# MICRO
C O S M

ANNUAL REPORT 2018

LPKF
Laser & Electronics

# AT A GLANCE

## LPKF LASER & ELECTRONICS AG

### CONSOLIDATED REVENUE AS OF 31 DECEMBER 2018

| in EUR million | 2014 | 2015 | 2016 | 2017 | **2018** |
|---|---|---|---|---|---|
| **Revenue** | 119.7 | 87.3 | 91.1 | 102.1 | 120.0 |
| **Revenue by region** | | | | | |
| Germany | 12.2 | 12.6 | 12.9 | 10.4 | 12.8 |
| Rest of Europe | 14.9 | 17.3 | 16.5 | 20.5 | 31.9 |
| North America | 25.6 | 19.0 | 17.7 | 23.0 | 24.7 |
| Asia | 63.4 | 35.6 | 42.3 | 45.7 | 49.1 |
| Other | 3.6 | 2.8 | 1.7 | 2.5 | 1.5 |
| **Revenue by segment** | | | | | |
| Development | 25.1 | 25.5 | 22.6 | 24.4 | 24.3 |
| Electronics | 51.2 | 29.9 | 30.6 | 31.7 | 34.6 |
| Welding | 20.9 | 23.3 | 24.0 | 25.4 | 22.2 |
| Solar | 21.9 | 8.5 | 13.9 | 20.6 | 38.9 |
| Other | 0.6 | 0.1 | 0.0 | 0.0 | 0.0 |

### CONSOLIDATED FINANCIAL KEY FIGURES AS OF 31 DECEMBER 2018

| in EUR million | 2014 | 2015 | 2016 | 2017 | **2018** |
|---|---|---|---|---|---|
| EBIT | 12.7 | −3.7 | −6.8 | 4.0 | 6.8 |
| EBIT margin (in %) | 10.6 | −4.3 | −7.4 | 3.9 | 5.7 |
| Consolidated net profit after non-controlling interest | 8.5 | −3.5 | −8.8 | 1.2 | 8.0 |
| Diluted EPS (in EUR) | 0.38 | −0.16 | −0.40 | 0.05 | 0.33 |
| Dividend per share* (in EUR) | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 |
| ROCE (in %) | 12.1 | −3.6 | −6.9 | 4.1 | 7.0 |
| Equity ratio (in %) | 53.5 | 53.4 | 46.5 | 46.5 | 60.4 |
| Operational cash flow | 1.8 | 10.1 | 5.7 | 9.6 | 11.5 |
| Investment in property, plant and equipment and intangible net assets | 15.0 | 13.7 | 7.5 | 6.8 | 5.7 |
| Free cash flow | −12.9 | −3.6 | −1.8 | 3.3 | 5.8 |
| Orders on hand | 17.7 | 13.3 | 27.8 | 38.8 | 58.4 |
| Incoming orders | 119.7 | 82.8 | 105.7 | 113.2 | 139.8 |
| Employees** (Number) | 795 | 778 | 700 | 683 | 655 |

* 2018: Annual General Meeting recommendation
** not including trainees and marginal employees

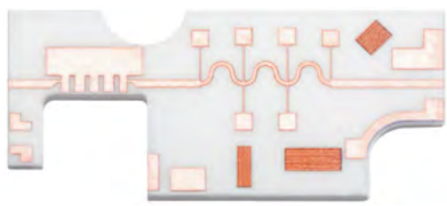
# MICRO
# C O S M

MISSION STATEMENT

We would like to invite you to familiarize yourself with LPKF's MICRO-COSM through this annual report. For us, the first part – "MICRO" – is synonymous with the **HIGHEST LEVEL OF PRECISION** in the micrometer range. Our lasers generally work in dimensions that are significantly smaller than the thickness of a human hair. In doing so, we make possible the continuous **MINIATURIZATION** in electronics and other industries.

Over the following pages, we will show you microscopic images of materials from different applications of our technologies. The extreme magnification reveals the complex structures and the beauty of the matter. You will discover what **APPLICATIONS AND TECHNOLOGIES** we have and what potential they have.

COSM, in turn, stands for our employees, customers, technologies – in short, for our company as a whole. The figures in this annual report show that we have returned to **PROFITABLE GROWTH**. We have paved the way for further business growth and seek to be pioneers in conquering new markets in the future. So, while it might not quite be the cosmos, we do have the **WHOLE WORLD** in our sights.



The cover image shows more than 45x magnification of precise geometric antenna structures on a ceramic substrate, created with a ProtoLaser R.

# COMPANY PROFILE

## THE LPKF GROUP

**DEVELOPMENT**
Solutions for PCB prototyping and micromaterial processing.

**ELECTRONICS**
Solutions for mass producing assembled and non-assembled printed circuit boards.

**WELDING**
Solutions for welding plastics in mass production.

**SOLAR**
Solutions for thin-film photovoltaic module production and digital printing of ceramic inks via Laser Transfer Printing.

Information about the segments on **pages 14–15.**

LPKF is a leading supplier of laser-based solutions for the technology industry. Our laser systems are vital in the manufacture of printed circuit boards, microchips, automotive parts, solar panels and many other components.

Our machines allow our customers to manufacture smaller and higher-precision components. At the same time, the functionality of the components can be increased and new design options can be used. This creates products on the cutting edge of technology, both for the industry and for consumers.

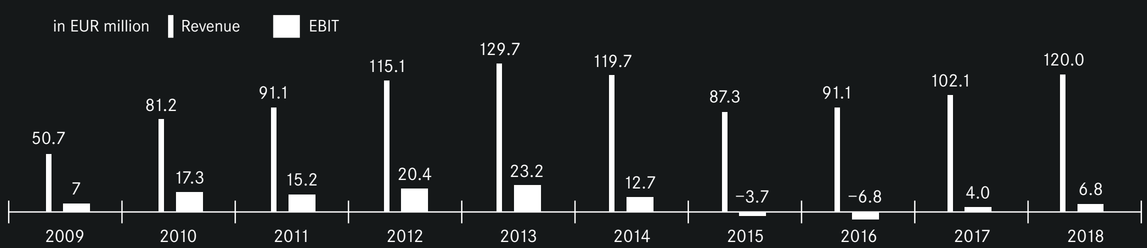
Our employees are laser technology experts and know how to integrate lasers as a tool into powerful machines. With that we have considerable influence on progress in a range of high-tech sectors. The outcome is faster, smaller and more energy efficient products and, thus, improvements in mobility, networking, electricity generation and digital entertainment.

LPKF has 40 years of experience as a technology and innovation leader to look back on. Going forward, we also plan to maximize the full potential of laser technology in the digital world.

LPKF Laser & Electronics AG is headquartered in Garbsen near Hannover, Germany. We maintain a broad presence, with a workforce of 655 based at sites in Europe, Asia and the US. Our global service network ensures our machines are ready for our customers around the clock.

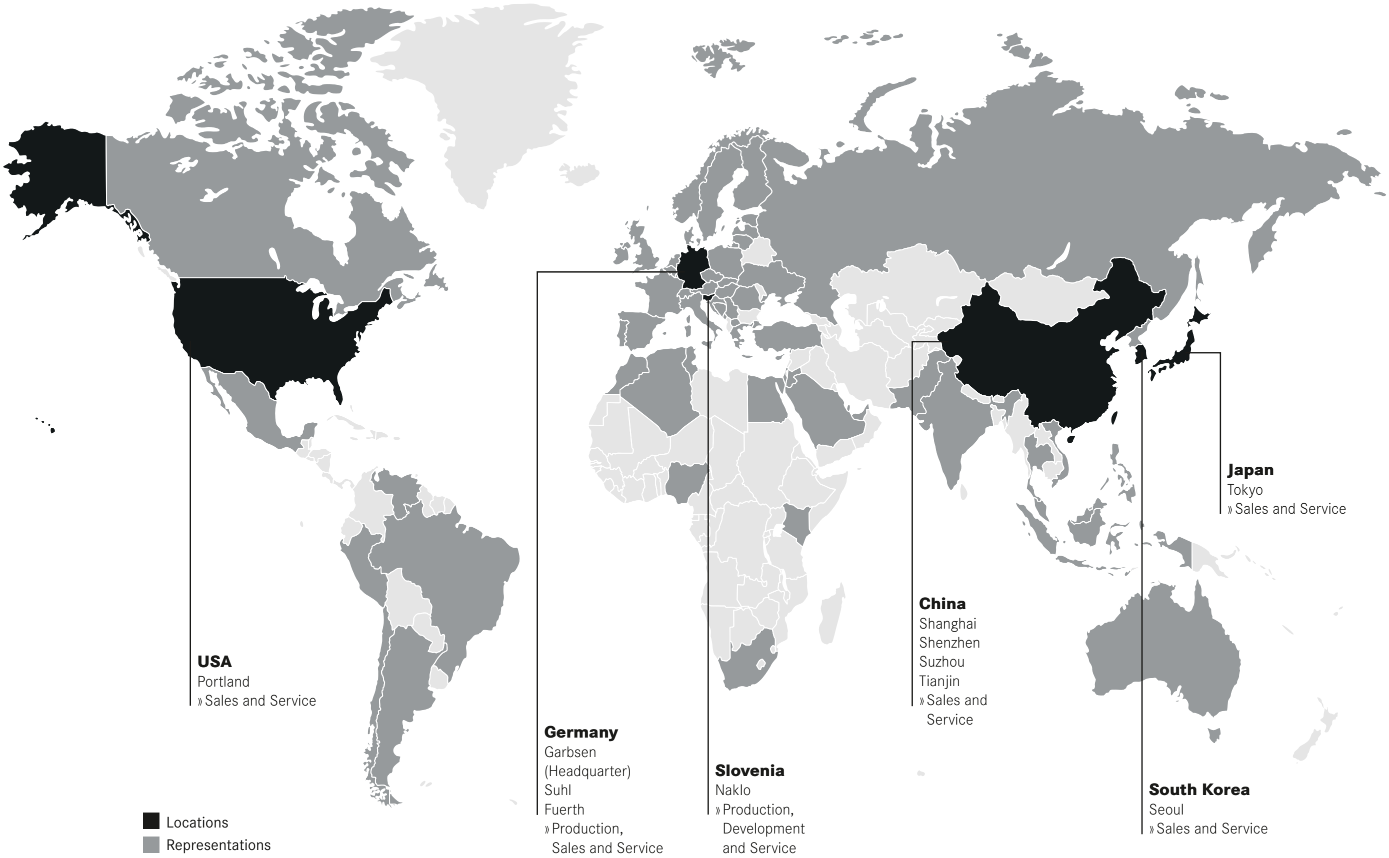
The shares of LPKF Laser & Electronics AG are listed on the Prime Standard segment of Deutsche Börse.

**REVENUE AND EBIT**



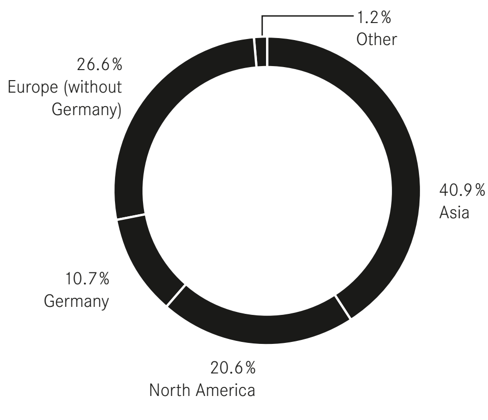
# LPKF WORLDWIDE

LOCATIONS & REPRESENTATIONS

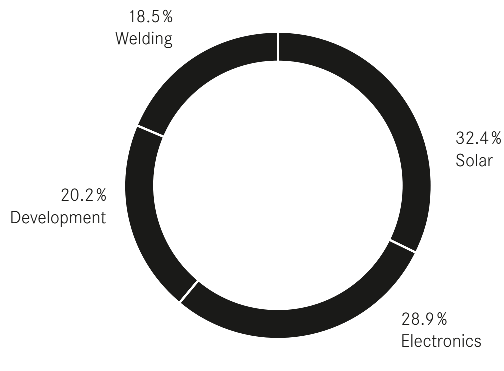



LPKF Laser & Electronics AG is headquartered in Garbsen near Hannover, Germany. We are represented in more than **70 COUNTRIES,** have **10 BRANCHES** in Europe, Asia and North America and with a total of **655 EMPLOYEES** we are broadly positioned worldwide. The export share was around 89% in the 2018 financial year.

REVENUES BY REGION




REVENUES BY SEGMENTS



# LETTER TO SHAREHOLDERS

DEAR SIR OR MADAM,

+73 %

The EBIT rose by 73% to EUR 6.8 million.

+51 %

Orders on hand were 51% higher than one year earlier.

During the financial year 2018, we have both joined the Management Board with the goal of returning LPKF to sustainable profitability as a technology company, and to generate growth in line with the company's exceptional potential. As the new Management Board, we have made strategic decisions during the year, and the LPKF employees have joined us on this journey. This has resulted in the significant outcomes in the past financial year:

Revenue increased by 18% to EUR 120 million. **EARNINGS BEFORE INTEREST AND TAXES (EBIT) ALSO INCREASED BY 73% TO EUR 6.8 MILLION**, resulting in an EBIT margin of 5.7%. Following the past year's restructuring phase, LPKF is now once again on track towards profitable growth, and on the way to sustainably create value with an increasing return on investment and positive cash flow in 2019 and beyond. To this end, we want to continue to build on our global position as a leading technology company in a wide range of applications.

## BUSINESS PERFORMANCE IN 2018

First of all, we would like to thank the roughly 650 LPKF employees around the world for the company's successful performance during the 2018 financial year. Their strong commitment during and after the difficult times for the company, their experience, their expertise, and their creativity are the basis for our success, and we would like to thank each and every one of them.

The key figures illustrate the overall positive business development. With revenue growth of 18% to EUR 120 million, we reached the top end of our forecast, which we increased twice during the year following a a weak first quarter. We recorded EUR 140 million in incoming orders in 2018, an increase of 23% compared to the previous year. **ORDERS ON HAND ON DEC. 31, 2018 TOTALED EUR 58 MILLION, UP 51% FROM ONE YEAR EARLIER**. The strong growth had a positive effect on earnings before interest and taxes (EBIT): an EBIT margin of 5.7%, despite already including one-off restructuring expenses totaling EUR 2.3 million, was significantly higher than the previous year (2017: 3.9%, with positive one-off effects). The return on capital employed (ROCE) was 7.0% (previous year: 4.1%), still slightly less than our 8% cost of capital. This means that, in spite of LPKF's improved profitability, we still have not created shareholder value in 2018. However, the recent development shows that we are on the right path. It is clear to us that we have not yet reached our goals, and that there is still a lot to do in 2019.

## OUR BUSINESS SEGMENTS

The Solar segment made the biggest contribution to this year's revenue growth. Compared to the previous year, revenue grew by 89% and the EBIT by more than 400%. We are the technology and market leader for scribing solutions for thin-film solar modules. This process step greatly contributes to increasing the conversion efficiency, and to the market value of the modules that our customers produce. Our solution maximizes this effect in that it minimizes the share the non-productive "dead" zone takes up on the module surface. We have expanded our customer base in 2018 and anticipate that this segment will continue to develop strongly in the future. On the other hand, we have unfortunately had to postpone the market launch of the other new technology in this segment, Laser Transfer Printing (LTP) until the second half of 2019. While we see LTP as a contributor to future growth, it did not contribute to revenue in this financial year.

We also saw significant growth in our Electronics segment. Following a slow first quarter and the restructuring that took place in the segment, revenue for the year increased by almost 10%. Despite the expenses for restructuring, EBIT was roughly flat at EUR 0.8 million. There are two things worth noting about these results. First, the expected operational improvements during the year came more quickly than expected. Second, the revenue growth came about without a big contribution from various new technologies, products and applications. While they are important growth drivers for 2019, their contribution to revenue during this financial year was minimal. This applies to the newly introduced LPKF PicoLine systems with ultra-short laser pulses, which provide Clean Cut solutions for printed circuit board application in the electronics industry, which enable the use of lasers for a wider range of printed circuit board materials and applications. This also includes our LIDE technology for micro-structuring ultra-thin glass. We received our first orders for Vitrion systems in 2018. Furthermore, we produced the first pilot volumes as part of our newly established foundry production service business and delivered them to customers.

The Development segment has shown consistent and profitable business over the past several years. Revenue of EUR 24 million in the 2018 financial year was at the previous year's level; the segment's EBIT was EUR 4.2 million. Our aim here, too, is to promote future growth and to participate even more in the growing number of globally produced prototypes, whether with our current customers, or with those customers that develop electronic modules and products in-house for the first time. We also seek to expand our global presence in this market, which relies more heavily on sales through distributors than our other segments. At the turn of the year, we launched our new ProtoMat S64/S104 series as part of a model change, and we also launched the ProtoLaser ST, the first available compact laser system for manufacturing prototypes. Both new product families should generate additional growth for the Development segment over the coming years.

The Welding segment did not do as well as expected in 2018. Following an extraordinarily weak start of the year, revenue for the year shrank by 13% to EUR 22 million. This led to a negative EBIT of EUR −1.6 million. This result was particularly disappointing given the large and growing market potential we see in this area. Therefore, we have made changes to the management of this segment during the fourth quarter. In the short-term, we anticipate quicker decisions and more effective collaboration, which should better leverage the segment's existing strengths – in particular, the skills and customer-focus of our colleagues. In the medium-term, we expect additional growth from new, technologically differentiated solutions that give our customers a competitive advantage. We will continue to pursue a turnaround in the Welding segment by, among other things, increasing the support from other areas of the company. We feel there is good reason to believe that 2019 and onwards will see a sustainable improvement of the revenue and earnings situation. We have started to see a positive development at the end of the year with incoming orders and orders on hand in the Welding segment. Orders on hand were at EUR 7.9 million at the end of the year (versus EUR 4.3 million at the end of 2017), 83% higher than a year earlier.

THE MANAGEMENT BOARD

Dr. Götz M. Bendele (CEO) and Christian Witt (CFO)

## CHANGES

Since we took office, we have talked to our colleagues about how we want to once again act with more of the agility of a technology start-up, among other things. By doing so, we want to enable us to act more quickly and directly, both within the company and in collaborating with our customers. In addition, an agile way of working allows us to even better leverage the enthusiasm for the company and for our products that we have seen from our very first days in the company. Changes of this nature are a process and will require some time. That said, we are already using this approach in those areas which have been built up more recently: shortest possible decision paths, fast processes oriented around customer needs, and rapid deployment of our capacity. In many instances, we have been able to fill customer orders in our **"VITRION FOUNDRY" BUSINESS**, from initial contact to shipping the finished product, in only a few days. Next to our technology leadership, this is an equally important source of our competitive advantage.

www.vitrion.com

In addition, we have continuously focused on three main improvement areas:

First, we want to ensure that all parts of LPKF work together and in concert. This requires greater transparency, but allows us to take better advantage of our experience in different industries, different global markets, different production technologies and applications. This applies to the whole company, whether in sales, research and development, production, or in our central departments.

We have started by strategically realigning our service departments, establishing a single company-wide service business across different segments. We have also expanded our service offerings in all segments and regions, and developed and introduced various new service products. We want to continue this in 2019 and in particular, improve system availability for our customers.

Likewise, we want to strengthen the production services that we offer under the LaserMicronics brand, for printed circuit board and laser welding applications. Here too, we want to systematically strengthen our offering as a standalone business area. We will strengthen the focus of our organization: The segments work directly and quickly with our customers, while the global and central functions create the prerequisites and infrastructure to support them.

**+76%**

We achieved a positive free cash flow of EUR 5.8 million – an increase of 76%.

Secondly, we want to even better understand the economic and industrial logic that our customers are facing. Our machines are often involved in process steps which are decisive in determining the unit cost, performance, or design of our customers' products. Our particular value add is not least due to the fact that we understand the parameters that constitute the economic success of our customers, that we address them directly with our machines, and that we are able to communicate this. In many of the industries and markets that our customers operate in, this is no trivial matter. It also means that we need to take on the challenge of understanding our customers' markets in much greater detail, whether in the semiconductor, consumer electronics, automotive or another industry; whether for microelectronics, glass, plastic, MEMS, or a completely new applications. To this end, we have already strengthened our sales function in order to increase both our proximity to our customers and our understanding of the value our customers derive from using the solutions we provide. This goes hand in hand with strengthening, and in some instances creating, an effective strategic product management function in our segments, along with systematic overall sales controlling. We will continue to pursue these goals in 2019.

Third, we want to further improve economic efficiency both in terms of our P&L and our balance sheet. Here, our main focus is on measures which strengthen our capabilities in terms of our technology and our customers, and which do not limit our future growth. This also includes increasing our capacity to make investments to commercialize our future technologies.

In 2018, we have focused on the near-term – while at the same time sustainable – improvement of our working capital and on the already high overall cost discipline. We have intensified or initiated programs to reduce stocks and trade receivables in order to improve the current financial situation. Both programs will continue in 2019 as, in our view, there is still significant room for improvement, especially for receivables. We were cautious when it came to most types of investment in 2018. The exception to this was and is Research and Development, as R&D outlay has not been reduced.

Overall, we were able to significantly improve our key financial figures. In spite of revenue growth, we were successful in keeping overall working capital at a stable level. **WE ALSO ACHIEVED A POSITIVE FREE CASH FLOW OF EUR 5.8 MILLION**. Furthermore, the successfully executed capital increase in August, with proceeds of EUR 16.2 million, have contributed considerably to the improvement of the company's capital resources.

The equity ratio rose from 46.5% to 60.4% in 2018. **NET DEBT TO BANKS WAS REDUCED FROM EUR 37.7 MILLION TO EUR 16.3 MILLION.** This corresponds to a reduction in the leverage ratio (net debt/EBITDA) from 3.2 at the beginning of the year to just 1.1 at the end of 2018. In 2019 we would like to reduce the company's net debt even further and increase investment in our new technologies.

FORECAST

Our aim for the company is to proceed on the path towards sustainably profitable growth, to create value for our share-holders, and to further reduce company debt. This will require a high level of investment in innovative technologies. With that, and despite the positive results of the past financial year, we will recommend to the Annual General Meeting on 6 June 2019, that we not pay out a dividend for 2018. However, if the positive company performance continues for the current financial year, then we expect to recommend to the Annual General Meeting in 2020 that a dividend be paid.

We have set ourselves ambitious goals for the future. As long as growth of the global economy remains stable, we estimate consolidated revenue of between EUR 130 million and EUR 135 million and an EBIT margin of between 8% and 12% in 2019. This corresponds to a ROCE of between 10% and 15%. During the subsequent years, we want to further increase the company's profitability and generate a sustainable EBIT margin of more than 12%.

We would like to thank the works council members for their fair and constructive collaboration with us, especially during the extensive changes that took place as a result of the change in company leadership.

We would also like to thank the Supervisory Board, both for the trust that they have placed in us to lead and shape the company during the coming years, and for their close collaboration with us in tackling challenges and implementing our strategy together.

Last but not least, we want to thank you, our shareholders, for your trust during an eventful yet ultimately positive year. We hope that you will continue to support LPKF in the future.

Best regards,

DR. GÖTZ M. BENDELE

CHRISTIAN WITT

Garbsen, March 2019

**-57%**

Net debt was reduced by 57%.

# CREATING SUSTAINABLE VALUE WITH OUR CUSTOMERS

## IN CONVERSATION WITH THE MANAGEMENT BOARD

**Dr. Bendele, you have been Chairman of the LPKF AG Management Board since May 2018. What is your assessment of the 2018 financial year? In your view, what is the most important success of the past year, and what further changes do you expect to see?**

DR. GOETZ M. BENDELE To me, by far the most important success of 2018 was the increase in optimism and confidence that I have observed among employees across the company, and among customers and partners as well. This, more than any performance indicator, shows that we are on the right path to realize LPKF's considerable potential, and to generate sustainable value for us and for our customers in the future.

DR. GOETZ M. BENDELE
**Chief Executive Officer (CEO)**
Strategy, Sales & Marketing, Human Resources, Manufacturing, Research & Development, Innovation
Born in 1970, Management Board member since 2018 – Goetz M. Bendele studied physics in Braunschweig and the U. S., and received his Ph. D. from Stony Brook University. After his post doc, he has worked as a management consultant, followed by managerial roles in the high-tech industry. He joined the LPKF Group as Chief Executive Officer in May 2018.

When I joined the Management Board at the start of May, I initiated a number of immediate actions: initially, an operational program to reduce working capital and to improve cash flow and since July, a company-wide performance improvement program that covers nearly all employees and that we are continuing in 2019. There were also changes in management in some areas. In general, we were cautious in doing so, but we took decisive action where necessary. These immediate actions had positive impact: for the year as a whole, revenue and profit were significantly higher than the forecast made at the start of the year. I am delighted that we were able to achieve this in the space of just a few months.

I also want to create more agility, better cooperation and more transparency within the company; I want us to even better understand how our customers generate value and how we can help them with our solutions; I want to strengthen the company's economics with a consistent and high degree of cost-consciousness. In addition, it is important to me that, today and going forward, we enjoy our work and our success. We work in a high-tech company, often on the absolute cutting-edge of what technology can do. This is something truly special.

**Mr. Witt, you have been LPKF AG's Chief Financial Officer since September 2018. The company's capital structure changed significantly during 2018. The Management Board has significantly reduced net debt. How was this accomplished, and what additional goals do you have for financing the company?**

CHRISTIAN WITT From my point of view, there were two crucial factors. First, in 2018 LPKF was able to generate sustainable earnings from operations, thanks to significantly higher revenue and an improved cost position, and generate a positive free cash flow of EUR 5.8 million. Second, from the capital increase in August 2018 we have raised EUR 16.2 million in new equity. We were able to reduce our net debt significantly from EUR 37.7 million to EUR 16.3 million, which has increased the company's degree of financial and entrepreneurial freedom. In addition, we achieved first success in working capital management. In 2019, we will work hard to reduce the company's capital employed – both working capital and fixed assets.

**Nearly all segments showed a positive development in 2018. Welding remains the exception. How do you plan to make this segment profitable?**

DR. GOETZ M. BENDELE It is true, in 2018 the Development, Electronics, and Solar segments all achieved a profit, in each case higher than the forecast from the beginning of the year. The Welding segment, on the other hand, has incurred a loss. For this and other reasons, we made a change in the segment's management during the fourth quarter of the year.

I am convinced that what was (and in part still is) true for the company as a whole, is true for the Welding segment as well: on the one hand, we have outstanding technology and attractive products; on the other hand, there is a need for operational improvements. We will implement these improvements, which have already led to noticeably better results in the Electronics segment in 2018, in the Welding segment as well.

This is about a stronger focus on customer satisfaction and our specific value contribution for them. This means that, during the entire customer project cycle, we focus strongly on the customer requirements, and that we strengthen our service and sales functions accordingly. I expect that we will already see a positive development during the second half of the year. During the coming year at the latest, the Welding segment should become profitable.

**Mr. Witt, if we can come back to the finance point of view, what are your strategic priorities for the future? What is the main focus for investment?**

CHRISTIAN WITT Goetz Bendele has already pointed out how important being close to our customers and ensuring their satisfaction are to our company. As the Chief Financial Officer, I agree 100 percent. We want to achieve more profitable growth and align ourselves more closely with the needs of our customers. This means we need to continuously develop new and innovative solutions, technologies and applications. Our ability to innovate should in turn strengthen our customers' innovations, and enable them to develop and market new products, or to produce existing products more competitively with new production processes. We will continue to invest in these technologies and in our ability to offer our innovative solutions quickly to our customers.

CHRISTIAN WITT
**Chief Financial Officer (CFO)**
Finance & Controlling, Investor Relations, Compliance & Law, Organization & IT, Purchasing
Born in 1971, Management Board Member since September 2018 – Christian Witt studied economics at the University of Regensburg and as a Fulbright Scholar at Rice University in the USA. He has worked for various industrial and high-tech companies, where he gained extensive experience as CFO. He joined the LPKF Group as Chief Financial Officer in September 2018.

LIDE is a good example of this. Here we have developed a technology that can significantly change and improve the production of microsystems and that also enables entirely new products. Clearly, our investment activity will continue to focus on development. As before, around 10 percent of revenue will be invested in research and development.

**The ability to innovate is one of LPKF's strengths. How do you plan to continue and expand LPKF's innovation and technology leadership?**

DR. GOETZ M. BENDELE As Christian Witt explained, we invest a signification proportion of our revenue in research and development, and that is a good thing. The current positive development can be attributed in large part to the fact that this focus on the development of new solutions has continued without cutting back even during difficult times. We must use our creativity to continue to identify new applications for laser-based technology and introduce them to our customers. Basically, this is a cycle: where today, we have a unique selling point as technology leader, tomorrow there will be intense competition on price which we may not always win. So, we need keep earning our right to be a successful player at the leading edge of high technology again and again. Our investment to do so is very well spent.

**How do you plan to improve Group profitability and return on capital in the short and medium term?**

CHRISTIAN WITT In my view, this is about management measures as well as operational aspects. First and foremost, I see the effects of transparency and controlling within the company. In 2019, the Group is managed exclusively based on consolidated key performance indicators, which are directly tied to increasing the company's success and value. This will lead to more transparency in relation to successes as well as decisions, and a better focus of executives and the entire organization. I have received broad support for these changes within the company, which further increases the effectiveness of these measures.

Moving on to the operational areas, Goetz Bendele has already explained that we have implemented a company-wide performance improvement program in the middle of 2018. The "PEP program" includes operational improvements in key areas such as sales, purchasing, production and development, and is aimed at increased growth and effectiveness (particularly in sales), efficiency, speed and a reduction in capital employed. While we have already seen some initial success, we expect the bulk of the impact in 2019 and 2020. We have embedded the program within the company on a long-term basis, so that potentials for improvement are systematically accounted for and executed as part of projects in the future.

Another key focus area is service. Many of our customers have 24/7 manufacturing operations. Our machines are often part of tightly run production chains. Reliable service is, therefore, a requirement for customer success, and we want to further improve this important success factor. As an initial step, we have improved our service offering by, for example, offering contracts with committed service levels. In 2018, Service and Accessories earned a revenue of EUR 18.7 million. In 2019, we plan to optimize and expand this area in the interest of our customers.

**In recent months, you have also talked about extending the LPKF business models. What can you tell us about that?**

DR. GOETZ M. BENDELE LPKF has, to date, considered itself primarily a machine manufacturer. In reality, we have been a high technology company for quite some time, generating value for our customers with sophisticated technological solutions. In many cases, we do this through the sale of machines, but also through the implementation of customer-specific applications, and production and other services. Where it makes sense for our customers, we can imagine that we will also offer to manufacture products or intermediate products ourselves.

In addition to strengthening our service as Christian Witt has described, we also want to expand our production services business for pilot and production volumes under the LaserMicronics brand. Since the last quarter of 2018, under the Vitrion brand, we have been offering customers a full range of manufacturing services for thin-glass micro-processing with our LIDE technology – from joint application development, to pilot volumes and right through to large-scale production of thin-glass microstructures for applications in different industries. We call this business model a "foundry".

We are doing this, on one hand, to be able to supply our customers more quickly and to lower the entry barriers in introducing new laser technology to our customers. On the other hand, this foundry model has been in use in different parts of the technology industry for years, and it is to some extent a requirement for quick and successful market entry. We anticipate that the Vitrion foundry model will contribute significantly to our growth in 2019 and beyond.

**Why are you going to recommend to the Annual General Meeting that no dividend should be paid for 2018, despite the positive results? How do you plan to make LPKF attractive to investors in the long term?**

CHRISTIAN WITT First of all, I am delighted that LPKF AG managed to generate a positive free cash flow and with that, regain the ability to pay a dividend. It is our responsibility to carefully weigh the best way to use this cash flow to create value – within the company as well as for our shareholders. The Management Board and the Supervisory Board are in agreement that reducing debt and investing in new technology, and thereby in the future sustainability of LPKF, take precedence over the distribution of profits. If things develop as planned, we expect that we will recommend a dividend payment to the Annual General Meeting for 2019.

To me increasing the value of our company through sustainable, profitable growth is the deciding decisive factor in attracting investment to LPKF. This is based on customer-focused technology leadership and we are investing continually investing in that.

**The competition for young talent has increased steadily in recent years. How are you going to persuade them to work at LPKF?**

DR. GOETZ M. BENDELE It should be fun to work with us. We are still a young company, not a large corporation, and we do not want this to change, regardless of our future growth. As a physicist with a high-tech professional background, I cannot think of anything more exciting than what we do at LPKF. There are not many companies that are truly at the leading edge of technology in nearly all areas they are active in. LPKF has been doing exactly this for many years.

But this by itself is not enough. Young people, and not just young people, want their work to be appreciated; they want to know that their contribution is having a positive impact on what we are trying to achieve together; that there are clearly defined career paths along which they can progress, and finally, that we as a company, are flexible when to comes to balancing family and work. It is my aim to achieve this throughout LPKF. That will mean a change in company culture which will take some time.

Our solutions create value for customers – Christian Witt and Goetz M. Bendele.

**How do you plan to communicate with the capital markets?**

CHRISTIAN WITT Our aim is to communicate in a transparent, prompt and reliable manner and create the conditions for a “fair” valuation of our shares, which is especially important for us as a small-cap company. In addition to share price, liquidity and therefore the tradability of our shares, play an important role for investors. As a new Management Board, we plan to intensify our investor relations efforts in 2019. The aim is to expand the coverage of LPKF shares, increase and improve press relations and maintain a direct dialog between the Management Board and investors. I am looking forward to lively discussions with our shareholders.

# SUPERVISORY BOARD REPORT

DEAR SIR OR MADAM,

Encouragingly, the last financial year showed a positive trend of improved revenue and earnings growth. We now need to work on consolidating this growth. We are already seeing the effects of the streamlining of management structures and processes, and the focusing on profitable revenue in the increased attention on customer requirements. This has also improved our return on capital. Prudent use of capital employed and a positive cash flow are still important objectives. Despite these successes, there is still work to be done to keep LPKF Laser & Electronics AG on a long-term profitable growth course. The Supervisory Board's objective is to continue to encourage these value-adding changes.

DR. MARKUS PETERS
**Chairman of the Supervisory Board**
Born 1964, member of the supervisory board since 13 July 2017 – After completing a training as a banker, Markus Peters studied business administration at Christian-Albrechts-University Kiel and in the USA. He worked in various managerial positions for RWE, thyssenkrupp, Outokumpu Holding Germany GmbH and DMG MORI, including 4 years in the USA. Since July 2017 Markus Peters is member of the Executive Board of German Technology AG, a subsidiary of BANTLEON BANK AG. Since 2018 he is also a member of the board of LPKF USA.

LPKF Laser & Electronics AG benefited from globalization and the robust economy in 2018. On the one hand, this presents considerable opportunities for the future, while an economic slowdown could present risks on the other. Therefore, we now need to prepare for potential changes in economic conditions. I am certain that we will succeed at this. Over the last financial year, I was able to assure myself of the innovation power, commitment, and great motivation of our employees, both in Germany and abroad. LPKF Laser & Electronics AG has considerable potential and expertise that we can use to benefit our customers more successfully than we have previously. We want to develop further as a solution provider using our technological leadership combined with a deep understanding of customer requirements and, in so doing, efficiently market our phenomenal process expertise. Miniaturization, digitization, industry 4.0 and automation remain the main growth drivers in this area.

In 2018, the capital was also successfully increased by 10% of the share capital. This strengthened the balance sheet and the liquidity position, and paved the way for new growth opportunities and greater independence from financing banks.

There were two new appointments to the LPKF Laser & Electronics AG Management Board during the reporting period. On May 1, Dr. Götz Bendele took on the role of Chairman of the Management Board and reported to the Annual General Meeting on May 31, 2018. Mr. Christian Witt was appointed Chief Financial Officer by the Supervisory Board with effect from September 1, 2018. On behalf of the entire Supervisory Board, I would like to wish Dr. Bendele and Mr. Witt every success in the performance of their roles. Both appointments are for three years. The former members of the Board of Managing Directors retired at the end 2018 as planned.

## SUPERVISION AND CONSULTATION

The Supervisory Board has critically monitored the company's business performance over the reporting period and performed the duties incumbent upon it in accordance with the law and the Articles of Incorporation. The Supervisory Board met on ten occasions during 2018, two of which were extraordinary meetings. With just two exceptions, all members of the Supervisory Board were physically present for all meetings. One Supervisory Board member took part via telephone in the March meeting and the extraordinary meeting in December. The Supervisory Board examines the efficiency of its activities annually in accordance with the recommendations of the Corporate Governance Code. The efficiency review for the 2018 financial year took place in January 2019 and the outcome was successful.

The Supervisory Board regularly monitored the Management Board's conduct of business during the financial year and advised the Management Board on different aspects of corporate management. The Management Board kept the Supervisory Board informed in a timely manner on issues relating to strategy, planning, business performance, exposure to risk, risk management, and adherence to compliance requirements. If business performance deviated from approved plans then this was discussed with the Management Board. The Supervisory Board was involved in important group decisions at an early stage. The Management Board submitted monthly written reports to the Supervisory Board about the earnings and liquidity situation, along with an overview of the business position and exposure to risk.

The members of the Supervisory Board dealt with the submitted documents and resolutions critically, and also made their own suggestions. To this end, the Supervisory Board had numerous discussions with the Management Board outside of the official board meetings. Furthermore, in my position as Chairman of the Supervisory Board, I practiced a continuous exchange of information with the Management Board. Measures requiring approval were submitted to the members of the Supervisory Board in accordance with the Articles of Incorporation and rules of procedure; following consultation, the Supervisory Board approved these measures. Furthermore, the Supervisory Board regularly assured itself of the legality, conduct and expediency of the Management Board's actions. Where necessary, the Supervisory Board was given access to the company's books and records.

### MAIN FOCUS OF CONSULTATION

The main topics under consultation during the reporting period were the operational performance of the LPKF Group and opportunities to further improve the economic situation. The Management Board kept the Supervisory Board briefed with key management figures, in particular, orders on hand, incoming orders, working capital, liquidity, and earnings. Where advisable, the Supervisory Board requested improvements or additional measures. Furthermore, detailed advice was given on company organization, the business situation (at segment level too), cash flow and financing, and net working capital.

The Supervisory Board was extensively involved in the restructuring of Management Board remuneration and presented an optimized remuneration model at the annual General Meeting on May 31, 2018. On the one hand, the model included the achievement of minimum targets independent of the business plan as a prerequisite for payment of a profit-sharing bonus to the Management Board. This means that payment of a variable bonus to the Management Board would automatically be waived in times of poor performance. On the other hand, improved profitability and a higher cash flow combined with careful handling of the capital employed and sustainable value creation taking into account share price developments will be rewarded. The new remuneration model will be used for the first time to pay a variable remuneration to the Members of the Board of Managing Directors newly appointed in 2018.

Furthermore, the Supervisory Board has been closely involved in the reappointment of the Management Board. As a result, a new Chairman of the Management Board and a new Chief Financial Officer have been appointed. Simultaneously, we have streamlined the Management Board from four members down to two.

During the reporting period, a strategy meeting was held with the Management Board and the division managers. The Supervisory Board extensively addressed and discussed company strategy. The strategy meeting is the basis for corporate planning.

Business performance provided different starting points for constructive discussions with the Management Board. The Solar segment has performed very positively, in particular thanks to the expansion of solar capacity in Asia, but there is still plenty of work to be done in the long-term planning of capacity and the introduction of new products. Unexpected delays in the launch of LTP were repeatedly subject of discussion with the Management Board. The emerging turnaround in the Electronics segment is encouraging and something the Supervisory Board is keen to continue supporting. We made progress with the implementation of LIDE technology during the reporting period and expect revenue and earnings to increase going forward. However, the market opportunities and implementation risks need to be weighed up carefully. The Development segment has performed in a stable manner and is an essential pillar of business success. Unfortunately, the Welding segment did not perform as planned, despite a profitable market and high-quality technological products. The Management Board generously introduced strong direct control to the segment during the second half of the year. We hope to record positive effects here during the new financial year. The Supervisory Board has scrutinized all development projects multiple times and called for corrections where required. This also applies to LTP and LIDE technology.

Internal audit measures are an integral part of Supervisory Board meetings. Internal audits at LPKF Laser & Electronics AG are outsourced to an auditing firm, which reviewed selected areas of the company in accordance with the established schedule and audit plan. The Supervisory Board was informed of the outcomes of the audits. Following consultation, the Supervisory Board approved the suggested measures.

## CORPORATE GOVERNANCE AND DECLARATION OF COMPLIANCE

In 2018, the Supervisory Board dealt intensively with the implementation of corporate governance standards. LPKF Laser & Electronics AG's corporate governance is presented in detail in the Corporate Governance Report. On March 20, 2019 the Management Board and the Supervisory Board submitted the annual Declaration of Compliance, which reports on any deviations from recommendations, in accordance with Section 161 of the German Stock Corporation Act. The Declaration of Compliance is also publicly available on **OUR WEBSITE**. LPKF Laser & Electronics AG has complied with all recommendations, apart from two deviations, and recognizes that the Corporate Governance Code is an important part of corporate management. There were no conflicts of interest during the reporting year.

www.lpkf.com/en/investor-relations/corporate-governance/

## SUSTAINABILITY

Sustainability remains an important part of corporate strategy. The Supervisory Board happily and constructively supported the activities presented in the Sustainability Report related to LPKF Laser & Electronics AG's corporate, social and ecological responsibility. LPKF Laser & Electronics AG's Declaration of Compliance in relation to the German Sustainability Code will be available **ON OUR WEBSITE** by the end of April 2019 at the latest.

www.lpkf.com/en/company/lpkf-group/sustainability/

## REVIEWING THE ANNUAL FINANCIAL STATEMENT

Following the decision made at the Annual General Meeting, the Supervisory Board commissioned PriceWaterhouseCoopers GmbH auditing firm (PwC) to audit the financial and consolidated statements for 2018 and it set the key areas of the audit in its meeting on August 14, 2018. After auditing the financial and consolidated statements, the auditor issued an unqualified audit opinion. The auditor attended the Supervisory Board meeting on March 20, 2019 and reported on the audit of the 2018 financial and consolidated statements. During this meeting, he explained the company's net assets, the financial situation, and the results of operations and was available for questioning by members of the Supervisory Board. In addition, after examining the early risk detection system PwC confirmed that the measures taken by the Management Board in accordance with the German Stock Corporation Act identified potential risks endangering the existence of the company.

The members of the Supervisory Board were given copies of the AG financial statement and consolidated statement documents, and PwC's report in a timely manner for inspection and review. There were no circumstances that gave rise to concern about the auditor's prejudice. As agreed, the auditor reported to the Supervisory Board on other specific matters in addition to the standard auditing services.

The Supervisory Board discussed and reviewed the financial statements, the summarized and the group management reports, and the auditor's report in detail with the auditor. He was satisfied that the reports met the statutory requirements of Sections 317 and 323 of the German Commercial Code. The Supervisory Board approved the outcome of the audit and ratified the AG financial statement and the consolidated statement as presented by the Management Board at their meeting on March 20, 2019. LPKF Laser & Electronics AG's financial statement has therefore been adopted.

