





RoodMicrotec N.V. Business Report 2016

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Chamber of Commerce number 33251008

Business Report 2016

ROODMICROTEC – POWERFUL SOLUTIONS

RoodMicrotec focuses on eXtended supply chain management, offering ASIC turnkey solutions for the industrial and automotive markets. In that, it is vital to collaborate closely with design houses, suppliers, foundries, institutes and other related parties to offer the optimal solution to our customers. In this process, RoodMicrotec's eXtended supply chain management solution ensures the weakest link is as strong as possible by putting our best efforts into and feeling responsible for the whole project as well as for the different disciplines within the project. This applies to both the internal business units (supply chain management, test operation, test engineering, failure & technology analysis and qualification & reliability investigation) and to the external parties.

RoodMicrotec has further strengthened the relationship with its main customers and design house partners during 2016. Our customer base consists of major industrial and automotive companies throughout Europe. The growing role of design houses is also very important in this market since the end customers need to have someone who can realize their ideas with high reliability and within a short time schedule.

Our relationships with suppliers and institutes are also essential to realizing turnkey projects. RoodMicrotec has excellent cooperation agreements with suppliers like assembly houses and wafer foundries in Asia as well as in Europe. Institutes are important to be able to be at the forefront of technology and to have access to additional resources and ideas in the realization of turnkey projects. RoodMicrotec has agreements with many institutes in Europe and participates in a number of advanced publicly funded projects.

RoodMicrotec is well positioned to offer eXtended supply chain management turnkey solutions to the industrial and automotive markets and is convinced that this is the way to bring success to all partners and customers.



CONTENT

GENERAL

Preface by the CEO	04
Preface by the COO	05
RoodMicrotec in 2016	06
Key charts	07
Key figures	09
Main developments during 2016	10
RoodMicrotec at a glance	10
Shareholder information	14
Vision and mission, SWOT analysis, targets and strategy	16

REPORT OF THE BOARD OF MANAGEMENT

18
19
19
23
28
28
30
32
32
32
33
33
40
42

REPORT OF THE SUPERVISORY BOARD

Report of the Supervisory Board	45
Supervisory Board members	46

ANNUAL ACCOUNTS

Consolidated financial statements

OTHER INFORMATION

Group Structure	51
Addresses and personal details	51

GENERAL

PREFACE BY THE CEO

I'm very pleased and excited to be allowed to lead such an excellent organization as RoodMicrotec in the path we have set forth for the future.

The combination of a well-established company and a new direction with supply chain management for our customers makes the company well positioned for the future in the ever changing semiconductor business. In November we celebrated 30 years on the Amsterdam stock exchange by ringing the opening gong.

During 2016 we changed the management team when Philip Nijenhuis stepped down as CEO and I took over this role. At the same time Reinhard Pusch was promoted to COO handling our sales activities, supply chain management department and the very important area of funded projects. He will elaborate around these areas in the second part of this preface. In November we welcomed Arvid Ladega as our new CFO. With his vast knowledge in the financial area together with experience running small start-up companies, I'm convinced that we have found the right CFO for the future.

Two new board members, Herman Bartelink and Jeroen Tuik, were nominated and their appointment has since then been approved by an extraordinary general meeting. I'm looking forward working with the new supervisory board constellation in making the company a success.



We have also welcomed new people to our organization to speed-up the transition into a supply chain management company and have said good-bye to some long term employees that have well deserved moved into their retirement.

The growth in sales is lower than expected due to some delays in customer projects and market problems for our main customer. We however realized a 2% increase in sales and a 3% increase in gross margin, which is promising in a market that declined during 2016. The personnel and operating expenses are in line with 2016 which is according to our plans to prepare ourselves for the increase in the upcoming years. We have made significant invests in new equipment to enable us to follow the ever increasing demand of the electronic industry. This has increased the depreciation rate as well as the financing costs.

The Test Operation Business Unit prepares for the increase in orders with the new test equipment purchased in 2016. The new test system and a 12" wafer prober that joined the company's equipment arsenal are installed and fully up and running. Our Failure & Technology Analysis business very much depends on the short term needs of our customers. We have a number of new customer contacts in this important part of our business which lead to new long term contracts. Test Engineering and Qualification & Reliability Investigation saw substantial year-on-year rises in sales over the past 12 months, on the back of some large ongoing projects and the start of qualification in other big contracts. We see additional orders coming in to support qualification of standard components for the expanding automotive market.

I'm looking forward to the upcoming years and I am confident that we are on the right track to turn the company around to the leading supply chain provider in Europe.

Zwolle, 26 April 2017

Martin Sallenhag, CEO

PREFACE BY THE COO

I'm also excited and looking forward to be allowed to lead such an excellent organization as RoodMicrotec towards the future goals. The new direction that we are moving the company in and the vast know-how that the team has makes us very well prepared for the needs of our customers, especially in the supply chain management area where we see a great interest in our services.

During 2016 we changed our sales team with two new sales & marketing managers to focus on the new customers for SCM and all of our different services. The new persons bring different know-how into the company, from deep technical knowledge in the design and layout of ASICs to pure sales experience from different market areas. It is exciting for us to have new younger persons join the company bringing additional ideas how to sell our services and products. Both of the sales & marketing managers will cover Germany and Engin Eser will on top of this cover also France, Scandinavia and Eastern Europe. Alexander Jung will on top of Germany also cover Austria, Switzerland and Italy. With the present team of Dieter Schreiber who covers Germany, Austria and Benelux and Malkit Jhitta covering UK and the US we now have an excellent team to bring the company forward.



In our supply chain management unit we support our customers with a wide range of services. It ranges from design support through external partners, through package

selection, test program development and qualification to the final production with test as well as logistics. During 2016 we have moved some main projects through the development phase into the industrialisation phase and are now ready for full volume production ramp up. Some other projects have just started the development phase so we are well prepared for the future in this area. In early 2017 we have strengthened our supply chain management team to be able to support our customers with an even higher standard of services. Sönke Hundertmakrk joined as manager for the business unit and Yasemin Gülmez joined as responsible for customer project management. I'm extra delighted to be able to welcome Yasemin to this unit since she has a wide knowledge of the company coming from the communication and logistics team.

With this improved team we are well prepared to realize the challenges in supply chain management for the future.

During 2016 we have also added another publicly funded project to our portfolio. It is key for a company like RoodMicrotec to participate in these type of projects to be able to work on leading edge technology with well renowned medium and large scale companies in this area. The institutes also bring new and exciting ideas to these projects. The new project is a pan-European project called Europat-MASIP and it covers MEMS sensors, image sensors and RF solutions. Together with the already running projects, ParsiFAL and ScaleIT@Shopfloor we are now participating in very exciting projects that will take the European technology base to a new level.

Based on the successful management of the different existing and new project we have won during 2016 we are well prepared for the upcoming challenges of the market in 2017 and onwards.

