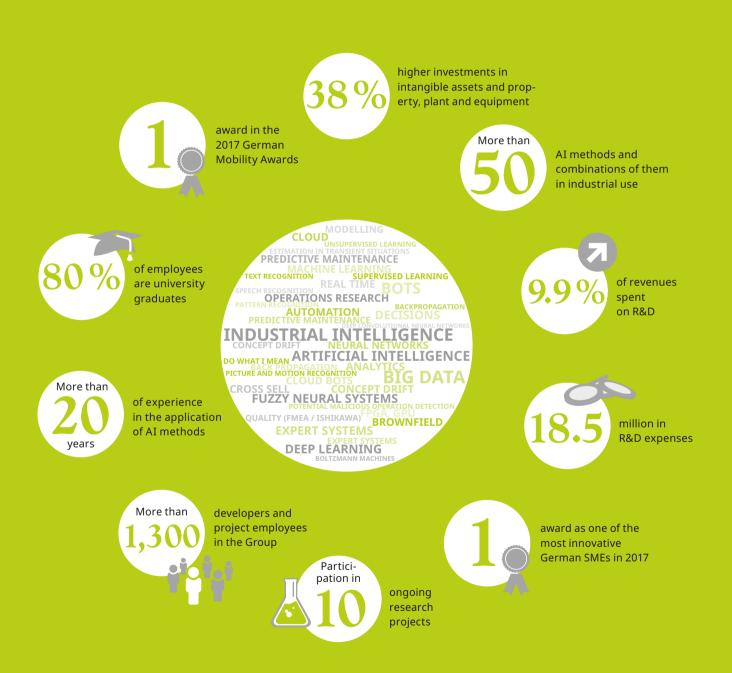
# INDUSTRIAL INTELLIGENCE



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## PSI INDUSTRIAL INTELLIGENCE IN FIGURES



## PSI GROUP IN FIGURES

in EUR million	2017	2016	%
Revenues	186.1	176.9	5.2
Operating result	13.4	11.8	13.6
Earnings before taxes	12.5	11.2	11.6
Group net result	9.5	8.6	10.5
Equity	80.3	75.3	6.6
Equity ratio (in %)	41.4	37.8	9.6
Return on equity (in %)	11.8	11.4	3.5
Investments*	4.4	3.2	37.5
Research & development expenses	18.5	16.8	10.1
Research and development ratio (in %)	9.9	9.5	4.2
New orders	190	182	4.4
Order backlog on 31 December	128	129	- 0.8
Employees at 31 December (number)	1,665	1,619	2.8

\* Company acquisitions, intangible assets, property, plant and equipment

## OUR SEGMENTS

### **Energy Management**



Intelligent solutions for grid operators in the electricity, gas, oil and district

heating sectors. The focus here is on reliable and cost-effective solutions for intelligent grid management, gas and pipeline management and energy trading.

	2017	2016
Revenues*	69,231	69,215
Operating result*	6,030	5,783
Employees	585	564
* In EUR thousand		

### **Production Management**



Software products and solutions for production planning, production control

and logistics. The focus is on optimising the use of resources and cost-effectiveness in the metals industry, machinery/plant engineering, the automotive industry and logistics.

	2017	2016
Revenues*	91,942	84,167
Operating result*	8,617	7,104
Employees	682	639
* In EUR thousand		

### Infrastructure Management



Control system solutions for costeffective operation of infrastructure in

the areas of rail and road transport and public safety. The focus is on operations-control technology and on safety and telematics applications.

	2017	2016
Revenues*	24,923	23,472
Operating result*	- 376	133
Employees	398	416
* In EUR thousand		

## OPTIMISING THE FLOW OF ENERGY AND MATERIAL

PSI is an independent software producer that has been a technological leader in process control systems for energy grid operators and industrial production since 1969. PSI software ensures efficient use of energy, labour and raw materials in energy management (gas grids, electrical grids, sector coupling, energy trading), production management (raw material extraction, metal production, automotive, mechanical engineering, logistics) and infrastructure management (transport and safety).

PSI software products stand for safe, efficient energy supply and optimised production and logistics processes worldwide.

## CONTENTS

- 2 Letter from the Board of Directors
- 6 Report of the Supervisory Board
- 10 The year at a glance
- **12 ENTERING NEW DIMENSIONS WITH AI**
- 14 Industrial Intelligence: the interview
- 16 Industrial Intelligence: solutions for our branches' clients

### 29 THE PSI SHARE

### **33 FINANCIAL STATEMENTS**

- 34 Consolidated management report
- 52 Consolidated financial statements (IFRS)
- 91 Responsibility statement
- 92 Independent auditor's report
- 98 PSI key figures
- 100 Investor relations

Publication details

## INDUSTRIAL INTELLIGENCE

Artificial intelligence (AI) has long since found its way into industrial applications. The advantages of using AI are clear: neural networks show their strengths when it comes to developing solutions to problems on the basis of large quantities of data. Enhanced fuzzy logic supports decision-making processes, particularly in the case of fuzzy information, while also taking account of conflicting objectives. But in industrial use in particular, the different processes deliver their maximum benefit only when they are combined in the right way.

In this annual report, we show you how we are already helping our customers optimise their processes and deal with new market requirements using AI methods. Building on more than 20 years of experience in the industrial application of AI, we use more than 50 processes and combinations of processes to achieve constantly improving results.

### Harald Fuchs (53)

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**Member of the Board of Directors** Responsibilities: Organisation, HR, Finances and Controlling

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### Dr. Harald Schrimpf (53)

**Chairman** Responsibilities: Marketing, Sales, Technology and Investor Relations

### Ladies and gentlemen,

In 2017, your PSI Software AG generated an operating result (EBIT) of EUR 13.4 million, up 13 % on the previous year. Revenues climbed by EUR 9 million (5 %) to EUR 186 million, while new orders increased by EUR 8 million to EUR 190 million. With software for electric mobility, artificial intelligence and Industry 4.0, we will continue to grow and increase our profits in 2018.

We increased EBITDA to a new record level of EUR 17.5 million (previous year: EUR 16.1 million). Depreciation and amortisation of EUR 4.35 million chiefly related to equipment, purchase price allocations and capitalised software development. EBIT includes adjustments for existing projects of around EUR 1 million, for example, for projects at Broner Metals, which was acquired in 2014. Although the associated risks were taken into account and reduced the purchase price, it is no longer economically viable to change them to the new PSI products. After deducting EUR 3.9 million (previous year: EUR 3.3 million) for net finance costs and particularly for higher taxes, the Group net result increased from EUR 8.6 million to EUR 9.5 million. This corresponds to 61 euro cents per share (previous year: 55 euro cents). Our cash flow from operating activities only came to EUR 1.2 million (previous year: EUR 13.3 million), as German utility companies are making considerably lower advance payments in the current regulatory "shadow years". Weak oil prices and uncertainty about embargoes caused delays in new orders and advance payments from Russia. EUR 4.1 million was invested in IT equipment and growth investments (previous year: EUR 2.9 million). Only EUR 1.1 million was spent on financing (previous year with loan repayments: EUR 6.7 million). After deducting EUR 0.8 million for notional foreign exchange losses, cash flow therefore fell to a weak EUR -4.9 million in total (previous year: EUR 4.2 million). Cash and cash equivalents therefore decreased to EUR 38.1 million (previous years: EUR 43.0 million; EUR 38.8 million; EUR 9.3 million; EUR 21.8 million). Pension liabilities, which had leapt to EUR 52 million on an actuarial basis in the zero-interest-rate years, eased back down to EUR 50.5 million as a result of the interest rate reversal. In consultation with the Supervisory Board, the Board of Directors will propose a dividend of 23 euro cents (previous year: 22 euro cents) to the Annual General Meeting. The share price started the year at a relatively low level of EUR 12.20 before rising substantially by more than 50% to EUR 18.51 (enterprise value of EUR 290 million) thanks to a positive newsflow in a generally favourable market.

#### Modernisation, trending topics and growth

PSI software controls and optimises technical and commercial processes from raw material extraction ("upstream"), through basic material production and energy generation ("midstream") to goods production and distribution ("downstream"). In the upstream markets in Russia, the Gulf, China, India and Southeast Asia, we suffered revenue losses of around EUR 20 million

## +8.7%

Energy Management's EBIT increased slightly to 8.7 % of revenues and was overtaken by Production Management (9.4 %).

in recent years due to oil prices, embargoes and political instability. We offset these losses with growth in western industrialised countries. The contraction in upstream business has halted and is reversing in line with the oil price. By contrast, growth in downstream business is accelerating due to waves of modernisation in our core topics such as Industry 4.0, artificial intelligence and the transition in transport and heating.

Despite the embargo on Russia and the regulatory "shadow years", Energy Management kept its revenues stable, meaning that another upturn leading to a higher plateau again can be expected in the next regulatory "photo years". Its EBIT increased slightly to 8.7% of revenues and was overtaken by Production Management (9.4%). The German federal government's green and liquid gas strategy and the replacement of nuclear and coal-fired power plants with fast gas-fired power plants will lead not only to a recovery in gas prices, but also to a rise in new orders again. By contrast, the Electricity division coped with the high level of new orders in the previous years by massively expanding capacity and is set to grow again in 2018 in areas such as intelligent distribution grids, grid management as a service, decentralised grids and electric mobility charging infrastructure. The Infrastructure segment halted the previous years' revenue declines and grew by 6 % again. As a result of write-offs of receivables for existing projects, earnings were negative for the first time at -1.5% of revenues (previous year: 0.6%). The problems relate to projects at PSI Incontrol for electricity grids in South Asia. In the continued weak economic environment, we closed down an extended workbench in India. Initial projects with newly hired software engineers were still demanding. Production Management's products have almost entirely been transferred to the state-of-the-art Group technology platform PJF Client. The economic effects of this huge effort are increasingly materialising, despite follow-up work and training costs. With growth of 9%, we thus increased profits by 21 %. For Industry 4.0-based production of electric vehicles, we now deliver a production-optimising, uniform, modern and highly adaptive "Production Software Suite" from the cloud.

### Software platform and real-time cloud

In 2017, PSI continued its technological and operational transformation from a regional contract developer into an international software product company for controlling and optimising energy and material flows. In the Energy Management segment, all non-real-time products are being transferred to the Group technology platform PJF over a period of several years. Several million lines of code are being completely reprogrammed in Java. Work is facilitated by PSI's Click Design technology, originally developed for customers, with which user interfaces can be designed by mouse click or by touch. This can now also be used on web browsers and on mobile smartphones and tablets as "industrial apps". Because cloud providers do not supply adequate availability and real-time guarantees, PSI has launched high-availability, high-performance and scalable application

## Trust

We see our customers' trust as an obligation to keep vigorously advancing our investments in specialist functions, Group technology, artificial intelligence and a variety of future trends for them.

hosting in Frankfurt for the first customers. We will upgrade this to a real-time cloud. In 2017, initial PSI products were migrated to the PJF application server, which automatically maps our model- and object-oriented Java software to all marketable relational databases. We increased permanent contracts for maintenance, upgrade and cloud/SaaS services from EUR 52.4 million a year to EUR 57.9 million. Income from licences amounted to EUR 12.1 million (previous year: EUR 13.8 million). In 2018, it will be increased not just operationally, but also by modernising contractual and recognition practices.

### 2018: ongoing transformation, growth and rise in profits

The Board of Directors is delighted to be able to thank the shareholders for providing capital and assuming risk in 2017 not only with dividends and warm words, but also with another significant increase in the share value. We see our customers' trust as an obligation to keep vigorously advancing our investments in specialist functions, Group technology, artificial intelligence and a variety of future trends for them. Our thanks and respect go to our employees, who handle the platform, products and projects worldwide with so much creativity and enthusiasm. Despite the strong euro, we anticipate high single-digit growth in 2018, primarily driven by industrial business, and another low double-digit increase in earnings.

Berlin, March 2018

Dr. Harald Schrimpf

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Harald Fuchs



Karsten Trippel Supervisory Board Chairman

### Dear PSI shareholders, dear friends and partners of our company,

As in the previous years, the Supervisory Board worked in trusting cooperation with the Board of Directors in the 2017 financial year. Its work particularly focussed on the Group's current situation in the context of the economic environment, the medium-term corporate planning and the strategic development of the Group. We therefore regularly monitored the Board of Directors' work and provided advice according to the law, the company's Articles of Association and the German Corporate Governance Code. The Board regularly informed us promptly, in writing and orally about the situation of PSI Software AG. On this basis, we discussed business performance and decisions in detail. The Board of Directors fully met its obligations to provide the Supervisory Board with information.

The Supervisory Board ensured that the law, the Articles of Association and the rules of procedure of the Supervisory Board and the Board of Directors were complied with. It passed the resolutions required by the law and the Articles of Association. When business transactions required the Supervisory Board's approval, it discussed them in depth with the Board of Directors before passing a resolution. Cooperation between the Supervisory Board and the Board of Directors was always constructive and purposeful.

The Chairman of the Supervisory Board was also in regular contact with the Board of Directors outside of Supervisory Board meetings and was informed about the business situation and material business transactions; the consultation between him and the two Board of Directors members was ongoing and extensive. The Supervisory Board Chairman shared the material information from each of these exchanges with the other members of the Supervisory Board.

### Main areas of discussion for the Supervisory Board

In the performance of its monitoring function, the Supervisory Board's discussions included the following main topics:

- Development of new orders, revenues and earnings of the PSI Group and the individual business units
- Supervision of measures to reduce risks in Southeast Asia by way of capacity adjustments, the closure of the Chennai location and a stronger focus on software business
- Supervision of further internationalisation in the Energy segment by means of the establishment of a company in Scandinavia and the conclusion of a partnership for the US market
- Ongoing supervision of further steps in the transformation of the Group from a project-based to a more product-based business model
- Ongoing supervision of the migration of further Group activities and products to the new, Group-wide technology platform

One particular focus of the Supervisory Board's work in 2017 was preparing for the Supervisory Board elections at the Annual General Meeting on 16 May 2017. In these elections, Andreas Böwing, Prof. Uwe Hack, Prof. Ulrich Wilhelm Jaroni and Karsten Trippel were elected to the Supervisory Board as shareholder representatives. After nine years of dedicated work, Bernd Haus did not stand for election to the Supervisory Board again. We would like to thank Mr. Haus for the great commitment he has shown over the past years, particularly as Chairman of the Audit Committee.

In view of the growing complexity of the Supervisory Board members' work and the increasing internationality of the PSI Group, the Supervisory Board drew up a proposal for the adjustment of Supervisory Board remuneration that was adopted at the Annual General Meeting on 16 May 2017.

The Supervisory Board's regular discussions and resolutions concerned the annual financial statements, the review of the Group strategy and its implementation, short- and medium-term planning, the ongoing development of operating business, the review and enhancement of the Group risk management system and the audit of its own work. In addition to the financial performance of PSI Software AG and the Group, the Supervisory Board also concerned itself with the development of individual subsidiaries, paying particular attention to their activities abroad. The Supervisory Board was also provided detailed information from the Board of Directors on an ongoing basis regarding the development of the business and financial situation, the risk situation, the market and competitive situation and the personnel situation in these areas. The Supervisory Board held seven ordinary meetings in order to perform its duties in 2017. These included one meeting devoted primarily to the discussion and adoption of the annual financial statements, one strategy meeting, one planning meeting, and one audit meeting. The Supervisory Board was in full attendance at all meetings.

### Work of the Supervisory Board committees

The Supervisory Board has formed two committees.

The Personnel Committee deals with the employment contracts and personnel matters of the Board of Directors. The committee met three times in the financial year with full attendance. Among other things, it dealt with the structure of Board of Directors remuneration. This focused in particular on the vertical comparison between the remuneration of top management and the remuneration of the workforce of PSI as a whole – as required by the German Corporate Governance Code.

The Audit Committee is particularly concerned with issues of accounting and risk management. The committee met four times in 2017, with one meeting serving to prepare the adoption of the annual financial statements and the approval of the consolidated financial statements. Three of the four meetings were attended by all committee members. There was only one meeting that Bernd Haus was unable to attend due to illness.

The activities of the shareholder representatives on the Supervisory Board (a Nominating Committee was not formed because of the low number of Supervisory Board members) focused on preparing for the Supervisory Board elections at the Annual General Meeting in 2017.

### **Corporate governance**

As in previous year, the Board of Directors and the Supervisory Board monitored the Group's compliance with the rules of the German Corporate Governance Code. The Supervisory Board adopted the declaration of compliance according to section 161 of the German Stock Corporation Act on 5 December 2017. The company fulfils the majority of the Code's recommendations. The few deviations are explained in the corporate governance report, which was published in connection with the corporate governance declaration on the website at www.psi.de.

The Supervisory Board examined the efficiency of its own work again at an audit meeting in 2017.

### Composition of the Supervisory Board and the committees

In the 2017 financial year, the Supervisory Board comprised the shareholder representatives Karsten Trippel (Chairman), Prof. Ulrich Wilhelm Jaroni (Deputy Chairman), Andreas Böwing, Prof. Uwe Hack (from 16 May 2017) and Bernd Haus (until 16 May 2017) and the employee representatives Elena Günzler and Uwe Seidel. The Personnel Committee comprised the Supervisory Board members Karsten Trippel as Chairman, Prof. Ulrich Wilhelm Jaroni and Elena Günzler, while the Audit Committee comprised the Supervisory Board members Prof. Uwe Hack (Chairman, from 16 May 2017), Bernd Haus (Chairman, until 16 May 2017), Andreas Böwing (from 16 May 2017), Prof. Ulrich Wilhelm Jaroni, Uwe Seidel and Karsten Trippel.

### Audit of annual and consolidated financial statements

At the Annual General Meeting of PSI Software AG on 16 May 2017, Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft was elected as the auditor of the financial statements. This company audited the annual financial statements, the management report, the consolidated financial statements and the consolidated management report for the financial year from 1 January to 31 December 2017 and issued an unqualified audit opinion in each case.

