	**10,465**	**+16%**



The increase in the automotive market is a result of efforts to consolidate our Reliability Competence Center and attract large new orders in automotive. Our growth in this sector is very much in line with our strategic goals to expand our activities in this industry, which is being revolutionised by the disruptive technologies of artificial intelligence, automation and the internet of things, driving up demand for bespoke semiconductor products and services.
The industrial/healthcare segment saw a 18% increase compared to 2016 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 decline in the HiRel/Aerospace field is due to the nature of this business. It mainly consists of failure analysis and qualification work and this is very much depending on the design cycles at our customers. We still consider this area of importance to our business and foresee a future increase.
Other sectors have seen a net sales decline which resulted from a strategic shift towards the automotive and industrial sectors, e.g. transferring consumer products into automotive applications.

The sales results of the business units were as follows:

(x EUR 1,000)	2017	2016	approx. change
Supply Chain Management	2,448	2,077	+18%
Test Engineering	689	471	+46%
Test Operations	4,275	3,727	+15%
Failure & Technology Analysis	1,787	1,494	+20%
Qualification & Reliability Investigation	2,928	2,696	+9%
Total	**12,127**	**10,465**	**+16%**

Net result showed a loss of EUR 44,000 (2016: EUR 1.6 million loss). This includes non-recurring restructuring costs of in total EUR 0.4 million related to an extraordinary payment to a former advisor.

Financial position

The balance sheet total decreased to EUR 13.4 million in 2017 (2016: EUR 14.7 million). The decrease in balance sheet total is mainly explained by the reclassification of Plentum bonds from financial assets to the plan assets within the pension obligation. The Plentum bonds are netted with the pension liabilities. Equity increased by EUR 0.7 million, from EUR 4.1 million to EUR 4.8 million, which was due to the receipts from the equity line and warrant plans and a revaluation of the land & building and reduced due to the net loss in 2017. Solvency increased from 28% to 36%. The net debt position remained unchanged at a level of EUR 2.4 million. Working capital is positive by EUR 0.5 million and stayed at a same level as in previous year.

Property, plant and equipment increased by EUR 0.7 million. End of 2017 the land & building are revaluated and a revaluation of EUR 0.6 million is recognised.

Cash and cash equivalents stayed at a stable level of EUR 0.6 million.

Events after balance date

In the beginning of 2018, the following events after balance sheet date occurred:

- Exercise of warrants Series III that resulted in an increase of 2,303,963 shares (exercise price: EUR 0.21) on 11 January 2018.
- On 1 February 2018, 1,530,785 shares were issued at EUR 0.33 and 1,530,785 non listed warrants were issued with strike price of EUR 0,42 and 5 year exercise period.
- Exercise of options that resulted in an increase of 110,000 shares (exercise price: EUR 0.11) on 14 February 2018.
- Exercise of options that resulted in an increase of 300,000 shares (exercise price: EUR 0.11) on 27 February 2018.
- Exercise of options that resulted in an increase of 1,150,000 shares (exercise price: EUR 0.11) on 2 March 2018.
- Exercise of options that resulted in an increase of 468,440 shares (exercise price: EUR 0.11) on 07 March 2018.
- Sale of 6.524 square meters of land to a neighbor company, EUR 300.000 will be used to pay back part of the 2016 bond loan.

Focus and actions 2018

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.

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: “Quality First”. This will increase our competitiveness and also give our customers an advantage in the market.

Focus

Automotive

We are a recognised player in the automotive sector, which is the fastest growing market that offers us a lot of opportunities. The growth of this market will lead to additional demands on electronic equipment and create a positive impact on the semiconductor industry. In general semiconductor content per vehicle is approximately 3 times higher in electric cars compared to conventional cars. For example in a high class BMW there are semiconductors built in for roughly EUR 8,000.

Industrial

In the industrial sector all attention is on the Industry 4.0. Based on our knowledge and experience we are well positioned to play a role in these developments. As a partner in three publicly funded Industry 4.0 projects we have good access to all parties involved. This is good for our reputation and brand awareness and opens the doors to spread our services to an enlarged customer clientele.
Not to neglect the Internet of Things (IoT) for which double digit growth rates are published, e.g. CAGR 2016 – 2024 of 21.1% (Source: Variant Market Research, https://iot.do/global-internet-of-things-iot-market-2017-12 dated December 26, 2017).

Healthcare

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

Actions

- Investment in a fully automated system for the visual inspection of 8 and 12 inch wafers
- Analyse and invest in new machinery where necessary. This can be for capacity or capability 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, sensors and medical applications to widen our service portfolio according the market demands.
- To strengthen our customer base by focusing on existing customers with high potential and by approaching new strategic customers with high potential.
- Together with partners RoodMicrotec will start by mid 2018 a publicly funded project to develop a commercial test to determine the life time of intelligent implants inside the human body.
- To improve brand awareness of RoodMicrotec through:
  - Professional valuable articles for customers and other stakeholders
  - Professional brochures and flyers
  - Presentations on seminars and trade fairs
  - Presence on well selected and dedicated fairs.
- To (continuously) make the difference by:
  - Showing high technical and personal competence
  - Showing innovative and proactive thinking and working
  - Showing responsibility and entrepreneurship
  - Focussing on high quality “Quality First”
  - Providing solutions and thus having added value.

Outlook 2018

RoodMicrotec expects a continuing revenue increase over the next years and projects the revenue in 2020 to be approximately EUR 18 million. The results will continue to improve and the company expects to report yearly positive net profits.

The growth in 2017 exceeded the most forecasts significantly, e.g. WSTS forecasted 6.5% in February 2017 and real global growth ended at 21.6%. Again beyond 2017, the semiconductor market is expected to grow across all regions. WSTS forecasts 9.5% growth globally for 2018 ($451 billion in total sales).(source: WSTS press release 28 February 2018). IC Insights sees the IC market to grow 15% in 2018 (Source: IC Insights Research Bulletin dated March 14, 2018).

Quality Management

Our company's success is the success of our customers, employees and investors. This is the main guiding principle of our quality management system.

This requires continuous improvement of quality management and its processes and procedures and demands a high level of dedication and commitment from our employees. Management determines the quantifiable quality objectives for the company with clear and objective evaluation and target cascading for the business units. Following this, it defines targets for the business units and business unit managers.

The challenge for the year 2018 is to continue the development to a 0 ppm concept. This is done by applying the relevant automotive tools FMEA / Risk Management such as 5S and Kaizen.

Our guiding principle for 2018 and beyond is: **"Quality First"**

RoodMicrotec's laboratories for qualification & reliability investigation (electronic, mechanical and optical qualifications) and failure & technology 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 certificate (PL-12120-01-01 and PL-12120-01-02).

RoodMicrotec's quality standard is defined by our customer. With our products and services, we aim to exceed customer expectations in terms of quality and price.

Human Resources and Sustainability

Changes, such as poverty in developing countries, demographic changes, globalisation, youth unemployment, climate change and natural resource utilisation issues, are affecting our environment and the people living in it. These forces are shaping our business by creating new markets and opening up new opportunities. They also cause significant risks that need careful management.

Values and sustainability can minimise these risks and master these challenges to optimally leverage emerging opportunities for our stakeholders.

We attach a great importance to good relationships with the group's customers, employees, suppliers, investors, other business partners and the communities in which we are active.

Corporate Social Responsibility and sustainability are therefore intrinsic, integral elements in our local operations. For RoodMicrotec, Corporate Social Responsibility means conducting business with due consideration for climate effects and energy sources, for people and the environment, taking responsibility for the chain in which the company operates. That is why our strategy already includes 'people, planet and profit'. Long-term economic, environmental and social aspects are integrated into our business strategies, while maintaining global competitiveness and brand reputation.

We manage our human resources so as to maintain workforce capabilities and employee satisfaction. We strive to provide continuing further education for all of our employees as appropriate to their tasks. We want to create an environment in which all employees can develop and excel. High priority is given to further development of our managerial staff and to attracting new talents for RoodMicrotec. In order to create a performance-oriented environment for our employees we offer remuneration and benefit schemes depending on company's objectives and individual objectives.

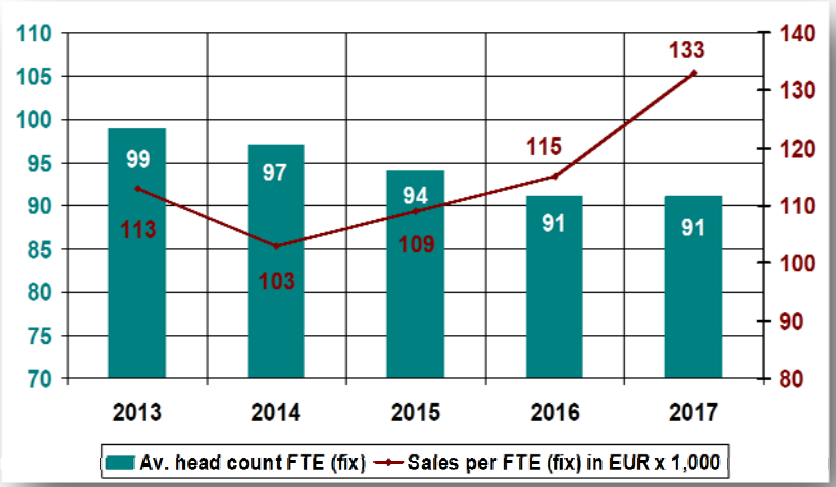
The aim of our environmental policy is to safeguard the environment and human health. The practical aims are to monitor and prevent environmental risks so as to avoid compromising environmental conditions for future generations. As a company we bear a social responsibility that necessitates consideration of environmental issues when assessing processes.

Employees, sales by employee and head count

During 2017 some employees retired, but RoodMicrotec kept the number of employees constant.

In key positions RoodMicrotec hired experienced people to strengthen the position of RoodMicrotec in the market, such as Jan de Koning Gans in Sales & Marketing. We will continue to search for experienced people to strengthen our organization and generate a more diverse structure.

The average number of full-time employees (FTE) remained constant at 91 FTEs in 2017. The sales per full-time employee increased by approx. 16% from EUR 115,000 in 2016 to EUR 133,000 in 2017. Our policy is to continue to strive for growth of sales per FTE.



When I started working for RoodMicrotec in 2017, I had the great experience of joining a veteran company under contemporary and visionary leadership. In addition to the well-equipped facilities, operating under high quality standards, the company has access to human resources with long experience and in-depth know-how in the field of microelectronics manufacturing technology and product quality management. These assets are utilized with an entrepreneurial mentality throughout the whole organization, marked by a 'can do' and 'taking ownership' attitude.

RoodMicrotec is well established as a highly valued partner to many companies in Europe, providing ASIC supply chain management and component quality assessment services. We support both OEMs and Tier 1 suppliers in the automotive, industrial, healthcare and aerospace markets. These are ranking from start-ups to market leading multinationals and from Fabless IC Suppliers to IDMs and system manufacturers. It is the objective of RoodMicrotec to contribute to the success of their customers, which we rather refer to as our partners.

It is my personal objective to work with the marketing & sales organization on strengthening RoodMicrotec's position in the various markets, expanding our geographical coverage and establish sustainable businesses with both existing and new customers. I am confident about this ambition, as I am seeing me surrounded by a great team of colleagues in all different departments in our company. Towards a successful and enjoyable in 2018 and beyond!

Jan de Koning Gans, Marketing & Sales

In Memoriam – Sönke Hundertmark

We were deeply saddened by the death of Sönke Hundertmark in the age of only 46 on January 29, 2018. Although he has been ill for the last few months, it deeply and painfully shocked us.

Sönke started on 1 January 2017 and took over the responsibility for the Business Unit “Supply Chain Management”. He successfully represented RoodMicrotec and its services and was a valuable, highly competent and well liked character in the company.

Sönke, we will miss you, we will miss your optimism and your confident, reliable, friendly and cheerful appearance. We will always keep you in our hearts.

Our thoughts go out to your wife and your family at this difficult time.

Martin Sallenhag, CEO,
on behalf of the employees, the management and the supervisory board of RoodMicrotec.

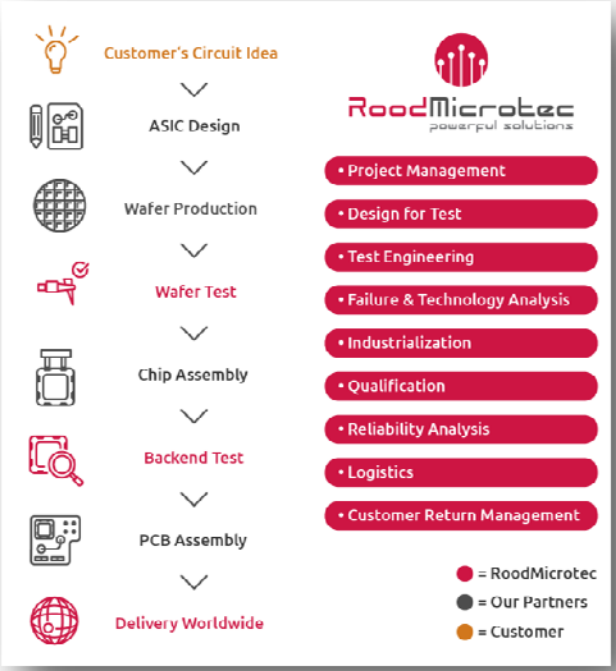
Report per Business Unit

Supply Chain Management (SCM)

Profile

In this business unit RoodMicrotec supports customers who wish to launch high-quality semiconductors, in particular ASICs and ASSPs, on the worldwide market. RoodMicrotec provides comprehensive services, from the beginning of the development process (together with design partners) all the way up to delivery to its customers, including engineering support, test engineering, wafer test, assembly (through partners), final test, qualification and reliability, failure analysis, field failure 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. Our customers are Fabless Design houses and OEM companies.