Zwolle, 26 April 2017

Reinhard Pusch, COO

ROODMICROTEC IN 2016













KEY CHARTS

Revenue by Markets 2016Automotive4,01338%Industrial/Healthcare4,70045%HiRel/Space7798%Others9739%





R	evenue by Business Unit	s 2016	
	Test Operation	3,727	36%
	Q&R	2,696	26%
	Failure Analysis	1,494	14%
	Test Engineering	471	4%
	SCM	2,077	20%



С	osts by Category 2016	
	Personnel costs	50%
	Cost of sales	15%
	Other Operating expenses	24%
	Depreciation & Amortisation	9%
	Financial Expenses	2%
	(Others) Taxation	0%

Revenue by Country 2016	
Germany	46%
Switzerland	19%
Benelux	12%
Austria	9%
– UK	5%
Eastern/Southern Europe	4%
📃 China, India & Rest of Asia	3%
Scandinavia	1%
USA	1%









KEY FIGURES

31 December 2016

(x EUR 1,000)

	2016	2015	2014	2013	2012
Result					
Net sales	10,465	10,250	9,971	11,180	11,971
Gross margin	8,615	8,384	8,184	9,021	9,688
EBITDA	-310	-378	-722	870	703
EBIT (operating result)	-1,339	-1,308	-1,514	-13	-181
EBT	-1,587	-1,495	-1,675	-243	-507
Cash flow (net result and depreciation)	-549	-575	-901	599	603
Cash flow from operating activities	-452	-832	-246	17	899
Net result	-1,578	-1,505	-1,693	-284	-281
Capital. Debt & Liquidity Ratios					
Total assets	14.711	13.531	13.475	13.941	12.915
Group equity	4.053	4.321	3,564	5,396	5,457
Net debt	2,428	1.675	2,159	2,113	3.216
Capital (net debt + equity)	6,481	5,996	, 5,723	, 7,509	8,173
Gearing ratio (net debt/ capital)	37%	28%	38%	28%	37%
Solvency (group equity / total liabilities)	28%	32%	26%	39%	42%
Debt ratio (net debt / EBITDA)	-7.83	-4.43	-2.99	2.43	4.57
Net working capital	540	560	-125	-1.331	-1.422
Working capital ratio	0.97	1.27	0.95	0.68	0.63
Assets Tangible and intangible fixed assets	7,684	6,908	7,112	7,187	8,102
Investments in (in)tangible fixed assets	1,879	726	499	535	1,475
Depreciation of (in)tangible fixed assets	1,029	930	792	883	884
Data per share (x EUR 1)					
Group equity	0.06	0.08	0.08	0.14	0.15
Operating results	-0.00	-0.02	-0.03	0.00	-0.01
Cash flow	-0.01	-0.02	-0.00	0.00	0.03
Net result	-0.02	-0.03	-0.04	-0.01	-0.01
Share price: year end	0.20	0.27	0.25	0.16	0.15
Share price: highest	0.28	0.30	0.35	0.18	0.23
Share price: lowest	0.19	0.21	0.15	0.14	0.15
Issue of nominal shares					
At year end (x 1.000)	63.411	54.411	43.519	38.674	35.769
			,		
Number of FTEs (permanent)					
At year end	94	92	94	96	103
Average	91	94	97	99	103
Sales (total)/ Average FTE's (permanent)	115	109	103	113	116

MAIN DEVELOPMENTS DURING 2016

Two new contracts in automotive/ aerospace sector

We secured two new orders with a Chinese market leader in the automotive industry and a European market leader in the aerospace industry.

Contract with German OEM (Original Equipment Manufacturer) in automotive & industrial area

A contract for 10 years with a sales volume of approx. EUR 4.5 million for a supply chain management project has been secured.

Sales channel agreement for Swiss market

The agreement to double sales to EUR 1.2 million by 2018 has been signed with Altec Electronic AG.

Framework agreement signed with leading test equipment manufacturer

SCM agreement with Rohde & Schwarz has been signed with further growth of our activities and future expansion of our relationship.

Publicly funded project

Winning a new publicly funded project (EU & German) opens us new and additional partnerships with all project participants. The consortium consists of well-known institutes and companies. This project belongs to the automotive market segment but also to the field of power and consumer electronics.

Strengthened relationship with large players

We strengthened our relationship with main assembly houses, important European design houses and foundries throughout the world. All top global players.

Big contracts for recurring business

Our long-term SCM-projects published earlier passed through several stages of the development phase in 2016 and will move into the industrialisation phase during 2017.

Certification and accreditation

Accreditation of our laboratories according ISO/IEC 17025 has been renewed. Our ISO 9001 certification also has been renewed in 2016 and adjusted to the new 2015 version of the standard.

Investment

To meet further demands and requirements of our customers the main investments were the Verigy 93k test system, a 12" wafer prober and the upgrade of our system for X-ray tomography with 3D x-ray and higher resolution for 2D applications.

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.
- 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 2016, the company had 91 (2015: 94) full-time employees (FTE).
- In 2016, the company realised EUR 10.5 million sales (2015: EUR 10.3 million).

We focus on

Automotive

- Electronic components for vehicle applications are a global driver of the 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 the publicly funded project EuroPAT-MASIP.

Industrial



- In this sector the 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, like smart grid and smart metering. For example starting an oven remotely, opening and shutting down windows when the temperature changes, etcetera.
- We develop (complex) solutions and are a partner in two publicly funded projects: ParsiFAL 4.0 and ScaleIT@Shopfloor.

Healthcare



- High quality demand and device complexity is 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.

HiRel/Aerospace



- 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

eXtended SCM: Turnkey Services

Customer categories

Our main focus is on Fabless Companies and OEMs (Original Equipment Manufacturers).

Fabless Companies, which are among the fastest growers in the industry, are even more motivated to protect their know-how. As a service provider, we are never in competition with Fabless Companies, so their intellectual property is maximally protected.

OEMs are becoming ever leaner and are contracting out their non-core activities, including semiconductor manufacturing facilities. It is vital for them to have a continuous supply of reliable highly qualified chips. They also often require tailored solutions. We are uniquely qualified to meet this requirements. Protection of specific features of their products may play an important role.



Our business units

Supply Chain Management (SCM) / eXtended SCM



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 & reliability investigation, failure & technology analysis and logistics.

RoodMicrotec handles the complete (turnkey) industrialisation of ASICs from GDSII data up to the final product including all automotive-specific Quality Assurance activities.

Test Engineering



Complete test solutions for a wide range of devices like sensors, mixed-signal, digital,

analogue or RF ICs. Carrying out characterisation, production and qualification to the highest standards as it is required by the automotive and high-reliability sectors.

Extensive know-how on several tester platforms

Test Operation



Complete semiconductor segment is covered, with focus geared towards wafer and

semiconductor component tests. The customers include OEMs, Fabless Companies, distributors, IDMs and other customers in the automotive, industrial, healthcare, telecommunications and HiRel markets.

Failure & Technology Analysis

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, 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, including focused ion beam (FIB) services and consulting and/or line surveys concerning electrostatic discharge (ESD) and certification of ESD materials.

Qualification & Reliability Investigation



Electrical/electronic qualification of customer components under extreme

conditions such as climatic and temperature changes as well as vibration and mechanical shock.

Optical and mechanical qualification focuses on image sensors (digital photography, high speed image processing, X-ray technology) and on mechanical investigations of semiconductors on boards.

Automotive Competence Centre (ACC)



Our 'virtual' ACC team consists of members of different business units with the goal to strengthen knowledge within the company and market it as a service.

This team is fully equipped with the fundamentals required for automotive projects.

ASIC Turnkey Service

Logistics Project Management Quality Assurance

Development — Industrialisation — Production

- Design / design support
- Product engineering
- Design for test
- Test engineering
- Debug

Customer

- Prototype wafer production
- Wafer probing
- Failure analysis, chip repair
- Prototype package assembly
- Characterisation
- Final test
- Product release

- Definition of qualification flow
- Qualification
- Electrical tests, interim tests
- Characterisation
- Life time / reliability calculations
- Failure analysis
- Test program optimisation
- Test time reduction
- Yield optimisation
- Other cost reduction
- Product release

- Supply Chain logistics
- Project management & production control
- Wafer production
- Wafer probing
- Package assembly
- Final test

11/

- End-of-line handling
- Yield monitoring
- System level analysis
- Sophisticated failure analysis
- Customer return management

In the fields design, wafer fabrication and assembly RoodMicrotec is working with partners.