All Supervisory Board members received the financial statements and management reports, the auditor's reports and the Board of Directors' proposal on the appropriation of net profit after they were compiled and in due time ahead of the meeting convened to approve the annual accounts. After preparatory discussion by the Audit Committee, the Supervisory Board as a whole dealt with these documents at its meeting on 14 March 2018. These meetings were attended by members of the Board of Directors and representatives of the auditor. The latter reported on the audit in general, the audit priorities set, the material findings of the audit and the services that the auditor provided in addition to the audit services, and answered the Supervisory Board members' questions. There were no objections from the Supervisory Board, which therefore acknowledged and approved the results of the audit.

The Supervisory Board examined the consolidated financial statements and Group management report and the annual financial statements and management report for 2017 as well as the results of the audit by the auditor. In accordance with the conclusive findings of these examinations, it raised no objections and adopted the annual financial statements and approved the consolidated financial statements at the Supervisory Board meeting on 14 March 2018. The Supervisory Board agrees with the Board of Directors' proposal on the appropriation of net profit, which stipulates a dividend of EUR 0.23 per entitled share.

In addition, the Supervisory Board also reviewed the Board of Directors' non-financial CSR report for the company and the Group for 2017 and discussed it in depth with the Board of Directors at the meeting on 14 March 2018. There were no objections to be raised, so the Supervisory Board also approved the CSR report.

In 2017, demand in many of PSI's business areas stabilised. The stabilisation of energy and raw material prices, the trend towards electric mobility and the boom in the logistics sector resulted in an upturn in new orders. At the same time, the Group suffered from the continued low economic momentum in many emerging economies, which PSI responded to by adopting a stronger focus on developed industrialised nations and the production and distribution of consumer-related goods. The PSI Group was thus able to increase its new orders, revenues and earnings in 2017 as planned. In 2017, PSI particularly benefited from the technology investments made in recent years, which also form the basis for further increases in earnings. As in previous years, PSI gained important new customers and follow-up orders from existing customers. The successes achieved jointly by the Board of Directors, management and employees against the backdrop of dynamic changes in the target markets deserve recognition and respect. The Supervisory Board therefore thanks everyone involved for the work they have done and for their great commitment.

The Supervisory Board thanks customers and shareholders for the confidence they showed in 2017. PSI will remain a reliable partner for customers in 2018 and work with all its strength on supporting them in the continuing digitalisation of their business processes and the development of new, digital business models. Satisfied reference customers will continue to be the basis for gaining further new customers in the future and continuing PSI's positive development.

Karsten Trippel Supervisory Board Chairman

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Berlin, March 2018

## THE YEAR AT A GLANCE

## World's biggest coal producer grants overall acceptance for PSImining



At the beginning of 2017, the world's biggest coal producer Shendong, part of the Shenhua Group, granted final acceptance for the PSImining mining control system, in which PSI applies Industry 4.0 concepts to raw material extraction for the first time.

## New product combines fuzzy logic with neural networks



With its new product Deep Qualicision, PSI combines the proven decision-making tool Qualicision with the benefits of neural networks, which will make self-adjusting optimisation processes possible in the future.

### Comprehensive IT infrastructure from PSI for the production of innovative electric vehicles



e.GO Mobile AG decided to use a comprehensive PSI solution for its production network's intralogistics and production processes at its site in Aachen.

## PSI among the most innovative German SMEs



In the latest ranking by the magazine WirtschaftsWoche, PSI was in 29th place among the most innovative German SMEs, selected from a total of 3,500 analysed companies.

## GERMAN MOBILITY AWARDS

At the German Mobility Awards, the PSIroads MDS product was recognised as a beacon project for intelligent mobility.



out of a total of 1,665 employees work in export markets.

## **BEST LOGISTICS BRAND 2017**

In 2017, the magazine LOGISTIK HEUTE rated PSI Logistics as one of the best three logistics brands in the category of IT for warehouse management.



of our revenues were spent on research and development in 2017.

## STRATEGIC PARTNERSHIP

PSI has entered into a partnership with Advanced Control Systems, Inc. for the North American energy management systems market.



of the PSI Group's revenues in 2017 were generated with long-term maintenance and upgrade contracts.

## ENTERING NEW DIMENSIONS WITH AI

INTELLIGENT SOLUTIONS FROM PSI PROVIDE INDUSTRIAL-QUALITY ARTIFICIAL INTELLIGENCE

With voice-controlled personal assistant services and other smart products, learning systems have found their way into everyday life. PSI has for many years been using a variety of AI and optimisation methods to optimise energy and material flows.

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## INDUSTRIAL INTELLIGENCE – THE INTERVIEW

Interview with AI expert Dr. Rudolf Felix, Managing Director of PSI FLS Fuzzy Logik & Neuro Systeme GmbH.

### What are the benefits of using artificial intelligence?

**Dr. Felix:** The benefit of using AI methods is that you can enhance systems and solutions with abilities that are otherwise only ascribed to humans. In this way, you can solve issues in business processes that software systems are not always believed capable of handling. For example, neural networks are very good at recognising patterns in large quantities of data. This can be a major benefit if large quantities of data need to be analysed very quickly in business processes. In addition, balancing out conflicts between objectives such as capacity utilisation versus throughput in production optimisation is often no easy task. Systems based on enhanced fuzzy logic that work with qualitative parameters are very good at this. They can also explain the calculated decisions better. Hybrid AI systems can complement one another and lead to even better solutions. Depending on the issue at hand, there are many other AI methods that can also show their benefits.

## What factors need to be considered when using AI in industrial applications?

**Dr. Felix:** As well as in-depth knowledge of all AI methods, it is also important for the developers of AI-based solutions to have problem-solving expertise. This is why at PSI we talk about industrial intelligence, which combines AI method knowledge and industrial process knowledge. When you have both, the benefits of AI solutions are far-reaching.

### What factors characterise the use of AI at PSI?

**Dr. Felix:** With regard to PSI's solutions, we can certainly claim that they possess industrial intelligence. Neural networks have been in use in PSI customers' networks for more than ten years in some cases. Systems based on enhanced fuzzy logic control processes at well-known automotive manufacturers and suppliers on more than 180 production lines worldwide. PSI customers from the metals industry also optimise their processes worldwide using AI scheduling algorithms. AI systems from PSI are used to harmonise processes in bus depots. Maintenance management systems optimise the maintenance plans for electricity grids. All in all, PSI has supplied and supported more than 50 different AI processes.

"One area that holds potential for the future is connecting existing solutions. When individual solutions are combined in interconnected scenarios, this results in global solution scenarios, the benefits of which are plain to see. In this area, I consider PSI to be unique."

## Specifically, what kind of experiences have PSI and its customers had with the use of AI?

**Dr. Felix:** Many positive ones. Particularly in terms of seeing that PSI's industrial intelligence works. Sometimes the processes work in silence, efficiently and inconspicuously. Because the focus is on the solution, not the method, the topic is only now starting to be discussed more intensively, as it is subject to more public attention that it was just a few years ago.

### What is your future vision for the use of AI in PSI solutions?

**Dr. Felix:** One area that definitely holds potential for the future is connecting existing solutions to form overarching solution scenarios. When individual solutions from the areas of automotive, depot management, traffic flow optimisation, maintenance and management of electricity grids are combined in interconnected scenarios, this directly results in global solution scenarios such as concepts for modern mobility, electric mobility or interconnection of production and transport logistics, the benefits of which are plain to see. In this area, I consider PSI to be unique in terms of its potential.



# 90%

# SMART DISTRIBUTIONGRIDS FOR MOREELECTRIC MOBILITY

Using a self-learning algorithm, the Smart Telecontrol Unit developed by PSI transforms local grids into intelligent microgrids. It combines charging management with smart decentralised generation and saves up to 90% of the costs otherwise needed for the grid expansion.

## EFFICIENCY BY MEANS OF INTEGRATED ENERGY

Combining the transition in power, transport and heating is regarded as the key to a successful energy transition

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## Integrated control technology for cross-sector grid optimisation

PSI's control technology software has been used for many years in integrated systems for the joint management of electricity, gas, water and district heating networks. Our products have special functions for optimal feed-in of renewable energy and for integrating charging stations. Neural networks are used here to minimise transmission losses, for example.

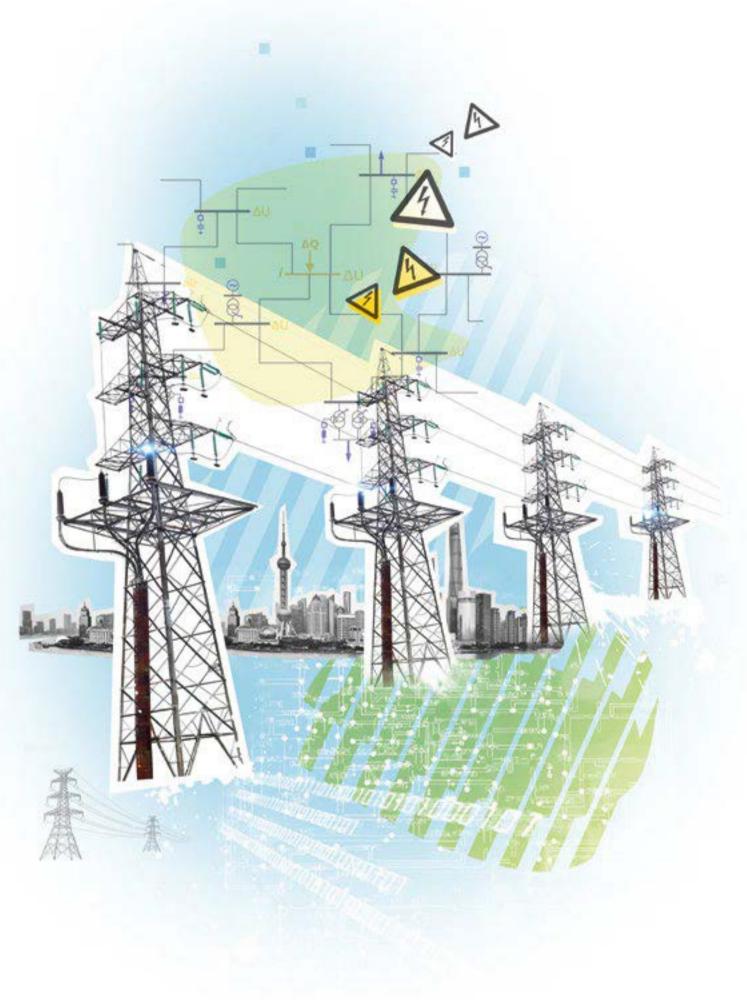
## CONTROL SYSTEMS WITH MULTI-CLIENT CAPABILITY

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### New business potential in grid operation

With multi-client control systems, large grid operators can offer grid management as a new service. On this basis, smaller grid operators can join together to form cooperatives. NEW SERVICE



## INTELLIGENT GRID MANAGEMENT

### Moving towards automated grid management

The SASO system determines forward-looking proposals for rectifying current and anticipated disruptions in the transport network or distribution grid. In the future, SASO can be extended to become a self-learning system acting as a sort of grid autopilot.

## SELF-LEARNING

## SUCCESSFULLY MASTERING DIGITALISATION

Data are the new raw material and the basis for future energy supply

## Big data and data analysis as the foundation for new business models

The digitalisation of the energy transition is being driven both by laws and by new technologies. With analytical and AI methods, PSI helps customers leverage optimisation potential in areas such as energy trading and grid operation and also to develop new business models on this basis – for example, for managing energy purchases by large consumers.

## **REVOLUTION IN VEHICLE PRODUCTIO**

The fuzzy logic optimisation developed by PSI already achieves 8 % higher productivity than conventional lean production. With flexible swarm production based on production islands, an additional 20 % improvement can be achieved.

the state of the s Since 2015, PSI software products have been supporting production planning, manufacturing management and intralogistics in electric vehicle production with innovative Industry 4.0 concepts. In doing so, we combine established software products with innovative optimisation methods such as enhanced fuzzy logic. Production processes with dynamic goals and both certain and uncertain information are thereby improved significantly on the basis of key performance indicators. The benefits include cost savings from an optimised sequence with improved use of materials, balancing out conflicts between objectives, and the ability to react in real-time.

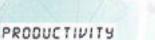


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SURRA PRODUCTION

### PRODUCTIVITY

+8%



+20%

The lean production concept focuses on reducing time, costs and inventories in production, partly by means of a high degree of standardisation. As a result, the concept is highly efficient but also relatively rigid.

When creating sequences in line with the "pearl chain" principle, conflicts between different objectives are balanced out despite the wide range of variants by means of fuzzy-logic-based sequence optimisation, enabling savings of 8 % to 10 % to be achieved. Using Industry 4.0 swarm production with flexible resources and driverless transportation systems instead of rigid production lines, further efficiency gains of up to 20 % can be achieved with corresponding optimisation, planning and management.

## HIGHER PRODUCTIVITY IN THE STEEL INDUSTRY

## Optimising production with KPI-controlled processes

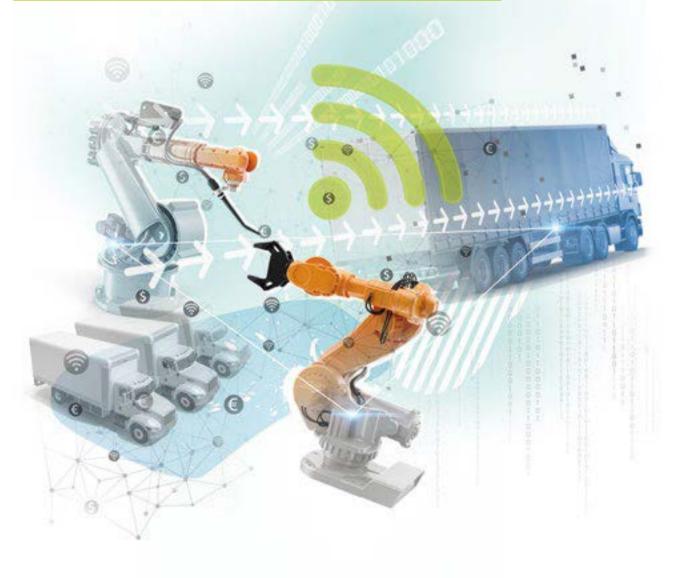
Using combinational methods, the market-leading standard product PSImetals optimises production planning in the steel industry on the basis of dynamic business objectives. This makes it possible to achieve up to 80 % higher adherence to schedules, up to 25 % better reliability, up to 20 % shorter processing times and up to 10 % higher productivity overall.



## New services combining software and IoT

The use of RFID and Internet-of-Things chips opens up new opportunities – for example, with automatic service and usage notifications.

## INDUSTRY 4.0 FOR NEW BUSINESS MODELS IN MECHANICAL ENGINEERING





## **SMART LOGISTICS**

By linking a wide range of combinational methods, the PSIglobal product allows for strategic optimisation of complex logistical networks and global supply chains. This can be done based on data quantities

of any size.

The visualisation and optimisation of global supply flows and production and warehouse facilities offers significant potential for industrial, trading and logistics companies. Using multi-criteria optimisation methods, a favourable balance can be achieved by combining aspects such as transport costs, operating times, location costs, utilisation levels and emissions with strategic objectives.

Users include some of the biggest trading companies, automotive suppliers and logistics service providers. In 2017, PSI enhanced the product with additional analytical methods for calculating and preparing relevant key figures and for a combined analysis and concerted optimisation of production and logistics.



## THE FUTURE OF LOCAL PUBLIC TRANSPORT IS ELECTRIC

Increasing pollution and noise are also forcing local public transport providers to focus on alternative drive technologies in the long term

### Charging management for large bus fleets

As electric mobility increases, charging management will become a growing challenge for transport companies. In contrast to personal electric mobility, operators of large bus fleets already have infrastructure in the form of their depots that can be used for charging the vehicles.

The depot management system developed by PSI, which is already being used successfully by several transport companies, features proven fuelling optimisation. Combined with the smart grid solution offered by PSI's Energy division, this can be extended to become a highly effective solution for charging management and charging optimisation.

## THE PSI SHARE – CREATING LONG-TERM VALUE

### Leading technology creates new opportunities

PSI continuously invests in further development of its technologically leading software products, thereby opening up new business opportunities and efficiency. This improves profitability in the medium term and increases enterprise value.

### Fit for the future thanks to research and development

With its outstanding industry expertise accumulated over more than 45 years and its close cooperation with customers and research organisations, PSI helps advance technological change and prepares technologies for the challenges of the future at an early stage.

### Pioneer in digitalisation, integrated energy and Industry 4.0

PSI has invested at an early stage in future topics such as new, digital business models for energy distribution, integrated energy in the energy transition and decentralised, self-organising manufacturing structures. This enables our customers to achieve digital transformation of their business processes and opens up new growth potential both for them and for us.

### Growth potential from artificial intelligence and updated core technology

In recent years, PSI has made significant investments in core technology, implementation methods and the combination of different methods of artificial intelligence for industrial applications. The focus over the coming years will be on transforming this into revenue and profit growth, thereby increasing enterprise value.

## SHARE PERFORMANCE DURING THE YEAR

### Modest start to the year followed by upward trend in first half of year

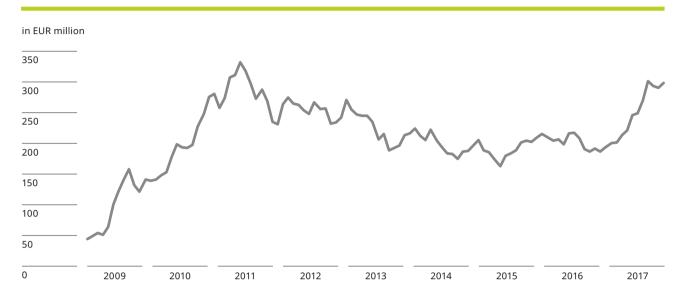
The PSI share started 2017 at a price of EUR 12.20 and initially ranged within a corridor between EUR 11.50 and just under EUR 12.50 in the first two months, briefly falling to its low for the year of EUR 11.50 in mid-January. The share price rose to almost EUR 13 after the publication of the annual financial statements and then to over EUR 14 by the middle of the year following the publication of the figures for the first quarter.