The Management Board and the Supervisory Board will propose to the Annual General Meeting on June 6, 2019 to pay no dividend. In the current corporate situation, priority is being given, in particular, to strengthening the balance sheet and investing in growth.

### REVIEWING THE MANAGEMENT BOARD'S REPORT ON RELATIONS WITH AFFILIATED COMPANIES

The Management Board presented the Supervisory Board with its report on relations with affiliated companies (Dependent Companies Report) during the 2018 financial year in a timely manner. The auditor reviewed the Dependent Companies Report and issued the following opinion:

"On completion of our audit in accordance with professional standards, we confirm that

1. the factual information in the report is correct,
2. the payments made by the Company for the legal transactions listed in the report were not unreasonably high."

The auditor submitted the Dependent Companies Report to the Supervisory Board along with the auditor's report. The Dependent Companies Report and the auditor's report were then transmitted to all members of the Supervisory Board in good time. At its meeting on March 20, 2019 the Supervisory Board discussed and reviewed the Management Board's Dependent Companies Report and the auditor's report.

### PERSONNEL

At the Annual General Meeting on May 31, 2018, Dr. Heino Büsching, Deputy Chairman of the Supervisory Board, resigned from his position for personal reasons. Dr. Büsching had served on the company's Supervisory Board since it was floated on the stock market in 1998. The Supervisory Board would like to thank Dr. Büsching for his long-term commitment. Professor Dr. Erich Barke was elected as Deputy Chairman of the Management Board on May 31, 2018.

Upon completion of the Annual General Meeting that concluded the 2018 financial year, Professor Dr. Barke will leave the board as he has reached the age level. The Supervisory Board is very grateful to Professor Dr. Barke for his valuable and constructive contributions to the development of the company and his long-standing support of the corporation.

### THANKS

The Supervisory Board would like to thank all employees and the Management Board for their dedication and commitment during the 2018 financial year. We would also like to thank our customers who have increasingly used our solutions for their processes.

The works' committees have constructively represented employees' interests and respected the overall company situation. This warrants our particular thanks.

The Supervisory Board would especially like to thank our shareholders for their support of LPKF Laser & Electronics AG during the reporting period and beyond.

Garbsen, March 2019

DR. MARKUS PETERS
Chairman of the Supervisory Board

# SEGMENT OVERVIEW

## OUR INNOVATIVE IDEAS AND SPECIFIC EXPERTISE HAVE ENABLED US TO ACHIEVE MARKET LEADING POSITIONS.

### DEVELOPMENT

**From an idea to a completed printed circuit board in just a few hours – sophisticated printed circuit boards can also be produced quickly and cost-effectively with our LPKF Rapid Prototyping processes. This means that the same laboratory can produce layouts, near-production quality prototypes and small batches.**

Users can significantly reduce their processing time with our mechanical or laser-based systems without compromising on sensitive individual company layout data. LPFK laser systems can also process the high-quality specialized materials that are increasingly being used in electronics. For example, we enable to process special materials such as Pyralux® TK for high-speed digital and high-frequency applications, even on both sides. The laser system takes care of both the drilling and the double-sided etching and contour cutting. The impact on the substrate itself is extremely low.

In the Development segment, we serve a global market with lots of individual customers. Our customers include the R&D departments of industrial companies, universities, research institutes, schools, electronic design houses, and government institutions. For a number of years we have offered micromachining systems for research use outside of circuit board prototyping. This gives LPKF the opportunity to open up new markets above and beyond pure electronics development.

### ELECTRONICS

**Our Electronics segment encompasses various of our technologies. They are all used for large-scale production electronic components and meet the three core requirements of the electronics industry: precision, speed and flexibility.**

LPKF MicroLine laser systems cut and drill both flexible and more complex printed circuit board materials with high speed and precision. The new LPKF CleanCut technology allows our customers to make extremely clean cuts and gives them great freedom of design (see also page 18).

Our StencilLaser cuts high-precision stencils for solder paste printing. We have secured our position as global market leader in this highly specialized area to date by continuously developing.

The LDS technology for manufacturing three-dimensional circuit carriers also is part of the Electronics segment. This allows mechanical and electronic functions to be integrated into injection molded parts.

LIDE technology is one the Electronics segment's most exciting innovations. It allows our customers to efficiently manufacture multiple micro etchings in thin glass. (See also page 22).

**SERVICE** Our customers manufacture in over 70 countries and all around the world they can rely on our **COMPETENT SERVICE NETWORK**. Highly qualified LPKF service technicians provide on-demand support on site, over the telephone, by email or remotely 24 hours a day seven

## WELDING

**In the Welding segment, LPKF develops and markets highly efficient laser systems for welding plastics. Our laser systems produce a reliable and visually attractive weld seam that meets the most demanding quality requirements. As a leading technological supplier, we have many years of experience in this area.**

Our range of solutions for joining plastic components is primarily targeted at automotive suppliers and manufacturers of consumer electronics and medical technology. Laser welding can be used to replace traditional material joining methods such as gluing. Our customers set great store by the easy operation of our laser welding machines. We calibrate the systems so that they produce fast and perfect weld seams at the touch of a button.

In 2018, for example, we launched the LPKF InlineWeld 6600, a universally applicable, standardized welding system. The system has a compact laser head and separate control cabinet and is designed for high-volume three-shift operations. The Inline system can be integrated into a production line quickly and easily using the extensive automation interfaces. The perfect interplay of hardware and software makes a major contribution to the efficient use of the machines – and there are very few steps from project setup to finished component.

## SOLAR

**LPKF has been developing laser systems to manufacture thin film solar panels for over ten years. The active layers on these panels are deposited homogeneously and structured subsequently.**

Our laser systems etch the laminated panels with high precision and speed. The energy efficiency of individual panels can be significantly increased by using LPKF laser technology. We can therefore offer our customers a unique competitive advantage and have contributed to a situation where today solar energy is frequently produced without subsidies.

The production of thin film solar panels requires a greater degree of technology than that of silicon-based solar cells. At the same time, however, it requires less raw materials and has the best $CO_2$ balance in the industry. Additional advantages of the thin film solar panels include good low-light performance, a better temperature coefficient and a lack of sensitivity to the angle of the sun. The result is a good market perspective for thin film technology – and growth potential for our solar business (see also page 20).

In the Solar segment we are developing a new technology for the printing of functional pastes and colors with Laser Transfer Printing (LTP). This digital printing process is a flexible and efficient alternative to the widely used screen printing method. We envisage LTP having particular applications in the automotive industry, in the manufacture of printed glass, and in other sectors.

days a week. Thanks to our regional service centers and spare parts depots we can promptly supply our customers with original spare parts, and install them, thus guaranteeing the **CONSTANT AVAILABILITY** of machinery.

# THE FUTURE IS LIGHT.

LPKF IS SPEARHEADING THE CHANGE FROM TRADITIONAL TO LASER-BASED PRODUCTION METHODS. THE **PRECISION** OF THE LASER ALLOWS MATERIALS TO BE PROCESSED IN THE **MICROMETER RANGE**. THIS MAKES ELECTRONIC DEVICES SMALLER, MORE EFFICIENT AND MORE CAPABLE.

OUR LASER SYSTEMS CONTRIBUTE TO THE **REDUCTION** OF BOTH THE **PROCESS COSTS** AND THE **MATERIAL COSTS**. MOREOVER, THEY OFFER MAXIMUM **DESIGN FREEDOM** DURING DEVELOPMENT AND LEAD TO MORE **SUSTAINABLE** PRODUCTS.

TODAY, WE ARE CREATING THE **SOLUTIONS** THAT ARE BEING DEMANDED BY THE **MEGA TRENDS** MINIATURIZATION, EFFICIENT PRODUCTION, PRODUCT DESIGN AND CLEAN ENVIRONMENT.

ON THE FOLLOWING PAGES, WE PRESENT THREE SELECTED **SAMPLE APPLICATIONS** THAT DIRECTLY CREATE **COMPETITIVE ADVANTAGES** FOR OUR CUSTOMERS.

# MICRO
COSM

# THE FUTURE IS LIGHT.

MICRO C O S M

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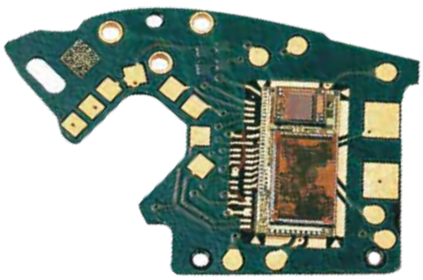
200 µm

# CLEAN CUT TECHNOLOGY

## THIS LPKF INNOVATION CREATES PROCESS ADVANTAGES AND PERFECTLY CLEAN-CUT EDGES FOR OUR CUSTOMERS' BENEFIT.



On the previous page the cut edge of a printed circuit board, which has been cut cleanly and precisely by "cool" processing with extremely short laser pulses.

PicoLine systems generate almost no heat in the material.

### PRINTED CIRCUIT BOARD PROCESSING WITH LASER TECHNOLOGY

Over the last few years, the laser has become established as a contact-free tool in the manufacture of printed circuit boards. Laser technology, when compared with traditional processes, offers a range of advantages that save resources and improve results. Lasers operate without contact or abrasion and, apart from in the desired locations, do not heat or mechanically stress the material in any way.

The laser beam can create even very complex structures, with its cutting channel that is only a few micrometers wide. This means that it is possible to position more components on a board than by using traditional tools such as saws, mills and stamps.

Modern laser systems are much faster than those that were first used for cutting printed circuit boards, and they are totally software controlled.

### EFFICIENT PRODUCTION AND BETTER RESULTS THANKS TO CLEANCUT TECHNOLOGY

Lasers are not all equal. Comprehensive expertise is required to develop a laser system that is right for the given material, its thickness and its area of application. Modified wavelengths and shorter pulses mean that laser technology is penetrating into more and more areas of industrial production. We are pioneers in this area and develop highly innovative high-tech systems for both research institutions and large-scale production.

The requirements for the processing of especially high-performance printed circuit boards are very high and keep increasing. When it comes to PCBs for 5G high-speed data transfers or safety-critical applications in the automotive industry, quite understandably, our customers are not prepared to compromise. They cannot accept impaired quality due to traces of powder on the cut edges or the appearance of dust.

Our solution is "cool" processing. **THE LASERS IN OUR NEW LPKF PICOLINE SYSTEMS OPERATE WITH VERY SHORT LASER PULSES** and create virtually no heat in the material. By also using LPKF CleanCut technology we ensure there is no carbonization, which in turn eliminates the need for subsequent cleaning stages.

The convincing results are printed circuit boards cut with clean cut edges, exact dimensions and considerable material savings. In addition, our laser systems can cut at a speed which traditional milling machines cannot match.

Increased yield and production efficiency in printed circuit board processing leads to a quicker return on investment – a plus for laser technology.


2 µm

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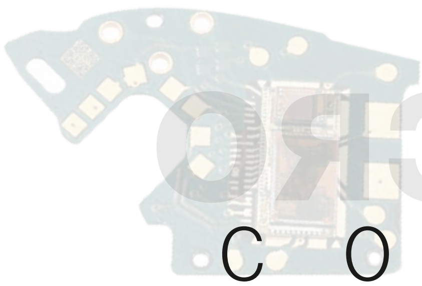


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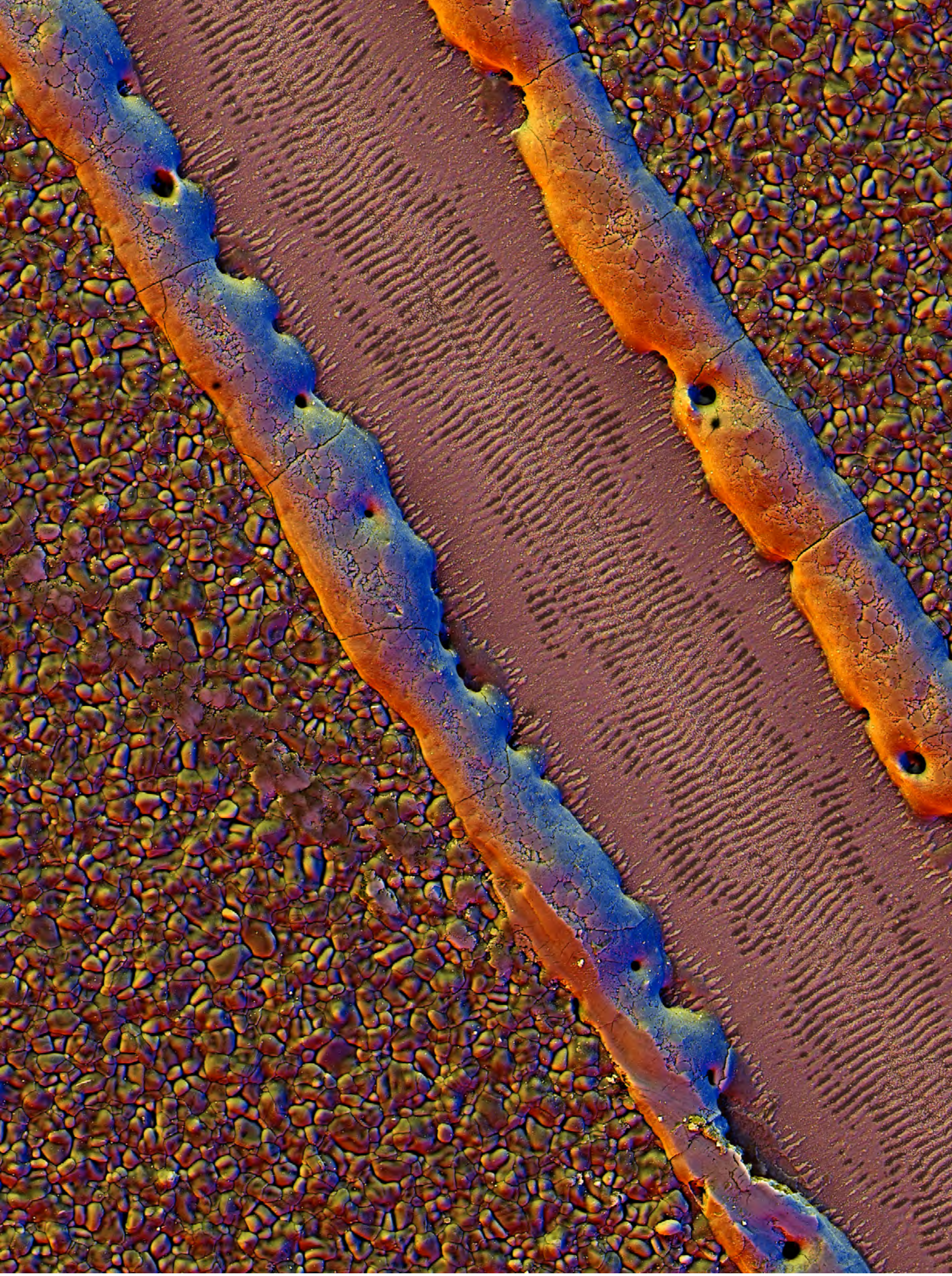

2 µm

# LASER SCRIBING

## OUR LASER SYSTEMS CREATE A COMPETITIVE ADVANTAGE BY MAKING THIN-FILM SOLAR MODULES WORK MORE EFFICIENTLY.

On the previous page, we can see a "laser groove" by which a thin-film solar module was precisely and gently structured.

### EFFICIENCY PAYS

We have been developing laser systems for all the important thin film technologies in the solar panel manufacturing sector for over ten years. We have been successfully working with our customers for a number of years, despite fluctuations in the solar market, and we have **INSTALLED AND COMMISSIONED MORE THAN 100 ALLEGRO SERIES LASER SCRIBERS** worldwide to date. These scribers run around the clock in factories and produce highly efficient solar panels.

**>100**

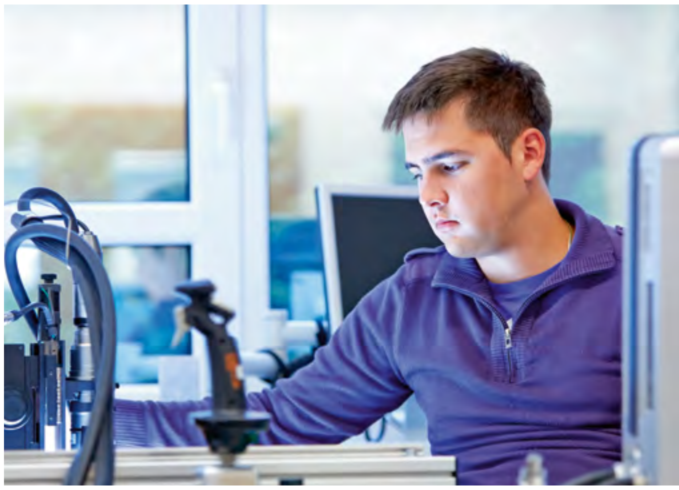
LPKF Allegro series laser scribers have been deployed worldwide.

"Scribing" ultra-precise, thin, straight lines on large, coated glass substrates is a real challenge. Especially when the high-temperature coating process distorts the material even further and this also has to be taken into account. The Dynamic Focus Tracking we developed keeps all laser beams in their focal plane on the panel during scribing. This means that even wavely substrates can be optimally structured. Integrated sensors automatically recalibrate the scribing head in order to ensure precision in different workload scenarios. **THE ULTRA-PRECISE STRUCTURING OF OUR ALLEGRO LASER SYSTEMS ALLOWS TO SIGNIFICANTLY INCREASE THE EFFICIENCY OF THE PANEL.** Moreover, they are so fast that they achieve the highest-possible flow rate on production lines.

Allegro laser systems significantly increase module efficiency.

We are supporting our customers to develop their technological advantage over "silicon-based competition". This can only succeed if the production costs per peak performance watt (EUR/Wpeak) continue to fall even further. Our laser scribers contribute to reducing costs with speed and maximum availability. In addition, the superior accuracy minimizes the inactive zone and thus maximizes panel performance.

Our customers appreciate our commitment to their business. That is why we have already been working with them for a number of years to further develop the technology. We support them all the way from application development to installation and commissioning, and also during production in the servicing of the machine. A well-organized on-site service is essential for the machine's reliability.



Our laser scribers are manufactured at the Suhl site.


MICRO
COSM
300 µm

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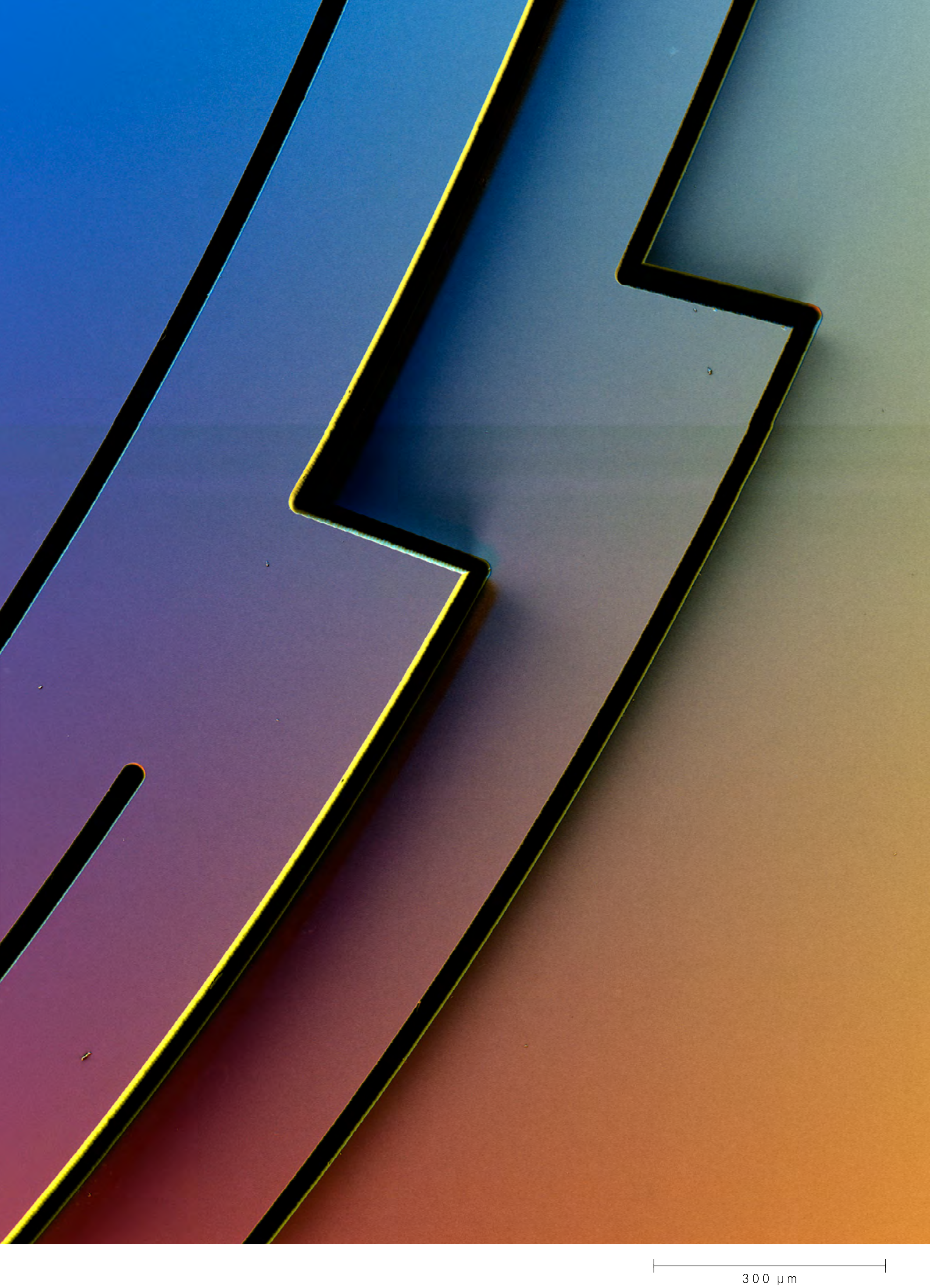
300 µm

# LIDE

## THE LIDE PROCESS SHALL FOSTER THE BREAKTHROUGH OF GLASS AS A MATERIAL IN THE HIGH-TECH INDUSTRY.

The previous page shows high-precision microchannels in ultra-thin glass that have been created using the LIDE process.

www.vitrion.com

Glass processing takes place in our own clean room.

### GLASS HAS HUGE POTENTIAL

Glass is an inexpensive material with unique properties. As well as its cost benefits, it is thermally stable, transparent, insulating and chemically inert. For these reasons, glass is already widely used in the production of electronics. In other situations, glass can replace relatively expensive silicon but it has not been easy to process until now. If traditional processes are used, for example, to put deep micro etchings into thin glass, cracks can appear and the glass becomes unstable. In addition, the majority of traditional processes are very time-consuming and costly. Our solution to these problems is called LIDE (Laser Induced Deep Etching).

### A QUANTUM LEAP IN MICROSYSTEM TECHNOLOGY

LIDE is able to etch on thin glass quickly and precisely. The procedure is a two-step process. The first step is to modify the required layout area using directed laser pulses. A single laser pulse is sufficient to modify the glass substrate. In the second step, the modified areas of the glass are removed using wet-chemical etching. This process can create up to 5000 holes with a diameter of less than 5 micrometers in one second. The resultant etchings can be as deep in the material as required and are characterized by high precision and quality. The fact that there are no micro cracks or stresses means LIDE is a quantum leap forward for glass applications. This process is particularly of interest for those applications where glass has not been used in the past due to the issues detailed above.

### PROCESS THIN GLASS PRECISELY AND EFFICIENTLY

Creativity, expertise and lots of patience are needed to successfully launch a new technology. We know this from experience. With LIDE we have succeeded in making a real innovation commercially viable. We want to give customers from all areas of the microsystem technique access to this new basic technology and so are providing LIDE as a foundry service on **WWW.VITRION.COM**. Our Vitrion team can help with batch production, prototypes or sample parts. We cover the entire range of applications, from through glass vias to wafers for advanced IC packages and glass spacer wafers, right through to high-precision components for microfluidics. **THE GLASS PROCESSING TAKES PLACE IN A SEPARATE CLEAN ROOM.** Our Vitrion team can advise customers in detail on all phases of production. We are paving the way for innovative and efficient thin glass applications.

# INNOVATION FROM PASSION

# MICRO

COSM

A **SPIRIT OF INNOVATION** IS ESSENTIAL IF YOU WANT TO STAY AHEAD IN THE TECHNOLOGY GAME. WE HAVE BEEN ENTHUSIASTICALLY DEVELOPING CUTTING-EDGE TECHNOLOGY FOR OUR CUSTOMERS FOR OVER 40 YEARS. OUR DEVELOPMENT LABORATORIES ARE FULL OF CREATIVE PEOPLE SEARCHING FOR THE SOLUTIONS TO **TOMORROW'S CUSTOMER REQUIREMENTS**. THE RATE OF TECHNOLOGICAL ADVANCEMENT HAS INCREASED WITH THE EVOLUTION OF DIGITALIZATION. LASERS, THEREFORE, HAVE AN EVER INCREASING ROLE TO PLAY AS A **PRECISE AND FLEXIBLE TOOL**. WE PLAN TO MAXIMIZE THEIR FULL **POTENTIAL** – AND THERE'S STILL A LONG WAY TO GO.

# LIDE

## THE LIDE PROCESS SHALL FOSTER THE BREAKTHROUGH OF GLASS AS A MATERIAL IN THE HIGH-TECH INDUSTRY.


The previous page shows high-precision microchannels in ultra-thin glass that have been created using the LIDE process.

www.vitrion.com

Glass processing takes place in our own clean room.

### GLASS HAS HUGE POTENTIAL

Glass is an inexpensive material with unique properties. As well as its cost benefits, it is thermally stable, transparent, insulating and chemically inert. For these reasons, glass is already widely used in the production of electronics. In other situations, glass can replace relatively expensive silicon but it has not been easy to process until now. If traditional processes are used, for example, to put deep micro etchings into thin glass, cracks can appear and the glass becomes unstable. In addition, the majority of traditional processes are very time-consuming and costly. Our solution to these problems is called LIDE (Laser Induced Deep Etching).

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# WE ARE FULL OF IDEAS!

## LPKF AS AN EMPLOYER

There are a lot of good reasons to join LPKF. We systematically create the right conditions for everyone to give their best and enjoy their work, and we know that our employees are the key factor in our success – and we act accordingly.

Although we deal with the processing of micro-materials by lasers, anyone who knows us is aware that something big is happening here. Our laser systems can change many things for the better. As a high-tech partner, we pave the way for environmentally friendly, digital manufacturing and increasingly powerful products.

We cover a vast range of roles in mechanics, electronics, software and process technology. At LPKF, cooperation across disciplines and flat hierarchies are a value that we live by and part of our recipe for success. Specialists can contribute their strengths, as can unconventional thinkers who prefer to interact between specialist areas and disciplines. Creative thinking, curiosity and the desire to experiment – these are what sets us apart, and gives our industry its unique appeal.

**"CREATIVITY, CURIOSITY** AND **THE DESIRE TO EXPERIMENT** – THESE ARE WHAT SET US APART.

### HUMANS ARE AT THE HEART OF WHAT WE DO – RIGHT FROM THE START

Ultimately, it is our employees who use their expertise to develop the best solutions for LPKF customers on a regular basis. And it's no accident – to us, the most important thing is to offer a wide range of ongoing training opportunities to promote the individual strengths of our specialists and managers. Based on structured training, regular discussions and individual performance appraisals, we support all employees in their development, right from the start. We also dedicate a lot of energy to our training programs in our commercial, IT and industrial sectors. Our aim is to attract well-trained specialists to our company, not just today but also in the years to come.

### PRO DIVERS

We have been taking part in the continuing education project called "ProDivers" since 2016. It combines the development of staff and senior management with a focus on diversity. The aim is to promote transparency and a spirit of innovation, thus making cooperation even more rewarding and successful.

At LPKF, we are proud of our smart solutions and successful projects, but we are also well aware that work is not the only thing in life, and we firmly believe that employees feel more motivated and are able to perform better when their professional careers fit in perfectly with their lives as a whole. We have turned this insight into action. From flexible work hours and work time accounts, time off and part-time requests, to working from home or medical screening: we attach great importance to ensuring that employees' personal and working lives are compatible. We always look together eye to eye at working options – and so far we have always been able to offer workable solutions. And we don't skimp on healthy treats such as fresh fruit and free gym membership either.

**655**

The 2018 financial year has been a success, thanks to the 655 employees.

## LPKF STANDS FOR TEAMWORK

LPKF's sense of community extends far beyond our business premises. We are a team that is diverse in every way, and one that also works closely together internationally. Our identification and enthusiasm is reflected not only in our friendly working atmosphere, but also in the many initiatives launched by our employees. Events involving multiple locations are fun and spur us on to perform at our best together, away from the daily routine. Maybe the board of directors may even find themselves running behind an apprentice in a company run ...

## WE TRAIN YOUNG PEOPLE

We understand that thorough training is an investment in our company's future. That is why every year we train young men and women to become mechatronics engineers, industrial clerks, IT specialists, technical product designers, warehouse logistics specialists and electronics technicians for devices and systems.

# THE LPKF SHARE

## THE 2018 STOCK MARKET YEAR

In 2018 the stock markets were characterized by uncertainty due to the political environment. One of the main issues was the USA's trade conflicts with China and Europe, both of which were the cause of new lows on the stock markets in February and March at the beginning of the year. The subsequent recovery of the markets in August and September did not happen equally across all indices. At the end of the 2018 stock market year, the DAX closed at 10,559 points, an overall loss of 18%. The MDAX also bowed out with a loss of 18% on 21,588 points and the SDAX was down 20% at 9,509 points. The TecDAX did a little better, but still closed the year down 3% on 2,450 points.

## LPKF SHARES

Despite a positive company performance and good corporate news, LPKF shares could not stand their ground against the strong external factors in 2018. At the start of the year the shares were at 9.64 EUR. They peaked shortly afterwards on January 19 with a market value of 10.48 EUR. By the end of January they had fallen to 8.60 EUR and they then stayed around this level until the end of April. The share price then fell until the end of June, when it reached a low of 6.10 EUR. Following a recovery at the end of August the price reached EUR 8.21 and the year ended with a market price of 5.52 EUR. During the first half of the year LPKF shares fell by a total of 25.16% (SDAX +0.53%), whereas during the second half share performance fell more or less in line with the SDAX (LPKF −21.03%, SDAX −20.43%).

The share performance also reflected demand for LPKF shares – trading volumes were between 347 and 175,511 shares. On Xetra, an average of 17,344 shares change hands each day.

## CAPITAL INCREASE AND SHAREHOLDER STRUCTURE

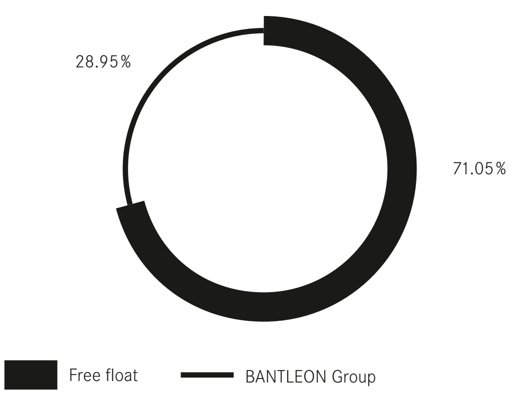
In the third quarter of 2018, LPKF AG implemented a cash capital increase by issuing around 2.2 million shares (representing 10% of the share capital) excluding shareholders' pre-emptive rights. The placement price per share was determined by the market price. In addition to reducing corporate debt, the EUR 16.2 million issue proceeds served to increase the company's margin for maneuver.

Following the successful implementation of the capital increase, LPKF Laser & Electronics AG had a subscribed capital of 24,496,546.00 EUR. The corresponding number of ordinary shares were approved for the regulated market of the Frankfurt am Main stock exchange (prime standard). 28.95% of the shares are held by Jörg Bantleon as the anchor shareholder. This also includes the voting rights of German Technology AG, a subsidiary of Bantleon Bank, which are attributed to Jörg Bantleon. Three other investors hold over 3% of the shares. Shares held by asset managers and trust companies, funds and pension funds, investment companies, and foreign investment companies in their respective special funds are not considered to be in fixed ownership.

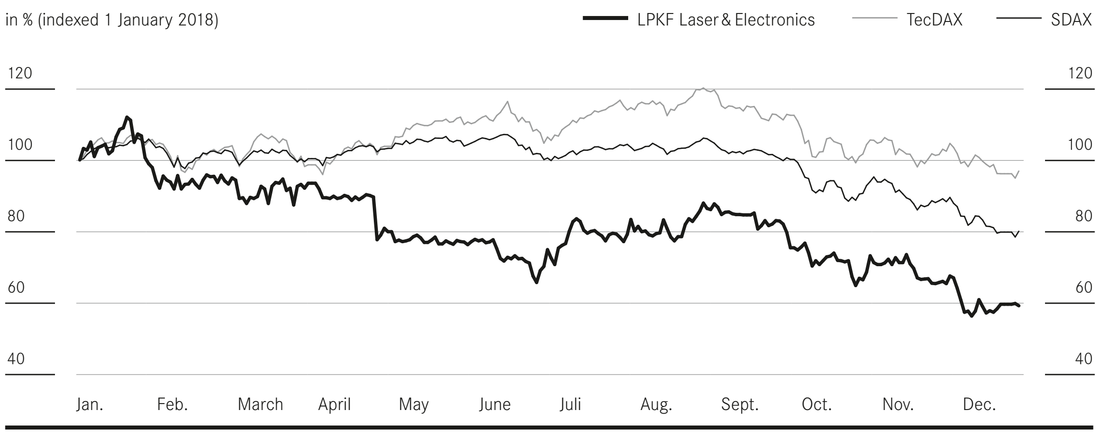
The BANTLEON Group is the exception to this, as it is in the position of being a long-term anchor shareholder and has publicly announced its intention to pursue strategic goals and to have a lasting impact on corporate policy.

As per Deutsche Börse AG definition, 71% of LPKF shares are in free float.

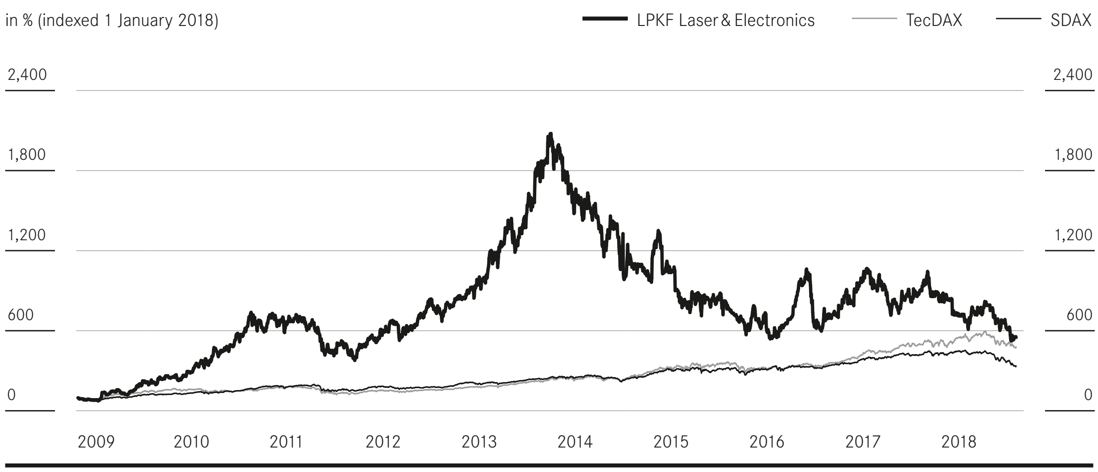
SHAREHOLDER STRUCTURE DIAGRAM
as of 31.12.2018



## LPKF SHARE PERFORMANCE DURING THE 2018 FINANCIAL YEAR




## LONG-TERM PERFORMANCE OF LPKF SHARES 2009–2018



## ANNUAL GENERAL MEETING AND DIVIDENDS

On May 31, 2018 the Annual General Meeting for LPKF AG took place in the Hannover Congress Centrum. Around 300 shareholders listened to the report given by the new Chairman of the Management Board, Dr. Götz Bendele. 43.35% of the company's share capital was represented there (previous year: 46.38%). All of the management recommendations were approved by the shareholders with an overwhelming majority. Detailed voting results can be found on the **IR-WEBSITE**.

www.lpkf.com/en/
investor-relations/
annual-general-meeting/

and secure the necessary funding to invest in new technology. The management will propose to the Annual General Meeting on 6 June 2019 that no dividend will be paid. If the company continues to develop positively, the Management Board plans to recommend a corresponding dividend for the 2019 financial year.

## INVESTOR RELATIONS ACTIVITIES

The aim of our investor relations work is to ensure a fair valuation of LPKF shares through the capital market. We communicate regularly with market participants to create the conditions necessary for this and are as transparent as possible. Dr. Götz Bendele, the new Chairman of the Management Board and Kai Bentz, Chief Financial Officer until the end of August, followed by his successor Christian Witt, spoke at three investor conferences with institutional investors and analysts, and took part in a total of 65 investor meetings.

### LPKF KEY SHARE FIGURES

| | **2018** | 2017 | 2016 |
|---|---|---|---|
| Number of shares on 31.12. | 24,496,546.00 | 22,269,588 | 22,269,588 |
| Highest price (XETRA) | EUR 10.48 | EUR 10,875 | EUR 10.64 |
| Lowest price (XETRA) | EUR 5.10 | EUR 6.89 | EUR 5.41 |
| Closing price at year end (XETRA) | EUR 5.52 | EUR 9.39 | EUR 6.95 |
| Market capitalization at year end | EUR 135.24 million | EUR 209.11 million | EUR 154.77 million |
| Share turnover in shares per day (average) | 17,344 | 42,506 | 51,993 |
| Earnings per share, diluted | 0.33 | 0.05 | –0.40 |
| Dividend per share* | **0.00 EUR** | 0.00 EUR | 0.00 EUR |

* 2018: Annual General Meeting recommendation

The newly appointed Management Board reviewed the LPKF AG dividend policy and reformulated it as follows with the consent of the Supervisory Board: the Company plans to propose to the Annual General Meeting that 30 – 50% of the free cash flow be distributed as a dividend. The current corporate situation, economic developments, and potential investments, acquisitions or sale of assets, could all lead to a deviation from this principle. Following the successful consolidation and restructuring over the previous three years, LPKF once more generated positive free cash flow in 2018, which is an important prerequisite for paying a dividend. However, the Management Board felt that, given the current corporate situation, 2018 was too early for a dividend payout. The plan, instead, was to further reduce the company's debt

LPKF SHARES MASTER DATA

| | |
|---|---|
| ISIN | DE0006450000 |
| Ticker symbol | LPK |
| Trading segment | Prime Standard |
| Market places | Frankfurt, Berlin, Bremen, Düsseldorf, Hamburg, Hannover, München, Stuttgart |
| Trading advisor | Oddo Seydler Bank AG |
| Underwriting syndicate | Bankgesellschaft Berlin AG. Commerzbank AG. DG Bank AG (heute DZ Bank AG). M.M. Warburg & Co, KGaA |
| First trading day (new market) | 30 November 1998 |
| Face value | 1 EUR |

LPKF shares are covered and rated by the following institutions:

- Warburg Research
- ODDO Seydler
- HSBC
- Quirin Privatbank
- Hauck & Aufhäuser
- EQUI.TS

LPKF also has regular contact with financial and economic journalists. LPKF offers individual press interviews with the Management Board on the publication of quarterly figures in order to provide shareholders with an independent and comprehensive picture.

The new Management Board plans to continue and significantly intensify this active communication with the capital market in 2019.


LPKF WILL BE HAPPY TO PROVIDE YOU WITH PERSONAL SUPPORT

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# CORPORATE GOVERNANCE

SUSTAINABLE VALUE CREATION AND EFFICIENT COLLABORATION

The actions of the LPKF Group's management and supervisory bodies are guided by the principles of responsible and good corporate governance. The Management Board and the Supervisory Board report on issues of corporate governance at LPKF in this chapter pursuant to Article 3.10 of the German Corporate Governance Code. This chapter also contains the corporate governance declaration pursuant to Sections 289f and 315d of the German Commercial Code. The corporate governance declaration for the company and the group is a part of the combined management and group management report. For the remuneration report, please see page 70 of the combined management and Group management report.

## CORPORATE GOVERNANCE DECLARATION AND CORPORATE GOVERNANCE REPORT

### COMPOSITION AND PROCEDURES OF THE MANAGEMENT BOARD AND SUPERVISORY BOARD

www.lpkf.com/en/company/lpkf-group/management/

LPKF AG is an enterprise incorporated according to German law. It operates under a dual management system comprising the Management Board and the Supervisory Board. The Management Board and the Supervisory Board of LPKF AG work closely together in managing and supervising the Company.

As of the start of 2019, the LPKF AG Management Board consists of two members with one Chairman. They are responsible for managing the Company's business with the aim of creating sustainable value. The Management Board fulfills its managerial tasks as a collegial committee. Notwithstanding the overall responsibility, the individual members of the Management Board bear individual responsibility for the areas assigned to them by Management Board resolutions. The distribution of business among the two members of the Management Board is in accordance with the business distribution plan. **INFORMATION ABOUT THE MANAGEMENT BOARD MEMBERS' AREAS OF RESPONSIBILITY AND BRIEF CVS** can be found on the company website. The Management Board convenes on a regular basis.

The Supervisory Board advises and monitors the Management Board with regard to its management of the Company. The Supervisory Board is integrated in corporate strategy and planning, as well as all aspects of fundamental importance to the Company. The rules of procedure require the Management Board to obtain the approval of the Supervisory Board for major business transactions. The Chairman of the Supervisory Board coordinates the work of the Supervisory Board, chairs its meetings and represents the Supervisory Board externally.

The Management Board informs the Supervisory Board of the Group's planning, performance and situation, including risk management and compliance in a timely and comprehensive manner, both in writing and at regular meetings. Extraordinary Supervisory Board meetings are convened as necessary in connection with material events. The Supervisory Board has adopted rules of procedure for its own work.

LPKF AG has taken out a D&O insurance policy for all members of its Management Board and Supervisory Board, subject to a deductible corresponding to 10% of damages, but no more than one-and-a-half times the fixed annual remuneration.

The LPKF AG Supervisory Board consisted of four members until 31 May 2018. On 27 June 2018 there was a registered amendment to the Articles of Incorporation to reduce the number of Supervisory Board members to three, all individually elected at the Annual General Meeting. **SHORT CVS FOR THE MEMBERS OF THE SUPERVISORY BOARD** can be found on the company website. The term of office of the Supervisory Board members runs until the 2019 Annual General Meeting and in one case until the 2022 Annual General Meeting. All election proposals concerning potential Supervisory Board members shall consider the expertise, abilities and professional experience that are required for carrying out the respective tasks as well as issues of diversity. For its proposals to the Annual General Meeting for the election of new Supervisory Board members, the Supervisory Board makes sure that the candidates in question can devote the requisite amount of time to the Company.

Details on the actual membership of the Management Board and the Supervisory Board in the 2018 financial year and disclosures in accordance with Section 285 (10) of the German Commercial Code can be found on pages 41 and 79 of the combined management and group management report. There are no committees.