Custome

SHAREHOLDER INFORMATION

Listing

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

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

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

Major Holdings in Listed Companies Disclosure Act

As at December 2016 RoodMicrotec has received the following reports 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

Kuikens B.V./ M.H.B. Kok	11.21%	2 May 2014
Sitimo Ltd	5.61%	30 December 2016
P.C. van Leeuwen	5.48%	2 November 2015
Ph.M.G. Nijenhuis	4.97%	29 December 2016
W.L. Kemper	3.12%	26 August 2016

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

Position as at 1 January 2016	Position as at 31 December 2016	
54,411	63,411	

At 31 December 2016, the company held 4,100 of its own shares (2015: 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 2016 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 2017 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, <u>www.roodmicrotec.com</u>, 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.

Analysts

The company does not pay fees to analysts for preparing reports; analysts' reports are evaluated only for factual inaccuracies.

Annual general meeting of shareholders 2017

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



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.

SWOT ANALYSIS

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.

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
- Customer know-how 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
- Poor financial net result
- Cash position

Opportunities

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

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 approximately be 75% higher compared to the total turnover of over EUR 10 million in 2015. 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 5-10% of sales
- EBIT is the benchmark for the profitability of our operations. It is highly dependent on the internal efficiency of the company. We therefore strive to continuously optimise our operations.
- Net result of 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 of a gross margin 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.
- 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 and fourth industrial revolution (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).

STRATEGY

- We will remain focussing on automotive and industrial markets to grow further in both 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 Operation.
- We will continue to strengthen our internal quality system through maintaining the certification according the version 2015 of ISO 9001, in addition with focus on risk assessment, which is especially important for automotive customers.
- For further strengthening our technical position for automotive, industrial, Industry 4.0 and IoT 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 short 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 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

DEVELOPMENTS WITHIN ROODMICROTEC

Our total sales increased by 2% despite the somewhat negative development of the European semiconductor industry (97% of RoodMicrotec sales is realised in European countries). Total industry sales in Europe were \$ 32.7 billion in 2016, a decrease of -4.5% compared to the 2015 sales. Worldwide semiconductor industry showed a growth of 1.1%.

Although our total sales of EUR 10.5 million (2015: EUR 10.3 million) were lower than expected, 2016 was again a year marked by positive developments. In 2016 the order value increased by 20%. The quote portfolio remains on a high level and a major part of the offers are converted into orders (hit rate). In 2016, the book-to-bill ratio was above 1.0 in all quarters.

Our strategic move to larger and long-term projects is yielding more stable and predictable recurring sales. In 2016 we again succeeded in concluding a number of long-term contracts with reputed companies in our focus sectors.

While we have talked of 'orders' in recent times, the term 'contract' would be more accurate. 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. A contract 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.

Automotive

Our Automotive Competence Centre, a virtual group, consisting of specialists of all RoodMicrotec competence departments, is able to offer a new and enlarged service portfolio especially for the demands to quality and safety for automotive 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.



Business Report 2016

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Full quality assurance, from quality planning and component release through to customer feedback/complaints processing is being handled in cooperation with all competence centres 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, trainings courses and workshops to automotive customers is a further element in our portfolio.

Our efforts resulted in further acceptance and recommendation from the automotive sector:

- Two of our automotive projects finalised the development phase and are now entering the industrialisation phase.
- With a German automotive and industrial client a significant new SCM contract has been secured, sales volume is due to generate EUR 4.5 million over the next 10 years.

Industrial

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. These projects were industrialized during the first half of 2016 and started to production phase in the second half of 2016 and will go for 10 years.

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, has finished the engineering phase and is reaching the end of the industrialisation phase. The volume production, mainly testing, will start in the second half 2017. The speciality in this project is the long industrialisation phase combined with a product life time with more than 20 years.

Healthcare

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.

Further activities started in 2016 regarding intelligent implants, especially developing new test methods for encapsulated ASICs for in-body applications.

Publicly funded projects

In the reporting year we could gain the European / German funded project EuroPAT-MASIP and two additional projects are still pending for approval.

We want to increase our participation at publicly funded projects in the fields of Automotive, power electronics, Industry 4.0, IoT and biotechnology. 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.

Two publicly funded projects reported earlier successfully run their first year at RoodMicrotec. We are making big steps in those projects towards industrialisation of technologies which will be developed in these projects.

For the year 2017 we expect several new publicly funded projects in different fields. We want to expand our possibilities in developing new technologies so we can provide new services to the market.

Running Project: ParsiFAL 4.0

The ParsiFAL 4.0 project started on 1 November 2015. 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. The project is approx. 50% publicly funded by BMBF (Bundesministerium für Bildung und Forschung/Federal Ministry of Education and Research).

The first application will be for Festo AG & Co.KG and will be used as a flexible control unit for independent automation equipment (smart sensor system). The second application for Bosch will be 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. With several sensors the conditions during transit can be recorded.

The partners are RoodMicrotec GmbH, Festo AG & Co.KG, Bosch GmbH, Hahn-Schickard Gesellschaft für angewandte Forschung e.V., Institut für Mikroelektronik Stuttgart, Infineon Technologie AG, Micronas GmbH, Stackforce GmbH, Würth Elektronik GmbH Co & Co.KG.

Running Project: ScaleIT@Shopfloor

The negotiations for the ScaleIT@Shopfloor project were finalised in December 2015; the project started on 1 January 2016 and will run for 3 years.

The project should 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. That is why with our partners in the project ScaleIT@Shopfloor we want to achieve solutions in the area of intelligent test devices and also process concepts which can be introduced into production.

In the first step our partner 'Feinmetall' will produce an intelligent test card, which we will implement at an intelligent electronic test system workstation that we will build. This workstation should interact with the test card from Feinmetall and also with all our IT and electric test system. The benefits from this system are ad hoc data, e.g. necessary information for the operator, status for the ERP system, and data for the quality system or staff. Another important point is that we automatically get the conditions during operation, like hit-downs, contacts, operational temperature and also decisions about calibration or maintenance.

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.

Through the coalition of companies in the project, we see the project as being very well matched to our goal.

The partners are:

RoodMicrotec GmbH, Bull GmbH, Carl Zeiss 3D Automation GmbH, digiraster GmbH, Feinmetall GmbH, Karlsruhe Institute of Technology (Pervasive Computing Systems / TECO), microTEC Südwest e.V., Ondics GmbH, Sick AG, Smart HMI GmbH, Universität Stuttgart, Institut für Arbeitswissenschaften und Technologiemanagement IAT, Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e. V., Fraunhofer Institute für Arbeitswirtschaft und Organisation IAO.

Starting Project: EuroPAT-MASIP

With the Project EuroPAT-MASIP (European Packaging Assembly and Test pilot for Manufacturing of Advanced System in Package) RoodMicrotec has also been allocated EUR 850,000 in public funding over the next three years, approved by the ECSEL Joint Undertaking, a public/private partnership for the development of the European electronic components and systems industry. 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 a Radio Frequency (RF) ASIC. Through its participation in the project, RoodMicrotec will be able to refine its existing expertise in all three areas. Project is due to start mid 2017. Special task for RoodMicrotec in this project is the project leadership for TEST.

Partners of the submitted project are:

RoodMicrotec GmbH, 3DiS Technologies, Advanced Vacuum Distribution Europe AB, Afore Oy, AMIC Angewandte Micro Messtechnik GmbH, Berliner Nanotest und Design GmbH, BESI Austria GmbH, BESI Netherlands BV, Commissariat al Energie Atomique et aux Energies Alternatives, Connaught E. Thallner GmbH, Fraunhofer Gesellschaft zur Förderung Electronics Limited, ELMOS Semiconductor AG, EV Group der angewandten Forschung e.V., INNOSENT GmbH, KETEK, micro analog systems Oy, MURATA Electronics Oy, Nanium S.A., Nokian Tyres plc., NXP Semiconductors France SAS, PAC TECH Packaging Technologies GmbH, Packaging SIP, Semilab Felvezeto Fizikal Laboratorium Reszvenytarsasag, SENCIO BV, Silicon Radar GmbH, Spinverse Innovation Management Oy, Teknologian tutkimuskeskus VTT Oy, TexEDA Design GmbH

Collaboration/partnerships

We have concluded major collaboration agreements with several European leading and most successful Fabless Companies (design houses). 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 it in manufacturing high-grade microchips (high-reliability chips) and in their growth process. 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), we will provide both individual services and backend manufacturing services.