### Substantial share price increase and six-year high in October

Due to the generally good newsflow in the second half of the year, the share price developed very positively, particularly from mid-July onward, and reached its highest level in six years of EUR 19.95 at the end of October. After falling to around EUR 17.30 and tracking sideways in a range between EUR 17.50 and EUR 19, the PSI share finally ended the year at a closing price of EUR 18.51 – up 51.7 % on its closing price from the previous year.



### PSI share price compared with TecDAX



### Market capitalisation of PSI 2009–2017

## Communication focussing on international developments

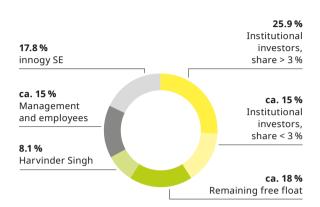
In addition to the ongoing transformation of the PSI Group, the opportunities presented by the e-mobility trend for all three segments of the PSI Group were the main points of interest for investors in 2017. These particularly include the additional challenges for operators of electrical distribution grids, new production methods for electric vehicles and their optimisation with innovative process management software, and the requirements of local public transport arising from increased use of battery-powered buses. Other topics included the opportunities arising from the digitalisation of industrial processes and integrated energy in the German energy market.

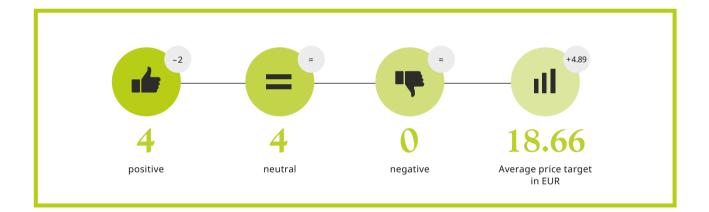
### Intensive dialogue with the capital market

In this challenging environment, we communicated actively and intensively with the capital market again in 2017. We presented PSI at 16 investment conferences and roadshows in Europe and the USA. In addition, we held many discussions in which we explained our long-term strategy of transforming PSI into an international software product provider and demonstrated the opportunities arising for PSI with utilities and industrial companies as a result of continuing digitalisation of business processes.

## ANALYST RECOMMENDATIONS ON THE PSI SHARE 2017

### Shareholder structure on 31 December 2017





### Data on the PSI share

Stock exchanges	Xetra, Frankfurt, Berlin, Stuttgart, Düsseldorf, Hamburg, Hanover, Munich, Tradegate	
Stock exchange segment	Regulated Market, Prime Standard	
Inclusion in indices	Technology All Share, DAXsector Software, DAXsector All Software, DAXsubsector Software, DAXsubsector All Software, Prime All Share, CDAX	
ISIN	DE000A0Z1JH9	
Securities identification number (WKN):	A0Z1JH	
Stock exchange symbol	PSAN	

Key figures on the PSI share		2017	2016
Earnings per share	in EUR	0.61	0.55
Market capitalisation on 31 December	in EUR	290,558,245	191,507,865
High for the year	in EUR	19.95	14.69
Low for the year	in EUR	11.50	10.55
Number of shares on 31 December		15,697,366	15,697,366

# FINANCIAL STATEMENTS

- 34 Consolidated management report
- 35 Basic information on the Group
- 37 Economic report
- 42 Sustainability
- 45 Statutory disclosures
- 47 Supplementary report
- 47 Risk report
- 51 Forecast

## 52 Consolidated financial statements (IFRS)

- 52 Consolidated balance sheet
- 54 Consolidated income statement
- 54 Consolidated comprehensive income statement
- 55 Consolidated cash flow statement
- 56 Consolidated statement of changes in equity
- 56 Consolidated segment reporting
- 58 Development of fixed assets
- 60 Notes to the consolidated financial statements
- 92 Independent auditor's report

98 PSI key figures

100 Investor relations

# CONSOLIDATED MANAGEMENT REPORT

Group revenues 5.2 % above previous year

Further improvement in results of operations

Operating result climbed by 13.6% to EUR 13.4 million

New orders amounted to EUR 190 million, up 4.4 % on the previous year's level

Share of revenues attributable to maintenance expanded

Significant increase of revenues and earnings in the Production Management segment

## **Basic information on the Group**

#### **Business model of the Group**

The core business of the PSI Group consists of process control and information systems for the management of energy and material flows in the following industries:

- utility companies in the electricity, gas, oil and district heating sectors
- industry in the metallurgy, raw material extraction, mechanical and plant engineering, automotive, automotive supply and logistics sectors
- · infrastructure operators in the areas of transport and safety

The Group is accordingly divided into three segments: Energy Management, Production Management and Infrastructure Management. For these economic sectors, PSI develops and sells its own software products and complete systems based on these software products.

In the Energy Management segment, the PSI Group develops control systems for electricity grids, cross-sector control systems, gas and pipeline management systems, and solutions for energy trading, energy distribution, virtual power plants, power plant optimisation and gas industry planning.

In Production Management, PSI has an integrated portfolio of solutions for planning and controlling production processes in raw material extraction, metal production, logistics, mechanical engineering and automotive manufacturing.

The Infrastructure Management segment comprises control system solutions for monitoring and operating infrastructure in the areas of transport and safety.

With more than 1,650 employees, PSI is one of the biggest software producers in Germany. As a specialist in high-quality process control systems, the Group has gained a leading position nationally, as well as internationally in the target export markets, particularly among utility companies and metal producers. The key competitive advantages are the functionality and innovativeness of PSI's products. PSI was established in 1969, making it one of the most experienced German software companies. In Germany, the PSI Group has locations in Berlin, Aachen, Aschaffenburg, Dortmund, Düsseldorf, Essen, Hamburg, Hanover, Karlsruhe, Munich and Stuttgart. Internationally, PSI is represented by subsidiaries and representative offices in Austria, Bahrain, Belgium, Brazil, China, Denmark, India, Japan, Malaysia, Oman, Poland, Russia, Sweden, Switzerland, Thailand, Turkey, the United Kingdom and the USA.

#### Strategy and control system

The central aspects of the Group's strategy are growth, internationalisation and a stronger focus on the software product business. To achieve its strategic goals, the PSI Group focuses on technology leadership and a high pace of development in order to influence trends in the target sectors at an early stage. In some cases, products and technologies are developed in collaboration with customers in pilot projects.

PSI pursues a growth strategy with a particular focus on international business. The main growth driver is exports to markets in Northern and Central Europe and increasingly also in North America. Over the coming years, PSI will endeavour to achieve a further increase in the share of revenues attributable to products, to expand the share attributable to exports, and to step up business in the geographical target markets. This will create economies of scale and therefore improve the conditions for further increases in profitability.

The key performance indicators for achievement of the strategic goals are:

- the ratio of operating result to revenues (EBIT margin) as the main key figure for improvement in the Group's profitability
- the development of revenues as a key figure for the Group's growth rate
- new orders as a significant leading indicator of future revenues growth
- the share of consolidated revenues attributable to licence revenues and maintenance revenues as key figures for PSI's transformation from a service-oriented IT provider to a software product provider

In the non-financial area, the PSI Group has since 2017 been calculating the following key figures to measure its performance with regard to employee commitment and customer loyalty:

- an employee commitment index showing the employees' motivation and loyalty and the extent to which they identify with PSI
- a customer loyalty index that measures the customers' willingness to rely on PSI in the long term and to provide a reference

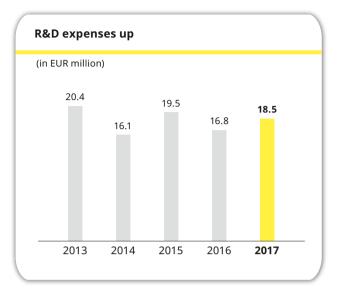
Since 2004, the PSI Group has increased its revenues from EUR 115.2 million to EUR 186.1 million as a result of its strategy focusing on growth and profitability. During this period, the share attributable to international revenues in the Group more than tripled, rising from 13 % to 44 %.

#### **Research and development**

Innovative products and maintaining a technological edge are among the most important competitive advantages in the software market. For this reason, the development of new unique selling points and products plays a key role for the PSI Group. Functionality and modernity are pivotal factors for economic success, as are the use of Group-wide development platforms and the exchange of new functionalities within the Group.

When developing new products, PSI works closely with industry-leading pilot customers. This collaboration ensures right from the start that the products will offer customer benefits. These products are then continuously evolved in follow-up projects and adapted to the development in the target markets. The resulting product cores form the basis for wider distribution and export.

One focus of development activities in 2017 was the migration of the Group-wide software platform to the high-performance JavaFX graphics standard and the expansion of the platform with progressive web applications. PSI has established a Groupwide development community and developed a modern software platform that will form the basis for all products in the medium term. The objective is to further increase reuse of the same software modules in the Group and to standardise software tools and the programming language for all employees worldwide. The software platform improves the conditions for further export growth and also reduces development costs.



In 2017, the PSI Group's research and development expenses (costs recognised directly as expenses and capitalised software development costs) amounted to EUR 18.5 million, up from EUR 16.8 million in the previous year. This amount did not include any relevant purchased services.

Development work in 2017 focused on:

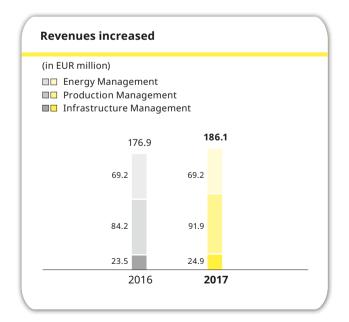
- new advanced scheduling and monitoring software to replace the previous control centre software
- · further development of the new Java-based SCADA system
- extension of the PSIcommand workforce management system, including with optimisation functions and mobile applications
- functional extension of the PSIcontrol grid control system with functions for failure analysis, overhead line monitoring, management of decentralised feed-in and multi-client capability
- implementation of a cloud/SaaS version (Software-as-a-Service) of the logistics suite migrated to the Group software platform
- migration of the PSIpenta components BDE/PZ to the Group-wide software platform and functional extension of the PSIpenta production software in the areas of quality assurance, service management, and planning and analysis
- new functions in the PSImetals metal production software with a particular focus on cross-module process support

ongoing further development of the Group-wide software platform and its roll-out in additional products. This further development particularly relates to new interface and operating concepts, which will reduce development and implementation expenses in the future.

In the Production Management segment, broad-based marketing of the software products migrated to the Group platform was started in 2017. At the 2017 Hanover Trade Fair, PSI presented a scenario covering all of the segment's products as an integrated, comprehensive Industry 4.0 solution from the cloud.

In addition to product development, PSI has also been involved in state-subsidised research projects for fundamental technology development for many years. One focus of this research is projects dedicated to implementing the future-oriented Industry 4.0 project initiated by the German federal government. This includes developing platforms for creating adaptable production systems, controlling intelligent logistics networks and optimising series production by replacing conveyor belts with swarm manufacturing concepts on the basis of intelligent, self-controlled workplaces.

Another focus of PSI's research is projects that deal with the development of technologies for the digital transformation of energy supply. This includes the development of smart grid technologies, intelligent integration of electric mobility in municipal distribution grids, grid restoration taking account of future generation structures, marketing of energy flexibilities of



industrial consumers, and mathematical methods for the simulation of power grids taking account of future integrated energy scenarios.

The knowledge gained in the projects is used in accordance with the cooperation or consortium agreements concluded between the parties involved in the respective research association. The subsidies cover around 40% to 50% of the personnel expenses and operating expenses incurred for these research projects in the PSI Group. The use of the funding must be accounted for vis-à-vis the funding body on an ongoing basis and on completion of the project. In the 2017 financial year, the PSI Group received state subsidies totalling EUR 1.1 million.

### **Economic report**

#### **Business performance and general conditions**

#### Significant growth in global steel market

For a focused software provider like PSI, the economic development in its key target sectors is particularly important. According to the World Steel Association, the global steel market, in which PSI is one of the main software suppliers, recorded a 5.3 % increase in global crude steel production in 2017 after growth of 0.8 % in the previous year. In this environment, PSI once again increased new orders in this area. The slump in oil and gas prices in 2016 impacted important export countries and target sectors for PSI. As prices recover, demand will pick up again.

In the Electric Energy division, PSI increased its new orders year-on-year in the first year after the regulatory base year 2016.

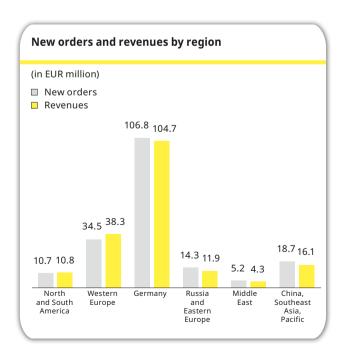
#### Increase in earnings in production and logistics

Raw material prices stabilised over the course of 2017 following the slump in the previous year. PSI particularly benefited from the dissolution of the investment backlog in the steel industry and from strong growth in the logistics sector. Consolidated revenues were increased, as were the operating result and the Group net result. New orders amounted to EUR 190 million, up 4.4 % on the previous year's level of EUR 182 million. The order backlog at the end of the year was down slightly year-onyear at EUR 128 million. In the Production Management segment, the Metal Production and Logistics divisions significantly increased their new orders, revenues and earnings. After the migration of its products to the Group software platform, the Automotive & Industry division improved its revenues and earnings. In the energy market, the Electric Energy division increased its revenues and earnings, while the Gas and Oil division recorded a decline in revenues and earnings.

In 2017, PSI received acceptance from the world's biggest gas supplier Gazprom for the basic software delivered by PSI for the central control system for Gazprom's gas transportation system. As part of the joint venture founded with the system integrator Gazprom avtomatizatsiya at the end of 2016, a new generation of products is to be created for Gazprom.

PSI AG Scandinavia AB, based in Karlstad, Sweden, was founded with effect from 28 February 2017. The main activity of the company is selling energy grid software and grid management as a service in Scandinavia.

In September 2017, PSI entered into a strategic partnership with Advanced Control Systems, Inc. for the North American energy management market, under which PSI energy management systems have been implemented together with the ACS solution for the first customers.





#### Overall assessment of the business performance

With an operating result of EUR 13.4 million, PSI reached its 2017 target of improving the operating result to between EUR 12 million and EUR 15 million, resulting in a further improvement in the EBIT margin from 6.7% in the previous year to 7.2 %. PSI achieved the targeted growth in consolidated revenues in the mid-single-digit percentage range with a 5.2 % increase in revenues. The share attributable to licence business fell from 8% to 7%, while that of maintenance business rose from 30% to 31%. Continued weak business in Infrastructure Management, particularly in Southeast Asia, was offset by a positive earnings performance in Energy Management and Production Management. Overall, business continued to develop positively particularly in the industrialised countries of Northern and Western Europe after raw material prices stabilised, while PSI posted a further decline in new orders and revenues in emerging economies. With a broadened customer base in industrialised countries in Europe, the PSI Group continued its positive earnings trend and returned to its growth trajectory.

#### **Result of operations**

#### Consolidated revenues up 5.2%

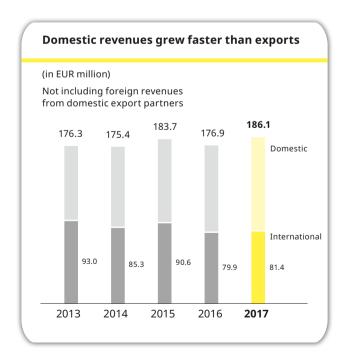
Consolidated revenues amounted to EUR 186.1 million in 2017, up 5.2% on the previous year's level of EUR 176.9 million. Energy Management generated stable revenues as against the previous year, while Production Management achieved revenue growth of 9.1%. In Infrastructure Management, revenue stabilised with growth of 6.0% after the significant decline in the previous year. Revenues per employee based on the average number of people employed in the Group increased slightly from EUR 108,000 to EUR 113,000.

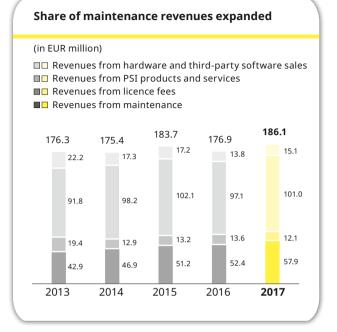
#### Slight increase in purchased services

Expenses for purchased goods and services rose by EUR 1.0 million to EUR 27.2 million. Expenses for project-related procurement of hardware and licences and expenses for purchased services both increased by EUR 0.5 million. At EUR 112.3 million, personnel expenses were up 2.7% year-on-year.

## Further improvement in operating result and Group net result

The Group's operating result climbed by 13.6% from EUR 11.8 million in the previous year to EUR 13.4 million. The Group net result increased from EUR 8.6 million to EUR 9.5 million in the year under review. Earnings per share accordingly improved from EUR 0.55 to EUR 0.61. Electrical Energy, Metal





Production, Automotive & Industry and Logistics made a particularly strong contribution to earnings. The main negative effects on earnings were due to valuation allowances for receivables and structural measures in Southeast Asia.

#### New orders up on previous year

New orders amounted to EUR 190 million in 2017, up 4.4% on the previous year's figure of EUR 182 million and thus 2% higher than revenues. The order backlog as at the end of the year was down slightly year-on-year at EUR 128 million.

## Slightly lower share of revenues attributable to exports, increase in maintenance revenues

Revenues generated outside Germany increased by 1.9% from EUR 79.9 million in the previous year to EUR 81.4 million. Due to the higher increase in consolidated revenues, this meant that the export share declined from 45% to 44%. The share of international orders decreased from 48% to 44%, mainly due to substantial growth in Germany.