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 is capable of managing 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 a partner).

Key developments in 2017

In 2017 two major automotive projects were run through the development phase and reached successful the industrialisation phase to be ready for production in the first quarter of 2018. Two industrial projects and a BioChip also reached the industrialisation phase short before production.

The SCM team was further strengthened. Yasemin Gülmez joined the team in 2017 and is responsible for Logistics. In January 2018 Wolfgang Kemmler has been appointed Technical Manager of SCM. He will complement the team competently and efficiently with his far reaching expertise and his profound knowledge in handling ASIC design partners.

New supplier and partner relations have been established for the automotive and industrial market:

- Close cooperation with two additional major European design partners was fixed.
- SCM seminar together with Fraunhofer IIS and AMS
- Project management is adapted to the new requirements of the ISO 9001 version of 2015, including risk management
- Significant increase in our position as leading partner for assembly houses.
- New customer requests for our ASIC turnkey service

Actions 2018

In 2018 RoodMicrotec will continue to focus on OEM customers in the automotive and industrial markets. We will continue to offer ASIC turnkey services in conjunction with several fabless design houses to win new projects for industrialisation and recurring business.

We will bring more SCM projects into development, industrialisation and production-line. We will focus on optoelectronics and photonic chips and will also focus on widening our emphasis to modern packages as these are Wafer Level Scale Packages (WLSP) and chip-on-board requirements.

To cover new and increasing demand from the market, we will continue to strengthen the SCM team.

Test Engineering

Profile

RoodMicrotec's Test Engineering business unit provides complete test solutions for a wide range of devices like mixed-signal, digital, analogue or RF ICs. Customers include OEMs, IDMs and Fabless Companies working worldwide in automotive and industrial, healthcare, HiRel and aerospace, and consumer sectors.

Our team of highly skilled engineers develops test programs, probe cards and load boards for characterisation, 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.

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

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

Key developments in 2017

Revenue in the test engineering business unit increased on a year-to-year basis as well as from the first half to the second half of 2017 due to more customer projects generating recurring business in our SCM area and Test Operations.

In 2017, we appointed a new engineering manager to improve and increase the efficiency inside of the engineering department.

We have also developed new test programs and hardware for the new V93000 test system as well as for the 12 inch wafer prober. These projects have already started production during 2017. We successfully implemented production test on wafer level over the full temperature range from -40°C up to +150°C.

Actions for 2018

The key goals for 2018 are to continue to acquire more recurring business in the area of turnkey solutions. Test engineering plays a major role in this by enabling the other business units to generate long term revenues in all areas.

We will continue to invest in new tester systems to stay competitive in the new Industry 4.0 era as well as to increase support for our SCM customers in the area of production and yield analysis.

We also will increase the head count to be able to fulfil the customer requirements in time.

In addition we are working for our publicly funded projects like GaNScan (tests and characterisation of GaN based wafers for high voltage, high temperature and high current applications), ScaleIT@Shopfloor to optimize and improve test floor operation by adding more intelligence to the systems and EuropatMASIP (ASIC development for a MEMS gyroscope, for an image sensor, and for Radio Frequency (RF)).

Test Operations

Profile

In this business unit the services of component and wafer testing, component programming, straightening and scanning of devices and the end of line of semiconductor devices are performed. Main focus lies on the wafer test and final test of semiconductor devices.

The main goal is to provide service and support our customers through the whole project by continuous improvement of the processes and systems related to it, offering excellent customer care, delivering in-time 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 in the past and the ones planned for 2018 show, that RoodMicrotec is highly competitive in this area of growing technical demands and the growing semiconductor market in general.

Our customers are OEMs, Fabless Companies, distributors, IDMs and others out of the automotive, industrial, healthcare, telecommunications and HiRel market.

Key developments in 2017

Main focus was on the acquisition and installation of our new test system, an IntegraFlex from Teradyne.

Various docking possibilities for this new test system guarantee a high degree of flexibility and scope of action with regard to future projects. Direct docking solutions were developed in close cooperation with the suppliers of the test and the handling system - both for wafer and component testing - and implemented in production. Some solutions are unique and have not yet been implemented by any other company. This is a further step on the way to take on a pioneering role in these matters and to generate new know-how.

After a successful 1st half year, a new handling system for 8-times parallel final test was purchased and put into operations.

Outdated test and handling systems were phased out in order to make room for the new investments.

Actions for 2018

We will invest in a fully automated system for the visual inspection of wafers and will have it ready for operation at the end of the second / beginning of the third quarter. The VI-system will be able to inspect 8 and 12 inch wafers for macroscopic damage on the wafers and will replace the manual wafer inspection. Market investigation and first discussions with several manufacturers of such systems are already ongoing.

We have to analyse and to invest in new machinery where necessary. This can be for capacity or capability reasons and will apply in all areas such as tester, prober, handler or end-of-line.

Failure & Technology Analysis

Profile

RoodMicrotec's extensively equipped failure & technology analysis laboratory is capable of providing 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 various types of analytical investigations can be performed as part of a reliability assessment or qualification. Further service is including focused ion beam (FIB), design modification and consulting and/or line surveys concerning electrostatic discharge (ESD) and certification of ESD materials.

Failure & Technology Analysis

Analysis of defective devices (failure & technology analysis) 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 DPA

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 analysis

Qualification-related analyses are carried out before and after various qualification tests performed by our own Qualification & Reliability Investigation laboratory. The purpose of these investigations is to determine the influence of these environmental tests on package and chip-related problems.

FIB service

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.

The business unit has a broad European customer base, primarily in the automotive and aerospace industries.

Key developments in 2017

We improved number and education of our Failure Analysis engineers to support the supply chain management business. This business showed a significant increase of failure & technology analysis activities.

The demand for failure analysis on ceramic capacitors showed a strong increase as well. This improvement was supported by a tutorial, given at SMT fair in Nuremberg.

First contacts to universities and institutes were made, to enlarge our capabilities by using other equipment

First edition of 'Failure Analysis Inside' was distributed, a special newsletter on failure analysis topics, to make our technical possibilities more popular and give customers more detailed information.

Our expectations concerning 3D X-ray tomography have been confirmed. Beside a strong raising demand for this type of investigation, this technique supports our failure analysis as well, to get additional information without mechanical treatment / destruction of the samples.

Actions for 2018

In the context of our annual seminars, we plan a seminar concerning electrical overstress (EOS) in October.

A team will be formed to deal with market requirements of future technologies like high power electronics, sensors or requirements for medical applications.

The service must be reconsidered to support customers in advance, not just in an emergency.

Qualification & Reliability Investigation

Profile

In our business unit Qualification & Reliability Investigation 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.

Electrical / electronic qualification including mechanical stress tests

Electrical/electronic 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 areas covered are automotive, aerospace, telecommunication etc. where stress tests are performed to various international specifications (AEC-Q, MIL, JEDEC, ESCC, IEC). Furthermore, up-screening of components (specific qualification and test flow for higher quality grade of units for military and space applications) is another main task of the business unit. Products can be tested under extreme conditions such as climatic and temperature changes as well as under vibration and mechanical shock. The investigations determine whether the components meet the required qualification standards.

Using burn-in (monitored or standard), components are stressed 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. Most products are tested for the aerospace, automotive and medical sectors. Our main customers are in these sectors and are Fabless Companies and OEMs. Burn-in board loading for the monitoring system can be done manually or on request by means of an automated board loader/unloader.

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

Product-specific hardware (boards, fixtures) for mounting the tested devices together with specific software for stimulating them during the stress treatments are also being developed by RoodMicrotec.

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

We offer our customers services ranging from root-cause analysis right through to physical product analysis performed by our in-house ISO 17025 accredited failure analysis laboratory.

Optical qualification

This unit focuses on image sensors and on mechanical investigations of semiconductors and boards. Image sensors are needed for example in the digital photography, high speed image processing, X-ray technology and other applications.

Optical qualifications are for the automotive, aerospace and telecommunication markets where we focus on the reliability investigations of optical components such as image sensors and LEDs.

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.

We are known as a professional partner providing services to the industry.

Key developments in 2017

Revenue in the Business Unit Qualification & Reliability Investigation increased during 2017 thanks to new orders for the turn-key business, individual AEC-Q100 qualification as well as a steady demand for single stress tests. A number of the turn-key projects within RoodMicrotec passed the qualification step during 2017 and were moved into the production stage. We also have a steady demand in the burn-in area from some of our long-term customers. We have continued to improve the project management of our qualification tasks by introducing a more stringent use of a standard project control tool and regular internal as well as customer reviews.

A major focus of the activities in optical area was the winning of new customers in the aerospace field. Together with a key customer, a qualification program was started and the implementation is running; main activities continued through 2017.

Due to the increasing number of application areas of image sensors, RoodMicrotec has strengthened and increased its activities accordingly to comply with the test requirements.

Actions for 2018

- Increased focus on monitoring of the stress tests through new and innovative ways of controlling the chambers and stress equipment.
- Continue the development of increased stress coverage for our customers using mission profiles and other application specific conditions, in other words Robustness Validation.
- Continuous improvement in project management to be more efficient in performing the large qualification projects.
- Qualify and characterise LEDs and VCSELs at wafer level on our automated test systems.

RoodMicrotec is participating in a publicly funded project (ParsiFAL 4.0) to adapt the qualification procedures for hybrid microelectronic sensor systems. The company will continue to build up knowledge in the field of qualification and tests of assembled on thinned chips mounted on flexible PCBs and to adapt failure analysis methods.

Reliability Competence Center (RCC)

Profile

This team inside RoodMicrotec consists of members of different business units and external consultants with the goal to strengthen knowledge within the company and market it as a service. Main focus is on the following topics:

- Reliability Assessment
- Reliability Analysis
- Qualification Support
- Automotive Support
- ESD Services
- Supplier Development
- Interconnection Technology
- Audits and Expert Assessment

Using our experience, we offer our customers specially adapted solutions. There is no standard solution each task is individually adapted to our customer.

Key developments in 2017

The team was established in the second half of 2017, based on the ACC department. During 2017 we supported a customer on the development from an industrial to an automotive supplier.

Actions 2018

- Contact lead customers and existing customers to present the capabilities of RCC, specifically in the automotive market.
- Inform the market by several publications in the press and our newsletter.

Publicly funded projects

Profile

Since years RoodMicrotec is participating in publicly funded projects and is identifying more and more interesting projects. These projects are an integral part for RoodMicrotec and its internal coordinator to identify the best ones and having all administrative and technical threads in his hand. Our individual business units working on the projects from the technical point of view can gain a lot of know-how and new technologies.

Being a part and recognised partner in publicly funded projects gives RoodMicrotec many advantages:

- Networking with the partners and other companies within the projects
- New potential customers
- Gain of Know-how

ParsiFAL 4.0

The aim is to realise a thin flex foil with integrated electronic chips for sensors, microcontrollers, wireless interfaces and energy harvesting components for Industry 4.0. It is an important step forward that will have applications in many different markets. RoodMicrotec is partner among nine participating companies, among others Festo where the first application is a flexible control unit for independent automation equipment (smart sensor system). The second application with Bosch is a flexible foil used as an information label on shipments, especially in the food and pharmaceutical industries, whose products are very sensitive to high temperatures and vibration.

ScaleIT@Shopfloor

With 15 partners inclusive RoodMicrotec the project will prepare high-tech companies for the start of Industry 4.0. Currently there are still many manual processes in high-tech companies' production lines. In Industry 4.0, production should have a high degree of automation and intelligent networking.

In the first step our partner 'Feinmetall' will produce an intelligent test card, which we will implement at an intelligent test system workstation that we will build. This workstation should interact with the test card from Feinmetall and also with all our IT and test system.

For RoodMicrotec the funded ScaleIT@Shopfloor project is a great opportunity to be one of the leading companies in our sector in Industry 4.0.

EuroPAT-MASIP

With the Project EuroPAT-MASIP (European Packaging Assembly and Test pilot for Manufacturing of Advanced System in Package) RoodMicrotec has been allocated EUR 850,000 in public funding over the next three years. The organisation has granted a total of EUR 7.2 million in EU funding for the EuroPAT-MASIP project, for which RoodMicrotec is one of the 27 submitting partners. The proposed project was deemed to make a significant contribution to European competitiveness and job creation in the electronics industry.

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). Through its participation in the project, RoodMicrotec will be able to refine its existing expertise in all three areas. Special task for RoodMicrotec in this project is the project leadership for TEST.

GaNScan

The project GaNScan with the full title “Mapping and modelling of industrial GaN/Si-wafer substrates for optimized yield production of GaN HEMT components in power electronics” has a duration of over 2.5 years. In this project RoodMicrotec and its two partners will develop reliable processes for testing of Gallium Nitride-on-Silicon wafers.

At the moment the GaN technology is going to be industrialized in the field of high frequency and power electronics. In this case there will be a need of qualified test and reliability processes for GaN technology soon. Therefore RoodMicrotec and its partners will build up the know-how in this field. After the project the members of the consortium can extend the field of GaN to their company portfolio.

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

Sales in Test Operations make up approx. 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, Test Engineering, Qualification & Reliability Investigation and Failure & Technology Analysis. We focus on high-end work and long-term projects specifically in Supply Chain Management, which further reduces operating risks.

Costs

Globalisation is putting increasing pressure on prices in all areas, but in particular in our Test Operations. This requires constant focus on improving cost management, reducing costs, optimising 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 programme 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 branches in the university cities Stuttgart and Dresden, puts it in a better position to recruit high-quality staff.

