

## EXTENDED SUPPLY CHAIN MANAGEMENT

### RoodMicrotec's production-oriented one-stop-shop ASIC development & fabrication service.

In 2012 we expanded our supply chain management further by adding ASIC design in collaboration with Fabless Companies. This means we can offer an even more comprehensive one-stop-shop service. This initiative was created at the express request of our customers, and is being marketed as **eXtended SCM**. In this context we have expanded our professional team with a sales & marketing manager who is highly experienced in this area in order to liaise between our team and the design partner. The service has been welcomed in the market place and we have already gained many promising new customers.

OEMs and system designers face quite a challenge if they decide to control the design and production of an ASIC as part of their overall system on their own – this takes up valuable resources and carries high risks, as an intimate knowledge not only of technology, but also of the semiconductor market and its players is indispensable.

RoodMicrotec has developed a natural extension of its successful supply chain management (SCM) service creating an even more highly developed one-stop-shop offer, starting right at the chip definition stage all the way down to qualified production volume device shipments: **eXtended SCM**. In this concept, RoodMicrotec provides the overall project management from its inception until its standard SCM takes over, enabling a flawless flow from idea to product shipment.

Unlike other approaches in the market, RoodMicrotec embeds the expertise of optimally suited partners into its concept. Based on the insight that each application and each project has specific requirements for technology, process, design knowledge, packaging, qualification and test, RoodMicrotec combines the best selection of established foundry, design and assembly partners with its own back-end services, where RoodMicrotec has been strong for decades - ranging from rapid FIB prototype modifications via test development, industrialisation/qualification to order/shipment handling by its supply chain management.

This concept of a production-oriented ASIC design introduces another major benefit: DfT - Design for Testability. Bringing RoodMicrotec's test expertise right to the initial design phase by enabling discussions between test and design engineers creates a unique opportunity to influence the ASIC content with respect to later testability, potentially leading to higher yield and shorter test times – and therefore lower part prices.

In summary, RoodMicrotec's **eXtended SCM** concept offers the best of two worlds: full flexibility to set up a dedicated team of experts providing the best match for a specific customer project's unique requirements, while maintaining full transparency via an overall project coordinator and a single customer interface – from idea to volume shipments.

# AVIATION INDUS

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## **RoodMicrotec N.V.** **Business Report 2012**

**RoodMicrotec N.V.**

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## 2012 HIGHLIGHTS

### Commercial/operational

- Strengthening of our position in Supply Chain Management by introducing extended Supply Chain Management: **eXtended SCM**
- Strengthening of our sales organisation by recruiting an additional sales & marketing manager.
- Extension of our engineering capabilities by establishing a design support department.
- Optimisation of our critical installed equipment base.
- Increase in the number of applications and orders in SCM.

### Financials

- Sales in 2012 of EUR 12 million fell by 24% compared to 2011 (EUR 15.7 million).
- Operating expenses fell by approximately EUR 1.5 million compared to 2011.
- EBITDA: EUR 0.7 million; strong recovery in the second half with 272%.
- EBIT (operating result): EUR 181,000 negative; but recovery in second half to EUR 97,000.
- EBT: EUR 507,000 negative; recovery in second half to EUR 85,000 negative.
- Net income: EUR 82,000 negative.
- Solvency remained stable at 48% (2011: 48%).

## SUPPLY CHAIN

Legend:  Customer  RoodMicrotec  Partner RoodMicrotec



## PROFILE

### Customer-oriented solutions

RoodMicrotec's strategy is aimed at powerful solutions, i.e. customer solutions aimed at serving the market optimally and providing maximum protection of products. The background for this strategy is the fact that products developed in the West are increasingly being manufactured in low-wage countries. These products are often subject to intellectual property rights and must be protected against infringement. Our business model and positioning provide maximum protection. In addition, many Fabless Companies (FCs) find it hard to find the right partners who can guarantee the quality of the end-products. This is why our strategy is aimed at aiding the successful marketing of designs by FCs and OEMs by (test) engineering these products, having them manufactured, and perform testing, qualification, failure analysis and distribution.

### Know-how

Our products are mainly used in high-tech environments: in aeronautical and aerospace applications including satellite connections and communication with satellites, and in healthcare, for example in pacemakers, which must be reliable under various conditions like temperature - after all, you can't have a pacemaker fail when the wearer jumps into a swimming pool. But also in automotive, where microchips are used to monitor tire pressure, in steering mechanisms, braking systems, ABS, airbags, etcetera. In all these situations, the highest possible reliability in many different conditions is paramount. Achieving this requires ever more know-how on all fronts as well as knowledge of all the specific regulatory requirements for these products. With the know-how of its engineers and consultants, RoodMicrotec is ideally positioned to bridge the gap between the idea (the designer) and the end-user by performing the intermediary steps.

Services

RoodMicrotec distinguishes the following individual core services:

- 1. testing semiconductors (microchips), which represents the majority of sales, optoelectronics (image sensors, OASIC, LEDs) and printed circuit boards;
- 2. end-of-line manufacture and service;
- 3. developing test software for semiconductors;
- 4. qualifying semiconductors and printed circuit boards as well as printed boards assemblies;
- 5. qualifying production processes according interconnection technologies and ESD sensitivity;
- 6. analysing failures from wafer, package and board level;
- 7. reliability and environmental investigations of semiconductors, (assembled) printed circuit boards (PCBs).

In addition, RoodMicrotec offers Supply Chain Management. This means that we manage the entire process from design idea to delivery to the end-user, including: purchasing, logistics, warehousing/logistics and consultancy.

RoodMicrotec offers this as a one-stop-shop proposition.

In 2012, RoodMicrotec expanded its supply chain management further by adding ASIC design in collaboration with Fabless Companies: **eXtended SCM**. This complete service package with long-term experienced engineers gives us a unique position in the market.

eXtended Supply Chain Management

eXtended SCM already begins in the chip specification phase – thus RoodMicrotec’s experienced test engineers can work with ASIC design engineers on a test concept targeting the selected test environment. If required, even appropriate measurement blocks can be designed into the ASIC at this stage. This **DfT** (Design for Testability) method can contribute significantly to higher yield and shorter test times once the device is in mass production; key factors for bringing the overall part price down.

Of course **eXtended SCM** is by no means replacing any of RoodMicrotec’s individual services provided to our customers since many years, but rather an additional offer uniting multiple disciplines.

To summarize, RoodMicrotec’s **eXtended SCM** concept combines full turnkey service and full flexibility – the best of two worlds!

eXtended Supply Chain Management

ASIC DESIGN PARTNER	{ Standard eXtended	Selection by customer RoodMicrotec suggests ASIC partner matching your application
FOUNDRY PARTNER	{ Standard eXtended	Selection by ASIC partner or customer RoodMicrotec suggests optimal ASIC design house/foundry combination for your project
TESTABILITY	{ Standard eXtended	ASIC designers provide access to internal nodes RoodMicrotec test engineers discuss DfT with ASIC designers targeting specific testers - <i>before</i> chip spec is frozen
ASSEMBLY PARTNER	{ Standard eXtended	Chosen by customer or ASIC design house RoodMicrotec selects and/or proposes optimal partner for specific project/volume
PROTOTYPES	{ Standard eXtended	Debug by ASIC design house or by customer RoodMicrotec offers failure/technology analysis methodes plus FIB for rapid modification
INDUSTRIALIZATION	{ Standard eXtended	Customers’ test department organizes flow RoodMicrotec offers yield optimization and customized qualification RoodMicrotec offers a smooth flow
TEST & SHIPMENT	{ Standard eXtended	Customer organizes test, logistics, shipment RoodMicrotec provides supply chain services

## Organisation

In the context of its strategy to offer customers to take care of all the steps involved in taking an idea to market, RoodMicrotec is increasingly focusing on consultancy, product engineering and project management. RoodMicrotec has both highly experienced and young ambitious engineers who are able to work in all disciplines in our organisation.

Our services comply with the industrial and quality requirements of the high reliability/space, automotive, telecommunications, medical, IT and electronics sectors. 'Certified by RoodMicrotec' concerns inter alia certification of products to the stringent ISO/TS 16949 standard concerning suppliers to the automotive industry. We also have an accredited laboratory for test activities and calibration to the ISO/IEC 17025 and ISO 1401000 standards.

## Collaboration with partners and customers

Key in our operations is not only collaboration with customers, also with partners. The entire semiconductor industry is dependent on collaboration within the production chain. For this purpose, we develop partnerships with our customers, such as FCs and

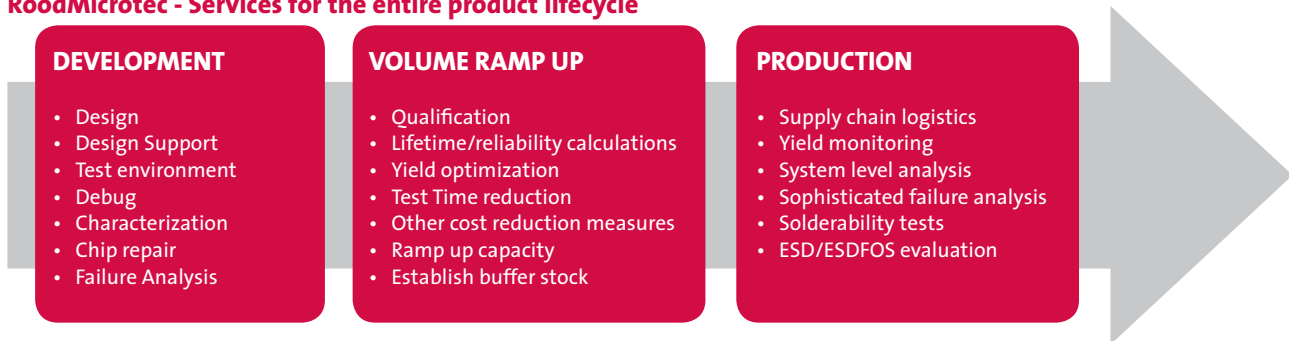
OEMs in the field of design with our design partners, such as FCs and also foundry and back-end service partners, knowledge institutes like universities, technical colleges, the Fraunhofer Institute, and with technology partners, suppliers and government authorities.

RoodMicrotec is fully committed to possessing in-house all the know-how required to develop an idea all the way from concept to end-product.

## Vision

We anticipate that an increasing number of product design companies will focus on the partial segments in which they have a strong position, but also that many of these companies that are often vertically integrated, will shed non-core activities to lower their risk exposure. Such activities would include testing, assembly and engineering. This will create a market for specialised service providers focusing on supporting leaner OEMs and FCs. We are such a specialised service provider, and we have the know-how to offer these OEMs and FCs high-quality products, both independently and within the Supply Chain Management concept. This forms the basis for our growth potential.

## RoodMicrotec - Services for the entire product lifecycle



## Ambitions

We have set ourselves the following goals:

- to position ourselves as a first-class one-stop-shop supply chain service provider to OEMs and FCs;
- to offer the highest quality individual Qualification & Reliability, Failure & Technology Analysis, Test Engineering, Supply Chain Management and Test & End-of-line services;
- to develop into a major player in the semiconductor supply chain from Asia (China) to Europe;
- to develop into a major player in the electronics services market from wafer to board;
- to position ourselves as a leading innovative testhouse in Europe.