### DETERMINATIONS ON THE TARGET NUMBER FOR THE PROPORTION OF WOMEN ON THE SUPERVISORY BOARD, THE MANAGEMENT BOARD AND THE TWO MANAGEMENT LEVELS BELOW THE MANAGEMENT BOARD

LPKF AG is legally required to set targets for the proportion of women on the Supervisory Board, the Management Board and the two management levels below the Management Board.

With effect from 1 July 2017, the Supervisory Board defined a target for the proportion of women on the Supervisory Board and the Management Board of 25% each, to be fulfilled by 30 June 2022. At the time this target was set, both the Management Board and the Supervisory consisted of four members each. Both bodies have since been reduced in size. As of 31 May 2018, the Supervisory Board has only three members, in accordance with an amendment to the Articles of Association registered with the commercial register on 27 June 2018. From 1 January 2019, the Management Board consists of only two members.

In view of these changes and taking into account the duration of the current terms of office, the Supervisory Board reviewed the existing targets and set new targets and deadlines for achieving them via resolutions on 27 February 2019. The Supervisory Board set a new target of 1/3 (= 33.33%) for the proportion of women on the Supervisory Board. The Supervisory Board set a target of 0% for the proportion of women on the Management Board. Given the current composition of the Management Board with just two members, the current appointment periods of both male Management Board members and the fact that there are no plans to expand the Management Board, it was not appropriate to set a higher target at this time. The fulfillment date for both of these new targets is 26 February 2024.

At the time that the new targets were set, the original targets of 25% for both the Supervisory Board and the Management Board had not been achieved. The reasons for this were the interim reductions in the memberships of the Management Board and the Supervisory Board and also the fact that new Management Board members were appointed through a structured gender-neutral process of identifying and selecting candidates and subject to the prior consideration of candidates' qualifications and management experience. There were no new elections to the Supervisory Board during the period of 1 July 2017 to 27 February 2019.

The Management Board laid down a target for the proportion of women on the two management levels below the Management Board with effect from 1 July 2017. They remain unchanged at 17% for the first level below the Management Board and 23% for the second level below the Management Board. The fulfillment date for these targets is 30 June 2022.

### MANAGEMENT BOARD SUCCESSION PLANS, DIVERSITY CONCEPT

Together with the Management Board, the Supervisory Board ensures that there is long-term succession planning for the Management Board. When deciding who to appoint to the Management Board, the fundamental selection criteria for the Supervisory Board are professional qualifications in the area of responsibility to be taken on, leadership qualities, past achievements and skills acquired, and knowledge of the LPKF AG company.

In putting together a Management Board, the Supervisory Board aims for diversity consisting primarily of the following aspects:

- The members of the Management Board should between them have the knowledge, abilities and professional experience required to properly perform the duties incumbent on them.

- The members of the Management Board must be familiar with the relevant areas of industry. At least one member of the Management Board should have knowledge of the laser technology sector and of capital markets and financing. At least the Management Board member with responsibility for finance must have expertise in accounting or auditing and one member of the Management Board should have experience in the management of a medium-sized company.

- Diversity should also be taken into account when searching for qualified Management Board members. It should also be recognized that different yet complementary professional profiles and professional and personal experiences, and appropriate representation of both genders on the Board will benefit the overall operation of the Management Board.

- As a general rule, members of the Management Board will be under 65 years of age. The age of Management Board members should therefore be taken into account during selection.

- The Supervisory Board has set the aforementioned targets and deadlines concerning the proportion of women on the Management Board.

The diversity concept should benefit the overall operation of the Management Board. No matter who the Supervisory Board chooses to appoint to the Management Board, they should do so in the best interests of the Company and having taken into account all the relevant factors.

The LPKF Management Board currently consists of two members who are qualified in different areas both professionally and personally. With the exception of the proportion of women which has been extended to 30 June 2022, the Supervisory Board is satisfied that the Management Board met the diversity criteria during the reporting period.

## TARGETS FOR THE COMPOSITION OF THE SUPERVISORY BOARD, SKILLS PROFILE, DIVERSITY

On 27 February 2018 the Supervisory Board updated and extended their previous target specifications concerning their composition and adopted a diversity concept. The Supervisory Board compiled a skills profile for the whole committee that can be considered when suggesting new candidates for the Supervisory Board.

The members of the Supervisory Board should have between them the knowledge, abilities and professional experience required to perform the duties incumbent on them. Members of the Supervisory Board must between them be familiar with the sector that the company operates in.

It should be ensured that between them, the members of the Supervisory Board have at least the following knowledge and experience: (i) familiarity with the Company's sector, (ii) knowledge in multiple defined areas, (iii) expertise in accounting or auditing for at least one member of the Supervisory Board, (iv) international experience. In this way, the individual qualifications of the individual members complement each other in the achievement of these aims.

a) **Addressing the international nature of the Company's activities**
The international activities of LPKF AG are reflected in nominations to the Annual General Meeting. In addition to the ability to speak and write English, the measure here is the professional experience acquired in other German and foreign companies with international operations, whether in management or supervisory bodies, and the understanding of global economic issues. The criterion of internationality does not stipulate the mandatory inclusion of one or more Supervisory Board members holding foreign citizenship; German citizens can also contribute the desired range of experience.

b) **Independence and avoiding potential conflicts of interest**
The Supervisory Board must include what it considers to be an appropriate number of independent members within the meaning of Article 5.4.2 of the German Corporate Governance Code. For the

purposes of this recommendation, at least half of the members of the Supervisory Board must be independent from the Supervisory Board's perspective. Within the meaning of this recommendation, Supervisory Board members are to be considered non-independent in particular if they have a personal or business relationship with the corporation, its governing bodies, a controlling shareholder or a company affiliated with the controlling shareholder that may cause a substantial and not merely temporary conflict of interest.

Members of the Supervisory Board shall not be members of governing bodies of, or exercise advisory functions at, significant competitors of the Company and the Group.

No more than one former member of the Management Board may be a member of the Supervisory Board.

**c) Definition of an age limit**
The age limit for members of the Supervisory Board has been set at under 70 years at the time of election.

**d) Definition of a regular limit of length of membership for the members of the Supervisory Board**
To ensure a balanced mix of experience and new members on the Supervisory Board, the Supervisory Board specified a regular limit of ten years for the average length of membership for the members of the Supervisory Board based on the date of their election.

**e) Diversity**
The composition of the Supervisory Board of LPKF AG should reflect as broadly as possible a spectrum of professional expertise and experience in various areas relevant to the Company. Concerning the proportion of women on the Supervisory Board, the Supervisory Board has set the aforementioned targets and deadlines.

The aforementioned aims and the diversity concept should benefit the overall operation of the Supervisory Board.

There were no conflicts of interest in the financial year just ended. Each member of the Supervisory Board ensures that he can devote the requisite amount of time to his role. No member of the Management Board held more than three appointments to the supervisory boards of listed stock corporations not belonging to the Group.

With the exception of the proportion of women which has been extended to 26 February 2024, the current composition of the Supervisory Board corresponds to the targets set by the Supervisory Board and complies with the diversity concept and the skills profile.

The Supervisory Board members are between them familiar with the relevant company sector for which they have responsibility, and there is at least one member with expertise in the area of accounting or auditing and one with international experience. The body is comprised of a sufficient number of independent members as determined by the Supervisory Board. The Supervisory Board considers its current members Dr. Dirk Michael Rothweiler and Prof. Dr. Erich Barke to qualify as independent members pursuant to Section 5.4.2 of the German Corporate Governance Code version dated 7 February 2017.

## CORPORATE GOVERNANCE PRACTICES DISCLOSURES

### RISK MANAGEMENT

The Management Board of LPKF AG has a comprehensive Group-wide reporting and control system that makes it possible to record, assess and manage risks. This system is continuously refined, adjusted to changing parameters, and audited by the auditors of the financial statements. The Management Board informs the Supervisory Board on a regular basis of existing risks and their development. Details of risk management within the LPKF Group are in the risk report, which is part of the Group management report. This contains the report on the accounting-related internal control and risk management system pursuant to the German Commercial Code.

### COMPLIANCE – PRINCIPLES GOVERNING CORPORATE ACTIONS AND BUSINESS ACTIVITIES

Acting in compliance with the principles of corporate, environmental and social sustainability in accordance with applicable law is an indispensable element of LPKF's corporate culture. This includes trust, respect and integrity in interactions with other people. These values are expressed in exemplary behavior vis-à-vis employees, business partners, shareholders and the public. LPKF's understanding of compliance includes observing all laws, statutes and the Articles of Incorporation, complying with internal regulations, and honoring voluntary obligations.

www.lpkf.com/en/
company/lpkf-group/
compliance-management/

LPKF AG considers it particularly important to raise the awareness of compliance among all of the Group's employees. Compliance is enshrined in internal processes and there is a Group-wide compliance structure. Employee training courses are held on the **COMPLIANCE CODE** which applies across the Group. This should ensure the prevention of compliance infringements across the whole Group.

The Compliance Office holds regular meetings to discuss current topics, some times in the presence of the technical officers.

Reliable reporting channels for internal and external stakeholders help to ensure that possible irregularities are reported confidentially. Internal auditing is also used for this purpose. To obtain knowledge of any possible compliance violations, LPKF makes contact channels available to internal and external whistleblowers on its **WEBSITE**. These can be used to contact the compliance officer or independent legal counsel. Additional employee contact details can be found in the Compliance Code, on the intranet and on notices posted at the Company.

Internal auditing, which is performed by an international audit firm functioning as a third-party service provider, plays a key role in the compliance organization. The relevant audits are also used to update the internal control system.

### DECLARATION OF COMPLIANCE OF LPKF LASER & ELECTRONICS AG FOR THE 2019 FINANCIAL YEAR WITH THE CORPORATE GOVERNANCE CODE IN ACCORDANCE WITH SECTION 161 GERMAN STOCK CORPORATION ACT

LPKF implements the recommendations and suggestions of the German Corporate Governance Code (GCGC) apart from a few exceptions. The Management Board and the Supervisory Board jointly issued the 2019 Declaration of Compliance on 20 March 2019 pursuant to Section 161 German Stock Corporation Act. The Declaration is permanently made public on LPKF AG's website.

The following Declaration of Compliance relates to the current version of the German Corporate Governance Code (GCGC) of 7 February 2017, as promulgated in the Federal Gazette on 24 April 2017.

The Management Board and Supervisory Board declare that LPKF Laser & Electronics AG complies with the recommendations of the GCGC and intends to continue to comply with these in the future. The following exceptions were or are valid:

I. No severance pay cap agreed for Directors' contracts in case of premature termination of a Director's contract (Section 4.2.3 (4) and (5) GCGC).

   Because they only run for a maximum of three years, the Directors' contracts do not contain a cap on severance pay. If a Director's contract is terminated prematurely without cause, remuneration is limited to no more than the remaining contractual period. For this reason, the Supervisory Board did not see any need to agree on a severance payment limit of two years' remuneration when concluding the contract.

II. No formation of Supervisory Board committees (Section 5.3.1, 5.3.2 and 5.3.3 GCGC).

   In the case of three members, committees are not considered expedient. After consultation, members of the Supervisory Board are entrusted with special tasks on a topic-related basis and report to the entire Supervisory Board.

### SHAREHOLDERS AND ANNUAL GENERAL MEETING

The shareholders of LPKF AG exercise their co-determination and control rights at the General Meeting, which takes place at least once per year. It resolves all matters determined by law with binding effect on all shareholders and the Company. Each share grants one vote at the Annual General Meeting.

Every shareholder who registers in due time has the right to participate in the Annual General Meeting. Shareholders who cannot attend in person have the option of appointing a bank, a shareholders' association, the proxies appointed by LPKF AG who are bound by instructions, or any other agent as their proxy to exercise their voting right.

The invitation to the Annual General Meeting as well as the reports and information required for the Annual General Meeting are published in accordance with the requirements of German corporate law and are also made available on LPKF AG's website in both German and English.

### TRANSPARENCY

LPKF regularly informs the participants in the financial markets and interested members of the public about the commercial situation of the Group and any new facts. The annual report, the half-yearly financial report and the quarterly financial reports are published within the specified deadlines. Press releases, and where applicable, ad hoc announcements, provide information on current events and new developments. All of the information is published in printed form and via suitable electronic media such as email and the Internet. The **COMPANY WEBSITE** also provides comprehensive information on the LPKF Group and LPKF shares.

www.lpkf.com

A financial calendar lists the scheduled dates for the most important regular events and publications such as the Annual General Meeting, the annual report, quarterly financial reports, the financials press conference and analyst conferences. The calendar is published well in advance of the scheduled events and is made permanently available on the LPKF AG website.

### SHARE TRANSACTIONS OF MEMBERS OF THE COMPANY'S CORPORATE BODIES

Reportable directors' dealings were published on the Company's website and reported to the competent supervisory authorities.

## ACCOUNTING AND AUDITING

LPKF AG prepares its consolidated financial statements and its interim consolidated financial statements in accordance with the International Financial Reporting Standards (IFRS) as applicable in the European Union. The annual financial statements of LPKF AG are prepared in accordance with the German Commercial Code. The consolidated financial statements are prepared by the Management Board, audited by the auditor of the financial statements and reviewed by the Supervisory Board. The interim reports and the half-yearly financial reports are discussed by the Supervisory Board and the Management Board before publication. The consolidated financial statements and the annual financial statements of LPKF AG were audited by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Hannover, the auditor elected by the 2018 Annual General Meeting. The audit reports were signed by German public auditors Jens Wedekind (since the 2016 annual financial statements) and Hanno Karlheim (since the 2017 annual financial statements).

The audits were conducted in accordance with German auditing standards, taking into account the generally accepted German standards for the audit of financial statements promulgated by the Institute of Public Auditors (IDW). The audits also assessed the early risk warning system and compliance with the reporting obligations defined for proper corporate governance pursuant to Section 161 German Stock Corporation Act.

LPKF AG also entered into a contract with the auditor pursuant to which they must notify the Supervisory Board immediately, while the audit is in progress, of any grounds for excluding them, any partiality on their part as well as any material findings and events. Nothing of this nature arose in the course of the audit covering the 2018 financial year.

In May 2018 the Supervisory Board put the mandate to audit the financial and consolidated statements of LPKF Laser & Electronics AG and the statements of some of the subsidiaries included in the consolidated statement for the 2019 financial year out to tender. This is an early adoption of the EU Audit Reform stipulating the mandatory rotation of external auditors. The EU Audit Reform consists of Regulation (EU) No. 537/2014 and Guideline 2014/56/EU which have been transposed into national law. The public procurement of the audit and the selection of an auditor are subject to the provisions of the EU regulation and the choice of auditor will be finalized by the Annual General Meeting on 6 June 2019.

Garbsen, 20 March 2019

DR. MARKUS PETERS
on behalf of the Supervisory Board

DR. GÖTZ M. BENDELE
on behalf of the Management Board

# COMBINED MANAGEMENT REPORT

FOR THE LPKF GROUP AND LPKF AG

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CONTENTS

# FUNDAMENTAL GROUP INFORMATION

## GROUP STRUCTURE AND BUSINESS MODEL

LPKF Laser & Electronics AG (LPKF AG) is a highly specialized photonics machinery manufacturer and a worldwide leading provider of laser-driven production processes. LPKF develops all-in-one solutions for dynamic markets such as the electronics industry, automotive parts suppliers, the solar industry, the semi-conductor industry, medical technology, research institutions and universities.

The LPKF Group maintains a broad-based product portfolio. With innovative ideas and specific expertise, it has taken a leading position in its segments while developing entirely new markets on a regular basis. To maintain its ability to innovate, the company invests around 10% of its revenue into in-house R&D activities every single year.

In many industries, the superior precision offered by laser technology is supplanting traditional manufacturing techniques. When deployed as a tool, light is clearing the way for the environmentally friendly, digital production of increasingly smaller yet more powerful products.

The miniaturization mega-trend demands increasingly precise and efficient manufacturing methods for products such as smartphones, sensors and microfluidic systems. The increasing digitization in the industry requires a higher level of flexibility in production. Unlike conventional tools, lasers can be programmed for a multitude of tasks and integrate easily into the digital systems used for the process control of entire production runs.

LPKF Laser & Electronics AG is headquartered in Garbsen near Hannover, Germany. The Company maintains a broad-based global presence, with a workforce of 655 based at sites in Europe, Asia and North America. The export share was around 89% in the 2018 financial year. The shares of LPKF Laser & Electronics AG are listed on the Prime Standard segment of Deutsche Börse.

### Legal structure of the Group

As of December 31, 2018, LPKF AG had ten subsidiaries, which together with the parent company form the group of consolidated companies.

Domiciled in Garbsen, near Hannover, Germany, LPKF AG carries out top-level Group functions such as strategic business development and innovation management and performs core activities in the areas of management accounting, investor relations, HR, accounting,

**LPKF LASER & ELECTRONICS AG**
**GARBSEN**/Germany

| PRODUCTION SUBSIDIARIES | SALES AND SERVICE COMPANIES |
|---|---|
| **LPKF WeldingQuipment GmbH**<br>**Fürth**/Germany (100%) | **LPKF Distribution Inc.**<br>**Tualatin (Portland)**/USA (100%) |
| **LPKF SolarQuipment GmbH**<br>**Suhl**/Germany (100%) | **LPKF Laser & Electronics Trading (Shang-hai) Co., Ltd.**<br>**Shanghai**/China (100%) |
| **LPKF Laser & Electronics d.o.o.**<br>**Naklo**/Slovenia (100%) | **LPKF (Tianjin) Co. Ltd.**<br>**Tianjin*, Suzhou, Shenzhen, Shanghai**/China (100%) |
| **LaserMicronics GmbH**<br>**Garbsen*, Fürth**/Germany (100%) | **LPKF Laser & Electronics K. K.**<br>**Tokyo**/Japan (100%) |
| | **LPKF Laser & Electronics Korea Ltd.**<br>**Seoul**/Korea (100%) |
| | **LPKF Laser & Electronics Hong Kong Ltd.**<br>**Hong Kong**/China (100%) |

* The companies are headquartered at the locations mentioned first in each case.

legal, internal audit, risk management, compliance, marketing, strategic purchasing and management systems. Sales and marketing, service, production and development work is handled by separate business units per segment. In LPKF's most important markets outside Germany, sales and service functions are provided through other companies in close collaboration with business unit management.

**Operating segments**
LPKF was active in the following segments in the 2018 financial year:

**Welding**
**WELDING** comprises laser systems for welding plastic components. These systems are primarily used by the automotive supply industry, medical technology and in the production of consumer electronics.

**Solar**
In the **SOLAR** segment, LPKF develops and produces laser scribers for the structuring of thin-film solar cells. Its customers are mainly solar cell manufacturers. This segment also includes laser systems for the digital printing of functional pastes and inks (laser transfer printing, LTP).

**LPKF LASER & ELECTRONICS AG**

| DEVELOPMENT | ELECTRONICS | WELDING | SOLAR |
|---|---|---|---|
| Systems for printed circuit board development and research | Systems for electronic production | Systems for plastics welding | Systems for the production of solar cells and for Laser Transfer Printing |

**Development**
In the **DEVELOPMENT** segment, LPKF supplies almost everything required by developers of electronic equipment to manufacture and assemble printed circuit board prototypes largely without the use of chemicals. In addition to the development departments of industrial customers, the company primarily supplies public organizations such as research institutes, universities and schools. Customers in this segment mainly make their purchasing decisions on the basis of their available budget.

**Electronics**
LPKF's **ELECTRONICS** segment manufactures systems that are primarily used in production in the electronics industry. These include StencilLaser for cutting print stencils and MicroLine laser systems for the cutting and drilling of rigid and flexible printed circuit boards. Process expertise for the manufacture of molded interconnect devices using LPKF's patented laser direct structuring (LDS) method is also part of this segment. Laser systems for high-precision structuring of very thin glass (Laser Induced Deep Etching, LIDE) has also been added more recently.

**Other**
The "other segments" category mainly includes undistributed costs and income. This primarily includes expenses for the holding company function and foreign exchange expenses and income.

The LPKF Group ranks among the market and/or technology leaders in its areas of business. As a rule, LPKF strives to become at least the number two in new markets.

LPKF competes with an entirely separate set of competitors in each segment and in each product group. These groups of competitors range from multinational corporations to smaller, regional providers, who are often active in only a single market.

**Primary locations**

| COUNTRY | CITY | FUNCTION | FOCUS AREA |
|---|---|---|---|
| Germany | Garbsen | Group headquarters, production, development, sales and services | Electronics segment<br>• Stencil, cutting and drilling, LIDE, LDS<br>Development segment<br>• Systems for prototyping |
| | Fürth | Production, development, sales and services | Welding segment<br>• Systems for plastic welding |
| | Suhl | Development, sales, production and services | Solar segment<br>• Systems or structuring thin-film solar panels<br>• LTP |
| Slovenia | Naklo | Production, development and services | Development segment<br>• Systems for prototyping,<br>• Laser sources |
| USA | Portland, OR | Sales and services | Sales and services in North America |
| China | Shanghai, Shenzhen, Suzhou, Tianjin | Sales and services | Sales and services |
| Japan | Tokyo | Sales and services | Supporting local distributors in sales Establishing their own customer contacts |
| Korea | Seoul | Sales and services | Supporting local distributors in sales Establishing their own customer contacts |

**Production and procurement**

Production takes place exclusively at the German locations and in Slovenia. Rapid Prototyping Equipment and other equipment for the Development segment, as well as some of the laser sources used within the Group, are produced by the subsidiary LPKF Laser & Electronics d.o.o. in Naklo (Slovenia). Systems for the Electronics segment are manufactured in Garbsen. Welding segment production takes place in Fürth, Germany. Solar and LTP systems are produced in Suhl.

LPKF does not generally acquire complete systems from third parties. If system components are purchased from outside the Group, several suppliers are available in most cases.

**Sales**

Global sales, especially in important regions such as China, Japan and North America are handled by subsidiaries. Overall, the Group is represented by subsidiaries or distributors in 71 countries.

### Management and control

Organization of management and control

The Management Board represents the Company and is responsible for running it. The members of LPKF's Management Board are appointed by the Supervisory Board. The Supervisory Board may withdraw appointments for cause.

The Supervisory Board has determined that certain transactions require its approval.

The Annual General Meeting may only decide on management issues if requested to do so by the Management Board. Any amendment to the Articles of Incorporation requires a resolution by the Annual General Meeting to be passed with a majority of the share capital represented at the adoption of the resolution. Article 25 (1) of the Company's Articles of Incorporation stipulates that, in cases where the law requires a resolution to be passed by a majority of the share capital represented, a simple majority of the share capital represented will suffice, unless the law mandates a larger majority.

The following persons were members of the Management Board of LPKF AG in financial year 2018:

- Kai Bentz (CFO, Spokesman of the Management Board since 10/16/2017) until 8/31/2018
- Dr.-Ing. Christian Bieniek (COO) until 8/31/2018
- Bernd Lange (CTO) until 12/31/2018
- Dr. Götz Matthias Bendele (CEO) from 5/1/2018
- Christian Witt (CFO) from 9/1/2018

In the 2018 financial year, the Supervisory Board consisted of the following members:

- Dr. Markus Peters (Chairman)
- Prof. Dr.-Ing. Erich Barke (Vice Chairman from 6/1/2018)
- Dr. Dirk Rothweiler
- Dr. Heino Büsching (Vice Chairman until 5/31/2018)

### Legal factors

The Company and each of its segments are subject to the general legal requirements applicable to listed companies. Beyond this, no special legal provisions apply.

## STRATEGY

### Strategic framework

Vision

The LPKF Group is driven by the vision that innovative technology will sustainably change the world of electronics production. At the same time, the design and manufacture of electronic devices are increasingly centered around people.

LPKF has derived two central Group functions from this vision.

1. Pioneer: LPKF is promoting the transformation from traditional production methods to laser technology and in so doing is opening up new opportunities in product design and production.

2. Solution provider: LPKF provides high-precision laser-based solutions for manufacturing.

Corporate responsibility

For the LPKF Group, sustainability means acting with responsibility, achieving economic success as well as both ecological and social progress while working to secure the future of the Company.

### Mission statement

All activities of the LPKF Group are geared toward the success of its customers. All activities and decisions are aimed at improving the competitiveness of the Group's customer base through technological advancement and efficiency gains. Strengthening LPKF in the long term serves the interest of all customers, business partners, employees and shareholders. Management therefore emphasizes strengthening the Group's innovation resources and ensuring profitability.

LPKF is a technology group. LPKF shapes technological progress and gains leading market positions through the strength of its superior technical solutions. A sense of professional partnership characterizes relationships with customers, suppliers and representatives as well as the working relationships among employees within the LPKF Group. As an internationally active group, LPKF strives for understanding various cultures and philosophies and always places the Group's interests above those of its individual subsidiaries.

The high quality of its products is the key to customer satisfaction. All employees shoulder responsibility for the quality of the work the LPKF Group does for its customers. LPKF promotes the professional qualifications of its employees to sustain the high quality of LPKF products.

With laser-based technology, LPKF helps to reduce the environmental impact generated by waste. LPKF designs its products and internal processes to be as environmentally friendly as possible. Health and well-being are the foundation for success. LPKF pays special attention to both occupational safety and promoting the health of its employees. As a technology leader, LPKF always strives to optimize its products and the processes necessary for their development. It goes without saying that this requires a corporate culture that is open and encourages learning and constructive criticism. LPKF's responsibility extends to its customers, employees, business partners, shareholders and the public. Being a good corporate citizen includes obeying applicable laws at all times and everywhere, respecting ethical principles and pursuing sustainability. The **LPKF COMPLIANCE CODE** supports the Company's employees in this endeavor.

www.lpkf.com/en/company/lpkf-group/compliance-management/

**Success factors**

The Group's success is based on its understanding of the laser microprocessing of different materials. A key factor of success is LPKF's focus on the following core competencies and the interplay between them:

Core competencies

- Laser technology and optics
- Precision drive systems
- Control technology and software
- Materials technology

Megatrends

The following megatrends are playing a decisive role in the changeover from traditional to laser-based production methods.

- Miniaturization: Miniaturization continues apace. Electronic devices are constantly becoming smaller, more capable and more efficient. The precision of the lasers means that materials can be processed in the micrometer sector.
- Efficiency: Efficient production is of paramount importance to customers. LPKF laser systems support this by reducing both process and material costs.
- Design: Product design is increasingly a primary differentiator. Laser flexibility maximizes freedom of design when designing new products.
- Environmental consideration: Consumers are placing increasing importance on a clean environment. Laser technology creates the conditions for economical and more and more environmentally friendly products.

**Corporate goal**

The Group's fundamental, overarching corporate goal is to increase the value of the Company in the long term. LPKF continuously creates new innovative solutions for its customers in order to achieve this goal. LPKF's technical advantage is constantly being extended and so the organization is geared towards serving its customers. In addition to operational strength and speed, research and development work is also of central importance.

**Strategic orientation of operating business**

Strategic alignment of the companies

The megatrends of miniaturization and digitization require lasers as highly-precise tools for the production of electronic components. As an experienced and innovative laser specialist, LPKF supplies an important key technology for many growth industries. The Company's broad portfolio of products and services contributes to boosting efficiency and thus conserving resources. LPKF is a strategic partner for international customers, with whom it works closely to design advanced solutions.

LPKF is positioned as a global laser specialist. From this vantage point, LPKF enjoys many advantages over competitors, who are often only active in one market or who only act as regional players. Since LPKF addresses a range of markets, it therefore reduces its dependence on the cycles in individual industries. This makes it much easier to compensate for economic fluctuations. This approach requires the integration of business processes with potential synergies.

LPKF Group infrastructure and cross-departmental functions are shared across the segments, for example areas such as development, procurement, the use of international distribution networks, operational IT or administration. Since segments share sites, this means that LPKF can cater to local service and sales business in key regions throughout the world. Shared use of infrastructure also simplifies market entry while helping to ensure optimization of the cost base by exploiting synergy effects.

### Strategic alignment of the segments

The Development segment offers its customers the entire value chain for the manufacturing of circuit board prototypes. Its core is mechanical and increasingly laser-based systems that undergo continuous enhancement. In the Development segment, LPKF addresses a global market with many individual customers from manufacturing and universities. Many customers invest on the basis of an R&D budget. The Development segment can draw on a worldwide network of agents, who are in many cases longtime partners of the Company and able to secure outstanding options for market entry. Despite a large market share of around 60%, the Management Board sees solid growth rates in this segment due to new products and applications. As one example, LPKF has offered micromachining systems for research use outside circuit board prototyping for several years. This provides the opportunity to open up new markets above and beyond pure electronics development.

The Electronics segment addresses markets associated with the production and processing of electronic components. It operates in a highly dynamic market offering opportunities for generating short-term revenue, where sometimes large quantities are delivered to individual customers. The Electronics segment offers its customers systems for cutting, structuring and drilling a wide variety of materials at high speed and with outstanding precision. LPKF also has a major presence in its target market of Asia with its own offices and partners. After-sales service is one of LPKF's major competitive advantages, especially in the field of production machinery.

In the Welding segment, LPKF develops, produces and markets laser systems for welding plastics. This segment primarily targets the automotive supplier industry, medical technology and manufacturers of consumer electronics. Laser welding can be used to replace traditional material joining methods in various different sectors. This creates lots of market potential. LPKF's primary competitive differentiators are its often unique range of products, its superior product quality, its wealth of process expertise, its shorter lead times and its global service network.

In 2018, the Solar segment was dominated by major orders from a single customer. Thanks to the year-long collaboration with this customer, LPKF has gained a leading position in the surface treatment of thin film solar modules and has been the basis of this customer's competitive advantage. The precision and the speed of the Allegro systems are some of LPKF's key differentiators in the solar energy market. In 2018, LPKF was able to acquire new major orders and additional orders from new customers. LPKF continues to work on expanding the customer base. One approach being pursued is developing new markets outside the solar industry. With its new LTP technology, LPKF is addressing the market for printing functional pastes. There is potential here to replace the predominant screen printing method in some areas.

LPKF's strategy for growth also includes the continuous development and optimization of its product portfolio. Here, the Company is not only orienting its development work on market trends but is also pursuing its own concepts and innovations. All products are reviewed at least once a year to see if their continued existence makes sense from an economically point of view.

Service is a core component of our strategy and of what we offer our customers. It is generated and reported within each segment.

## CORPORATE MANAGEMENT

**Essential key LPKF Group figures**

LPKF manages its business performance using key performance indicators (KPI) and ratios at various reporting levels. The following section outlines the key figures LPKF uses.

At Group level these financial indicators include revenue, Earnings Before Interest and Taxes (EBIT) and EBIT margin, net working capital, the net working capital ratio, and the error rate. In 2017, Return On Capital Employed (ROCE) was introduced as an additional key figure.

From 2019, LPKF will also include **FREE CASH FLOW (FCF)** in the financial performance indicators. FCF is an indicator of a company's self-financing capability and its ability to pay a dividend from the cash flow for the period. Free cash flow is the sum of the operational cash flow and the cash flow from investment activity.

LPKF has developed targets for these financial indicators and ratios through strategic and operational planning processes, and these are reviewed annually. The applicable targets for the reporting period are listed along with the time series.

**EBIT:** The Group goal of profitable growth can be reviewed by analyzing revenue in conjunction with EBIT. The EBIT margin is given as a ratio for the Group's goal and is calculated using the following formula: EBIT margin = EBIT/revenue x 100.

www.lpkf.com/en/company/lpkf-group/sustainability/

**ROCE (RETURN ON CAPITAL EMPLOYED):** Capital employed is calculated as the sum of non-current assets and property, plant and equipment, inventories and trade receivables less trade payables and advances received. This is then compared against EBIT and expressed as a percentage to denote the return on capital employed.

**NET WORKING CAPITAL:** It is calculated by using inventories and current trade receivables less current trade payables and advances received. This KPI reflects the net capital tied up in the reported items.

**NET WORKING CAPITAL RATIO:** This KPI gives net working capital as a proportion of revenue, as in a changing business generally the net capital tied up also varies.

**ERROR RATE:** This is the ratio of error costs to revenue. Error costs comprise expenditure associated with the fulfillment of warranty obligations and quality assurance. The target achievement is calculated by means of linear interpolation between the initial value and the minimum value of the error rate.

Other than the error rate, no significant non-financial key performance indicator was used for controlling the Group in the 2018 financial year.

Explanatory notes on the non- financial performance indicators for the LPKF Group are contained in the declaration of compliance with the **GERMAN SUSTAINABILITY CODE.**

The following table presents the changes in the Group's key financial figures over the past five years and the original target figures:

| | | Target 2018 | **2018** | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|---|
| Revenue | in EUR million | 103–108 | 120.0 | 102.1 | 91.1 | 87.3 | 119.7 |
| EBIT | in EUR million | 0–6.5 | 6.8 | 4.0 | –6.8 | –3.7 | 12.7 |
| EBIT margin | in % | 0–6.0 | 5.7 | 3.9 | –7.4 | –4.3 | 10.6 |
| ROCE | in % | 2–7 | 7.0 | 4.1 | –6.8 | –3.5 | 11.8 |
| Net Working Capital | in EUR million | <34.0 | 37.9 | 33.3 | 35.2 | 40.3 | 50.1 |
| Net Working Capital Ratio | in % | <33.0 | 31.6 | 32.6 | 38.7 | 46.2 | 41.9 |
| Error rate | in % | <78.0 | 70.0 | 78.0 | 73.0 | 60.0 | 71.0 |

**Target/actual comparison of planning and realization**

During the 2018 financial year, the Management Board updated their forecast several times. The company issued its first forecast for the whole of 2018 on 1/25/2018. Then consolidated revenue was expected to be between EUR 103 million and EUR 108 million and the EBIT margin to reach up to 6%. On 7/31/2018, the forecast for consolidated revenue was raised to between EUR 110 million and EUR 115 million. On 10/11/2018, it was raised once again to between EUR 115 million and EUR 120 million. On 11/15/2018, the EBIT margin forecast was increased to the upper end of the range of up to 6%.

With a revenue of around EUR 120 million, the Group has significantly exceeded the forecast made a year ago and achieved the higher of the values in the most recent forecast. The EBIT margin of 5.7% is at the upper end of both the original forecast and the more recent one. Revenues in the Solar and Electronics segments were significantly better than originally forecast. This was particularly the case in the Solar segment where it was accompanied by a significantly above-plan development of the EBIT.

At 7.0%, the ROCE was also at the upper end of the target range for 2018, mainly due to the improved EBIT.

As of the reporting date, the net working capital target was not achieved and the Group was outside of the target area at EUR 37.9 million. Whereas, the net working capital ratio was within target at 31.6% thanks to the increased revenue.

The quality costs target was also achieved as the error rate had improved slightly compared to the previous year.

**Non-financial explanation**

In 2014, the European Parliament and EU member states adopted a directive (the CSR Directive) to expand the reporting of large publicly traded companies, credit institutions, financial services institutions and insurance companies. The aim of the Directive is to increase transparency about ecological and social aspects of companies in the EU. It includes information on environmental, social and employee issues as well as respect for human rights and combating corruption and bribery. Germany has implemented the Directive into its national law (CSR Directive Implementation Act). The CSR Directive Implementation Act applies to management reports with effect from the 2017 financial year onwards.

LPKF AG is complying with its CSR reporting requirement by submitting a Declaration of Compliance with the German Sustainability Code (Deutscher Nachhaltigkeitskodex – GSC). The GSC provides a clear structure for reporting non-financial performance. The main focus is on materiality and transparency.

LPKF AG's separate non-financial consolidated report will be published on our **CORPORATE WEBSITE** within the legally stipulated period and no later than 4/30/2019.

www.lpkf.com/en/company/lpkf-group/sustainability/

## RESEARCH AND DEVELOPMENT

**Focus of R&D activities**

Research and development (R&D) is of considerable significance for LPKF as a technology company. Innovations decisively influence the future capabilities of the LPKF Group and hence the business success of the Company.

The primary strategic goal of R&D activities is to acquire, secure or develop the Company's role as an innovation leader within the sectors in question. New products are designed to exhibit differentiators that are then secured via patents. The benchmark for LPKF's development activities is strengthening its customers' profitability.

During the 2018 financial year, development activities focused intensely on new products and technologies in order to bring to market short and medium-term products with significant advantages over competitor products. The key differentiators of these new developments have been secured via patents. Moreover, the quality of the development process has continued to improve with the implementation of agile project management techniques.

Pre-competitive collaboration with research institutions and industry partners, organized as consortium projects, continues to support technological development at the LPKF Group.

**R&D expenses, investments and ratios**
Continuous investment in near-to-market developments is crucial to a technology-oriented Group such as LPKF.

Development expenses in 2018 amounted to EUR 11.7 million, which is equivalent to around 10% of revenue.

LPKF capitalized EUR 3.9 million (previous year: EUR 3.3 million) in development expenses as non-current assets in the reporting year, which equates to a capitalization ratio of 33% (previous year: 32%). Amortization of capitalized development expenses in 2018 amounted to EUR 3.7 million (previous year: EUR 3.3 million).

The following multi-period overview of R&D shows the development of key figures:

| | | **2018** | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|
| R&D expenses | in EUR million* | 11.7 | 11.1 | 11.4 | 9.9 | 11.1 |
| as % of revenue | | 9.7 | 10.9 | 12.5 | 11.3 | 9.3 |
| R&D-employees | | 141 | 155 | 159 | 179 | 171 |

* Current R&D expenses were adjusted for amortization and impairments, and the capitalization of development costs.

**R&D results**
In the Electronics segment, a new generation of systems for depaneling increased cutting speed by 50% and reduced processing time by 80%. A new technology for residue-free cutting was developed in collaboration with LPKF's Laser Competence Center (Development segment). MX technology was used to increase drilling speed by 40% in the field of printed circuit boards. The integration of laser sources with ultra-short pulses has led to the highest technical cleanliness to date.

The development of the award-winning LIDE technology has given rise to a dedicated team to concentrate on marketing and further development of the technology. Dedicated production facilities have been built for thin glass products in order to implement customer projects.

In the Development segment, a new generation of granite platform has been developed for table-top machines, along with three new systems based on it, and they are all ready for market.

Development activities in the Solar segment have concentrated on processes for handling CIGS solar modules. This is required for a major customer. The newly developed generation of etching machines was rolled out and a machine was developed specifically for the CIGS market. The LTP area focused on finalizing the prototypes for the digital printing of functional pastes.

In the Welding segment, the work on modularization of machine components was completed and launched on the market. New software architecture was also completed and is now being used by customers.

## REPORT ON ECONOMIC POSITION

### OVERVIEW OF COMPANY DEVELOPMENT

**Macroeconomic environment**
Trade disputes, the slowing down of economic development in China, restrictive fiscal policy, and the prospect of Brexit all led to sluggish growth of the global economy in 2018. According to the International Monetary Fund (IMF) and the Institute for the World Economy (IfW) growth for the year was 3.7%, a similar level to the previous year. The increase was less than expected.

In advanced economies, the first half of the year was marked by the anticipated good economic development. By the middle of the year things were slowing down somewhat and the growth in Gross Domestic Product (GDP) for the whole of 2018 for this group of countries was 2.4% according to the IfW and back to a level comparable with 2017. As the largest advanced economy, the USA developed well. In 2018, according to the IfW, its GDP rose to 2.9% up from 2.3% in 2017. In the eurozone, the second largest economic area, growth in GDP slowed in 2018 to 1.8%, according to the IMF. In 2017 this value reached at 2.4%. A similar trend was seen in the development of the Japanese economy. The GDP growth rate fell to 0.9% in 2018 down from 1.9% in 2017. The picture was similar in Great Britain, with a fall in growth from 1.8% to 1.4% in 2018.

In Germany, economic growth lost considerable momentum in 2018 after two years of 2.2% growth rates. Preliminary figures published by the Federal Statistical Office suggest growth for the year was only around 1.4%.

Following the economic upswing that emerging economies experienced in 2017, economic growth stagnated in these countries in 2018. After an increase on 5.2% in 2017, economic growth for this year was 5.1% according to IfW. In China, the largest of the emerging economies, growth dropped from 6.8% in 2017 to 6.6% this year.

**Sectorspecific environment**
LPKF’s business success is also influenced by the development of individual sectors. These include the automotive sector, solar industry, electronics industry and consumer electronics in particular, and the plastics sector. The following section addresses the performance of these sectors during 2018.

According to the German Automobile Industry Association (VDA), 2018 was a robust year for the international automotive industry. Global new car sales were at a similar level to the previous year at almost 84.5 million vehicles. The main reason for the stagnation was a decline in sales in the biggest market China of 3.8% and in Western Europe of 0.8%. This was the first decline in sales for decades in China, an important market for German manufacturers.

Whilst capacity in the global photovoltaics market grew in 2018 by around 10% or more than 100 Gigawatt (GW), according to Bloomberg New Energy Finance (Bloomberg) investment sank significantly to around 24%. This opposing trend was a result of continued price pressure on solar modules due to oversupply. In Germany performance in photovoltaics rose significantly by 68% according to German Solar Industry Association figures. According to Bloomberg, photovoltaics and wind power are now the cheapest in terms of electricity generation costs. Monocrystalline and polycrystalline solar cells dominate the world market and the majority are mass produced in large quantities in China. The lighter and cheaper thin-film modules that still work in low light, were further improved and made more efficient with the use of cadmium telluride and CIGS. This combines crystalline and thin-film modules. With a large-scale production also possible in Europe, economies of scale could drive the price of thin-film modules down further, increasing market opportunities. In Germany the production share of thin-film has increased in recent years and is currently at around 50%. In Europe, its ability to generate electricity even at low light levels is a big advantage over crystalline modules.

After plateauing at a high level, sales figures for smartphones fell for the first time in 2018 by 1.2%, according to market research institute Gartner. IDC went even further and suggested a fall of 4.1% to around 1.4 billion devices sold.

In the plastics processing industry, orders on hand and capacity utilization have been falling since fall 2018 according to the Ifo institute.

Mechanical engineering production in Germany rose by 3.7% during the first ten months of 2018. The Verband Deutscher Maschinen- und Anlagenbau e. V. (VDMA) was claiming an ambitious 5% for the entire year. From January to October 2018 new orders rose by 7%. Over the course of the year the order dynamic shifted towards domestic trade.

**Effects on the LPKF Group**

The macroeconomic environment for LPKF AG deteriorated in 2018, particularly towards the end of the year, due in part to continuing uncertainties. All sectors relevant to LPKG AG were affected. As far as demand for the company's products is concerned, technological progress is more important than the economy. The positive LPKF Group development shows that revenue and new orders were not unduly affected by the economic influences that have been discussed.

By contrast, the movement of the euro against other key currencies was conducive to LPKF's export activities.