In 2016 we announced our partnership with Altec Electronic AG, Switzerland by signing a sales channel agreement as well as the framework agreement regarding Supply Chain Management with Rohde & Schwarz. Cooperation with Chinese and European market leaders in the automotive and industrial industry has been started with first orders. In addition other 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.

Other developments

We strengthened our know-how in different areas such as project management, design and management and the Automotive Competence Centre. 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. As the Dutch proverb onbekend maakt onbemind (unknown, unloved) illustrates. Last year we worked hard on increasing our visibility by publishing several technical articles, by giving presentations around Europe during exhibitions and conferences, by publishing newsletters and by organising seminars. Our seminars are a growing event - in our first seminar last year we had again 40 attendees. A second seminar has been held in Switzerland in cooperation with IG exact (Network of Excellence in Applied Electronics and Technologies) and also here the 45 participants gave us positive feedback.

MARKET DEVELOPMENTS AND TRENDS

Rapid technological innovation is driving growth in the semiconductor industry. As more and more cutting-edge devices emerge, such as electric cars and hybrids, medical applications, smart phones and wearable devices, the number of semiconductor components in daily use is ever expanding. The advance of digitisation and the IoT will further increase demand for semiconductor products. Taken together, these factors will drive solid growth for the global semiconductor market over the next five years.

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 and industrial/healthcare sectors will enter the industrialisation 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. Industry wide, growth of semiconductor businesses in Europe saw a 4.5% decrease, which is due to get back on track with a projected 3.6% increase in 2017 (WSTS Forecast Summary February 2017). The management therefore reinforces its outlook for an increase in sales turnover of 75% by 2020.

PwC's analysis of the global semiconductor market of May 2015 suggests that between 2014 and 2019 billings will increase by US\$ 96 billion to US\$ 432 billion, corresponding to a compound annual growth rate (CAGR) of 5.2%. This analysis assumes that there won't be an economic downturn in the period to 2019 and that the technological progress will maintain its high pace and that the scaling down of semiconductor feature sizes will continue.

In Asia, China will continue to expand its semiconductor market leadership and increase its market share. In contrast, Japan will grow only by an annual rate of 1.5% in the projected period. Europe and the Americas will see moderate annual growth rates to 2019 of 3.9% and 4.5% respectively. For the rest of the world, growth will be concentrated in Taiwan, South Korea and Singapore.

The following key findings in the PwC report support our strategic choice for our focus markets:

- 1. The automotive and industrial markets will both drive significant growth in demand for semiconductors.
- The IoT is the next growth engine for the semiconductor industry, particularly for the sensor, communications and industrial segments.

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.

We are highly experienced in a wide range of services, such as test engineering, failure & technology analysis and qualification & reliability investigation. 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.



Automotive

Although conventional cars are still the most important driver for the semiconductor industry, the worldwide market for electric cars and hybrids is growing fast. The growth of this market will lead to additional demands on electronic equipment and create a positive impact on the semiconductor industry. PwC expects that the CAGR of semiconductor content sales market will reach 20.5% for electric cars and hybrids in the period to 2019.

Although conventional cars are still selling well, 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, car-to-car communication), 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 Automotive Competence Centre 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.

Worldwide Electronic System CAGRs (\$, 2015-2020)

Auto	4,9%
Ind/Med/Other	4,3%
Comm	3,9%
Consumer	2,8%
Gov/Mil	2,5%
Computer (includes tablets)	1,5%



Industrial (Industry 4.0, IoT) / Healthcare

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. The expected growth rate will be 4.3% CAGR in 2015-2020 (Source: IC Insights 8th November 2016).

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. 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 (car-to-car communication, internal car communication), in agriculture, in healthcare and elsewhere.



Malkit Jhitta

Despite continued tough conditions in the semiconductor sector RoodMicrotec saw some excellent new opportunities and projects starts in 2016. Some key investments including a 12 inch wafer prober and a new Verigy 93k tester allowed RoodMicrotec to address more complex designs.

The SCM team continues to grow and also expand its connections with key suppliers globally to allow RoodMicrotec to offer solutions to the most complex customer projects. The UK will see two major projects progress from pre-production to volume production in 2017. This has been a major achievement in tough conditions. Several new opportunities with excellent volume and product-life times are work-in-progress and the outlook looks very good.

The UK is seeing significant development activity in the IoT area, some major UK organisations are looking to support this market sector by offering development platforms to allow SME's and entrepreneurs to exploit new opportunities – RoodMicrotec is positioning itself to support these activities and provide the additional services required to turn these concepts into market ready products.

These additional services include industrialisation, test, qualification and supply chain management services.

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 Internet of Things products and applications will play an important role in the development of the market. That market, in turn, may represent a significant growth opportunity for semiconductor players.

Analysts have predicted that the installed base for Internet of Things devices will grow from around 10 billion connected devices today to as many as 30 billion devices (or more) by 2020. Each of these devices will require, at a minimum, a microcontroller to add intelligence to the device, one or more sensors to allow for data collection, one or more chips to allow for connectivity and data transmission, and a memory component.

For semiconductor players, this represents a direct growth opportunity (source: McKinsey report Winter2015).

Some 30 billion objects may be connected to the Internet of Things¹ by 2020



¹ A networking of physical objects via embedded devices that collect and/or transmit information. Source: Forecasts derived from ABI Research: expert interviews: Gartner: IDC: McKinsev

Source: Forecasts derived from ABI Research; expert interviews; Gartner; IDC; McKinsey analysis

In this field we are also active whilst working on smart metering/smart grid together with one of our main customers. This is also for us a strong expanding market.



Source: http://polishinstitute.pl/innovaction/

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 (co-creating and co-operation) and in which we are responsible for the 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. The way we have set up the procedures in our Automotive Competence Centre as well as in the entire company is completely in line with this urge for responsibility.

Networking

We do not need to be very big, we need to have strong partners – therefore in our industry it is essential to be part of networks and being active in them. For that reason we have 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. The publicly funded projects mentioned earlier are a good example of a consortium of partners. 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. One plus one equals more than two.

Dieter Schreiber



This year, a few of my automotive and industrial projects will come from engineering / qualification mode into volume production. Necessary investments and trainings had been made to realize this ramp up and will then show the budgeted revenue.

Based on the already good and long-lasting relationships with our existing customers, I am looking for new customers and projects to widen our customer base. Review and analysis of market information and user requirements with focus on maximising collaboration across the internal teams and re-use of already available capabilities and capacity will support this activity.

During last year we already acquired some projects with new companies (fabless design houses as

well as OEM customers) with interesting applications in growing market segments like medical/healthcare, industrial and IoT. We are convinced that they need our extensive know-how, capabilities and service offerings, especially Supply Chain Management.

In addition we will contribute to the EuroPAT-MASIP publicly funded project which will start in the second quarter 2017.



Engin Eser

The semiconductor industry is a rapidly changing environment. Customers require higher performance, greater integration, faster time to market and all of that at a lower cost. All this we can support with our strong and experienced engineering team and all our employees.

We were able to increase our revenue by 2%, although the revenue of the European semiconductor industry decreased by 4.5%. Our order book grew again.

Years ago we introduced our "eXtended Supply Chain Management", now we start to reap the success of this strategy change. This shows that we took the right decisions and are prepared for the future.