# HiRel/space

ESA photo library



## I. ROODMICROTEC IN PERSPECTIVE - 2012

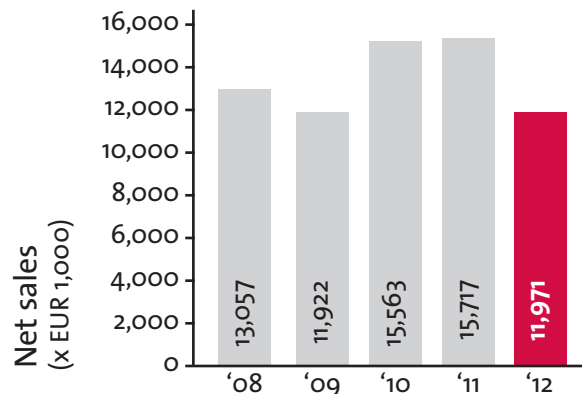
### SALES: EUR 12 MILLION

Sales growth is a key aspect for RoodMicrotec since the total semiconductor market grows by approximately 6% each year, the unit costs keep falling and complexity is increasing.

This is why volume growth and sales growth are needed for us to retain our intended market position. Sales growth allows us to finance the expert knowledge in the company and brings about essential costs reductions. The world market declined in 2012, which was one of the reasons why RoodMicrotec's sales slumped. As of 2013, RoodMicrotec's sales will increase again in parallel with the expected market growth.

**Objective for 2013 - 2017:** In the long-term (2014 and beyond) we aim to continue to grow at the same rate as in the past few years (autonomous growth of between 3% and 13 %), i.e. at least at the same rate as the global market.

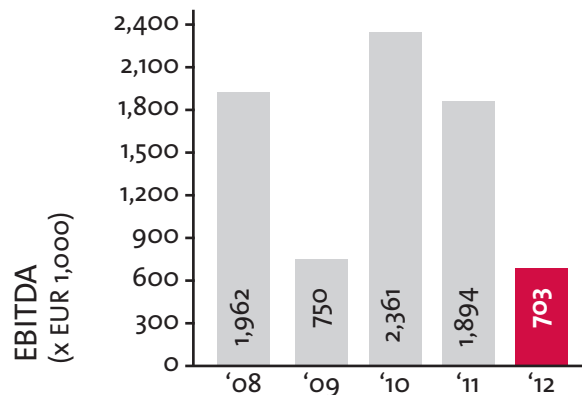
The average semiconductor market growth in 2013 and 2014 is forecast at 4.5% and 5.2% respectively (WSTS, World Semiconductor Trade Statistics forecast).

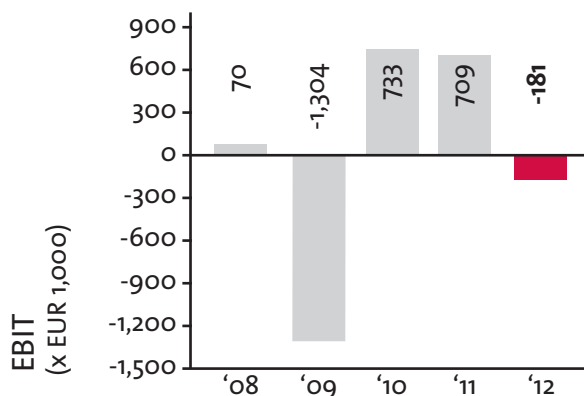


### EBITDA: EUR 0.7 MILLION, OR 5.6 % OF SALES

EBITDA: EBIT before depreciation and amortisation is one of RoodMicrotec's key evaluation criteria. Working as we do in a high-tech environment, investment in production equipment and innovation is vital in order to be able to continue to provide the desired technological solutions. This is why strong growth of EBITDA over the next few years is one of our key objectives.

**Objective for 2013-2017:** EBITDA to rise to minimum 10-15 % of sales.

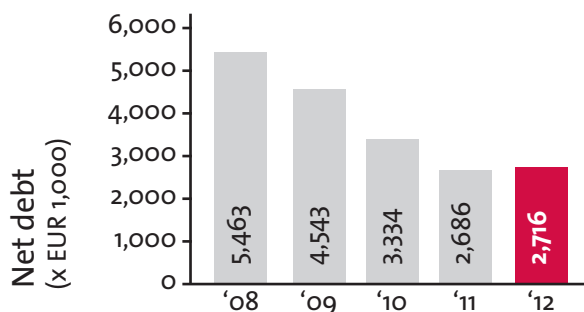




### EBIT: minus EUR 0.2 MILLION, OR minus 2% OF SALES

EBIT – the operating result or income minus operating costs – is the main benchmark for the profitability of our operations and the continuity of our company. EBIT is highly dependent on the internal efficiency of the company. RoodMicrotec has therefore set itself the objective of further optimising its operations.

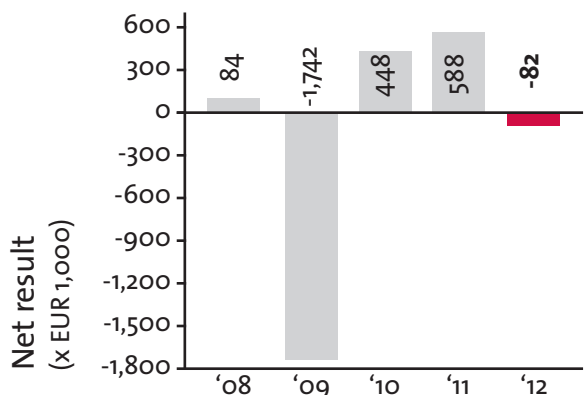
**Objective for 2013-2017:** EBIT growth to 5-10 % of sales.



### NET INTEREST-BEARING DEBT: EUR 2.7 MILLION

A significant debt position can negatively impact business operations, which in turn may impede the growth of the company. Since financing is regularly required for new activities, being able to respond rapidly is imperative. A limited debt position makes operating in the market far easier.

**Objective:** a moderate reduction of the debt position with banks based on the present business model.



### NET RESULT: EUR minus 0.1 MILLION

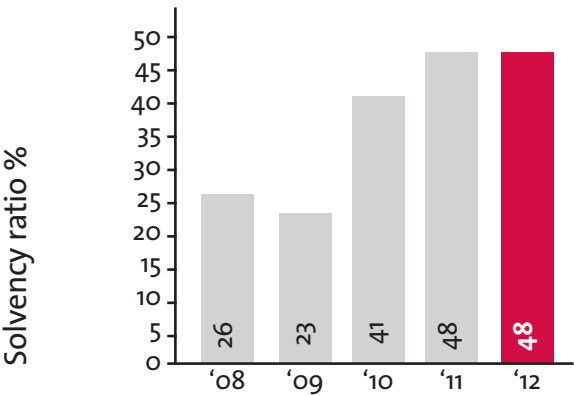
The net result is the eventual reward of all our activities. RoodMicrotec is aware of the need to achieve higher profitability than in the past, and also of the logic that we can only achieve higher profitability by raising production volumes, sales and efficiency.

**Objective for the next five years:** to raise the net result step by step to a level between 4% and 10% of sales.

**SOLVENCY: 48 PERCENT**

Solvency - the ratio of shareholders' equity to total assets - is a key indicator of the stability and continuity of a company, and is also a commercial tool. A strong solvency ratio of between 40% and 50% helps RoodMicrotec to obtain desired loans, to strengthen confidence among customers and to guarantee continuity and secure growth.

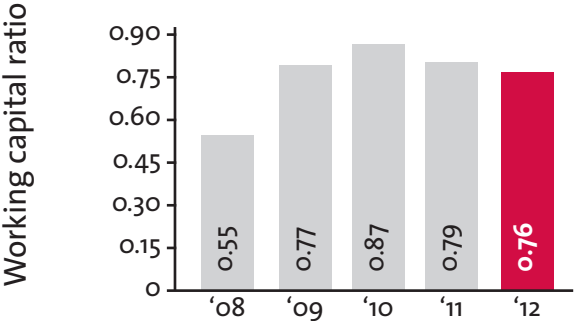
**Objective:** solvency between 38% and 50%.



**WORKING CAPITAL RATIO: 0.7 (CURRENT ASSETS/CURRENT LIABILITIES)**

As a service provider and project organisation, the working capital is a key element of our balance sheet. We must be able to secure sufficient funding to invest promptly in our projects, and working capital is vital for our company's future growth.

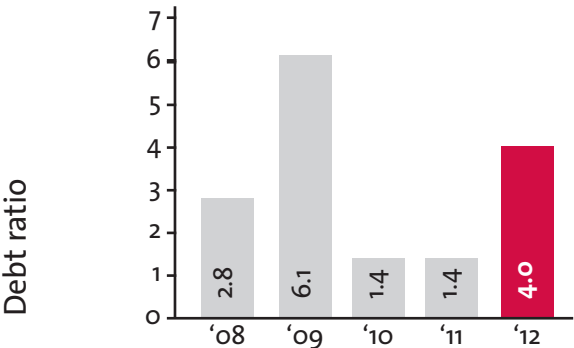
**Objective:** to keep the working capital ratio to a gross margin of between 1.0 and 1.5.



**DEBT RATIO: 4.0**

The debt ratio – net interest-bearing debt divided by EBITDA – is important for RoodMicrotec for growth financing and for obtaining long-term projects.

**Objective:** RoodMicrotec considers a debt ratio of between 1.0 and 2.5 as a solid position that can be defended vis-à-vis the bank syndicates. RoodMicrotec is in compliance with the banking syndicate agreements.



## II. KEY FIGURES

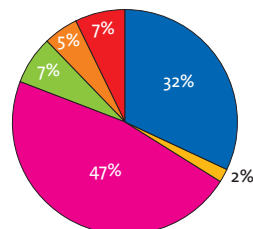
(x EUR 1,000)	IFRS 2012	IFRS 2011	IFRS 2010	IFRS 2009	IFRS 2008
<b>Result</b>					
Net sales	11,971	15,717	15,563	11,922	13,057
Total operating income	11,909	15,464	15,684	12,076	13,019
Gross margin	9,688	12,342	12,242	9,821	11,307
EBITDA	703	1,865	2,361	750	1,962
EBIT (operating result)	-181	709	733	-1,304	70
EBT	-507	408	207	-1,744	-456
Cash flow (net result and depreciation)	803	1,744	2,076	312	1,976
Cash flow from operating activities	899	1,939	1,689	315	2,815
Net result	-82	588	448	-1,742	84
<b>Capital, Debt &amp; Liquidity Ratios</b>					
Total assets	13,135	12,857	13,726	13,713	16,107
Group equity	6,352	6,138	5,647	3,115	4,132
Convertible Debt	-	-	500	750	1,667
Group equity + convertible loans	6,351	6,138	6,147	3,865	5,799
Net debt	2,716	2,686	3,334	4,543	5,463
Capital (=net debt + equity)	9,067	8,824	8,981	7,658	9,595
Gearing ratio (net debt / capital)	30%	30%	37%	59%	57%
Solvency (group equity / total liabilities)	48%	48%	41%	23%	26%
Debt ratio (net debt / EBITDA)	3.9	1.4	1.4	6.1	2.8
Net working capital	-921	-831	-569	-974	-2,994
Working capital ratio (current assets / current liabilities)	0.76	0.79	0.87	0.77	0.55
<b>Assets</b>					
Tangible fixed assets	6,347	5,732	5,710	6,629	8,367
Investments in tangible fixed assets	1,475	1,024	681	288	941
Investments in subsidiaries	-	-	-	-	2,987
Depreciation of tangible fixed assets	860	1,156	1,600	2,026	1,878
<b>Data per share (x EUR 1)</b>					
Capital and reserves	0.18	0.17	0.16	0.09	0.14
Operating results	-0.01	0.02	0.02	-0.04	0.00
Cash flow	0.03	0.05	0.05	0.01	0.09
Net result	0.00	0.02	0.01	-0.05	0.00
Share price: year-end	0.15	0.16	0.17	0.15	0.15
Share price: highest	0.23	0.31	0.19	0.57	0.57
Share price: lowest	0.15	0.14	0.15	0.12	0.12
<b>Issue of ordinary shares</b>					
At year end (x 1,000)	35,769	35,769	35,769	35,196	30,489
<b>Number of FTEs (Permanent)</b>					
At year-end	102	106	120	126	148
Average	103	111	124	128	125
Sales (total) / Average FTEs (Permanent)	116	142	126	93	104