Market risks

We operate in a highly cyclical market, which continues to grow in Asia but also recovered in Europe last year showing a significant growth rate but with expected lower growth in the coming year. The use 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 & reliability investigation, failure & technology 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 minimise 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

General

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 business units, work with the same system, which allows for better monitoring of financial results.

Based on what is summarised 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

General commitment

RoodMicrotec's mission is to be a knowledge and technology driven service provider and semiconductor supplier 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 may be affected by its activities. RoodMicrotec duly observes applicable laws and regulations in 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 endeavours to adapt to local situations in order to take the most appropriate approach to possible problems within the bounds of applicable laws and responsible conduct. In this respect RoodMicrotec supports the principle of dialogue and cooperation with all parties involved.

Human rights

With due regard to the Universal Declaration of Human Rights, which states that all parties in society, including corporate entities, 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.

Free market competition

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

Product safety

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

Privacy

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

Environmental protection

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

Commitment towards customers

RoodMicrotec is dedicated to improving people's lives. Its 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 listening to and learning from them, so that it can 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.

Commitment towards investors

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 a satisfactory return on equity, with the intention if possible to distribute 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.

Commitment towards employees

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

Right to organise

RoodMicrotec recognises and respects the freedom of employees to choose whether or not to establish, or to associate with, any organisation. RoodMicrotec respects

- within the framework of (local) laws, regulations and prevailing labour relations and employment practices;
- the right of its employees to be represented by labour unions and other employee organisations, and RoodMicrotec will engage in negotiations, either on its own behalf or through employers' associations, with a view to reaching agreement on employment conditions.

Health and safety

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

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.

Wages and payment

Remuneration and working hours shall comply with local labour laws and shall be in line with prevailing industry norms.

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 acting fairly and with integrity towards their stakeholders and who observe the applicable laws of the countries in which they operate.

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.

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 to refraining from making use of information disclosed to it by third parties if it suspects 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.

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 authorised 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.

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 favours may only be made or accepted in strict accordance with the General Business Principles (GBP) 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's accounting principles. No unrecorded funds or assets may be established or maintained.

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.

Political payments

RoodMicrotec companies shall not make payments or donations, in money or in kind, to political parties, political organisations or individual politicians, unless such payments are made in strict accordance with the GBP Directives.

Sanctions

All RoodMicrotec employees must comply with the General Business Principles. Violation may lead to disciplinary action, including dismissal, notwithstanding any further civil or criminal action that may be instigated.

Whistleblower policy

In order to promote the reporting of violations of the General Business Principles, a whistleblower policy is in place, enabling employees to submit complaints anonymously without fear of the complaints leading to disciplinary action.

Compliance

Compliance with the General Business Principles is monitored by a compliance officer, who regularly reports to the Board of Management and Supervisory Board on the deployment of the General Business Principles and on ethical issues in general. Reporting on compliance with the General Business Principles is also an integral part of the Statement on Business Controls issued annually by the Board of Management and Supervisory Board as part of a cascade process leading to certification of the company's annual accounts. Compliance processes and procedures are reviewed by RoodMicrotec's Supervisory Board.

Further information: 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 whistleblower 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.

I. Enforcement and application of the Code

RoodMicrotec follows all the Code's principles and has implemented almost all its best practices. Deviations from the Code will be explained in the remainder of the chapter. We are evaluating the new corporate governance rules from December 2016 and will issue an updated corporate governance compliance statement with respect to this by mid of 2018.

II. The Board of Management

II. 1.1– 1.11 Tasks and working methods

Our Board of Management is appointed by the Annual General Meeting of shareholders on 7 June 2016 on a four-year employment contract governed by Dutch law. A member may be reappointed for a term of not more than four years at a time. These terms shall also apply to new board members to be appointed.

The Supervisory Board supervises the policy of the Board of Management, as well as the general course of the corporate affairs and business, and provides advice to the Board of Management. The Board of Management must keep the Supervisory Board informed, consult with the Supervisory Board on important matters and submit certain important decisions to the Supervisory Board for its prior approval. Over the years it has become a tradition that the Supervisory Board and the Board of Management determine RoodMicrotec's operational and financial objectives and the company's targets in consultation. The same applies to the strategy and the framework conditions to be implemented. The custom of including the highlights in the annual report will be continued.

The company has an internal risk management and control system, which includes (a) a risk analysis of the operational and financial objectives of the company, (b) a whistleblower policy, (c) a code of ethics for principal executive and financial officers and a code of conduct which the Board of Management and employees must adhere to, which is published on the company's website www.roodmicrotec.com, (d) guidelines for the layout of financial reports and the procedures to be followed in the preparation of the reports, (e) a system of disclosure controls.

The risk management and control system has proved to function adequately and effectively. This was achieved by special focus on the operating and control system. Over the past years, further organisational adjustments had been implemented, including the selection of 'empowered' management. Based on this decision, each business unit manager is now accountable. We measure the performance of the management of his/her business unit by using key indicators. The need to optimise the organisation was discussed with the Supervisory Board on several occasions.

With reference to the section on Risk Management, the sales levels and results are highly sensitive to upswings and downturns of the market. However, customer structure also plays an important role.

The Board of Management is responsible for the strategy and the associated risk profile and reports to the Supervisory Board and the general meeting of shareholders in this context. The Board of Management is responsible for compliance with all applicable laws and regulations, the control of risks associated with the company's business operations and the financing of the company. The Board of Management reports on this topic and discusses the internal risk management and control systems with the Supervisory Board and its audit committee.

At least once every year, the Supervisory Board discusses the strategy and the main risks for the company, the results of the Board of Management's evaluation of the structure and functioning of the internal risk management and control systems, as well as any significant adjustments to them. These discussions are referred to in the report of the Supervisory Board. In the annual report the Board of Management describes the main risks related to the company's strategy.

The Board of Management is responsible for the relevant social aspects of the company's business operations.

RoodMicrotec employees can report suspected irregularities within the company without jeopardising their legal position. RoodMicrotec's whistle-blower policy enables employees to report any suspected irregularities of a general, operational or financial nature within the company and its subsidiaries without having to fear for their legal position. Insofar as the suspected irregularities do not involve RoodMicrotec's managing director(s), such reports should be addressed to the chairman of RoodMicrotec's Board of Management. However, if the report concerns actions or omissions by RoodMicrotec's managing director(s), the whistleblower should communicate it to the chairman of RoodMicrotec's Supervisory Board.

Before an employee may invoke that his/her legal position was jeopardised as a consequence of a report as described above, the chairman of the Board of Management (when the report does not involve suspicions against RoodMicrotec's managing director(s)) or the chairman of the Supervisory Board (if the report involves suspicions against RoodMicrotec's managing director(s)) must issue an assessment in writing. This assessment document must be issued within 14 days after the relevant request.

No member of RoodMicrotec's Board of Management holds the post of managing director in another listed company. The employment contract with managing directors stipulates that accepting other posts in a business environment is subject to approval from RoodMicrotec's Supervisory Board. Insofar as this has been applicable, the company has complied with this provision.

In the event of a takeover, the Board of Management and the Supervisory Board are jointly responsible for evaluating the offer made and for making recommendations to the shareholders. If a takeover offer is under preparation, it is the responsibility of the Board of Management to involve the Supervisory Board in the takeover process closely and in a timely manner. It is appropriate to discuss in advance the role of the Supervisory Board in any takeover process. The Board of Management will discuss requests from any competing bidders with the Supervisory Board without delay.

Shareholders may make use of their right to place issues on the agenda of the general meeting of shareholders. If it concerns a matter that may result in a change of strategy, for example the dismissal of managing directors or supervisory directors, the Supervisory Board will set a reasonable term to respond to the issue brought up (the 'response time'). The response time may not exceed 180 days, calculated from the time when the Supervisory Board was informed of the intention to place an item on the agenda up to the day on which the shareholders' meeting is held. Shareholders must respect this response time. The Supervisory Board will use this time for further consultation and constructive discussions, in any case with the relevant shareholder(s). It is the responsibility of the Supervisory Board to monitor the way in which the Board of Management uses the response time. The Supervisory Board may use the response time only once in relation to the same matter. Setting a response time is not possible in a situation in which a public takeover offer is successful and the acquiring party has 75% or more of the share capital.

II. 2.1 – 2.15 Remuneration

Options on shares are part of the company's remuneration components. Granting these options is subject to achieving targets based on the company's short-term and long-term strategic plans.

The remuneration structure, in particular its variable component, does not promote taking risks that conflict with the set strategy. The variable part is determined taking into account the risks that variable remuneration entails for the company.

Prior to setting the remuneration policy and the determining the remuneration of the individual directors, the Supervisory Board will analyse the possible outcomes of the variable remuneration components and the consequences thereof for the remuneration for the director.

The Supervisory Board determines the level and the structure of the directors' remuneration partially based on the scenarios analysed, taking into account the balance of remunerations within the company.

The options granted are stated in the company's annual accounts.

Regarding ownership and transactions of shares by Supervisory Board members, other than those issued by the company itself, the Supervisory Board has resolved to deviate from the Code. Supervisory 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, Supervisory Board members must report changes in shareholdings in other listed or semiconductor companies to the chairman of the Supervisory Board.

The remuneration of the Managing Directors 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. As stated above, 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 Managing Directors will be evaluated every six months and new targets will be set. The targets for the Managing Directors are not described in the annual accounts due to competitive reasons. Company objectives are described in this report.

The employment of the Managing Directors may be terminated by giving six months' notice in writing before the end of each calendar month. In case of termination from RoodMicrotec the Managing Directors is entitled to a severance pay equal to 100% of total annual gross salary. No personal loans or guarantees have been provided to the Managing Directors. RoodMicrotec complies with provision II.2.7 of the Code, which determines inter alia that the exercise price of the share options and other conditions may be adjusted during the term of the contract.

II. 3.1 – 3.4 Conflicting interests

According to Article 22 of RoodMicrotec's articles of association, the company shall be represented by the chairman of the Supervisory Board in the event of a conflict of interest involving a managing director. The company complies with all provisions of the Code regarding refraining from competing with the company, accepting or requesting gifts for the managing director and/or his/her immediate family, providing unjustifiable benefits charged to the company, the managing director and/or his/her immediate family using business opportunities that are intended for the company, and the obligation to report a potential conflict of interest to the chairman of the Supervisory Board. Furthermore, the managing director may not take part in the discussion of the issue in which he/she has a major conflict of interest. Moreover, all transactions concerning a conflict of interest must be approved by the Supervisory Board and will be reported in the annual report.

III. The Supervisory Board

III. 1.1 – 1.9 Task and working methods

Some years ago, the Supervisory Board prepared a set of rules for its own functioning, which are available for inspection by shareholders and stakeholders at the company's offices. These rules include regulations for the interaction with the Board of Management. The articles of association of the company contain regulations regarding the interaction with the shareholders. The report of the Supervisory Board, which is included in this annual report, provides specific details regarding the members of the Supervisory Board as required by the Code.

In the performance of its duties, the Supervisory Board focuses on the interest of the company and the business associated with it, and in that context weighs the relevant interests of the stakeholders of the company. The Supervisory Board also considers the relevant social aspects of the company's business.

The Supervisory Board's supervision of the Board of Management includes the relevant social aspects of the company's business. The Board of Management must inform the shareholders promptly of the policies it intends to pursue. The Supervisory Board's duty to supervise the Board of Management will be extended to supervision of the relationship with the shareholders.

III. 2.1 – 2.3 Independence

RoodMicrotec complies with the Code, which recommends that the Supervisory Board should not include more than one non-independent member.

III. 3.1 – 3.6 Expertise and composition

The regulations for the Supervisory Board including its profile are available on the company's website www.roodmicrotec.com.

All new members of the Supervisory Board are required to attend an induction program, which addresses general financial and legal issues, the financial reporting of the company, the specific aspects of the company's activities and the responsibilities of a supervisory director. Current supervisory directors will annually evaluate their need for training. The company will play a facilitating role in this.

RoodMicrotec's articles of association stipulate that a member of the Supervisory Board shall be appointed for a maximum term of four years, and be reappointed no more than three times. The resignation rota is stated in the annual accounts.

We strive for a mixed composition in terms of sex and age. However, our first selection criterion is suitable qualifications, before issues like sex and age are considered.

III. 4.1 – 4.3 Role of the chairman of the Supervisory Board and the company secretary

RoodMicrotec complies with these provisions of the Code. 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.

III. 5.1 – 5.13 Composition and the role of three core committees on the Supervisory Board

As per January 2017, the company has a Supervisory Board comprised of three members. RoodMicrotec is intending establishing a remuneration and audit committee. The company will then apply the relevant provisions of the Code. Presently, the responsibilities of the core committees are carried out by the full Supervisory Board.

III. 6.1 – 6.7 Conflict of interest

A supervisory director who has a conflict of interest as described in provision III.6.1 of the Code shall report it to the chairman of the Supervisory Board and the supervisory director will not take part in any discussions of the matter in which he or she has a conflict of interest. Moreover, all transactions involving a conflict of interest must be approved by the Supervisory Board and will be reported in the annual report.

If relevant, the company shall comply with the provision III.6.4 concerning transactions between the company and natural persons or legal entities holding 10% or more of the company's share capital.

Regulations on dealing with (potentially) conflicting interests involving the managing directors, board members, including Supervisory Board members, and the external auditor, will be extended with the rules of the Supervisory Board.

The company shares the Tabaksblat Committee's views on the tasks and authority of a delegated member of the Supervisory Board.