"Anyone who wants to be successful in the future has to lay the foundations in the past and in the present."

In 2017 we will concentrate our sales efforts on turnkey solutions for having further success. I am proud, that we are involved in very interesting projects in the automotive and industrial market. Especially for the healthcare market we are working together with our customer to develop a "BioChip" which is unique in the world.



Alexander Jung

The establishment of our supply chain services (Supply Chain Management) for ASIC's some years ago has gradually changed RoodMicrotec's role in terms of responsibility for the end product. Hence a solid understanding of our customers business simply became compulsory. More and more companies are using our turnkey services for ASICs/ASSPs. Thus, our order books are filled and RoodMicrotec looks into a bright future

Long-term storage of components is becoming more and more important for many companies, as the lifetime of parts is becoming shorter and customers and end users are demanding longer replacement periods and spare parts supply. For this reason, we are currently working on a project to expand our service portfolio in order to be able to extend our long-term storage program and to

provide our customers with a carefree package.

Many of our employees have a vast background and experience in the electronics and semiconductor industries are able to tackle the challenges of the future demands of the market are needed.

We are on the cutting edge with our ideas, know how the technique is developing and we align our strength to the respective demands.



Smartec and RoodMicrotec – A long and successful relationship

Smartec is a fabless sensor company which develops sensors and sensor interfaces.

The temperature sensor is already the second generation. The first generation started in 1992 and has been calibrated on wafer level at Rood Testhouse, based in Heerde, The Netherlands at that time. Ever since millions of the first generation sensors were calibrated on their wafer test machines. In close cooperation between the technical staff of Rood, the University of Delft and us the calibration set-up was developed.



The University of Delft played a crucial role to make - for the first time in history - a calibration set-up which could be used to calibrate within 0.1 °C on wafer level. In the meantime PhD students worked on a temperature sensor with a better accuracy. This has led to the second generation sensor with an improved performance. This means again with the technical staff of RoodMicrotec a challenge to design a system with a calibrating accuracy of better than 0.025°C.

Starting in 2015 together we succeeded to achieve our goals and now hundred thousands of sensors find their way to all kind of high accuracy applications like the use in medical and laboratory equipment. Thanks to the technical and innovating staff of RoodMicrotec.

About Smartec

Smartec is a fabless network company, founded in 1987 in BREDA in the Netherlands, and selling sensors.

Nowadays we are selling our sensors and sensor products all over the world. Represented in about 25 countries in the world we can rely on RoodMicrotec as a very reliable partner in a way we got back from the market only positive messages having the temperature sensor with the highest accuracy and resolution in the world.



"Smartec temperature sensors are used in the solar race (Australia) to control the output of the photovoltaic cells. "

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.

It is very important to focus more on the quality management system using the quality relevant automotive tools such as APQP, PPAP and RMA. Process instruction and introduction within RoodMicrotec is an intensive process, and training is needed to implement the processes effectively and successfully. The devotion to the automotive tools is key for SCM projects in the automotive industry. A professional FMEA / Risk Management tool has been installed and is active in use for the new SCM projects started in 2016.

Our integrated quality management system is based on international DIN EN ISO 9001 standards. In addition, our quality management is broadly consistent with the Automotive Specification TS 16949. Our ISO 9001 certification has been renewed in 2016 and adjusted to the new 2015 version of the standard.

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).

For 2017 the preparation for an AEO (Authorised Economic Operator) declaration is planned.

With the extended use of electronics in automotive applications in general it is important to strive for zero defects. This philosophy has been used within RoodMicrotec in the past as well but will be reinforced in the coming years.

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.



Koray Muratoglu

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RoodMicrotec offers me the freedom to be active in a wide range of fields.

Whether this will be in the test-data analysis, managing software roll-outs, the automation via scripting languages, programming tools, hardware development or just simply optimizing internal procedures – my tasks are always exciting and diversified.

After years of experience in the aviation development and the IT consulting market I can pass my knowledge to the company and expand my skills to a higher level.

Currently I am managing the software implementation of Quantix Yield-Man to get our yield management system more automated. Yield-Man offers our customers more detailed information about their tested products and for RoodMicrotec an easier way to manage the generated test data.

Moreover, I took over the technical management of the ScaleIT@Shopfloor research project to implement more "smart factory" elements at RoodMicrotec - better known as "Industry 4.0".

Horst Hykel



Since September 2016 I am working within the Test Operation-Team in Nördlingen.

As electrical technician the main part of my work is repair and maintenance on our test-environment.

In addition to that, in 2018 we will start education in mechatronics in dual training system again. I'm looking forward to work with young and interested boys and girls, to take the first step in to a new chapter of their lives. We will have to do some modifications on our buildings and mechanical conditions to ensure a good education of the prospective technicians. We hope that many of them will stay at RoodMicrotec after their education and become members of our family. Being part of this project makes me very proud.

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 appropriat e to their tasks. We want to create an environment in which all employees can develop and excel. High priority is given to focused 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 2016 RoodMicrotec continued the consolidation process in personnel and organisation.

In key positions RoodMicrotec hired experienced people to strengthen the position of RoodMicrotec in the market, such as CFO Arvid Ladega, Engin Eser and Alexander Jung in Sales & Marketing, Florian Seibold, Dr. Tobias Zweifel and Björn Hoffmann in Failure & Technology Analysis.

The average number of full-time employees (FTE) decreased by approx. 3% from 94 FTEs in 2015 to 91 FTEs in 2016.

The sales per full-time employee increased by approx. 6% from EUR 109,000 in 2015 to EUR 115,000 in 2016. Our policy is to continue to strive for growth of sales per FTE.

After performing an evaluation in 2015 we discussed the results with our employees so we could take up all inputs and initiated some necessary changes. The next evaluation is planned for the first half of 2017.

Sales per employee and head count



FINANCIAL DEVELOPMENT

Sales and result

Sales saw a limited increase to EUR 10.5 million. The cost of sales was in line with last year, i.e. EUR 1.9 million. This is equal to a gross margin of EUR 8.6 million, or approx. EUR 0.2 more than last year. Total operating expenses were EUR 8.9 million, against EUR 8.8 million in 2015. Personnel expenses increased by EUR 0.2 million mainly explained by a lower capitalisation of internal hours compared to 2015.

Revenue by Customer Segment



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

Total	10,465	10,250	+2%
Others	973	1360	-28%
Hi-rel/Space	779	668	+17%
Industrial/Healthcare	4,700	5,201	-10%
Automotive	4,013	3,021	+33%
(x Eur 1,000)	2016	2015	Approx. change

The increase in the automotive market is a result of efforts to consolidate our Automotive Competence Centre 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 10% decrease compared to 2015 due to delays of a large order by a Brazilian client in the sector, tied to the economic difficulties in the market. We expect the regained momentum of this project to contribute to a pick-up in sales into 2017.

A solid increase in sales over the HiRel/Space field underlines RoodMicrotec's market expansion into this high-tech field with exceptionally stringent quality standards.

Other sectors have seen a net sales decline which resulted from difficulties in the broader European semiconductor market, and a strategic shift towards the automotive and industrial sectors.

The sales results of the business units were as follows:

(x Eur 1,000)	2016	2015	approx. change
Test Operation	3,727	3,676	+1%
Supply Chain Management	2,077	2,348	-12%
Failure & Technology Analysis	1,494	1,655	-10%
Test Engineering	471	437	+8%
Qualification & Reliability Investigation	2,696	2,134	+26%
Total	10,465	10,250	+2%

Net result showed a loss of EUR 1.6 million (2015: EUR 1.5 million loss).