### III. KEY FIGURE CHARTS 2012

(X EUR 1,000)

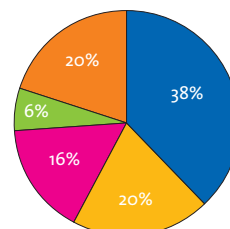
#### Revenue by Markets 2012

Automotive	3,876	32%
Telecommunication	277	2%
Industrial/Medical	5,659	47%
Data Processing	765	7%
Consumer	563	5%
HiRel/Space	838	7%



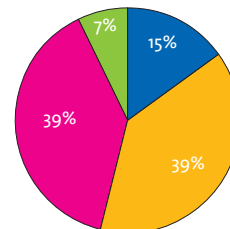
#### Revenue by Business Units 2012

Test&EOL	4,553	38%
Q&R	2,346	20%
Failure Analysis	1,917	16%
Test Engineering	705	6%
SCM	2,457	20%



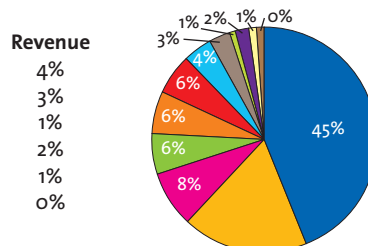
#### Revenue by Customer type 2012

IDM	1,847	15%
OEM	4,674	39%
Fabless, IP, Provider, SCM	4,609	39%
Disti, CEM, OSH	848	7%



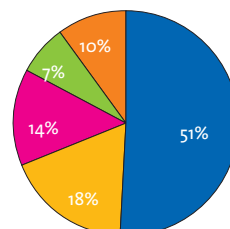
#### Revenue by Country 2012

Country	Revenue	Country	Revenue
Germany	45%	USA	4%
Switzerland	18%	France	3%
Poland	8%	Ireland	1%
Austria	6%	Eastern/Southern Europe	2%
UK	6%	Scandinavia	1%
Benelux	6%	China, India & Rest of Asia	0%



#### Costs by Category 2012

Personnel costs	6,401	51%
Cost of sales	2,283	18%
Operating costs	1,785	14%
Energy (current, gas, water)	799	7%
Other expenses	1,210	10%



## Financial agenda

14 March 2013	Publication annual report 2012
25 April 2013	Annual general meeting of shareholders
14 May 2013	Publication trading update
9 July 2013	Publication sales figures first half 2013
29 August 2013	Publication interim report 2013
29 August 2013	Conference call for press and analysts
14 November 2013	Publication trading update
9 January 2014	Publication annual sales figures 2013
27 February 2014	Publication annual figures 2013
27 February 2014	Conference call for press and analysts
13 March 2014	Publication annual report 2013
24 April 2014	Annual general meeting of shareholders
13 May 2014	Publication trading update
10 July 2014	Publication sales figures first half 2014
28 August 2014	Publication interim report 2014
28 August 2014	Conference call for press and analysts
13 November 2014	Publication trading update

# LED street lights

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## IV. SHAREHOLDER INFORMATION

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### Listing

RoodMicrotec N.V. is a public limited liability company with its registered office in Zwolle, the Netherlands and publicly listed on the NYSE Euronext Amsterdam Stock Exchange since 1986

### Major Holdings in Listed Companies Disclosure Act

As at 31 December 2012, RoodMicrotec had not received any reports in the context of the Major Holdings in Listed Companies Disclosure Act.

### Regulations to prevent insider trading

We comply with the Regulations on Notification and Regulation of Securities Transactions of the Securities Transactions (Supervision) Act (Wte 1995). A broad circle of employees and consultants has signed a declaration binding them to abide by the Rules as referred to in Section 46d of the Wte 1995. The board of management and the supervisory board also comply with the 1996 Major Holdings in Listed Companies Disclosure Act (WMZ 1996), as amended on 1 September 2002. The Netherlands Authority for the Financial Markets (AFM) monitors compliance with this law.

### Dividend

So far, we have not distributed any dividend since our financial position did not allow it.

The management prefers to allow the company over the next few years to grow and further improve its financial health. 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 year 2012. Our first priority is balanced debt management, without jeopardising RoodMicrotec's growth.

Changes in the number of shares in 2012 (x EUR 1,000):  
Position as at 1 January 2012: 35,769. Position as at 31 December 2012: 35,769.  
At 31 December 2012, the company held 4,100 of its own shares.

Irmgard Bayerle  
Management Assistant



### Investor relations

We are well aware of the importance of active and open communication with our stakeholders. For this reason, we have since 2006 pursued an active investor relations policy through meetings and conference calls with press, analysts and investors. As in 2012, in 2013 we will raise our profile by organising seminars highlighting our core activities and the corresponding services for FCs and OEMs. The objective is to communicate our specific knowledge and share it with our customers and partners. We will also give more attention to publicity.

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

### Liquidity provider

In order to promote the trade in the RoodMicrotec N.V. share and to optimise the company's relationship with its shareholders, SNS Securities N.V. in Amsterdam was engaged as liquidity provider.

### Annual general meeting of shareholders 2012

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

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## V. REPORT OF THE CEO

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2012 was a difficult year for RoodMicrotec. Contrary to previous expectations, sales fell sharply in the second quarter. On top of a struggling market, we were faced with a loss of a key part of our sales, one particular IDM. Although we were aware we would lose this turnover in due time because the products we were testing were nearing the end of their lifecycle, it happened rather sooner than expected. In previous years we had been able to offset IDM volume reductions by new sales, in 2012 we were unfortunately not able to. We lost further sales as a consequence of a customer going bankrupt. This loss mainly affected the Test and Supply Chain Management business units. We are happy to say this situation resolved itself in the third and fourth quarter. The recovery came in fits and starts, which is common in the semiconductor market. Many companies decided to reduce their capacity significantly in the last weeks of December and the first week of January, often to reduce unused holidays. In response, we also decided to send much of our staff on holiday.

It was striking how our developments almost completely matched those of the global market. Turnover in the semiconductor industry declined sharply in the first half of 2012, but rebounded in the third and fourth quarter. In 2012, semiconductor market sales significantly lagged behind 2011.

For 2013 and to a greater extent for 2014, significant growth is forecast for the semiconductor market. In 2014 the forecast growth will once again approach the ten-year average of 6% per year. We believe that this forecast is quite realistic, both because the growth of the global market as a whole will show a recovery in 2014, but also because an ever increasing number of products contain semiconductors.

In 2012 we expanded our sales capacity by recruiting an additional sales & marketing manager who will operate in all of Europe, in particular in the OEM segment. Partly due to the experience of our new sales & marketing manager, we expect to be able to approach the OEM market better than before. We expect this improvement chiefly in the area of supply chain management, which will also give new momentum to our other services. We will continue in 2013 to strengthen our sales and marketing organisation.



### Philip Nijenhuis (CEO)

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*'The macroeconomic uncertainty impacts not only the developments of the semiconductor industry, but also RoodMicrotec's. Still, the semiconductor industry showed a positive development in the second half of 2012, as did RoodMicrotec. Looking back on 2012, it was a turbulent year, and the first half of 2012 was especially disappointing. We are experiencing a recovery in particular in the countries in which we directly or indirectly realise our sales, and this is being reflected in increasing sales activities. For this reason, we anticipate our business to recover in 2013, and expect this to occur chiefly in the second half of 2013. We remain convinced that with our strategy we are on the right track and that we will be able to profit from further growth in the global market from 2013 onwards.'*

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Centralising Test in Nördlingen was successfully completed and has led to considerably greater manageability and quality levels. Optimising the Test business unit did take up a significant amount of engineering capacity in 2012. In addition, we have recruited new staff in Test Engineering.



### Reinhard Pusch (CSO)

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*'2012 was a year of structural changes. A major internal change was the introduction of a company-wide ERP system, which affected especially the members of the internal sales teams. It will help us to operate more consistently and improve reporting, which will improve our offer preparation. We received varying signals from the market: there was a major drop in business from one key customer, which was partly offset by new customers and additional business from within our current customer base. I am grateful to our colleagues in sales for their determined efforts that have made this new step possible.'*

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We decided to recruit an ASIC designer who will further develop our supply chain management in the direction of eXtended SCM. This ASIC designer will liaise between our external design partners, subcontractors and our in-house service provision. In this way we hope to give additional momentum to the development of our supply chain.

### Norbert Wirth (CTO)



*'Know-how, innovation, experience and excellent project control are the success factors for development teams. In early 2012 we were in a critical personnel situation in Nördlingen and Stuttgart due to a shortage of engineers. We were able to manage this problem by hiring highly skilled experts and young engineers directly from universities. I was positively surprised how fast we were able to overcome the staff bottlenecks.'*

*After twelve months of hard work the business units Test Engineering, Failure & Technology Analysis and Qualification & Reliability are now in a very much better state. Our target for 2013 is to improve our competences further in order to be well prepared for new challenges.'*

In the first half of the year, Failure & Technology Analysis was weak, partly due to a lack of capacity, but it recovered sharply in the second half. Meanwhile, we have gained a good position in this area, and will further stimulate it, also by recruiting additional specialised engineers. Qualification & Reliability showed stable development in 2012. We intend to continue our growth in this business unit, too. In 2012 we adapted and improved our internal organisation in various areas. For example, the payroll administration was contracted out, as well as part of our bookkeeping. This will allow us to focus specifically on our primary processes. Our listing and the related regulatory and control costs are a heavy burden for a company such as ours in terms of size. The board of management is actively looking for solutions for this issue. In this context, financial and/or strategic participation by other parties in RoodMicrotec is welcome, as well as a review of our current listing.

### Outlook for 2013

After disappointing market developments in 2012, in 2013 4.5% growth of the global market is being forecast and 5.2% in 2014, according to the World Semiconductor Trade Statistics (WSTS). However, these figures are still below the multi-year average of 6%. Analogous to the forecasts of the WSTS for 2013 and beyond, RoodMicrotec anticipates a recovery of its business and the realisation of its growth objectives. We aim to grow at least at a faster rate than the global market, which we have done almost without fail in the last 9 years.

The ongoing increase of the number of applications backs up our confidence that in 2013 we will once again grow more strongly than the market.

However, the macroeconomic developments force us to remain cautious. For this reason, we do not pronounce any concrete predictions for 2013.

### Remy Cuny (CFO)



*'2012 was a year marked by integration and big changes in a major part of our support departments. We merged two different ERP systems into one, and in the same period we also finalised the legal merger of our German legal entities. Furthermore, we contracted out our bookkeeping and payroll administration, while at the same time automating and digitising many administrative processes.'*

This was achieved by our own people within a very short time, next to their regular activities. In spite of serious time constraints, they dedicated themselves 100% to achieving this goal, even though it meant that some employees' positions would be eliminated. We are very proud of what our employees have achieved. All this gives us the confidence that in 2013 we will be lean and mean, and can focus fully on supporting our business units in their sales and operational performance.'