## RESULTS OF OPERATIONS, FINANCIAL POSITION AND NET ASSETS OF THE GROUP

### Results of operations

Development of revenue

In the financial year just ended, the LPKF Group achieved a revenue of EUR 120.0 million, 18% more than the previous year's revenue of EUR 102.1 million. This significant increase in revenue came mainly from the Solar segment, where the previous year's revenue of EUR 20.6 million was almost doubled in 2018 at EUR 38.9 million. The Electronics segment also recorded a revenue increase of almost 10% due to several major orders for cutting systems and, having achieved a revenue of EUR 31.8 million in 2017, increased it to EUR 34.6 million. The Development segment almost matched the previous year's revenue with EUR 24.3 million, whilst a shift towards laser-based systems in the product mix was noted here. The Welding segment, by contrast, endured a fall in revenue. Revenue fell from EUR 25.3 million in the previous year to just EUR 22.2 million.

The following table shows the revenue by region:

| in % | **2018** | 2017 |
|---|---|---|
| Asia | 40.9 | 44.8 |
| Germany | 10.7 | 10.2 |
| Europe excl. Germany | 26.6 | 20.1 |
| North America | 20.6 | 22.5 |
| Other | 1.2 | 2.4 |
| **Total** | **100.0** | 100.0 |

At 89.3%, the Group's export rate is at a similar level to the previous year (89.8%). The rest of Europe share is slightly misleading in that a proportion of the machines for European customers were installed in Asia. In this respect, Asia remains the most important market for LPKF by a clear margin.

### SEGMENT PERFORMANCE

The following table provides an overview of the operating segments' performance:

| in EUR million | | Electronics | Development | Welding | Solar | Other | **Total** |
|---|---|---|---|---|---|---|---|
| External revenue | 2018 | 34.6 | 24.3 | 22.2 | 38.9 | 0.0 | 120.0 |
| | 2017 | 31.8 | 24.4 | 25.3 | 20.6 | 0.0 | 102.1 |
| EBIT | 2018 | 0.8 | 4.2 | −1.6 | 8.4 | −5.0 | 6.8 |
| | 2017 | 0.9 | 5.3 | 0.6 | 1.5 | −4.3 | 4.0 |

Last year the Electronics segment benefited from the extraordinary effect of an insurance payout. In the Solar segment the growth of the EBIT was exclusively due to revenue development.

### DEVELOPMENT OF ORDERS

At EUR 139.8 million, incoming orders during the reporting period were 23% up on the previous year's level. Orders on hand at the end of the year, at EUR 58.4 million were clearly above the previous year's figure of EUR 38.8 million (+51%). This increase is primarily attributable to a strong solar business.

### DEVELOPMENT OF MAIN INCOME STATEMENT ITEMS

In capitalized own work, EUR 3.9 million was recorded for the development costs of products and software. Primarily due to the effect of an insurance payout during the previous year, other operating income was EUR 2.0 million less than the previous year's value. Furthermore, higher income from the reversal of provisions was offset by lower currency exchange gains and investment grants.

The material cost ratio relative to revenue and changes in inventories rose significantly compared to the previous year from 33.4% to 39.7%. The main reason for this increase was a higher revenue share in the Solar segment, as these systems have a significantly higher share of material relative to revenue. In addition, at the start of 2018 the Electronics segment recorded several transactions with high sales volumes and low margins. The cost of materials also included a higher value of inventory write-offs compared to the previous year (EUR 1.7 million, previous year EUR 1.1 million).

Staff costs incurred some indemnity and severance expenses during the financial year to the value of EUR 2.3 million (previous year: EUR 0.6 million). Staff costs reached EUR 44.3 million (previous year: EUR 41.9 million), mainly due to the previously mentioned one-off expenses and the increase in performance-based remuneration. The staff costs ratio, being staff costs in relation to revenue, reduced from 41.0% in the previous year to 36.9% in the reporting year.

Depreciation and amortization were at EUR 7.7 million the previous year and EUR 8.1 million in 2018. The slight rise is almost entirely due to higher scheduled depreciation of capitalized development costs. Depreciation of other non-current assets remained practically unchanged.

Other operating expenses were significantly reduced. At EUR 23.3 million in the previous year, they were 7.0% lower at EUR 21.7 million. Significant reductions were recorded in development expenses (EUR −0.8 million), sales expenses (EUR −0.6 million) and warranty expenses (EUR −0.3 million). Only third-party work increased (+EUR 0.3 million).

Despite the increased burden of one-off expenses Group EBIT rose. Whilst during the previous year an EBIT of EUR 4.0 million was achieved, this year it was EUR 6.8 million. The EBIT margin in 2018 was 5.7% whereas the previous year it was 3.9%. It should be noted that the previous year's total included extraordinary profits of EUR 1.5 million and the reporting year was burdened by one-off staff costs of EUR 2.3 million.

The capital increase in August meant that the use of credit lines could be scaled back sharply, and this has been reflected in an improved financial result in 2018.

Due to improved earnings prospects of the parent company deferred taxes not already taken into account from loss carryforwards were capitalized. This led to an overall tax income and a negative tax ratio. Consolidated net profit for the year after taxes is EUR 8.0 million (previous year: EUR 1.2 million).

Multi-period overview of results of operations

| | | **2018** | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|
| Revenue | in EUR million | 120.0 | 102.1 | 91.1 | 87.3 | 119.7 |
| EBIT | in EUR million | 6.8 | 4.0 | −6.8 | −3.7 | 12.7 |
| Material cost ratio | in % | 39.7 | 33.4 | 34.9 | 28.6 | 31.4 |
| Staff cost ratio | in % | 36.9 | 41.0 | 48.2 | 50.1 | 36.3 |
| Tax ratio | in % | −33.2 | 61.8 | −16.4 | 20.9 | 28.6 |
| EBIT/Employee | in EUR thousand | 10.2 | 5.3 | −9.0 | −4.7 | 16.1 |

**Financial position**

Principles and goals of financial management

External funding sources available to LPKF AG include the issue of shares and raising short and long-term loans. The Group uses its profits, as well as the retention of proceeds generated by depreciation/amortization and provisions, as sources for its internal financing.

Within the LPKF Group, derivatives are managed by the parent company, LPKF Laser & Electronics AG. Derivatives are only used to hedge foreign exchange rates and interest rates. The European companies optimized their liquidity by way of cash pooling. All other companies carry out their ongoing cash management locally. LPKF is continually reviewing whether to expand cash pooling to other international companies. If large amounts of funds are required, reviews are performed to determine whether to utilize local financing or financing via LPKF AG.

## Statement of cash flows

The following **STATEMENT OF CASH FLOWS** shows the origin and use of financial resources:

| in EUR million | **2018** | 2017 |
| --- | --- | --- |
| Cash flow from operating activities | 11.5 | 9.6 |
| Cash flow from investment activity | –5.7 | –6.3 |
| Cash flow from financing activities | 1.8 | –10.8 |
| Exchange rate-related changes to the cash funds | 0.1 | –0.1 |
| Change in cash and cash equivalents | 7.6 | –7.5 |
| Cash funds on 1/1 | –4.0 | 3.6 |
| Cash funds 12/31 | 3.7 | –4.0 |
| Composition of the cash funds: | | |
| Cash on hand, bank balances | 3.7 | 3.3 |
| Current account liabilities | 0.0 | –7.3 |
| **Cash funds on 12/31** | **3.7** | –4.0 |

The Group's cash funds rose from EUR –4.0 million at the end of the previous year to EUR 3.7 million. This was due primarily to two factors. Firstly, the significantly improved net profit led to higher cash flow from operating activities, despite an increase in working capital. Cautious investment activity meant that free cash flow (total of cash flow from current operating activities and from investment activity) rose by EUR 2.5 million. Secondly, the capital increase that was successfully implemented in August caused EUR 16.1 million to flow into the Group. This was used to reduce short-term credit and current account liabilities and resulted in a total cash inflow from financing activities of EUR 1.8 million. Due to both these factors, cash funds increased by EUR 7.7 million.

See Consolidated Statement of Cash Flows on page 84.

Long-term financing is used for non-current assets. In general, long-term fixed interest periods are agreed.

At the end of the financial year the financial position can be considered as solid and gives the Group sufficient room for maneuver with regards to medium-term development.

## Multi-period overview of financial position

| in EUR million | **2018** | 2017 | 2016 | 2015 | 2014 |
| --- | --- | --- | --- | --- | --- |
| Free cash flow | 5.8 | 3.3 | –1.8 | –3.6 | –12.9 |
| Net debt to banks | 16.3 | 37.7 | 39.9 | 37.3 | 30.2 |

(–) Credit balance (+) Debt

**Net assets**

Analysis of net assets and capital structure

The Company's net assets and capital structure developed as follows year on year:

| | 12/31/2018 | | 12/31/2017 | |
|---|---|---|---|---|
| | in EUR million | in % | in EUR million | in % |
| Non-current assets | 64.8 | 50.3 | 63.9 | 54.8 |
| Current assets | 64.0 | 49.7 | 52.7 | 45.2 |
| **Assets** | **128.8** | **100.0** | 116.6 | 100.0 |
| Equity | 77.7 | 60.3 | 54.2 | 46.5 |
| Non-current liabilities | 18.5 | 14.4 | 21.6 | 18.5 |
| Current liabilities | 32.6 | 25.3 | 40.8 | 35.0 |
| **Liabilities and equity** | **128.8** | **100.0** | 116.6 | 100.0 |

Whilst within intangible net assets depreciation only slightly exceeded capitalization, depreciation in property, plant and equipment was more than twice the value of asset additions. This resulted in an overall reduction in non-current assets. In tax assets, however, deferred tax assets were additionally capitalized on loss carryforwards and so non-current assets rose by EUR 1.0 million. The non-current assets are covered 120% (previous year: 88%) by equity.

Of the current assets, inventories remained at the previous year's level despite the increase in revenue. Due to the strong revenue at the end of the fourth quarter, trade receivables increased significantly. Other current assets fell slightly compared with the previous year mainly due to the extraordinary effect on the income statement of an insurance payout. Cash and cash equivalents were slightly below the previous year's level on the reporting date. Net working capital was significantly higher (+EUR 4.6 million) when compared with the previous year due to the increase in receivables. Even though revenue rose sharply, at 31.6%, the net working capital ratio stayed slightly under last year's level of 32.6%.

With the capital increase on the one hand and the good annual profit on the other, the equity ratio rose from 46.5% at the end of 2017 to 60.3%. Other provisions increased by EUR 1.2 million, due in particular to higher personnel-related provisions. Liabilities to banks reduced considerably as both long-term loans were repaid as scheduled and short-term credit was paid off in full. Other current liabilities increased mainly due to increased advances received and higher trade payables totaling EUR 8.6 million. Beyond this, the structure of the income statement has not changed significantly.

## Multi-period overview of net assets

| | | **2018** | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|
| ROCE | in % | 7.0 | 4.1 | −6.8 | −3.5 | 11.8 |
| Net Working Capital | in EUR million | 37.9 | 33.3 | 35.2 | 40.3 | 50.1 |
| Net Working Capital Ratio | in % | 31.6 | 32.6 | 38.7 | 46.2 | 41.9 |
| Days sales outstanding | days | 78 | 67 | 63 | 64 | 54 |

Days sales outstanding (DSO) are determined based on the average amount of outstanding receivables between reporting dates.

### Capital expenditures

In the 2018 financial year, EUR 5.7 million was invested in intangible assets and property, plant and equipment and thus EUR 1.0 million less than in the previous year. Investment in development projects for products rose slightly, investment in property, plant and equipment was mainly the remainder of the work on the production hall at the Suhl site plus some technical equipment and IT.

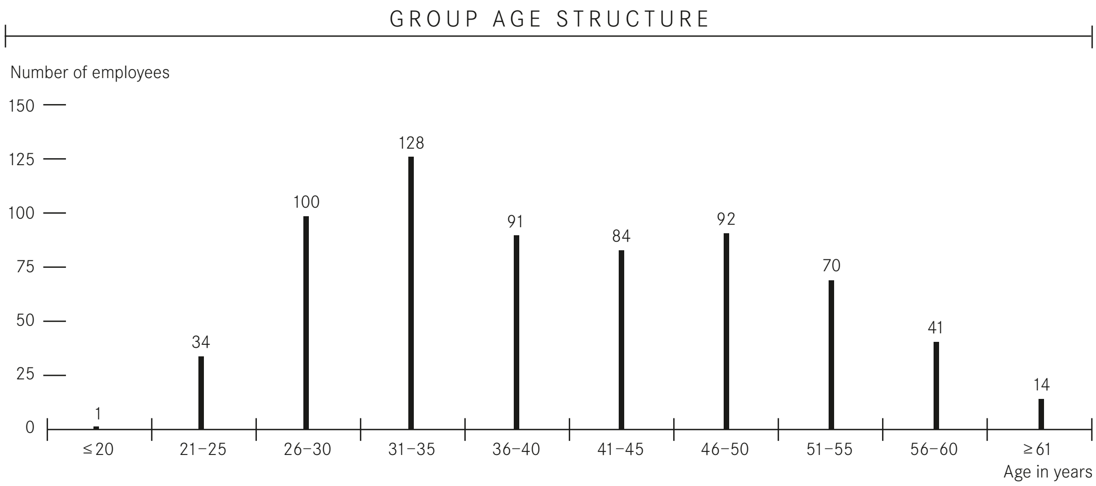
### Employees

Highly-qualified and motivated staff is the key to success for a technology group like LPKF. Therefore, LPKF's basic philosophy is to secure motivated and well- trained employees and tie them to the Group on a long-term basis. Following the restructuring in 2016 and 2017, the focus was back on recruiting in the 2018 financial year. Priority was given to filling vacant positions internally. The expanding solar business was the exception here. We stepped up our activities in terms of personnel development so as to be prepared for future requirements. LPKF trains mechatronic technicians, industrial business assistants, IT specialists, product designers and technical drafters in order to acquire properly qualified young staff. The Group employed 34 trainees at the reporting date (2017: 35); the number of trainees is expected to remain stable over the coming years.

Levels of sick leave and employee turnover are important indicators of employee motivation and their loyalty to the company. At 4.3%, the sick leave percentage in the LPKF Group was below the average for the metal working and electronics industry in Germany (2016: 5.4%). The Company's turnover level in 2018 was 13.6%, up from 10.1% the previous year. This is mostly due to the restructuring measures in the first half of 2018.

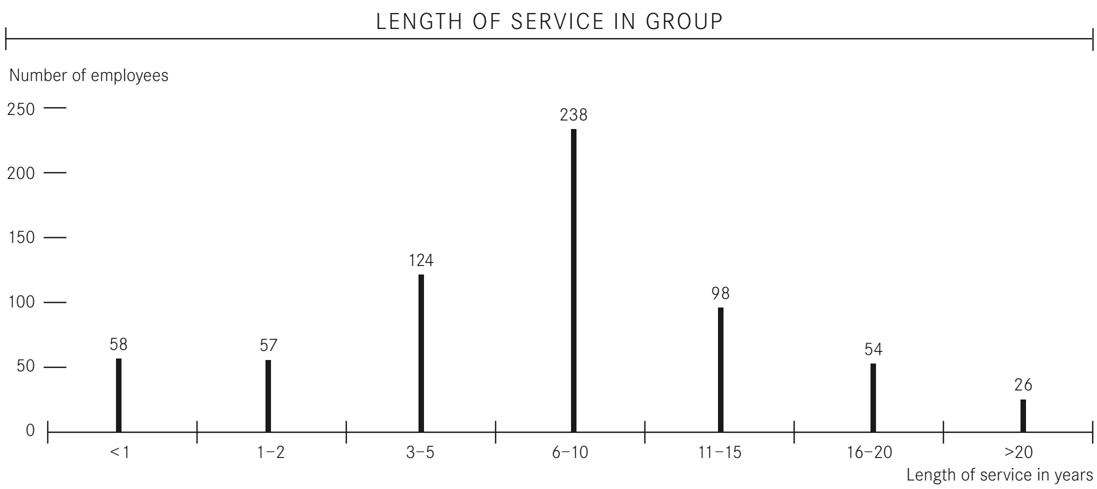
The average age of the workforce at the LPKF Group was 40.6 years (previous year: 39.6). According to information provided by the VDMA, the average age of all employees in the German engineering industry is rising slowly but steadily.

Age structure analysis in years,
LPKF Group (excluding trainees)




An analysis of the length of service of LPKF Group employees shows an average of 8.2 years (previous year: 7.5 years). LPKF can point to a healthy mix of experienced and new employees.

Distribution of length of service in years,
LPKF Group (excluding trainees)




Based on the current age structure and a balanced mix of years of service, LPKF is positioned well to face the challenges posed by demographic trends.

## RESULTS OF OPERATIONS, FINANCIAL POSITION AND NET ASSETS OF LPKF AG

The following explanations aim to provide an overview of the economic development of LPKF AG (single entity). The annual financial statements of LPKF AG are prepared in accordance with the provisions of the German Commercial Code (HGB) as amended to reflect the provisions of the Accounting Directive Implementation Act (BilRUG) and published in the Federal Gazette. The single entity is managed according to the same principles as the Group, on the basis of the IFRSs. On account of the single entity's large share of the value creation in the Group, LPKF therefore refers to the statements in the "Corporate management" section and in the report on expected developments, which can also be extrapolated for the parent company.

**Results of operations**

In the 2018 financial year, LPKF AG's revenue rose from EUR 46.8 million to EUR 50.4 million, a growth of 8%. The increase came mainly from the Electronics segment. Here, revenue was EUR 30.2 million, an increase of 14% on the previous year. The reason for this was a sharp increase in cutting systems that were mainly supplied to one large customer. The Development segment, however, stood at EUR 17.4 million, slightly under last year's figure of EUR 17.7 million. The percentage of revenue generated internationally was 85.5% (previous year: 82.1%).

Other operating income fell significantly compared to the previous year, from EUR 5.4 million to EUR 2.2 million. This is mostly due to the insurance payout of EUR 2.3 million in the previous year. In addition, in 2018 there were fewer currency translation gains (EUR –0.4 million), lower benefits (EUR –0.1 million), and lower income from affiliated companies (EUR –0.1 million) incurred.

Thanks to the still high revenue share of cutting systems in the Electronics segment, the material cost ratio was similar to last year at around 47%. Inventory write-offs and scrappages in the financial year amounted to EUR 1.1 million (previous year EUR 0.9 million).

The average number of company employees fell in 2018 and went from 238 employees to 225. This was part of a targeted measure and led to expenses for severance and indemnity of EUR 1.2 million (previous year EUR 0.1 million). In 2018, thanks to the LPKF Group finally being in a good earnings position, the company was able to pay staff a Christmas bonus for the first time in years. All told, staff costs rose from EUR 15.5 million the previous year to EUR 16.7 million in the current financial year. Due to the increased revenue, the staff costs ratio stayed at the previous year's level (33%). Depreciation of non-current assets reduced by EUR 0.1 million due to the further decline in investment activity. Other operating expenses stayed at the same level as the previous year. Within this item, expenses for third-party and temporary work increased (+EUR 1.1 million) whilst R&D expenses fell (EUR –0.6 million), as did advertising and trade fair costs (EUR –0.1 million).

The EBIT fell from EUR –3.0 million in 2017 to EUR –4.7 million primarily due to the low other operating income. The financial result includes distributions from LPKF Inc., LaserMicronics GmbH and LPKF d.o.o. totaling EUR 1.5 million. Due to profit and loss transfer agreements with LPKF SolarQuipment and LPKF WeldingQuipment, LPKF AG received EUR 6.6 million in a net positive contribution to earnings (previous year: EUR 1.4 million), which is entirely due to LPKF SolarQuipment GmbH's good business. For this reason earnings before tax rose by EUR 1.9 million to EUR 2.9 million in 2018. After tax this constitutes a net profit of EUR 6.4 million (previous year EUR 1.0 million).

LPKF AG income statement

| in EUR million | **2018** | 2017 |
|---|---|---|
| Revenue | 50.4 | 46.8 |
| Changes in inventory | 0.0 | −1.2 |
| Other operating items | 2.2 | 5.4 |
| Cost of materials | 23.6 | 21.4 |
| Staff costs | 16.7 | 15.5 |
| Depreciation, amortization and impairment losses | 2.7 | 2.8 |
| Other operating expenses | 14.3 | 14.3 |
| **Operating result** | **−4.7** | −3.0 |
| **Net financial income/ expense** | **7.6** | 4.1 |
| Income tax | −3.5 | 0.0 |
| **Earnings after tax** | **6.4** | 1.1 |
| Other taxes | 0.0 | 0.1 |
| **Net loss/ profit for the year** | **6.4** | 1.0 |
| Retained earnings from previous year | −0.2 | −1.2 |
| **Retained profit** | **6.2** | −0.2 |

Regarding the performance indicators, the expectation is that LPKF AG will essentially develop in line with the Group's forecast (as descibed on page 68–69).

**Net assets and financial position**

The income statement total on 31 December 2018 was, at EUR 91.1 million, above the previous year's value of EUR 78.8 million. Investment in property, plant and equipment and intangible net assets amounted to EUR 0.5 million in the financial year, following EUR 1.2 million the previous year. Investments were mostly made up of replacement technical equipment. As depreciation exceeded investments, the value of non-current assets fell. Despite business volume increasing, inventories were kept at EUR 9.3 million, lower than the previous year's value of EUR 10.1 million. Here, a major order in production had an impact and saw unfinished products rise by EUR 0.7 million. High revenue in December of the financial year ensured trade receivables, at EUR 9.2 million, were EUR 4.6 million higher than the previous year. Receivables from affiliated companies rose significantly compared to the previous year and primarily comprise financial receivables which led, above all, to profit transfers. Cash and cash equivalents reached EUR 0.8 million following a value of EUR 0.2 million the previous year. Overall, current assets increased significantly to EUR 10.6 million. Deferred tax assets totaling EUR 7.7 million are primarily attributable to the loss carryforwards from 2017 and 2016.

A capital increase was implemented during the financial year. The issue of 2.2 million new shares increased subscribed capital and capital reserves by a total of EUR 16.1 million. The net profit for the current financial year led to a slight increase in equity from EUR 6.4 million so that equity increased by EUR 22.5 million compared to the previous year. The equity ratio therefore increased from 45.0% in the previous year to 63.7%. This inflow of funds meant that external debt could be significantly reduced. Liabilities to banks were reduced by EUR 19.3 million and on the reporting date amounted to EUR 13.6 million. On the reporting date, there were no reported current account liabilities or loans with a duration of more than a year. Miscellaneous liabilities primarily include liabilities to affiliated companies resulting from both trade payables and financing. At EUR 29.7 million, total liabilities were once again considerably lower than the previous year's level (EUR 41.1 million).

The Company's net assets and capital structure developed as follows year on year:

| | **12/31/2018** | | 12/31/2017 | |
|---|---|---|---|---|
| | in EUR million | in % | in EUR million | in % |
| Non-current assets | 37.8 | 41.5 | 39.9 | 50.7 |
| Current assets | 53.3 | 58.5 | 38.9 | 49.3 |
| **Assets** | **91.1** | **100.0** | 78.8 | 100.0 |
| Equity | 58.1 | 63.8 | 35.5 | 45.0 |
| Non-current liabilities | 12.6 | 13.8 | 13.6 | 17.3 |
| Current liabilities | 20.4 | 22.4 | 29.7 | 37.7 |
| **Liabilities and equity** | **91.1** | **100.0** | 78.8 | 100.0 |

The capital increase along with improved results from operations contributed to stabilization of the asset and capital structure and reinforced equity. As a result of the recent increase in the equity ratio, LPKF AG's net assets and financial position are judged to be stable, given that there are also undrawn lines of credit.

### Capital expenditures

Investments totaling EUR 0.5 million were mostly made up of replacement technical equipment and to a lesser extent office equipment.

### Employees

LPKF AG had 217 employees at the reporting date, 18 less than in the previous year.

### Dividend

The Management Board, newly appointed in 2018, reviewed the LPKF AG dividend policy and, in conjunction with the Supervisory Board, reformulated it as follows:

The Company plans to propose to the Annual General Meeting that 30–50% of the free cash flow be distributed as a dividend. The current corporate situation, economic developments, and potential investments, acquisitions or sale of assets, could all lead to a deviation from this principle.

However, both the Management Board and Supervisory Board felt that, given the current corporate situation, 2018 was too early for a dividend payout. The plan, instead, was to further reduce the company's debt and secure the necessary room for maneuver to invest in new technology and growth. The management will propose to the Annual General Meeting on 6 June 2019 that a dividend not be paid. If the company continues to develop positively, the Management Board plans to recommend a dividend in the 2019 financial year.

### Risk report

The business development of LPKF AG is essentially exposed to the same risks as that of the LPKF Group. These risks are explained in the **RISK REPORT** of the combined management report.

See risk report on page 59.

## OVERALL APPRAISAL OF THE GROUP'S ECONOMIC SITUATION

After two years of losses in 2015 and 2016, and a barely positive EBIT in 2017, 2018 produced revenue and earnings growth and a positive cash flow. In the 2018 financial year, staff costs and write-downs of inventories amount to a total of EUR 4.0 million.

Thanks to the positive cash flow and the successfully implemented capital increase, LPKF is well-equipped to build its market position and invest in new technology. The order situation at the start of 2019 supports this trend.

## SUPPLEMENTARY REPORT

### DISCLOSURES ON PARTICULARLY SIGNIFICANT EVENTS

Please refer to the consolidated notes for reportable events after the reporting date.

## REPORT ON OPPORTUNITIES

### OPPORTUNITY MANAGEMENT

As a technology company, LPKF does business in a dynamic market environment. New opportunities constantly arise from a changing technology landscape and new market requirements. Systematically identifying and leveraging these opportunities is a major factor in the sustainable growth of the LPKF Group. Opportunity management involves closely monitoring new markets and applications, evaluating market analyses, and regularly reviewing the focus of the product portfolio.

In the R&D unit, innovation managers specialize in systematically seeking out new technologies. The responsibility for identifying opportunities in the product groups and markets lies with the product managers and international subsidiaries. Results are regularly reported to the Company's management.

Opportunities also arise from improved market penetration, service and further operating improvements. These opportunities are systematically collected, analyzed and addressed in LPKF's earnings improvement program (PEP) and in the customer relationship management scheme.

If it is likely that opportunities will materialize, they are included in the planning and outlook for the coming years. The opportunities listed below focus on future trends or events that could result in a positive deviation for LPKF from the outlook given in the report on expected developments. Taking into account the existing estimation uncertainty, the opportunities presented below can make a positive contribution to earnings in the single-digit million range.

### OPPORTUNITIES

**Further development of the existing product portfolio**

LPKF updates its product portfolio on an ongoing basis, aligning this activity with signals from customers, technological progress outside the Company and changing markets. At the same time, it also pursues its own ideas and innovations. The Company thus aims to always be prepared to meet future customer needs while at the same time actively creating new market demand through its own innovative and efficient processes. LPKF ensures its capability to innovate for the future by closely networking its development departments with market research, sales and service, as well as providing a suitable annual R&D budget of approximately 10% of revenue. The continuous development of the product portfolio can lead to changes in the product mix. These changes present risks as well opportunities.

**New technology breakthroughs**

LPKF is a market leader in all product groups worldwide. The chances for further expansion of market share are excellent thanks to LPKF's wide-ranging technological expertise, brand recognition and long-term relationships with customers. In addition to established markets, LPKF additionally concentrates on attractive new markets that promise good growth and income opportunities. Moreover, LPKF aims to open up new markets and further cement its presence in existing markets by developing new products. The purpose of systematic market and technology monitoring is to identify market opportunities. Based on this monitoring, technology studies are conducted that provide an opportunity to register industrial property rights on completely novel solutions, among others.

**Takeover of external companies with strategically relevant expertise**

LPKF has a broad product portfolio and many ideas for further developing products and uncovering new market opportunities. This is why organic growth is at the forefront of LPKF's corporate strategy. Nonetheless, the Company also pursues opportunities for external growth that could come from acquiring patents or companies with strategically relevant expertise.

**Impact of the megatrends of miniaturization and digitization**
The production methods developed by LPKF enable the miniaturization of components and often have commercial and quality advantages compared to conventional production technologies. Above average growth is possible if customers decide to abandon traditional methods in favor of LPKF's equipment. Especially in a rapidly changing market environment, many of LPKF's customers see the need to make larger investments in their own developments and launch new products. This benefits sales of LPKF products to development laboratories. Both the increasing digitization of production and LPKF's intensive development activities are making laser-based machinery more attractive to customers than established technologies, even for mass production.

**Independence of individual markets as a result of broad positioning**
LPKF's strategy to build on its core competencies and enter different markets has a potentially stabilizing effect against the backdrop of cyclical markets. The various markets served by LPKF often have asynchronous and different industry cycles. This strategy also offers low sensitivity to the technological cycles of LPKF's own products.

**Improving market penetration**
LPKF continuously improves its market penetration in different regions and sectors and potential applications and customer groups. Experience and customer relationships are used to find additional areas of application and sales opportunities. Going forward LPKF will systemize, expand and generally professionalize this systematic, often general market development in order to become more profitable with both new and existing products. This includes the sales of machines, service and increasingly production services too.

**Operational improvements**
LPKF is ensuring that the Company's future competitiveness and profitability is secure and will continue to increase by continuously identifying potential for operational improvements in costs and also by using the Company's 2018 capital increase to start Performance Excellence Programs (PEP). These programs have been transformed into a continuous improvement program.

**Business organization**
The consistent alignment of the corporate structure to the strategy has created one of the key conditions for exploiting opportunities for further growth. The Group's organization and internal processes are continually future-proofed, made leaner and faster and focused on market proximity and profitable growth. Going forward, LPKF will benefit further from the size of the Group, will use economies of scale more intensively and, at the same time, will make Company administration leaner and more efficient.

## RISK REPORT

### DESCRIPTION OF THE INTERNAL CONTROL SYSTEM

**Overview**
The internal control system (ICS for short) comprises the principles, procedures and measures introduced by LPKF management that focus on the organizational implementation of management decisions and legal requirements. The aim of the methods and measures implemented by LPKF is to safeguard the Group's assets and to boost its operating efficiency.

The ongoing refinement of the ICS involves analyzing the Company's functional areas, e.g. during audits, workshops, internal audits and Management Board meetings, and assessing the probability of damage occurring in these areas and the extent of potential damage.

The Management Board organizes the structure of the individual units and constantly adjusts workflow to the findings gathered from the ICS. Among others, this involves strictly separating incompatible activities, implementing the dual control principle in all significant areas internationally and installing controls in the workflows.

Examples include signature regulations, approval requirements for significant transactions, and IT access authorizations.

The results of internal audits are presented to the Supervisory Board and the findings are processed in a timely manner. Follow-up audits ensure that the agreed implementation of the findings is monitored regularly and documented. Implementation is the responsibility of the relevant Management Board member with purview over the respective area.

The risk and opportunity management system is also an integral part of the ICS.

**Risk management system**

Risk management is pursued actively at LPKF, as is opportunity management, which is treated separately. In doing so, the Company employs a number of reporting tools.

Risk management at LPKF involves the formulation and implementation of measures that are suitable to identify existing risks, hedge them, reduce their probability of occurring, mitigate them or consciously accept them to a reasonable extent. Risk is defined as potential future trends or events that might result in a negative departure from forecasts or goals. Risk management serves to safeguard the foundation of business and enhance competitiveness by providing a platform for suitably controlling specific risks and managing them transparently. It ensures that risks are identified and controlled proactively. The risk management system is integrated with compliance management through creation of a shared position.

An international firm of public auditors performs internal auditing tasks for the entire LPKF Group. These audits are based on a multi-year audit plan that reflects the risk situation of the Group documented by the risk management system and the risk assessment developed by the Management Board. In financial year 2018, audits were conducted at LPKF AG and one subsidiary.

The LPKF Group is exposed to numerous risks as it pursues its global business activities within the rapidly changing conditions affecting its target markets. Risk management, specifically the risk early warning system, is therefore always a fundamental element in the planning and implementation of LPKF's business strategy. Although risks can be limited by taking suitable measures and can be identified rapidly and precisely through an early warning system, they can never be completely excluded and can only be assessed as of a given point in time. LPKF therefore makes use of a number of highly developed management and control systems to measure, monitor, control and handle the risks the Group is exposed to. Group-wide strategic planning and the associated reporting system are particularly important in this context.

The Management Board of LPKF AG is responsible for risk policy and the internal control and risk management system. The second and third-level management staff implement these control functions in each of the Group's organizational units and benefit here from theoretical technical knowledge, practical experience and excellent networking in the relevant topical areas. In this way, the responsible employees can use suitable and effective means to identify new risks quickly and directly where they arise and then report them to the risk manager. A central database is used for reporting.

A risk report is submitted to the Supervisory Board and the Management Board on a monthly basis. In addition to regular reporting on identified risks, ad hoc reports must be prepared as needed on all risks that occur unexpectedly. This involves the risk manager coordinating and, if necessary, participating in developing the various risk control measures. The risk manager reports directly to the Management Board. Risk and opportunity management are also fixed items on the weekly board meetings. The risk early warning system is reviewed annually by a public auditor, and where necessary also by other external auditors. The risk management system is subject to scheduled inspections via the internal audit system.

In order to record and control risks, existing instruments in the context of the risk management process such as the risk management manual and the reporting tools are updated continuously and the daily implementation of the risk management system is documented. Risk management discussions of all types are always recorded in minutes. As in previous years, existing and potential risks were reassessed and the reporting system was reviewed to ascertain its efficiency in managing risks in the 2018 financial year. New risk owners were trained and made aware of risks. A database-supported reporting system has been installed. The quality management system pursuant to DIN EN ISO 9001:2015 is another important element of the risk early warning system and for ensuring structured business processes. The implementation of the recommendations of the German Corporate Governance Code, which also plays an important part in the cooperation between the Supervisory Board and the Management Board, is yet another instrument for limiting and managing risks.

**Description of the main features of the internal control and risk management system relevant to the financial reporting process (Section 289 (5) German Commercial Code)**

The internal control and risk management system relevant for the financial reporting process is designed to ensure proper financial reporting, which is defined as the compliance of the consolidated financial statements and combined management report with all applicable regulations.

The workflows in the Group are structured around processes and are set up identically for the most part thanks to the use of the same ERP system in key units of the Group.

Automatic process controls are integrated into this system and protected from unintentional changes with an IT-based authorization concept. LPKF plans to harmonize the systems Group-wide.

The LPKF Group fundamentally applies the dual control principle on the basis that the general division of administration, execution, accounting and approval functions and the sharing of these functions across different employees and/or departments reduces the possibility of fraud. This is a manual control that also underlies the process descriptions, signature regulations, guidelines and work instructions.

The specific functions of the internal control system are the risk management system, Group Accounting, Internal Auditing and Compliance Management, all of which are based at the Group's headquarters at LPKF AG.

In particular, the risks from possible incorrect reporting by subsidiaries and the publication of erroneous financial reports are recorded by the risk management system and monitored regularly.

The entries recorded at LPKF AG and the subsidiaries provide the data used to prepare the consolidated financial statements. LPKF guarantees the quality of this data by selecting suitable staff and regularly training employees. In this context, LPKF is also supported by service providers, e.g. in measuring non-current liabilities and determining facts material to accounting by Group Accounting. Before being included in the consolidated financial statements, the data is subject to automatic and manual controls. The consolidated financial statements are prepared in a system separate from the ERP system to which only a limited group of authorized persons has access. It is managed solely at headquarters. In further developing the systems, the focus is on automating standard procedures to the greatest extent possible. The annual financial statements of the parent company and the consolidated financial statements are subject to a statutory audit, one component of which is to check whether the Management Board has met the requirements of Section 91 (2) German Stock Corporation Act for setting up an appropriately structured risk early warning system, and whether the risk early warning system is suitable for identifying developments that would endanger the Company's status as a going concern at an early stage.

LPKF has a compliance organization to ensure that all business activities comply with statutory provisions and the Company's values. Regular training of employees and a whistleblower system aligned with independent legal counsel are the main components of this organization.

During the 2018 financial year a compliance risk analysis was carried out with employees who have responsibility for compliance. Necessary measures that arose from this were identified and implemented.

The compliance organization was subject to scheduled audits. The main features of the compliance management systems have been published on the **WEBSITE OF THE GROUP.**

www.lpkf.com

Based on the organizational, control and monitoring structures defined by the Management Board, the internal control system enables the complete recording and proper presentation of transactions in the Company's accounts.

However, personal judgments, defective controls and criminal acts in particular cannot be fully excluded despite these measures. This could limit the effectiveness of the internal control system, which means that even the strict application of regulations provides no absolute guarantee for the correct, complete and punctual recording of all matters in the accounts.

### SPECIFIC RISKS

The risk management process currently involves dealing in detail with the specific risks listed in the table below which could have a significant impact on the LPKF Group's business, as well as its net assets, financial position and results of operations. Some of the risks changed compared to the previous year.

The following risks in particular are given high priority*:

| Specific risk | Qualitative probability of occurrence | | Possible financial effects | |
|---|---|---|---|---|
| | Categories | in % | Categories | Damage amount |
| General business risks (esp. macroeconomic risks from sector trends) | Less Likely | up to 25 % | moderate | up to EUR 5 million |
| Dependence on individual customers | Less Likely | up to 25 % | significant | over EUR 5 million |
| Technological developments | Possible | over 25% up to 50% | moderate | up to EUR 5 million |
| Market acceptance | Possible | over 25% up to 50% | moderate (significant) | up to EUR 5 million |
| Personnel risks | Possible | over 25% up to 50% | moderate | up to EUR 5 million |
| Financial risks | Unlikely | under 5 % | significant | over EUR 5 million |

* Previous year's assessments are shown in parentheses if they have changed

The patent risk reported in the previous year has been significantly reduced and is no longer a high priority, and so has not been reported on here. Other risks which are currently unknown, or which are currently (still) considered negligible, could also have a negative impact on business.

**General business risks**

Cause

LPKF is operating internationally in a fast and ever changing environment. The Company's customers are exposed to considerable cost and competitive pressures as well as curtailed investment budgets. Business in LPKF's target markets is cyclical, with particularly strong fluctuations especially in the electronics industry as well as the automotive and solar sectors.

The automotive industry was generally stable in 2018, however the largest sales market, China, reported the first drop in sales for decades. Investment in the global photovoltaics market fell in 2018 despite the increase in capacity. Among others, the further development of the business with solar scribers is also contingent on the continuation of and further amendments to legal regulations that govern the feed-in fees, e. g. for solar electricity. Government regulations, particularly in China, also have a considerable effect on business performance. Often, investment decisions are not made based on economic factors but instead in view of political considerations.

Economic fluctuations have a strong impact on the investment in production equipment. Especially in markets outside Asia, customers' willingness to expand capacities or introduce new technologies is therefore limited. New investments are often only made when future utilization of such equipment appears assured by concrete orders from customers.

The Group's general business risks also include the increasing share of the project business in the overall operations. Order volumes of several million euros are being negotiated more frequently than in the past in connection with projects. This places special demands on the Group's flexibility to be able to also deal with greater fluctuations in sales volumes. The ability to plan the Company's business performance can also be impacted as a result. This affects the Solar and Electronics segments in particular.

LPKF is also exposed to risks associated with a rapidly changing technological environment. The availability of high-quality components enables new players to launch cost-efficient competitive products or alternative techniques.

The systematic development of new technologies and business segments is generally associated with the risk that the planned business model fails to meet its targets. A risk also exists that new technologies may not be accepted by the market overall or only accepted after a considerable time lag. There is also the risk, especially in connection with new technologies or machine types, that deliveries might be delayed or that formal acceptance procedures might not take place at all or only later. Ensuring the high level of quality required by customers places great demands on development and production processes. In particular, systems, components and technologies that have been newly developed from scratch entail a risk of high quality costs.

Product liability risks in connection with patents and warranty of title arise to different degrees in all segments. Furthermore, the risk that recall costs may be incurred is to be pointed out. This latter risk arises in particular in the business with production services at the subsidiary LaserMicronics GmbH.

The generally very strong economy currently seen in the engineering industry is still giving rise to increasingly long lead times and occasional bottlenecks in the supply chain are to be expected. This can lead to delays in delivery and, in the worst cases, to contractual penalties and raised transport costs. Last but not least, the global political situation may also pose risks affecting the development of LPKF's business. The risks involved here include possible changes in laws, e.g. with respect to the import of capital goods to China or in other important markets such as the USA. Recent years have seen the increasing implementation of tariff and non-tariff barriers to trade in China. Furthermore, political crises can have an unfavorable effect on the willingness of government institutions to invest and therefore particularly affect the Development segment.

See specific risks table on page 62.

Measures

In part, industry cycles are staggered time-wise in different markets such that LPKF's broad market positioning helps to balance matters somewhat. This positioning in the market is part of the business model and is to be retained in the future. In order to expand LPKF's leading role in the various businesses, it is important to have a robust innovation and product management system with state-of-the-art technology and to be in close contact with customers in close proximity to the market. Overall, around 10% of revenue should also be invested in the new and further development of products in the future.

In order to be able to compensate for fluctuations in the utilization of capacities, LPKF is focusing on flexible structures in production, and increasingly also on the collaboration of LPKF's production sites. In addition, peak workload levels are covered by way of external production service providers and recourse to temporary workers. In the case of lower workload levels, the depth of production can be increased.

In the Electronics segment, the new LIDE method was developed to market readiness to expand the product portfolio. A wide range of promising projects, including those in the IC packaging sector, have been identified and sampled so far.

The Solar segment is experiencing excellent capacity utilization, but it is dependent on additional big projects coming in in the future. A new technology, the LTP method, is also being developed for the digital printing of functional pastes. Significant revenue contributions are anticipated starting in 2020. LTP is expected to decrease the Solar segment's dependence on the solar industry in the long term.

Existing product liability risks are covered by insurance policies where possible.

One of LPKF's subsidiaries also provides production services for the automotive supply industry. There is a risk in this connection that the Group will be held liable for auto manufacturers' recalls on account of defects. The probability of a loss is deemed to be low, however. This risk is further mitigated by taking out insurance.

Effects on economic position

Despite the measures in place and planned, occurrence of the **RISKS** described above is considered less likely and any financial effects on the Company are considered moderate.

**Dependence on individual customers**

Cause

The distribution of revenue by region shows a clear shift to Asia, China in particular. While it reflects prevailing market conditions, it has resulted in the Group's evolving dependence on international customers that base most of their manufacturing in China. In the Solar segment, larger-scale projects are often completed with a few customers. For some time now, a major customer has dominated significant parts of this business. In the Electronics segment, there is also a certain dependence on decisions made on the part of a few major customers for laser-based technologies who provide their suppliers with corresponding instructions. These instructions can have an impact on LPKF's business with these suppliers.

If the Company were to fail to land individual major projects, this could significantly affect the financial success of this business segment.

Measures

LPKF is continuing to work on making the organization more flexible to ensure that it can anticipate larger project-related fluctuations in the business. In the solar business, the agreed payment terms and other contractual conditions provide a certain level of protection against cancellations and payment defaults.

Effects on economic position

Possible order cancellations can have a negative impact on the Group's revenue and earnings if, for example, capacities cannot be wound down fast enough or used by other business units. Taking into account the overall circumstances, this **RISK** is considered less likely to occur than before. Due to the current order situation, any possible loss is categorized as material.