RoodMicrotec



RoodMicrotec und IQZ – Your partner for more secure and reliable elctronic systems



The cooperation of the Institute for Quality and Reliability (IQZ) and RoodMicrotec is based on the joint membership in the interest group COG Germany as well as a joint participation in the COG Hausmesse, on which both partners saw their first connection points. The cooperation process was strengthened by now three successful seminars, in which the IQZ contributed with lectures. In 2017 the first joint customers were acquired, which took advantage of the expertise of the two partners.

In addition, a first joint seminar on "Security and Reliability of Electronic Systems" will be offered in 2017.

By combining the consulting and analysis services, RoodMicrotec and the IQZ can act as a one-stop shop provider in the area of complaints management, failure analysis and subsequent recourse processing. In this demanding and cost-intensive area, the customer receives a solution - if necessary as a full-service support. Even downstream recourse negotiations can be accompanied and handled both technically and legally with the support of our network partners

The manifold qualification profiles of the employees can be used to cover all areas of the project, from strategy development through the generation of suitable organizational and process structures as well as detailed analysis methods and the programming of special software (for example, for test planning). Projects can therefore be supported from the managementlevel to the coaching of engineers.

In the area of the development process for products, the partners' expertise also interlinks each other.

As a respected research and advisory institute, the IQZ accompanies numerous corporations and medium-sized companies in the field of preventive quality and reliability.

In close coordination, RoodMicrotec can be used to tailor the scope of experience and to offer the customer complete solutions. In addition, the expertise of the electronic experts can be integrated into the IQZ reliability concepts.

 ONE-STOP-SHOP FOR COMPLAINT MANAGEMENT AND FAILURE ANALYSIS

 Complaint Management
 Pattern Recognition
 Failure Analysis

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As a result, RoodMicrotec and IQZ ensure a coordinated and integral service throughout the product life cycle, which is based on current standards. Through the close cooperation with the Bergische Universität Wuppertal as well as the execution of teaching assignments in the field of reliability management, both partners provide their customers with solutions based on science and technology. This is particularly interesting in view of the increased demand of automated systems (e.g. automated driving).

On this subject the IQZ researches with well-known German OEMs and system suppliers and is also active in the BMVI committee.

Financial position

The balance sheet total increased to EUR 14.7 million in 2016 (2015: EUR 13.5 million).

Equity decreased by EUR 0.2 million, from EUR 4.3 million to EUR 4.1 million, which was due to the receipts from the equity line and warrant plans and reduced due to the net loss in 2016. Solvency reduced, from 32% to 28%. The net debt position increased to a level of EUR 2.4 million. Working capital is positive by EUR 0.5 million and showed a slight decrease compared to 2015.

Property, plant and equipment increased by EUR 600,000, as the level of investments was higher than the depreciation. The intangible assets increased by EUR 300,000 as a result of capitalisation of development expenditure for the Automotive Competence Centre.

Cash and cash equivalents stayed at a stable level of EUR 0.7 million.

RESEARCH AND DEVELOPMENT

In order to be competitive in our business, RoodMicrotec invests relatively large amounts in (technical) innovations. In 2015 and 2016, RoodMicrotec invested in high technological test systems, internally generated assets in the Automotive Competence Centre (ACC). 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.

In of 2016, total investments in capitalised development expenditure amounts to EUR 0.3 million.

Besides the company invested in innovations by means of partnerships in publicly funded projects. In 2016 two projects in the field of Industry 4.0/IoT were running, the next project - EuroPAT-MASIP – starting in 2017 has been secured.

FOCUS AND ACTIONS 2017

Whereas last year our main focus was on the automotive sector, which resulted in some major contracts, this year we will still focus on the automotive sector, but will also emphasis on the industrial sector, the second growth segment for the semiconductor industry. Growing demand of industrial applications following the bish employee store store store of a distributed for the second sector.

high quality according automotive and/or HiRel/Space requirements will open new opportunities.

Focus

Industrial

In the industrial sector all attention is on the 'fourth revolution': Industry 4.0. Based on our knowledge and experience we are well positioned to play a role in these developments. As a partner in two publicly funded Industry 4.0 projects we have good access to all parties involved. This is good for our reputation and brand awareness and gives us a starting point 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 by the research institutes in the next years (source: it-markt.ch & IDC; McKinsey)

Automotive

We are a recognised player in the automotive sector, which is a fast 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. For example, semiconductor content per vehicle is 1.5 to 3 times higher in electric cars and hybrids compared to conventional cars.

Actions

- Investment in an Integra Flex test system for complex high performance devices. This will enable us to win new business from existing and new customers.
- New handling system MT9928 for octal testing with this investment we will establish a unique position in our segment as a service provider to Fabless Companies (design houses) and OEMs.
- Investment in a digital microscope for the business unit Failure & Technology Analysis.
- To strengthen our customer base by focusing on existing customers with high potential and by approaching new strategic customers with high potential.
- Continue to extend our capabilities for products and yield analysis by adding new advanced tools such as Yield-Man
 - To improve brand awareness of RoodMicrotec through:
 - Professional and accessible website
 - Professional valuable articles for customers and other stakeholders
 - Presentations on seminars and a few 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
 - Providing solutions and thus having added value.

OUTLOOK 2017

As a result of new announced arrangements and the contracts reported in 2016, RoodMicrotec expects that turnover will increase substantially in the coming years. We expect that in 2020 our turnover will approximately be 75% higher compared to the total turnover of over EUR 10 million in 2015.

With a number of new projects ramping to production during the second half of 2017 we expect to see an increase in revenue and improved results compared to 2016. During 2017 we expect to come to the inflection point where we reach a positive quarterly net profit.

Beyond 2016, the semiconductor market is expected to grow across all regions. WSTS forecasts 6.5% growth globally for 2017 (\$360.9 billion in total sales) and 2.3% for 2018 (\$369.0 billion) (source: WSTS forecast published February 23, 2017).

EVENTS AFTER BALANCE DATE

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

- Exercise of warrants Series III that resulted in an increase of 31,063 shares (exercise price: EUR 0.21) on 12 January 2017
- Exercise of warrants Series III that resulted in an increase of 8,972 shares (exercise price: EUR 0.21) on 13 April 2017
- On 31 January 2017, 528,392 shares were issued at EUR 0.18, on 28 February 2017, 442,834 shares were issued at EUR 0.21, and on 31 March 2017, 569,872 shares were issued at EUR 0.17.
- On 26 January 2017 Mr. H.J. Bartelink and Mr. J.B. Tuik are elected as members of the supervisory board in an extraordinary shareholders meeting.

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, 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 GDSII data 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 2016

In 2016 two major automotive projects were run through the development phase and reached successful the industrialisation phase to be ready for production by mid of 2017. Two industrial projects and a BioChip also reached industrialisation phase short before production.

Sönke Hundertmark joined RoodMicrotec on the 1st of January as a very experienced logistics manager. He will further develop our logistical strength and improve the overall automatisation via our ERP system.

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

- Four partners for BGAs (Ball grid arrays) and two for CSPs (Chip scale packages).
- Close cooperation with two additional major European design partners was fixed.
- Significant increase in our position as leading partner for assembly houses.
- Partnership with two institutes, IMS Stuttgart and IMS Duisburg, were started to serve small and midsized companies.
- With Altec Electronic AG we started a new sales channel agreement for the Swiss market.

Actions 2017

In 2017 RoodMicrotec will continue to focus on Tier 1 and Tier 2 customers in the automotive and industrial markets. We will offer ASIC turnkey services in conjunction with several Fabless Design houses to win new projects for industrialisation and recurring business.

We will continue to strengthen the SCM team to cover new and increasing demand from the market.

Project management will be adapted to the new requirements of the ISO 9001 version of 2015, including risk management.



Sönke Hundertmark

On January 01 this year Sönke Hundertmark (45), an expert in Logistics, joined RoodMicrotec as new Business Unit leader of our SCM-Team. Sönke is born in Hamburg, married and father of a daughter.