III. 7.1 – 7.4 Remuneration

The remuneration of the Supervisory Board is subject to approval from the general meeting of shareholders (see also Article 24, paragraph 4 of the articles of association). The Supervisory Board will not be granted shares and/or options on shares as part of its remuneration. The profile of the Supervisory Board, published on the company website, will be extended with the relevant articles of the Code.

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.

IV. The (general meeting of) shareholders

IV. 1.1 – 1.8 Scope of authority

The company complies with the Code regarding the decision-making of the general meeting of shareholders on the following items:

- Compliance with the Code is accounted for in the annual report in the context of the disregarding, the dismissal of the Board of Management and the Supervisory Board.
- The chairman of the general meeting of shareholders is responsible for an orderly meeting, so as to facilitate meaningful discussions.
- The voting rights on preference shares.
- The public statement of and motivation for the board's point of view regarding a published, serious private offer on a company division or participation in the company with a value exceeding the limit stipulated in Book 2, Section 107(a) of the Dutch Civil Code, first paragraph, sub c.
- The allocation and dividend policy, the dividend distribution proposal, and dismissal of the managing directors and supervisory directors being separate items on the agenda of the general meeting of shareholders.
- The setting of a registration date for exercising voting and attendance rights.

IV. 2.1 – 2.8 Depositary receipts for shares

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

IV. 3.1 – 3.13 Information provision / logistics of the general meeting of shareholders

RoodMicrotec complies with the best-practice provisions concerning informing shareholders and other parties in the financial market simultaneously and equally on issues that may affect the share price. However, based on a cost/benefit analysis, the company has decided against spending money on technology for attending meetings remotely.

The agenda of the general meeting shall list the items for discussion and the voting items.

The company will continue to provide the general meeting of shareholders with all relevant information required to properly exercise its rights and authorities, unless a material interest prevents it from disclosing certain information. In compliance with the Code, RoodMicrotec publishes presentations to analysts on its website after the event. If necessary, the company will ask for trade in RoodMicrotec shares to be suspended during such presentations.

RoodMicrotec will publish or make available all information required by corporate law and securities legislation.

Proposals to be approved or authorised by the general meeting will be explained in writing. In its explanation, the Board of Management will address all facts and circumstances relevant for the requested approval or authorisation. Proposals to be approved or authorised by the general meeting will be explained in writing.

Material changes to the articles of association of the company and nominations for managing directors and supervisory directors will be put to the general meeting separately.

The company offers shareholders and other parties with voting rights the option of giving a voting proxy or voting instructions to an independent third party prior to the general meeting.

The company has not formulated policies concerning bilateral contacts with shareholders and therefore does not publish any such policy on its website.

Furthermore, the company shall at first request make the minutes of any general meeting of shareholders available to all shareholders no later than three months after the date of the relevant meeting. Shareholders then have three months to submit their reactions to the minutes. Subsequently, the minutes will be signed by the chairman of the meeting and the person who prepared the minutes, in accordance with Article 31, paragraph 1 of RoodMicrotec's articles of association.

The company has not put in place any protective construction against takeovers. The reason for this is that for a relatively small company like RoodMicrotec, it would not be unfavourable either for the shareholders or the operational entity to be part of a larger organisation in the semiconductor industry.

IV. 4.1 – 4.6 Responsibility of institutional investors

RoodMicrotec currently does not have any institutional investors. If this should change in the future, RoodMicrotec will ask the institutional investors to apply these best-practice provisions of the Code. However, RoodMicrotec will not insist on compliance, since it does not wish to restrict potential institutional investors.

Shareholders must behave in accordance with standards of reasonableness and fairness. The following guidelines apply to all shareholders including institutional investors:

- a willingness to engage in discussion;
- the right to set agenda items should be exercised in consultation with the Board of Management; voting at one's discretion, taking an independent view of any voting recommendations;
- agenda items must be explained in the meeting.

V. The audit of financial reports and the position of the internal audit function and the external auditor

V. 1.1 – 1.3 Financial reporting

RoodMicrotec's Supervisory Board monitors the reporting and publication of the annual report, the annual accounts and other financial statements required by internal procedures. The Board of Management bears responsibility for the internal procedures that ensure the adequacy, accuracy and reliability of the external financial reporting.

V. 2.1 – 2.3 Role, appointment, remuneration and assessment of the external auditor

The external auditor will attend the general meeting of shareholders to answer questions regarding the accuracy of the annual accounts. The company's Board of Management reports annually to the Supervisory Board on developments in the relationship with the external auditor. According to the company's articles of association (Article 25, paragraph 2), the authority to appoint the external auditor lies with the general meeting of shareholders.

V. 3.1 – 3.3 Internal audit function

RoodMicrotec does not have an internal auditor. Every listed company should in principle have an internal auditor in accordance with best practice provision V.3.1.

The audit committee/the Supervisory Board will annually assess the need for an internal auditor. The audit committee/the Supervisory Board will make recommendations to the management board, which will be recorded in the report of the Supervisory Board.

If an internal auditor is appointed, this officer will be accountable to the Board of Management.

V. 4.1 – 4.3 Relation and communication with the external auditor and the company's departments

The external auditor will at least once a year meet with the Supervisory Board to discuss the external auditor's report and the annual accounts. Furthermore, the external auditor will receive all financial information he/she requires to perform his/her tasks. The external auditor annually submits a management letter to the Board of Management and the Supervisory Board, which is discussed in a joint meeting of the Board of Management and the Supervisory Board.

Board of Management

O.M. Sallenhag, CEO

R. Pusch, COO

Zwolle, 28th March 2018

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 2017 (included in the chapter on corporate governance), which is available on RoodMicrotec's website: 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 following chapters, sections and pages of RoodMicrotec's annual report 2017 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 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' 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 on 28 March 2018. 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 recognised 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.

Zwolle, 28th March 2018

Board of Management

O.M. Sallenhag, CEO

R. Pusch, COO

Supervisory Board

V.G. Tee, Chairman

H.J. Bartelink

J.B. Tuik

REPORT OF THE SUPERVISORY BOARD

Financial statements, dividend and discharge

We hereby present the 2017 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 2017 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 107 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 17 May 2018 to:

- adopt the financial statements;
- discharge the sole member of the Board of Management from liability for his conduct of business in 2017;
- discharge the Supervisory Board from liability for its supervision of the management;
- approve that no dividend will be distributed.

RoodMicrotec in 2017

It would be fair to claim 2017 has been a major turnaround year for the company. The senior management changes in 2016 occurred in time for them to develop into a well-motivated and highly competent team that brought in the necessary changes to deliver a solid base for sustainable profitable growth. In addition to improvements to the business management, they took a hard look at all aspects of the company including staff competencies and have applied a prudent cost management regime. This now provides them with the ability to generate a healthy positive cash flow which should allow them to invest in the equipment required to take advantage of emerging market opportunities.

On the business side, the positioning in the market and alignment with customers' requirements is excellent bringing positive feedback from several customers which has on occasion been received by supervisory board members. As a consequence, it is the opinion of the supervisory board that the company should in the short term focus on building the enterprise value of the company which should ultimately lead to a position where the company is able to provide dividends to shareholders.

In the various and regular meetings with the Board of Management we discussed the strategy and also 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 is also an interesting challenge. Overall, it was concluded that RoodMicrotec is on the right track. In 2018, the further rollout of the strategy is high on the agenda of the Board of Management and therefore also the Supervisory Board.

During an extraordinary shareholders meeting on 26 January 2017 Jeroen Tuik and Herman Bartelink were elected as members for the Supervisory Board for the time period of January 2017 till 17 May 2018, the next General Shareholders Meeting.

Philip Nijenhuis decided to step down as advisor for RoodMicrotec as per 31 December 2017 and all open obligations were solved by a mutual agreement.

Supervisory Board meeting schedule

The Supervisory Board gives the highest priority to good governance practice. The supervisory board met with the Board of Management 15 times during 2017. In addition to the regular meetings they met during the extraordinary and 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;
- 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 2017 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 2017 provided a continuous evaluative process and provided an open dialog platform for sound governance of the company.

The appointments of the two new Supervisory Board members enabled a more robust level of governance through 2017 and brought additional experience and knowledge to support sustainable development of the company. All procedures of the Board are considered adequate for a company of this size.

	Start Current Term	End Current Term
Victor George Tee (Chairman)	2017	2019
Herman Johan Bartelink	2017	2018
Jeroen Bertil Tuik	2017	2018

Zwolle, 28th March 2018

The Supervisory Board

V.G. Tee, chairman

H.J. Bartelink

J.B. Tuik

Supervisory Board Members

Victor George Tee, Chairman (1943) (British nationality)

Victor joined the Supervisory Board in 2009 and became Chairman in 2013. With 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. Having lived and worked in Asia for 20 years and operated internationally he has a wide network at both operational and board levels globally.

Herman Johan Bartelink (1969) (Dutch nationality)

Herman joined RoodMicrotec in January 2017 as a member of the supervisory board. 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). Herman has a bachelor degree in economics.

Jeroen Bertil Tuik (1973) (Dutch nationality)

Jeroen joined RoodMicrotec in January 2017. He is holding a Master of Science in Mechanical Engineering. Started working in the IT for 3 years at Stork TPS (Account Management, Consultant), afterwards 7 years at Pemstar Inc. (Program Director), subsequently 4 years at Benchmark Electronics Inc. (Managing Director). Made the move for 3 years to Schuitemaker Machines & Industrial (Managing Director), 2 years at Stork IMM (Operations Director) and finally to the Connect Group (CEO).

ANNUAL ACCOUNTS

A. CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Statement of Profit or Loss

(x EUR 1,000)	Notes	2017	2016
Net sales	1	12,127	10,465
Cost of sales	2	-1,970	-1,850
Gross profit		**10,157**	**8,615**
Personnel expenses	3	-6,105	-6,016
Other operating expenses	4	-2,703	-2,909
Termination benefit costs	5	-400	
Total operating expenses		**-9,208**	**-8,925**
EBITDA		**949**	**-310**
Depreciation and amortisation	6	- 1,018	- 1,029
EBIT		**-69**	**-1,339**
Financial expenses	7	-258	-248
Profit (loss) before taxes		**-327**	**-1,587**
Taxes	8	283	9
Net profit (loss)		**-44**	**-1,578**

Net profit attributable to:

Equity holders of the company		-44	-1,578
Non-controlling interests		-	-
Net profit (loss)		**-44**	**-1,578**

Earnings per share

Basic	17	-0.00	-0.02
Diluted	17	-0.00	-0.02

The figures following the various items refer to the notes on pages 63 to 97.

Consolidated Statement of Comprehensive Income

(x EUR 1,000)	Notes	2017	2016
Net profit (loss)		-44	-1,578
Items that will not be reclassified to profit and loss:			
Remeasurement of defined benefit obligations	20	-286	-459
Remeasurement of defined benefit obligations – DTL	11	-16	126
Revaluation of land and buildings	9	586	-
Revaluation of land and buildings – DTL	11	-133	-
Total comprehensive income		**107**	**-1,911**

Total comprehensive income attributable to:

Equity holders of the company	107	-1,911
Non-controlling interests	-	-
Total comprehensive income	**107**	**-1,911**

The figures following the various items refer to the notes on pages 63 to 97.

Consolidated Statement of Financial Position

(x EUR 1,000)	Notes	31-12-2017	31-12-2016
Assets			
Property, plant and equipment	9	6,023	5,283
Intangible assets	10	2,428	2,401
Deferred income taxes	11	1,284	1,151
Financial assets	12	503	3,001
Non-current assets		**10,238**	**11,836**
Inventories	13	581	474
Trade and other receivables	14	1,980	1,712
Cash and cash equivalents	15	617	689
Current assets		**3,178**	**2,875**
Total assets		**13,416**	**14,711**
Equity and liabilities			
Issued share capital		7,339	6,979
Share premium		19,906	19,659
Revaluation reserve		2,216	1,763
Retained earnings		-27,188	-26,842
Equity, attributable to equity holders of the parent	16	2,273	1,559
Non-controlling interests		2,494	2,494
Total equity	**16**	**4,767**	**4,053**
Loans and borrowings	19	2,880	3,004
Defined benefit obligation	20	2,899	5,247
Provisions	21	144	72
Non-current liabilities		**5,923**	**8,323**
Loans and borrowings	19	188	113
Trade and other payables	22	2,480	2,159
Current tax liabilities	19	58	63
Current liabilities		**2,726**	**2,335**
Total equity and liabilities		**13,416**	**14,711**

The figures following the various items refer to the notes on pages 63 to 97.