Long-term (as from 2014) we aim to maintain our growth at the least at the same level as the global semiconductor market.

## Strategy, SWOT analysis and financial objectives

### General

RoodMicrotec N.V. is listed on the Official Market of the NYSE Euronext Amsterdam stock exchange ( NYSE Euronext N.V.) since 1986.

With 44 years' experience as an independent value-added service provider in the area of micro and opto-electronics, we offer FCs, OEMs and other companies a one-stop-shop proposition. With our powerful solutions we have built up a strong position in Europe. Our customers are mainly based in Europe.

The activities have been grouped into the following business units:

- Supply Chain Management
- Test & End-of-Line Services
- Failure & Technology Analysis
- Test Engineering
- Qualification & Reliability
- Engineering/Consulting/ Project Management

At year-end 2012, the company had 102 full-time employees with an average of 103. In the 2012 financial year, sales of EUR 11,971 generated a net result of EUR 82,000 negative.

## Strategy

### *General strategic objective*

We aim to position ourselves as a first-class one-stop-shop supply chain service provider to OEMs and FCs in Europe. We focus on strengthening our current specialist areas Supply Chain Management, Test Engineering, Failure & Technology Analysis, Qualification & Reliability, Engineering/Consultancy/Project Management and Test & End-of-Line Services for microelectronics, optoelectronics and printed circuit boards. Additionally, we aim to enhance partnerships in the area of wafer and back-end applications.

### *Market choices*

The semiconductor market fell in 2009, then recovered in the second half of 2010 and the first half of 2011, but slumped again in 2012. The long-term trend remains very positive, with an average annual growth of approx. 6%. The market is expected to see strong growth of between 4% and 6% over the next few years. We will continue to focus on the fastest growing segments within the semiconductor market in order to grow at least at the same rate as the market as a whole.

### *Customer types*

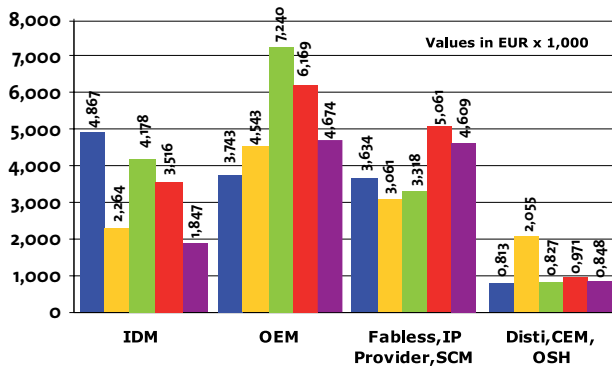
We distinguish four customer groups: IDMs (Integrated Device Manufacturers), OEMs (Original Equipment Manufacturer), FCs (Fabless Companies)/IP-providers and Distributors. Our special focus is on OEMs and FCs.

These OEMs are turning ever leaner. To achieve that goal, they contract out non-core activities, including semiconductor manufacturing facilities. It is vital for OEMs to have a supply of reliable highly qualified chips. Production continuity is of the essence. But they also often require unique solutions. We are uniquely qualified to provide these solutions in collaboration with our partners. Protection of specific features of these products may play an important role in this.

**Jerôme Sabot**  
**Manager Internal Sales,**  
**Communications, Logistics,**  
**Purchasing, SCM**



## Revenue by customer type



■ 2008 ■ 2009 ■ 2010 ■ 2011 ■ 2012

Note: 2008 including microtec-figures of the 2nd half

FCs are even more motivated than the other categories to protect their know-how. IP protection is their priority. As a service provider, we are never in competition with FCs, so their IP know-how is maximally protected.

Also, FCs have shown double digit growth over the past few years. There are between 300 and 400 of these FCs in Europe, many of which are active in the more complex mixed-signal chips.

### Product choices

Our know-how and services are focused on the following products:

**Semiconductors:** There is a wide range of products in the semiconductor market. We focus on more complex products that often combine analog and digital technologies and that are used in the space and aeronautical, automotive, medical and connection technologies as well as in other industrial applications. These applications demand the highest reliability. So we emphatically do not focus on toys, cheap consumer electronics, etcetera.

**Optoelectronics:** Optical electronics is a booming business which will find more and more applications. Strong market growth is expected in this product segment. Our products tend to be associated with industrial applications and are often produced in limited series, but to very high quality requirements. We have the specialists capable of doing this.

**Printed Circuit Boards:** Developing and testing printed circuit boards for high-quality industrial applications is a relatively new market for us. The distinction between printed circuit boards and chips is growing smaller and more complex due to rapid technological developments. The quality requirements are very high, especially in aerospace and aeronautical applications. We expect further growth in this market.

### Service provision choices

**Core activities:** Core services like Supply Chain Management, Test Engineering, Failure & Technology Analysis, Qualification & Reliability and Logistics as mentioned in profile on page 4. As product use in Europe will increase while production decreases, the volume of the semiconductor supply chain will rise in the next few years. We intend to expand our role in this supply chain.

**Back-end test and assembly services:** Offering assembly capacity is crucial in order to play a major role in the abovementioned supply chain. To ensure this, we have concluded partnerships in Europe and Asia. These partnerships enable us to offer a competitive integral solution.

**Focus on consulting in the complete field of electronics:** We will continue to exploit our broad range of know-how in the market of consulting and assessment of reliability, interconnection technology and ESD. Our recognised industry experts offer valuable solutions to the customer.

**High-tech Test & Related Services:** We will continue to focus on the mixed-signal and image sensors products that are used extensively in the automotive, industrial, High Rel/satellite, medical and telecom sectors. All these markets are strong in Europe.

# Telecommunication consumers



## Internal assessment of the company

### **SWOT analysis**

As of 2007 we have reported on our internal assessment of the company. An update of those reports is set out below.

#### *Strengths:*

- Gained a position in the OEM and Fabless Company market.
- Our company's location in southern Germany, which has reached the necessary critical mass per service.
- The staff's know-how and quality awareness are very high.
- Positive cash flow and balance sheet ratios.
- One of the few recognisable independent Supply Chain providers in Europe.

#### *Weaknesses:*

- Limited size of the company.
- The financial net result is poor.
- No presence outside Europe.
- Our market is and will remain cyclical.

#### *Opportunities:*

- A key opportunity is to become a first-class European one-stop-shop supply chain provider and a partner for leading high-tech FCs.
- There are currently exciting opportunities in the services market to FCs and OEMs: many companies are introducing new products with great potential, which RoodMicrotec can support.
- Opportunities to strengthen our market position by means of partnerships in engineering and in-house test engineering.
- Increased scale and scope through M&A and partnerships.

#### *Threats:*

- The developments in the dollar, even though we currently have only limited exposure.
- The risk that the development of new products also moves to Asia, partly due to the cheap dollar.
- The semiconductor production in Europe is declining structurally.
- The cyclical character of the semiconductor business and a continuation of the downturn.
- The tight labour market for highly qualified specialised personnel.

## Critical success factors

Several critical success factors have been identified within the company, which are measured periodically. These include: sales, sales per business unit, engineers, order intake, order hit rate, staff motivation, customer assessment, cash position and our relationship with banks. Some of those measurements are quantitative, others are qualitative; the indicators are periodically adjusted to changing circumstances. The management draws conclusions based on this information.

## Financial objectives realised in 2012

The objectives for 2012 were based on relatively optimistic world-wide semiconductor market forecasts of 2.6% growth. Unfortunately the market dropped with about 2.7%, which means a world market deduction of about

\$16 billion compared to the forecast. That has influenced the realisation of our objectives significantly. Nevertheless we were able to improve several financial objectives:

- reduction of inventories with about 25%;
- improvement of trade receivables with about 15%;
- improvement of cash cash and cash equivalents position;
- reduction of non-current liabilities.

## Long-term financial objectives

- sales growth of between 0% and 7% over the annual market growth, at an average semiconductor world market growth of 6% per year;
- annual improvement of the operating result;
- optimizing the debt position by means of long-term and short-term loans.

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## VI. REPORT OF THE SUPERVISORY BOARD

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We hereby present the 2012 annual report as prepared by the board of management in accordance with Article 26 of the articles of association of the company.

The financial statements were audited and issued with an unqualified opinion by Mazars Paardekooper Hoffman Accountants N.V. and discussed by us with the board of management in the presence of Mazars. We propose to our shareholders to adopt these financial statements in the general meeting of shareholders on 25 April 2013 and to discharge the board of management of responsibility for their conduct of business in 2012 and the members of the supervisory board for their supervision of the management.

In consultation with the management we propose that no dividend be distributed.

### RoodMicrotec in 2012

2012 was a disappointing year for RoodMicrotec. Contrary to the original expectations, difficult market conditions and the disappearance of a large client hit the company. The company did benefit from the restructurings and new synergies created in 2011, and these helped the company to weather this difficult year. Following the completion of the relocation of the production between the two sites in Germany, focus for the year 2012 was on the implementation of a new growth strategy and the development of new markets.

The managing board has put major efforts in its continued path towards more integrated services for its clients and prepared for a stronger marketing organisation in Europe. Proposals were presented by the executive management and discussed. It was among others decided to put more resources and focus on the development of business in the Benelux and the United Kingdom. RoodMicrotec remains a small player and the costs of being a listed company outweigh the benefits. It is therefore the shared opinion of the management board and the supervisory board that cooperation with financially strong partners is a desirable option for the company and its stakeholders. In consultation with the supervisory board, the company has shown openness to orientation discussions with potentially interested parties. No concrete results can be presented.

### Supervisory board meeting schedule

The supervisory board gives the highest priority to good corporate governance practice.

The supervisory board met with the board of management seven times during 2012. In addition, meetings were held between individual supervisory board members and the board of management. These meetings were held both in Zwolle at the corporate head office and at the production sites in Stuttgart and Nördlingen. Given the location of the supervisory board members, some meetings were held 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;
- risk management;
- remuneration;
- financial audit and the outsourcing of parts of the financial administration;
- publication of press releases.

V.G. Tee



The supervisory board also met without the board of management and reviewed the performance of the organisation, management issues and structural business developments.

The supervisory board met with the external auditor in the absence of the board of management to discuss audit issues. In this context the financial control system and the internal audits were reviewed.

The supervisory board met with representatives of the Works Councils in both Stuttgart and Nördlingen in the absence of the board of management to discuss the position of the company.

### **Supervisory board composition and evaluation**

There is currently no separate remuneration and audit committee; all topics are discussed in the joint meetings with the board of management, sometimes after preparation by members of the supervisory board.

The supervisory board evaluated its own performance over the year 2012. Given the small size of the board and the company, this evaluation was performed without external assistance. Topics of discussion were the individual competences of the board members, internal communication and reporting procedures between supervisory board and board of management. It was concluded that competences in the areas of microprocessor technology, operations, commercial management, strategic management, finance and risk management as well as international experience remain sufficiently represented on the supervisory board. Internal communication and procedures within the board are considered adequate for a company of this size.

Finally, the supervisory board wishes to thank all of RoodMicrotec's staff for their great efforts, loyalty and continued dedication during 2012.