"Looking back on some more than 20 years in Supply Chain Management and Logistics in different Industries I am happy to join this great SCM team at RoodMicrotec. With my knowledge and my enthusiasm I will contribute to the growing business unit and will support the increasing requirements of our long term customers and partners for the coming business." reflects Sönke.

As counterbalance to the challenges of his job he loves to be out in the nature for e.g. hiking.

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 2016

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 2016 due to more customer projects generating recurring business in our SCM area and Test Operation.

We have also continued the implementation of the new working strategy with a lead engineer and an engineer on all our projects to increase efficiency as well as having a redundant solution in case unexpected events happen.

We have also developed new test programs and hardware for the new V93k test system as well as for the 12" wafer prober. These projects have already started pre-production and will move into full production during 2017.

Actions 2017

The key goals for 2017 are to continue to acquire more recurring business in the area of SCM and ASICs. Test engineering plays a major role in this by enabling these other business units to generate long term revenues in these areas. We will also continue to invest in new tester systems to stay competitive in the new Industry 4.0 era as well as increased support for our SCM customers in the area of production and yield analysis.

We are also participating in a publicly funded project, ScaleIT@Shopfloor, to optimize and improve test floor operation by adding more intelligence to the systems.

Test Operation

Profile



This business unit covers the segments of testing, programming, scanning,

straightening and tape & reel of semiconductor devices. The main focus lies on the wafer test and final test of semiconductor components.

The main goal is to provide service and support for our customer through the whole project by continuous improvement of the processes and systems related to it. 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 for achieving the desired quality standard claimed by the industry and the customer itself. The investments done in the last few years show, that RoodMicrotec is still highly competitive in this area of the growing semiconductor market.

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

Key developments in 2016

Test

The requirements from the market and our customers reaffirmed our decision to invest in a new Verigy 93k test system, which was successfully installed in early 2016. The manipulator developed for this purpose offers a pivot radius of more than 190° and thus has a very great flexibility to place prober and handler optimally around the test system.

A further investment in an Accretech UF3000, 12" wafer prober with the possibility to test wafers at a temperature range from -55°C to 200°C was made. This prober can also be used for testing 8" wafers to relieve the existing systems. In addition we invested in different docking systems so that we can connect all our automatic test equipment to the prober.

The capacity expansion by installing another pick & place system has resulted in an additional relaxation of the utilization of the handling systems.

With these new installed systems RoodMicrotec will be in an even better position to support different customer needs for flexibility and efficiency.

Programming

Old and no longer needed equipment has been disposed. The free space supports the disposition of our systems in use in order to further process optimization.

EOL

In order to further increase the high quality an in-pocket inspection was retrofitted within special systems. This inspection is carried out when the components have been placed in the belt pocket after the measurement in order to detect leads having been bent during this process step.

Actions for 2017

At the beginning of the year, a new Integra-Flex test equipment with a new MT9928 handling system will be installed. This handler enables us to test the devices 8-times in parallel (octal testing).

Our plan is also to upgrade our Electroglass probers with new camera systems for OCR (Optical Character Recognition) and new software.

To increase our capacity for tape & reel and for inspection we need to invest in a new End of Line Equipment

Failure & Technology Analysis



Profile

RoodMicrotec's extensively equipped failure & technology analysis laboratory is capable of providing failure, construction and qualification-related analysis of all



Björn Hoffmann

Before I joined RoodMicrotec in July 2016, I had worked as a materials scientist at the Leibnitz Institute for Photonic Technology in Jena and as head of the electron microscopy labs at the Max Planck Institute for the Science of Light in Erlangen. Recently, I successfully finished my PhD thesis on correlative electron microscopy and optical nanomaterials.

Working so many years in academic research, I noticed that my real passion, helping people to understand their material and to solve their problems by using advanced microscopic methods, would have much more impact in industry. When I found the job opening at RoodMicrotec, I instantly knew that a job in failure analysis would perfectly match all my job expectations.

At heart, I am still a researcher and that motivates me to deeply understand the complex nature of

electronic assemblies and all the problems that might occur during manufacturing. At RoodMicrotec, my goals are to drive the failure analysis to future needs such as e-mobility and medical technology. I would like to use my longstanding experience with federal funding projects to connect the company more to the academic sector to get into contact with cutting edge applications. I think this is necessary to be prepared for future products and to guarantee continuous growth. Furthermore, I am working on a regular failure analysis newsletter to better connect with our customers!

When I am not at work solving complex electronic problems, I am an ambitioned astro- and landscape photographer and I like hiking as well as cycling

kinds of electronic parts like wafers, integrated circuits, discrete components, electromechanical components, printed circuit boards and complete printed board assemblies. These various types of analytical investigations can be performed as part of a reliability assessment, including focused ion beam (FIB) services and consulting/ 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, aeronautical and aerospace industries.

Good service is time-driven, so 1.5 shift operation is offered where necessary.

Key developments in 2016

In view of the high demand for X-ray tomography, we invested in an upgrade of our existing X-ray system. Beside the possibility of 3D X-ray investigation the upgrade also offers higher resolution for 2D applications. The new offer is well accepted by our customers.

To fulfil the increasing market demand the following new service packages, which include the complete process from the beginning to the end, have been developed on the basis of our deep experience for more than 30 years in this field:

- Yield improvement process on chip, package and board level.
- Obsolescence management including relevant inspection/test during long-term storage
- Customer Return Management

In the context of our annual seminars, in April 2016 we organised a successful seminar on 'Legal issues and liability risks in the supply chain of electronic components and modules'. In addition we organized in cooperation with IG Exact a seminar in Switzerland on 'Reliability of electronic components, robustness validation, qualification, failure analysis, statistical methods'. More than 80 participants from the industry and research institutes joined this year's in-depth trainings.

Actions for 2017

The focus that RoodMicrotec now has on supply chain management requires a significant amount of Failure & Technology Analysis activities and to be able to support this. We hired young engineers and will continue in education to increase our capabilities as well as increase cooperation with other laboratories and institutes.

Demand for failure analysis of LEDs and capacitors is still increasing. We will respond to this higher market demand. We were asked to continue with our organisation of seminars, so we aim to have three of them in 2017. This is a good opportunity to increase our level of knowledge.

'Failure Analysis Inside' will be introduced as a special newsletter on failure analysis topics. The aim is to make our technical possibilities more popular.

Qualification & Reliability Investigation

Profile



In our business unit Qualification & Reliability Investigation we distinguish between electrical/electronic qualification and optical and mechanical qualification.

Electrical/electronic qualification

Here we focus on investigating electrical components like semiconductors (die level and package level), passives and PCBs.

Electrical/electronic qualification and robustness validation of customer components under extreme conditions such as climatic and temperature changes as well as vibration and mechanical shock for automotive, space, telecommunication etc. 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. The business unit is one of the leading independent certified test houses in Europe. 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.

Standardised stress environments performed within RoodMicrotec:

- High/Low Temperature Operating Life Test (HTOL/ LTOL)
- Low/High Temperature Storage Life Test (LTSL/HTSL)
- High Accelerated Stress Test (HAST/UHAST, Unbiased)
- Autoclave (AC)
- Temperature Cycling (TC)
- Liquid-to-Liquid Thermal Shock Test (TS)
- Mechanical tests such as shock, vibration, solderability

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 test systems in the certified 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.

RoodMicrotec is one of the leading one-stop-shop solution providers for qualification and reliability aspects in semiconductor industries.

Optical/mechanical qualification

This unit focuses on image sensors and on mechanical investigations of semiconductors and boards.

These qualifications are for automotive, space, telecommunication, etc. The mechanical qualifications include shock, vibration and bump. The focus for optoelectronics is mainly LED.