Maintenance revenues rose from EUR 52.4 million to EUR 57.9 million, causing the share attributable to maintenance to rise from 30% to 31%. Licence revenues posted a decline from EUR 13.6 million to EUR 12.1 million. In line with the focus on increasing software product business, maintenance and long-term upgrade contracts in particular are to be increased further.

Licence revenues are to be increased again in 2018 not just operationally, but also by adjusting contractual and performance practices.

Energy Management generated constant revenues, causing the share of consolidated revenues attributable to this segment to fall from 39 % in the previous year to 37 %. The share attributable to Production Management rose from 48 % to 49 %, while that of Infrastructure Management was unchanged at 13 %. Infrastructure Management includes the revenues of the PSI Incontrol Group, which operates in the energy management sector with Asian customers as well as in infrastructure projects.

#### Energy Management segment posts slight improvement in earnings in 2017

Energy Management in 2017 was characterised by a slightly weaker development in the Gas and Oil division and an improvement in the Electrical Energy division. Overall, revenues remained constant at EUR 69.2 million and were thus slightly lower than expected. The segment comprises the areas of electricity grids, gas grids, oil pipelines, heating grids and energy trading. The operating result improved from EUR 5.8 million in the previous year to EUR 6.0 million in line with expectations. The Gas and Oil division suffered from the only slow recovery in demand after raw material prices stabilised. After the product investments in the previous years, the Energy Trading division generated constant earnings.

#### Revenue and earnings growth in Production Management

Revenues in Production Management grew by 9.1 % to EUR 91.9 million in 2017 and were thus in line with expectations. In this segment, PSI develops solutions for efficient planning and controlling of production and logistics processes. PSI is continuing to invest heavily here in the future-oriented topic of Industry 4.0 and is developing interesting unique selling points and growth potential as a result. The segment's operating result rose from EUR 7.1 million in the previous year to EUR 8.6 million, thus exceeding expectations. The highest margins were once again generated by PSI FLS Fuzzy Logik & Neuro Systeme, PSI Metals and PSI Logistics, which gained one of Germany's biggest logistics groups as a new customer in 2017. After the migration of its products to the Group technology platform, the production software provider PSI Automotive & Industry increased its earnings again.

#### Infrastructure Management records stable business in public transport and in Poland

Revenues generated in Infrastructure Management in 2017 were up 6.0% year-on-year at EUR 24.9 million and were thus in line with expectations. The operating result was slightly negative at EUR -0.4 million and was thus weaker than expected, after having come to EUR 0.1 million in the previous year. The Public Transport division confirmed the positive result it generated in the previous year, while at the Asian PSI Incontrol Group revenues and earnings were negatively impacted by valuation allowances for receivables and structural measures.

#### Group structure as of 31 December 2017

#### **Energy Management**

PSI AG Electrical Energy Gas/Oil	
PSI Nentec GmbH	100 %
PSIAG Scandinavia AB	100 %
PSI Energy Markets GmbH	100 %
PSI TURKEY BİLİŞİM TEKNOLOJİLERİ SANAYİ VE TİCARET A.Ş. (Turkey)	100 %
Time-steps AG (Switzerland)	100 %
OOO PSI (Russia)	100 %
OOO OREKHsoft (Russia)	49 %
OOO Gazavtomatika dispetcherskije sistemy (Russia))	33%
caplog-x GmbH	31.3 %

#### **Production Management**

PSI Mines&Roads GmbH	100 %
PSI Automotive & Industry GmbH	100 %
PSI Automotive & Industry Austria GmbH	100 %
PSI Metals GmbH	100 %
PSI Metals Austria GmbH	100 %
PSI Metals Belgium NV	100 %
PSI Metals Non Ferrous GmbH	100 %
PSI Information Technology Shanghai Co. Ltd. (China)	100 %
PSI Metals North America Inc.	100 %
PSI Metals Brazil Ltda.	100 %
PSI Metals UK Ltd.	100 %
PSI Metals India Private Ltd.	100 %
PSI Logistics GmbH	100 %
PSI AG (Switzerland)	100 %
PSI FLS Fuzzy Logik & Neuro Systeme GmbH	100 %

#### **Infrastructure Management**

PSI Transcom GmbH	100 %
PSI Polska Sp. z o.o.	100 %
PSI Incontrol Group	100 %

#### **Financial position**

PSI's monthly liquidity planning and the measures derived on this basis ensure that the financial requirements for operating business and investments are covered. Risk Management prepares a rolling monthly forecast that covers all companies and has a planning horizon of twelve months. This minimises taking up bank loans by the individual Group companies and optimises net finance costs. Current financial liabilities rose from EUR 0.0 million to EUR 2.6 million in 2017.

#### Financing from operating business as far as possible

PSI's investing activities are focused on further development of its products and international expansion of its business, both of which are intended to be financed from operating business as far as possible. With regard to both internationalisation and the development of new products and functionalities, PSI focuses on major pilot customers and reliable partnerships.

On 31 December 2017, PSI had guarantee and cash credit facilities totalling EUR 106.9 million for financing its operating business. In the previous year, guarantee and cash credit facilities had amounted to EUR 113.2 million. Utilisation related entirely to the guarantee credit facilities and decreased from EUR 42.1 million in the previous year to EUR 35.7 million as at the end of the reporting period. In the 2017 financial year, the Group was able to meet its payment obligations at all times. The Group has internal ratings from its principal banks that roughly correspond to the rating categories between BBB–and BBB+.

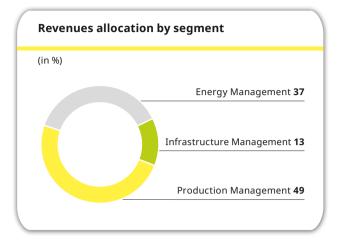
#### Cash flow from operating activities down on previous year

Cash flow from operating activities declined from EUR 13.3 million in the previous year to EUR 1.2 million. It was chiefly influenced by lower advance payments.

Cash flow from investing activities declined from EUR –2.9 million to EUR –4.1 million. As in the previous year, it was primarily affected by replacement investments in property, plant and equipment and intangible assets.

Cash flow from financing activities increased from EUR -6.7 million to EUR -1.1 million as a result of the change in short-term loans.

Cash and cash equivalents at the end of the year fell from EUR 43.0 million to EUR 38.1 million.



#### Net asset situation

#### Asset structure: slight decrease in goodwill

In 2017, the PSI Group invested a total of EUR 4.4 million in intangible assets and property, plant and equipment. The investments primarily related to intangible assets and property, plant and equipment acquired from third parties. In the previous year, investments had amounted to EUR 3.2 million.

The carrying amount of goodwill declined from EUR 48.9 million to EUR 48.3 million due to currency effects.

## Structure of the balance sheet: equity ratio rises to 41.4 %

Total assets of the PSI Group declined from EUR 199.4 million to EUR 194.0 million in 2017.

On the assets side, non-current assets decreased from EUR 78.7 million to EUR 77.5 million. Current assets fell from EUR 120.7 million to EUR 116.5 million in 2017. Within this category, cash and cash equivalents decreased by EUR 4.9 million and trade receivables were EUR 4.1 million higher, whereas receivables from long-term development contracts fell by EUR 5.1 million.

On the equity and liabilities side, current liabilities decreased from EUR 69.2 million to EUR 59.7 million, particularly due to the decrease in liabilities from long-term development contracts. Non-current liabilities fell from EUR 52.0 million to EUR 50.5 million, driven primarily by the decrease in pension provisions. Equity increased from EUR 75.3 million to EUR 80.3 million. The equity ratio accordingly improved from 37.8 % to 41.4 %.

# Overall assessment of result of operations, balance sheet and net asset situation

In the 2017 financial year, the Group's results of operations improved in comparison to the previous year. The financial position deteriorated due to the lower cash flow from operating activities. The net asset position was largely stable. For 2018, the management anticipates a further increase in earnings and a positive cash flow. As such, the Group still has the financial prerequisites to finance organic growth and selective acquisitions.

## Sustainability

Ever since the Company was founded in 1969, sustainability has been a very important issue for PSI, both in customer projects and in its internal processes. In addition to environmental and social concerns, this particularly includes the areas of employees and customers.

#### Transparent and responsible corporate governance

PSI follows ethical principles in its dealings with customers, shareholders, employees, partners and competitors. These principles are set out in the Code of Conduct, which is publicly accessible on the Group's website at www.psi.de. Here, PSI commits to fair business practices and compliance with legal standards for fair working conditions, protection of natural resources, fair business conduct and protection of intellectual property.

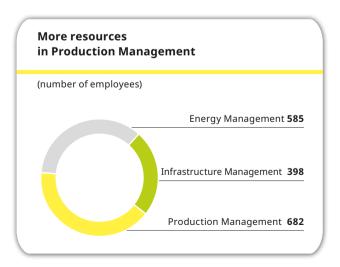
In addition to the Code of Conduct, PSI has adopted a guideline system that governs many different aspects of sustainable and responsible corporate governance. PSI once again complied with the recommendations of the Government Commission on the German Corporate Governance Code in 2017, with a small number of exceptions that are discussed in the declaration of compliance. The declaration of compliance and the corporate government declaration are published on PSI's website at www.psi.de/en/psi-investor-relations/corporate-governance.

#### Sustainability in PSI solutions and internal processes

PSI's software solutions make a significant contribution to careful and sustainable use of energy, raw materials and labour in the energy industry and the production sector. For this reason, PSI's production management systems for the steel and aluminium industry incorporate functions for optimising the use of energy and using quantities of energy that are released during production.

PSI's control systems for managing major electricity grids have been and still are continuously expanded with functions for intelligent management of the feed-in of renewable energy. Together with partners from the energy industry and academia, PSI is actively involved in developing the intelligent energy supply infrastructure of the future. Among other things, this includes products for virtual power plants and intelligent microgrids. PSI's gas management systems allow optimised control of the compressor stations required for grid operation and minimise technical losses. Leak detection and location systems help reduce losses when transporting gas and oil over long distances and avoid environmental damage.

In the field of logistics and transport, PSI has in recent years developed new solutions for dynamic control of optimised logistics networks that help reduce transport costs and emissions by up to 10%. Further functions include energy-optimised driving in rail transport and a depot management system with route and fuelling optimisation, as well as range management and charging management for electric buses. This gives customers effective support in reducing greenhouse gases and saving energy.



Due to the fact that PSI as a services company does not manufacture any physical products, the PSI business processes impact the environment and resources only in a marginal fashion. PSI works with green IT equipment and uses combined heat, cooling and power generation at its location in Aschaffenburg. To evaluate energy flows and potential for improvement in the area of energy efficiency, in 2016 PSI carried out an energy audit in line with DIN EN 16247-1. PSI has participated in the Carbon Disclosure Project since 2011 and was given the score C- in 2017. As in previous years, PSI was again awarded the DZ Bank Seal of Quality for Sustainability in 2017. Implementation of environmental management is currently being evidenced by external energy audits and involvement in the Carbon Disclosure Project. Preparations are being made for certification in line with DIN EN ISO 14001.

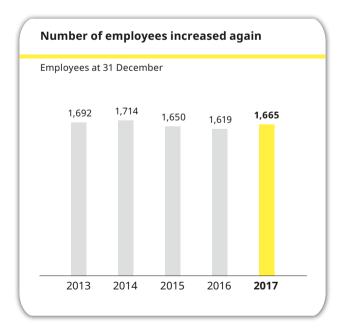
#### **Employees and social commitment**

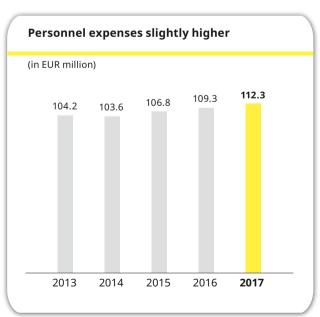
For a specialised software provider like PSI, the high qualifications and motivation of its employees are key success factors. For this reason, the PSI Group has for many years been characterised by a particularly high proportion of graduates with specialist industry expertise. The proportion of employees with a university degree averages approximately 80%. The largest share of these employees have an engineering degree.

Employee development and training are crucial for the functionality and innovativeness of the products developed by PSI. The main focus areas here are specialist training for new employees at the international locations and in Germany and employee development for internationalisation. This takes place in the form of sales, project management and contract law training and courses relating to Group software tools. Groupwide work teams focusing on the topics of technology, infrastructure, product management, maintenance, quality management, controlling and marketing promote knowledge transfer and standardisation within the Group. Employee training for the uniform Java technology platform is particularly important for the strategic development of the Group.

In order to make contact with graduates in the relevant courses of study at an early stage, PSI is involved in promoting education and research in science and engineering at many different levels. For example, at its main locations the PSI Group has formed university partnerships that range from offering internships to cooperating on dual courses of study.

Since autumn 2010, PSI has been involved as an industry partner of the logistics research cluster and as a project partner in the environmentally friendly and sustainable energy engineering cluster, while since the beginning of 2016 it has also acted as a technology partner at the new European 4.0 Transformation Centre on the RWTH Aachen Campus.





One special aspect at PSI is that a significant share of PSI stock amounting to more than 20% is held by employees and managers. After PSI went public, a large number of employees joined together to form a consortium. Its main objectives are the coordination of uniform voting by the employee shareholders involved at the Annual General Meeting. Since 2011, PSI has issued staff shares to promote employee participation; these shares can be acquired for this purpose on the stock market, for example.

The number of employees as at the end of the year rose by 46 to 1,665. A total of 585 employees were allocated to the Energy Management segment, 682 to Production Management and 398 to Infrastructure Management.

PSI has been involved in social activities for many years. Examples include various regional initiatives to support charitable organisations based near PSI locations. In addition, PSI supports team sports activities of various different employee groups by funding participation in competitions and equipment. In early 2018, PSI was ranked 14th in the telecommunications and IT sector in a large-scale survey of working conditions at 2,000 German companies conducted by the magazine FOCUS and was recognised as a top employer.

#### Non-financial statement

In an internal process, PSI assessed the non-financial topic areas of the environment, customers, employees, society, human rights and combating corruption in terms of their relevance to the Group and derived non-financial key performance indicators on this basis. Because PSI is a developer of specialised software solutions that does not manufacture any physical products, it is primarily employee commitment and long-term customer relationships that are key to the PSI Group's success. In order to measure its performance with regard to these parameters, PSI has been calculating an employee commitment index and a customer loyalty index since 2017.

Employee commitment shows the employees' motivation and loyalty and the extent to which they identify with PSI. The employee commitment index includes average employee turnover, employee satisfaction and the average sick leave rate in the Group, with targets being defined for all three criteria. In the subsequent calculation of the index based on the respective level of target achievement, employee turnover and employee satisfaction are given a higher weighting than the sick leave rate. The PSI Group achieved an employee commitment index of 82 % in 2017. For 2018, PSI is aiming for an index value of between 80 % and 84 %.

Long-term customer relationships form the basis for the PSI Group's positive long-term economic performance. The customer loyalty index therefore takes account of customers' willingness to conclude long-term maintenance and upgrade contracts and to provide a reference. Targets are defined and their achievement is measured both for the share of consolidated revenues attributable to maintenance and upgrade contracts and for the level of willingness to provide a reference. The target achievement levels calculated in this way are included in the index with equal weightings. In 2017, the customer loyalty index came to 83 %. For 2018, PSI is aiming for an index value of between 82 % and 86 %.

## **Statutory disclosures**

# Disclosures in accordance with section 315a (1) of the German Commercial Code (HGB)

As at 31 December 2017, the share capital of PSI Software AG amounted to EUR 40,185,256.96 and was divided into 15,697,366 no-par-value shares with an accounting par value of EUR 2.56. Each share confers the right to one vote. There are no different classes of shares. The shareholders exercise their voting rights at the Annual General Meeting in accordance with the statutory requirements and the Articles of Association. There may be statutory restrictions on voting rights in accordance with section 136 of the German Stock Corporation Act (AktG) or, to the extent that the Company holds treasury shares, in accordance with section 71b AktG. In the second half of 2016, PSI Software AG issued a total of 51,169 shares in PSI Software AG to employees as staff shares. A contractual prohibition on the sale of these shares until 30 September 2018 was agreed. In the second half of 2017, PSI Software AG issued a total of 28,889 shares in PSI Software AG to employees as staff shares. A contractual prohibition on the sale of these shares until 29 September 2019 was agreed. There are no further restrictions with regard to voting rights or transfers of shares.

In the 2017 financial year, Mr. Norman Rentrop, Germany, held a 20.65% interest in PSI Software AG, held via Investmentaktiengesellschaft für langfristige Investoren TGV, which he controls. According to the notification in accordance with section 27a(1) of the German Securities Trading Act (WpHG) dated 7 September 2017, the investment in PSI Software AG serves the long-term objective of generating trading profits.

In the 2017 financial year, innogy SE, Essen, Germany, held a 17.77% interest in PSI Software AG. According to PSI Software AG's knowledge, innogy SE is a company in which RWE AG, Essen, has a majority shareholding. innogy SE is a major distribution grid operator and an important customer of PSI Software AG in the Energy Management segment. According to the RWE Group's notification in accordance with section 27a(1) of the German Securities Trading Act (WpHG) dated 22 September 2009, its investment in PSI Software AG serves the purpose of sustainably securing the cooperation between PSI AG and the RWE Group.

PSI Software AG has not issued any shares with special rights.

There are no voting right controls at PSI Software AG in relation to employee shares if employees have an investment in the Company's capital and do not exercise control rights directly. In accordance with Article 8 (1) of the Articles of Association, Board of Directors members are appointed and dismissed by the Supervisory Board, which also determines the number of Board of Directors members. Sections 84 et seq. AktG also apply to the appointment and dismissal of Board of Directors members.