Zwolle, 13 March 2013

#### **The supervisory board**

J.H.P.M. Stolker, chairman

V.G. Tee

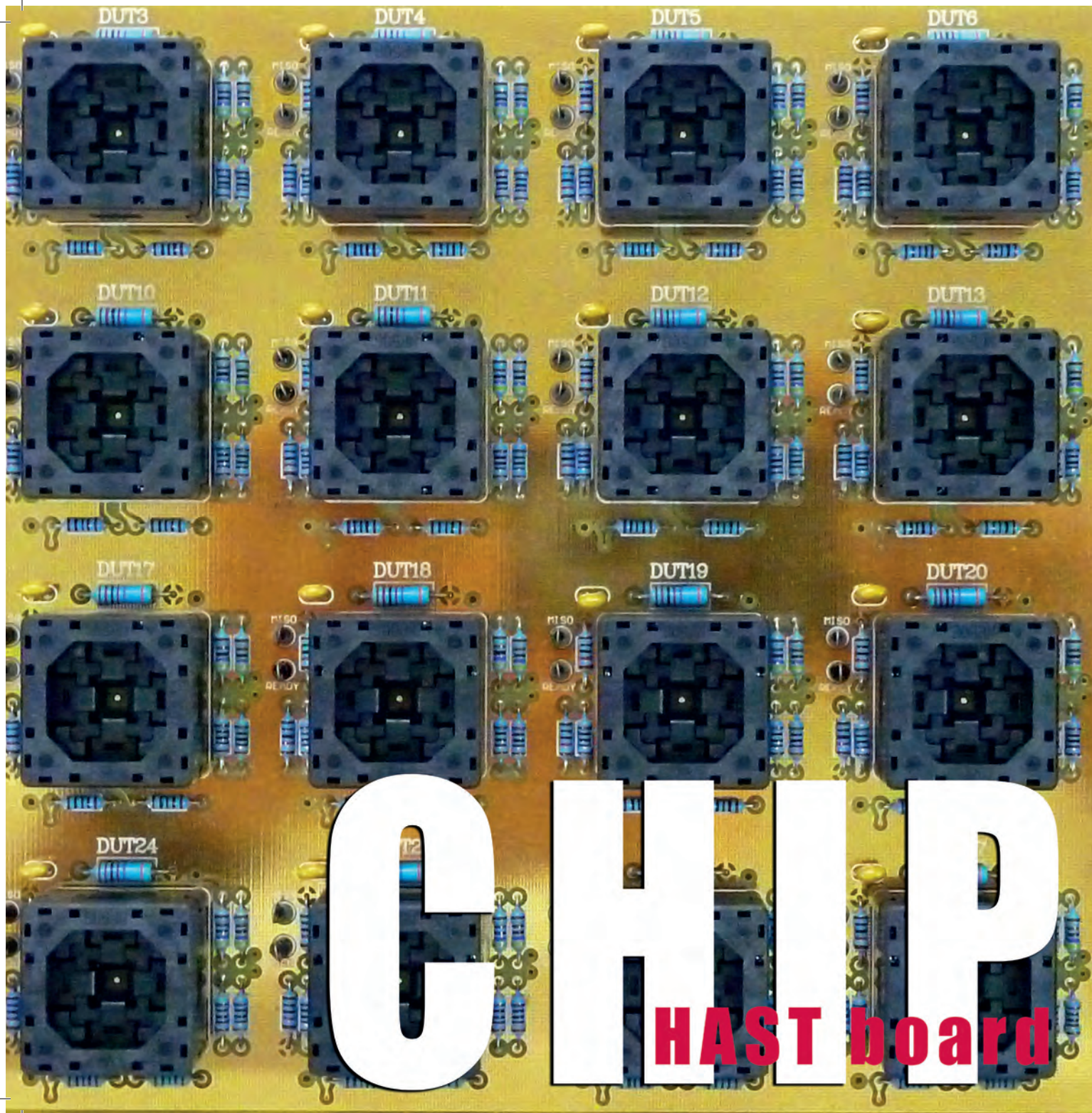
W. Fluit

**J.H.P.M. Stolker**



**W. Fluit**





## VII. REPORT OF THE BOARD OF MANAGEMENT

### A. General

At the end of 2011, the outlook for 2012 was positive. World Semiconductor Trade Statistics (WSTS) forecast about 4% growth in 2012. Instead, the market contracted by over 2.7%. RoodMicrotec felt the worst drop in the second quarter of 2012. It was partly due to the state of the economy, but also to the fact that some products we used to test for a big IDM came to the end of their lifecycle and were discontinued, and to a major customer going bankrupt. Business recovered in the following quarters. Incidentally, the number of applications never dropped, even in the second quarter. In a market slump it is more difficult to find new customers. On top of that, projected sales to other key customers also fell below expectations. These two occurrences together, being the market decline and the loss of sales due to end-of-lifecycle and bankruptcy, caused RoodMicrotec to adjust its costs maximally. However, the company has continued to invest in the future.

The loss of the abovementioned IDMs marks the end of an era in which a large part of RoodMicrotec's sales came from IDMs, such as Infineon, NXP and others. These companies have increased their presence in Asia and now subcontract little of their business in Europe. It was a trend we had predicted, and in fact anticipated.

After RoodMicrotec in 2011 had achieved growth at a rate above that of the then recovering global market, its growth in 2012 declined faster than the global market. This has happened before in the past.

### B. Key developments in 2012

Further development of our Supply Chain Management organisation by sharpening up our profile by introducing eXtended SCM (see also page 4). For this purpose, we have recruited additional engineering capacity and introduced a support product engineering group, which is to supervise product development projects. Both our centralised test activities in Nördlingen and our Failure & Technology Analysis group have shown good progress. In addition, we have contracted out some staff activities like payroll admini-

stration and part of our bookkeeping. We also installed a new mainframe and introduced and/or optimised various computer systems.

### C. Operational and commercial objectives achieved in 2012

The number of customers for Supply Chain Management increased over the past year, in line with our objectives. In the initial phase, the new customers are realising limited sales for now, but they are expected to grow in the future. Vital in that has been our presence at various seminars, exhibitions, fairs and industry magazines in various European countries. Furthermore, we have searched for new sales managers, which has led to the appointment at the end of 2012 of a European-oriented sales & marketing manager.

Due to the market slump caused by the ongoing economic crisis, Fabless Companies find it harder to find funding for their projects, which has affected our sales growth in this segment.

Our logistics system was introduced in our sites in Stuttgart and Nördlingen, which has brought about a significant improvement and allows us to monitor our orders far better. This was necessary to enhance customer satisfaction.

We have strengthened our project management in our organisation inter alia by laying down responsibilities for projects more clearly. Senior managers have been given responsibility for entire projects, from design to eventual delivery.

**Erika Nagel**  
Management Assistant



### D. Operational and commercial objectives for 2013

We will expand our activities in the area of eXtended SCM further through partnerships with other companies. In particular, our strengthened sales organisation will allow us to focus more on recruiting new customers in the OEM segment. We will also continue to work on improving customer satisfaction.

#### Market developments and market position

The following trends may be identified in the semiconductor industry:

- ongoing globalisation and corresponding pressure on prices;
- ongoing relocation of business to low-wage countries;
- customers reassessing their core competences.

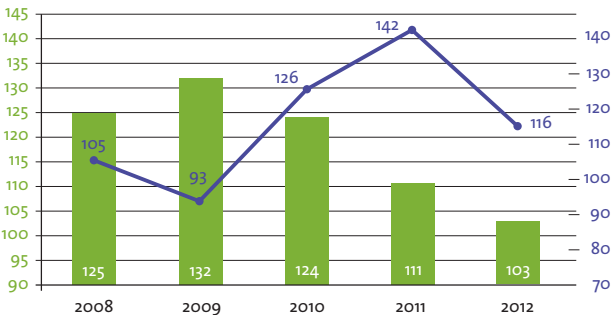
We respond to these developments by focusing specifically on:

- professionalism;
- project support by senior managers;
- broadening engineering support.

#### Sales by employee and head count

The average full-time employees (FTE's) decreased by approx. 7% from 111 FTE in 2011 to 103 FTE in 2012.

Sales per full-time employee decreased by approx. 18% from EUR 142,000 in 2011 to EUR 116,000 in 2012.



- Av. head count FTE (fix)
- Sales per FTE (fix) in EUR x 1,000

### E. Sustainability

'People, planet and profit' are key elements in RoodMicrotec's strategy. In the area of 'people', we strive to explain the strategy of the company and the corresponding objectives to our employees so they can help the management realise them. Continuous training is a precondition for bringing this about. Another factor in the success of our organisation is a focus on the four basis principles of our social system. Adaptation to market changes, safeguarding company culture, goal-oriented operations and integration, i.e. matching procedures and actions.

Ultimately, any organisation can only achieve its goals by striving to establish a performance-oriented environment for its employees, so that they can use their talents in the realisation of the company's objectives.

RoodMicrotec strives to improve the employee assessment systems, and the corresponding introduction of objectives.

With regard to 'planet', RoodMicrotec has an active environmental policy in place introducing an environmental monitoring system and preventive actions to keep environmental risks at acceptable levels and to monitor them.

Romy Baur  
Human Resources



## F. Quality management

The success of our company is dependent on the success of our customers, employees and investors. But we believe it is also conditional on ensuring the quality and management of our processes and operations. Our core business is to pursue constant improvement of the reliability and reproducibility of our services and products and the efficiency of our processes. RoodMicrotec's integrated management system is derived from international standards.

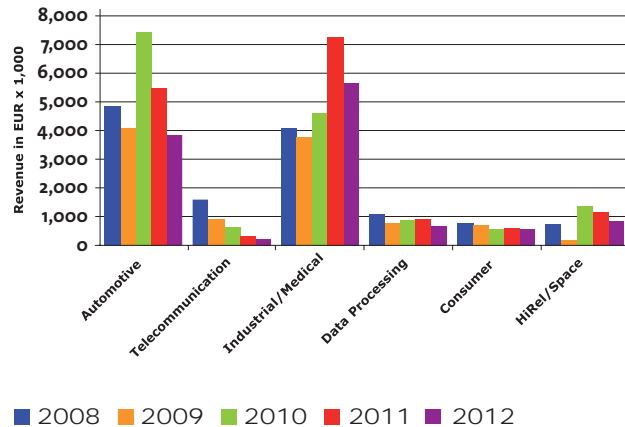
Our location in Nördlingen is certified to the ISO 14001 standard and the ISO/TS 16949 standard. This certification is the result of collaboration between ISO and IATF (International Automotive Task Force) and is recognised by all automotive QS-9000 and VDA 6.1 oriented industries. The Qualification & Reliability and Failure & Technology Analysis labs in Stuttgart and Nördlingen are certified by the DAkkS Deutsche Akkreditierungsstelle GmbH (German Accreditation Body) based on ISO/IEC 17025 'general requirements for the competence of testing and calibration laboratories.' This enables us to perform verifications for public reference. With our products and services we aim to exceed customers' expectations in terms of quality and price.

**Certified by RoodMicrotec**

**Hans-Joachim Mertens**  
Quality Manager



## Revenue by market segment



Note: 2008 including microtec-figures of the 2nd half

## G. Sales and result

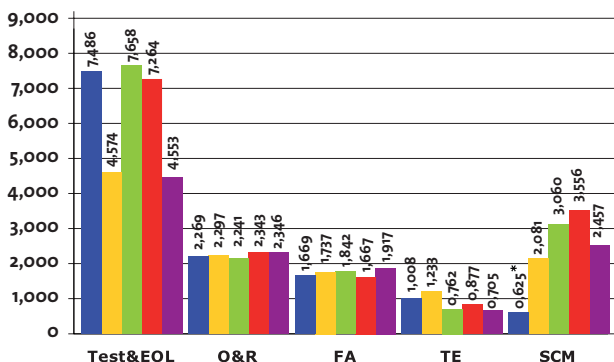
In 2012, RoodMicrotec's sales decreased compared to 2011. Net sales broken down by customer category/sector (market segment) are presented below.