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**
Balance at 1 January 2016	***54,411***	**5,986**	**19,009**	**1,822**	**-24,990**	**1,827**	**2,494**	**4,321**
Issuance of ordinary shares	*9,030*	993	637	-	-	1,630	-	**1,630**
Value of employee options granted	-	-	13	-	-	13	-	**13**
Transactions with equity holders of the company	***63,441***	**6,979**	**19,659**	**1,822**	**-24,990**	**3,470**	**2,494**	**5,964**
Net profit (loss)	-	-	-	-	-1,578	-1,578	-	**-1,578**
Other comprehensive income:								
Remeasurement of defined benefit obligation	-	-	-	-	-333	-333	-	**-333**
Revaluation of land and buildings	-	-	-	-59	59	-	-	**-**
Total comprehensive income for the year	**-**	**-**	**-**	**-59**	**-1,852**	**-1,911**	**-**	**-1,911**
Balance at 31 December 2016	***63,441***	**6,979**	**19,659**	**1,763**	**-26,842**	**1,559**	**2,494**	**4,053**
Balance at 1 January 2017	***63,441***	**6,979**	**19,659**	**1,763**	**-26,842**	**1,559**	**2,494**	**4,053**
Issuance of ordinary shares	*3,275*	360	248	-	-	608	-	**608**
Value of employee options granted	-	-	-1	-	-	-1	-	**-1**
Transactions with equity holders of the company	***66,716***	**7,339**	**19,906**	**1,763**	**-26,842**	**2,166**	**2,494**	**4,660**
Net profit (loss)	-	-	-	-	-44	-44	-	**-44**
Other comprehensive income:								
Remeasurement of defined benefit obligation	-	-	-	-	-302	-302	-	**-302**
Revaluation of land and buildings	-	-	-	453	-	453	-	**453**
Total comprehensive income for the year	**-**	**-**	**-**	**453**	**-346**	**107**	**-**	**107**
Balance at 31 December 2017	***66,716***	**7,339**	**19,906**	**2,216**	**-27,188**	**2,273**	**2,494**	**4,767**

Consolidated Cash Flow Statement

(X EUR 1,000)	Notes	2017	2016
EBITDA		949	-310
Adjustments for:			
- Movements in net defined benefit obligations	20	-141	-76
- Share based payments	18	-1	13
- Accrued interest	7	-25	-28
Changes in working capital			
- Inventories	13	-107	-194
- Trade and other receivables	14	-268	-53
- Trade and other current liabilities	19 22	409	361
Cash generated from operating activities		**816**	**-287**
Interest paid	7	-188	-165
Net cash from operating activities		**628**	**-452**
Cash flows from investing activities			
Investments in property, plant and equipment	9	-1,127	-1,590
Disposal of property, plant and equipment	9	-	-
Investments in intangible assets	10	-72	-289
Net investments in financial assets	12	4	1
Net cash from investing activities		**-1.195**	**-1,878**
Cash flows from financing activities			
Proceeds from issuance of share capital	16	608	1,629
Proceeds from borrowings	19	-	723
Repayment of borrowings	19	-113	-
Net cash flow from financing activities		**495**	**2,352**
Net cash flow		**-72**	**22**
Cash -/- bank overdrafts at 1 January	15	689	667
Cash -/- bank overdrafts at 31 December	15	617	689
Net cash flow		**-72**	**22**

The figures following the various items refer to the notes on pages 63 to 97.

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 2017 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 Dresden GmbH (Dresden, Germany)

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

The German subsidiaries included in the consolidated financial statements of RoodMicrotec N.V. made use of the exemption provisions of section 264 (3) HGB in the 2017 financial year: RoodMicrotec GmbH, Nördlingen and RoodMicrotec Dresden GmbH, Dresden.

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 authorized for issue by the board of management on 26 April 2017.

Basis of measurement

The consolidated financial statements have been prepared on a historical cost basis, except for investment properties, land and buildings classified as property, plant and equipment. The carrying values of recognised assets and liabilities that are designated as hedged items in fair value hedges that would otherwise be carried at amortised cost are adjusted to record changes in the fair values attributable to the risks that are being hedged in effective hedge relationships. 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 IFRS 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 reviews for impairment, deferred taxes, pension plans and share-based compensation. For each of these items the assumptions used are disclosed in the respective notes. Revisions of accounting estimates are recognised prospectively.

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 2017;
- The sales order book saw a year-on-year increase in 2017 of 55%. The Group has a strong forward order book;
- Significant increase in cash flow from operating activities in 2017. The cash position remains at a relatively high level;
- Significant increase in sales in 2017 leading to a positive result for the year 2017 before one-time termination benefit costs. 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 recognized 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 management team is very positive about the future development of the company, as five of six important projects in the key strategic focus automotive and industrial/healthcare sectors have entered the industrialization or the production phase in 2017. These projects will generate a combined turnover of up to EUR 10 million per year when they have all been ramped up for full production. RoodMicrotec expects a continuing revenue increase over the next years and projects the revenue in 2020 to be approximately EUR 18 million. The results will continue to improve and the company expects to report yearly positive net profits.

Industry wide, growth of semiconductor businesses in Europe saw a 15.4% increase, with a projected 4.6% increase in 2018 (WSTS Forecast Summary November 2017).

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.

Application of new and revised International Financial Reporting Standards

New standards, amendments and interpretations applicable as of January 1, 2017
The Group has adopted the following new standards, amendments and interpretations with a date of initial application of January 1, 2017:

- IAS 7 Amendment 'Disclosure initiative';
- IAS 12 Amendment 'Recognition of deferred tax assets for unrealized Losses';
- Annual Improvements to IFRSs 2014-2016 (Amendments to IFRS 12).

The adoption of the interpretations, amendments and annual improvements had no significant effect on the financial statements for the period ended December 31, 2017.

New standards, amendments and interpretations not yet adopted
A number of new standards and amendments to standards are effective for annual periods beginning after 1 January 2018, which the Group has not applied in preparing these consolidated financial statements:

IFRS 9 Financial Instruments

IFRS 9 was published in July 2014 and subsequently endorsed by the European Union in November 2016. IFRS 9 includes revised guidance on classification and measurement of financial instruments, including a new expected credit loss impairment model for calculating impairment on financial assets. This standards replaces the existing guidance in IAS 39 Financial Instruments: Recognition and Measurement. The Group will implement IFRS 9 per 1 January 2018 using the modified retrospective approach, meaning the 2017 comparative figures in the 2018 financial statements will not be restated. Any impact of IFRS 9 will be recognized directly in equity per 1 January 2018.

The Group assessed the impact of the new standard and concludes that the expected impact is immaterial:

- With regard to the revised classification and measurement principles, IFRS 9 contains three classification categories: 'measured at amortized 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 brings no change in presentation and/ or measurement for the Group.
- With regard to the expected loss model on financial assets the Group concludes that the impact on the Group's future consolidated statement of profit or loss is expected to be immaterial as the standard requires provisions to be recorded earlier and the initial impact of this timing difference is recorded in equity upon implementation. The initial impact recorded in equity per 1 January 2018 is also expected to be immaterial.

IFRS 15 Revenue from Contracts with Customers

IFRS 15 was published in May 2014 and subsequently endorsed by the European Union in September 2016. IFRS 15 establishes a framework for determining whether, how much and when revenue is recognized 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), sales are recognised for each performance obligation in the amount of the allocated portion of the transaction price as soon as the agreed-upon good or service has been provided or the customer receives control over it. Principles are set out for determining whether the good or service has been provided over time or at one point in time. IFRS supersedes existing standards and interpretations related to revenue. The Group will apply the new standard as per 1 January 2018 using the modified retrospective method, meaning the 2017 comparative figures in the 2018 financial statements will not be restated. Any impact of IFRS 15 will be recognized directly in equity per 1 January 2018.

The Group performed a preliminary analysis of customer contracts and assessed the impact of the new standard. The full analysis will be completed in the first half of 2018. Based on the analysis performed, the Group concludes that the expected impact is immaterial:

- With respect to the recognition standards the Group concludes that the majority of its contracts are contracts with customers in which the performance of the service or delivery of the goods is generally expected to be the only performance obligation of the Group's business units which are involved in the contract. The revenue recognition will still occur at a point in time when control of the assets is transferred to the customer or in case of projects over time when the services are rendered.
- With respect to the measurement principles, the Group concludes 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 are expected to have an immaterial impact on the Group's consolidated financial statements.
- IFRS 15 provides presentation and disclosure requirements, which are more detailed than under current standards.

IFRS 16 Leases

IFRS 16 was published in January 2016 and subsequently endorsed by the European Union In October 2017. IFRS 16 establishes a revised framework for determining whether a lease is recognized in the (consolidated) balance sheet. The standard replaces existing guidance on leases, including IAS 17. The Group will implement IFRS 16 per 1 January 2019 by applying the modified retrospective method, meaning that the 2018 comparative figures in the 2019 financial statements will not be restated to show the impact of IFRS 16. In selecting which practical expedients to apply Group will focus on reducing the complexity of implementation.

Under the new standard lease contracts will be recognized on the Group's balance sheet and subsequently depreciated on a straight line basis. The liability recognized on transition is measured based on the discounted future cash flows and the future interest will be recorded in interest expenses. Lease expenses currently recorded in the income statement will be therefore replaced by depreciation and interest expenses for all lease contracts within the scope of the standard.

The financial impact of the new standard on the Group is expected be material. As an indication a reference is made to note 23 'Off-balance sheet commitments', which includes the operational lease commitments.

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 unrealized 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, at which time it is classified as property, plant or equipment. 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:

Category	**Years**
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 profit or loss 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.

Customer relations

Intangible assets include customer relations, acquired in a business combination by the Group, and recognised separately from goodwill.

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. Customer relations and development expenditure is 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 assets

The Group classifies financial assets into the following categories: financial assets at fair value through profit or loss, held-to-maturity financial assets and trade and other receivables.

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 designated as such on initial recognition. These financial assets are initially recognised at fair value and are not held for trading. Directly attributable transaction costs are recognised in profit or loss as incurred. Financial assets at fair value through profit or loss are measured at fair value and changes therein are recognised in profit or loss.

Impairment of financial assets

Financial assets not classified as at fair value through profit or loss are assessed at each reporting date to determine whether there is objective evidence of impairment

Objective evidence that financial assets are impaired includes:

- default or delinquency by a debtor;
- restructuring of an amount due to the Group on terms that the Group would not consider otherwise;
- indications that a debtor or issuer will enter bankruptcy;
- adverse changes in the payment status of borrowers or issuers.

For an investment in an equity security, objective evidence of impairment includes a significant or prolonged decline in its fair value below its cost.

Financial assets measured at amortized cost

The Group considers evidence of impairment for these assets at both an individual asset and a collective level. All individually significant assets are individually assessed for impairment. Those found not to be impaired are then collectively assessed for any impairment that has been incurred but not yet individually identified. Assets that are not individually significant are collectively assessed for impairment. Collective assessment is carried out by grouping together assets with similar risk characteristics. In assessing collective impairment, the Group uses historical information on the timing of recoveries and the amount of loss incurred, and makes an adjustment if current economic and credit conditions are such that the actual losses are likely to be greater or lesser than suggested by historical trends.

An impairment loss is calculated as the difference between an asset's carrying amount and the present value of the estimated future cash flows discounted at the asset’s original effective interest rate. Losses are recognized in profit or loss and reflected in an allowance account. When the Group considers that there are no realistic prospects of recovery of the asset, the relevant amounts are written off. If the amount of impairment loss subsequently decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, then the previously recognized impairment loss is reversed through profit or loss.

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. Due to short-term nature the fair value and amortised cost equal the face value.

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

The carrying amounts of assets, of non-financial assets and deferred tax 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. Intangible assets that are not available for use or assets that have an indefinite useful life are 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 against its nominal value.

Borrowings

Interest-bearing borrowings are recognised initially at fair value, less attributable transaction costs. 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 borrowings using the effective interest method.

Deferred income taxes

Deferred income 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 income 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 income tax is 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 income tax asset is realised or the deferred income tax liability is settled.

Deferred income 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 income tax is 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 income 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 income 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.

Only a small part of the employees (approximately 13 FTEs) have a defined pension plan. The pension of these people is limited to a relative small fixed annual amount per year.

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.

Net sales

Net sales

Revenues from products sold are recognised in accordance with IAS 18, 'Revenue' when the conditions for revenue recognition are met. Revenues from services which relate to projects (Test Engineering, Qualification & Reliability Investigation and Failure & Technology Analysis) are allocated to the net sales on a pro rata basis in proportion to the completion of the project. Revenues from services which relate to production (Test Operations & End-of-line Services and Supply Chain Management) are allocated to net sales on a pro rata basis. Revenue is recognised when delivery has occurred or services have been rendered, the risks and rewards of ownership have been transferred to the customer, the amount of revenue can be measured reliably, and collection of the related receivable can be reasonably assured.

Government grants

An unconditional government grant is recognised in the balance sheet when the grant becomes receivable. Any other government grant is initially recognised in the balance sheet as deferred income when there is reasonable assurance that it will be received and that the Group will comply with the conditions attaching to it. Grants that compensate the Group for expenses incurred are recognised as revenue in the income statement in the same periods in which the expenses are incurred. Grants that compensate the Group for the cost of an asset are recognised in the income statement as revenue over the useful life of the asset.

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 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. 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.

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)	2017	2016
Euro denominated net sales	11,450	9,902
US dollar denominated net sales	677	563
Balance at 31 December	**12,127**	**10,465**

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 2017 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	581				
Trade receivables	1,589				
Other receivables	391				
Total interest-bearing loans and borrowings	-188	-2,880	-499	-2,381	
Trade payables	-960				
Other payables	-1,520				
Current tax liabilities	-58				
Cash at bank	617				
Liquidity position (working-capital)	**452**	**-2,880**	**-499**	**-2,381**	**-**

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.

For purposes of financing its working capital position, the company has per 31 December 2017 the following additional finance available:

(x EUR 1,000)	Equity line
Balance at 1 January	469
Draw down equity line 2017	-469
Balance at 31 December	**-**

For 2018, it is important to realise the expected further growth in business. Not reaching the plans for 2018 could harm the working capital position and/ or investment plans and additional measurements could be necessary.

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 1% decrease in the market interest rate at year-end would increase the pension obligation by approximately EUR 732,000. A 1% increase of the market interest rate at year-end would lead to a decrease of the pension obligation by approximately EUR 610,000.

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)	2017	2016
Total interest-bearing borrowings	3,068	3,117
Less cash and cash equivalents	-617	-689
Net debt	**2,451**	**2,428**
Total equity	4,767	4,053
Total capital	**7,218**	**6,481**
Gearing ratio (net debt/capital x 100%)	**34%**	**37%**

Fair value measurement

The Group measures its non-financial assets at fair value.