In accordance with Article 11 of the Articles of Association, the Supervisory Board is authorised to make amendments and additions to the Articles of Association that affect the wording only. Other than this, the Articles of Association are resolved by the Annual General Meeting with a simple majority of the votes cast and a simple majority of the share capital represented when the resolution is adopted, as stipulated in Article 19 of the Articles of Association. This applies except in cases where the law requires resolutions to be adopted with a majority of at least three-quarters of the share capital represented when the resolution is adopted.

PSI Software AG has authorised capital of EUR 8.0 million in place until 11 May 2020 that was created by resolution of the Annual General Meeting on 12 May 2015. This resolution authorises the Board of Directors, with the approval of the Supervisory Board and without requiring a further resolution by the Annual General Meeting, to increase the Company's share capital in exchange for cash or contributions in kind. In particular, this can be used as acquisition currency for acquiring companies. The Company has not yet exercised this authorisation to date.

PSI Software AG also has contingent capital of EUR 8.0 million in place until 15 May 2022. This serves the purpose of servicing convertible and warrant-linked bonds and profit-sharing certificates. The Company was authorised to issue this contingent capital in a total nominal amount of up to EUR 100 million by the Annual General Meeting on 16 May 2017. The Company has not yet exercised this authorisation to date.

The Board of Directors of PSI Software AG was authorised by the Annual General Meeting on 16 May 2017 to acquire treasury shares in the Company in a volume of up to 10% of the share capital until the end of 30 June 2020. Together with treasury shares acquired for other reasons that are owned by or attributable to the Company, the shares acquired on the basis of this authorisation must not exceed 10% of the Company's share capital at any time. Treasury shares may be acquired only if the Company was able to establish a reserve in the amount of the expenses for the acquisition without reducing the share capital or any reserve to be established in accordance with the law or the Articles of Association that must not be used for payments to the shareholders. The authorisation must not be used for the purpose of trading in treasury shares. In keeping with the principle of equal treatment, the Board of Directors shall choose to acquire the shares either on the stock market or by way of a public purchase offer to all shareholders of the company. The authorisation may be exercised one or more times in full or in partial amounts.

There are no significant agreements of the Company that are subject to the condition of a change of control following a takeover bid.

#### Remuneration of the governing bodies

The Supervisory Board remuneration does not include a performance-related component. It consists of basic remuneration and a component that is dependent on attendance of meetings and committees.

The remuneration of each of the two Board of Directors members consists of non-performance-related fixed remuneration (fixed salary component including non-cash benefit from private use of a company vehicle) and a variable component that in turn consists of a recognition bonus considered possible by the Supervisory Board as well as a short-term and a long-term performance-related component.

The employment contracts provide for non-performancerelated fixed remuneration of EUR 382,000 a year for the CEO and EUR 315,000 a year for the second Board of Directors member. This is paid out in twelve equal monthly instalments. It includes a leased vehicle for business and private use for each member of the Board of Directors for the duration of their actual term in office.

In addition to the non-performance-related fixed remuneration, the Company can also pay each of the Board of Directors members a voluntary annual recognition bonus that is capped at a certain amount. However, there is no legal entitlement to this bonus, even if it is repeatedly paid. The Supervisory Board determines whether and in what amount the recognition bonus is to be paid according to its best judgement based on the extent to which the business performance of PSI Software AG justifies this. It was granted only once during the 2000s.

In addition to the recognition bonus, the employment contracts also provide for performance-related components, the amounts of which are determined by the Supervisory Board on the basis of the PSI Group's business performance. Each of the Board of Directors members is entitled to a variable amount of short-term performance-related remuneration that depends on the level of target achievement in a financial year in the category of earnings before taxes, specific other key figures and specific strategic targets. These targets are defined in an annual target agreement concluded between the Supervisory Board and the respective Board of Directors member.

In November 2015, long-term performance-related remuneration was agreed with the Board of Directors members. Under certain conditions, this may also be paid out in the event of a change of control. The amount of this remuneration is dependent on a long-term increase in the stock market capitalisation of PSI Software AG above a certain threshold and on the cumulative development of the PSI Group's EBITA over the period from 1 January 2016 to 31 December 2018. This remuneration component will be paid out at the earliest in the 2019 financial year.

## Supplementary report

There were no significant events after the end of the reporting period.

### **Risk report**

The PSI Group's risk policy has the aim of securing the Group's success in the long term. This requires effective identification and analysis of business risks in order to eliminate or limit them by means of suitable control measures.

To this end, PSI has set up a risk management system that is used by the management of the Company as a tool for the early recognition and prevention of risks. This particularly applies to risks whose effects could jeopardise the continued existence of the PSI Group as a going concern. The risk management tasks comprise risk identification, risk assessment, risk communication, risk management and control, risk documentation and risk system monitoring. The Company's risk management system is developed further on an ongoing basis and the knowledge gained from the management system is integrated in corporate planning.

#### Description of the key features of the internal control and risk management system with regard to the Group accounting process (section 289 (4) and section 315 (4) HGB)

The PSI Group's risk management system covers all organisational regulations and measures for identifying and dealing with the risks and opportunities of its business activities.

The Board of Directors has overall responsibility for the internal control and risk management system with regard to the accounting processes of the consolidated companies and the accounting process in the Group. The Accounting department prepares the consolidated financial statements for the PSI Group based on the recognised separate financial statements of the companies and reports consolidated financial information to the Board of Directors. The separate financial statements are prepared on the basis of a Group-wide accounting manual. All companies and divisions included in the consolidated financial statements are integrated by way of a clearly defined management and reporting organisation.

With regard to the accounting processes of the consolidated companies and the Group accounting process, we consider features of the internal control and risk management system to be material if they could have a significant impact on the Group accounting and the overall view presented in the consolidated financial statements including the Group management report. This particularly includes the following elements:

- identification of key risk areas and control areas relevant to the Group-wide accounting process
- controls for monitoring the Group-wide accounting process and its results at Board of Directors level and division level
- preventive control measures in the Finance and Accounting departments of the Group and the divisions and in operational, performance-related business processes that generate significant information for the preparation of the consolidated financial statements and the Group management report, including a separation of functions and predefined approval processes in relevant areas
- measures that ensure proper IT-based processing of facts and data relating to Group accounting
- in addition, the Group has implemented a risk management system with regard to the accounting process that includes measures to identify and assess significant risks and corresponding measures to limit risks in order to ensure the correctness of the consolidated financial statements.

PSI has identified the following key risks and integrated them in its early warning system:

- · market: too low level of new orders/order backlog
- · employees: lack of availability of the necessary qualifications
- · liquidity: bad payment terms and insufficient credit facilities
- costs and revenues: deviation from planning figures, particularly in project implementation or development

When assessing the risks, the individual categories are regularly regarded at business unit level. Depending on the risk assessment and the importance of the business unit for the Group, the Board of Directors intensifies the dialogue with the management of the business unit and resolves specific measures as required. In the 2017 financial year, the risks were classified as not jeopardising the Group's continued existence as a going concern, neither individually nor in combination.

The risk management guideline governs the areas of:

- risk strategy: explicit principles for minimising the main risks and general risk management principles
- risk management organisation: responsibilities of the management levels and controllers involved
- risk identification, control and monitoring: tools for identifying risks and monitoring the key figures used
- risk management system: application of the Group-wide commercial information system and a Group-wide issue tracking solution

These provisions are supplemented by a guideline on risk management in projects. This governs the implementation of risk management in the project, the identification, recording, analysis and assessment of risks and the planning, specification and monitoring of measures to minimise risks in the context of projects. This particularly relates to measures to limit prefinancing in projects.

The commercial information system has an integrated management information system (MIS) and serves as a uniform information and controlling tool for all levels of the Group. Regular MIS reports, which are generally prepared on a monthly basis, provide key figures from the divisions as defined in the guideline system:

- · development of the order situation and capacity utilisation
- liquidity planning
- · development of net asset situation and financial position
- forecast of key economic figures
- · sales forecast and market development
- · project controlling and contract management

#### Analysis of opportunities and risks

The PSI Group is exposed to a number of risks, including normal risks from its business operations, general economic risks, tax and financial risks, and risks that could arise from the shareholder structure. In the 2017 financial year, the risk profile changed mainly as a result of the decrease in business in the politically unstable region of Southeast Asia and the recovery of the steel market and the oil price. There were no substantial changes in the risk profile with regard to the shareholder structure or the regulatory environment in the energy sector.

#### **Opportunities and risks for the segments**

In Energy Management, PSI slightly increased its new orders, revenues and earnings in 2017. It was particularly the area of electricity grids that developed positively, while the gas grid business weakened. In the short term, there could be a decline in investments in electrical distribution grids in Germany due to the cyclical nature of the incentive regulation, while in the Gas and Oil division stabilising raw material prices provide the opportunity for an upturn in demand in export business. In the long term, the transnational effects of the expansion of renewable energy, continuing digitalisation, innovative energy services, integrated energy, electric mobility and the expansion of storage technologies will result in additional business potential, as investments will be required for these purposes. The expansion of international business is resulting in an increased need for prefinancing and guarantee credit.

By their nature, major export projects involve implementation risks in relation to local partners and their training, differing performance interpretations and standards and sometimes also changes in customer policy. The existing international partnerships extend the sales reach and thus increase the opportunities for sales of PSI's products. At the same time, they also create new dependencies.

In **Production Management**, the Logistics, Metal Production and Automotive/Industry divisions benefited from the positive economic development, with the effect that the segment's new orders, revenues and earnings saw a significant increase overall. In Metal Production, PSI continued to roll out the PSI solution with important Group customers and received large new orders from existing European, Chinese and American customers. Despite stabilisation in the global steel market, the risk of stronger price pressure due to cyclical fluctuations of the market and the raw material prices remains. Opportunities remain due to growing demand from large metal producers for group roll-outs of PSI solutions. In some countries of East Asia, the risk remains as a result of a not completely developed awareness for quality and trademark protection.

The Logistics and Production Control/ERP divisions are particularly affected by fluctuations in the economic climate on account of their market position and customer structure. For this reason, there is a risk that new orders may be too low in the event of a weak domestic economy. In the Logistics division, PSI is therefore primarily focusing on solutions for logistics service providers, internet companies and the automotive industry.

In 2017, the Logistics division recorded a surge in demand for its renewed products and gained one of Germany's biggest logistics groups as a new customer. The positive consumer climate, growth in online mail order business and the increasing complexity of industrial logistics flows will give rise to further growth potential for PSI's logistics solutions in the short and medium term. The production software subsidiary PSI Automotive & Industry is increasingly focusing on the growth trend Industry 4.0 and received major orders from innovative electric vehicle manufacturers. This creates further growth potential due to the establishment of additional electric vehicle production plants, but also results in implementation risks, particularly in export business.

In **Infrastructure Management**, transport systems recorded a significant increase in revenues and a slight decline in new orders. In this area, PSI is largely dependent on the financial situation of its predominantly public-sector clients. Over the last few years, PSI has developed unique selling points and consolidated its market position, particularly for depot management systems. As a result of the increasing deployment of electric vehicles in local public transport, this means there is growth potential in the shape of new functions such as range management and charging management. PSI Poland, which is assigned to the Infrastructure Management segment, won a major Polish trading company as a new customer for PSI's logistics software.

With the PSI Incontrol Group, PSI has had direct access to the markets in Southeast Asia and the Middle East since 2009. PSI has access to inexpensive hardware and integration services. The cost of services and equipment can be reduced by using a relatively large pool of qualified specialists in the region. As a result of the high share of system integration business and the associated need to prefinance projects, business at PSI Incontrol also entails risks. In 2017, capacity in the capital-intensive hardware business was scaled back further and the CAD location in Chennai, India, was closed. At the same time, PSI invested in training IT specialists and developing the software business, which is less strongly impacted by fluctuations in the economic cycle, as part of two smart city projects and other SCADA projects.

#### **Opportunities and risks of internationalisation**

The share of international activities declined slightly in 2017, as revenues in Germany rose faster than in export business. Overall, the export share of 43.7% indicates that PSI still has only a limited dependency on the domestic market and that there are further international growth opportunities. However, the international expansion will give rise to new risks from the integration of new subsidiaries into the Group and dependency on international partners, exchange rates and legal systems. On the other hand, opportunities and risks will be more broadly diversified as a result of the further expansion of international activities. Due to the low share of revenues in the UK, the upcoming Brexit does not pose any relevant risk to the PSI Group.

## Opportunities and risks from new products and technologies

In order to strengthen its competitive position, PSI constantly invests in new product versions and product enhancements. At the same time, PSI has brought products and components together on a joint platform as part of a Group-wide convergence process to enable it to benefit from high quantities. The future income and liquidity development of the PSI Group will largely depend on the market success of its new products and on its command of newly developed technologies.

#### **Risks from the shareholder structure**

If attendance of the Annual General Meeting is considerably below 100 %, there is a risk that one of the major shareholders of PSI Software AG may exercise decisive influence on the Annual General Meeting and use this for its own interests, which may differ from the Company's aims. The same risk arises if there is high attendance at the Annual General Meeting but major shareholders coordinate their voting. In addition, an acquisition of shares with negative tax effects cannot be ruled out.

#### Tax risks

PSI cannot rule out the risk that external audits by the taxation authorities may lead to subsequent tax claims for which the Company has not recognised provisions or that result in an unforeseen liquidity requirement. A tax audit for the years 2010 to 2013 is currently being conducted and has not yet been fully completed.

The tax audit for the years 2005 to 2009 determined that the short-term ownership and the resulting possible allocation of a total of 28.60% of the voting right shares in the Company by Kajo Neukirchen GmbH, Eschborn, and Mr. Kajo Neukirchen in the second guarter of 2009 resulted in the loss of 25.65 % of the eligible tax loss carryforwards. In May 2017, the German Federal Constitutional Court declared the underlying law to be unconstitutional based on an order for reference submitted by the Hamburg Fiscal Court. As a result of this judgement, the legislators are required to draw up new regulations for loss deduction for corporations in compliance with the constitution by no later than 31 December 2018, with retroactive effect from 1 January 2008. The Board of Management believes that there is still a chance that there is no detrimental acquisition of shares and the tax loss carryforwards therefore were not lost on a pro rata basis.

#### **Financial risks**

To finance its operating business, PSI uses instruments that chiefly consist of trade receivables, cash and cash equivalents, liabilities to banks and guarantees. The main risks in this context are credit risks, liquidity risks and fair value risks. Credit risks and liquidity risks are managed by using credit facilities and monitoring procedures. There is no concentration of credit risk for PSI with individual counterparties or with a group of counterparties. The Group endeavours to ensure that it has sufficient liquidity and credit facilities to meet its obligations.

The PSI Group predominantly enters into transactions concluded in euro. In the 2017 financial year, the Group did not use any transactions to hedge currency risks.

#### **Employees**

With technically challenging tasks, we succeed in hiring, integrating and permanently retaining qualified employees at our Company. Our staff turnover rate is low. The remuneration structure includes performance- and earnings-related components. Following the freezing of the pension provisions as at the end of 2006, all future benefits are specified, direct salary components and are almost entirely covered by insurance policies.

#### **Future risks**

PSI's strategy for the coming years is focused on the Group's further transformation into a software product provider and on ongoing internationalisation. If this does not succeed as planned, there is a risk that the PSI Group may not achieve its revenues and earnings targets. In addition, PSI would then still be dependent to a large extent on the general economic development and regulatory framework in Germany.

### Forecast

PSI started the new year with a slightly lower order backlog of EUR 128 million and a product base that has been further renewed. Despite high expenses for research and development, there was a further improvement in the operating result. With the conclusion of numerous product migrations and pilot projects, the conditions were created for a broader-based marketing of the new product versions to existing and new customers.

The trend towards digitalisation of business processes in energy supply, production and logistics also continued in 2017 and provides further business potential for the years ahead. The increasing interconnection of the electricity, heating and transport sectors (integrated energy) and the associated trend towards expansion of electric mobility represent additional drivers. As a leading provider of cross-sector grid control systems, PSI is very well positioned in this market and has invested in functions for intelligent integration of electric mobility in municipal distribution grids in recent years. In production management, the development of production capacity for electric vehicles requires investments in new manufacturing processes and software, while in local public transport investments in infrastructure and infrastructure management are needed. PSI has invested in new products and functions for these areas and will benefit from this in 2018. In the Electric Energy division, PSI will continue to focus on exports in 2018, as no growth in IT investments in German distribution grids can be expected in the second year after the regulatory base year 2016. Despite the fact that raw material prices have stabilised, the upturn in demand in the Gas and Oil division is only slow, meaning that a sideways trend is likely in 2018. In Infrastructure Management, we anticipate stable investment activities in Germany and Europe again in 2018 and a continued restrained development in Southeast Asia. In Production Management in particular, we intend to build on the previous year's dynamic development and generate further growth in 2018.

In continuing our strategy of specialisation and internationalisation, our focus has increasingly shifted from energy-producing countries to industrialised consumer countries as a result of the decrease in raw material prices. Consequently, we are aiming for further growth in Northern Europe in particular over the coming years.

By means of the migration of further products to the new, uniform software platform and convergence of our technical base, we intend to further increase the quantities sold and expand the share of revenues attributable to licences, upgrades and maintenance. We will continue to selectively expand our portfolio in order to take advantage of opportunities and increase our efficiency. In this way, we will improve the basis for enabling us to generate double-digit returns in the future.

In the Energy Management segment, we anticipate a slightly positive trend for Electrical Energy in 2018 and, in the event that oil and gas prices remain stable, a slow upturn in demand in this business area. In Production Management, we are continuing to invest in the future-oriented topic of Industry 4.0 and intend to increase our revenues and profitability further with the renewed product base. In Infrastructure Management, we anticipate a slight increase in Europe and stabilisation in Southeast Asia. Overall, in 2018 we are aiming for a high single-digit percentage increase in consolidated revenues and a low doubledigit percentage improvement in the operating result. Due to the ongoing risks in some export regions, we consider it appropriate to state a percentage range. We are also aiming for a slight increase in licence and maintenance revenues, with our focus here being on long-term maintenance and upgrade agreements and less on licences. In order to achieve our goals, we will continue to invest in the unique selling points and quality of our products and the efficiency of our internal processes.