**Technological developments/market acceptance**

Cause

As a technology company, LPKF primarily markets manufacturing solutions for current technical issues. There is a risk that the demand for LPKF's manufacturing technologies will develop adversely due to changes in end customer markets or that markets will not accept or only to a limited degree accept the new technologies developed by LPKF. In the markets, some of which can be quite cyclic, there is an additional risk when the capacity and willingness to invest in new technology diminishes temporarily in response to the state of the economy. The emergence of competing techniques can lead to declining revenue and income, in particular if these techniques should prove to be technologically and/or economically advantageous.

The competitive situation and the rapidly changing technological requirements are associated with cross-segment risks. LPKF's success significantly depends on the speed and quality with which new products can be developed to market readiness and customers can be convinced of the developed technologies.

Measures

Permanent follow-up by the Supervisory Board and the Management Board is an integral part of the risk management system to review the sustainable value of new developments and integrate these findings into the product strategy. This follow-up also involves the division heads and technology management. The development of high-quality products in a structured, expeditious flow of development projects is supported by a structured idea generation and development process. In addition to frequently achieving cost benefits by investing in LPKF's technology, LPKF's customers can also enjoy competitive benefits and harness the associated market opportunities. This requires continuous engagement with the market and close contact with end customers. In this way, it has been possible to repeatedly replace established technologies with laser-based processes. New applications are developed and promoted for existing technologies. The technologies are also protected by patents.

Effects on economic position

On the whole, innovation is critically important for the LPKF Group. The competitive situation and rapidly changing technological requirements necessitate a flexible and dynamic development process. The occurrence of **RISKS** related to technological development and market acceptance is currently considered possible. Financial effects are considered moderate if demand for manufacturing technologies develops adversely.

**Personnel risks**

Cause

Demand for qualified technical personnel in both mechanical engineering and manufacturing remains high. Following capacity reductions in 2016, consolidation in 2017 and 2018, and some peak workloads in 2018, more jobs were advertised outside the Company this financial year. Accordingly, significantly more applications were received by the German sites. This situation has become more demanding in recent years as a result of the growing skills shortage, particularly in technical departments.

Due to the high level of qualifications of LPKF's staff, all segments are exposed to the risk of losing key employees with important know-how as a result of head hunting and not being able to fill vacancies in a timely manner.

Measures

An attractive working environment and development opportunities within the LPKF Group are offered to employees to retain high performers in the Company. Particular value is placed on individual flexibility, compensation that reflects performance and a good working atmosphere. Executives have an important role to play in maintaining employee satisfaction and retaining staff. Leadership issues were the focus in many discussions and meetings, including in events for managers. HR marketing will continue to be important to position LPKF on the labor market as an attractive employer among small and medium-sized mechanical engineering firms. Investment in systematic personnel development once again increased in 2018 and continuing professional and personnel development measures aligned with the needs of employees were initiated. There is increased demand for technical personnel in the Solar business due to the strong order and project situation. This business also makes use of employees in other segments and includes external service providers in its recruiting.

Effects on economic position

Thanks to its attractive work environment, contacts with universities and the growing level of awareness the Company enjoys in the laser sector, LPKF had problems attracting adequately trained staff only in a few cases. Strong demand for internships and traineeships, the

See specific risks table on page 62.

See specific risks table on page 62.

number of unsolicited applications received and the very short time it usually takes to fill positions are evidence of this. However, there continues to be a risk in all segments associated with the loss of key employees with important know-how as a result of head hunting. This **RISK** is currently estimated to be possible to occur. The financial effects can be described as moderate.

**Financial risks**

Cause

An unfavorable business trajectory coupled with the lack of access to cash tied up in assets can result in a downturn in the liquidity of the Group. External influences, such as deterioration in the financing environment, a rating change or customer payment difficulties can also adversely affect the liquidity situation. This risk affects all segments.

Measures

In 2018 LPKF also adopted measures to both sustainably reduce the cost base and optimally control working capital. During discussions held with financiers, the Group's business was presented in an open and transparent way with the aim of securing long-term collaboration with finance partners. Credit lines and conditions were regularly reviewed and renegotiated. Collaborations with additional investors are also reviewed on an ongoing basis. Communication with the capital markets is handled through regular events.

The Company uses suitable information sources in an effort to assess financial risks at the level of customers, the relevant markets and economic conditions and, if necessary, to hedge these with credit default insurance.

Effects on economic position

The economic position of the Group can be affected materially by financial **RISKS**. The current economic environment is viewed as fairly positive. The initiated measures had the desired effect and the successful capital increase reaffirmed the existing confidence in LPKF. This consolidated the financial position. LPKF therefore considers it unlikely that such risks will materialize.

**Other risks**

In addition to the significant risks described above, the Group is also exposed to the following risks, among others:

Exchange rate fluctuations

**Cause**

The exchange rates between foreign currencies and the euro can undergo major fluctuations. For LPKF, the main fluctuations are those with regard to the US dollar (USD) and the Chinese renminbi (CNY). This risk also includes obligations from hedging relationships entered into that arise from delays in the underlying transaction (e.g. late receipt of USD already sold). As a rule, LPKF invoices in euros. Transactions with American customers are often billed in USD. If business is invoiced in euros, exchange rate volatility can have an indirect effect on LPKF's competitiveness because most of its competitors are not from the eurozone and material costs at LPKF are incurred in euros.

**Measures**

LPKF closes hedging transactions to protect itself against exchange rate risks involving business transactions invoiced in foreign currencies. This part of the risk management is handled by the parent Company in Garbsen, Germany, also on behalf of subsidiaries, if required. In accordance with the risk management strategy, most of the foreign currency cash flow is either used for procuring materials in the dollar countries or hedged by engaging in forward exchange transactions.

**Effects on economic position**

Fluctuations in exchange rates can have a moderately positive or negative effect on earnings. Counter measures are permanently reviewed and implemented to the degree possible.

IT risks

**Cause**

In terms of its information, its international activities and the IT systems used to process it, the Group is potentially exposed to the risk of industrial espionage or disruptions by internal or external perpetrators, just as other innovative companies.

### Measures

By implementing redundant IT infrastructures, LPKF protect itself against risks that occur in the event of a systems failure or natural disaster. Security is also ensured by means of a restrictive policy for granting access authorizations to systems and information as well as by maintaining distributed backups of business-critical data. The Company uses various IT security technologies to mitigate the risk of unauthorized access to Company data. In addition to technical measures, LPKF also provides training to all employees. IT security measures are evaluated on an ongoing basis by way of audits conducted by both internal staff and external consultants. In this context, LPKF adheres to national and international standards. The results are structured for management and serve as a planning and decision-making tool for further risk management. There is a separate budget planning for IT security at LPKF.

### Effects on economic position

The performance of many security measures is sometimes costly, but results in LPKF being able to classify the likelihood of occurrence of a risk and possible loss as moderate. A residual risk that cannot be fully managed exists with regard to IT security due to the rapid pace of continuing technical developments.

## ASSESSMENT BY THE MANAGEMENT BOARD OF THE RISK SITUATION AFFECTING THE GROUP

The slow macroeconomic environment did not improve things for LPKF AG in 2018 compared with 2017. The sectors relevant to the Company exhibited different trends during the financial year ended. Economic research institutes forecast a weakening of the global economy during 2019 and beyond. On the whole, planning reliability and the foreseeability of business trends continue to be low in most business segments. Financial risks have decreased slightly because of LPKF's business development in 2018 and the successful capital increase. However, the various individual risks only have a limited influence on the overall risk situation of the Group and have not led to any significant changes compared with the previous year.

A review of the overall risk situation of the LPKF Group concluded that there are currently no concrete risks jeopardizing the Group's existence as a going concern.

There is also currently no foreseeable development which could significantly and sustainably harm the profit or loss, cash flows and financial position of the LPKF Group in the future. There is, however, a continued possibility that the effects of a significant economic slowdown, particularly in China, could impede the further development of LPKF. The extent to which a change in foreign trade policy in the United States will expose LPKF to risk still cannot be estimated.

LPKF AG's auditor also reviewed the risk early warning system in accordance with the German Stock Corporation Act.

## REPORT ON EXPECTED DEVELOPMENTS

### OVERALL APPRAISAL OF THE GROUP'S PROBABLE PERFORMANCE

**Economic environment**
Experts anticipate that the global economy will slow down further in 2019. The IfW expects a slight increase of 0.3% in Gross Domestic Product for the current year compared to the previous year. Growth of 3.4% is expected in 2019 and 2020. The IMF predicts 3.5% for the current year.

Economic development in advanced economies will lose headway during the current year and 2020. The IfW forecasts an increase in GDP of 2.1% for 2019 and 1.8% for 2020.

As the USA economy reached its peak in the past year, the IfW expects an increase in economic output of 2.5% this year and 1.9% for 2020.

Economic development is also expected to slow down in the eurozone. Following a good export-driven economic trend in 2016 and 2017, 2018 was less dynamic and this trend is set to continue with the IfW predicting an increase in GDP of 1.7% in 2019 and 1.5% in 2020. The EU commission has reduced their forecast for the 19 countries of the eurozone to 1.3%.

Economic experts are predicting an increase in economic performance in Germany in 2019 of between 1.3% and 1.7%. The German Federal Government has significantly reduced the forecast it made last fall of 1.8% for this year down to 1.0%. While the IMF predicts an upward trend for Germany in the coming year with a GDP growth forecast of 1.6%, the IfW expects things to be somewhat slower with a predicted growth of 1.5%.

When it comes to the economic development of emerging economies, the IfW predicts a reduction in GDP growth from 5.1% in 2018 to 4.8% in 2019. Economic performance is expected to rise to 4.9% in 2020. China is key to this development. After economic growth fell to 6.6% in the past year, its lowest level for decades, further reductions are expected in light of the trade conflicts. The IMF anticipates an increase in GDP there of 6.2% for 2019 and 2020.

Additional important conditions for LPKF AG will arise from the development of the automotive sector, solar industry, electronics industry and consumer electronics in particular, and the plastics sector.

2019 will be a difficult year for the global automotive market according to automotive expert Prof. Ferdinand Dudenhöffer, with sales figures falling to around 82.9 million new vehicles. This includes a fall in new car business in China, in particular, but also in smaller markets such as Turkey and the possibility of a no-deal Brexit.

According to research company Trendforce, there will be a further increase in newly installed photovoltaic systems during the current year of almost 8% or around 111 GW.

In the smartphone segment of the consumer electronics sector, Gartner predicts a slight improvement in the sale of new devices during 2019 of 1.6%. On the contrary, analysts at IDC predict a further reduction for the current year. A new generation of smart wearables however, promise fast growing future markets.

According to the Ifo business climate index, the assessment of the business situation and expectations in the plastics industry is likely to deteriorate over the next six months.

The Verband Deutscher Maschinen- und Anlagenbau e. V. only anticipates an increase in production of 2% in the current year due to the worsening global economic situation. Orders received by the sector will, therefore, last an average of 8.6 months.

**Group performance**
Economists expect weakening global economic development during 2019 and 2020. This makes conditions less favorable for the export-oriented LPKF Group. The LPKF Group's high degree of diversification reduces its dependence on individual market segments.

The Electronics segment has experienced a turnaround since its successful restructuring in 2018. Improved market development and new innovative printed circuit board processing and LIDE products should lead to further growth in 2019.

The Development segment has shown solid and profitable business development over the last few years. LPKF expects additional growth through new products during the 2019 financial year.

The Welding segment did not do nearly as well as expected in 2018. The segment had its organization and staff restructured during 2018 and is now more customer-focused and efficient. This has created a good base for a turnaround and significant improvements in sales and earnings in 2019.

The customer base in the Solar segment will be expanded. LPKF anticipates a continuation of good development at a high level here.

The development of Laser Transfer Printing (LTP) should be completed in 2019, albeit significantly later than originally planned. LTP is an alternative to widespread screen printing and will be used for the digital printing of pastes. LPKF sees a variety of short and medium-term applications for LTP.

The service department was strategically realigned in 2018 and had its staffing levels increased. LPKF has created an effective and efficient service team for its customers in 2019 which should also be a profitable business unit.

**Development of significant indicators and outlook**

2018 financial year

Revenue in financial year 2018 reached EUR 120.0 million, thus exceeding the previous year's figure by 17.5%. Primarily this revenue development led to an increase of the EBIT from EUR 4.0 million in the previous year to EUR 6.8 million. The EBIT margin rose from 3.3% to 5.7%. In the 2018 financial year the EBIT was adversely affected by one-off staff costs of EUR 2.3 million.

At 7.0% the ROCE was not quite able to cover the cost of capital, as it took into account the negative impact on EBIT and the measures to reduce capital employed were only partly effective. The measures will continue to be implemented in the following year.

Although capital tied up in working capital was improved during the current year, the consolidated statement of financial position still showed a net working capital of EUR 37.9 million on the reporting date that to high revenue at the end of the year. The net working capital ratio remained stable at around 32%.

At EUR 139.8 million, incoming orders during the reporting period were 23% up on the previous year's level and at a record level. Orders on hand also reached an unprecedented level at the year-end of EUR 58.4 million and were up by 51% on the already good figure of the previous year. LPKF has never before started a financial year in such a good position.

2019 financial year

In 2019, subject to stable growth in the global economy, the Management Board estimates consolidated revenue of between EUR 130 million and EUR 135 million and an EBIT margin of between 8% and 12%. This means an estimated EBIT of between EUR 10.4 million and EUR 16.2 million. This corresponds to a ROCE of between 10% and 15%. Based on the current order position, LPKF expects a strong first quarter in 2019 with a revenue of between EUR 30 million and EUR 35 million.

The net working capital ratio is expected to be between 28% and 33%, which would correspond to a net working capital of between EUR 36 million and EUR 44 million for the forecast period, similar to that of the previous year.

Free cash flow should be between EUR 10.0 million and EUR 17.0 million. The error rate is expected to improve slightly.

Outlook for future years

Over the coming years the Management Board wants to further increase the company's profitability and generate a sustainable EBIT margin of more than 12%.

www.lpkf.com/en/investor-relations/corporate-governance/

See corporate governance report on page 30.

## CORPORATE GOVERNANCE DECLARATION

The corporate governance declaration pursuant to Section 289a HGB is part of the combined management report. The declaration is available for the public on **LPKF AG'S WEBSITE** and included in the corporate governance report on **PAGES 30–33** of the annual report.

## DISCLOSURES RELATED TO ACQUISITIONS

The takeover-related disclosures required under Section 289a (1) and Section 315a (1) German Commercial Code are shown below.

On 31 December 2018 LPKF AG's share capital was EUR 24,496,546.00. The share capital is made up of 24,496,546 no-par value ordinary bearer shares (unit shares). No preferred shares have been issued. One no-par share represents a pro-rata interest of EUR 1.00 in the share capital. The rights and duties under the no-par shares comply with the relevant requirements of the German Stock Corporation Act, specifically, in Sections 12, 53a ff., 118 ff. and 186. Both the exercising of voting rights and the transfer of shares are subject solely to statutory limits.

Direct or indirect interests in the share capital exceeding 10% of the voting rights are disclosed in the consolidated notes.

The regulations on appointing and dismissing members of the Management Board, as well as on amending the Articles of Incorporation, comply with the respective requirements of both the German Stock Corporation Act and the Articles of Incorporation. Complementing Sections 84 and 85 of the German Stock Corporation Act, Article 7 of the Company's Articles of Incorporation governs the Management Board's composition as follows: The Management Board shall comprise at least two members. Deputy members of the Management Board may be appointed. They have the same rights as the regular members of the Management Board when representing the Company vis-à-vis third parties. The Supervisory Board shall determine the number of both regular and deputy members of the Management Board and appoint them, enter into director's contracts with them as well as dismiss them. Likewise, the Supervisory Board may also appoint a member of the Management Board to serve as its chairperson or speaker and appoint additional Management Board members to serve as deputy chairpersons or speakers.

Under Sections 133 and 179 German Stock Corporation Act, in conjunction with Article 25 (1) of the Company's Articles of Incorporation, the latter may only be amended by resolution of the Annual General Meeting, which must be adopted by the simple majority of the share capital represented at the Meeting unless larger majorities are required by law. The Supervisory Board is authorized under Article 12 (2) of the Articles of Incorporation to make amendments that affect solely the given wording.

## REMUNERATION REPORT

### CHANGES TO THE MANAGEMENT BOARD

In April 2018, the Supervisory Board decided that, going forward, the Management Board would consist of one Chairman of the Management Board (CEO) and one Chief Financial Officer (CFO). In its meeting on 3/15/2018, the Supervisory Board appointed Dr. Götz M. Bendele as the new Chairman of the Management Board. His term of office began on 1 May 2018. On 9/1/2018 Mr. Christian Witt was appointed to the Management Board with responsibility for finance. In both cases the contracts are for three years.

Accordingly, Mr. Lange, Mr. Bentz and Dr. Bieniek retired from the company in 2018.

### BASIC FEATURES OF THE NEW REMUNERATION SYSTEM

On 20 March 2018 the Supervisory Board agreed on changes to the remuneration system for the members of the Management Board with the aim of aligning the interests of the shareholders and those of the Management Board more closely. This means that the Management Board's remuneration is closely linked to an increase of Company value. In addition, the new system is strongly oriented towards return on investment, cash flow and long-term value increase. It combines profitability, liquidity and sustainable growth targets and is capital-market oriented.

Criteria for Management Board remuneration appropriateness include the responsibilities of the respective Management Board members, personal performance, the economic position, success, future prospects and sustainable development of the Company, and the customary level of the remuneration under consideration of the level of executive remuneration at peer companies and the remuneration structure in place in other parts of the Company. The relationship between the remuneration of the Management Board and that of senior management and the workforce overall is taken into account also in terms of its development over time, whereby the Supervisory Board determines how senior managers and the workforce are to be defined for the purposes of the comparison. The remuneration of the members of the Management Board is based on performance and calculated such that it is both appropriate and competitive, offering a higher incentive for committed and successful work. The new remuneration system was approved at the Annual General Meeting on 31 May 2018 with a majority of 92% and was applied for the first time for Chairman of the Management Board Dr. Götz M. Bendele and Management Board member Christian Witt in 2018.

The remuneration structure consists of a fixed basic remuneration, two short-term and one long-term variable elements, as well as incidental benefits (benefits in kind). As stipulated in the German Stock Corporation Act and the Corporate Governance Code, the higher proportion of the remuneration is allotted to the variable remuneration elements, which have a predominantly perennial assessment base.

### NONPERFORMANCE BASED COMPONENTS

The fixed remuneration comprises both the base salary, which is paid in equal monthly installments, and benefits. The benefits include a company car for both official and private use, health and care insurance contributions and, for Management Board member Christian Witt, a contractually agreed contribution towards trips home.

### PERFORMANCEBASED COMPONENTS

The variable remuneration components comprise both long-term incentives (LTI) and short-term incentives (STI).

Remuneration element Options (LTI) is designed as a Long Term Incentive and remuneration element ROCE (STI 1) and Cash flow (STI 2) are designed as Short Term Incentives (STI). The variable remuneration elements are based on different performance indicators in order to incentivize a swift reorientation of the Company and to reward sustainable value creation in particular. The LTI, STI 1, and STI 2 remuneration components are based on ambitious targets, independent of budget planning, whose achievement is decisive for the amount of the remuneration component in question.

### SHORT TERM INCENTIVES (STI)

STI 1 corresponds to performance indicator ROCE. Payment for STI 1 is made in cash for the relevant financial year after approval of the consolidated financial statements. The amount of STI 1 is graded depending on target achievement; a payment is only made if a minimum ROCE value of 8% (floor) is achieved. The target value is a ROCE of 18% and the cap is 30%. There is no linear interpolation between the target levels.

STI 2 corresponds to the ratio of cash flow to total capital. Payment for this performance indicator is also made in cash following approval of the consolidated financial statements in the following year. The amount of STI 2 is graded, the target value is 13%, the floor is 8% and the cap is 21%. There is no linear interpolation between the individual grading values.

If there is a negative ROCE or cash flow the following year, this loss will subsequently be taken into consideration and STI 1 and STI 2 reassessed in light of the negative ROCE and/or cash flow. Any overpayments will be repaid by the Management Board members. In addition, extraordinary developments as defined in the contracts will not be included in the calculation of STI 1 and STI 2.

### LONG TERM INCENTIVE (LTI)

A long-term bonus plan has been created as LTI (Options) and is a value-oriented performance target. Details are laid down in the plan’s terms and conditions, which are part of the contractual arrangements with the Management Board members. Decisive factors for the amount of LTI are the development of the LPKF Group value added and the share price performance. LTI is therefore directly tied to the achievement of profitable growth and a long-term increase in Company value. The RCE value used is identical to the target value in STI 1.

In detail, LTI is designed as follows: Fictitious shares, known as phantom stocks, are granted to the Management Board members annually in a contractually stipulated amount. The number of phantom stocks corresponds to the individual amount stated, divided by the average closing price of LPKF shares in the first quarter of the year the shares are being allotted. The scheme runs for 3 years. Once this performance period elapses, the beneficiaries will be entitled to a disbursement amount whose calculation will depend on the final number of phantom stocks. The final number of phantom stocks will be calculated by multiplying the number of originally allocated phantom stocks by a performance factor that is dependent on the average value added of the LPKF Group during the relevant performance period. The amount to be paid out will in turn be calculated by multiplying the final number of phantom stocks by the average share price of LPKF Laser & Electronics AG on the last thirty trading days before the end of the relevant performance period. This is capped at four times the amount to be granted, the maximum shown in the benefits table. The final number of phantom stocks is limited to a maximum of 200% of the allocated phantom stocks. Advance payments are not available. There is no minimum agreed bonus either.

### BASIC FEATURES OF THE OLD REMUNERATION SYSTEM

The previous LPKF Laser & Electronics AG Management Board remuneration system has been in use since 2014 and applies to Management Board members Kai Bentz, Dr. Christian Bieniek and Bernd Lange until their retirement in the 2018 financial year.

The overall remuneration of the members of the Management Board comprises a non-performance-based fixed component and variable performance-based components.

The fixed remuneration comprises both the base salary, which is paid in equal monthly installments, and benefits. The incidental benefits include a company car for both official and private use, as well as insurance contributions, particularly in connection with health, care and legal insurance.

The variable performance-based remuneration components comprise both long-term incentives (LTI) and short-term incentives (STI).

The remuneration components Quality (LTI 1), Options (LTI 2) and Long-term EBIT (LTI 3) are designed as long-term incentives while EBIT (STI) is designed as a short-term incentive (STI). The LTI 1, LTI 3, and STI remuneration components are based on targets whose achievement is decisive for the amount of the remuneration component in question.

### SHORT TERM INCENTIVES (STI)

STI is calculated based on the corporate planning approved prior to the beginning of a given financial year, in which the target for EBIT is set for three different future scenarios (normal, aggressive, and defensive). A target achieved in the financial year under the normal scenario constitutes a target achievement in accordance with the target value shown in the benefits table and, under the defensive scenario, a target achievement of 0% (minimum). The table shows the maximum target attainment (maximum) if the planned aggressive scenario is exceeded by at least 20%. There is linear interpolation between the individual values. If negative EBIT is reported for the following year, in certain circumstances the given loss may be taken into account retroactively.

### LONG TERM INCENTIVES (LTI)

LTI 1 (Quality), which will run for three years, is measured by the Group error rate. The aim is to lower the error rate calculated in the 2013 financial year by 50% by 2016 and maintain this improved rate in 2017 and 2018. Target achievement is calculated based on two- and three-year averages. If the error rate is not reduced, this constitutes a target achievement of 0%. The target achievement is calculated by means of linear interpolation between the initial value and the average target value of the error rate.

A long-term bonus plan was established as LTI 2 (Options). Details are laid down in the plan's terms and conditions, which are part of the contractual arrangements with the Management Board members. Decisive factors for the amount of LTI 2 are the development of the EBIT margin of the LPKF Group and the share price performance. Fictitious shares, known as phantom stocks, are allocated to the Management Board members in a contractually stipulated amount. The number of phantom stocks granted to a single Management Board member will be calculated based on the set amount to be granted divided by the average closing price of the shares of LPKF Laser & Electronics AG over the last 30 trading days prior to 1 January of the year in which the shares are allotted. Once a four-year performance period elapses, the beneficiaries will be entitled for the first time to a disbursement amount whose calculation will depend on the final number of phantom stocks. The final number of phantom stocks will be calculated by multiplying the preliminary number of phantom stocks by a performance factor that is determined by the average EBIT margin of the LPKF Group during the relevant performance period. The amount to be paid out will in turn be calculated by multiplying the final number of phantom stocks by the average share price of LPKF Laser & Electronics AG on the last 30 trading days before the end of the relevant performance period. This is limited to three times the allocated value. If the beneficiaries waive their right to a disbursement after the four-year performance period, they can obtain the amount to be paid out after a five- or six-year performance period. One prerequisite for a disbursement under the long-term bonus plan is an own investment in the form of shares of LPKF Laser & Electronics AG, which must correspond to at least half of the amount to be granted.

Remuneration component LTI 3 (long-term EBIT) is calculated based on target achievement in accordance with STI 1 (EBIT) for the respective financial year, the prior financial year and the financial year before that.

### VALUE OF THE BENEFITS IN THE REPORTING PERIOD

The benefits for the 2018 reporting period, split between old and new Management Boards, are presented in the tables below, supplemented by the minimum and maximum amounts that can be reached. The multi-year variable remuneration granted in the past is broken down according to various plans and the length of the respective periods is indicated. The target value of a moderately probable scenario is stated for LTI 1 in the old remuneration system and the amount to be granted is stated for LTI Options.

BENEFITS GRANTED (PLAN)

| | Dr. Götz M. Bendele Chairman of the Management Board since 5/1/2018 | | | |
|---|---|---|---|---|
| in EUR thousand | 2017 | **2018** | (Min) | (Max) |
| Fixed remuneration | n/a | 160 | 160 | 160 |
| Incidental benefits | n/a | 8 | 8 | 8 |
| **Total** | n/a | **168** | 168 | 168 |
| **One-year variable remuneration** | | | | |
| STI 1 ROCE | n/a | 33 | 0 | 100 |
| STI 2 Cash flow | n/a | 33 | 0 | 86 |
| **Multi-year variable remuneration** | | | | |
| LTI Options 2018 (3 years) | n/a | 50 | 0 | 200 |
| Number of phantom stocks (in shares) | n/a | 5.550 | 0 | 11.100 |
| **Other** | | | | |
| **Total** | n/a | **116** | 0 | 386 |
| Cost of benefits | n/a | 0 | 0 | 0 |
| **Total remuneration** | n/a | **284** | 168 | 554 |

BENEFITS GRANTED (PLAN)

| | Bernd Lange Management Board CTO until 12/31/2018 | | | |
|---|---|---|---|---|
| in EUR thousand | 2017 | **2018** | (Min) | (Max) |
| Fixed remuneration** | 243 | 243 | 243 | 243 |
| Incidental benefits | 24 | 22 | 22 | 22 |
| **Total** | 267 | **265** | 265 | 265 |
| **One-year variable remuneration** | | | | |
| STI 1 EBIT | 150 | 150 | 0 | 188 |
| **Multi-year variable remuneration** | | | | |
| LTI 1 Quality (3 years) | 75 | 75 | 0 | 94 |
| LTI 2 Options 2017 (4 years) | 25 | n/a | n/a | n/a |
| LTI 2 Options 2018 (4 years) | n/a | 25 | 0 | 75 |
| LTI 3 Long-term EBIT (3 years) | 75 | 75 | 0 | 94 |
| **Other** | | | | |
| Other contractual remuneration* | n/a | 0 | 0 | 0 |
| **Total** | 325 | **325** | 0 | 450 |
| Cost of benefits** | 7 | 7 | 7 | 7 |
| **Total remuneration** | 599 | **597** | 272 | 722 |

* Contractual remuneration until the end of the employment contract.
** According to the contracts, the cost of benefits is part of fixed remuneration.

| Christian Witt<br>Chief Financial Officer since 9/1/2018 | | | | | Total |
|---|---|---|---|---|---|
| 2017 | **2018** | (Min) | (Max) | | **2018** |
| n/a | 67 | 67 | 67 | | 227 |
| n/a | 7 | 7 | 7 | | 15 |
| n/a | **74** | 74 | 74 | | **242** |
| | | | | | |
| n/a | 17 | 0 | 50 | | 50 |
| n/a | 17 | 0 | 43 | | 50 |
| | | | | | |
| n/a | 22 | 0 | 87 | | 72 |
| n/a | 2.405 | 0 | 4.810 | | 7.955 |
| | | | | | |
| n/a | **56** | 0 | 180 | | **172** |
| n/a | 0 | 0 | 0 | | 0 |
| n/a | **130** | 74 | 254 | | 414 |

| Kai Bentz<br>Management Board CFO until 8/31/2018 | | | | Dr. Christian Bieniek<br>Management Board COO until 8/31/2018 | | | | Total |
|---|---|---|---|---|---|---|---|---|
| 2017 | **2018** | (Min) | (Max) | 2017 | **2018** | (Min) | (Max) | **2018** |
| 213 | 142 | 142 | 142 | 210 | 140 | 140 | 140 | 525 |
| 19 | 13 | 13 | 13 | 22 | 15 | 15 | 15 | 50 |
| 233 | **155** | 155 | 155 | 232 | **155** | 155 | 155 | **575** |
| | | | | | | | | |
| 132 | 88 | 0 | 110 | 126 | 84 | 0 | 105 | 322 |
| | | | | | | | | |
| 66 | 44 | 0 | 55 | 63 | 42 | 0 | 53 | 161 |
| 25 | n/a | n/a | n/a | 25 | n/a | n/a | n/a | |
| n/a | 17 | 0 | 50 | n/a | 17 | 0 | 50 | 59 |
| 66 | 44 | 0 | 55 | 63 | 42 | 0 | 53 | 161 |
| | | | | | | | | |
| n/a | 86 | 38 | 106 | n/a | 127 | 77 | 154 | 213 |
| 289 | **279** | 38 | 376 | 277 | **312** | 77 | 414 | **916** |
| 7 | 6 | 6 | 6 | 0 | 0 | 0 | 0 | 13 |
| 528 | **440** | 199 | 537 | 509 | **467** | 232 | 569 | **1,504** |

### BENEFITS RECEIVED FOR THE REPORTING PERIOD

In compliance with the recommendations of the GCGC, the benefits received for the reporting period and the previous-year period are stated in the table below.

Following the recommendations of the GCGC, the benefit costs correspond to the committed contributions to old-age pensions, although they do not represent benefits received in the narrow sense.

Total remuneration as per GCC/GAS 17 also includes the allotment value of the share-based remuneration from LTI Options as of the grant date, even though new Management Board members will not receive payment for this in the 2018 financial year. A hypothetical payment amount corresponds to the amount to be paid on attainment of the target at the end of the scheme.

### BENEFITS RECEIVED (ACTUAL)

| | **Dr. Götz M. Bendele** Chairman of the Management Board since 5/1/2018 | | **Christian Witt** Chief Financial Officer since 9/1/2018 | | Total |
|---|---|---|---|---|---|
| in EUR thousand | 2017 | **2018** | 2017 | **2018** | **2018** |
| Fixed remuneration | n/a | 160 | n/a | 67 | 227 |
| Incidental benefits | n/a | 8 | n/a | 7 | 15 |
| **Total** | n/a | **168** | n/a | **74** | **242** |
| **One-year variable remuneration** | | | | | |
| STI 1 ROCE | n/a | 0 | n/a | 0 | 0 |
| STI 2 Cash flow | n/a | 0 | n/a | 0 | 0 |
| **Multi-year variable remuneration** | | | | | |
| LTI Options 2018 (3 years) | n/a | 0 | n/a | 0 | 0 |
| **Other** | | | | | |
| **Total** | n/a | **0** | n/a | **0** | **0** |
| Cost of benefits | n/a | 0 | n/a | 0 | 0 |
| **Total remuneration as per GCGC (benefits received)** | n/a | **168** | n/a | **74** | **242** |
| Share-based remuneration as per GCC/GAS 17 (for LTI Options 2018) | n/a | 10 | n/a | 5 | 15 |
| **Total remuneration as per GCC/GAS 17 (benefits received)** | n/a | **178** | n/a | **79** | **257** |

BENEFITS RECEIVED (ACTUAL)

| | Bernd Lange Management Board CTO until 12/31/2018 | | Kai Bentz Management Board CFO until 8/31/2018 | | Dr. Christian Bieniek Management Board COO until 8/31/2018 | | Total |
|---|---|---|---|---|---|---|---|
| in EUR thousand | 2017 | **2018** | 2017 | **2018** | 2017 | **2018** | **2018** |
| Fixed remuneration** | 243 | 243 | 213 | 142 | 210 | 140 | 525 |
| Incidental benefits | 24 | 22 | 19 | 13 | 22 | 15 | 50 |
| **Total** | 267 | **265** | 232 | **155** | 232 | **155** | **575** |
| **One-year variable remuneration** | | | | | | | |
| STI 1 EBIT | 0 | 78 | 0 | 46 | 0 | 43 | 167 |
| **Multi-year variable remuneration** | | | | | | | |
| LTI 1 Quality (3 years) | 0 | 21 | 0 | 12 | 0 | 12 | 45 |
| LTI 2 Options (4 years) | 0 | 6 | 0 | 4 | 0 | 4 | |
| LTI 3 Long-term EBIT (3 years) | 0 | 38 | 0 | 23 | 0 | 22 | 83 |
| **Other** | | | | | | | |
| Other contractual remuneration* | n/a | 0 | n/a | 59 | n/a | 98 | 157 |
| **Total** | 0 | **143** | 0 | **144** | 0 | **179** | **466** |
| Cost of benefits** | 7 | 7 | 7 | 6 | 0 | 0 | 13 |
| **Total remuneration as per GCGC (benefits received)** | 274 | **415** | 239 | **305** | 232 | **334** | **1,054** |
| Share-based remuneration as per GCC/GAS 17 (for LTI 2 options) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total remuneration as per GCC/GAS 17 (benefits received)** | 274 | **415** | 239 | **305** | 232 | **334** | **1,054** |

* Contractual remuneration until the end of the employment contract.
** According to the contracts, the cost of benefits is part of fixed remuneration.

The members of the Management Board in office in 2018 were paid total remuneration of EUR 1,296 thousand (2017: EUR 1,017 thousand). EUR 932 thousand of which can be attributed to fixed remuneration components (including incidental benefits) that were fully paid out in the 2018 reporting period.

The variable remuneration components account for EUR 351 thousand. EUR 333 thousand of this became due after the consolidated financial statements were approved by the Supervisory Board and will be paid in April 2019.

### COMMITMENTS TO MEMBERS OF THE MANAGEMENT BOARD UPON TERMINATION

A post-contractual non-competition clause for a period of twelve months after departure is in place for members of the Management Board irrespective of the termination was ordinary or extraordinary.

If the appointment of a member of the Management Board ends early on account of his or her death while in office, the fixed monthly remuneration shall be paid to the heirs for a three-month period for new members of the Management Board and for a six-month period for old members of the Management Board.

Separate agreements were made with Kai Bentz and Dr. Christian Bieniek to settle their employment relationships. For this reason, there are payments for the settlement of claims resulting from the remaining contractual period ("other contractual remuneration") to the value of EUR 157 thousand. These comprise payment of fixed salary including benefits and pro-rata variable remuneration following the end of the appointment on 31 August to the end of the employment contract on 10/31/2018 for Kai Bentz and on 12/31/2018 for Dr. Christian Bieniek. No severance payments were made.

The Company has not made any performance-oriented pension commitments to the current members of its Management Board in the 2018 financial year. Contracts regarding a company pension were closed with the members of the Management Board, Kai Bentz and Bernd Lange. These are defined-contribution commitments from salary conversion. No provisions for pensions are required in this case.

### TOTAL REMUNERATION OF FORMER MEMBERS OF THE MANAGEMENT BOARD

Provisions were recognized for EUR 573 thousand (previous year: EUR 535 thousand) in pension commitments (pension plan, disability pension and widow's pension) toward former members of the Management Board and their survivors.

A total of EUR 17 thousand (previous year: EUR 17 thousand) in pensions was paid to a former member of the Management Board in 2018.

In addition, non-competition payments to the value of EUR 163 thousand were paid to former Chairman of the Management Board Dr. Ingo Bretthauer in 2018 as part of his post-contractual non-competition agreement. According to the contractual agreement, this corresponds to 50% of the last ordinary monthly base salary paid.

### REMUNERATION OF THE SUPERVISORY BOARD

Each member of the Supervisory Board receives fixed basic remuneration for each full financial year of membership on the Supervisory Board that is specified by resolution of the Annual General Meeting and is payable after the end of the financial year. The Chairman of the Supervisory Board receives double and the Deputy Chairman receives one-and-a-half times the amount of the fixed basic remuneration. By resolution of the Annual General Meeting dated 2 June 2016, the fixed basic remuneration of each member of the Supervisory Board was set at EUR 32 thousand effective 1 January 2017.

The remuneration of the Supervisory Board is as follows:

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Dr. Markus Peters (Chairman) | 64 | 25 |
| Dr. Heino Büsching (Deputy Chairman until 5/31/2018) | 20 | 61 |
| Prof. Dr.-Ing. Erich Barke (Deputy Chairman from 6/1/2018) | 41 | 32 |
| Dr. Dirk Rothweiler | 32 | 18 |
| **Total** | **157** | 136 |

## SUPERVISORY BOARD MEMBERS

**Dr. Markus Peters (Chairman)**
- Head of Finance and Investment of German Technology AG, Hannover, Germany
- Member of the Board of Directors for LPKF Distribution Inc., Portland, USA

**Dr. Heino Buesching (Deputy Chairman until 5/31/2018)**
- Lawyer/tax consultant at CMS Hasche Sigle, Partnerschaft von Rechtsanwälten und Steuerberatern mbB, Hamburg, Germany

**Prof. Dr.-Ing. Erich Barke (Deputy Chairman from 6/1/2018)**
- Retired professor of Leibniz University Hannover, Germany, formerly: President of Leibniz University Hannover, Germany
- Member of the Supervisory Board of the following companies:
  - Esso Deutschland GmbH, Hamburg, Germany
  - ExxonMobil Central Europe Holding GmbH, Hamburg, Germany
  - hannoverimpuls GmbH, Hannover, Germany

**Dr. Dirk Rothweiler**
- CEO of First Sensor AG, Berlin, Germany

## FINAL MANAGEMENT BOARD DECLARATION CONCERNING THE REPORT ON RELATIONS WITH AFFILIATED COMPANIES AS PER SECTION 312 OF THE GERMAN STOCK CORPORATION ACT.

We hereby declare that LPKF AG received an appropriate payment for each of the legal transactions listed in the report on its relations with affiliated companies according to the circumstances that were known to us at the time that the legal transactions were performed. Other measures subject to mandatory disclosure have neither been taken nor omitted.

## AFFIRMATION BY THE LEGAL REPRESENTATIVES (RESPONSIBILITY STATEMENT)

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the group management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the material opportunities and risks associated with the expected development of the Group.