Fair value is the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset takes place either:

- In the principal market for the asset, or
- In the absence of a principal market, in the most advantageous market for the asset

The principal or the most advantageous market must be accessible to by the Group.

The fair value of an asset is measured using the assumptions that market participants would use when pricing the asset, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use. The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 — Quoted (unadjusted) market prices in active markets for identical assets
- Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between Levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

1. Net sales

The Group is active in one operating segment, due to the limited size of the company and the internal reporting structure. Sales are reported internally as well as externally in different product/services groups. Every month a consolidated profit & loss statement is prepared, based on which an analysis and management report is communicated. Monthly profit & loss statements per product/service group are not available. As there is identified one operating segment, the IFRS 8 segment reporting disclosures are limited to non-current assets per country and net sales by business unit and net sales by country.

Non-current assets amounting to EUR 98,000 (2016: EUR 125,000) 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)	2017	2016
Test Operations	4,275	3,727
Supply Chain Management (SCM)	2,448	2,077
Failure & Technological Analysis	1,787	1,494
Test Engineering	689	471
Qualification & Reliability Investigation	2,928	2,696
Total	**12,127**	**10,465**

Net sales by country

(x EUR 1,000)	2017	2016
Germany	6,139	4,614
Rest of Europe	5,154	5,026
Asia	518	503
Rest of the world	316	322
Total	**12,127**	**10,465**

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 company makes limited use of government grants. In 2017 approximately EUR 341,000 (2016: EUR 145,000) have been recognised in the sales which concerns two German government grants. These grants 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)	2017	2016
Change in work in process capitalised	129	162
Cost of raw materials and consumables	-2,099	-2,012
Total	**-1,970**	**-1,850**

3. Personnel expenses

(x EUR 1,000)	2017	2016
Salaries	5,043	4,945
Social securities	961	943
Share options	-1	13
Pension charges	102	115
Total	**6,105**	**6,016**

In 2017, capitalized internal hours are deducted from salaries amounting to EUR 113,000 (2016: EUR 265,000).

The professional categories of the employees are as follows:

Category	2017	2016
Business units	63	62
Management and administrative	15	15
Sales and support	13	14
Total average number of employees	91	91

The average number of persons employed by the Group in 2017 on a full-time basis was 91 (2016: 91). In 2017 an average of 3 persons are employed in the Netherlands on a full-time basis (2016:3).

At year-end 2017, the Group employed 91 persons (2016: 94).

4. Other operating expenses

(x EUR 1,000)	2017	2016
Housing and equipment costs	1,430	1,213
Selling and administrative expenses	1,273	1,696
Total	**2,703**	**2,909**

Lease expenses included in other operating expenses amounts in 2017 consist of lease expenses for equipment and vehicles amounting to EUR 520,000 and rental costs of buildings amounting to EUR 226,000.

Auditor fees

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

	2017			2016		
(x EUR 1,000)	Baker Tilly Berk NV	Other Baker Tilly network	Total	Baker Tilly Berk NV	Other Baker Tilly network	Total
Audit of annual accounts	36	43	79	52	43	95
Other assurance services	-	-	-	-	-	-
Non audit	-	-	-	-	-	-
Total	**36**	**43**	**79**	**52**	**43**	**95**

5. Termination benefit costs

(x EUR 1,000)	2017	2016
Termination benefit costs	400	-
Total	**400**	**-**

On 29 December 2017, the company announced that Mr. Ph.M.G. Nijenhuis stepped down as advisor to the company as of 31 December 2017. All outstanding financial obligations to Mr. Ph.M.G. Nijenhuis have been approved by mutual agreement. The termination benefits, totalling EUR 400,000 gross, will be paid to Mr. Ph.M.G. Nijenhuis in two instalments, the first in January 2018 and the second latest in January 2019.

6. Depreciation and amortisation

(x EUR 1,000)	2017	2016
Intangible assets	45	18
Land and buildings	116	116
Machinery and equipment	521	536
Other property, plant and equipment	336	359
Total	**1,018**	**1,029**

7. Financial expenses

(x EUR 1,000)	2017	2016
Interest	233	220
Interest accrued	25	28
Total	**258**	**248**

(x EUR 1,000)	2017	2016
Interest expenses:		
- bond loan	191	188
- other loans	57	45
- other financial expenses /income (-)	10	15
Total	**258**	**248**

(x EUR 1,000)	2017	2016
Interest paid:		
- bond loan	150	150
- other loans	-	-
- other financial expenses /income (-)	38	15
Total	**188**	**165**

The interest expenses 2017 include amortisation costs amounting to EUR 64,000 (2016: EUR 55,000), which relate to discount and bond issuance cost of the bond loan and 2016 loan.

8. Taxes

(x EUR 1,000)	2017	2016
Recognition of deferred tax assets carried forward	260	-24
Changes in deferred tax liabilities	23	33
Taxes in Consolidated Statement of Profit and Loss	**283**	**9**

Income taxes paid in 2017 is EUR 0 (2016: EUR 0).

As the major part of the activities is in Germany, the Group uses the German domestic tax rates of 27.5% (2016: 27.5%) in the reconciliation of the effective tax rate below:

(x EUR 1,000)	2017	2016
Profit (loss) before taxes	-44	-1,587
Taxes based on the weighted average applicable rate	12	436
Unrecognised deferred tax assets carried forward	248	-460
Changes in deferred tax liabilities	25	95
Capitalisation of deferred tax liabilities	-2	-62
Taxes in Consolidated Statement of Profit and Loss	**283**	**9**

9. Property, plant and equipment

(x EUR 1,000)	Land and buildings at fair value	Machinery and equipment	Others	Total
1 January 2016				
Cost or valuation	4,631	24,220	3,878	32,729
Accumulated depreciation	-1,631	-23,349	-3,017	-27,997
Carrying amount				
1 January 2016	**3,000**	**871**	**861**	**4,732**
Additions	8	1,501	81	1,590
Disposals	-19	-	-9	-28
Depreciation charge	-116	-536	-359	-1,011
Carrying amount				
31 December 2016	**2,873**	**1,836**	**574**	**5,283**
31 December 2016				
Cost or valuation	4,620	25,721	3,950	34,291
Accumulated depreciation	-1,747	-23,885	-3,376	-29,008
Carrying amount				
31 December 2016	**2,873**	**1,836**	**574**	**5,283**
1 January 2017				
Cost or valuation	4,620	25,721	3,950	34,291
Accumulated depreciation	-1,747	-23,885	-3,376	-29,008
Carrying amount				
1 January 2017	**2,873**	**1,836**	**574**	**5,283**
Additions	2	1,111	15	1,128
Disposals	-	-1	-	-1
Revaluation	586	-	-	586
Depreciation charge	-116	-521	-336	-973
Carrying amount				
31 December 2017	**3,345**	**2,425**	**253**	**6,023**
31 December 2017				
Cost or valuation	5,208	26,831	3,965	36,004
Accumulated depreciation	-1,863	-24,406	-3,712	-29,981
Carrying amount				
31 December 2017	**3,345**	**2,425**	**253**	**6,023**
Useful economic life in years	20	2-10	4-10	

Land and buildings at historical cost

(x EUR 1,000)	2017	2016
Initial costs land and buildings	4,528	4,528
Accumulated depreciation	-4,237	-4,223
Net book amount	**291**	**305**

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	15,048	50	752,400
Unbuilt land	6,256	50	312,800
Total land	21,304		1,065,200

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 build 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 2017 (2016: zero).

Assets under construction

Assets under construction are included in the category ‘others’. As at December 31, 2017, assets are under construction with a value of EUR 120,000 (2016: zero).

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. For the lenders of the 2016 loan a mortgage cover on land and buildings amounting to EUR 500,000 and a right of pledge on machinery and equipment amounting to EUR 250,000 is provided. The right of pledge on machinery and equipment expires as per 31 December 2018 at the latest.

Lease assets

The company leases production equipment and other assets under a number of finance lease agreements. Some leases provide the company with the option to purchase the assets at a beneficial price. The lease assets secures lease obligations.

10. Intangible assets

(x EUR 1,000)	Goodwill	Customer relations	Development expenditure	Total
Cost				
Balance at 1 January 2016	**1,741**	**140**	**435**	**2,316**
Investments	-	-	289	289
Disinvestments	-	-	-46	-46
Balance at 31 December 2016	**1,741**	**140**	**678**	**2,559**
Accumulated amortisation				
Balance at 1 January 2016	**-**	**140**	**-**	**140**
Amortisation	-		18	18
Balance at 31 December 2016	**-**	**140**	**18**	**158**
Carrying amount				
Balance at 1 January 2016	**1,741**	**-**	**435**	**2,176**
Balance at 31 December 2016	**1,741**	**-**	**660**	**2,401**

(x EUR 1,000)	Goodwill	Customer relations	Development expenditure	Total
Cost				
Balance at 1 January 2017	**1,741**	**140**	**678**	**2,559**
Investments	-	18	113	131
Disinvestments	-	-	-59	-59
Balance at 31 December 2017	**1,741**	**158**	**732**	**2,631**
Accumulated amortisation				
Balance at 1 January 2017	**-**	**140**	**18**	**158**

Amortisation	-		45	45
Balance at 31 December 2017	**-**	**140**	**63**	**203**
Carrying amount				
Balance at 1 January 2017	**1,741**	**-**	**660**	**2,401**
Balance at 31 December 2017	**1,741**	**18**	**669**	**2,428**

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 12.76% (2016: 12.86%).

The discounting rate applied in accordance with IAS 36.55 corresponds to a WACC pre-tax of 17.61% (2016: 17.73%).

The following data have been used for the WACC calculation:

WACC post tax	12.76%
Risk free rate	1.30%
Beta unlevered	1.14
Beta levered	1.14
Market risk premium	6.0%
Company specific size premium	6.0%
Spread	1.3%
Tax rate	27.5%
Cost of debt (post tax)	5.80%
Equity to Enterprise Value	92.85%
Debt to Enterprise Value	7.15%

The recoverable amount for 2017 amounts to EUR 14.8 million. The headroom in the impairment test scenario amounts to EUR 5.9 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 20.40%.

Development expenditure

In 2017, the Group invested in internally generated intangible assets amounting to EUR 113,000 (2016 EUR 290,000). 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 2017 the amortisation of development expenditure amounts to EUR 44,000 (2016 EUR 18,000). In 2017 EUR 60,000 (2016 EUR 46,000) is disinvested as the future economic benefits were no longer visible.

Amortisation is accounted for in statement of profit or loss within depreciation. Loss on disinvestments is accounted for in the statement of profit or loss within other operating expenses.

11. Deferred taxes

Deferred income 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 income taxes relate to the same tax authority. Deferred taxes comprise the following:

(x EUR 1,000)	2017	2016
Deferred income tax assets to be recovered > 12 months	1,825	1,565
Deferred income tax assets to be recovered < 12 months	-	-
Deferred income tax assets (unnetted)	**1,825**	**1,565**
Deferred tax liabilities to be recovered > 12 months	-541	-414
Deferred tax liabilities to be recovered < 12 months	-	-
Deferred income tax liabilities (unnetted)	**-541**	**-414**
Deferred tax assets (netted)	**1,284**	**1,151**

The movement in deferred tax assets is as follows:

Deferred tax assets

(x EUR 1,000)	Total capitalised carry forward losses
Balance at 1 January 2016	**1,589**
Charges for the book year	-24
Balance at 31 December 2016	**1,565**
Balance at 1 January 2017	**1,565**
Charges for the book year	260
Balance at 31 December 2017	**1,825**

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 2017, 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 18.3 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 2018-2022, 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 0.8 million as per 31 December 2017 (2016: 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 2016	Recognised in profit and loss	Recognised in other comprehensive income	31 December 2016
Re-valued land and building	729	-22	-	707
Pension obligations	-501	16	-126	-611
Lease assets & other	225	-89	-	136
Development expenditure	120	62	-	182
Total	573	-33	-126	414

	1 January 2017	Recognised in profit and loss	Recognised in other comprehensive income	31 December 2017
Revalued land and building	707	-	133	840
Pension obligations	-611	48	16	-547
Lease assets & other	136	-72	-	64
Development expenditure	182	2	-	184
Total	414	-22	149	541

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. In 2017, no deferred tax liability is formed on the remeasurement of the Plentum assets of EUR 346,000 included in the other comprehensive income movements of the pension obligations (note 20), because the Group does not expect a difference between the HGB and IFRS valuation. All deferred tax liabilities are within the same jurisdiction.

12. Financial assets

(x EUR 1,000)	2017	2016
Cost		
Balance at 1 January	3,001	3,002
Net investments	-4	-1
Reclassification Plentum bonds	-2,494	-
Balance at 31 December	**503**	**3,001**

The financial assets comprise life insurance policies in total EUR 503,000 (2016: EUR 488,000), 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.

The decrease in financial assets in 2017 is the result of the reclassification of Plentum bonds to the plan assets within the defined benefit obligation.
In 2016, the financial assets comprised a UBS deposit for bonds in the Plentum Luxembourg fund. In 2016 and prior years, these bonds were not netted with the pension liabilities. The reason for this was the fair value of these bonds could not be reliably substantiated, making these bonds not qualified as fair value plan assets under IAS 19. As stated in the annual report 2016, the Group would discuss this in more detail with Plentum Luxemburg in 2017 in order to compose a plan to solve this.
In the past months, the Plentum Luxembourg fund provided more evidence to support a fair value calculation of these bonds under IAS 19. Therefore, in 2017 these Plentum bonds are netted with the pension liabilities. For more details reference is made to note 20 'Defined benefit obligation'.