(x Eur 1,000)	2010	2011	2012
Automotive	7,473	5,491	3,870
Telecoms	590	385	277
Industrial/Medical	4,659	7,222	5,658
Electra Data Proc.	875	904	765
Consumer	586	610	563
Hi-rel/Space	1,380	1,105	838
<b>Total</b>	<b>15,563</b>	<b>15,717</b>	<b>11,971</b>

The sales results of the business units were as follows:

(x Eur 1,000)	2011	2012	Approx. change
Test	7,264	4,546	-37%
Supply Chain Management	3,556	2,457	-31%
Failure & Technology Analysis	1,667	1,917	+15%
Test Engineering Qualification & Reliability	2,343	2,346	0%
<b>Total</b>	<b>15,717</b>	<b>11,971</b>	<b>-24%</b>

## Revenue by business unit



■ 2008 ■ 2009 ■ 2010 ■ 2011 ■ 2012

Note: 2008 including microtec-figures of the 2nd half

\*: Calculation for SCM (Supply Chain Management) has been changed in 2008

## H. Investments and financing

In 2012, investments in tangible fixed assets totalled EUR 1.475 million (2011: EUR 1.0 million). Depreciation was EUR 0.9 million (2011: EUR 1.2 million). The investments were partly financed from operational cash flow. For the next few years, we anticipate that investments will remain limited due to various synergy benefits. At year-end equity was EUR 6.4 million, a 5.2% increase as compared to year-end 2011 (EUR 6.1 million). Solvency remained stable at 48% (year-end 2011: 48%).

## I. Taxation

In 2012 we restructured our companies by reducing the number of GmbHs in Germany. We subsequently rationalised the companies and then harmonized the information structure (financial, commercial & operational), partly as a result of the above. In addition, our market position changed very quickly from a subcontractor for the large device manufacturers towards an integrated service provider with 'supply chain management' as its driver. This change of character fundamentally altered our order horizon: as a subcontractor of major device manufacturers our order horizon was very short indeed; most of our orders served to deal with peak loads, and such orders could change or dry up very quickly. As an integrated supply chain provider we build up long-term relationships with our customers, i.e. from the design phase until the end of the lifecycle of a product. The developments described above led to a review of the estimation period, extending it from 3 to 5 years. This adjusted estimation period as well as the review of the company's outlook had the effect of increasing the deferred tax assets on the carry forwards tax losses. The effect of the review has been fully included in the 2012 results.

**Arno Rudolph**  
Sales & Marketing Manager



## J. Market developments

### Devices for aeronautical and space applications

The application areas aeronautical and space technology place the highest demands on the total value creation chain in terms of quality and reliability. In most cases the lives of the astronauts or the success of the mission depend on the correct operation of all parts in the most demanding conditions. Repairs are often impossible during flight.

Another challenge is to meet the highest reliability requirements also for low production numbers. The investigations and tests carried out by RoodMicrotec are adequate to meet the high demands of aeronautical and space applications: in particular the entire Qualification, Lot Acceptance Test (LAT) and Destructive Physical Analysis (DPA) for new developments, production parts and 'reliefing'. Selection tests, upscreening and counterfeit analyses for parts that are no longer in production complete our portfolio. This applies to the entire spectrum of electronic components, from simple resistors and integrated circuits to complex optical sensors with detection logic.

The analytical as well as measurement and test activities are performed inter alia to the ESCC 9000 and 9100 standards in our ISO/IEC 17025 certified lab on hermetic and non-hermetic parts. RoodMicrotec serves a wide range of customers in the aeronautical and space industries, mainly in Europe. Since 2012, RoodMicrotec is also a direct supplier of ESA (European Space Agency), in conjunction with different partners. Furthermore, RoodMicrotec supports an increasing number of customers in the HI-REL areas aeronautical, space and satellites.

RoodMicrotec has been awarded a Certificate of Qualification No 307 for qualification work for our customer.

**Günther Lippold**  
Manager Opto-/Mechanical  
Qualification



### Semiconductor Services to achieve and ensure consistent quality in LEDs

LEDs open the way to new applications and markets in various different fields with a broad spectrum of requirements. LED lighting is advancing rapidly and increasing the replacement of classical lighting. LEDs are used in flatscreen TV, automotive applications, general lighting, traffic and street lighting.

Besides other benefits, LEDs in general provide high reliability; lifetimes of over 1,000 hours can be reached. But poor workmanship in manufacturing and unfavourable operational conditions may reduce the reliability significantly. Avoiding failures and achieving fast resolutions of existing problems requires excellent knowledge of the failure mechanisms and suitable analytical methods.

RoodMicrotec has extensive experience in performing failure analysis, characterisation, qualification, life testing and classification of single LED chips and LED lamps.

LEDs present a broad range of faults which can be approached using different methods of analysis. The objective of failure analysis is to allocate the observed error pattern to a possible cause and then show a way to avoid it. Because of the complexity, a failure analysis puts high requirements on technological know-how and the availability of methods for analysis. The knowledge and experience of the employees as well the dedicated inspection equipment in semiconductor failure analysis is available at RoodMicrotec since many years and is the best base to apply also for LED. It is the close teamwork of failure analysis people with opto- and reliability engineers that results in fast and effective root cause finding, providing recommendations for quality improvements.

**Holger Pross**  
Sales & Marketing Manager





# INDUSTRY

Agriculture

RoodMicrotec regularly contributes to conferences and fairs with technical presentations, lectures & articles that promote its experience to a broad community. Our publications present the typical failure mechanisms, various types of analysis and corresponding ways to avoid failures. For example, in 2012 we attended seven fairs and workshops and made nine speeches. The feedback from the audience was very positive, especially the valuable tips and recommendations.

Our plans for the future are to continue to align our resources (know-how, equipment) with the technical demands of the market for qualification and life tests, such as for street lighting. The objective is to contribute to energy and cost savings, improved lifetimes, and reduction of waste.

### Summary

Basically, the reliability of LEDs is high, but also very dependent upon technology, construction technology and application requirements. A systematic procedure to zero failures, suitable procedures and methods for analysis, the correct way to produce and interpret error patterns of LEDs and very importantly, the realisation of preventive measures for the avoidance of problems are vital in our work.

**Dieter Schreiber**  
Sales & Marketing Manager



*'As value-added service provider, RoodMicrotec responds proactively to the demands of our markets. In this context, a few years ago we introduced the Supply Chain Management (SCM), in which we take care of production, assembly as well as logistics of the devices in addition to our standard services. This service was a growth segment for RoodMicrotec. Starting from scratch some years ago, it has increased to over 20% of revenue in 2012.'*

*I have acquired several new projects for interesting applications; here are some examples:*

- an access control application in the area of security control;
- a general industrial automation device to be used in an universal PLC (programmable logic controller). This standard device has an expected life time of 10-15 years. The annual offtake/quantities of

*this device are expected to start growing as of the time it has been engineered in several universal PLCs;*

- a professional chronograph with altimeter and GPS functionality;
- a redesign of an ASIC into an ASSP device to be used in a general application environment.

For these and similar projects we usually utilise our partners for wafer production and assembling in Europe and the Far East. In some cases, e.g. with CMOS image sensors in optoelectronic packages, we need the highest level of excellence and know-how in order to be able to realise the requirements of our customers. For these kind of projects we have performed software and hardware development, electrical testing of wafers and packaged devices, qualification of semiconductors and in some cases failure analyses as well.

For 2013 we expect to grow further in this segment. We are currently discussing new SCM projects with several new customers. At our customers' request we have strengthened our SCM services portfolio towards eXtended SCM, which has been highlighted elsewhere in this report.'

**Mike Jarvis**  
Sales Representative, UK



*'2012 was a positive year in the UK with the opening of the Remote Test and Sales Office here in Bath.. This along with some hard work over the past two years will see several projects begin in 2013. One of those is thanks to close cooperation with one customer in particular; RoodMicrotec has formed an alliance with a fabless company here in the UK. Engineering work is due to start shortly with first production runs. This opportunity links us to what could become a major player in the world module market. The second involves new developments in forensic analysis aimed at police forces here in the UK and around Europe, which should keep our engineers busy well into 2014 and beyond. In order to maintain our growth in the UK RoodMicrotec has enlisted Malkit Jhitta (formally of Delta) to strengthen the European team and in his role as sales & marketing manager his focus will be on eXtended SCM both here in the UK and mainland Europe. I look forward to working with him and expanding the European market.'*

**Malkit Jhitta,**  
**Sales & Marketing Manager**



*'The last four years or so have been extremely tough for the semiconductor industry with a considerable amount of consolidation and downsizing. Some of this downsizing activity has and will continue to result in an increase in demand for the services provided by RoodMicrotec. As a supplier of a range of world class specialist skills and services in qualification, reliability, test and quality engineering RoodMicrotec is well positioned for growth in 2013. Combined with the uprated eXtended Supply Chain Management offering, as the latest addition to the sales & marketing team I expect a very busy and successful career at RoodMicrotec.'*

## **K. Research and Development projects**

### **HERMES project**

The technical project work on the innovative research fields of embedding and corresponding testing has been finalised with the official project end dated late February 2012. During a final review meeting in Leoben, Austria, the European Commission confirmed that HERMES has been a very successful project due to the excellent work of all project partners in their individual project tasks. The project achievements were presented at the meeting in a video and a public presentation. Within the project RoodMicrotec developed and verified new test concepts for the different project demonstrators.

## **Manos Project**

In 2012 a first step was made in which the specifications and the requirements for two planned sensor systems were laid down. These specifications include basic properties, range of functions and lifespan requirements.

The modular sensor concept was developed based on the requirements set by the specifications. Depending on the availability of certain required components, it was decided which technology could be used to embed them in the module. With available samples the first embedding tests were carried out.

In conjunction with the project partners, the requirements for adhesives were designed and tested in relation to various technologies, such as Lasercavity and Chip+. RoodMicrotec together with its project partners designed a concept for testing the modular components at different stages of completion. The purpose of this test concept is to reduce the reliability investigation of individual modules after completion by means of acceleration investigations. Furthermore, reliability investigations were performed on stacks, i.e. stacked individual modules with different adhesives.

The key point for 2013 is the optimisation of various adhesives and construction of the first prototypes with corresponding initial qualification.

**Wilhelm Wagner**  
**Engineering/Consultancy/  
Key Account Project  
Management**



## **Objectives for 2013**

RoodMicrotec will improve its knowledge of LEDs and LED lamps to establish a certification process for LED 'retrofit lamps', general lighting and automotive applications. In addition to all the government safety regulations, this includes a complete optical characterisation of these kinds of lamps. This characterisation will form the basis for a proper selection of LED lamps for the European market.

## L. Report per business unit and division

### Supply Chain Management (SCM)

#### **Profile**

In this business model RoodMicrotec supports customers who wish to put high-quality semiconductors, in particular ASICs and ASSPs, on the worldwide market. RoodMicrotec provides all services from the beginning of the development process (together with design partners), up to delivery to its customers, including engineering support, test engineering, wafer test, assembly (through partners), final test, qualification and reliability, failure and technology analysis and logistics. RoodMicrotec achieves this by qualifying and testing suppliers as well as products and, if requested, executing the entire project management for such processes. RoodMicrotec is capable of managing the entire 'end-to-end' process, but can also provide each individual step separately.