Garbsen, Germany, 20 March 2019

Dr. Götz M. Bendele    Christian Witt

# CONSOLIDATED AND ANNUAL FINANCIAL STATEMENTS

FOR THE LPKF GROUP AND LPKF AG

S.80

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# CONSOLIDATED INCOME STATEMENT

FROM 1 JANUARY TO 31 DECEMBER 2018

| in EUR thousand | Notes | **2018** | 2017 |
|---|---|---|---|
| Revenue | 1 | 119,960 | 102,067 |
| Change in inventories of finished and unfinished products | | 847 | −689 |
| Other own work capitalized | 2 | 4,309 | 3,559 |
| Other operating income | 3 | 3,707 | 5,728 |
| | | **128,823** | 110,665 |
| Cost of materials | 4 | 47,955 | 33,807 |
| Staff costs | 5 | 44,294 | 41,897 |
| Depreciation of intangible net assets of non-current assets and property, plant and equipment | 6 | 8,054 | 7,677 |
| Value adjustments as per IFRS 9 | 25 | 15 | 0 |
| Other operating expenses | 7 | 21,681 | 23,332 |
| **Operating result (EBIT)** | | **6,824** | 3,952 |
| Finance income | 8 | 5 | 4 |
| Finance costs | 8 | 855 | 945 |
| **Earnings before tax** | | **5,974** | 3,011 |
| Income taxes | 9 | −2,067 | 1,861 |
| **Consolidated net profit** | | **8,041** | 1,150 |
| Earnings per share (basic) | 21 | 0.33 EUR | 0.05 EUR |
| Earnings per share (diluted) | 21 | 0.33 EUR | 0.05 EUR |

# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

FROM 1 JANUARY TO 31 DECEMBER 2018

| in EUR thousand | Notes | **2018** | 2017 |
|---|---|---|---|
| **Consolidated net profit** | | **8,041** | 1,150 |
| Revaluations (mainly actuarial gains and losses) | | −7 | 20 |
| Deferred taxes | | 13 | −11 |
| **Total changes in value, not reclassified in the income statement in the future** | | **6** | 9 |
| Fair value changes from cash flow hedges | | 12 | 0 |
| Fair value changes from cash flow hedges transferred to the income statement | | −12 | 0 |
| Currency translation differences | | −37 | −1,257 |
| **Total changes in value, to be reclassified in the income statement in the future if certain conditions are met** | | **−37** | −1,257 |
| **Other earnings after tax** | | **−31** | −1,248 |
| **Total earnings** | | **8,010** | −98 |

# CONSOLIDATED STATEMENT OF FINANCIAL POSITION

## AS OF 31 DECEMBER 2018

**ASSETS**

| in EUR thousand | Notes | **12/31/2018** | 12/31/2017 |
|---|---|---|---|
| **NON-CURRENT ASSETS** | | | |
| **Intangible net assets** | 10 | | |
| Goodwill | | 74 | 74 |
| Development costs | | 13,775 | 13,541 |
| Other intangible assets | | 1,362 | 1,826 |
| | | **15,211** | 15,441 |
| **Property, plant and equipment** | 10 | | |
| Land, similar rights and buildings | | 37,769 | 38,642 |
| Technical equipment | | 3,469 | 3,859 |
| Other equipment, operating and office equipment | | 3,084 | 3,955 |
| | | **44,322** | 46,456 |
| **Receivables and other net assets** | | | |
| Trade receivables | 12 | 200 | 107 |
| Other net assets | 13 | 31 | 124 |
| | | **231** | 231 |
| **Deferred taxes** | 15 | **5,054** | 1,731 |
| | | **64,818** | 63,859 |
| **CURRENT ASSETS** | | | |
| **Inventories** | 11 | | |
| (System) components | | 12,811 | 13,617 |
| Unfinished products, unfinished services | | 5,496 | 3,625 |
| Finished products and goods | | 7,192 | 8,086 |
| Advance payments | | 216 | 200 |
| | | **25,715** | 25,528 |
| **Receivables and other net assets** | | | |
| Trade receivables | 12 | 30,544 | 19,401 |
| Income tax receivables | 13 | 354 | 198 |
| Other net assets | 13 | 3,652 | 4,263 |
| | | **34,550** | 23,835 |
| **Cash and cash equivalents** | 14 | **3,709** | 3,345 |
| | | **63,974** | 52,708 |
| | | **128,792** | 116,567 |

## EQUITY AND LIABILITIES

| in EUR thousand | Notes | **12/31/2018** | 12/31/2017 |
|---|---|---|---|
| **EQUITY** | | | |
| Subscribed capital | 16 | 24,497 | 22,270 |
| Capital reserves | | 15,463 | 1,489 |
| Other retained earnings | | 10,236 | 10,942 |
| Share-based payment reserve | | 490 | 490 |
| Currency conversion reserve | | 301 | 338 |
| Retained profit | | 26,744 | 18,703 |
| | | **77,731** | 54,232 |
| **NON-CURRENT LIABILITIES** | | | |
| Provisions for pensions and similar obligations | 17 | 267 | 329 |
| Non-current liabilities to banks | 19 | 17,444 | 20,045 |
| Deferred grants | 3 | 578 | 627 |
| Deferred taxes | 15 | 203 | 568 |
| | | **18,492** | 21,569 |
| **CURRENT LIABILITIES** | | | |
| Tax provisions | 18 | 388 | 0 |
| Other provisions | 18 | 4,880 | 3,707 |
| Current liabilities to banks | 19 | 2,603 | 20,952 |
| Trade payables | 19 | 6,877 | 3,227 |
| Contract liabilities | 1 | 12,762 | 0 |
| Other liabilities | 19 | 5,059 | 12,880 |
| | | **32,569** | 40,766 |
| | | **128,792** | 116,567 |

# CONSOLIDATED STATEMENT OF CASH FLOWS

## FROM 1 JANUARY TO 31 DECEMBER 2018

| in EUR thousand | Notes | **2018** | 2017 |
|---|---|---|---|
| **Current operating activities** | | | |
| Consolidated net profit/loss | | 8,041 | 1,150 |
| Income taxes | | −2,067 | 1,861 |
| Interest expense | | 855 | 945 |
| Interest income | | −5 | −4 |
| Depreciation of non-current assets | | 8,054 | 7,677 |
| Gains/losses on disposal of non-current assets incl. reclassification as current assets | | 85 | 175 |
| Changes to inventories, receivables and other assets | | −12,430 | −4,149 |
| Changes to provisions | | 1,111 | 559 |
| Changes to liabilities and other liabilities and equity | | 8,139 | 578 |
| Other non-cash expenses and income | | 816 | 1,647 |
| Income from interest | | 5 | 4 |
| Paid income tax | | −1,097 | −869 |
| **Cash flow from operating activities** | | **11,507** | 9,574 |
| **Investment activity** | | | |
| Investment in intangible net assets | | −3,968 | −3,835 |
| Investment in property, plant and equipment | | −1,758 | −2,717 |
| Revenue from disposal of assets | | 51 | 292 |
| **Cash flow from investment activity** | | **−5,675** | −6,260 |

| in EUR thousand | Notes | **2018** | 2017 |
|---|---|---|---|
| **Cash flow from financing activities** | | | |
| Interest paid | | −855 | −945 |
| Income from changes in equity | | 16,201 | 0 |
| Payments for repaying loans | | −13,595 | −9,841 |
| **Cash flow from financing activities** | | **1,751** | −10,786 |
| **Changes to the cash funds** | | | |
| Exchange rate-related changes to the cash funds | | 136 | −121 |
| Changes to the cash funds | | 7,583 | −7,472 |
| Cash funds on 01 January | | −4,012 | 3,581 |
| **Cash funds on 31 December** | | **3,707** | −4,012 |
| **Summary of cash funds** | | | |
| Cash and cash equivalents | | 3,709 | 3,345 |
| Current account liabilities | | −2 | −7,357 |
| **Cash funds on 31 December** | 20 | **3,707** | −4,012 |

# CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

## AS OF 31 DECEMBER 2018

| in EUR thousand | Subscribed capital | Capital reserves | Other retained earnings |
|---|---|---|---|
| **Balance on 12/31/2017** | 22,270 | 1,489 | 10,942 |
| Adjustment IFRS 9 | | | −73 |
| Adjustment IFRS 15 | | | −639 |
| **Balance on 1/1/2018** | 22,270 | 1,489 | 10,230 |
| **Total group earnings** | | | |
| Consolidated net profit | | | |
| Change to valuation of cash flow hedge reserve | | | |
| Reclassification of cash flow hedge reserve in the income statement | | | |
| Revaluations (mainly actuarial gains and losses) | | | −7 |
| Deferred taxes not impacting income | | | 13 |
| Differences from currency translation | | | |
| **Total group earnings** | 0 | 0 | 6 |
| **Transactions with shareholders** | | | |
| Income from capital increase | | 13,974 | |
| Use of authorized capital | 2,227 | | |
| Dividends to shareholders | | | |
| **Balance on 12/31/2018** | 24,497 | 15,463 | 10,236 |

| in EUR thousand | Subscribed capital | Capital reserves | Other retained earnings |
|---|---|---|---|
| **Balance on 1/1/2017** | 22,270 | 1,489 | 10,933 |
| **Total group earnings** | | | |
| Consolidated net profit | | | |
| Reclassification of cash flow hedge reserve in the income statement | | | |
| Revaluations (mainly actuarial gains and losses) | | | 20 |
| Deferred taxes not impacting income | | | −11 |
| Differences from currency translation | | | |
| **Total group earnings** | 0 | 0 | 9 |
| **Transactions with shareholders** | | | |
| Capital increase from corporate funds | | | |
| Transfer to retained earnings | | | |
| Dividends to shareholders | | | |
| **Balance on 12/31/2017** | 22,270 | 1,489 | 10,942 |

Consolidated Statement of Changes in Equity

| Cash flow hedge reserve | Share-based payment reserve | Currency translation reserve | Retained profit | **Equity** |
|---|---|---|---|---|
| 0 | 490 | 338 | 18,703 | **54,232** |
| | | | | −73 |
| | | | | −639 |
| 0 | 490 | 338 | 18,703 | **53,520** |
| | | | | |
| | | | 8,041 | 8,041 |
| 12 | | | | 12 |
| −12 | | | | −12 |
| | | | | −7 |
| | | | | 13 |
| | | −37 | | −37 |
| 0 | 0 | −37 | 8,041 | **8,010** |
| | | | | |
| | | | | 13,974 |
| | | | | 2,227 |
| | | | 0 | 0 |
| 0 | 490 | 301 | 26,744 | **77,731** |

| Cash flow hedge reserve | Share-based payment reserve | Currency translation reserve | Retained profit | **Equity** |
|---|---|---|---|---|
| 0 | 490 | 1,595 | 17,553 | **54,330** |
| | | | | |
| | | | 1,150 | 1,150 |
| | | | | 0 |
| | | | | 20 |
| | | | | −11 |
| | | −1,257 | | −1,257 |
| 0 | 0 | −1,257 | 1,150 | **−98** |
| | | | | |
| | | | | 0 |
| | | | | 0 |
| | | | 0 | 0 |
| 0 | 490 | 338 | 18,703 | **54,232** |

# CONSOLIDATED NOTES

FOR THE LPKF GROUP AND LPKF AG

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CONTENS

## A. BASIC INFORMATION

LPKF Laser & Electronics AG, Garbsen (the Company) and its subsidiaries (hereinafter the LPKF Group) produce equipment and systems for electronics development and production. New laser-based technologies are aimed at customers in the automotive, electronics and solar industries.

The Company is a stock corporation which was established and is headquartered in Germany. Its registered office is at:

Osteriede 7
30827 Garbsen

These consolidated financial statements were approved for publication by the Management Board on March 20, 2019.

## B. BASIS OF PREPARATION OF THE CONSOLIDATED FINANCIAL STATEMENTS

The consolidated financial statements of LPKF Laser & Electronics AG, Garbsen, have been prepared using uniform accounting policies. They take into account all International Financial Reporting Standards (IFRS) and all interpretations of the International Financial Reporting Interpretations Committee (IFRIC) as applicable on the reporting date and in the form applicable in the EU.

The consolidated financial statements are prepared on the basis of historical cost, limited by the market valuation of available-for-sale financial assets as well as by the measurement of financial assets and financial liabilities including derivatives at fair value through profit and loss.

Preparing IFRS consolidated financial statements requires the use of estimates. Furthermore, the application of Group-wide accounting policies requires assessments by management. Areas that permit greater leeway in terms of assessments or exhibit greater complexity, or where assumptions and estimates are of critical significance to the consolidated financial statements, are discussed in the notes under E.

The financial year corresponds to the calendar year. The consolidated financial statements have been prepared in euros. Unless indicated otherwise, all amounts are shown in thousands of euros (EUR thousand).

The following standards that were amended, revised or issued prior to the reporting date were applied in the 2018 financial year:

| Standard/interpretation | | Mandatory application | Effects |
|---|---|---|---|
| IFRS 9 | Financial Instruments | 1/1/2018 | see I.25 other disclosures |
| IFRS 15 | Revenue from Contracts with Customers | 1/1/2018 | see G.1 Revenue |
| IFRS 1 and IAS 28 | Annual Improvements Cycle 2014–2016 | 1/1/2018 | none |
| Amendment to IFRS 2 | Classification and valuation of share-based payments | 1/1/2018 | none |
| Amendment to IFRS 4 | Application of IFRS 9 with IFRS 4 insurance contracts | 1/1/2018 | none |
| Amendment to IAS 40 | Transfers of investment property | 1/1/2018 | none |
| IFRIC 22 | Foreign currency transactions and advance consideration | 1/1/2018 | none |

Initial application of these pronouncements and amendments, with the exception of IFRS 9 and IFRS 15, did not have any material effects on the current or previous presentation of the Group's net assets, financial position and results of operations.

The following standards that were amended, revised or issued prior to the reporting date were not applied in the 2018 financial year:

| Standard/interpretation | | Mandatory application |
|---|---|---|
| IFRS 16 | Leases | 1/1/2019 |
| IFRIC 23 | Uncertainty over Income Tax Treatments | 1/1/2019 |
| Amendment to IFRS 9 | Prepayment features with negative compensation | 1/1/2019 |
| IAS 28 | Long-term investments in associates and joint ventures | 1/1/2019 |
| Amendment to IAS 19 | Plan amendment, curtailment or settlement | 1/1/2019 |
| | Annual Improvements Cycle 2015–2017 | 1/1/2019 |
| | References to the conceptual framework in IFRS standards | 1/1/2020 |
| IFRS 17 | Insurance Contracts | 1/1/2021 |
| Amendment to IFRS 10 and IAS 28 | Sale or contribution of assets between an investor and its associate or joint venture | Still open |

Balance on 12/31/2018

### IFRS 16 LEASES

IFRS 16 is mandatory for financial years beginning on or after 1/1/2019. The standard contains comprehensive rules concerning the identification of lease agreements and for accounting at both the lessor and the lessee. A lease as defined in IFRS 16 exists if the lessee is granted contractual rights by the lessor to control an identifiable asset for a specified period of time, and the lessor receives consideration from the lessee in return.

In the new standard, the distinction in effect to date between operating and finance leases is eliminated for the lessee. In the future, the lessee must report a right of use for the leased object and a corresponding lease liability for all leases. Exceptions are made for short-term leases with a duration of up to one year and lease agreements covering low-value assets. Usage rights (right-of-use assets) are recognized in the amount of the lease liability plus any initial direct costs of the lessee in addition. Subsequent measurement of the asset is at amortized cost. The amount of the lease liability is equal to the present value of the lease payments not yet due. Changes in lease payments trigger remeasurement of the lease liability.

The disclosure requirements of IFRS 16 are much more extensive than those in IAS 17. This is expected to give financial statement readers a better understanding of the effects of leases on an entity's net assets, financial positions and results of operations.

Over the past financial year, key leases were analyzed to determine the effects of the introduction of IFRS 16. The initial application will be modified and applied retrospectively so that the comparison figures from the previous year are not adjusted.

Only operating leases are currently used at the LPKF Group. This includes vehicle leases and rental leases. Therefore, the asset is currently not recognized.

The initial application of IFRS 16 as of 1 January 2019 will recognize usage rights and lease liabilities to a value of between EUR 1.5 million and EUR 2.0 million. The recognition of usage rights as of the 2019 financial year will produce additional amortization expenses of around EUR 0.5 million with a loss of leasing expenses to a value of EUR 0.6 million. Interest expense on lease liabilities amounts to around EUR 40 thousand.

The implementation of IFRS 16 will therefore result in changes to the consolidated financial statements. However, the effects of the initial application are estimated to be minimal as it mainly just applies to moveable non-current assets. Most of the companies within the Group have their own capitalized property.

### BASIS OF CONSOLIDATION

In addition to the Group's parent company, LPKF Laser & Electronics Aktiengesellschaft, Garbsen, the following subsidiaries have also been included in the consolidated financial statements:

| Name<br>Fully consolidated | Registered seat | Equity interest (previous year) in % | Equity in EUR thousand | Result for the financial year ended in EUR thousand |
|---|---|---|---|---|
| LaserMicronics GmbH | Garbsen/ Germany | 100.0 (100.0) | 1,036.9 | 346.5 |
| LPKF SolarQuipment GmbH | Suhl/ Germany | 100.0 (100.0) | 7,194.9 | 0.0 |
| LPKF WeldingQuipment GmbH | Fürth/ Germany | 100.0 (100.0) | 286.9 | 0.0 |
| LPKF Laser & Electronics d.o.o. | Naklo/Slovenia | 100.0 (100.0) | 5,857.0 | 866.1 |
| LPKF Distribution Inc. | Tualatin (Portland)/USA | 100.0 (100.0) | 5,843.9 | 1,682.5 |
| LPKF (Tianjin) Co. Ltd. | Shanghai/China | 100.0 (100.0) | 10,235.6 | 471.9 |
| LPKF Laser & Electronics Trading (Shanghai) Co. Ltd. | Shanghai/China | 100.0 (100.0) | 30.0 | −3.1 |
| LPKF Laser & Electronics (Hong Kong) Ltd. | Hong Kong/ China | 100.0 (100.0) | 1,279.4 | −378.5 |
| LPKF Laser & Electronics K.K. | Tokyo/Japan | 100.0 (100.0) | −1,444.4 | 159.8 |
| LPKF Laser & Electronics Korea Ltd. | Seoul/Korea | 100.0 (100.0) | −1,644.9 | −176.1 |

The equity and earnings figures for the financial year just ended concern the financial statements as of 31 December 2018 and represent the balances pursuant to the local financial statements prior to reconciliation for purposes of group-wide recognition and measurement.

The legal structure of the LPKF Group did not change in the 2018 financial year.

With the authorization of the Annual General Meeting on 28 May 2015, a profit transfer agreement with a five-year term effective retrospectively at the beginning of 2015 is in place between LPKF Laser & Electronics AG and LPKF SolarQuipment GmbH. With the authorization of the Annual General Meeting on 02 June 2016, LPKF WeldingQuipment GmbH signed a profit transfer agreement with LPKF Laser & Electronics AG that became effective retrospectively at the beginning of 2016. Due to their inclusion in the consolidated financial statements, LPKF WeldingQuipment GmbH and LPKF SolarQuipment GmbH met the requirements of Section 264 (3) German Commercial Code and to the extent possible made use of the exemption rule.

As of December 31, 2018, LPKF AG had ten subsidiaries, which, together with the parent company, form the group of consolidated companies.

## C. CONSOLIDATION PRINCIPLES

The consolidated financial statements are based on the financial statements as of 31 December 2018 of the companies included in the consolidated financial statements, which were prepared in accordance with uniform accounting policies.

Subsidiaries include all entities that are controlled by LPKF AG. LPKF AG controls an associate company when it has power over the associate company, risk exposure or rights to variable returns arise from its investment in the associate company and LPKF AG has the ability to use its power over the associate company such that this affects the amount of the associate company’s variable returns. Consolidation of an associate company begins on the day on which LPKF AG gains control over the entity. It ends when LPKF AG loses control over the associate company.

Subsidiaries acquired are accounted for using the purchase method. The acquisition costs correspond to the fair value of the assets given, the equity instruments issued and the liabilities incurred or assumed at the acquisition date.

Assets, liabilities and contingent liabilities identifiably in connection with a business combination are remeasured upon initial consolidation, irrespective of the scope of the non-controlling interests. The excess of the cost of the acquisition over the Group’s interest in the fair value of the net assets acquired is recognized as goodwill. If the cost of acquisition is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognized directly in the income statement.

Intra-Group transactions, balances and unrealized gains and losses from transactions between Group companies are eliminated. Deferred taxes are recognized on consolidation measures reported in the income statement.

The accounting policies used by subsidiaries were adjusted as necessary to the Group’s uniform accounting policies to ensure uniform accounting.

If the Group loses either its control or significant influence over an entity, its remaining equity interest is remeasured at fair value and the resulting difference is recognized as profit or loss. The fair value of an associate, joint venture or financial asset is the fair value determined upon initial recognition. In addition, the treatment of any amounts shown in other comprehensive income relating to this entity is analogous to the treatment of transactions by the parent company directly disposing of the respective assets and liabilities. This means that any gain or loss previously shown in other comprehensive income must be reclassified from equity to profit or loss.

## D. CURRENCY TRANSLATION

Annual financial statements are prepared in the functional currency of each entity; it is defined as the currency of the economic environment in which the entity mainly operates. The functional currency of subsidiaries is the same as the currency of the country in which the subsidiary is domiciled.

If the annual financial statements of a subsidiary are prepared in a functional currency other than the euro, the assets and liabilities are translated into euros at an average exchange rate at the reporting date and equity is translated at the historical exchange rate. Expenses and income are translated at the average annual exchange rate. The translation differences are recognized directly in equity as a currency translation reserve until the subsidiary is disposed of.

The exchange rates of the material currencies that were applied in the preparation of these consolidated financial statements are listed below:

| 1 euro = currency x | Closing rate | | Average exchange rate | |
|---|---|---|---|---|
| | **12/31/2018** | 12/31/2017 | **2018** | 2017 |
| US dollar | USD 1.1450 | USD 1.1993 | USD 1.1815 | USD 1.1293 |
| Chinese renminbi yuan | CNY 7.8751 | CNY 7.8044 | CNY 7.8074 | CNY 7.6264 |
| Hong Kong dollar | HKD 8.9675 | HKD 9.372 | HKD 9.2599 | HKD 8.8012 |
| Japanese yen | JPY 125.85 | JPY 135.01 | JPY 130.41 | JPY 126.65 |
| South Korean won | KRW 1,277.93 | KRW 1,279.61 | KRW 1,299.25 | KRW 1,275.83 |

## E. CRITICAL ACCOUNTING AND MEASUREMENT ESTIMATES AND ASSUMPTIONS

All estimates and assessments are continuously updated and are based on historical experience and other factors including expectations of future events that are believed to be reasonable under the circumstances.

The Group makes assessments and assumptions that concern the future. Estimates based on these assessments and assumptions often do not correspond to actual facts in the future. The estimates and assumptions associated with a significant risk of triggering material adjustments to the carrying amounts of assets and liabilities within the next financial year are discussed in the following.

### (A) ESTIMATED IMPAIRMENT OF GOODWILL

In accordance with the accounting policy described in note 10.1, the Group tests goodwill for impairment annually and whenever there is a concrete indication of possible impairment. The recoverable amount of cash generating units (CGUs) was determined based on a calculation of their value in use. These calculations must be based on assumptions made by the management on 31 December 2018.

### (B) INTANGIBLE NON-CURRENT ASSETS AND PROPERTY, PLANT AND EQUIPMENT

Material assumptions and estimates refer to determining the useful lives and the recoverable residual values of intangible non-current assets and items of property, plant and equipment. More details regarding useful lives and residual values are presented under note 10. “Non-current assets” in chapter H “Consolidated statement of financial position”.

### (C) PROVISIONS

Accounting for provisions involves making assumptions regarding probability, maturity and risk level. Actuarial calculations are used to determine the obligation from defined-benefit pension commitments and termination benefits paid to employees as well as the obligation from a long-term bonus program launched for the first time in 2012. The amount of the pension provisions is essentially dependent on the life expectancies on which it is based, and the choice of discount rate which is redetermined every year. The discount rate is based on the interest rate paid on high-quality corporate bonds in that currency in which the benefits are paid and whose maturities correspond to the pension obligations. Key parameters in the calculation of provisions for anniversary payments and termination benefits are employee turnover and the salary growth factor. Detailed information is provided in note 17 describing pension provisions. An option pricing model is used to calculate the value of the obligation arising from the long- term bonus program settled in cash due to the influence exerted by LPKF’s share price. Another material factor is the performance of the EBIT margin, which is derived from the Group’s planning. Detailed information is provided in note 18 describing other provisions.

### (D) INCOME TAXES

The Group is subject to income tax payments in various countries. Material assumptions are therefore required to determine income tax provisions on a global scale.

There are numerous business transactions and calculations for which the ultimate level of taxation cannot be finally determined during the course of normal business activities. The Company determines the amount of the provisions for expected tax audits based on best estimates of whether and to what extent additional income taxes may become payable. If the final level of taxation of these business transactions deviates from the initial assumptions, this will have an impact on the actual taxes and deferred taxes in the period in which taxation is finally determined.

Deferred tax assets are recognized at the amount at which it is probable that future tax benefits will be realized. The assessment of recoverability is based on five-year planning, probable performance as well as taxable temporary differences. The actual extent to which earnings in future periods must be taxed, and thus the actual extent to which the tax benefits will be usable, may deviate from the assessment at the time the deferred tax assets are recognized.

### (E) FAIR VALUE OF DERIVATIVE AND OTHER FINANCIAL INSTRUMENTS

The fair value of financial instruments not traded on an active market is determined by applying suitable valuation techniques selected from a large number of methods. The assumptions applied in this context are largely based on the market conditions existing on the reporting date.

### (F) REVENUE RECOGNITION ESTIMATES

The realization of revenue from estimated guarantee extensions that arise from past experience.

### (G) ACCOUNTING CHANGES

No accounting changes were made in these financial statements apart from those relating to the initial application of IFRS 9 and IFRS 15.

## F. SEGMENT REPORTING

In accordance with the provisions of IFRS 8 (Operating segments), selected information in the annual financial statements is presented by operating segment and region, with segmentation being based on internal reporting to the chief operating decision maker. The chief operating decision maker is responsible for determining the allocation of resources to segments and reviewing their performance. The Management Board of LPKF AG has been defined as the Group’s chief operating decision maker. Segment reporting aims to lend greater transparency to both the performance and potential of the Group’s individual activities.

Primary segment reporting is based on the following segments:

- Development comprises products such as circuit board plotters and ProtoLasers, primarily for electronics developers.

- The Electronics segment comprises production systems for cutting print stencils, rigid and flexible circuit boards, ultra-thin glass, and the etching of plastic circuit carriers.

- Welding comprises systems for laser beam welding of plastic components.

- The Solar segment develops and produces laser scribers for the etching of thin-film solar cells and laser systems for the digital printing of functional pastes and inks (laser transfer printing, LTP) which are used in production.

- The Other category contains some expense and income items which cannot be assigned to any of the other operating segments.

There is insignificant inter-segment revenue. The existing goodwill (EUR 74 thousand) is allocated to the Welding segment.

The segment information was determined as follows:

- The segment result (EBIT) is determined by taking into account impairment of goodwill, but without taking into account the financial result and taxes.
- The investments and depreciation and amortization including impairment losses refer to property, plant and equipment and intangible non-current assets including goodwill.

The figures reported are those after consolidation.

| in EUR thousand | | Electronics | Develop-ment | Welding | Solar | Other | **Total** |
|---|---|---|---|---|---|---|---|
| | 2018 | 34,616 | 24,248 | 22,229 | 38,867 | 0 | 119,960 |
| External revenue | 2017 | 31,653 | 24,412 | 25,408 | 20,594 | 0 | 102,067 |
| Operating result (EBIT) | 2018 | 796 | 4,186 | −1,640 | 8,458 | −4,976 | 6,824 |
| | 2017 | 883 | 5,272 | 629 | 1,475 | −4,307 | 3,952 |
| Depreciation, amortization and impairment losses (Non-current assets) | 2018 | 3,154 | 1,527 | 2,265 | 1,012 | 96 | 8,054 |
| | 2017 | 2,810 | 1,749 | 1,937 | 1,112 | 69 | 7,677 |
| Depreciation, amortization and impairment losses (Inventories) | 2018 | 1,233 | 117 | 32 | 354 | 0 | 1,736 |
| | 2017 | 793 | 111 | 215 | 17 | 0 | 1,136 |
| **Structure in %** | | | | | | | |
| | 2018 | 28.9 | 20.2 | 18.5 | 32.4 | 0.0 | 100.0 |
| External revenue | 2017 | 31.0 | 23.9 | 24.9 | 20.2 | 0.0 | 100.0 |

Revenue of EUR 36 million and EUR 19 million was generated from two individual customers. Revenue of EUR 17 million and EUR 13 million was generated from two individual customers during the previous year.

The impairment losses recognized on inventories are shown under cost of material.

GEOGRAPHICAL SEGMENTS

Reporting reflects the four main geographical regions in which the Group is active.

| in EUR thousand | | Germany | Rest of Europe | North America | Asia | Other | **Total** |
|---|---|---|---|---|---|---|---|
| External revenue | 2018 | 12,778 | 31,934 | 24,656 | 49,129 | 1,463 | 119,960 |
| | 2017 | 10,375 | 20,490 | 23,004 | 45,698 | 2,500 | 102,067 |
| Assets | 2018 | 114,517 | 1,426 | 5,310 | 7,539 | 0 | 128,792 |
| | 2017 | 100,125 | 1,596 | 5,613 | 9,233 | 0 | 116,567 |
| Capital expenditures | 2018 | 4,773 | 769 | 19 | 165 | 0 | 5,726 |
| | 2017 | 6,085 | 481 | 14 | 183 | 0 | 6,763 |

## G. CONSOLIDATED INCOME STATEMENT

### 1. REVENUE

At the start of the reporting period, 01 January 2018, LPKF applied standard IFRS 15 Revenue from contracts with customers for the first time. IFRS 15 replaces existing regulations from IFRS concerning the recognition of revenue.

**1. Revenue breakdown**

The core business of the LPKF Group is the sale of equipment and systems used by customers in production and development. In sales of equipment and machines, revenue is generated at a specific time and is thus recognized on transfer of control.

Over time revenue stems from service contracts which mainly include maintenance contracts and guarantee extensions.

| in EUR million | Electronics | Development | Welding | Solar | Other | **Total** |
|---|---|---|---|---|---|---|
| External revenue | 34.6 | 24.2 | 22.2 | 38.9 | 0.0 | 120.0 |
| **Revenue recognition time point** | | | | | | |
| Equipment and machines (satisfied at a point in time) | 33.5 | 24.0 | 22.1 | 38.8 | 0.0 | 118.4 |
| Service contracts (satisfied over time) | 1.1 | 0.2 | 0.1 | 0.1 | 0.0 | 1.5 |
| **Total** | 34.6 | 24.2 | 22.2 | 38.9 | 0.0 | **120.0** |

Revenue of EUR 36 million and EUR 19 million was generated from two individual customers. During the previous year, revenue of EUR 17 million and EUR 13 million was generated from two individual customers.

Agreement balance

| in EUR million | 01/01/2018 | **12/31/2018** |
|---|---|---|
| Contract assets | 0.0 | 0.0 |
| Contract liabilities | 9.4 | 12.8 |
| up to one year | 9.4 | 12.6 |
| one to five years | 0.0 | 0.2 |
| Revenue that was in the contract liabilities balance at the beginning of the financial year | 0.0 | 9.4 |
| Revenue from benefit obligations that were met in earlier periods | 0.0 | 0.0 |

LPKF chose the modified retrospective approach for the initial application of IFRS 15. In the 2017 financial year, revenue recognition was still prepared in accordance with IAS 18 revenue which did not stipulate any contract assets or contract liabilities.

Differences that arose due to the transition from IAS 18 to IFRS 15 were posted against retained earnings as of 1 January 2018.

| in EUR thousand | 12/31/2017 | Adjustments as per IFRS 15 | Opening balance 1/1/2018 | 12/31/2018 (as reported) | Reconciliation for IAS 18 | 12/31/2018 (without application of IFRS 15) |
|---|---|---|---|---|---|---|
| Other retained earnings | 10,942 | −893 | 10,049 | | | |
| Other liabilities | 12,880 | −8,462 | 4,418 | 5,059 | 11,485 | 16,544 |
| Contract liabilities | 0 | 9,355 | 9,355 | 12,762 | −12,762 | 0 |

Contract assets arise from claims for consideration on services rendered. There were no contract assets in the 2018 financial year.

Contract liabilities are payments received prematurely i.e. before completion of the contracted service. Once the contractual service has been performed contract liabilities are recognized as revenue. As of 12/31/2018 contract liabilities amounted to EUR 12,762 thousand. Of which EUR 1,277 thousand are contract liabilities from over time revenue from service contracts and EUR 11,485 thousand are advances received on point in time services. In the 2017 financial year, advances received on point in time services to the value of EUR 8,426 thousand were reported under other net assets.

During the 2018 financial year, there were no significant or substantial changes to the contract assets and contract liabilities accounts.

There has been no impairment of contract assets in the course of the current reporting period.

**2. Performance obligations**
LPKF Group performance obligations arise from the sale of equipment and systems and from service contracts with customers.

In the sale of equipment and systems, the performance obligation is fulfilled upon delivery to the customer.

Service contracts with customers mainly comprise maintenance contracts and guarantee extensions. LPKF uses the output-based method to determine performance progress. Revenue from service contracts with customers is recognized in the time period where the service is provided.

Outstanding performance obligations at the end of the 2018 financial year consisted mainly of one-year service contracts that will be realized in the 2019 financial year.

LPKF employs the IFRS 15.120 exemption clause if the original expected duration of the contract is one year or less. This applies to both the sale of equipment and service contracts with a duration of one year or less. The transaction price of unsatisfied (or partially unsatisfied) performance obligations with a duration of more than one year amounts to EUR 202 thousand and corresponds to contract liabilities with a corresponding duration. The revenue for these will be recognized between 2020 and 2022.

The payment received generally corresponds to the invoice price and does not contain significant financing components. The terms of payment are between 30 and 45 days.

**3. Further disclosures**
No costs relating to the completion or acquisition of a contract were capitalized in the course of the financial year.

There were no other significant judgments involved in the implementation of IFRS 15.

The initial application of IFRS 15 has not led to any substantial deviation from the financial statements concerned.

## 2. OTHER OWN WORK CAPITALIZED

Own work capitalized by the Group concerned non-current assets amounted to EUR 4,309 thousand (previous year: EUR 3,559 thousand). This comprises own work for plant and machinery used by Group companies for production as well as prototype development projects capitalized during 2018 which are intended for permanent use in Group operations. Research costs, on the other hand, are immediately expensed when they are incurred. Costs incurred in the context of development projects (in connection with the design and test runs of new or improved products) are recognized as intangible non-current assets if the criteria of IAS 38.57 are met. Other development costs which do not meet these criteria are expensed on an accrual basis. Development costs expensed in prior periods are not capitalized in sub- sequent reporting periods. Development costs recognized as intangible assets are amortized on a straight-line basis over their useful lives – up to a maximum of three years – from the time they become usable.

## 3. OTHER OPERATING INCOME

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Income from currency translation differences | 800 | 1,021 |
| Income from the reversal of provisions | 777 | 144 |
| Research and development grants | 594 | 642 |
| Income from insurance payments | 142 | 2,255 |
| Reversal of deferred item income from grants | 49 | 192 |
| Income from the reversal of write-downs | 21 | 193 |
| Income from the disposal of non-current assets | 0 | 12 |
| Other | 1,324 | 1,269 |
| | **3,707** | 5,728 |

Research and development grants are recognized in accordance with IAS 20 and exclusively concern government grants – in some cases with the involvement of private project companies. They are granted for costs actually incurred in connection with a specific purpose during the financial year (expenditure grant). Payments are made in line with project progress. Grants received for capitalized development costs and other assets which have been recognized as deferred income are reversed on an accrual basis in accordance with the useful life of the associated capitalized development costs and other assets. The same applies to a grant for building costs in Suhl totaling EUR 943 thousand. Income from the reversal of provisions consists mainly of the reversal of provisions for guarantees and warranties.

## 4. COST OF MATERIALS

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Cost of (system) parts and purchased goods | 46,654 | 32,964 |
| Cost of purchased services | 1,301 | 843 |
| | **47,955** | 33,807 |

Cost of materials includes impairment losses on inventories in the amount of EUR 1,736 thousand (previous year: EUR 1,136 thousand).

## 5. STAFF COSTS AND EMPLOYEES

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| **Wages and salaries** | | |
| Expenses for wages | 37,113 | 34,686 |
| Other | 963 | 1,051 |
| | **38,076** | 35,737 |
| | | |
| **Social security costs and pension costs** | | |
| Employer's contribution to social security | 5,786 | 5,719 |
| Pension costs | 251 | 249 |
| Employer's liability insurance association | 181 | 192 |
| | **6,218** | 6,160 |
| | **44,294** | 41,897 |

There were ongoing pension payments of EUR 17 thousand (previous year: EUR 17 thousand) arising from pension obligations in the 2018 financial year (also see note 17).

The workforce is distributed as follows:

| | as of reporting date | | annual average | |
|---|---|---|---|---|
| in EUR thousand | **12/31/2018** | 12/31/2017 | **2018** | 2017 |
| Production | 158 | 163 | 163 | 164 |
| Sales | 120 | 120 | 120 | 125 |
| Development | 141 | 155 | 147 | 157 |
| Service | 100 | 97 | 98 | 96 |
| Administration | 136 | 148 | 143 | 148 |
| | **655** | 683 | **671** | 690 |

## 6. DEPRECIATION, AMORTIZATION AND IMPAIRMENT LOSSES

Depreciation, amortization and impairment losses on non-current assets are shown in the statement of changes in non-current assets (note 10.)

## 7. OTHER OPERATING EXPENSES

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Travel, meals/entertainment | 3,034 | 3,100 |
| Advertising and sales expenses | 2,186 | 2,257 |
| Third-party work | 2,457 | 2,202 |
| Rent, ancillary rental costs, leases, land and building costs | 2,119 | 2,151 |
| Consumables, Development and Purchased Development Services | 1,289 | 2,078 |
| Repairs, maintenance, operating materials | 1,520 | 1,624 |
| Exchange rate losses | 1,289 | 1,492 |
| Legal and consulting costs | 1,500 | 1,345 |
| Sales commissions | 471 | 1,015 |
| Insurance, contributions, duties | 781 | 885 |
| Vehicle costs | 704 | 692 |
| Trade fair costs | 617 | 629 |
| Expenses for warranties | 281 | 602 |
| Telephone, postage, fax | 527 | 611 |
| Voluntary benefits, training and further education | 529 | 491 |
| Investor relations | 474 | 321 |
| Financial statements preparation, publication, auditing costs | 295 | 292 |
| Bank charges | 181 | 261 |
| Office supplies, books, software | 155 | 190 |
| Supervisory Board remuneration incl. reimbursement of expenses | 164 | 165 |
| Addition to allowance on receivables and bad debts | 170 | 86 |
| Other | 938 | 843 |
| | **21,681** | 23,332 |

In 2018, total research and development costs or the effect on the income statement were EUR 11,672 thousand (previous year: EUR 11,145 thousand), besides EUR 2,846 thousand for materials and other costs (previous year: EUR 3,156 thousand), they also contain EUR 8,826 thousand (previous year: EUR 7,989 thousand) in additional costs for staff as well as depreciation, amortization and impairment losses, among other things.

## 8. NET FINANCIAL INCOME/EXPENSE

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| **Finance income** | | |
| Other interest and similar income | 5 | 4 |
| **Finance costs** | | |
| Interest and similar expenses | −855 | −945 |
| | **−850** | −941 |

The other interest income arose from overnight and time deposits totaling EUR 5 thousand (previous year: EUR 4 thousand). At EUR 826 thousand (previous year: EUR 945 thousand), the other interest expense was incurred in connection with long-term loans as well as short-term money market loans.

Other borrowing costs are recognized as an expense in the period in which they are incurred.

## 9. INCOME TAXES

Actual and deferred taxes are reported in the income statement as tax expense or tax income unless they affect items recognized directly in equity. In this case, the taxes are recognized directly in equity.

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Corporate income tax and solidarity surcharge | 1,053 | 1,021 |
| Trade tax | 276 | 35 |
| | **1,329** | 1,056 |
| of which related to prior period | 172 | 7 |
| Deferred taxes | −3,396 | 805 |
| | **−2,067** | 1,861 |

The German entities of the LPKF Group are subject to trade tax of 15.1% or 15.4%, depending on the applicable trade tax assessment rate. As in the previous year, a corporate income tax rate of 15.0% plus a solidarity surcharge of 5.5% on corporate income tax applies. Foreign income taxes are calculated on the basis of the laws and regulations applicable in the individual countries. The income tax rates applicable to the foreign entities vary from 11.0% to 33.8% for deferred taxes (previous year: 16.5% to 25.00%) and 11.0% to 33.8% for current taxes (previous year: 16.5% to 39.0%).

The corporate tax rates applicable in the respective countries were used to calculate the deferred tax assets and tax liabilities in connection with the preparation of the consolidated financial statements.

Reconciliation of estimated and current tax expense:

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Consolidated profit/loss before income taxes | 5,974 | 3,011 |
| Anticipated tax expense 30.8% (previous year: 30.0%) | 1,840 | 903 |
| Effect of different tax rates | −284 | −127 |
| Effect from unrecognized deferred tax assets | −3,652 | 1,062 |
| Effects of legal tax rate changes | 6 | 90 |
| Tax-free income | −154 | −201 |
| Trade tax additions and deductions | 18 | 22 |
| Tax effect of non-deductible operating expenses | 91 | 121 |
| Prior-period tax effects | 78 | −7 |
| Other differences | −10 | −2 |
| **Effective tax expense -34.6% (previous year: 61.8%)** | **−2,067** | 1,861 |

The tax rate applied for the reconciliation presented above corresponds to the corporate tax rate of 30.8% (previous year: 30.0%) that is to be paid on taxable profits by the Company in Germany in accordance with German tax law.

The effect from unrecognized deferred tax assets is deferred tax assets on tax-loss carry-forwards and temporary difference arising from the non-recognition of EUR 265 thousand (previous year EUR 996 thousand) and derecognition of previously capitalized benefits of EUR 0 thousand (previous year EUR 68 thousand) and the opposite effect as a result of the use of not previously recognized tax losses being carried forward and temporary differences of EUR 29 thousand (previous year EUR 2 thousand) and the reinstatement of tax losses carried forward of EUR 3,889 thousand (previous year EUR 0 thousand).

## H. CONSOLIDATED STATEMENT OF FINANCIAL POSITION

# ASSETS

### 10. NON-CURRENT ASSETS

The following statement of changes in non-current assets shows the changes in the individual categories:

| | Purchasing/Manufacturing Costs | | | | | |
|---|---|---|---|---|---|---|
| in EUR thousand | Balance on 1/1/2018 | Currency differences | Addition | Reclassification | Disposal | **Balance on 12/31/2018** |
| **Intangible Net Assets** | | | | | | |
| Goodwill | 74 | 0 | 0 | 0 | 0 | 74 |
| Development costs | 39,202 | 0 | 3,895 | 0 | 0 | 43,097 |
| Other intangible assets | 11,414 | 0 | 73 | 0 | 8 | 11,479 |
| | 50,690 | 0 | 3,968 | 0 | 8 | **54,650** |
| **Property, Plant and Equipment** | | | | | | |
| Land, similar rights and buildings | 49,682 | 108 | 386 | 0 | 6 | 50,170 |
| Technical equipment | 11,865 | 18 | 1,003 | 0 | 398 | 12,488 |
| Other equipment, operating and office equipment | 14,153 | 10 | 369 | 0 | 245 | 14,287 |
| Advances paid and construction in progress | 0 | 0 | 0 | 0 | 0 | 0 |
| | 75,700 | 136 | 1,758 | 0 | 649 | **76,945** |
| | 126,390 | 136 | 5,726 | 0 | 657 | **131,595** |

| Depreciation, Amortization and Impairment Losses | | | | | Residual Carrying Amounts | |
|---|---|---|---|---|---|---|
| Balance on 1/1/2018 | Currency differences | Addition | Disposal | Balance on 12/31/2018 | Balance on 12/31/2018 | Previous year |
| | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 74 | 74 |
| 25,661 | 0 | 3,661 | 0 | 29,322 | 13,775 | 13,541 |
| 9,588 | 0 | 537 | 8 | 10,117 | 1,362 | 1,826 |
| 35,249 | 0 | 4,198 | 8 | 39,439 | 15,211 | 15,441 |
| | | | | | | |
| 11,040 | 20 | 1,341 | 0 | 12,401 | 37,769 | 38,642 |
| 8,006 | 12 | 1,306 | 305 | 9,019 | 3,469 | 3,859 |
| 10,198 | 6 | 1,208 | 209 | 11,203 | 3,084 | 3,955 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29,244 | 38 | 3,855 | 514 | 32,623 | 44,322 | 46,456 |
| 64,493 | 38 | 8,053 | 522 | 72,062 | 59,533 | 61,897 |

The following illustration shows the corresponding values from the previous year:

| | Purchasing/Manufacturing Costs | | | | | |
|---|---|---|---|---|---|---|
| in EUR thousand | Balance on 1/1/2017 | Currency differences | Addition | Reclassification | Disposal | Balance on 12/31/2017 |
| **Intangible Net Assets** | | | | | | |
| Goodwill | 74 | 0 | 0 | 0 | 0 | 74 |
| Development costs | 35,875 | 0 | 3,327 | 0 | 0 | 39,202 |
| Other intangible assets | 10,949 | −2 | 508 | 0 | 41 | 11,414 |
| | 46,898 | −2 | 3,835 | 0 | 41 | 50,690 |
| **Property, Plant and Equipment** | | | | | | |
| Land, similar rights and buildings | 48,405 | −313 | 123 | 1,467 | 0 | 49,682 |
| Technical equipment | 12,184 | −125 | 796 | 0 | 990 | 11,865 |
| Other equipment, operating and office equipment | 13,853 | −105 | 542 | 0 | 137 | 14,153 |
| Advances paid and construction in progress | 0 | 0 | 1,467 | −1,467 | 0 | 0 |
| | 74,442 | −543 | 2,928 | 0 | 1,127 | 75,700 |
| | 121,340 | −545 | 6,763 | 0 | 1,168 | 126,390 |

**10.1 Intangible non-current assets**

Software

As an intangible non-current asset, purchased software is recognized at cost less straight-line amortization.