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 2016

Revenue in the Business Unit Qualification & Reliability Investigation increased during 2016 thanks to new orders for the turn-key business, individual AEC-Q100 qualification as well as a steady demand for single stress tests. We have also had an increasing 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/mechanical qualification 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 will continue through 2017.

Due to the increasing number of application areas of image sensors, RoodMicrotec will strengthen and increase its activities accordingly to comply with the test requirements.

Actions for 2017

- Technical Extend the monitoring capabilities in our chambers.
- Robustness validation continue to develop increased stress coverage for our customers using mission profiles and other application specific conditions.
- 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 IC 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 also intends to build up knowledge in the field of qualification and tests assembled on thinned chips mounted on flexible PCBs and to adapt failure analysis methods.



Rohde & Schwarz and RoodMicrotec cooperate for Supply Chain Management and turnkey solutions

RoodMicrotec, the Dutch supplier of semiconductors and advanced microchips, has signed a Framework Agreement with Germany's Rohde & Schwarz electronics group, one of the world's leading manufacturers of test & measurement equipment and broadcasting equipment, for future ASICs supply chain management (SCM) and turnkey services. ASICs (Application Specific Integrated Circuits) are chips that are fully customised to handle one specific application for individual customers. RoodMicrotec's first project for Rohde & Schwarz will start in early 2017.

The framework agreement between the two firms sets the stage for a stable long-term partnership with RoodMicrotec as a supplier of ASIC turnkey solutions. Since 2001 RoodMicrotec already runs the testing business for Rohde & Schwarz originally held by Telefunken and executes qualification as well as analysis orders. Furthermore, Rohde & Schwarz has commissioned the company with mechanical testing under extreme conditions.

Dr. Gerhard Kahmen, Vice President of the Center of Competence for Mixed Signal Integration at Rohde & Schwarz commented: "Our positive experiences with RoodMicrotec so far and their recognised experience in the fields of ASIC supply chain management, turnkey solutions, qualification services and semiconductor testing make them a very interesting supplier for us in this field."

About Rohde & Schwarz

The Rohde & Schwarz electronics group offers innovative solutions in all fields of wireless communications as well as in IT security. Founded more than 80 years ago, the independent company has an extensive sales and service network with subsidiaries and representatives in more than 70 countries.



"High End ASICs manufactured in cooperation with RoodMicrotec are key components in a variety of Rohde & Schwarz test and measurement instruments." Copyright: Rohde & Schwarz

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 Operation make up approx. 36% 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 have diminished over the years. This reduction was expected due to semiconductor manufacturing moving to Asia. In response to this trend, 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 Operation. 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 Operation. 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 has contracted in Europe but continues to grow in Asia. The use of semiconductors, however, continues to rise, also in Europe. They are increasingly being imported from Asia. 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 and Israel 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 implementation of the system has been completed.

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 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 entering into transactions in RoodMicrotec shares and related rights.

Additionally, employees must 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



REPORT OF THE SUPERVISORY BOARD

Financial statements, dividend and discharge

We hereby present the 2016 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 2016 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 105 of the Annual Report published on the company's website www.roodmicrotec.com 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 8 June 2017 to:

- adopt the financial statements;
- discharge the sole member of the Board of Management from liability for his conduct of business in 2016;
- discharge the Supervisory Board from liability for its supervision of the management;
- approve that no dividend will be distributed.

RoodMicrotec in 2016

The strategy change to focusing on long-term and bigger projects is beginning to bear fruit. Although sales growth again lagged behind expectations, the financial results did improve in a number of ways.

For example, EBITDA improved compared to 2015. But more importantly, long-term contracts were signed which will provide more stable predictable and recurring sales over the next few years. The growth prospects for the coming years are also looking favourable, as the arrangements of early 2016 will enter the production phase during 2017.

The organisation itself is now better positioned for project management and for offering more integrated services. While RoodMicrotec has said goodbye to a number of employees, the organisation, and with it its market position, has also been strengthened with a number of highly experienced people joining the company in key strategic positions.

In addition, the company has further improved its relations with large players such as wafer foundries, assembly houses and design houses.

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 now on the right track. In 2017, the further rollout of these strategy is high on the agenda of the Board of Management and therefore also the Supervisory Board During the annual general meeting on 7 June 2016 Martin Sallenhag has been appointed as CEO, Reinhard Pusch as COO. Philip Nijenhuis stepped back as CEO and will support the company as advisor and member of the Supervisory Board.

The discussions concerning the expansion of the Supervisory Board with two members were ongoing, especially after Philip decided to step back from the Supervisory Board in late 2016. During an investor meeting in November 2016 we nominated and presented Jeroen Tuik and Herman Bartelink as members for the Supervisory Board. During an extraordinary shareholders meeting in January 2017 both have been elected.

Supervisory Board meeting schedule

The Supervisory Board gives the highest priority to good governance practice.

The supervisory board met with the Board of Management ten times during 2016. 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

There were no separate remuneration or audit committees in 2016. 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 2016 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 will enable a more robust level of governance through 2017 and brings 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.

Zwolle, 26 April 2017

The Supervisory Board V.G. Tee, chairman

SUPERVISORY BOARD MEMBERS



Victor George Tee, Chairman

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

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

Jeroen joined RoodMicrotec in January 2017.

Started working in the IT for 3 years at Stork TPS (Account Management, Consultant), afterwards 7 years: 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).

Jeroen holds a Master of Science degree in Mechanical Engineering.



ANNUAL ACCOUNTS

CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Statement of Profit or Loss

(x EUR 1,000)	2016	2015
Net sales	10 465	10 250
Cost of sales	-1.850	-1.866
Gross profit	8,615	8,384
Personnel expenses	-6,016	-5,860
Other operating expenses	-2,909	-2,902
Total operating expenses	-8,925	-8,762
EBITDA	-310	-378
Depreciation and amortisation	- 1,029	- 930
EBIT	-1,339	-1,308
Financial expenses	-248	-187
Profit (loss) before taxes	-1,587	-1,495
Taxes	9	-10
Net profit (loss)	-1,578	-1,505
Net profit attributable to:		
Equity holders of the company Non-controlling interests	-1,578	-1,505 -
Net profit (loss)	-1,578	-1,505
Earnings per share		
Pasic	0.02	0.02

Basic	-0.02	-0.03
Diluted	-0.02	-0.03

Consolidated Statement of Financial Position

(x EUR 1,000)	31-12-2016	31-12-2015
ASSETS		
Property, plant and equipment	5,283	4,732
Intangible assets	2,401	2,176
Deferred income taxes	1,151	1,016
Financial assets	3,001	3,002
Non-current assets	11,836	10,926
Inventories	474	279
Trade and other receivables	1,712	1,659
Cash and cash equivalents	689	667
Current assets	2,875	2,605
Total assets	14,711	13,531
Equity and liabilities		
Issued share capital	6,979	5,986
Share premium	19,659	19,009
Revaluation reserve	1,763	1,822
Retained earnings	-26,842	-24,990
Equity, attributable to equity holders	1,559	1,827
Non-controlling interests	2 494	2 494
Total equity	4,053	4,321
Loans and borrowings	3,004	2,301
Retirement benefit obligations	5,247	4,864
Provisions	72	72
Non-current liabilities	8,323	7,165
Loaps and boscowings	110	11
Trade and other payables	2 1 5	4 I 1 070
Current tax liabilities	2,139	1,075
Current liabilities	2,335	1,973
Total equity and liabilities	14,711	13,531



OTHER INFORMATION

GROUP STRUCTURE



ADDRESSES AND PERSONAL DETAILS

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Board of Management

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Management

Martin Sallenhag, CEO Reinhard Pusch, COO Arvid Ladega, CFO (not statutory)

Management Martin Sallenhag, CEO

Management

Martin Sallenhag, CEO Reinhard Pusch, COO

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IQZ - Institut für Qualitäts- und

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