Berlin, 9 March 2018

Dr. Harald Schrimpf

M. Fr

Harald Fuchs

# **Consolidated balance sheet**

as of 31 December (IFRS)

ASSETS in EUR thousand	Note	31.12.2017	31.12.2016
Non-current assets			
Property, plant and equipment	C. 1	12,531	12,153
Intangible assets	C. 1	56,489	57,751
Investments in associated companies		150	150
Deferred tax assets	C. 11	8,377	8,663
		77,547	78,717
Current assets			
Inventories	C. 2	7,823	6,421
Net trade receivables	C. 3	31,611	27,466
Receivables from long-term development contracts	C. 4	33,118	38,184
Other assets	C. 5	5,779	5,631
Cash and cash equivalents	C. 6	38,132	43,008
		116,463	120,710

194,010	199,427

EQUITY AND LIABILITIES in EUR thousand	Note	31.12.2017	31.12.2016
Shareholders' equity			
Share capital	C. 7	40,185	40,185
Capital reserves	C. 7	35,137	35,137
Reserve for treasury shares	 C. 7	- 328	- 528
Other reserves	C. 7	- 18,823	- 17,588
Unappropriated surplus		24,126	18,068
		80,297	75,274
Non-current liabilities			
Pension provisions and similar obligations	C. 8	50,540	52,037
Deferred tax liabilities	C. 11	3,494	2,916
		54,034	54,953
Current liabilities			
Trade payables		14,564	12,553
Other liabilities	C. 10	29,206	30,919
Liabilities from long-term development contracts	C. 4	13,287	25,728
Financial liabilities	C. 9	2,622	0
		59,679	69,200
		194,010	199,427

## **Consolidated income statement**

for the period from 1 January to 31 December (IFRS)

in EUR thousand	Note	2017	2016
Revenues	D. 12	186,096	176,854
Other operating income	D. 13	4,207	5,017
Cost of materials	D. 14	- 27,228	- 26,210
Personnel expenses	D. 15	- 112,343	- 109,269
Depreciation and amortisation	D. 16	- 4,351	- 4,294
Other operating expenses	D. 17	- 33,016	- 30,263
Operating result		13,365	11,835
Net finance costs	D. 18	- 841	- 602
Earnings before taxes		12,524	11,233
Income taxes	C. 11	- 3,027	- 2,682
Group net result		9,497	8,551
Consolidated earnings per share (in EUR) (basic and diluted)	D. 19	0.61	0.55
Average number of shares outstanding (in thousands)	D. 19	15,641	15,618

## **Consolidated statement of comprehensive income**

for the period from 1 January to 31 December (IFRS)

in TEUR	2017	2016
Group net result	9,497	8,551
Items that are reclassified to consolidated net profit in subsequent periods		
Currency translation of foreign operations	- 1,652	- 316
Items that are not reclassified to consolidated net profit in subsequent periods		
Actuarial gains (previous year: losses)	592	- 4,986
Income tax effects	- 175	1,485
	417	- 3,501
Other comprehensive income after taxes	- 1,235	- 3,817
Consolidated total comprehensive income	8,262	4,734

## **Consolidated cash flow statement**

for the period from 1 January to 31 December (IFRS)

in	EUR thousand Note	2017	2016
1.	Cash flow from operating activities		
	Consolidated earnings before income taxes	12,524	11,23
	Adjustment of annual earnings for non-cash transactions		
	Amortisation of intangible assets	1,880	1,90
	Depreciation of property, plant and equipment	2,471	2,38
	Income from investments in associated companies	- 142	- 14
	Interest income	- 153	- 20
	Interest expense	943	1,22
	Other non-cash income/expenses	811	68
		18,334	17,08
	Change in inventories	- 1,424	- 2,15
	Change in trade receivables and receivables from long-term development contracts	940	6,63
	Change in other assets	- 338	- 45
	Change in provisions	- 1,523	- 1,20
	Change in trade payables	2,038	- 2,29
	Change in other liabilities	- 14,302	- 2,24
		3,725	15,37
	Interest paid	- 134	- 15
	Income taxes paid	- 2,423	- 1,88
		1,168	13,33
2.	Cash flow from investing activities		
	Outflows for investments in intangible assets	- 1,353	- 89
	Outflows for investments in property, plant and equipment	- 3,031	- 2,33
	Outflows/inflows for investments in subsidiaries (less cash and cash equivalents acquired)	0	-
	Inflows from distributions by associated companies	142	10
	Interest received	153	20
		- 4,089	- 2,91
3.	Cash flow from financing activities		
	Outflows for the acquisition of treasury shares	- 297	
	Dividends paid to shareholders of the parent	- 3,439	- 3,27
	Inflows/outflows from the repayment/borrowing of financial liabilities	2,622	- 3,45
		- 1,114	- 6,73
4.	Cash and cash equivalents at end of period		
	Cash-effective change in cash and cash equivalents	- 4,035	3,68
	Exchange-rate-related changes in cash and cash equivalents	- 841	48
	Cash and cash equivalents at beginning of period	43,008	38,83
		38,132	43,00

# **Consolidated statement of changes in equity**

as of 31 December (IFRS)

	Share capital	Capital reserve	
in EUR thousand			
Balance as at 31 December 2016	40,185	35,137	
Group net result			
Other comprehensive income after taxes			
Consolidated total comprehensive income after taxes			
Dividend payment to shareholders of the parent			
Issue of treasury shares			
Total capital transactions	0	0	
Balance as at 1 January 2017	40,185	35,137	
Group net result			
Other comprehensive income after taxes			
Consolidated total comprehensive income after taxes			
Dividend payment to shareholders of the parent			
Acquisition of treasury shares			
Issue of treasury shares			
Total capital transactions	0	0	
Balance as at 31 December 2017	40,185	35,137	

# **Consolidated segment reporting**

for 2017 and 2016 (IFRS)

	Energy Management		Productio	n Management
in EUR thousand	31.12.2017	31.12.2016	31.12.2017	31.12.2016
REVENUES				
Revenues with third parties	69,231	69,215	91,942	84,167
Revenues with other segments	3,265	781	2,493	2,122
Total revenues	72,496	69,996	94,435	86,289
Segment operating result before depreciation and amortisation	7,927	7,505	10,467	8,907
Segment operating result before depreciation and amortisation from purchase price allocation	6,115	5,868	9,142	7,747
Depreciation and amortisation from purchase price allocation	- 85	- 85	- 525	- 643
Segment operating result	6,030	5,783	8,617	7,104
Net finance costs	- 161	77	- 341	- 496
Segment result	5,869	5,860	8,276	6,608

Reserve for treasury shares	Other reserves	Unappropriated surplus/ cumulative loss	Total
- 1,193	- 13,771	12,794	73,152
		8,551	8,551
	- 3,817		- 3,817
	- 3,817	8,551	4,734
		- 3,277	- 3,277
665		0	665
665	0	- 3,277	- 2,612
- 528	- 17,588	18,068	75,274
		9,497	9,497
	- 1,235		- 1,235
	- 1,235	9,497	8,262
		- 3,439	- 3,439
- 297			- 297
497			497
200	0	- 3,439	- 3,239
- 328	- 18,823	24,126	80,297

Image: Non-State in the st		PSI	onciliation	Rec	Infrastructure Management		
5,744       5,623       -11,502       -8,526       0         30,667       29,095       -11,502       -8,526       186,096       176,8         151       822       -829       -1,105       17,716       16,1	31.12.2016	31.12.2017	31.12.2016	31.12.2017	31.12.2016	31.12.2017	
5,744       5,623       -11,502       -8,526       0         30,667       29,095       -11,502       -8,526       186,096       176,8         151       822       -829       -1,105       17,716       16,1							
30,667         29,095         -11,502         -8,526         186,096         176,8           151         822         -829         -1,105         17,716         16,1	176,854	186,096	0	0	23,472	24,923	
<u>151</u> 822 - 829 - 1,105 17,716 16,1	0	0	- 8,526	- 11,502	5,623	5,744	
	176,854	186,096	- 8,526	- 11,502	29,095	30,667	
	16,129	17,716	- 1,105	- 829	822	151	
- 376 133 - 906 - 1.185 13.975 12.5							
	12,563	13,975	- 1,185	- 906	133	- 376	
0 0 0 -610 -7	- 728	- 610	0	0	0	0	
<mark>- 376</mark> 133 - 906 - 1,185 13,365 11,8	11,835	13,365	- 1,185	- 906	133	- 376	
<mark>-339</mark> -183 0 0 -841 -6	- 602	- 841	0	0	- 183	- 339	
<mark>-715</mark> -50 <mark>-906</mark> -1,185 12,524 11,2	11,233	12,524	- 1,185	- 906	- 50	- 715	

## **Development of fixed assets**

for the period from 1 January to 31 December (IFRS)

2016	Costs						
in EUR thousand	1.1.2016	Exchange differences	Additions	Disposals	31.12.2016		
Intangible assets							
Other intangible assets	24,167	4	373	338	24,206		
Goodwill	51,817	- 645	0	0	51,172		
Capitalised software development costs	1,945	0	519	0	2,464		
	77,929	- 641	892	338	77,842		
Property, plant and equipment							
Land and buildings	18,091	- 3	225	2	18,311		
Computers and computer accessories	15,132	2	1,464	1,000	15,598		
Other equipment, operating and office equipment	7,668	7	517	397	7,795		
Advance payments	0	0	130	0	130		
	40,891	6	2,336	1,399	41,834		
Financial assets							
Investments in associated companies	149	0	1	0	150		
	149	0	1	0	150		
	118,969	- 635	3,229	1,737	119,826		

## **Development of fixed assets**

for the period from 1 January to 31 December (IFRS)

2017		Costs					
in EUR thousand	1.1.2017	Exchange differences	Transfer	Additions	Disposals	31.12.2017	
Intangible assets							
Other intangible assets	24,206	- 20	0	539	812	23,913	
Goodwill	51,172	- 625	0	0	0	50,547	
Capitalised software development costs	2,464	0	0	814	0	3,278	
	77,842	- 645	0	1,353	812	77,738	
Property, plant and equipment							
Land and buildings	18,311	- 11	0	191	0	18,491	
Computers and computer accessories	15,598	- 76	0	2,352	602	17,272	
Other equipment, operating and office equipment	7,795	17	130	407	523	7,826	
Advance payments	130	0	- 130	81	0	81	
	41,834	- 70	0	3,031	1,125	43,670	
Financial assets							
Investments in associated companies	150	0	0	0	0	150	1
	150	0	0	0	0	150	
	119,826	- 715	0	4,384	1,937	121,558	

mounts	Carrying	Accumulated amortisation/depreciation						
31.12.2015	31.12.2016	31.12.2016	Disposals	Additions	Exchange differences	1.1.2016		
8,465	7,248	16,958	334	1,585	5	15,702		
49,559	48,914	2,258	0	0	0	2,258		
1,394	1,589	875	0	324	0	551		
59,418	57,751	20,091	334	1,909	5	18,511		
7,829	7,607	10,704	2	446	- 2	10,262		
2,536	2,634	12,964	985	1,353	0	12,596		
1,849	1,782	6,013	393	586	1	5,819		
0	130	0	0	0	0	0		
12,214	12,153	29,681	1,380	2,385	- 1	28,677		
149	150	0	0	0	0	0		
149	150	0	0	0	0	0		
71,781	70,054	49,772	1,714	4,294	4	47,188		

Accumulated ar	Carrying	amounts				
1.1.2017	Exchange differences	Additions	Disposals	31.12.2017	31.12.2017	31.12.2016
16,958	- 15	1,420	707	17,656	6,257	7,248
2,258	0	0	0	2,258	48,289	48,914
875	0	460	0	1,335	1,943	1,589
20,091	- 15	1,880	707	21,249	56,489	57,751
10,704	- 11	462	0	11,155	7,336	7,607
12,964	- 71	1,457	586	13,764	3,508	2,634
6,013	- 15	552	330	6,220	1,606	1,782
0	0	0	0	0	81	130
29,681	- 97	2,471	916	31,139	12,531	12,153
0	0	0	0	0	150	150
0	0	0	0	0	150	150
49,772	- 112	4,351	1,623	52,388	69,170	70,054

# NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

PSI Software AG Berlin, as of 31 December 2017

## A. General information on the Company

The parent company of the PSI Group is PSI Software AG (formerly PSI Aktiengesellschaft für Produkte und Systeme der Informationstechnologie) (PSI AG), headquartered at Dircksenstrasse 42–44 in 10178 Berlin, Germany. It is entered in the commercial register of Berlin-Charlottenburg with the number HRB 51463.

The Board of Directors prepared the consolidated financial statements as at 31 December 2017 and the Group management report for the 2017 financial year on 9 March 2018 and then approved them for submission to the Supervisory Board.

The business operations of the PSI Group comprise the development and sale of software systems and products that meet the specific needs and requirements of customers chiefly operating in the following industries and service sectors: energy supply, production, infrastructure, software technology, internet applications and business consultancy. In addition, the PSI Group performs services of all kinds in the field of data processing, sells electronic equipment and runs data processing systems.

The PSI Group is divided into three main business areas (segments), Energy Management, Production Management and Infrastructure Management.

The Company is publicly listed in the Prime Standard on the German stock exchange in Frankfurt am Main (securities identification number (WKN), A0Z1JH).

# **B.** Presentation of accounting policies and financial risk management methods

# Basis of preparation of the financial statements

The consolidated financial statements of the PSI Group are generally prepared on the basis of the historical cost principle, with the exception of derivative financial instruments and available-for-sale financial assets, which are recognised at fair value.

The consolidated financial statements of the PSI Group are prepared in accordance with International Financial Reporting Standards (IFRSs) as endorsed by the EU. The consolidated financial statements were prepared in euro. Unless specified otherwise, all figures are rounded up or down to the nearest thousand euro in line with commercial rounding.

#### Changes in accounting policies

The accounting policies applied in the 2017 financial year generally correspond to those applied in the previous year.

#### Effects of new accounting requirements

The IASB has published the following standards and interpretations that were not yet required to be applied in the 2017 financial year. These standards and interpretations are not being applied early by the Group.

On 24 July 2014, the IASB published the final standard IFRS 9 "Financial Instruments" (IFRS 9 [2014]), which incorporates the results of all phases of the IFRS 9 project and supersedes both IAS 39 "Financial Instruments, Recognition and Measurement" and all earlier versions of IFRS 9 "Financial Instruments". The standard includes new regulations on classification and measurement, impairment and hedge accounting. IFRS 9 is to be applied for the first time for the financial year beginning on or after 1 January 2018. The effects of these new regulations are being analysed by the Group. Based on the current status of this analysis, no significant effects on the net assets, financial position and results of operations are anticipated.

IFRS 15 was published in May 2014 and is to be applied for the first time for the financial year beginning on or after 1 January 2018. Earlier application is permitted. The standard is to be applied retrospectively. The standard introduces a new model for revenues recognition with five analysis steps that is to be applied to all revenues from contracts with customers. The key principle of the standard is that an entity must recognise revenues at the time of the transfer of goods or services to customers and in the amount of the consideration that the entity can expect in return for the transfer of these goods or services. The principles in IFRS 15 provide a structured approach for the measurement and recognition of revenues. The scope of the standard extends to all types of sectors and companies and therefore supersedes all existing provisions relating to revenues recognition (IAS 11 "Construction Contracts", IAS 18 "Revenue", IFRIC 13 "Customer Loyalty Programmes", IFRIC 15 "Agreements for the Construction of Real Estate", IFRIC 18 "Transfers of Assets from Customers" and SIC 31 "Revenue -Barter Transactions Involving Advertising Services"). The application of the new standard requires more estimates and judgements than the currently applicable standards on revenues recognition, since the amount of revenues to be recognised is determined by the amount of the consideration that the entity can expect in return for the transfer of the goods or services. Particular challenges may arise when the consideration in question is variable.

Based on the detailed analysis performed in the financial year, the PSI Group arrived at the following assessment:

- As a result, the timing of revenue recognition for individual performance obligations is affected by the transition to IFRS 15. The preliminary result of the analysis shows that proprietary licences, hardware and associated integration services contributed under long-term project contracts together represent a combined performance obligation in accordance with IFRS 15. Proprietary licences, hardware and services represent input factors for producing a contractually owed combined output.
- In addition, the PSI Group arrived at the preliminary assessment that the vast majority of services under long-term project contracts that are currently accounted for using the percentage-of-completion method meet the requirement for period-based recognition. As part of the projects, an asset is created that does not have any alternative use (IFRS 15.35 c); while performing services, the PSI Group is legally entitled to payment for the services already performed. This is not expected to result in any significant effects compared to the previous method.
- The PSI Group grants warranties in its ordinary course of business. These often represent an assurance for the customer that the services in question will conform to the contractually agreed specifications after acceptance. As before, these warranties will be accounted for in accordance with IAS 37. Occasionally, an extension of the usual warranty period is agreed with individual customers. Such extended warranties will in future be recognised using a period-based method over the period for which they are granted beyond the usual warranty period. The PSI Group does not currently anticipate any significant effects, as these extended warranties are often already priced individually and recognised using a period-based method.
- The application of the new standard will not have any impact on equity.

The PSI Group plans to apply the new standard as at the required date on 1 January 2018, using the modified retroactive method. The requirements of IFRS 15 for presentation and disclosures in the notes to the financial statements will be reflected in a higher level of detail than before.

