



# RoodMicrotec Newsletter

Number 2, May 2014 • RoodMicrotec

## Focus on growth

I've said before that it looks as if all the pieces of the jigsaw are finally falling into place, and I want to reiterate that here.

After years of struggle due to the crisis, things are beginning to look up. The applications, which are always a harbinger of a recovery, are higher than ever. As we wrote in the trading update of 13 May, in euros the applications currently exceed the total annual sales in 2013.

This will lead to additional sales, but I must caution that applications are not yet billable sales. There is always a time lag. Our financial position is a great help. The market has suffered greatly from the crisis, and companies are always hesitant to work with weaker parties.

This is something we are set to benefit from. The issue of a bond loan with mortgage cover, as announced on 8 May, has strengthened our market position further. The proceeds will allow us to focus entirely on growth.

## Three key markets

In this newsletter, Reinhard Pusch (CSO) discusses the key markets for RoodMicrotec, and the developments in these markets using a number of examples.

RoodMicrotec focuses on three key markets:

1. Industrial and automotive, which respectively generate 50% and 35% of our sales;
2. Hi-rel/Space, with over 10% of total sales;
3. Medical, which currently stands at only 1-2% of total sales.

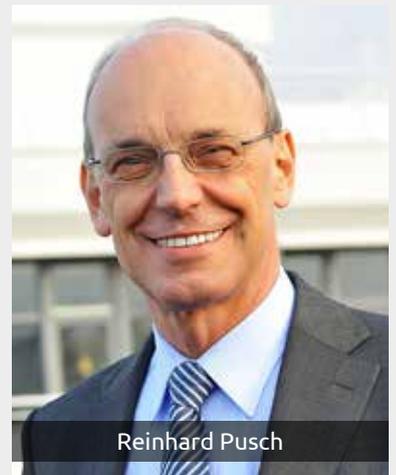
'To start at the end, although **medical** is still a small market for us, it has great growth potential, and we definitely wish to achieve further growth here.

We distinguish between devices inside the body and those outside. Sometimes there is a physical connection between the internal and external devices. The machine that carries out the measurements is often outside the body, while the critical part is inside, as you can see on the picture of the horse implant (page 2).

These projects involve long lead-up times from the start of a project until there is certainty that the device works and will keep working: this can take as much as ten years. This is to do with the 'test environment', which contains a number of biological elements, such as temperature, humidity, acidity and heart rate. We are already testing a number of devices, and we are in negotiations with various partners to set up partnerships.

These include (knowledge) institutes/universities and industrial partners.

Due to our experience with image sensors, this market offers excellent opportunities for RoodMicrotec.



Reinhard Pusch

**Hi-rel/Space** is also an important growth market. The first thing this brings to mind is space exploration. And indeed we are active in that with various projects, including qualification and evaluation for a robot to be used on Mars.

We are also involved in a project working on solar sensors for satellites that make it possible to determine the angle of the satellite relative to the sun. The sun provides a fixed reference point that can be used to determine the position of the satellite. It's similar to shipping, where you have to know where north is to set your course.

We may not be aware of it, but satellites play an ever more important role in our daily lives. Think for example of TV satellites, GPS systems and navigation systems.

GPS is also increasingly being used in agriculture. Using GPS, agricultural machines can work much more efficiently than the best driver ever could. It reduces overlap in tillage, fertilisation, sowing and harvesting, and allows for lower and more accurate use of artificial fertiliser and pesticides.

Taking the acreage of agriculture around the world into account, the potential savings are huge.



All in all, we are working on a wide range of projects, mainly in Europe so far, but we are also in negotiations with parties outside Europe, where we also see growing markets for Hi-rel/space.

We are also active in (military) aviation, in particular in radar applications. Here, too, we can bring our extensive knowledge and experience of electronics and of image sensors to bear, for example in modern cameras.

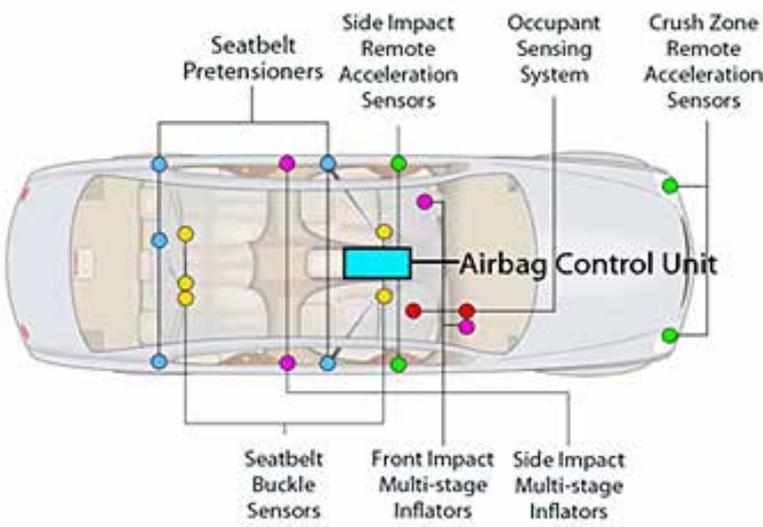
Characteristic for the Hi-rel/Space market are low volumes with very high commercial value.

To give you an idea: where we would normally make an offer for 1 million devices, in this market it would be perhaps 250, but they are very expensive indeed.

As in the medical market, the time between the start of a project and production start-up is very long, and quality and reliability demands are very high indeed.

Devices in a space mission, like in a pacemaker, must remain 100% functional for at least 20 years.

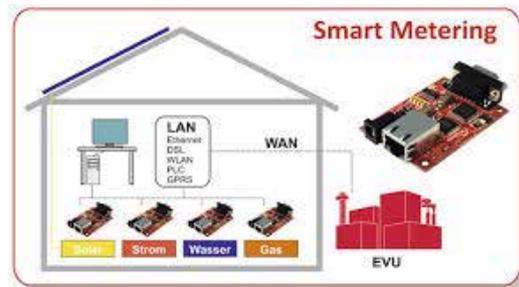
We expect this market to grow significantly over the next few years, and we expect the number of applications that affects our daily lives to increase further.



Finally, **industrial** and **automotive** markets are interesting growth markets. The applications in automotive are getting ever more sophisticated: car infotainment and communication with the outside world up to cars that drive themselves - these things are no longer pipedreams. Future generations will wonder what we used to mean by 'being in the driver's seat'.

We are in various negotiations with leading companies in these areas. Fabrication 4.0 is currently the buzzword in the industry. It refers to controlling every single part of the production flow, like for example smart grid, smart metering: starting your oven remotely, opening and shutting windows when the temperature changes, etcetera. These examples and the illustrations show clearly how RoodMicrotec's world is changing fast.

With our experience and knowledge in both the fields of electronics and image sensors, we are second to none in being able to comply with the most stringent demands in terms of reliability and quality. We see huge opportunities in these growth markets.'



## Agenda 2014

<p><b>SENSOR+TEST 2014</b> DIE MESSTECHNIK-MESSE The Measurement Fair</p>	3 - 5 June 2014	Sensor + Test	Nuremberg, Germany	Hall 12 Booth 12-108
<p>INTERNATIONAL AEROSPACE SUPPLY FAIR OCTOBER 28 - 30, 2014 AIRTEC</p>	28 - 30 October 2014	Airtec	Frankfurt, Germany	Hall 11.0 Booth C 70
<p>electronica 2014 inside tomorrow</p>	11 - 14 November 2014	electronica	Munich, Germany	Hall A 5 Booth 101

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