#### **Key developments in 2012**

In 2012 we introduced a new business model called extended SCM (eXtended SCM). eXtended SCM starts in the chip specification phase. Our experienced engineers work together with the ASIC design engineers on a test concept targeting the selected test environment, potentially adding appropriate functional blocks to the ASIC. This DfT (Design for Testability) method can contribute significantly to higher yields and shorter test times once the device is in mass production.

#### **Objectives realised in 2012**

In the second half of 2012 we managed to increase the sales result by 47% compared to the first half of 2012. Furthermore, the extension of a long-time partnership with one of our main customers was a great success in 2012, which reflects the confidence in the work of RoodMicrotec. Compared to 2011, we increased the number of new customers by 25%. The roots of these customers are in different market segments, which brought us a wider range of applications. This also includes new market segments in Europe, giving us an opportunity to further expand our market penetration as a first-class one-stop-shop supply chain provider in Europe. RoodMicrotec also presented its supply chain capabilities during different events, in particular the GSA European Executive Forum in Geneva, the Electronica in Munich and the SMT in Nuremberg.

#### **Objectives for 2013**

In 2013 we will focus on the branding of our new eXtended SCM business model, in which we expect strong growth in 2014. As an innovative company increasing the number of eXtended SCM pro-

jects is one of our main objectives for 2013. We aim for long-time partnerships, as well as one-off customers. Of course, we will also increase our efforts in offering our standard SCM services (from full SCM to assembly-only).

In terms of our overall SCM business we are aiming for a 25% increase in the number of customers and projects. In order to be able to offer a wider range of services to our customers and also to be even more flexible, we will increase the number of our partners and sub-partners in all market segments.

**Alexander Fritsch**  
Supply Chain Management



### Development Engineering / Project Management

#### **Introduction**

RoodMicrotec's solution packages include Supply Chain Management for semiconductor industry and significantly contribute to reliable complete solutions, supplying services like test engineering, qualification and reliability testing as well as failure and technology analysis. Many of our customers own IP for which we can guarantee best protection. We are proud to meet the requirements of our customers in the aerospace, automotive, telecommunications, medical technology, IT and electronics industries. The new development engineering group bridges the gap between design houses (external) on the one hand and operations like wafer production, backend assembly, test engineering and test on the other. The new engineering group will support our customers in the field of assembly and interconnection technology by providing solutions for new devices and products and failure analysis and corrective actions on existing boards and devices, also known as eXtended SCM. With this service RoodMicrotec has taken another step on its way towards the one-stop-shop approach for the semiconductor back-end market.

## Business unit Test Engineering

### **Profile**

The business unit Test Engineering develops test solutions for mixed-signal and digital ICs. The test cells utilise state-of-the-art Automated Test Equipment (ATE) and PC-based hardware. In order to overcome test system limitations, external equipment such as network analysers or RF signal sources are integrated into the test cells. This approach increases the flexibility while limiting the costs of the test. The test cells are used in production testing and qualification to the highest standards such as required by automotive, high-reliability or telecom (AEC-Q, ESCC, MIL-STD, JEDEC, TELCORDIA, IEC, DIN). Services include design for test, test time reduction, yield improvement, electrical characterisation and data analysis. Additional services are migration of complete test cells, production ramp-up and product validation. All these services are also available as on-site engineering support for the customer. Extensive know-how on several test platforms is available for Teradyne Flex, Credence D10/SZ /DUO, Advantest Digital as well as Lab View. Application know-how has been developed specifically for mixed-signal, digital, analog, memory, RF applications, image sensors, MEMS and PC applications. The business unit Test Engineering has a broad range of customers, mainly in the area of mixed-signal applications in the automotive, aeronautical and space, radio frequency, medical and industrial sectors. Customers include OEMs, IDMs and FCs worldwide.

### **Objectives realised and key developments in 2012**

In March 2012, the Hermes project was finalised successfully. The move of the test area from Stuttgart to Nördlingen required a great deal of optimisation for the transferred test setup. A large part of this task was performed successfully and today the production is running ever more smoothly and efficiently. A major space project required demanding know-how for RF production test and for the programming of the EDA Burn -In software. In both cases we are now in a situation to handle these challenges successfully in the future. Especially for EDA programming we invested in software and training in order to handle large test vector files. The project was finished successfully. A third project was to develop a test solution for integrated magnetic field sensors. These devices are used increasingly in many applications. The sensors provide information, with contactless devices about the location of magnet fields in three dimensions using the Hall Effect. We were able to develop the program in time with high yield and excellent productivity.

A large number of new test boards was designed in Nördlingen. In Stuttgart we built up a second engineering facility in order to create redundancy. We consider it a great advantage to have the complete design flow in our own hands. This approach results in better optimised test hardware, fewer design issues, lower cost and faster development time. Our engineers have received excellent training. All new engineers are now familiar with D10 test systems.

### **Objectives for 2013**

Our target is to increase revenue strongly compared to 2012 by broadening our engineering business through external consultants. In 2013 we plan to optimise our test environment and expect to gain more activity and reliability.

## Business unit Test & End-of-line Services (EOL)

**Alexander Scheitza**  
**Test Operations Manager**



### **Profile**

The business unit Test & EOL Services focuses on testing of wafer and packaged devices such as semiconductors (analog, digital and mixed-signal, RF applications), electronic devices and sensors. The customer base of this business unit comprises IDMs, OEMs, FCs, distributors and others engaged in the following markets: automotive, industrial, medical, telecommunication and Hi-Rel markets. We intensified the good and long lasting business relationship resulting in many projects.

### **Objectives realised and key developments in 2012**

#### **Test**

During the past year we finalised the reorganisation of the test floor by rotating the clean room. This allows for process/flow-oriented operation, resulting in higher efficiency. We also improved in the area of wafer test by increasing the use of wafer maps instead of delivering inked wafers. By installing more multisite testing capabilities we were able to contribute in making our prices more competitive. In addition, we spent time and money on health checks, maintenance and repair

of testers and handlers, resulting in higher uptime and throughput.

By taking on more the number of flexible staff, we managed to react to market fluctuations. This was supported by the appointment of one technician and one field engineer. These measures resulted in higher equipment usage and efficiency.

#### **Programming**

We installed a variety of automatic socket modules and programming algorithms to broaden the programming capabilities for programmable devices like flash nano drives with state of the art packages like BGA and QFN.

#### **EOL**

We increased our competitiveness in this area by installing 3D scanning capability.

#### **Organisation**

The new operation manager introduced a new shift system and recruited a maintenance leader as well as a personal planner for BU Test & EOL.

#### **Objectives for 2013**

Streamlining the test operation by deinstallation of obsolete and inefficient test equipment.

The vacated floor space allows us to further optimise the operation towards a process flow oriented structure.

To support the increasing requirements in the programming market segment we will appoint a programming engineer to oversee customer requirements.

### **Business unit Failure & Technology Analysis**

**Jürgen Gruber**  
**Failure & Technology**  
**Analysis Manager**



#### **Profile**

RoodMicrotec's extensively equipped failure & technology analysis laboratory is capable of providing failure, construction and qualification-related analysis of all kinds of electronic parts like wafers, integrated circuits, discrete components, electromechani-

cal 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).

#### **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 must be set up 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.

#### **Qualification-related Analysis**

Qualification-related analyses are carried out before and after various qualification tests performed by our own Q&R 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 highly sophisticated focused ion beam (FIB) 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.

### **Objectives realised and key developments in 2012**

PIND testing was introduced to complete our service for destructive physical analysis.

The enhancement of FIB modification on copper metallisation was acknowledged by several customers. One of them transferred his activities completely to RoodMicrotec.

Copper-FIB was introduced. Progress in IC technology development and further miniaturisation led to a significant part of copper modifications.

Reliability mechanisms and failure modes of high-power electronics are totally different from standard electronics. We are still looking for experienced people to start up this service. We have provided training to our own employees.

### **Highlights 2012**

In late 2011 and early 2012 we developed a new service to identify failures on ceramic capacitors during printed board assembly. With this method we can identify systemic production problems. Our investigations showed that all devices were affected by this problem and run the risk of fire. Affected daughter-boards were replaced by new ones after the manufacturing process was changed.

### **Objectives for 2013**

We are offering an outstanding quality of metallographic preparation and light-optical microscopy. We are planning to further promote this service.

In view of strong demand for X-ray analysis, expansion of the X-ray tomography service must be considered.

High-power electronics is a growing market. We still are looking for an experienced engineer to introduce this service.

**Frank Weber**  
**Manager Electrical**  
**Qualification & System**  
**Analysis, Burn-In**



## **Business unit Qualification & Reliability**

### **Profile**

The business unit Qualification & Reliability focuses on investigating electrical components like semiconductors, passives and PCBs in various stress environments. The qualifications of customer components for automotive, space, telecommunication etc. are performed to various international specifications (AEC-Q, MIL, JEDEC, ESCC, Telecommunication). Furthermore, upsampling of components (specific qualification and test flow for higher quality grade of units for military and space applications) are 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 testhouses in Europe. Most products are tested for the aerospace, automotive and medical sectors. Our main customers are in these sectors and in FC and OEM. Burn-in board loading for the monitoring system can be done manually or on request by means of an automated board loader/unloader.

### **Key qualifications in 2012**

Prior to a production release by the customers, qualifications are required in order to determine whether the product meets its reliability and functional requirements. Below some examples are set out of qualifications performed during 2012.

#### **a. Fivefold 3D magnetic field sensor in a QFN36 package.**

The requested industrial qualification was performed to various JEDEC standards. This qualification includes development of the hardware for the stress tests.

Besides the necessary pre-conditioning (stress and solder simulation prior to stress tests) for a temperature cycling test (called TC) and a highly accelerated temperature and humidity stress test (called HAST), an early-life-failure-rate test (ELFR) and high/temperature operating life test (HTOL) were performed. Finally, different ESD (electrostatic discharge) tests and latch-up test completed this qualification. Part of the qualification was 1000 hour HTOL and several 48 hour ELFR runs.

**b. Two different optical sensors in a PGA185 package.**

This qualification was a customer-specific industrial qualification to various JEDEC standards of two optical sensors in parallel. The qualification was headed by the qualification & reliability department in collaboration by other RoodMicrotec business units as well as external partners. The qualification was performed in the fourth quarter of 2012.

The following tests were required:

- low-temperature-operating life test (LTOL)
- high-temperature-operating-life test (HTOL)
- low- and high temperature storage life test (LTSL & HTSL)
- temperature cycling (TC)
- liquid-to-liquid temperature shock test (TS)
- autoclave (AC)
- mechanical tests like shock, vibration, solderability
- resistance to solder, heat and seal test.

The duration of this qualification was two months due to the duration of the 1000 hour HTOL and temperature storage tests. Electrical tests of the sensors were performed by an external company.

**c. Volume production burn-in LF-driver in a TQFP48 package**

Starting end of 2011 the customer asked for a complex 6 different voltage groups 'safe-launch' burn-in solution. Besides the necessary hardware development with different stages for debugging, RoodMicrotec also had to prepare the monitoring burn-in software generation. RoodMicrotec is currently in the final ramp-up stage, resulting in 24 burn-in boards with 60 socket positions each and a maximum weekly capacity of approximately 8.5k units.