In January 2016, the IASB published the new standard IFRS 16 on accounting for leases, which has a significant impact on the presentation of the net assets, financial position and results of operations following its adoption in the Official Journal of the European Union on 31 October 2017. IFRS 16 introduces a single lessee accounting model. As a result, previously unrecognised leases with a term of more than twelve months must be recognised as assets (for the right of use) and lease liabilities in the future. IFRS 16 requires additional disclosures in the notes for both lessees and lessors. IFRS 16 applies for the first time to financial years beginning on or after 1 January 2019. Earlier application is permitted on the condition that IFRS 15 "Revenue from Contracts with Customers" is already applied or is applied at the same time as IFRS 16. The PSI Group decided against early application and will apply the standard for the financial year beginning on 1 January 2019. In accordance with the transitional provisions of IFRS 16, the transition will take place in line with the modified retrospective method and the information for the comparative period will not be adjusted. The overall impact of application is currently being examined in a project on the implementation of IFRS 16. At present, we have obtained the following preliminary findings:

- Because the PSI Group is a tenant/lessee, there will be an increase in total assets recognition of a right-of-use asset and a rent/lease liability in the same amount as at the date of initial application. Total undiscounted future lease expenses as at 31 December 2017 amounted to EUR 15,106 thousand (see G., Other disclosures, page 85).
- In the income statement, additional expenses will be incurred in future from amortisation of the right of use and accrual of interest on the liability. Previously recognised other operating rent/lease expenses, which amounted to EUR 5,675 thousand in the past period, will no longer be recognised. The operating cash flow in the cash flow statement will also change.

The Company is still in the process of transition and due to the large number of contracts and different legal conditions, the findings are still preliminary at present. In addition, no decision has been made yet on dealing with the simplification options for the recognition of short-term and low-value asset agreements.

In June 2017, IFRIC 23 "Uncertainty over Income Tax Treatments" was issued by the IASB. It clarifies recognition and measurement in relation to uncertain income tax items. The interpretation applies to taxable profits (tax losses), tax bases, unused tax losses, unused tax credits and tax rates in cases where there is uncertainty regarding the income tax treatment in accordance with IAS 12. IFRIC 23 is effective for accounting periods beginning on or after 1 January 2019. Earlier application is permitted. The PSI Group is currently examining what impact application of the interpretation will have on the consolidated financial statements.

The IASB and the IFRS IC published further pronouncements in the year under review. The standards and pronouncements required to be applied for the first time in the financial year did not have any significant effects on the consolidated financial statements of the PSI Group.

# Significant judgements, estimates and assumptions

In preparing the consolidated financial statements, the management makes judgements, estimates and assumptions that affect the amount of reported income, expenses, assets and liabilities and the associated disclosures as well as the disclosure of contingent liabilities.

In applying the Group's accounting policies, the management did not make any significant judgements that have a significant impact on the amounts in the consolidated financial statements.

The main assumptions regarding the future and other major sources of estimation uncertainty at the end of the reporting period that entail a risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are described below. The Group's assumptions and estimates are based on parameters that were available when the consolidated financial statements were prepared. However, these situations and the assumptions regarding future developments may change as a result of market trends and market conditions that are beyond the control of the Group. Such changes are not taken into account in the assumptions until they occur.

#### Impairment of non-current assets

The PSI Group tests non-current assets for impairment once a year based on the provisions of IAS 36. The impairment tests are based on the future surplus cash generated for individual assets or for groups of assets combined in cash-generating units. An asset or a cash-generating unit is impaired if its carrying amount exceeds its recoverable amount. The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs to sell and its value in use. Value in use is calculated using a discounted cash flow method. The recoverable amount depends on the discount rate used when applying the discounted cash flow method as well as on the expected future cash inflows and the growth rate used for extrapolation purposes. Significant non-current assets that are tested for impairment on an annual basis relate to the goodwill reported in the PSI Group. Further details with regard to impairment testing can be found in section C.1 of the notes. The carrying amount of the goodwill tested for impairment amounted to EUR 48,289 thousand as at 31 December 2016 (previous year: EUR 48,914 thousand, see table on page 74).

#### **Project valuation**

The PSI Group recognises revenues on the basis of estimated performance in the projects. Performance estimates are based on an estimated hourly volume and estimated costs for purchased services or on contractually agreed milestones and are continuously updated. Further details on the income recognised for projects but not yet invoiced are provided in section C. 4 of the notes (page 76). Recognised partial profits amounted to EUR 15,028 thousand as at 31 December 2017 (previous year: EUR 15,963 thousand).

#### **Deferred taxes**

Deferred tax assets are recognised for all unused tax loss carryforwards and temporary differences to the extent that it is probable or there is convincing evidence that taxable income will be available for this purpose, meaning that the loss carryforwards can actually be used. Parts of the deferred tax assets also arose in the financial years 2008 to 2015 as a result of internal restructuring within the Group (asset deals). To determine the amount of the deferred tax assets, the management must make an estimate based on the expected timing and amount of future taxable income and on the future tax planning strategy (timing of tax results, taking account of tax risks, etc.). As at 31 December 2017, the amount of non-capitalised tax benefits from loss carryforwards for corporation tax (including foreign companies) came to EUR 42.0 million, while those from loss carryforwards for trade tax came to EUR 29.9 million (previous year: EUR 47.9 million/EUR 36.4 million). No deferred tax assets have been accrued for these tax losses. Deferred tax assets attributable to temporary differences amounted to EUR 8,377 thousand as at 31 December 2017 (previous year: EUR 8,663 thousand), while deferred tax liabilities amounted to EUR 3,494 thousand (previous year: EUR 2,916 thousand). Further details are presented in section C. 11 of the notes (page 81).

#### Pensions and other post-employment benefits

The expenses from post-employment defined benefit plans and the present value of the pension liability are determined using actuarial calculations. The actuarial valuation is based on assumptions relating to discount rates, the expected retirement age, future increases in wages and salaries, mortality, and future pension increases. In view of the long-term nature of these plans, such estimates are subject to significant uncertainties. All assumptions are reviewed at the end of each reporting period. The management determines an appropriate discount rate based on the interest rates of corporate bonds that are denominated in the same currency as the post-employment benefit obligation and have a rating of at least AA from an internationally recognised rating agency. Where necessary, these interest rates are adjusted to the expected duration of the defined benefit obligation by way of extrapolation along the yield curve. The provision for pensions and similar obligations amounted to EUR 50,540 thousand as at 31 December 2017 (previous year: EUR 52,037 thousand). Further details can be found in section C.8 of the notes (page 78).

#### **Development costs**

Development costs are capitalised using the accounting policy described on page 67 (Research and development costs). Initial capitalisation of the costs is based on the management's assessment that technical and commercial viability is demonstrated. For the purposes of determining the amounts to be capitalised, the management makes assumptions with regard to the amount of expected future cash flows from the project. The carrying amount of capitalised development costs amounted to EUR 1,943 thousand as at 31 December 2017 (previous year: EUR 1,589 thousand).

#### **Principles of consolidation**

#### a) Subsidiaries

The financial statements of the Group comprise PSI AG and the companies it controls. The consolidated financial statements include PSI AG and its subsidiaries over which it exercises control as defined in IFRS 10. PSI AG controls an investee when it has direct or indirect power over the investee, is exposed to variable returns from the investee and has the ability to affect the investee's variable returns through its power over it.

Company acquisitions are accounted for using the acquisition method in accordance with IFRS 3. Companies acquired or sold during the financial year under review are included in the consolidated financial statements starting from the date of the acquisition or sale.

The excess of the cost of an acquisition over the interest in the fair value of the identifiable assets and liabilities acquired as at the date of the acquisition transaction is referred to as goodwill and recognised as an asset. The identifiable assets and liabilities recognised are measured at their fair values as at the acquisition date.

The following changes occurred in the 2017 financial year with regard to the fully consolidated companies:

In February 2017, PSIAG Scandinavia AB, Sweden, was founded as a wholly owned subsidiary. The company was entered in the register of Karlstad. PSI Turkey has discontinued its operations and it was resolved to apply for the deletion of the company with the responsible authorities in Turkey.

In addition to PSI AG, the following companies were included in the consolidated financial statements:

- PSI Automotive & Industry GmbH ("PSI AI")
- PSI Logistics GmbH ("PSI Logistics")
- PSI Nentec GmbH ("Nentec")
- PSI Metals GmbH ("PSI Metals")
- PSI Transcom GmbH ("PSI Transcom")
- PSI AG für Produkte und Systeme der Informationstechnologie, Switzerland ("PSI AG/CH")
- PSI Mines&Roads GmbH ("PSI Mines&Roads")
- PSI Energy Markets GmbH ("PSI Energy")
- PSI Automotive & Industry Austria GmbH, Austria ("PSI AI Austria") (formerly PSI CNI Control Networks & Information Management GmbH)
- PSI Polska Sp. z o.o., Poland ("PSI Poland")
- PSI Information Technology (Shanghai) Co. Ltd., China ("PSI China")
- · PSI Metals Non Ferrous GmbH ("PSI Metals NF")
- PSI FLS Fuzzy Logik & Neuro Systeme GmbH ("PSI FLS") (formerly FLS Fuzzy Logik Systeme GmbH)
- OOO PSI, Russia ("PSI Russia")
- PSI Metals Austria GmbH, Austria ("PSI Metals Austria")
- PSI Metals Belgium NV, Belgium ("PSI Metals Belgium")
- PSI METALS INDIA PRIVATE LIMITED, India ("PSI Metals India")
- PSI Incontrol Sdn. Bhd., Malaysia ("PSI Incontrol") as the holding company of the following companies (hereafter collectively referred to as the "PSI Incontrol Group")
  - a) PSI Incontrol Private Limited, India
  - b) Incontrol Tech For Shares SPC, Bahrain
  - c) Incontrol Tech Holdings (Thailand) Ltd., Thailand
  - d) Incontrol Tech (Thailand) Ltd., Thailand
  - e) PSI Incontrol ANZ Pty Ltd., Australia
- PSI METALS NORTH AMERICA INC., USA ("PSI Metals NA")
- · Time-steps AG, Switzerland ("Time-steps")
- PSI Metals Brazil Ltda., Brazil ("PSI Metals Brazil")
- PSI Metals UK Limited, UK ("PSI Metals UK")
- OOO OREKHsoft, Russia ("OREKHsoft")
- · PSIAG Scandinavia AB, Sweden ("PSI Scandinavia")

#### b) Associated companies

An associated company as defined in IAS 28 is a company in which the PSI Group generally holds more than 20% of the voting rights and over which the Group has significant influence. Investments in associated companies are accounted for using the equity method. In accordance with the equity method, investments in an associated company are recognised in the balance sheet at acquisition cost plus changes in the Group's share of the associated company's net assets that occurred after the acquisition. The consolidated income statement includes the share of the associated company's profit or loss attributable to the Group. Changes reported directly in the associated company's equity are recognised by the Group in the amount of its share in the statement of changes in equity where appropriate. Unrealised gains and losses from transactions between the Group and the associated company are eliminated in line with the share in the associated company.

The investments in the following associated companies are measured using the equity method:

- caplog-x GmbH, Leipzig ("caplog-x"), 31.3 %
- OOO Gazavtomatika dispetcherskije sistemy, Russia, 33.0 %

## c) Consolidation measures and uniform measurement throughout the Group

The annual financial statements of the subsidiaries and associated companies included in the consolidated financial statements are based on uniform accounting standards and reporting periods/reporting dates.

Intragroup balances and transactions and resulting intragroup gains and unrealised gains and losses between consolidated companies were eliminated in full. Unrealised losses were eliminated only if the transactions did not provide evidence of an impairment of the asset transferred.

#### Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In a fair value measurement, it is assumed that the transaction in which the asset is sold or the liability is transferred takes place either in the

- · principal market for the asset or liability or
- the most advantageous market for the asset or liability, if there is no principal market.

The Group must have access to the principal market or to the most advantageous market. The fair value of an asset or liability is measured based on the assumptions that the market participants would make when fixing a price for the asset or liability, assuming that the market participants act in their best economic interests. Measurements of the fair value of a non-financial asset take account of the market participant's ability to generate economic benefits from the highest and best use of the asset or from its sale to another market participant that finds the best use for the asset. The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available for measuring the fair value. In doing so, the use of relevant observable inputs is to be maximised and the use of unobservable inputs is to be minimised.

All assets and liabilities whose fair value is determined or reported in the financial statements are classified in the fair value hierarchy described below based on the lowest-level input that is significant to the entire fair value measurement:

- Level 1 Quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2 Valuation methods in which the lowest-level input that is significant to the entire fair value measurement is directly or indirectly observable on the market
- Level 3 Valuation methods in which the lowest-level input that is significant to the entire fair value measurement is not observable on the market

In the case of assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether there have been any transfers between the levels of the hierarchy by reviewing the classification at the end of each reporting period.

#### **Currency translation**

PSI's consolidated financial statements are prepared in euro, the functional currency and presentation currency of the Group. Each company within the Group determines its own functional currency. The items included in the respective company's financial statements are measured using this functional currency. Foreign currency transactions are initially translated at the spot exchange rate between the functional currency and the foreign currency at the date of the transaction. Monetary assets and liabilities in foreign currencies are translated into the functional currency at the closing rate. All associated exchange differences are recognised in the net profit or loss for the period. Nonmonetary items of the Group balance sheet in foreign currencies are updated at historical exchange rates.

The functional currency of the main foreign companies, such as PSI AG/CH, PSI Poland, PSI Russia, the Incontrol Group companies, PSI Metals Brazil, PSI Metals UK, PSI Metals NA and PSI China, is generally the respective local currency. As at the end of the reporting period, the assets and liabilities of these subsidiaries are translated into the presentation currency of PSI AG (the euro) at the closing rate. Income and expenses are translated at the exchange rate on the date of the transaction. The exchange differences that arise on translation are recognised as a separate component of equity.

#### Non-current assets

#### a) Intangible assets

Intangible assets are initially measured at cost. Intangible assets are recognised if it is probable that the future economic benefits that are attributable to the asset will flow to the company and if the cost of the asset can be measured reliably. For the purposes of subsequent measurement, intangible assets are recognised at cost less accumulated amortisation and accumulated impairment losses (reported under depreciation and amortisation). The amortisation period and the amortisation method are reviewed at the end of each financial year.

Intangible assets comprise:

#### Goodwill

Goodwill from a business combination is initially measured at cost, which is calculated as the excess of the cost of the business combination over the PSI Group's interest in the fair values of the identifiable assets acquired and the identifiable liabilities and contingent liabilities assumed. After initial recognition, goodwill is measured at cost less accumulated impairment losses. Goodwill is tested for impairment at least once a year or when facts or changes in circumstances indicate that its carrying amount may have decreased. To check whether goodwill acquired in a business combination is impaired, this goodwill must be allocated to a cash-generating unit. If the recoverable amount of the cash-generating unit is lower than its carrying amount, an impairment loss must be recognised. Reversals of impairment losses are not recognised.

#### Industrial property rights and licences

Amounts paid to purchase industrial property rights and licence rights are capitalised and subsequently amortised on a straight-line basis over their expected useful lives (three to eight years).

The acquisition cost of new software is capitalised and treated as an intangible asset, provided it does not constitute an integral part of the related hardware. Software is amortised on a straight-line basis over a period of three to five years. Costs incurred to restore or maintain the future economic benefits that the Company had originally expected are recognised as an expense.

#### **Research and development costs**

Research costs are recognised as an expense in the period in which they are incurred. Development costs for an individual project are capitalised as an intangible asset only if the criteria for capitalisation under IAS 38.57 are met, i.e. if the Group can demonstrate the following:

- · the technical feasibility of completing the intangible asset
- the intention to complete the intangible asset and the ability to use or sell it
- · how the asset will generate future economic benefits
- · the availability of resources for completing the asset
- the ability to measure reliably the expenditure attributable to the intangible asset during its development

After their initial recognition, development costs are accounted for at cost less accumulated impairment losses. The amortisation period generally lasts five years, beginning when the development phase is completed and as soon as the asset is available for use. The asset is amortised over the period during which future use is expected and this amortisation is recognised under depreciation and amortisation. During the development phase, an impairment test is performed on an annual basis.

#### b) Property, plant and equipment

Property, plant and equipment is measured at cost less any accumulated depreciation and any accumulated impairment losses. For property, plant and equipment acquired as part of business combinations, cost corresponds to the fair value at the acquisition date. If items of property, plant and equipment are sold or scrapped or if no further economic benefit is expected from their use, then the corresponding cost and accumulated depreciation are derecognised. Any realised gain or loss on disposal is reported in the consolidated income statement.

The cost of an item of property, plant and equipment comprises the purchase price including the costs necessary to bring the item into condition for its intended use. Subsequent expenses such as servicing and maintenance costs that arise after the fixed assets have started being used are recognised as an expense when incurred. If it is likely that expenses will result in the Company receiving future economic benefits in excess of the originally assessed performance of the existing asset, these expenses are capitalised as additional costs of property, plant and equipment.

Depreciation is calculated on a straight-line basis over an estimated useful life, assuming a residual carrying amount of EUR 0. The following estimated useful lives are used for the individual asset groups:

Buildings	25 to 50 years
Exterior facilities,	
other constructions	10 to 20 years
Computer hardware	3 to 4 years
Leasehold improvements	Based on remaining term
	of the lease or actual useful
	life if shorter
Other office equipment	5 to 13 years

The useful lives and depreciation method for property, plant and equipment are reviewed on an annual basis to ensure that the depreciation method and depreciation period are consistent with the expected pattern of economic benefits from the items of property, plant and equipment.

#### c) Impairment of non-current, non-financial assets

Non-current assets are tested for impairment when facts or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. In the first step of the impairment test, the recoverable amount of the asset or cash-generating unit must initially be determined. This is defined as the higher of fair value less costs to sell and value in use. Fair value less costs to sell is defined as the price that can be achieved in a sale of an asset or cash-generating unit between two knowledgeable, willing and independent business partners, less the costs to sell. The value in use of an asset or a cash-generating unit is determined by its present value in its current use on the basis of expected cash flows. No impairment of non-current assets was recognised in the 2017 and 2016 financial years.

#### **Financial assets**

Financial assets as defined in IAS 39 are divided into the following categories:

- originated loans and receivables
- financial assets held for trading

As at 31 December 2017 and 31 December 2016, the PSI Group mainly held originated loans and receivables.