13. Inventories

(x EUR 1,000)	2017	2016
Raw materials and consumables	111	133
Work in progress	470	341
Total	**581**	**474**

No expenses are included in the consolidated statement of profit or loss in 2017 (2016: zero) with respect to write-downs of inventory to lower net realisable value.

14. Trade and other receivables

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

(x EUR 1,000)	2017	2016
Not overdue	1,126	1,140
< 30 days overdue	416	291
> 30 days and < 60 days overdue	44	22
> 60 days overdue	18	106
Provisions for bad debt	-15	-117
Trade receivables	1,589	1,442

Other receivables	391	270
Total	**1,980**	**1,712**

Provisions for bad debts

(x EUR 1,000)	2017	2016
Balance at 1 January	-117	-99
Release/addition to the provisions for bad debt	26	-20
Write-off bad debts	76	2
Balance at 31 December	**-15**	**-117**

15. Cash and cash equivalents

(x EUR 1,000)	2017	2016
Cash at bank and on hand	617	689
Total	**617**	**689**

16. Share capital

Authorised share capital

At 31 December 2017 the authorised share capital comprised 80,000,000 ordinary shares (2016: 80,000,000). The shares have a nominal value of EUR 0.11 each.

In 2017, the movement of the ordinary shares issuances are as follows:

Date of Issuance	Originating from	Nominal Value	Number of Shares	Share Capital	Share Premium
12/01/2017	Warrants III	0.11	31,063	3,417	3,106
27/01/2017	Equity Line	0.11	264,196	29,062	17,813
27/01/2017	Equity Line	0.11	264,196	29,062	17,813
27/01/2017	Equity Line	0.11	221,417	24,356	22,519
01/03/2017	Equity Line	0.11	221,417	24,356	22,519
27/03/2017	Equity Line	0.11	284,936	31,343	15,532
27/03/2017	Equity Line	0.11	284,936	31,343	15,532
10/04/2017	Warrants III	0.11	8,972	987	897
28/04/2017	Equity Line	0.11	271,318	29,845	17,030
02/05/2017	Equity Line	0.11	271,318	29,845	17,030
24/05/2017	Equity Line	0.11	245,195	26,971	19,904
29/05/2017	Equity Line	0.11	245,195	26,971	19,904
19/06/2017	Options	0.11	115,000	12,650	8,510
19/06/2017	Options	0.11	40,000	4,400	2,960
19/06/2017	Options	0.11	115,000	12,650	8,510
13/07/2017	Warrants III	0.11	127,224	13,995	12,722
11/10/2017	Warrants III	0.11	263,478	28,983	26,348
Total			**3,274,861**	**360,235**	**248,650**

As at 31 December 2017, 66,716,045 ordinary shares are issued (2016: 63,441,184). The company holds 4,100 ordinary shares (2016: 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 (2015: < 0.01%).

As at 31 December 2017, RoodMicrotec N.V. has 6,629,896 warrants Series III (2016: 7,060,633). 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 is 31 December 2018.

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.

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.

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 annual compensation does not have to be paid, in case RoodMicrotec GmbH makes losses. In case RoodMicrotec is profitable, an annual compensation of 11.70% may be paid, but this is at the discretion of the company.

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 2017, the total unpaid compensation amounts to zero.

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 deduct the entire result (loss) amounting to EUR 390,000 from 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)	2017	2016
Net result attributable to equity holders of the company	-44	-1,578
Weighted average number of ordinary shares in issue (in thousands)	65,617	58,783
Basic earnings per share (x EUR 1)	**-0.00**	**-0.02**

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)	2017	2016
Net result attributable to equity holders of the company (x EUR 1,000)	-44	-1,578
Weighted average number of ordinary shares in issue	65,617	58,783
Adjustments for:		
- Warrants (in the money)	6,630	7,061
- Share options (in the money)	1,928	1,828
Weighted average number of ordinary shares for diluted earnings per share	74,175	67,672
Diluted earnings per share (x EUR 1)	**-0.00**	**-0.02**

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 equal to 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 employer 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:

- 49% volatility, 60 days
- Fair value of share price at grant date: 0.207
- 1% dividend yield
- 4% annual risk-free interest rate
- Expected option life of 3 years

The value of the accrued options in 2017 was EUR 0 (2016: EUR 13,000).

The overview of the number of option rights outstanding as at 31 December 2017 is as follows:

Related to financial year	Options 31-12-17	Granted in 2017	Exercised in 2017	Options Cumulated	Exercise price in EUR (average)	First date of exercise
Mr. Ph.M.G. Nijenhuis						
2010	190,000	-	-	190,000	0.11	30 Dec 11
2011	370,000	-	-	560,000	0.11	26 Apr 12
2012	333,440	-	-	893,440	0.11	13 Jun 13
2013	375,000	-	-	1,268,440	0.11	13 Jun 14
2014	320,000	-	-	1,588,440	0.11	01 Oct 15
2015	240,000	-	-	1,828,440	0.11	25 Oct 16
2016	-	100,000	-	1,928,440	0.11	26 Apr 17
Total	**1,828,440**	**100,000**	**-**	**1,928,440**	**0.11**	

Regarding the options for the Mr. Ph.M.G. Nijenhuis, 100,000 options had been granted and approved for the first half of 2016 by the supervisory board as of 26 April 2017.

Mr. O.M. Sallenhag and Mr. R. Pusch have waived their options for 2017 due to the financial situation of the company.

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)	2017	2016
Secured bond loan	2,381	2,340
Secured loan	639	692
Loans from credit institutions	48	85
Total loans and borrowings	3,068	3,117
Less: current portion of long-term loans	-188	-113
Total non-current loans and borrowings	**2,880**	**3,004**

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	2,381	-	2,381	-	2,381	-
Secured loan	639	150	489	489	-	-
Loans from credit institutions	48	38	10	10	-	-
Total interest-bearing loans and borrowings	**3,068**	**188**	**2,880**	**499**	**2,381**	**-**
Trade and other payables	2,480	2.480	-	-	-	-
Current income tax liabilities	58	58	-	-	-	-

Total other current liabilities	**2,538**	**2,538**	**-**	**-**	**-**	**-**
Total	**5,606**	**2,726**	**2,880**	**499**	**2,381**	**-**

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

Interest expenses repayment schedule as per 31 December 2017

(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	494	195	299	299	-	-
Secured loan	50	28	22	22	-	-
Total	**544**	**223**	**321**	**321**	-	**-**

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 2017 related to the discount and bond issuance cost amounted to EUR 41,000 (2016: EUR 38,000). As at 31 December 2017, the secured bond loan amounted to EUR 2,381,000 (2016: EUR 2,340,000).

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%. The loan will be repaid in 4 installments in March of each year (2017: 10%, 2018: 20%, 2019: 30%, 2020: 40%).

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:

	2017	2016
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 13 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 2017 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:

	2017	2016
Discount rate at 31 December	1.93%	1.72%
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 2005 G	RT Heubeck 2005 G
Disability	RT Heubeck 2005 G	RT Heubeck 2005 G
Marriage	RT Heubeck 2005 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)	2017	2016
Defined benefit obligations and plan assets		
Defined benefit obligations at 1 January	6,563	6,172
Current service costs	16	27
Interest costs	108	146
Actuarial gains (-) or losses	-23	512
Pension payments	-318	-294
Defined benefit obligations at 31 December	**6,346**	**6,563**
Fair value of plan assets at 1 January	1,316	1,308
Reclassification Plentum plan assets	2,494	-
Remeasurement recognised in OCI	-346	-
Expected return on plan assets	22	31
Actuarial gains or losses (-)	37	53
Benefits paid	-76	-76
Fair value of plan assets at 31 December	**3,447**	**1,316**
Net defined benefit obligations at 31 December	**2,899**	**5,247**

In 2017, the plan assets increased by EUR 2.5 million due to the reclassification of Plentum plan assets from financial assets. In 2016 and prior years, the UBS deposit for bonds in the Plentum Luxembourg fund was not netted with the pension obligation, but presented as financial assets. The reason for this was the fair value of these bonds could not be reliably substantiated, making these bonds not qualified as fair value plan assets under IAS 19. In the past months, the Plentum Luxembourg fund provided more evidence to support a fair value calculation of these bonds under IAS 19. Therefore, in 2017 these Plentum bonds are netted with the pension liabilities. We refer to note 12 'Financial Assets'.
The information received from the Plentum Luxembourg fund showed the net asset value of the fund was below the nominal value of the debt as per 31 December 2016. Therefore, the Group performed further analysis based on unobservable inputs (level 3), because relevant observable inputs are not available for the fund. 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 0.3 million, which is recognized in 2017 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 2.1 million as per 31 December 2017.

In addition, plan assets are composed of life insurance policies amounting to EUR 1.3 million (2016: EUR 1.3 million), which are held at insurance companies. 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 -37,000 (2016: EUR -27,000). Not all insurance policies qualify as plan assets defined in IAS 19 'employee benefits'. The fair value of the insurance policies that do not qualify as plan assets have been presented as financial assets. As per 31 December 2017 in total EUR 0.5 million have been presented as financial assets (2016: EUR 0.5 million). We refer to note 12 'Financial assets'. 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.

Amounts recognised in profit or loss related to the Group's defined benefit plans are as follows:

(x EUR 1,000)

	2017	2016
Current service costs	16	27
Net interest expenses	86	115
Expenses (income)recognised in profit and loss	**102**	**142**

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

(x EUR 1,000)

	2017	2016
Effect of changes in financial assumptions	-142	478
Effect of experience adjustments	119	34
Return on plan assets or reimbursement rights excl. interest income	-37	-53
Remeasurement Plentum plan assets	-346	-
Expenses (income) recognised in OCI	**-406**	**459**

A quantitative sensitivity analysis for the discount rate as at 31 December 2017 is as shown below:

Assumption	**Discount rate**	
Sensitivity level	1% increase	1% decrease
Impact on defined benefit obligation in EUR	-610	732

The sensitivity analysis are 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)	2017	2016
Warranty provisions	104	52
Other provisions	40	20
Total	**144**	**72**

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 statement of profit or loss in the period in which they arose.

22. Trade and other payables

(x EUR 1,000)	2017	2016
Suppliers and trade creditors	960	1,168
Other payables	1,520	991
Total	**2,480**	**2,159**

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

23. Off-balance sheet commitments

Operating leases as lessee

(x EUR 1,000)	2017	2016
Less than one year	380	466
Between one and five years	228	500
More than five years	-	-
Total	**608**	**966**

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 2017 were EUR 520,000 (2016: EUR 521,000). 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. The total rental commitment is EUR 226,000 (2016: EUR 377,000).

Capital commitments

As at 31 December 2017 the Group did not enter into a contract to purchase property, plant and equipment (2016: 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 “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	
(x EUR 1,000)	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Mr. Ph.M.G. Nijenhuis[1]	-	89	-	-	-	7	-	13	-	109
Mr. O.M. Sallenhag[2]	120	68	-	-	-	-	-	-	120	68
Mr. R. Pusch[2]	120	68	-	-	-	-	-	-	120	68
Total	**240**	**225**	**-**	**0**	**-**	**7**	**-**	**13**	**240**	**245**

[1]until 6 June 2016
[2]from 7 June 2016

The remuneration of the board of management is determined by the supervisory board. In addition to the salary, the Group contributes to a post-employment defined benefit plan on behalf of the board of management.

Mr. O.M. Sallenhag and Mr. R. Pusch have waived their options for 2017 due to the financial situation of the company.

At the end of 2017 Mr. O.M. Sallenhag holds 365,000 shares and 22,916 warrants Series III 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)	2017	2016
Mr. V.G. Tee	13	13
Mr. H.J. Bartelink	10	
Mr. J.B. Tuik	10	
Total	**33**	**13**

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 2017, the members of the supervisory board did not hold any options on shares in the company.

At the end of 2017, the members of the supervisory board did not hold any shares in the company.

Other related party transactions

In 2017, 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 2018, the following events after balance sheet date occurred:

- Exercise of warrants Series III that resulted in an increase of 2,303,963 shares (exercise price: EUR 0.21) on 11 January 2018
- On 1 February 2018, 1,530,785 shares were issued at EUR 0.33 and 1,530,785 non listed warrants were issued with strike price of EUR 0,42 and 5 year exercise period
- Exercise of options that resulted in an increase of 110,000 shares (exercise price: EUR 0.11) on 14 February 2018
- Exercise of options that resulted in an increase of 300,000 shares (exercise price: EUR 0.11) on 27 February 2018
- Exercise of options that resulted in an increase of 1,150,000 shares (exercise price: EUR 0.11) on 2 March 2018
- Exercise of options that resulted in an increase of 468,440 shares (exercise price: EUR 0.11) on 07 March 2018
- Sale of 6.524 square meters of land to a neighbor company, EUR 300.000 will be used to pay back part of the 2016 bond loan.

C. COMPANY FINANCIAL STATEMENTS

Company Statement of Financial Position

(x EUR 1,000)	Notes	2017	2016
ASSETS			
Property, plant and equipment		98	125
Investments in subsidiaries	1	-	-
Loans to group companies	2	3,755	5,898
Non-current assets		**3,853**	**6,023**
Loan to group companies	2	4,232	686
Trade and other receivables		53	50
Cash and cash equivalents		165	504
Current assets		**4,450**	**1,240**
Total assets		**8,303**	**7,263**
EQUITY AND LIABILITIES			
Issued share capital		7,339	6,979
Share premium		19,906	19,659
Revaluation reserve		2,216	1,763
Retained earnings		-27,144	-25,264
Result for the year		-44	-1,578
Equity, attributable to equity holders	**3**	**2,273**	**1,559**
Perpetuals		2,494	2,494
Total risk-bearing capital	**3**	**4,767**	**4,053**
Loans and borrowings		2,878	2,966
Non-current liabilities		**2,878**	**2,966**
Loans and borrowings		150	75
Trade and other payables		508	169
Current income tax liabilities		-	-
Current liabilities		**658**	**244**
Total equity and liabilities		**8,303**	**7,263**

The figures following the various items refer to the notes on pages 100 to 105.