**Review of 2012**

The business unit Qualification & Reliability realised moderate positive growth in 2012 compared to 2011. This was the result of the objectives set for 2012 as well as a strong partnership with existing customers.

**Plans for 2013**

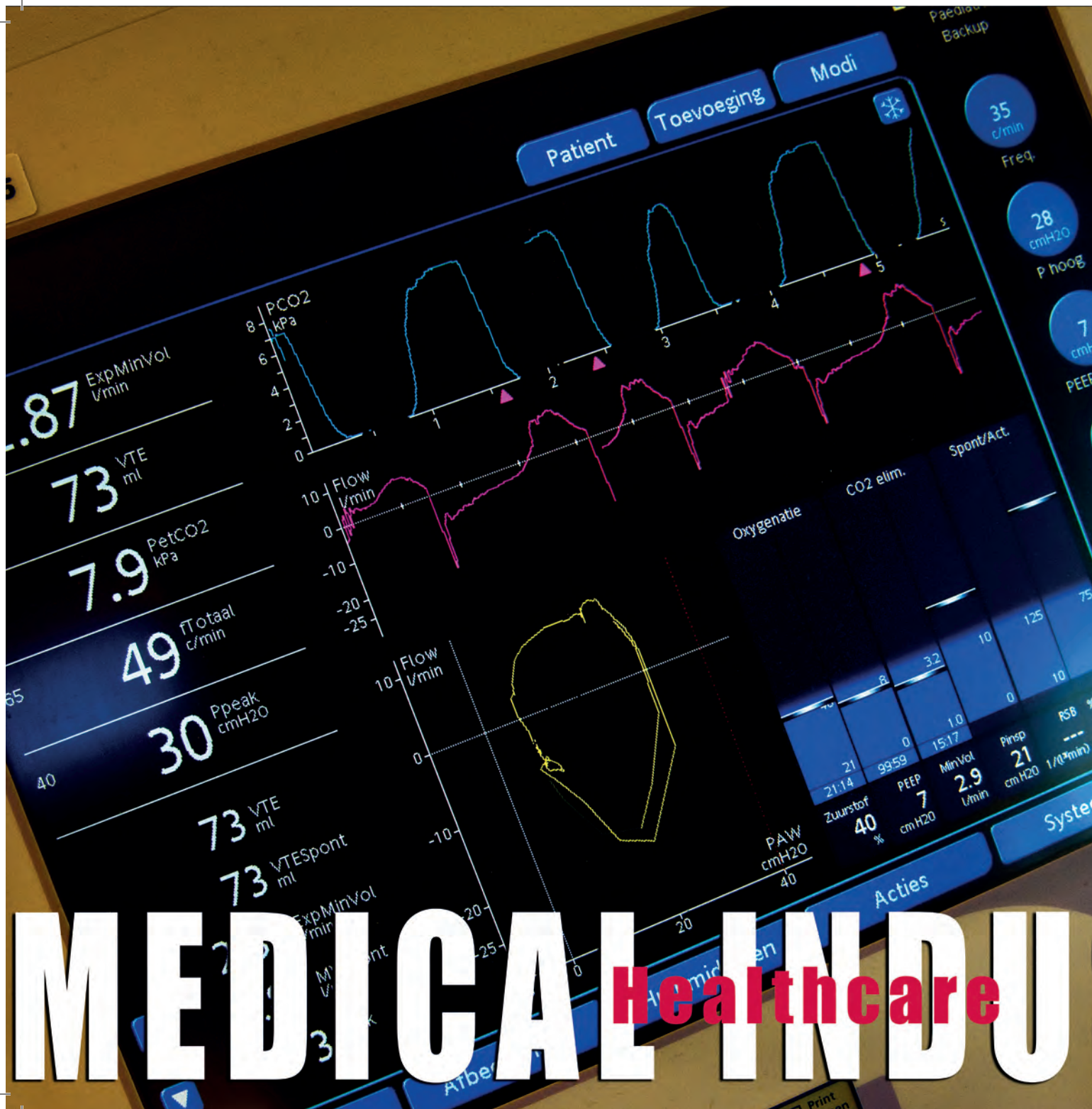
To continue and improve department growth at least in line with RoodMicrotec's targets. Activities to further improve the financial indicators of the business unit will be continued. Product and service-related objectives are focusing on new market segments as well as additional services in the burn-in area.

**M. Events after balance sheet date**

No significant events have taken place after balance sheet date.

Board of management  
Ph.M.G. Nijenhuis

Zwolle, 13 March 2013



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## VIII. CORPORATE SOCIAL RESPONSIBILITY

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### General commitment

RoodMicrotec's mission is to improve the quality of people's lives through the timely introduction of meaningful technological innovations. In a world where technology increasingly touches on every aspect of our daily lives, RoodMicrotec aspires to be a leading solutions provider in the areas of health care, lifestyle and enabling technology, delighting its customers with products and services that meet and even exceed their expectations.

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 the applicable laws and regulations of the countries in which it operates and regularly reviews its interests and those of affected persons or entities in order to ensure a healthy, long-term relationship with them. RoodMicrotec endeavours to adapt to local situations in order to take the most appropriate approach to possible problems within the bounds of applicable law and responsible conduct. In this respect RoodMicrotec supports the principle of dialogue and cooperation with all parties involved.

### 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.

**Jessica Nogger**  
Human Resources



## Commitment towards shareholders

It is of central importance to RoodMicrotec to conduct its operations in accordance with the highest standards of internationally accepted principles of good corporate governance. RoodMicrotec aims to achieve 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 an employee's 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 act fairly and with integrity towards their stakeholders and who observe the applicable laws of the countries in which they operate.

## Assets and information

### ***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 make use of information disclosed to it by a third party if it is suspected that the discloser thereby violates an obligation of confidentiality, unless the information:

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

### ***Insider trading***

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

## Business integrity

### ***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 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 should 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.

## Observance of General Business Principles

### ***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 management as part of a cascade process leading to CEO/CFO certification of the company's annual accounts. Compliance processes and procedures are audited by RoodMicrotec's audit committee.

Further information: [www.roodmicrotec.com](http://www.roodmicrotec.com)

Board of management  
Ph.M.G. Nijenhuis

Zwolle, 13 March 2013



**Works Council Nördlingen**

## IX. CONSOLIDATED FINANCIAL IFRS STATEMENTS

### Consolidated income statement

(x EUR 1,000)		2012	2011
Net sales	1	11,971	15,717
Cost of sales	2	-2,283	-3,375
<b>GROSS MARGIN</b>		<b>9,688</b>	<b>12,342</b>
Personnel expenses	3	6,401	7,215
Other operating expenses	4	2,584	3,262
<b>OPERATING EXPENSES</b>		<b>8,985</b>	<b>10,477</b>
<b>EBITDA</b>		<b>703</b>	<b>1,865</b>
Depreciation and amortisation	5	884	1,156
<b>EBIT</b>		<b>-181</b>	<b>709</b>
Financial expenses	6	-326	-301
<b>RESULT BEFORE TAXATION</b>		<b>-507</b>	<b>408</b>
Taxation	7	425	180
<b>NET RESULT</b>		<b>-82</b>	<b>588</b>
<b>Earnings per share for profit attributable to the equity holders of the company during the year</b>			
Basic	17	0.00	0.02
Diluted	17	0.00	0.02
Net result attributable to:			
Owners of the company		-82	588
Non-controlling interests		-	-
<b>Net result for the year</b>		<b>-82</b>	<b>588</b>

**Consolidated balance sheet**  
(after appropriation of net result)

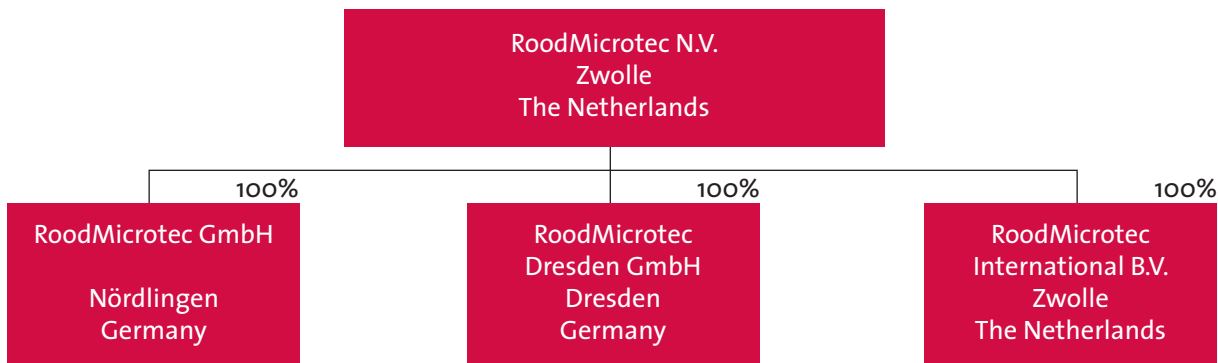
(x EUR 1,000)	Note	31 December 2012	31 December 2011
<b>ASSETS</b>			
Property, plant and equipment	8	6,347	5,732
Intangible assets	9	1,755	1,783
Deferred income tax assets	10	870	444
Retirement benefit assets	11	301	-
Financial assets	12	949	1,720
<b>Non-current assets</b>		<b>10,222</b>	<b>9,679</b>
Inventories	13	305	402
Trade and other receivables	14	2,089	2,431
Cash and cash equivalents	15	519	345
<b>Current assets</b>		<b>2,913</b>	<b>3,178</b>
<b>TOTAL ASSETS</b>		<b>13,135</b>	<b>12,857</b>
<b>EQUITY AND LIABILITIES</b>			
Issued capital	16	3,935	3,935
Share premium	16	17,751	17,723
Revaluation reserve	16	1,890	1,885
Retained earnings	16	-19,719	-19,399
Mezzanine capital	16	2,494	1,994
<b>Equity, attributable to shareholders</b>		<b>6,351</b>	<b>6,138</b>
Interest-bearing loans and borrowings	19	1,399	1,077
Retirement benefit obligations	20	1,550	1,633
<b>Non-current liabilities</b>		<b>2,949</b>	<b>2,710</b>
Bank overdrafts	15	1,381	1,115
Current portion of long-term debt	19	455	839
Trade account and other payables	21	1,977	1,846
Current income tax liabilities	22	22	209
<b>Current liabilities</b>		<b>3,834</b>	<b>4,009</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>13,135</b>	<b>12,857</b>



# AUTOMOT

**Car Industry**

## Group Structure



### **RoodMicrotec GmbH, (locations Stuttgart & Nördlingen)**

- Supply Chain Management
- Test & Related Services
- Test Engineering
- Qualification & Reliability
- Failure & Technology Analysis
- Opto-electronics
- Contracting
- Consultancy

### **RoodMicrotec Dresden GmbH & RoodMicrotec international BV**

- Contracting
- Test Engineering

## Addresses and personal details

### **RoodMicrotec N.V.**

'Rembrandt', Dokter van Deenweg 58  
NL-8025 BC Zwolle

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Telephone: +31 (0) 38 4215 216

E-mail: [investor-relations@roodmicrotec.com](mailto:investor-relations@roodmicrotec.com)

Website: [www.roodmicrotec.com](http://www.roodmicrotec.com)

### **Board of Management**

Ph.M.G. Nijenhuis, CEO

### **Members of Corporate Management Team**

R. Pusch, VP and CSO

N. Wirth, CTO

R. Cuny, CFO

## Business units

### **RoodMicrotec GmbH**

Oettinger Strasse 6  
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