Goodwill

As a rule, the goodwill arising from business combinations (capitalized differences arising from acquisition accounting) is assumed to have an unlimited useful life. The carrying amount of the goodwill is compared to the recoverable amount at every reporting date. The goodwill is written down if its carrying amount exceeds its recoverable amount. It is assigned to a cash generating unit for an impairment test. Based on the Welding segment, a detailed planning period of five years and an appropriate rate of return on capitalization are applied. Based on this, there was no impairment loss on goodwill in 2018, just as in the previous year.

| | Depreciation, Amortization and Impairment Losses | | | | | Residual Carrying Amounts | |
|---|---|---|---|---|---|---|---|
| | Balance on 1/1/2017 | Currency differences | Addition | Disposal | Balance on 12/31/2017 | Balance on 12/31/2017 | Previous year |
| | | | | | | | |
| | 0 | 0 | 0 | 0 | 0 | 74 | 74 |
| | 22,609 | 0 | 3,052 | 0 | 25,661 | 13,541 | 13,266 |
| | 9,021 | −1 | 609 | 41 | 9,588 | 1,826 | 1,928 |
| | 31,630 | −1 | 3,661 | 41 | 35,249 | 15,441 | 15,268 |
| | | | | | | | |
| | 9,794 | −51 | 1,297 | 0 | 11,040 | 38,642 | 38,611 |
| | 7,383 | −74 | 1,276 | 579 | 8,006 | 3,859 | 4,801 |
| | 8,924 | −85 | 1,443 | 84 | 10,198 | 3,955 | 4,929 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 26,101 | −210 | 4,016 | 663 | 29,244 | 46,456 | 48,341 |
| | 57,731 | −211 | 7,677 | 704 | 64,493 | 61,897 | 63,609 |

### Development costs

Own capitalized development costs are also reduced over their useful life using straight-line amortization. Borrowing costs are not capitalized, instead they are expensed in the period in which they are incurred. The item is broken down by segment as follows:

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Electronics | 5,728 | 6,804 |
| Development | 2,299 | 2,043 |
| Welding | 3,273 | 3,219 |
| Solar | 2,475 | 1,475 |
| | **13,775** | 13,541 |

Both the residual carrying amounts and the useful lives of the intangible assets are tested for impairment, at a minimum, as of the end of every financial year. Pursuant to IAS 36, intangible assets are written down if the recoverable amount of the respective asset has dropped below its carrying amount. Capitalized development costs not yet available for use are tested for impairment annually.

Reviews to determine whether write-ups are required for intangible assets written down in the past are conducted as of every reporting date; this does not concern the goodwill. No write-ups were necessary during the reporting year.

For software and development costs a useful life of 3 years was assumed as planned.

**10.2 Property, plant and equipment**

Property, plant and equipment are measured at cost less accumulated straight-line depreciation. Borrowing costs are not capitalized, instead they are expensed in the period in which they are incurred. Land is not depreciated. The residual carrying amounts and the useful lives of each item of property, plant and equipment are tested for impairment, at a minimum, as of the end of every financial year. Property, plant and equipment is tested for impairment if certain events or changes in circumstances indicate that the given carrying amount may no longer be recoverable.

Property, plant and equipment is written down in accordance with IAS 36 if the recoverable amount of the respective asset has dropped below its carrying amount. The recoverable amount is the higher of its value in use and fair value less costs to sell. Corresponding write-ups are made if the reasons for an earlier write-down no longer apply.

Production costs cover the costs of materials and related overheads as well as the manufacturing costs and related overheads.

They are deemed to have the following useful lives:

| | Years |
|---|---|
| Buildings | 33 or 25 |
| External facilities | 10 |
| Technical equipment | 3–10 |
| Other equipment, operating and office equipment | 3–10 |

Bank loans totaling EUR 9,595 thousand (previous year: EUR 11,889 thousand) are secured by land and buildings.

Leases are classified as finance leases when substantially all of the risks and rewards of ownership are transferred to the lessee under the terms of the lease. All of the other leases are classified as operating leases.

At the inception of finance leases, the relevant assets are capitalized at the lower of the fair value of the leased property and the present value of the minimum lease payments and depreciated over their expected useful lives, analogous to the treatment of comparable own assets, or over the term of the contract, whichever is shorter. At this time, no assets have been recognized as finance leases.

## 11. INVENTORIES

Inventories are recognized at the lower of cost and net realizable value at the reporting date.

The costs of conversion of inventories include costs directly related to the units of production (such as production costs and directly attributable material costs). They also include a systematic allocation of fixed and variable production overheads that are incurred in converting materials into finished goods. Borrowing costs are not capitalized, instead they are expensed in the period in which they are incurred. Inventories are measured using the weighted average cost formula. Inventories were written down below cost to their net realizable value and scrapped by EUR 1,736 thousand (previous year: EUR 1,136 thousand).

Some inventories are subject to customary collateral such as reservations of title.

## 12. TRADE RECEIVABLES

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Nominal amount of receivables | 31,081 | 19,705 |
| Specific valuation allowances incl. currency losses | –217 | –197 |
| Receivables value adjustment as per IFRS 9 | –120 | 0 |
| **Receivables after valuation allowances, discounts and currency losses** | **30,744** | 19,508 |

Trade receivables are measured at fair value on addition and subsequently at amortized cost using the effective interest rate method less impairment losses. An impairment of trade receivables is recognized if there is objective evidence that a receivable may not be fully recoverable on becoming due. The amount of the impairment is measured as the difference between the carrying amount of the receivable and the present value of the estimated future cash flows from this receivable, discounted at the effective interest rate. Impairment losses are recognized directly in equity and shown in an impairment loss item under trade receivables. Trade receivables are derecognized upon offsetting against previously recognized impairment losses if they are unrecoverable, e.g. if the given debtor is insolvent. Items recognized in foreign currencies are measured at the average exchange rate as of the reporting date.

Value adjustments as per IFRS 9 deal with trade receivable value adjustments.

The residual carrying amount of the trade receivables is EUR 200 thousand (previous year: EUR 107 thousand) and concerns receivables with remaining maturities of more than one year.

There is no indication that the recoverability of receivables has suffered if they are neither past due nor impaired.

VALUATION ALLOWANCES RECOGNIZED ON TRADE RECEIVABLES AND BORROWINGS

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| **Balance on 12/31** | **197** | 670 |
| Changes via initial application of IFRS 9 | 105 | 0 |
| **Balance on 1/1** | **302** | 670 |
| + Additions | 169 | 27 |
| – Reversals (value adjustments not required) | 143 | 193 |
| – Uses (value adjustments required) | 6 | 307 |
| +/– Changes via IFRS 9 | 15 | 0 |
| +/– Currency differences (foreign currency receivables) | 0 | 0 |
| **Balance on 12/31** | **337** | 197 |

There were no proceeds from derecognized receivables in the 2018 financial year (previous year: EUR 0 thousand).

## 13. OTHER NET ASSETS AND INCOME TAX RECEIVABLES

With the exception of derivatives, the other assets and current tax receivables are measured at cost. Derivatives are measured at their fair value, non-current tax receivables at the present value of the future rights to reimbursement.

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Input tax receivables | 2,099 | 1,707 |
| Income tax receivables | 354 | 198 |
| Deferred income | 508 | 493 |
| Other | 1,076 | 2,160 |
| **Total** | **4,037** | 4,558 |

Rights to reimbursement of corporate income and trade taxes are reported in tax receivables.

## 14. CASH AND CASH EQUIVALENTS

Cash and cash equivalents consist primarily of bank balances and are reported at their nominal value. Cash and cash equivalents in foreign currencies are translated at the respective reporting date exchange rate.

## 15. DEFERRED TAXES

Deferred taxes are determined using the liability method pursuant to IAS 12. Accordingly, deferred taxes are recognized for all temporary differences between the tax base of the assets and liabilities and their carrying amounts in the consolidated statement of financial position. Deferred tax assets are recognized only if it is probable that adequate earnings will be available in future periods to offset the tax benefits. Income tax liabilities are netted against income tax receivables within the same fiscal territory if maturity and type are matched.

The income taxes are calculated in accordance with applicable laws and regulations.

The capitalized deferred tax assets encompass deferred taxes mainly on loss carryforwards and intercompany profits. The deferred tax liabilities largely concern capitalized development costs. The deferred taxes consist of the following:

### DEFERRED TAX ASSETS

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Tax loss carryforwards | 6,974 | 3,660 |
| Intangible net assets | 165 | 214 |
| Property, plant and equipment | 453 | 0 |
| Trade receivables | 32 | 0 |
| Provisions | 367 | 251 |
| Elimination of intercompany profits and other deductible temporary differences | 1,160 | 1,296 |
| Other liabilities | 368 | 0 |
| Other | 0 | 24 |
| Offsetting with deferred tax liabilities | –4,465 | –3,714 |
| **Total** | **5,054** | 1,731 |

### DEFERRED TAX LIABILITIES

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Capitalized development costs | 4,135 | 4,029 |
| Property, plant and equipment | 441 | 62 |
| Trade receivables | 92 | 188 |
| Other | 0 | 3 |
| Offsetting with deferred tax assets | –4,465 | –3,714 |
| **Total** | **203** | 568 |

EUR 3,768 thousand (previous year: EUR 1,810 thousand) in deferred tax assets and EUR 964 thousand (previous year: EUR 192 thousand) in deferred tax liabilities will be realized within the next twelve months.

For entities which in the reporting period or in the previous year made a tax loss, deferred tax assets in the amount of EUR 3,958 thousand (previous year: EUR 1,058 thousand) are recognized because planning assumes the achievement of taxable profits. Since the restructuring measures in these regions have been largely completed, we once again expect growth and positive earnings going forward.

The amount for tax losses not yet used and temporary differences for which no deferred tax assets were recognized in the statement of financial position, was EUR 4,270 thousand (previous year: EUR 16,218 thousand). Of these carried forward tax losses, EUR 508 thousand (previous year: EUR 610 thousand) will expire within the next 5 years and EUR 2,143 thousand (previous year: EUR 2,058 thousand) will expire within the next 6 years to 10 years.

No deferred tax liabilities were recognized on EUR 1,068 thousand (previous year: EUR 917 thousand) in temporary differences related to investments in subsidiaries and branches.

# EQUITY AND LIABILITIES

## 16. SUBSCRIBED CAPITAL

**Share capital**
The Company's share capital is EUR 24,496,546.00 and is shared out over 24,496,546 no-par value ordinary bearer shares (unit shares) with a nominal value of EUR 1.00 each.

The capital reserves comprise only a capital reserve pursuant to Section 272 (2) no. 1 German Commercial Code.

There is no ban on dividend distributions with respect to net retained profits, since sufficient revenue reserves are available.

**Authorized capital**
With the resolution adopted by the Annual General Meeting on 31 May 2018, the Management Board is authorized to increase the share capital once or repeatedly until 30 May 2023 with the approval of the Supervisory Board by up to a total of EUR 5,567,397.00 by issuing up to 5,567,397 new no-par value bearer shares in return for contributions in cash or in kind (authorized capital).

Shareholders shall generally be granted a subscription right in that connection. The shares could also be taken on by one or more banks or companies determined by the Management Board as defined in Section 186(5) sentence 1 of the German Stock Corporation Act with a commitment to offer them to shareholders for subscription.

However, the Management Board is authorized with the approval of the Supervisory Board to disapply the pre-emptive rights of shareholders

- to exclude fractional amounts from shareholders' pre-emptive rights;

- if the new shares are issued in return for cash contributions and the issue price of the new shares is not significantly lower than the stock exchange price of the shares currently listed when the issue price is finally determined. The number of shares issued while thus disapplying shareholders' pre-emptive rights may not exceed a total of 10% of the share capital, neither at the time when this authorization takes effect nor when it is exercised. Other shares that are issued or were sold during the period in which this authorization is in effect while disapplying shareholders' pre-emptive rights in direct or corresponding application of section 186(3) sentence 4 of the German Stock Corporation Act are to be counted toward this upper limit of 10% of the share capital. Shares that are issued to service option rights and/or conversion rights or conversion obligations from convertible bonds or bonds with warrants or profit participation rights are also to be counted toward this limit if such debt securities or profit participation rights are issued during the period in which this authorization is in effect while disapplying shareholders' pre-emptive rights in corresponding application of section 186(3) sentence 4 of the German Stock Corporation Act;

- if the capital increase is carried out in return for contributions in kind for the purpose of acquiring entities, business divisions, equity investments, other assets related to an intended acquisition or in connection with mergers or for the purpose of acquiring industrial property rights, including copyrights and expertise or rights to use such rights;

- if it is necessary to grant subscription rights for new shares to the bearers or creditors of bonds with warrants and/or convertible bonds or profit participation rights with option rights or conversion rights and/or conversion obligations that were or will be issued by the Company or companies in which the Company holds a direct or indirect 100% interest in the volume to which they would be entitled after exercising the option rights or conversion rights or after conversion obligations are fulfilled;

- if the new shares are issued to individuals who are in an employment relationship with the Company or its affiliated companies. The number of shares issued while disapplying shareholders' pre-emptive rights may not exceed a proportionate interest in the share capital in the total amount of EUR 200,000.00.

In any case, the authorization to disapply shareholders' preemptive rights is limited insofar as after exercising the authorization the sum of shares issued while disapplying shareholders' pre-emptive rights in exchange for contributions in cash or in kind under this authorized capital may not exceed a total of 10% of the share capital, neither at the time that this authorization takes effect nor when it is exercised. The following count toward the aforementioned 10% limit

- treasury shares that are sold during the period in which this authorization is in effect while disapplying shareholders' pre-emptive rights, as well as

- new shares that are to be issued on the basis of convertible bonds or bonds with warrants or profit participation rights issued during the period in which this authorization is in effect while disapplying shareholders' pre-emptive rights, and

- new shares, issued during the period in which this authorization is in effect on the basis of other permitted authorized capital while disapplying shareholders' pre-emptive rights.

The Management Board is authorized with the approval of the Supervisory Board to determine the contents of the share rights, the further details of the capital increase, and the terms and conditions under which the shares are issued, in particular the issue price.

The Supervisory Board is authorized to revise the Articles of Incorporation accordingly after utilization of the authorized capital or the expiration of the period for utilizing the authorized capital.

The Management Board made use of this during the financial year and increased the share capital during the authorization period. On 8/31/2018 the Company's share capital excluding shareholders' pre-emptive rights making partial use of the authorized capital was increased by EUR 2,226,958 through the issuing of 2,226,958 new shares, corresponding to around 10% of the current share capital. On the reporting date the total number of shares was 24,496,546.

**Treasury shares**
The Management Board was authorized by resolution of the Annual General Meeting on 28 May 2015, subject to the Supervisory Board's prior approval, to buy back treasury shares until 27 May 2020 corresponding to up to 10% of the Company's share capital either on the date the resolution was adopted or on the date the authorization is exercised, whichever is higher; to use the treasury shares so acquired for all statutory purposes; and, in particular cases, to disapply shareholders' right to tender or subscribe such shares, respectively, in connection with buybacks and subscriptions.

This authorization was not utilized as of the reporting date.

## 17. PROVISIONS FOR PENSIONS AND SIMILAR OBLIGATIONS

The following obligations are recognized for this item in the consolidated financial statements:

a) Post-employment pension benefits
b) Anniversary payments and benefits similar to pensions

### a) Post-employment pension benefits

Germany has a statutory defined-contribution national pension scheme for employees that pay pensions contingent on income and contributions made. The Company has no benefit obligations other than the payment of its contributions to the statutory pension insurance entity. Some of the Group's employees have also taken out policies with a private insurer or a benevolent fund as part of the Company pension plan and based on a shop agreement. In this case, too, the Company has no other benefit obligations above and beyond the cost of contributions that are reported in current staff costs.

The provisions reported as retirement benefits in the statement of financial position comprise only defined-benefit obligations to former Management Board members of the parent company for which fixed retirement benefits have been stipulated. The plan is financed through payments to a fund and to insurance companies. The promised benefits comprise payments for retirement pensions, disability pensions and widow's and orphan's pensions. Once the age threshold has been attained by reaching the end of the 65th year of life, or if eligibility to receive a disability pension is established prior to reaching the end of the 65th year of life, a commitment is made to pay the beneficiary a monthly pension payment for life. The widow's pension paid to a surviving wife amounts to 60% or 70% of the relevant retirement pension entitlement. The weighted average term of the defined benefit plans is 17.5 years.

There is longevity and interest rate risk with regard to the pension provision. Reinsurance policies were obtained for hedging purposes and pledged to the beneficiaries. The fair value amounts are reported in the offsetting and reconciliation of the excess of plan assets over post-employment benefit liability.

The carrying amount in the statement of financial position of the net liabilities (assets) for defined benefit plans in accordance with IAS 19 corresponds to the present value of the defined benefit obligation (DBO) on the balance sheet date less the fair value of the plan assets. The DBO is calculated annually by an independent actuary using the projected unit credit method. The DBO's present value is determined by discounting the expected future cash out-flows at the interest rate of high-quality corporate bonds. The resulting revaluations (mainly actuarial gains and losses) in connection with the remeasurement of net liabilities and net assets are recognized directly in other comprehensive income (OCI) due to the amendment of IAS 19.

The following amounts were reported in the statement of financial position for defined benefit plans:

| in EUR thousand | 2018 | 2017 |
|---|---|---|
| **Present value of the defined benefit obligation at beginning of period** | **734** | 755 |
| Current service cost | 0 | 0 |
| Interest expense | 12 | 11 |
| Pension payments | −17 | −17 |
| Actuarial gains (−) and losses (+) | −10 | −15 |
| **Present value of the performance-related obligation at end of period** | **719** | 734 |
| **Plan assets** | | |
| Reinsurance coverage | −334 | −312 |
| Securities | −395 | −478 |
| **Deficit (net liability (+))/excess (net asset (−)) shown in the statement of financial position** | **−10** | −56 |

Development of net liabilities/assets:

| in EUR thousand | 2018 |
|---|---|
| **Net assets at beginning of period** | **56** |
| Total amount in the income statement | 1 |
| Total of the revaluations recognized in OCI | −63 |
| Benefit payments | 0 |
| Employer contributions | 16 |
| **Net assets at end of period** | **10** |

All defined benefit plans are covered by plan assets; there are no unfunded plans. The fair value of the plan assets developed as follows:

| in EUR thousand | 2018 | 2017 |
|---|---|---|
| **At beginning of period** | **790** | 751 |
| Interest income from plan assets | 13 | 11 |
| Cost of/income on plan assets without interest income | −73 | 29 |
| Payments from plan assets | −17 | −17 |
| Funded by the employer | 16 | 16 |
| **At end of period** | **729** | 790 |

The plan assets are made up as follows:

| | **2018** | | 2017 | |
|---|---|---|---|---|
| in EUR thousand | Absolute | in % | Absolute | in % |
| Equity securities | 0 | 0% | 0 | 0% |
| Debt securities | 395 | 54% | 478 | 61% |
| Other | 334 | 46% | 312 | 39% |
| **Total** | **729** | **100%** | 790 | 100% |

The debt securities include mixed fund shares that are primarily invested in fixed-income securities. As in the previous year, the plan assets do not contain any financial instruments.

The following amounts were recognized in the income statement:

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Current service cost | 0 | 0 |
| Interest income from plan assets | 13 | 11 |
| Interest expense related to the liability | −12 | −11 |
| **Total effect on earnings in the income statement** | **1** | 0 |

The provisions for pensions were determined based on the following assumptions:

| in % | **2018** | 2017 |
|---|---|---|
| Discount rate as of 12/31 | 1.70 | 1.60 |
| Future salary increases | 0.00 | 0.00 |
| Future pension increases | 1.75 | 1.75 |
| Expected return on plan assets | 1.70 | 1.60 |
| Employee turnover | 0.00 | 0.00 |

The determination of the expected return on the plan assets was based on the estimated return on the assets, taking the changes in the yields of non-current fixed-income instruments into account. The allocations to plans for post-employment benefits and pension payments payable in the financial year ending 31 December 2018 are estimated to total EUR 33 thousand.

The undiscounted pension payments based on the average life expectancy of 17.5 years result in the following maturity analysis:

| **12/31/2018** in EUR thousand | up to 1 year | more than 1 and up to 5 years | more than 5 and up to 10 years | **Total** |
|---|---|---|---|---|
| Retirement benefits | 17 | 51 | 185 | 253 |

Regarding possible changes in the significant actuarial assumptions made, the following sensitivities were determined:

| Basic Values | |
|---|---|
| Discount rate | 1.70 % |
| Pension trend | 1.75 % |
| DBO | 719,057 EUR |

| Sensitivities | Revalued DBO | Change in percent of the DBO |
|---|---|---|
| Discount rate plus 0.5% | 665,293 EUR | −7.48 % |
| Discount rate minus 0.5% | 779,332 EUR | 8.38 % |
| Pension trend plus 0.25% | 740,981 EUR | 3.05 % |
| Pension trend minus 0.25% | 698,052 EUR | −2.92 % |

b) Anniversary payments and benefits similar to pensions

One Group company is obligated to pay its employees a benefit equal to three months of an employee's salary based on the most recently paid salary when employment is terminated due to the employee reaching the maximum age threshold. In addition, the company is required to pay a benefit calculated based on the attainment of a certain number of years of service with the company. The company, which is included in the consolidated financial statements, meets these obligations itself as soon as they become due. These obligations are measured annually by an independent actuary. No plan assets are maintained for this purpose. The amount of the obligation is therefore reported in the statement of financial position under provisions for pensions.

Payments totaling EUR 40 thousand are expected in the following five years.

The amounts recognized in the statement of financial position are comprised as follows:

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| **Present value of the defined benefit obligation at beginning of period** | **329** | 285 |
| Current service cost | 21 | 21 |
| Interest expense | 6 | 5 |
| Benefit payments | −30 | −6 |
| Benefit changes | 0 | 0 |
| Actuarial gains (−) and losses (+) | −59 | 24 |
| **Present value of the performance-related obligation at end of period** | **267** | 329 |

The following amounts were recognized in the income statement:

| in EUR thousand | **2018** | 2017 |
| --- | --- | --- |
| Current service cost | 21 | 21 |
| Interest expense related to the liability | 6 | 5 |
| **Total amount in the income statement** | **27** | 26 |

Regarding possible changes in the significant actuarial assumptions made, the following sensitivities were determined:

| Basic Values | |
| --- | --- |
| Discount rate | 2.31 % |
| Pension trend | 2.00 % |
| DBO | 267,319 EUR |

| Sensitivities | Revalued DBO | Change in percent of the DBO |
| --- | --- | --- |
| Discount rate minus 0.5% | 287,680 EUR | 7.62 % |
| Discount rate plus 0.5% | 248,905 EUR | −6.89 % |
| Salary trend minus 0.5% | 248,800 EUR | −6.93 % |
| Salary trend plus 0.5% | 287,598 EUR | 7.59 % |

## 18. TAX PROVISIONS AND OTHER PROVISIONS

Provisions are recognized for legal or constructive obligations resulting from past events if it is probable that settling the obligation will lead to an outflow of Group resources and that a reliable estimate of the amount of the obligation can be made. Provisions are recognized at their estimated settlement value in accordance with IAS 37.

The tax provisions concern the following:

| in EUR thousand | **2018** | 2017 |
| --- | --- | --- |
| Corporate income tax and solidarity surcharge | 177 | 0 |
| Trade tax | 211 | 0 |
| | **388** | 0 |

Current income tax liabilities for current periods are measured at the amounts that are expected to be paid to the respective tax authorities based on the respective tax rates applicable on the reporting date.

Statement of changes in provisions

| in EUR thousand | Balance as of 1/1/2018 | Drawdown | Currency differences | Reversals | Addition | **Balance as of 12/31/2018** |
|---|---|---|---|---|---|---|
| Pension provisions and similar obligations | 329 | 89 | 0 | 0 | 27 | 267 |
| Tax provisions | 0 | 0 | 0 | 0 | 388 | 388 |
| Bonus | 478 | 441 | 0 | 37 | 1,460 | 1,460 |
| Warranty and guarantee | 2,354 | 1,208 | 2 | 555 | 1,253 | 1,846 |
| Other | 875 | 625 | 0 | 186 | 1,510 | 1,574 |
| **Total** | 4,036 | 2,363 | 2 | 778 | 4,638 | 5,535 |

The provisions for guarantees and warranties cover potential statutory or financial obligations under guarantee and goodwill cases. Other provisions mainly include provisions for severance payments, litigation and share-based payment plans settled in cash in accordance with IFRS 2.

In 2012, a long-term incentive program (LTI) was launched in which a selected group of LPKF Group executives can participate. The beneficiaries are entitled to a long-term bonus. This is paid to the beneficiaries depending on the long-term bonus allotment granted to each individual, the average EBIT margin of the LPKF Group during a four, five or six-year performance period and the performance of LPKF's share price. The program does not stipulate settlement by granting of equity instruments. The first prerequisite for payment of the bonus is an investment in LPKF shares to be made and held throughout the entire duration of the long-term bonus plan. The beneficiaries must also have an unterminated employment contract as of 20 July of the year in which the payment is made.

At plan inception, a preliminary number of phantom stocks corresponding to the allotment value is specified, which represents the starting point for calculating the bonus payment. The final number of phantom stocks is determined at the end of the performance period. The performance period amounts to at least four years, but can be extended to five, or no more than six, years upon request by an individual beneficiary. The final number of virtual shares is determined based on an in-house measure of the Company's success, the EBIT margin. If the target is exceeded or the actual figure falls short of the target, the preliminary number of phantom stocks at the time of the allotment is increased or decreased accordingly. The payment amount is determined by measuring the value of the phantom stocks using the average XETRA closing quote for LPKF shares on the 30 trading days prior to 21 July after the end of the four, five or six-year performance period. The amount of the payment is limited to no more than 300% of the individual allotment value.

Reporting of share-based compensation transactions settled in cash is governed by IFRS 2 "Share-based Payment." The expense expected to arise from the long-term bonus program is estimated at fair value at each reporting date using a Monte Carlo simulation. The expected total expense from the program is distributed pro rata temporis across the time period up to the first possible exercise date. On this basis, the amount of the provision in the Group for financial year 2018 is EUR 3 thousand (previous year: EUR 0 thousand), which comes from tranches six and seven. No provision is made for tranches 2 to 5 due to the resultant performance factors.

The following parameters were used in the option price model (modified Black Scholes (Merton) model) for determining the fair value as of 31 December 2018:

| | 2. Tranche 2013 | 3. Tranche 2014 | 4. Tranche 2015 | 5. Tranche 2016 | 6. Tranche 2017 | 7. Tranche 2018 |
|---|---|---|---|---|---|---|
| Expected volatility | 40% | 40% | 40% | 40% | 40% | 40% |
| Risk-free interest rate | 0.00% p.a. | 0.00% p.a. | 0.00% p.a. | 0.00% p.a. | 0.00% p.a. | 0.00% p.a. |
| Expected remaining maturity | 7 months | 1 year and 7 months | 2 years and 7 months | 3 years and 7 months | 4 years and 7 months | 5 years and 7 months |
| Price of the LPKF share as of 12/30/2018 | EUR 5.52 | EUR 5.52 | EUR 5.52 | EUR 5.52 | EUR 5.52 | EUR 5.52 |
| Initial price of the LPKF share | EUR 12.10 | EUR 15.02 | EUR 8.08 | EUR 6.18 | EUR 9.58 | EUR 7.02 |
| Number of phantom stocks at the allotment date | 3,822 | 4,803 | 10,359 | 11,938 | 7,663 | 5,660 |

Separate plan terms were introduced for the members of the Management Board in 2014. The main difference is the programs' terms, which begin on 1 January of each year for the members of the Management Board instead of on 21 July. The following parameters were used in the option price model (modified Black Scholes (Merton) model) for determining the fair value of the Management Board plan as of 31 December 2018:

| | 1. Tranche 2014 | 2. Tranche 2015 | 3. Tranche 2016 | 4. Tranche 2017 | 5. Tranche 2018 |
|---|---|---|---|---|---|
| Expected volatility | 40% | 40% | 40% | 40% | 40% |
| Risk-free interest rate | 0.00% p.a. | 0.00% p.a. | 0.00% p.a. | 0.00% p.a. | 0.00% p.a. |
| Expected remaining maturity | 0 years | 0 years | 0 years | 0 years | 0 years |
| Price of the LPKF share as of 12/28/2018 | EUR 5.52 | EUR 5.52 | EUR 5.52 | EUR 5.52 | EUR 5.52 |
| Initial price of the LPKF share | EUR 18.25 | EUR 10.97 | EUR 7.72 | EUR 6.69 | EUR 8.79 |
| Number of phantom stocks at the allotment date | 4,110 | 11,395 | 0 | 0 | 8,535 |

Recognition of the expected volatility is based on the historical volatility of the previous two years. The resulting volatility is rounded commercially to full percentage points.

In 2018 the previous Management Board waived in full their claims to the 2014 and 2015 tranches. There are no claims relating to the 2016 and 2017 tranches. The claims to the 2018 tranches were paid in full in a lump-sum on termination of the employment relationship.

The new incentive program for the new Management Board includes the following parameters in the option price model: expected volatility 40%, risk-free interest rate 0%, share price on 12/28/2018 EUR 5.52, number of phantom stocks on the allotment date: 7,954. The recognized accrual for the new incentive program for the new Management Board amounts to EUR 15 thousand.

## 19. LIABILITIES

Upon initial recognition, financial liabilities are measured at fair value after deduction of transaction costs. They are subsequently measured at amortized cost. Any difference between the disbursement amount (after deduction of transaction costs) and the repayment amount is amortized over the term of the loan using the effective interest method in the income statement.

The breakdown of the liabilities by remaining maturities follows from the statement of changes in liabilities below:

### TYPE OF LIABILITY

| in EUR thousand | | **Total amount** | Liabilities with a remaining terms of: up to 1 year | 1 to 5 years | more than 5 years | hedged amounts | Type of security |
|---|---|---|---|---|---|---|---|
| Liabilities to banks | 2018 | 20,047 | 2,603 | 17,199 | 245 | 19,597 | * |
| | 2017 | 40,997 | 20,953 | 18,837 | 1,207 | 40,247 | * |
| Trade payables | 2018 | 6,877 | 6,877 | 0 | 0 | 0 | – |
| | 2017 | 3,227 | 3,227 | 0 | 0 | 0 | – |
| Contract liabilities | 2018 | 12,762 | 12,559 | 203 | 0 | 0 | – |
| | 2017 | 0 | 0 | 0 | 0 | 0 | – |
| Other liabilities | 2018 | 5,059 | 5,059 | 0 | 0 | 0 | – |
| | 2017 | 12,880 | 12,880 | 0 | 0 | 0 | – |
| | 2018 | **31,983** | 14,539 | 17,199 | 245 | 19,597 | – |
| | 2017 | **57,104** | 37,060 | 18,837 | 1,207 | 40,247 | – |

* Land charge, assignment of receivables and security assignment of inventories (from 2017)

The loans are earmarked for financing new construction, purchases of real property, investments to expand capacities, development projects and equipment.

The other liabilities includes advances received in the amount of EUR 11,485 thousand (previous year: EUR 8,426 thousand). It also includes EUR 20 thousand of forward transactions (previous year: net assets from swap and forward transactions in USD to the value of EUR 26 thousand).

## I. OTHER DISCLOSURES

### 20. STATEMENT OF CASH FLOWS

The statement of cash flows is derived from the consolidated financial statements using the indirect method; pursuant to IAS 7, it presents the changes in cash flows broken down by inflows and outflows for operating activities, investing activities and financing activities. Cash comprises cash on hand and demand deposits. Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

RECONCILIATION FOR LIABILITIES FROM FINANCING ACTIVITIES AS PER IAS 7

| | | | Non-cash changes | | | |
|---|---|---|---|---|---|---|
| in EUR thousand | 1/1/2018 | Cash changes | Acquisitions | Currency exchange-related changes | Fair value changes | **12/31/2018** |
| Long-term borrowings | 20,044 | −2,600 | 0 | 0 | 0 | 17,444 |
| Short-term borrowings | 20,953 | −18,350 | 0 | 0 | 0 | 2,603 |
| Lease liabilities | 0 | 0 | 0 | 0 | 0 | 0 |
| Assets held as collateral for long-term borrowings | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | 40,997 | −20,950 | 0 | 0 | 0 | **20,047** |

### 21. EARNINGS PER SHARE

According to IAS 33, basic earnings per share are determined by dividing the consolidated net profit for the year attributable to the shareholders of LPKF Laser & Electronics AG by the weighted number of shares outstanding during the financial year. There are currently no transactions triggering dilution.

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Number of shares, undiluted | 24,496,546 | 22,269,588 |
| Number of shares, diluted | 24,496,546 | 22,269,588 |
| Consolidated net profit/loss (in EUR thousand) | 8,041 | 1,150 |
| Adjusted consolidated profit/loss (in EUR thousand) | 8,041 | 1,150 |
| Basic earnings per share (in EUR) | 0.33 | 0.05 |
| Diluted earnings per share (in EUR) | 0.33 | 0.05 |

### 22. DIVIDEND PER SHARE

The Management Board and the Supervisory Board will propose to the Annual General Meeting on 06 June 2019 that they resolve to carry the net accumulated profit of LPKF Laser & Electronics AG in the amount of EUR 6,158,872.88 for the 2018 financial year (previous year: EUR –204,768.03) forward to new account.

## 23. TRANSACTIONS WITH RELATED PARTIES

Mr. Jörg Bantleon made a loan agreement with LPKF AG with a credit line of EUR 20.0 million at fair market conditions. LPKF AG has not taken up the agreement as yet and has not incurred any expenses for it.

As of the reporting date, LPKF AG had EUR 157 thousand in liabilities to members of the Supervisory Board (previous year: EUR 192 thousand).

Apart from these, there are no other receivables from or liabilities to LPKF Group companies, nor were any payments or benefits granted to related parties. Notes 27 and 28 provide details on the corporate bodies of LPKF AG.

## 24. GERMAN CORPORATE GOVERNANCE CODE

The Declaration of Compliance by the Supervisory Board and the Management Board required under Section 161 German Stock Corporation Act on the application of the recommendations of the Government Commission of the German Corporate Governance Code, as well as the disclosures of any noncompliance with the recommendations, were made available to the shareholders on the **COMPANY'S WEBSITE**.

www.lpkf.com/en/investor-relations/corporate-governance/

## 25. OTHER DISCLOSURES

**Other financial obligations**

Short and mid-term leases for land and buildings are in place for the offices of LPKF (Tianjin) Co. Ltd., LPKF Laser & Electronics K.K., LPKF Laser & Electronics Korea Ltd. and for LPKF SolarQuipment GmbH in Suhl. Furthermore, auto leases are in place at LPKF SolarQuipment GmbH, LPKF WeldingQuipment GmbH and the parent company.

The existing auto leases are classified as operating leases. The lease payments are determined by the term of the given lease and the car's mileage. There are no other provisions or agreements with respect to the extension of maturities or favorable purchasing options. Total future lease payments broken down by maturity are:

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Lease payments included in the net profit/loss for the period | 877 | 350 |
| up to 1 year | 560 | 342 |
| more than 1 year and up to 5 years | 1,253 | 281 |

This also includes short-term rental payments for buildings and offices leases, broken down by maturity as follows:

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| up to 1 year | 234 | 219 |
| more than 1 year and up to 5 years | 961 | 194 |

There are no other significant financial obligations.

**Financial Instruments**

At the start of the reporting period, 01 January 2018, LPKF applied standard IFRS 9 Financial instruments for the first time. IFRS 9 determines the recognition and measurement requirements for financial assets, liabilities and contracts to buy or sell non-financial contracts and replaces IAS 39.

1. Transition and effects of initial application

The change in accounting policy through the initial application of IFRS 9 was performed prospectively on 1/1/2018. Differences that arose due to the transition from IAS 39 to IFRS 9 were recorded under retained earnings as of 1 January.

The business model, within which framework a financial asset is held was determined at the time of the initial application.

As a result of the introduction of IFRS 9, the Group has introduced a separate position in the overall earnings statement for the impairment of financial assets in accordance with IAS 1.

The effects of the initial application of IFRS 9 on the carrying amount of the financial assets as of 1 January 2018 came exclusively from the new requirements to recognize impairments. Previously, the addition of impairments on receivables and bad debts were included in other expenses. The impairment of financial assets will be recorded as a separate item from 01 January 2018.

The initial application of IFRS 9 has caused no other major changes to comparative information.

The initial application of IFRS 9 has had no significant effects on financial liabilities and derivative financial instruments.

The following table explains the transition of the measurement categories from IAS 39 to IFRS 9 and respective value changes:

| in EUR thousand | Measurement category as per IAS 39 (12/31/2017) | Measurement category as per IFRS 9 (1/1/2018) | Carrying amount as per IAS 39 (12/31/2017) | Revaluation | Carrying amount as per IAS 39 (1/1/2018) |
|---|---|---|---|---|---|
| **ASSETS** | | | | | |
| Cash and cash equivalents | LaR | AC | 3,345 | 0 | 3,345 |
| Trade receivables | LaR | AC | 19,508 | −105 | 19,403 |
| Other net assets | LaR | AC | 2,094 | 0 | 2,094 |
| **Derivative financial assets** | | | | | |
| Derivatives – Cash flow hedge | FAHfT | (FVtOCI) | – | – | – |
| Derivatives – Fair value hedge | FAHfT | (FVtPL) | 26 | – | 26 |
| **LIABILITIES AND EQUITY** | | | | | |
| Trade payables | FLAC | AC | 3,227 | 0 | 3,227 |
| Liabilities to banks | FLAC | AC | 40,997 | 0 | 40,997 |
| Other interest-free liabilities | FLAC | AC | 448 | 0 | 448 |

| | | | |
|---|---|---|---|
| Amortized Cost | (AC) | Loans and Receivables | (LaR) |
| Fair Value PL | (FVtPL) | Financial Liabilities Measured at Amortized Cost | (FLAC) |
| Fair Value OCI | (FVtOCI) | Financial Assets Held for Trading | (FAHfT) |
| Financial Liabilities Held for Trading | FLHfT | | |

The changes to the carrying amount at the initial application of IFRS 9 are exclusively due to the change of measurement category.

The initial application of IFRS 9 led to an increased value adjustment in relation to cash and cash equivalents and trade receivables. The increase was recorded as non-impacting in the retained earnings on 1 January 2018.

RECONCILIATION OF VALUE ADJUSTMENT VIA INITIAL APPLICATION OF IFRS 9

| in EUR thousand | Cash and cash equivalents | Trade receivables | Other net assets |
|---|---|---|---|
| Value adjustments as of 12/31/2017 | 0 | 197 | 0 |
| Changes by valuation method | 0 | 0 | 0 |
| Changes by valuation category | 0 | 105 | 0 |
| **Value adjustments as of 1/1/2018** | 0 | 302 | 0 |

## 2. Classification of financial assets and liabilities

The financial instruments reported in the LPKF consolidated statement of financial position as defined in IFRS 9 comprise trade receivables, cash, trade payables as well as certain other assets and liabilities under agreements.

Within the classification of financial assets, IFRS 9 differentiates between debt instruments, equity instruments and derivatives.

The classification of debt instruments, is, on one hand oriented towards the LPKF business model and, on the other hand, towards the characteristics of associated cash flows. The purpose of the LPHF business model is to hold these debts instruments in order to generate contractual cash flows and to collect the nominal value on maturity. The debt instruments correspond to the “holding” business model and are measured at amortized cost in accordance with IFRS 9. The debt instrument cash flow comes from the principal payment. LPKF debt instruments do not contain payment components as they are due in the short-term. Gain and losses are recognized if the debt instrument is written off or an impairment is recognized.

In accordance with IFRS 9, LPKF AG’s consolidated financial statement does not include any equity instruments.

Financial liabilities are measured at fair value plus transaction costs at the start. The subsequent measurement is done through amortized cost using the effective interest method. Gain and losses are recognized in the income statement.

| in EUR thousand | Measurement category as per IFRS 9 | Carrying amount as of 12/31/2018 | Carrying amount as per IFRS 9 | | | Fair Value 12/31/2018 |
|---|---|---|---|---|---|---|
| | | | Amortized cost | Fair value recognized in equity | Fair value through profit or loss | |
| **ASSETS** | | | | | | |
| Cash and cash equivalents | AC | 3,709 | 3,709 | – | – | 3,709 |
| Trade receivables | AC | 30,744 | 30,744 | – | – | 30,744 |
| Other net assets | AC | 3,683 | 3,683 | – | – | 3,683 |
| **Derivative financial assets** | | | | | | |
| Derivatives – Cash flow hedge | (FVtOCI) | – | – | – | – | 0 |
| Derivatives – Fair value hedge | (FVtPL) | – | – | – | – | 0 |
| **LIABILITIES AND EQUITY** | | | | | | |
| Trade payables | AC | 6,877 | 6,877 | – | – | 6,877 |
| Liabilities to banks | AC | 20,047 | 20,047 | – | – | 20,047 |
| Other interest-free liabilities | AC | 142 | 142 | – | – | 142 |
| **Derivative financial liabilities** | | | | | | |
| Derivatives – Cash flow hedge | (FVtOCI) | – | – | – | – | 0 |
| Derivatives – Fair value hedge | (FVtPL) | – | – | – | – | 0 |
| Derivatives – without hedge accounting | (FVtPL) | 20 | – | – | 20 | 20 |

Amortized Cost (AC)
Fair Value PL (FVtPL)
Fair Value OCI (FVtOCI)

| in EUR thousand | Measurement category as per IAS 39 | Carrying amount as of 12/31/2017 | IAS 39 carrying amount: Amortized cost | IAS 39 carrying amount: Fair value recognized in equity | IAS 39 carrying amount: Fair value through profit or loss | Fair Value 12/31/2017 |
|---|---|---|---|---|---|---|
| **ASSETS** | | | | | | |
| Cash and cash equivalents | LaR | 3,345 | 3,345 | – | – | 3,345 |
| Trade receivables | LaR | 19,508 | 19,508 | – | – | 19,508 |
| Other net assets | LaR | 2,094 | 2,094 | – | – | 2,094 |
| **Derivative financial assets** | | | | | | |
| Derivatives | FAHfT | 26 | – | – | 26 | 26 |
| **LIABILITIES AND EQUITY** | | | | | | |
| Trade payables | FLAC | 3,227 | 3,227 | – | – | 3,227 |
| Liabilities to banks | FLAC | 40,997 | 40,997 | – | – | 40,716 |
| Other interest-free liabilities | FLAC | 448 | 448 | – | – | 448 |
| **Derivative financial liabilities** | | | | | | |
| Derivatives | FLHfT | – | – | – | – | – |
| | | | | | | |
| **Of which accumulated by IAS 39 measurement category** | | | | | | |
| Loans and receivables | (LaR) | 24,947 | 24,947 | | | 24,947 |
| Assets held for trading | (FAHfT) | 26 | – | – | 26 | 26 |
| Financial liabilities measured at amortized cost | (FLAC) | 44,672 | 44,672 | – | – | 44,391 |

Because of short remaining maturities, the fair values of cash and cash equivalents, current receivables, trade payables as well as current financial assets and liabilities closely correspond to the respective carrying amounts. The carrying amount of the derivative financial instruments corresponds to their fair value (level 2 of the fair value hierarchy).

There were no financial instruments that had to be classified to level 3 of the fair value hierarchy.

The net gains/losses from financial instruments are as follows:

| in EUR thousand | | **2018** |
|---|---|---|
| Amortized cost | (AC) | 350 |
| Fair value PL | (FVtPL) | –12 |
| Fair value OCI | (FVtOCI) | 12 |
| | | **350** |

Previous year figures:

| in EUR thousand | | 2017 |
|---|---|---|
| Loans and receivables | (LaR) | 6 |
| Available-for-sale financial assets | (AfS) | 0 |
| Assets and liabilities held for trading | (FAHfT) + (FLHfT) | 0 |
| Financial liabilities measured at amortized cost | (FLAC) | 945 |
| | | 951 |

The net gains and losses from financial instruments measured at amortized cost are changes in allowances, gains and losses on disposal, payments received, reversals of write-downs on loans and receivables as well as currency translation.