Company Statement of Profit or Loss

(x EUR 1,000)	Notes	2017	2016
Net sales	4	474	509
Gross profit		**474**	**509**
Personnel expenses	5	-290	-244
Other operating expenses	6	-492	-554
Termination benefit costs	7	-400	
Total operating expenses		**-1,182**	**-798**
EBITDA		**-708**	**-289**
Depreciation and amortisation	8	-26	-26
EBIT		**-734**	**-315**
Financial income or expenses (-)	9	301	295
Profit (loss) before taxes		**-433**	**-20**
Taxes	10	-	-
Parent company income or loss (-)		**-433**	**-20**
Net profit or loss (-) from group companies	11	389	-1,558
Net profit (loss)		**-44**	**-1,578**

The figures following the various items refer to the notes on pages 100 to 105.

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)		2017		2016
Balance at 1 January		-3,021		-1,130
Profit of group companies		389		-1,558
Remeasurement of defined benefit obligations		60		-459
Remeasurement of defined benefit obligations – DTL		-16		126
Remeasurement return on plan assets		-346		-
Revaluation of land and building		586		-
Revaluation of land and building – DTL		-133		-
		- 2,481		**- 3,021**
Provision subsidiaries				
Provision at 1 January	3,021		1.130	
Changes	-540		1.891	
Provision at 31 December		**2,481**		**3,021**
Balance at 31 December		**-**		**-**

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)		2017		2016
Balance at 1 January		9,608		4,358
Addition		860		5,250
Balance at 31 December		**10,468**		**9,608**
Provision subsidiaries				
Provision at 1 January	-3,021		-1,130	
Changes	540		-1,891	
Provision at 31 December		**-2,481**		**-3,021**
Current portion		-4,232		-216
Loans at 31 December		**3,755**		**6,371**

For the negative equity of the German subsidiaries, a provision on the non-current loans to group companies is recognised. This provision amounts EUR 2,481,000 as per 31 December 2017 (31 December 2016: EUR 3,021,000). RoodMicrotec N.V. is liable for these subsidiaries.

3. Equity attributable to equity holders

(x EUR 1,000)	Issued share capital	Share premium	Revaluation reserve	Retained earnings	Result for the year	Total equity, share holders	Perpetuals	Total risk-bearing capital
Balance at 1 January 2016	**5,986**	**19,009**	**1,822**	**-24,990**	**-**	**1,827**	**2,494**	**4,321**
Issue ordinary shares	993	637	-	-	-	1,630	-	1,630
Valuation options granted		13	-	-	-	13	-	13
Loss on participation			-	-	-	-	-	-
Transactions with equity holders	**6,979**	**19,659**	**1,822**	**-24,990**	**-**	**3,470**	**2,494**	**5,964**
Profit and Loss	-	-	-	-	-1,578	-1,578	-	-1578
Other comprehensive income								
Remeasurement of defined benefit obligation	-	-	-	-333	-	-333	-	-333
Revaluation of land and buildings	-	-	-59	59	-	-	-	-
Total OCI for the year	**-**	**-**	**-59**	**-274**	**-1,578**	**-1,911**	**-**	**-1,911**
Balance at 31 December 2016	**6,979**	**19,659**	**1,763**	**-25,264**	**-1,578**	**1,559**	**2,494**	**4,053**

(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
Balance at 1 January 2017	**6,979**	**19,659**	**1,763**	**-26,842**	**-**	**1,559**	**2,494**	**4,053**
Issue ordinary shares	360	248	-	-	-	608	-	608
Valuation options granted		-1	-	-	-	-1	-	-1
Loss on participation			-	-	-	-	-	-
Transactions with equity holders	**7,339**	**19,906**	**1,763**	**-26,842**	**-**	**2,166**	**2,494**	**4,660**
Profit and Loss	-	-	-	-	-44	-44	-	-44
Other comprehensive income								
Remeasurement of defined benefit obligation	-	-	-	44	-	44	-	44
Remeasurement return on plan assets	-	-	-	-346	-	-346	-	-346
Revaluation of land and buildings	-	-	453	-	-	453	-	453
Total OCI for the year	**-**	**-**	**453**	**-302**	**-44**	**107**	**-**	**107**
Balance at 31 December 2017	**7,339**	**19,906**	**2,216**	**-27,144**	**-44**	**2,273**	**2,494**	**4,767**

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)	2017	2016
Balance as at 1 January	**2,242**	**2,137**
Revaluation of land and buildings	484	-81
Revaluation of land and buildings - DTL	-133	22
Capitalised development expenditure	9	235
Capitalised development expenditure – DTL	-2	-61
Balance as at 31 December	**2,600**	**2,242**

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)	2017	2016
Salaries	268	213
Social securities	23	18
Share options	-1	13
Pension charges	-	-
Total	**290**	**244**

6. Other operating expenses

(x EUR 1,000)	2017	2016
Housing and equipment costs	30	29
Selling and administrative expenses	462	525
Total	**492**	**554**

7. Termination benefit costs

(x EUR 1,000)	2017	2016
Termination benefit costs	400	-
Total	**400**	**-**

On 29 December 2017, the company announced that Mr. Ph.M.G. Nijenhuis stepped down as advisor to the company as of 31 December 2017. All outstanding financial obligations to Mr. Ph.M.G. Nijenhuis have been approved by mutual agreement. The termination benefits, totalling EUR 400,000 gross, will be paid to Mr. Ph.M.G. Nijenhuis in two instalments, the first in January 2018 and the second latest in January 2019.

8. Depreciation and amortisation

(x EUR 1,000)	2017	2016
Machinery and equipment	22	23
Other fixed assets	4	3
Total	**26**	**26**

9. Financial income or expenses

(x EUR 1,000)	2017	2016
Interest income / expenses (-)	276	267
Interest accrued income / expenses (-)	25	28
Total	**301**	**295**

(x EUR 1,000)	2017	2016
Interest income:		
- intercompany loan	547	525
- other financial income	-	1
Interest expenses:		
- bond loan	-189	-186
- other loans	-57	-45
Total	**301**	**295**

The interest expenses 2017 include amortisation costs amounting to EUR 64,000 (2016: EUR 55,000), which relate to discount and bond issuance cost of the bond loan and 2016 loan.

10. Taxes

(x EUR 1,000)	2017	2016
Profit (loss) before taxes	-433	-20
Taxes based on the weighted average applicable rate	-	-
Taxes in Company Statement of Profit and Loss	**-**	**-**

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

(x EUR 1,000)	2017	2016
Net profit (loss) from affiliated companies:		
- RoodMicrotec Dresden	-40	-43
- RoodMicrotec GmbH	429	-1,515
Total	**389**	**-1,558**

Employees

RoodMicrotec N.V. has an average of 3 employees in 2017 (2016:3)

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, 28th March 2018

Board of management	**Supervisory board**
O.M. Sallenhag, CEO	V.G. Tee, Chairman
R. Pusch, COO	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 2017 included in the Annual Report 2017

Our opinion

We have audited the Annual Accounts 2017 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 December 31, 2017, and of its result and its cash flows for 2017 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 December 31, 2017, and of its result for 2017 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 December 31, 2017;
2. The following statements for 2017:
   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 December 31, 2017;
5. The company statement of profit or loss for 2017; and
6. The notes comprising a summary of the significant accounting policies and other explanatory information.

Material uncertainty related to going concern

We draw attention to the going concern paragraph in the "notes to the consolidated financial statements" on page 64 of the Annual Accounts which indicates that the company depends on a future positive result development. These conditions indicate the existence of a material uncertainty which may cast significant doubt about the company's ability to continue as a going concern. Our opinion is not modified in respect of this matter.

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).

Materiality

Based on our professional judgement we determined the materiality for the financial statements as a whole at EUR 180.000. As the company is in a loss making situation 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 9.000, 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. This year 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 valuation of the plan assets and the classification of the 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.

Valuation and impairment of financial fixed assets

We consider the valuation and impairment of the financial fixes 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 EUR 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 due to the fact that the mezzanine contracts state that compensation payment is conditional and depending on the result of the issuing company.

As per December 31, 2016 there was no information available to determine the fair value of the portfolio of the Plentum Opportunity Fund VI. Consequently we were unable to obtain sufficient and/or appropriate audit evidence to support the fair value of these assets last year. This was expressed in our audit opinion by a disclaimer of opinion on the financial assets. Based on the fact that no fair value could be determined it was concluded that financial assets

held did not meet the criteria of plan assets as defined in IAS 19 paragraph 8 and therefore could not be netted with the pension obligation.

In 2017 RoodMicrotec obtained underlying documentation regarding the value of the mezzanine capital of the companies that are participating in the fund as per December 31, 2016. Based on the total value of the fund and RoodMicrotec's share in this fund resulted in a triggering event for 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.

For the valuation techniques applied and related disclosures we refer to note 20 in the Annual Report.

Due to the fact that the company was able to obtain additional information regarding the underlying assets in the fund a fair value calculation could be made. This means that the assets can be treated as pension assets in accordance with IAS 19 and consequently can be netted with the employee benefit obligation. Based on the above there is no reason for a disclaimer in our opinion as per December 31, 2017 any longer.

Deferred taxes

We identified the recoverability of deferred tax assets as a key audit matter due to the recognition of these assets involving judgement by management as to the likelihood of the realisation of these deferred tax assets, which is based on a number of factors, including whether there will be sufficient taxable profits in future periods to support recognition.

The amount of capitalized deferred tax assets of RoodMicrotec amounts to EUR 1.8 million as per December 31, 2017. Deferred income 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 income taxes relate to the same tax authority. Consequently the net position of the deferred tax asset amounts to EUR 1.3 million as per the end of 2017.

As per year end 2017, RoodMicrotec GmbH had approximately EUR 20.8 million tax losses which are indefinite in time. All of these tax losses can be carried forward and be compensated with future payable taxes without any time limitation.

The recognized deferred tax asset is based on the company's (taxable) profits shown in its internal business plan, made on a five-year rolling forecast. As stated in IAS 12 paragraph 35, there should be convincing evidence that the cause of the tax losses will probably not repeat. In further guidance that has been written with regard to reporting under IFRS-EU which states that such convincing indications include significant new contracts, an increase in the level of orders, or the divesture of a loss making segment.

Our procedures in relation to management's assessment about the recoverability of deferred tax assets included evaluating management's assessment on the sufficiency of future taxable profits in support of the recognition of deferred tax assets by comparing management's forecasts of future profits to historical results and evaluating the assumptions used in those forecasts.

Although RoodMicrotec has a history of losses we consider managements assumption on the recognition of the deferred tax assets as reasonable. This mainly because of the significant new number of contracts the company concluded in 2015 and 2016 and the significant order portfolio which will probably lead to additional revenues and consequently profits in the coming years. This is supported by the fact that the company would have realized a profit in case the one-time expenses would not have incurred.

Valuation of goodwill and other intangible assets

The carrying value of Goodwill, Customer Relations and Development Expenditure as at December 31, 2017 is EUR 2.4 million.

In 2017, 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:

- General & Key facts;
- The Report of the Board of Management;
- The Report of the Supervisory Board;
- 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 September 29, 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 skepticism 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.

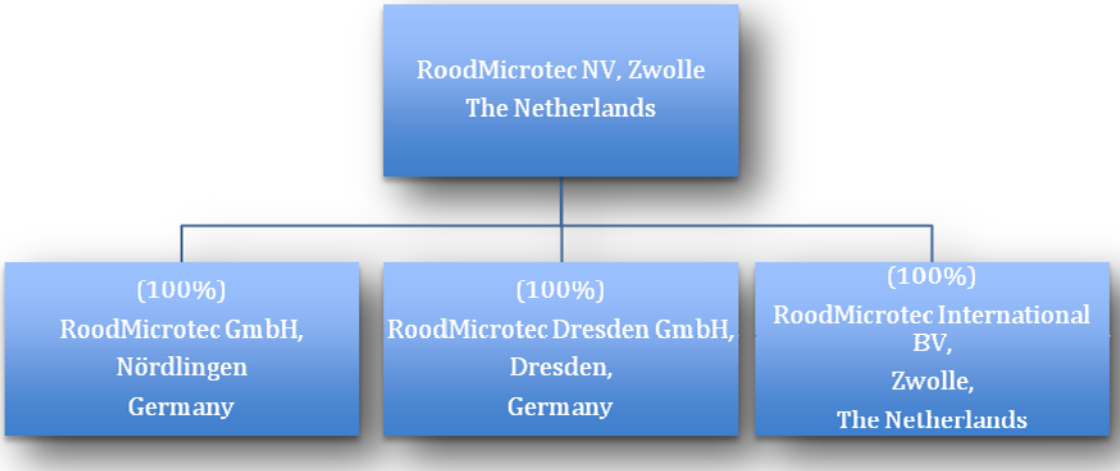
From the matters communicated with the supervisory board, we determine the key audit matters: those matters that were of most significance in the audit of the financial statements. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter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

Zwolle, March 28, 2018

Baker Tilly Berk N.V.

Signed by:
drs. G. Frühling RA

Group Structure



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Arvid Ladega, CFO (Not statutory)

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RoodMicrotec

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