There are no significant counterparty credit risks by customer group or geographical region. Loans and receivables are securitized in part through credit insurance or bank guarantees (LC).

The maximum default risk for cash and cash equivalents corresponds to the carrying amount. For trade receivables the maximum default risk is 71%.

DESCRIPTION OF THE FINANCIAL ASSETS RECONCILIATION

| in EUR thousand | Carrying value | 12 months ECL (Level 1) | Lifetime ECL – not impaired (Level 2) | Lifetime ECL – impaired (Level 3) | Lifetime ECL – simplified approach | Total ECL |
|---|---|---|---|---|---|---|
| **Cash and cash equivalents** | | | | | | |
| as of 1 January 2018 | 3,345 | 3,345 | | | | 3,345 |
| Currency translation and other differences | | | | | | |
| Changes in cash and cash equivalents | 364 | 364 | | | | |
| Reclassification between levels | | | | | | |
| as of 31 December 2018 | 3,709 | 3,709 | 0 | 0 | 0 | 3,709 |
| **Trade receivables** | | | | | | |
| as of 1 January 2018 | 19,508 | | | | 19,508 | 19,508 |
| Currency translation and other differences | | | | | | |
| Changes in trade receivables | 11,236 | | | | 11,236 | 11,236 |
| Reclassification between levels | | | | | | |
| as of 31 December 2018 | 30,744 | 0 | 0 | 0 | 30,744 | 30,744 |
| **Total** | | | | | | |
| as of 1 January 2018 | 22,853 | 3,345 | 0 | 0 | 19,508 | 22,853 |
| as of 31 December 2018 | 34,453 | 3,709 | 0 | 0 | 30,744 | 34,453 |

There were no significant changes to the carrying amounts of financial instruments due to value adjustments in the 2018 financial year.

**Financial assets maturity breakdown**

TRADE PAYABLES

| in EUR thousand | Carrying amount as of 12/31 | Up to 6 months | 6 months to 1 year | Between 1 year and 5 years | More than 5 years |
|---|---|---|---|---|---|
| 2018 | 6,877 | 6,877 | 0 | 0 | 0 |
| 2017 | 3,227 | 3,227 | 0 | 0 | 0 |

FINANCIAL OBLIGATIONS AND LOANS

| in EUR thousand | Carrying amount as of 12/31 | Up to 6 months | 6 months to 1 year | Between 1 year and 5 years | More than 5 years |
|---|---|---|---|---|---|
| 2018 | 20,047 | 1,303 | 1,300 | 17,199 | 245 |
| 2017 | 40,997 | 19,684 | 1,269 | 18,837 | 1,207 |

OTHER INTEREST-FREE LIABILITIES

| in EUR thousand | Carrying amount as of 12/31 | Up to 6 months | 6 months to 1 year | Between 1 year and 5 years | More than 5 years |
|---|---|---|---|---|---|
| 2018 | 142 | 142 | 0 | 0 | 0 |
| 2017 | 448 | 448 | 0 | 0 | 0 |

DERIVATIVE FINANCIAL INSTRUMENTS

| in EUR thousand | Carrying amount as of 12/31 | Up to 6 months | 6 months to 1 year | Between 1 year and 5 years | More than 5 years |
|---|---|---|---|---|---|
| 2018 | 0 | 0 | 0 | 0 | 0 |
| 2017 | 26 | 26 | 0 | 0 | 0 |

**3. Impairment model financial assets**

a. General approach: Expected Credit Loss (ECL) model

The general approach to the impairment model as per IFRS 9 contains three stages:

Stage 1 (low default risk)

At the point of entry financial instruments are categorized as stage 1. An exception to this is financial instruments that are already impaired at the point of entry. This is not the case at LPKF.

The loss allowance is based on the value of the expected credit risk over the next 12 months. The expected credit risk is based on historic default rates and is adjusted by future-oriented estimates.

Stage 2 (moderate default risk)
If a stage 1 financial instrument is subject to a significant increase in its credit risk then it is reclassified as stage 2. As long as there is no rebuttable presumption, contractually agreed payments that are more than 30 days overdue constitute a significant increase in credit risk.

The loss allowance is based on the value of the expected credit risk over the remaining maturity. The expected credit risk is based on historic default rates and is adjusted by individual expectations.

Stage 3 (impaired)
As soon as there are indications for the impairment of a financial instrument, it is reclassified as stage 3. This is the case as soon as a contractually agreed payment is more than 90 days overdue, provided we have no grounds for recoverability.

With the LPKF Group the general approach to impairment model as per IFRS 9 is used for cash and cash equivalents. There are other net assets contained mainly under taxes that do not come under IFRS 9.

GENERAL APPROACH TO IMPAIRMENT MODEL AS PER IFRS 9

| in EUR thousand | Measurement category as per IFRS 9 | Level 1 Low default risk | Level 2 Moderate default risk | Level 3 Impaired |
|---|---|---|---|---|
| Cash and cash equivalents | AC | 3,709 | 0 | 0 |
| **Total** | | 3,709 | 0 | 0 |

## CASH AND CASH EQUIVALENTS
Cash and cash equivalents consist of cash on hand and bank balances. When determining credit risks, both the historical default rates and the credit worthiness of the financial institution are considered.

Provided there are no significant findings concerning the deterioration of the credit worthiness of a financial institution, cash and cash equivalents are classed as stage 1.

## OTHER NET ASSETS
Other net assets mainly comprise before tax and other earnings related claims that do not come under IFRS 9’s scope of application. Any residual other net assets have short-term due dates and are not significant amounts.

b. Simplified approach
In accordance with IFRS 9, the simplified approach is used for current trade receivables.

Current trade receivables are held primarily for the purpose of collecting the nominal value of the receivables and to balance amortized costs. Due to their short-term maturity, the trade receivables do not contain financing components, which means the effective interest rate is deemed to be zero and the cash flow consists of the payment of the receivable.

SIMPLIFIED APPROACH TO IMPAIRMENT MODEL AS PER IFRS 9

| Days overdue | Default rate in % | Gross value in EUR | Value adjustment in EUR* |
|---|---|---|---|
| Current | 0.20 | 23,192 | 47 |
| 1-30 days overdue | 0.58 | 5,185 | 30 |
| 31-60 days overdue | 1.33 | 770 | 10 |
| 61-90 days overdue | 1.89 | 929 | 18 |
| More than 90 days overdue | 2.32 | 643 | 15 |

* Based on the total duration of recognized loss allowance (gross value x expected loan loss ratio over the total duration)

The default rate of the impairment matrix is based on historic default rates and is adjusted by future-oriented estimates. The historical default rates are updated and the future-oriented estimates are reanalyzed on each reporting date. Currently, LPKF is dealing with an economic downturn in Asia, its most important sales market. Furthermore, there is a risk discount that increases the applied default risk.

**4. Hedging policy and risk management**

The Group uses various derivative financial instruments to hedge future transactions and cash flows. Particularly derivatives such as forwards, options and swaps are used to that end. Special hedge accounting rules may be applied under IFRS 9 if certain conditions are met. The hedging relationship between the hedged item and the hedging instrument must be documented, and its effectiveness must be evidenced. As of 31 December 2018, there were no hedge relationships with hedge accounting.

One of the hedge relationships with hedge accounting (cash flow hedge) designated in 2018 as short-term expired during the reporting year. The change in value of the derivative financial instruments recognized in the quarterly equity of EUR 12 thousand has been reclassified in the income statement due to the discharge of the hedge relationship. The reclassified amount has been accounted for in the statement of changes in equity under “reclassification of cash flow hedge reserve in the income statement” and in the income statement as “fair value changes from cash flow hedges transferred to the income statement”.

Risk management principles

The assets, liabilities and planned transactions of LPKF Laser & Electronics AG are exposed, in particular, to risks from fluctuations in foreign exchange rates and interest rates. The aim of financial risk management is to limit these risks. Depending on the nature of the risk, this primarily involves the use of derivative financial instruments. These instruments are exclusively used for hedging, i.e. they are not used for trading or speculative purposes.

Risk management is handled by the Management Board, which fixes the general guidelines for risk management and determines the relevant procedures. It is implemented by the technical departments and subsidiaries subject to compliance with authorized business guidelines and coordinated by the Group Risk Officer.

The material risks from financial instruments and the attendant risk management system of the LPKF Group are disclosed below:

Currency risks

The currency risks to which the LPKF Group is exposed mainly arise from receivables, liabilities, cash and future transactions in foreign currencies. Assets recognized in currencies with declining exchange rates decline in value. Liabilities reported in currencies with rising exchange rates increase in value. From the Group’s point of view, only the difference between income and expense in a foreign currency is exposed to risk.

As a rule, risks are only hedged if they have an impact on the Group's cash flows. Foreign currency risks that have no impact on the Group's cash flows are not hedged. These include risks from the translation of the assets and liabilities reported in the annual financial statements of foreign subsidiaries into euros, the Group's reporting currency. Most invoices related to operations are written in euros. Sales in North America are invoiced in USD. Cash flows in other foreign currencies are required in some cases.

To the extent possible, the Group pays for its procurement in USD, thus following a natural hedge philosophy. In net terms, however, this does give rise to USD cash inflows. Foreign currency forward contracts or currency options are used to hedge foreign currency inflows contracted for up to twelve months. Foreign currency hedges cannot fully offset the negative effects of the euro's continued strength against the US dollar on the Group's competitive position.

Changes in the fair value of the derivatives used to hedge currency risks that arise from foreign exchange rates and changes in the hedged item in the statement of financial position during the same period are virtually balanced in the income statement.

The disclosure of market risks requires sensitivity analyses pursuant to IFRS 7. They show the effects of hypothetical changes in the relevant risk variables on performance and equity. Currency risks arising from changes in the USD exchange rate have priority for LPKF in this respect. The periodic effects are determined by relating the hypothetical changes in the risk variables to the holdings of financial instruments as of the reporting date. The assumption is that the value of the holdings as of the reporting date is representative for the whole year. Differences from foreign-currency translation of the annual financial statements of foreign subsidiaries into euros, the Group's functional currency, are not taken into account.

The currency sensitivity analysis is based on the following assumptions:

Interest income or expenses associated with financial instruments are either reported directly in the functional currency or translated into the functional currency by way of derivatives. This means that the figures analyzed cannot have material consequences.

Pursuant to IFRS 7, the analysis only shows the effects of exchange rate changes on financial instruments held by the Group as of the reporting date.

If the euro had risen by 10% against the USD dollar, earnings before income taxes would have been reduced by EUR 60 thousand. A 10% decline in the euro would have raised earnings (before income taxes) by EUR 65 thousand.

### Interest rate risks

Interest rates give rise to cash flow risks that affect cash funds. An increase in interest rates by 25 basis points yields a gain of EUR 9 thousand while a decrease in interest rates by 25 basis points yields a loss of EUR 5 thousand. Given low interest rates, the sensitivities are determined using a hypothetical change by 25 basis points. The low interest rate sensitivities relative to cash funds largely stem from low-interest cash funds.

The long-term loans obtained to finance buildings are subject to fixed interest rates.

### Other price risks

LPKF is not exposed to other price risks.

### Liquidity risks

The liquidity risk concerns the risk of not being able to satisfy existing or future payment obligations for lack of cash. This is centrally managed within the LPKF Group. The liquidity risk is minimized through continuous liquidity planning. In addition to existing cash and cash equivalents, credit lines are also available from various banks. The European companies optimized their liquidity peaks by way of cash pooling. All other companies carry out their ongoing cash management locally. LPKF is continually reviewing whether to expand cash pooling to other international companies. If large amounts of funds are required, reviews are performed to determine whether to utilize local financing or financing via LPKF AG. Long-term bank loans were used to finance the buildings in Garbsen, Suhl and Fürth.

### Credit risks

The LPKF Group's operating business and certain of its financing activities expose it to default risks. Receivables from the operating business are monitored on an ongoing basis in decentralized fashion by the segments and subsidiaries. Default risks are accounted for by appropriate allowances.

Trade receivables are also securitized by EUR 272 thousand in payment commitments from banks (letters of credit). This leaves solely the credit risk of the chattel mortgagor. In addition, EUR 8,662 thousand in trade receivables is hedged through credit default insurance.

29% of the trade receivables are securitized and 71% are not.

### Capital management disclosures

The Group's capital management serves to secure the Company's existence as a going concern and pursue opportunities for growth with the aim of continuing to funnel profits to its shareholders and pay other interested parties that to which they are entitled. Maintaining the best possible capital structure to reduce capital costs is another objective. To maintain or modify its capital structure, depending on the given situation the Group adjusts dividend payments to its shareholders, repays capital to its shareholders, issues new shares, or sells assets in order to discharge liabilities. The capital available comprises equity of EUR 77,731 thousand and borrowings of EUR 51,061 thousand.

## 26. DISCLOSURES PURSUANT TO SECTION 315E GERMAN COMMERCIAL CODE

The requirements of Section 315e German Commercial Code for the preparation of consolidated financial statements according to IFRS, as applicable in the EU, have been fulfilled. In addition to IFRS disclosure obligations, LPKF also publishes details and explanations required under the German Commercial Code.

## 27. DISCLOSURES ON MANAGEMENT BOARD REMUNERATION

The following individuals have been appointed as members of the Company's Management Board:

| | |
|---|---|
| **Dr. Götz M. Bendele**<br>(Chairman since 5/1/2018) | Strategy, Sales, Personnel, Marketing |
| **Christian Witt**<br>(from 9/1/2018) | Finance, Investor Relations, Compliance and Legal Affairs |
| **Dipl.-Oec. Kai Bentz**<br>(until 8/31/2018) | Finance, Controlling, Risk Management, Personnel, Investor Relations, Legal Affairs |
| **Dipl.-Ing. Bernd Lange**<br>(until 12/31/2018) | Research, Development, Patents, Sales, Marketing, Service |
| **Dr.-Ing. Christian Bieniek**<br>(until 8/31/2018) | Production, Purchasing, Logistics, Quality Management, Administration, Organization/IT |

The remuneration of the Management Board is performance-based and consists of a fixed component and variable performance-based components. Details regarding the remuneration system and individual disclosures are presented in the remuneration report, which is part of the Group management report.

The members of the Management Board in office in 2018 were paid total remuneration of EUR 1,383 thousand (2017: EUR 1,106 thousand). EUR 817 thousand of which can be attributed to fixed remuneration components, including incidental benefits that were fully paid out in the 2018 reporting period.

The variable remuneration components account for EUR 481 thousand. EUR 466 thousand of which became due after the consolidated financial statements were approved by the Supervisory Board and will be paid in April 2019.

The remuneration of the Management Board's active members represents short-term benefits as defined in IAS 24.17 (a).

Expenses relating to the setting-up of provisions for share-based payments as defined in IAS 24.17 (e) of EUR 15 thousand were recognized for members of the Management Board in the financial year (previous year: EUR 0 thousand). The fair value at the allotment date was EUR 15 thousand.

Commitments to members of the Management Board upon termination

The Company has not made any pension commitments to the current members of its Management Board. Contracts regarding a company pension were agreed with the members of the Management Board, Kai Bentz and Bernd Lange.

The Company makes contributions toward these contracts. Contributions of EUR 14 thousand (previous year: EUR 14 thousand) were paid in the financial year in connection with post-employment benefits as defined in IAS 24.17 (b). No provisions for pensions are required in this case.

A post-contractual non-compete clause for a period of twelve months after departure is in place for members of the Management Board irrespective of the termination was ordinary or extraordinary.

If the appointment of a member of the Management Board ends early on account of his or her death while in office, the fixed monthly remuneration shall be paid to the heirs for a three-month period.

**Total remuneration of former members of the Management Board**

Provisions were recognized for EUR 573 thousand (previous year: EUR 535 thousand) in pension commitments (pension plan, disability pension and widow's pension) toward former members of the Management Board and their survivors. A total of EUR 17 thousand (previous year: EUR 17 thousand) in pensions was paid to a former member of the Management Board in 2018.

## 28. DISCLOSURES ON SUPERVISORY BOARD REMUNERATION

| | |
|---|---|
| **Dr. Markus Peters**<br>Chairman | Head of Finance and Investment of German Technology AG, Hannover, Germany. |
| **Prof. Dr.-Ing. Erich Barke** | Retired professor of Leibniz University Hannover, Germany<br>formerly: President of Leibniz University, Hannover<br>Member of the Supervisory Board for the following companies:<br>Esso Deutschland GmbH, Hamburg, Germany<br>ExxonMobil Central Europe Holding GmbH, Hamburg, Germany<br>hannoverimpuls GmbH, Hannover, Germany<br>Solvay GmbH, Hannover, Germany (until July 2017) |
| **Dr. Dirk Rothweiler** | CEO of First Sensor AG, Berlin, Germany |

Each member of the Supervisory Board receives fixed basic remuneration for each full financial year of membership on the Supervisory Board that is specified by resolution of the Annual General Meeting and is payable after the end of the financial year. The Chairman of the Supervisory Board receives double and the Deputy Chairman receives one-and-a-half times the amount of the fixed basic remuneration. By resolution of the Annual General Meeting dated 2 June 2016, the fixed basic remuneration of each member of the Supervisory Board was set at EUR 32 thousand effective 1 January 2017.

The remuneration of the Supervisory Board's active members solely concerns short-term benefits as defined in IAS 24.17 (a). Further disclosures regarding the remuneration of the Supervisory Board, particularly individual disclosures, are set forth in the remuneration report, which is part of the Group management report.

## 29. DISCLOSURE OF REPORTED SHAREHOLDINGS IN THE COMPANY

The following entities and persons have notified us that their shareholdings exceeded the 3% threshold in 2018:

Mr. Jörg Bantleon, Germany, notified us that his share of the voting rights in LPKF Laser & Electronics AG, Garbsen, Germany on amounted to 28.95% (representing 7,091,665 voting rights) on 8/31/2017. Of which 18.20% (4,542,484 voting rights) are attributable to German Technology AG in accordance with Section 34 of the German Securities Trading Act.

Luxunion S.A., Leudelange, Luxembourg, notified us that its 5.18% share of the voting rights in LPKF Laser & Electronics AG, Garbsen, Germany, (representing 1,152,739 voting rights) is fully attributable to Luxempart S.A., Leudelange, Luxembourg.

Sicav Lazard Small Caps Euro, Paris, France, notified us that its share of the voting rights in LPKF Laser & Electronics Aktiengesellschaft, Garbsen, Germany on amounted to 4.86% (representing 1,189,700 voting rights) on 8/31/2018.

All other notifications of voting rights in accordance with the German Securities Trading Act concerned cases in which the interest in the voting shares had fallen below the 3% threshold. They have been published at the **COMPANY'S WEBSITE.**

www.lpkf.com/en/investor-relations/publications/#c16190

## 30. AUDITOR FEES INVOICES AT THE FINANCIAL YEAR END

The Company is obligated under the German Commercial Code (Section 314 (1) no. 9) to disclose Group auditor's fees for auditing the annual financial statements invoiced during the financial year:

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Audits of financial statements | 140 | 146 |
| of which prior-period | 8 | 17 |
| Other assurance services | 0 | 5 |
| Other services | 18 | 50 |
| | **158** | 201 |

## 31. EVENTS AFTER THE REPORTING PERIOD

There were no significant events after the end of financial year 2018.

Garbsen, Germany, 20 March 2019

LPKF Laser & Electronics Aktiengesellschaft

Management Board

DR. GÖTZ M. BENDELE

CHRISTIAN WITT

# INDEPENDENT AUDITOR'S REPORT

FOR LPKF LASER & ELECTRONICS AKTIENGESELLSCHAFT, GARBSEN

## REPORT ON REVIEW OF THE CONSOLIDATED FINANCIAL STATEMENT AND GROUP MANAGEMENT REPORT

### AUDIT OPINION

We audited the consolidated financial report for LPKF AG, Garbsen, and its subsidiaries (the Group) – consisting of the consolidated statement of financial position dated 31 December 2018, the consolidated statement of comprehensive income, the consolidated income statement, the consolidated statement of changes in equity and the consolidated cash flow statement for the financial year of 1 January 2018 to 31 December 2018, along with the consolidated notes including a summary of significant accounting policies. In addition to this, we have also audited the Group management report of LPKF Laser & Electronics Aktiengesellschaft, Garbsen, which is summarized with the company management report, for the financial year from 1 January 2018 to 31 December 2018. In accordance with German legal requirements, the content of the Group management report section "Other information" was not examined for our auditor's report.

In our opinion, based on the findings of our audit,

- the attached consolidated financial statement complies with the IFRS, as they are applied within the EU and the supplementary requirements of German law pursuant to Section 315a (1) of the German Commercial Code, in all material respects and, in accordance with these provisions, conveys an accurate representation of the company's results and financial position as at 31 December 2018, as well as the results of operations for the financial year from 1 January 2018 to 31 December 2018 and

- the attached Group management report conveys an overall accurate representation of the Group's situation. This Group management report is consistent with the consolidated financial statement in all material respects, meets the requirements of German regulations, and accurately represents the opportunities and risks of future development. Our audit opinion about the Group management report does not include the content in the Group management report section "Other information".

In accordance with Article 322 (3) Sentence 1 HGB (German Commercial Code), we declare that our audit led to no objections against the correctness of the consolidated financial statement or Group management report.

### BASIS OF THE AUDIT OPINION

We carried out our audit of the consolidated financial statements and Group management report in accordance with Section 317 HGB (German Commercial Code) and the EU regulation on statutory audit of public-interest entities (no. 537/2014; hereinafter "EU Regulation no. 537/2014"), and taking into consideration the German principles for proper auditing determined by the Institut der Wirtschaftsprüfer (Institute of Auditors, IDW). Our responsibility in accordance with these regulations and principles is described in the section of the audit opinion titled "Responsibility of the auditor for auditing of the consolidated financial statement and the Group management report". In accordance with European and German commercial and professional legal requirements, we are independent of the Group companies, and have fulfilled our other German professional duties in compliance with these requirements. In addition to this, and in accordance with Article 10 (2) (f) of EU Regulation no. 537/2014, we declare that we have not provided any prohibited non-audit services in accordance with Article 5 (1) of EU regulation no.

537/2014. We are of the opinion that the audit evidence obtained is sufficient and appropriate to serve as a basis for our audit opinion of the consolidated financial statement and Group management report.

## PARTICULARLY IMPORTANT AUDIT FACTS FOR AUDITING THE CONSOLIDATED FINANCIAL STATEMENT

Particularly important audit facts are facts that, in our considered judgment, are the most important to our auditing of the consolidated financial statement for the financial year from 1 January 2018 to 31 December 2018. These facts are considered in connection with our audit of the consolidated financial statement as a whole, and in the formation of our audit opinion. We do not submit a separate audit opinion of these facts.

In our opinion, the following facts were the most important in our audit:

1. Deferred tax assets on loss carryforwards
2. Accounting for development costs

Our representation of these particularly important audit facts is structured as follows:

1.1 Fact and problem statement
1.2 Audit approach and findings
1.3 Reference to further information

We will present the particularly important audit facts in the following:

**1. Deferred tax assets on loss carryforwards**

### 1.1 Fact and problem statement

The company's consolidated financial statement listed deferred tax assets after offsetting of EUR 5.1 million, of which EUR 7.0 million were for tax loss carryforwards. The accounting of deferred tax assets in temporary differences and tax loss carryforwards are recognized to the extent that the legal representatives consider it probable that taxable profits will be made in the future, against which the deductible temporary differences and tax loss carryforwards can be offset. If there are not sufficient deferred tax liabilities available to do this, projections of the future tax results are determined. Taxable profits stem from the planning calculation prepared by legal representatives, which is derived from the Group's multi-year planning for the years 2019 to 2023. In addition, there are foreign tax loss carryforwards amounting to EUR 3.3 million for which no deferred tax assets have been recognized. It is the opinion of the legal representatives that tax utilization by offsetting with taxable profits is not probable.

In our opinion, the accounting for deferred tax assets was a particularly important part of our audit, as it is to a large extent dependent on estimates and assumptions by the legal representatives, and therefore subject to uncertainties.

### 1.2 Audit approach and findings

As part of our audit, we engaged our internal specialists from the Tax Reporting & Strategy Division to assess the recoverability of tax items and appropriateness of the financial reporting. With their support we assessed, amongst other things, the internal processes and controls for recording of taxes, and the methodological procedures for determination, accounting and valuation of deferred tax. In addition to this, we compared the recoverability of deferred tax assets on deductible temporary differences and tax loss carryforwards based on internal predictions of the future profit situation, with regard to the tax planning calculation prepared by legal representatives based on the multi-year planning for the years 2019 to 2023, and acknowledge the appropriateness of the underlying estimates and assumptions.

Based on our audit procedures, we are satisfied that the estimates and assumptions of the legal representatives are reasonable and sufficiently documented.

1.3 Reference to further information

Information from the company regarding deferred tax assets and tax loss carryforwards are listed in the consolidated notes section "Accounting and valuation methods", as well as in Section H.15".

**2. Accounting for development costs**

2.1 Fact and problem statement

Under intangible assets, LPKF AG's consolidated financial statement lists capitalized development costs amounting to EUR 13.8 million. Combined, the items account for around 11% of the income statement total.

These development costs relate to development projects for prototypes that are to be used throughout their lifetimes for Group production operations. Development costs are capitalized at the point of completion as per the criteria given in IAS 38.57, whereas research costs, on the other hand, are treated as an expense. The capitalized development costs are depreciated on a straight-line basis over their useful lives – up to a maximum of three years – from the time they become usable.

The recoverability and/or validity of the carrying amount and the useful life of the capitalized development costs are reviewed at the end of each financial year. The impairment of capitalized development costs is written down in accordance with IAS 36 if the recoverable amount of the respective asset has dropped below its carrying amount. In addition, capitalized development costs not yet available for use are subject to annual impairment tests.

If impairments have been undertaken previously, reviews to determine whether write-ups are required are conducted as of every reporting date.

The recoverability of development costs is based on the estimates and assumptions of the legal representatives and subject to uncertainty. Furthermore, the capitalized development costs contribute directly to the consolidated net profit due to their direct recording in the consolidated income statement. In our opinion, the development cost items are therefore of particular importance to our audit.

2.2 Audit approach and findings

As part of our audit, we first undertook an audit reconciliation between the capitalized development costs and the consolidated income statement balance. Regarding the initial assessment, we checked the content of the procedures established by LPKF to ensure compliance with the IAS 38.57 criteria and the differentiation of research and development work and to make sure that they are applied consistently.

We handled the allocation of capitalized expenses to existing development projects (additions) that are not yet available for use by means of appropriate auditing procedures. In so doing, we were assured concerning the timeliness of the designated development projects.

Regarding the impairment test, we assessed the calculation of the recoverable amounts including the valuation parameters used. In particular, we reviewed the consideration of and consistency in sales planning, presented as the basis for assessing recoverability.

The procedures established by the legal representatives, including the estimates and assumptions applied to the differentiation, recording and valuation of development costs are comprehensible, sufficiently documented and, in our opinion, generally appropriate for carrying out the accounting and valuation of development costs.

The accounting and valuation methods used by the legal representatives for development costs are, in our opinion, altogether appropriate.

### 2.3 Reference to further information

Information concerning the development costs can be found in the consolidated notes under subheadings G.2 and H.10.1.

## OTHER INFORMATION

The legal representatives are responsible for this information. The other information includes the following sections of the Group management report that were not reviewed by us before the date of this auditor's report:

- the reference to the declaration of corporate governance, in accordance with Sections 289 (f) and 315 (d) HGB (German Commercial Code), in Section 5 of the Group management report

- the reference to the corporate governance report in Section 5 of the Group management report, in accordance with No. 3.10 of the German Corporate Governance Code

- the separate non-financial consolidated report in accordance with Section 315 (b) paragraph 3 HGB (German Commercial Code)

The annual report will be made available to us after the date of the auditor's report.

The separate non-financial consolidated report in accordance with Section 315 (b) paragraph 3 HGB (German Commercial Code) will be made available to us after the date of the auditor's report.

Our auditor's opinion of the consolidated financial statements and the Group management report does not extend to the other information, and thus we submit neither an audit opinion nor any other form of audit conclusion regarding this.

In connection with our audit, we have the responsibility to read the other information and to assess whether the other information

- presents significant discrepancies to the consolidated financial statement, to the Group management report or to knowledge acquired during our audit, or

- otherwise essentially misrepresents the situation.

## RESPONSIBILITY OF THE LEGAL REPRESENTATIVES AND THE SUPERVISORY BOARD FOR THE CONSOLIDATED FINANCIAL STATEMENT AND GROUP MANAGEMENT REPORT

The legal representatives are responsible for the preparation of the consolidated financial statement in compliance with the IFRS, as they are applied within the EU and the supplementary requirements of German law pursuant to Section 315a (1) of the German Commercial Code, in all material respects and that in taking these provisions into account, the consolidated financial statement conveys a realistic representation of the assets, financial position and profit situation of the Group. Furthermore, the legal representatives are responsible for internal controls that they have determined as necessary, in order to make it possible to prepare a consolidated financial statement that is free of material misstatements, whether intentional or unintentional.

In preparing the consolidated financial statement, the legal representatives are responsible for evaluating the ability of the Group to continue its business activity. They are also responsible for stating any facts that are relevant to the ability of the Group to continue its business activity. In addition, they are responsible for accounting for continuation of the business activity on the basis of the accounting policy, unless the intention is to liquidate the Group or to cease business operations or if there is no realistic alternative.

Furthermore, the legal representatives are responsible for preparation of the Group management report, which should convey an overall accurate picture of the Group situation, correspond to the consolidated financial statement in all material respects, comply with the German statutory regulations, and accurately represent the opportunities and risks of future development. In addition to this, the legal representatives are responsible for the provisions and measures (systems) that they have deemed necessary in order to make possible the preparation of a Group management report in accordance with the applicable German legal requirements, and provide sufficient suitable evidence for the statements in the Group management report.

The Supervisory Board is responsible for supervising the accounting processes in the Group that are used for preparation of the consolidated financial statement and the Group management report.

## RESPONSIBILITY OF THE AUDITOR FOR AUDITING OF THE CONSOLIDATED FINANCIAL STATEMENT AND THE GROUP MANAGEMENT REPORT

It is our aim to obtain reasonable assurance that the consolidated financial statement as a whole is free of material misstatements, whether intentional or unintentional, and that the Group management report conveys an overall accurate representation of the situation of the Group, corresponds with the consolidated financial statement in all material respects, complies with the German statutory regulations, and accurately represent the opportunities and risks of future development. We issue an auditor's report that includes our auditor's opinion about the consolidated financial statement and the Group management report.

Reasonable assurance is a high level of assurance, but no guarantee that a duly performed audit carried out in accordance with Section 317 HGB (German Commercial Code) and German principles for proper auditing determined by the Institut der Wirtschaftsprüfer (Institute of Auditors, IDW) will always uncover a material misrepresentation. Misrepresentations can result from infringements or inaccuracies, and are regarded as material if it can sensibly be expected that they, individually or as a whole, may influence economic decisions that are based on this consolidated financial statement and Group management report.

We exercise professional judgment and maintain a critical attitude throughout the audit. In addition to this,

- we identify and evaluate the risks of material misstatements, whether intentional or unintentional, in the consolidated financial statement and Group management report, plan and undertake audit procedures as a reaction to these risks, and obtain audit evidence that is sufficient and suitable to serve as the basis for our audit opinion. The risk that material misrepresentations are not uncovered is higher in the case of infringements than it is for inaccuracies, as infringements may include fraudulent collaboration, falsifications, intentional incompleteness, misleading representation or the suspension of internal controls.

- we gain an understanding of the internal control system that is relevant to auditing of the consolidated financial statement, and of the provisions and measures relevant to auditing the Group management report, so that we can plan audit procedures that are appropriate to the circumstances but do not have the aim of submitting an audit opinion on effectiveness of these systems.

- we evaluate the appropriateness of the accounting methods used by the legal representatives, as well as the reasonableness of estimated values and related information presented by the legal representatives.

- we draw conclusions about the appropriateness of the accounting principles used by the legal representatives with regard to continuation of business activity, as well as, based on the audit evidence obtained, whether there is material uncertainty in connection with events or circumstances that could lead to significant doubts about the ability of the Group to continue its business activity. If we come to the conclusion that a material uncertainty exists, then we are obligated to draw attention to this in the audit opinion of the associated information in the consolidated financial statement and Group management report, or, if these statements are inadequate, to modify our audit opinion. We draw our conclusions based on the audit evidence obtained up to the date of our auditor's report. However, future events or circumstances may lead to the Group no longer being able to continue their business activities.

- we evaluate the overall presentation, structure and content of the consolidated financial statement, including the statements, as well as examining whether the consolidated financial statement presents the underlying business transactions and events in such a way that the consolidated financial statement conveys a realistic representation of the assets, financial position and profit situation of the Group in accordance with the IFRS, as they are applied within the EU and the supplementary requirements of German law pursuant to Section 315a (1) of the German Commercial Code.

- we gather sufficient, appropriate audit evidence for the company's accounting information or business operations with the Group in order to form an audit opinion on the consolidated financial statement and the Group management report. We are responsible for the guidance, monitoring and implementation of the audit of the consolidated financial statement. We bear sole responsibility for our audit opinion.

- we evaluate the consistency of the Group management report with the consolidated financial statement, its legality and its representation of the Group situation.

- we perform audit procedures regarding forward-looking statements made by the legal representatives in the Group management report. Based on sufficient and suitable audit evidence, we closely examine the underlying assumptions that forward-looking statements of the legal representatives are based on, and evaluate the appropriateness of the forward-looking statements derived from these assumptions. We do not submit an independent audit opinion about the future-looking statements or the assumptions that they are based on. There is a considerable and unavoidable risk that future events deviate significantly from the future-looking statements.

We discuss the planned scope and scheduling of the audit, amongst other things, with the persons responsible for monitoring, as well as sharing important audit findings, including any shortcomings of the internal control system that are established as part of our audit.

We make a statement to the persons responsible for monitoring that we have complied with the relevant independence requirements, and discuss with them all relationships and other facts that they can sensibly be expected to be aware of or that have an effect on this independence, as well as the protective measures taken for this purpose.

From the facts that we have discussed with the persons responsible for monitoring, we determine which facts are the most important to the auditing of the consolidated financial statement for the present reporting period, and can therefore be considered important audit facts. We describe these facts in the auditor's report, unless the law or other legal regulations prevent public disclosure of these facts.

## OTHER LEGAL AND STATUTORY REQUIREMENTS

### ADDITIONAL INFORMATION AS PER ARTICLE 10 EU REGULATION NO. 537/2014

We were selected as auditors by the Annual General Meeting on 31 May 2018. We were commissioned by the Supervisory Board on 29 October 2018. We have been working as auditors for LPKF AG, Garbsen, since the financial year of 1999.

We declare that the audit opinion included in this auditor's report is consistent with the additional report to the audit committee, in accordance with Article 11 of the EU Regulation 537/2014 (Auditor's report).

## RESPONSIBLE AUDITOR

The auditor responsible for the audit is Jens Wedekind.

Hannover, 20 March 2019

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

| | |
|---|---|
| Jens Wedekind | p.p. Hanno Karlheim |
| Auditor | Auditor |

# INCOME STATEMENT

## FROM 1 JANUARY TO 31 DECEMBER 2018

| in EUR thousand | **2018** | 2017 |
|---|---|---|
| Revenue | 50,387 | 46,808 |
| Change in inventories of finished and unfinished products | 60 | –1,195 |
| Other own work capitalized | 0 | 0 |
| Other operating income | 2,193 | 5,425 |
| | **52,640** | 51,038 |
| Cost of materials | | |
| Costs for raw, auxiliary and operating materials and for purchased goods | 23,583 | 21,420 |
| Staff costs | | |
| Wages and salaries | 14,461 | 13,227 |
| Social security costs and pension costs (of which pension costs: EUR thsd. 107; previous year: EUR thsd. 115) | 2,267 | 2,295 |
| Depreciation, amortization and impairment losses | | |
| Depreciation and amortization of non-current assets and property, plant and equipment | 2,723 | 2,838 |
| Depreciation of current assets, in as far as it exceeds usual depreciation | 0 | 0 |
| Other operating expenses | 14,310 | 14,296 |
| | **57,344** | 54,076 |
| Income from investments (of which from affiliated companies: EUR thsd. 1,457; previous year: EUR thsd. 3,400) | 1,457 | 3,400 |
| Other interest and similar income (of which from affiliated companies: EUR thsd. 183; previous year: EUR thsd. 153) | 184 | 153 |
| Income from profit transfers | 8,060 | 1,693 |
| Costs of loss absorption | 1,410 | 268 |
| Depreciation of financial assets | 0 | 147 |
| Interest and similar expenses | 678 | 741 |
| Taxes on income and earnings | –3,449 | 11 |
| Earnings after tax | 6,406 | 1,041 |
| Other taxes | 43 | 45 |
| **Net profit** | **6,364** | 996 |
| Retained earnings from the previous year | –205 | –1,201 |
| **Retained profit** | **6,159** | –205 |

# BALANCE SHEET

## AS OF 31 DECEMBER 2018

### ASSETS

| in EUR thousand | 2018 | 2017 |
| --- | --- | --- |
| **NON-CURRENT ASSETS** | | |
| **Intangible assets** | | |
| Software | 750 | 1,161 |
| Usage rights | 24 | 29 |
| | **774** | 1,190 |
| **Property, plant and equipment** | | |
| Land, similar rights and buildings | 16,867 | 17,549 |
| Technical equipment | 1,895 | 2,294 |
| Other equipment, operating and office equipment | 2,373 | 3,150 |
| | **21,135** | 22,993 |
| **Financial assets** | | |
| Shares in affiliated companies | 15,658 | 15,658 |
| | **15,658** | 15,658 |
| | **37,567** | 39,841 |
| **CURRENT ASSETS** | | |
| **Inventories** | | |
| Raw, auxiliary and operating materials | 5,801 | 6,803 |
| Unfinished products | 1,105 | 426 |
| Finished products and goods | 2,396 | 2,886 |
| Advance payments | 12 | 17 |
| | **9,314** | 10,132 |
| **Receivables and other assets** | | |
| Trade receivables (of which with remaining maturities of more than one year: EUR thsd. 200; previous year: EUR thsd. 106) | 9,204 | 4,572 |
| Receivables from affiliated companies | 24,293 | 17,971 |
| Other assets | 1,620 | 1,822 |
| | **35,117** | 24,365 |
| | **44,431** | 34,497 |
| Cash on hand, bank balances and checks | 789 | 168 |
| | **45,220** | 34,665 |
| **Deferred income** | **340** | 234 |
| **Deferred taxes** | **7,816** | 3,797 |
| **Capitalized differences from asset offsetting** | **156** | 255 |
| | **91,099** | 78,792 |

## EQUITY AND LIABILITIES

| in EUR thousand | 2018 | 2017 |
|---|---|---|
| **EQUITY** | | |
| Subscribed capital | 24,497 | 22,270 |
| Capital reserves | 16,160 | 2,186 |
| **Retained earnings** | | |
| Statutory reserve | 41 | 41 |
| Other retained earnings | 11,200 | 11,200 |
| | **11,241** | 11,241 |
| Retained profit | 6,159 | –205 |
| | **58,057** | 35,492 |
| **PROVISIONS** | | |
| Pension provisions | 0 | 0 |
| Tax provisions | 193 | 0 |
| Other provisions | 2,677 | 2,051 |
| | **2,870** | 2,051 |
| **LIABILITIES** | | |
| Liabilities to banks | 13,599 | 32,918 |
| Advances received on orders | 1,734 | 439 |
| Trade payables | 3,249 | 748 |
| Liabilities to affiliated companies | 10,516 | 6,007 |
| Other liabilities | 642 | 990 |
| (of which taxes: EUR thsd. 310; previous year: EUR thsd. 194) | | |
| (of which in conjunction with social security: EUR thsd. 15; previous year: EUR thsd. 6) | | |
| | **29,740** | 41,102 |
| **Deferred taxes** | **432** | 147 |
| | **91,099** | 78,792 |

# GLOSSARY TECHNICAL TERMS

CAPITAL EMPLOYED
Capital employed calculated as fixed assets and working capital.

CDTE (CADMIUMTELLURID)
A highly efficient semiconductor, used in the manufacture of thin glass solar modules, an alternative to CIGS solar cells.

CIGS (ALSO KNOWN AS CIGSSE OR CIS)
CIGS is a thin film technology for solar modules and is an abbreviation for the following elements used: copper, indium, gallium, sulphur and selenium.

EBIT
Earnings before interest and taxes.

EBITDA
Earnings before interest, taxes, depreciation and amortization.

EBIT MARGIN
Ratio of earnings before interest and taxes to revenue.

FTE (FULL-TIME-EQUIVALENT)
Employee capacity. FTE represents the value that the full-time employee produces in an equivalent period of time.

IC (INTEGRATED CIRCUIT)
An IC is an electronic circuit applied to a thin plate of semiconductor material, generally only a few millimeters thick. The semiconductor plate is called a semiconductor chip, or just chip for short.

LDS PROCESS
(LASER DIRECT STRUCTURING)
A laser-based manufacturing process for three-dimensional plastic circuit carriers (MIDs) that can also perform mechanical functions.

LEVERAGE RATIO
Debt ratio (net debt/EBITDA).

LIDE (LASER INDUCED DEEP ETCHING)
Process for precision machining on glass. LIDE enables the production of extremely precise holes and structures at high-speed in glass and includes the TGV process.

LTP PROCESS
(LASER TRANSFER PRINTING)
A process for digital printing of functional pastes as an alternative to screen printing.

NET INDEBTEDNESS
Long-term and current liabilities to banks, less cash and cash equivalents.

PCB
Printed circuit board.

RAPID PROTOTYPING
A process for the chemical manufacture of near-production quality printed circuit board prototypes in laboratories.

ROCE
(RETURN ON CAPITAL EMPLOYED)
The return on capital employed is calculated as EBIT divided by capital employed.

STENCIL LASER
A laser system used for cutting fine and high-precision openings in stainless steel stencils. Stencils are used to print solder paste precisely onto printed circuit boards.

TCV PROCESS
(THROUGH GLASS VIA)
A laser process for putting ultra-fine holes into glass (see LIDE).

WACC
(WEIGHTED AVERAGE COST OF CAPITAL)
Average capital costs.

WAFER
In the semiconductor-photovoltaics industry and world of micromechanics, a wafer is a circular or square disc, about 1mm thick, which is the substrate on which electronic or micromechanical components, or photoelectric layers are manufactured, using different processes.

VALUE ADDED
Value added is calculated as follows:
(ROCE-WACC)*Capital Employed

# FINANCIAL CALENDAR

**3/26/2019**
Publication of 2018 annual financial report

**3/27/2019**
Analyst conference,
IHK (chamber of industry & commerce) Frankfurt/Main

**5/14/2019**
Publication of the 2019 3-month financial report

**6/6/2019**
Annual General Meeting

**8/14/2019**
Publication of 2019 half-year financial report

**11/11/2019**
Publication of the 9-month financial report

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