Originated loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. These assets are measured at amortised cost using the effective interest method. Gains and losses are recognised in the net profit or loss for the period when the loans and receivables are derecognised or impaired and through the amortisation process.

Financial assets held for trading are recognised at fair value when the relevant agreement is concluded and are remeasured at fair value in subsequent periods. Gains and losses from changes in the fair value of these financial assets held for trading are recognised immediately in profit or loss.

The Group uses the following hierarchy for determining and reporting the fair values of financial instruments depending on the valuation method used:

- Level 1: Quoted prices (unadjusted) in active markets for similar assets or liabilities
- Level 2: Methods in which all inputs with a significant effect on the recognised fair value are observable either directly or indirectly
- Level 3: Methods that use inputs with a significant effect on the recognised fair value that are not based on observable market data

Financial assets are tested for impairment at the end of each reporting period. In the case of financial assets carried at amortised cost, if it is likely that the Company will not be able to collect all amounts of loans, receivables or held-to-maturity investments due in accordance with the contractual conditions, then an impairment loss or a valuation allowance for receivables is recognised in profit or loss. The impairment loss is defined as the difference between the carrying amount of the asset and the present value of expected future cash flows measured in line with the effective interest method. The carrying amount of the asset is reduced using an allowance account. The impairment loss is recognised in profit or loss. Impairment losses previously recognised as expenses are adjusted in income if the subsequent partial recovery in value (or decrease in the impairment loss) can be related objectively to an event occurring after the original impairment. However, increases in value are recognised only to the extent that they do not exceed the amortised cost if there had been no impairment. Financial assets are derecognised if they are classified as uncollectible.

As in the previous year, the carrying amounts of the financial assets and liabilities generally correspond to their fair values.

#### **Financial liabilities**

Financial liabilities as defined in IAS 39 are divided into the following categories:

- financial liabilities held for trading
- other financial liabilities

The financial liabilities reported in the consolidated financial statements of the PSI Group were mainly classified as other financial liabilities.

On initial recognition, financial liabilities are accounted for at cost, which corresponds to the fair value of the consideration given; transaction costs are also included.

Financial liabilities are no longer reported when they are repaid, i.e. when the obligations specified in the contract have been settled or cancelled or have expired.

### As at 31 December 2017, the maturities of financial liabilities broke down as follows:

EUR thousand	Payable on demand	Payable within 1 year	Payable within more than 1 year	Total
Trade payables	3,008	11,536	20	14,564
Other liabilities	371	28,196	639	29,206
Financial liabilities	0	2,622	0	2,622
	3,379	42,354	659	46,392

Trade payables due within one year include obligations for services that have yet to be performed in the amount of EUR 6,703 thousand.

As at 31 December 2016, the maturities of financial liabilities broke down as follows:

EUR thousand	Payable on demand	Payable within 1 year	Payable within more than 1 year	Total
Other liabilities	824	11,712	17	12,553
Financial liabilities	690	29,785	444	30,919
	1,514	41,497	461	43,472

Trade payables due within one year include provisions for services that have yet to be performed in the amount of EUR 6,429 thousand.

### Financial risk management objectives and methods

The main financial instruments used by the Company to finance its operating business consist of cash and cash equivalents, available-for-sale financial assets and current liabilities (overdrafts) and other liabilities. There are also current receivables and liabilities from long-term development contracts, which are also covered by financial risk management. The main risks result from credit and liquidity risks. The Group is exposed to currency risks as a result of its business operations and net investments in foreign subsidiaries. For significant loans issued within the Group, a sensitivity analysis in relation to exchange rates was performed in order to illustrate possible effects on the Group net result. If the EUR/MYR exchange rate had been 10% lower as at 31 December 2017, this would have resulted in a decrease in the Group net result of approximately EUR 407 thousand (previous year: EUR 501 thousand). Conversely, a 10% increase in the EUR/MYR exchange rate would have meant an increase in the Group net result of approximately

EUR 407 thousand (previous year: EUR 501 thousand). Due to the low significance of interest-bearing liabilities, interest risks exist only to a limited extent.

### a) Credit risk

Credit risk, or the risk that a counterparty may fail to meet its payment obligations, is managed by using credit facilities, defining order-specific prefinancing ratios and applying monitoring procedures. The Group enters into transactions only with creditworthy third parties. A credit assessment is performed for all customers wishing to enter into transactions with the Group on a credit basis. Where appropriate, the Company obtains collateral. Because most of the PSI Group's customers are well-known major companies from the energy and utilities sector or the steel and automotive industry that have good or very good credit quality, the Board of Directors believes that the overall receivables portfolio of the PSI Group has a lower than average risk profile in comparison to other software providers. Concentrations of risk may arise with individual customers or groups of customers that are exposed to the same risk scenarios or operate in the same type of environment (same sector, same customers, same sales region, same currency, etc.). For the PSI Group, there is no significant concentration of credit risk either with an individual counterparty or with a group of counterparties with similar features. The maximum credit risk corresponds to the amount of the carrying amounts reported in the balance sheet for the financial assets from trade receivables and other assets.

The Group continuously monitors the risk of a liquidity shortage using liquidity planning tools (maturity, expected cash flows). The aim of this monitoring is to maintain a balance between continuously covering financing requirements and ensuring flexibility. In monitoring the financial balance, it is particularly important to monitor project financing. The PSI Group endeavours to maximise the prefinancing ratio (ratio of advance payments received for projects to receivables from long-term development contracts) for each project. Because there are significant differences in customers' payment history in relation to prefinancing depending on the industry in which the customers operate, the PSI Group has not made any specifications with regard to the exact amount of prefinancing. In general, a sufficient prefinancing ratio is targeted in the Group as a whole. There are no further individual targets for key figures in the area of liquidity monitoring.

### b) Capital management

The primary objective of the PSI Group's capital management is to ensure that a high credit rating and a good equity ratio are maintained so as to support business operations and maximise shareholder value.

The PSI Group manages its capital structure in line with the prevailing economic conditions. No adjustment measures or amendments to capital management goals and targets were made in the 2017 or 2016 financial years.

The PSI Group monitors its capital using the equity ratio on a consolidated basis.

### **Current assets**

### a) Inventories

Inventories are measured at the lower of cost and expected net disposal proceeds less costs to be incurred.

### b) Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, fixed term deposits and demand deposits. The cash and cash equivalents reported in the Group statement of cash flows are delimited according to the above definition.

### Shareholders' equity

Shareholders' equity comprises the share capital, the capital reserve, retained earnings, treasury shares, other reserves and accumulated profit or loss.

The capital reserve includes premiums in accordance with section 150 of the German Stock Corporation Act (AktG) and offset loss carryforwards in line with resolutions on the allocation of earnings.

Retained earnings include earnings allocations in accordance with section 174 AktG.

If the PSI Group acquires treasury shares, these are deducted from shareholders' equity. The purchase, sale, issue or withdrawal of treasury shares is not recognised in profit or loss.

Other reserves include unrealised gains and losses from currency translation and actuarial gains and losses from the measurement of pension provisions.

### **Pension provisions**

The PSI Group has several defined benefit pension plans. In some cases, there are plan assets in the form of pension liability insurance for the defined benefit plans. The expenses for benefits granted under the defined benefit plans are calculated separately for each plan using the projected unit credit method. Actuarial gains and losses are recognised directly in equity.

### **Current liabilities**

### **Other provisions**

A provision is reported if the PSI Group has a present (statutory, contractual or constructive) obligation due to a past event, if it is likely that the settlement of the obligation will result in an outflow of resources that represent an economic benefit, and if the amount of the obligation can be estimated reliably. Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimate. If the corresponding interest effect is material, the amount of the provision corresponds to the present value of the expenses likely to be required to settle the obligation. Where discounting is used, the increase in the provision to reflect the passage of time is recognised as borrowing costs.

### **Government grants**

Government grants are recognised if there is reasonable assurance that the Company will comply with the conditions attaching to it. Government grants are recognised in profit or loss as scheduled in line with the recognition of the related costs which they are intended to compensate. Grants received for the acquisition of property, plant and equipment are reported under other liabilities as deferred income that is recognised as income in line with the reported depreciation during the use of the asset in question. Income generated in connection with the grants is reported as other operating income in the consolidated income statement.

In 2017 the PSI Group received subsidies totalling EUR 1,093 thousand (previous year: EUR 816 thousand) under various subsidy programmes, including programmes offered by the German federal government, the State of Berlin and the European Union. As in the previous year, the subsidies granted were recognised in profit or loss and reported as a reduction of the corresponding expenses. Besides the obligation to demonstrate the amount of the expenses for which the subsidies were granted, there are no further conditions or obligations arising from the subsidy projects.

### **Borrowing costs**

No significant borrowing costs were incurred or capitalised as part of the production of qualifying assets in the financial year under review or in the previous year.

### **Research and development costs**

Research and development costs amounted to EUR 17.7 million in the 2017 financial year (previous year: EUR 16.3 million).

### Leases

Determining whether an arrangement is or contains a lease is based on the economic substance of the arrangement and requires an assessment as to whether the fulfilment of the contractual arrangement is dependent on the use of a specific asset or assets and whether the arrangement grants a right to use the asset.

A lease is classified as an operating lease if essentially all the risks and rewards associated with ownership remain with the lessor. Lease payments within an operating lease are recognised as expenditure on a straight-line basis over the term of the lease.

The PSI Group has mainly concluded leases for vehicles and hardware (servers). The term of these operating leases is generally three to four years.

### **Recognition of revenues and income**

The PSI Group primarily generates its revenues from project business and from issuing licences for the use of its own software products to end customers, both with and without customerspecific adjustments. Revenues are also generated from the sale of third-party software, hardware and services such as installation, consultancy, training and maintenance.

### a) Project business

For long-term project contracts that meet the requirements for applying the percentage-of-completion method in accordance with IAS 11, revenues from the development and sale of software systems and products is accrued and recognised depending on the percentage of completion of the project in line with the percentage-of-completion method. The percentage of completion is determined based on the ratio of labour hours worked to the total number of labour hours planned, or on the basis of milestones. Advance payments received from customers are offset against the corresponding receivables items with no effect on profit or loss. Changes in the project conditions may result in adjustments to the costs and revenues originally recognised for individual projects. Such changes are recognised in the period in which they are determined. In addition, provisions for anticipated losses from pending transactions are recognised in the period in which these losses are determined and are offset against the amount of receivables for the project.

### b) Sale of licences

The PSI Group recognises its revenues on the basis of a corresponding contract as soon as the licence has been delivered, the selling price is fixed or determinable, there are no significant obligations to customers and collection of the receivables is considered probable.

### c) Maintenance, other services

Income from maintenance agreements is recognised on a straight-line basis over the term of the agreement on the basis of past experience. Income from consultancy and training services is recognised as soon as the service is performed. Income from maintenance is reported as revenues from software development and maintenance in the notes to the consolidated financial statements, together with income from project business (less merchandise/hardware for which the costs are passed on).

### d) Recognition of interest income

Interest is recognised on a time proportion basis, taking account of the effective yield on the asset.

### **Income taxes**

Current tax assets and liabilities for the current and prior periods are to be measured at the amount expected to be recovered from or paid to the taxation authorities. This amount is calculated based on the tax rates and tax laws that are applicable or will soon be applicable as at the end of the reporting period.

Deferred taxes are accounted for using the liability method for all temporary differences as at the end of the reporting period between the carrying amount of an asset or liability in the balance sheet and its tax base. Deferred tax liabilities are recognised for all taxable temporary differences with the exception of:

- deferred tax liabilities from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination and does not affect the accounting profit for the period or the taxable profit at the time of the transaction
- the deferred tax liability from taxable temporary differences relating to investments in subsidiaries, associated companies and interests in joint ventures that cannot be recognised if the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognised for all deductible temporary differences, unused tax loss carryforwards and unused tax credits to the extent that it is probable or there is convincing evidence that taxable income will be available against which the deductible temporary differences and the unused tax loss carryforwards and tax credits can be offset, with the exception of:

 deferred tax assets from deductible temporary differences arising from the initial recognition of an asset or liability in a transaction that is not a business combination and does not affect the accounting profit for the period or the taxable profit at the time of the transaction  deferred tax assets from deductible temporary differences relating to investments in subsidiaries, associated companies and interests in joint ventures. These can be recognised only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and sufficient taxable profit will be available against which the temporary differences can be utilised.

The carrying amount of the deferred tax assets is reviewed at the end of each reporting period and written down to the extent that it is no longer probable that sufficient taxable profit will be available against which the deferred tax asset can be at least partially offset. Unrecognised deferred tax assets are reviewed at the end of each reporting period and recognised to the extent that it has become probable or convincing evidence has emerged that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on the tax rates (and tax laws) that are applicable or have been announced as at the end of the reporting period. Income taxes relating to items recognised directly in equity are recognised in equity and not in the consolidated income statement.

Deferred tax assets and deferred tax liabilities are offset against one another if they relate to income taxes of the same taxable entity levied by the same taxation authority and if it is not possible to offset the deferred taxes against one another.

### Sales tax

Revenues, expenses and assets are recognised net of sales tax, except in the following cases:

- If the sales tax incurred when purchasing assets or services cannot be claimed from the taxation authority, the sales tax is recognised as part of the cost of the asset or as part of the expenses.
- Receivables and liabilities are recognised including the associated amount of sales tax.

The amount of sales tax reimbursed by or paid to the taxation authority is recognised in the consolidated balance sheet under receivables or liabilities.

### Segment reporting

### a) Business segments

The PSI Group is divided into three main business areas:

- Energy Management
- Production Management
- Infrastructure Management

Financial information on the business segments and geographical segments is presented in section F. of the notes (page 84) and in the segment reporting (page 56 et seq.).

### b) Transactions between business segments

Transfers between business segments are included in the "Reconciliation" column in section F. of the notes (page 85) and in the segment reporting (page 56 et seq.).

# C. Disclosures on the consolidated balance sheet

### Non-current assets

### 1 Intangible assets and property, plant and equipment

With regard to the development of non-current assets in the financial years that ended on 31 December 2017 and on 31 December 2016, please refer to the attached information on the development of intangible assets and property, plant and equipment (see Development of fixed assets, page 58 seq.).

### Goodwill and property, plant and equipment

As at 31 December 2017 and 31 December 2016, the PSI Group performed an impairment test with regard to its non-current assets. For determining the value in use, the impairment test takes account of the following units with the attributable carrying amounts for goodwill:

As of 31.12.2017	As of 31.12.2016
1,493	1,493
1,576	1,576
2,267	2,267
605	605
5,941	5,941
615	615
8,198	8,198
838	838
285	285
342	342
10,750	10,750
3,435	3,578
24,463	24,606
2,352	2,352
15,533	16,015
17,885	18,367
48,289	48,914
	31.12.2017 1,493 1,576 2,267 605 5,941 615 8,198 838 285 342 10,750 3,435 24,463 2,352 15,533 17,885

The impairment test is based on cash flow projections for the individual cash-generating units and expectations with regard to the market development (growth rates in the relevant market segment, ratio of software project income to maintenance income, hourly and daily rates for employees, average personnel expenses, higher margins for sales of hardware and third-party licences). The three-year planning period reflects the long-term corporate planning. The cash flows recognised were derived from past information. The cash flows are adjusted by means of discounts to take account of current economic conditions. As in the past year, an increase in the operating margin of between 1 % and 2 % each year is planned in the budgets for subsequent years. The assumptions made by the management with regard to the general trend for business development in the software industry correspond to the expectations of industry experts and market observers.

Discount rates of 4.98% to 8.08% after taxes (previous year: 4.61% to 8.08%) and 6.29% to 9.62% before taxes (previous year: 5.79% to 10.75%) were applied. The adjustment of the interest rate compared to the previous year reflects the current economic conditions in each case (development of the real economy and financing conditions). Cash flows arising after the three-year period are extrapolated using a growth rate of 1.16% to 4.43% (previous year: 1.82% to 2.70%).

In the view of the management, only a change in the interest rates applied in determining the value in use of the cash-generating units could currently reasonably be expected to result in the carrying amount of the cash-generating unit significantly exceeding its recoverable amount and an adjustment of the interest rates would not give rise to any further changes in parameters (ceteris paribus). For example, an assumed increase of 2 percentage points in the interest rate used for discounting would result in possible impairment of EUR 1,282 thousand. The level of the interest rate used for discounting at which no impairment would occur is 1.7 percentage points. The table below shows the underlying assumptions that were applied in the impairment tests of the groups of cash-generating units to which significant goodwill has been allocated: As at 31 December, the maturity structure of trade receivables was as follows:

in %	Long-term growth rate	Discount factor after taxes
PSI Incontrol Group	2.33	6.22
Metals Group	2.30	5.55

### **Current assets**

### 2 Inventories

in EUR thousand	2017	2016
Hardware and third-party licences	6,603	5,785
Advance payments to subcontractors	1,220	636
	7,823	6,421

#### in EUR thousand 2017 2016 Neither past due nor impaired 21,595 18,356 Past due (after impairment) < 30 days 2,910 3,451 30-60 days 1,530 1,420 212 60-90 days 406 90–120 days 146 236 > 120 days\* 4,483 4,332 10,016 9,110 As at 31 December 31,611 27,466

\* Thereof paid by 19 February 2018: EUR 534 thousand (previous year: EUR 373 thousand).

### 3 Net trade receivables

in EUR thousand	2017	2016
Gross trade receivables	34,717	30,388
Specific valuation allowances	- 3,106	- 2,922
	31,611	27,466

Trade receivables do not bear interest and are payable within 0 to 90 days. The specific valuation allowances recognised developed as follows:

As at 31 December	3,106	2,922
Reversal recognised as income	- 415	- 51
Addition recognised as expense	599	1,271
As at 1 January	2,922	1,702
in EUR thousand	2017	2016

### 4 Receivables from long-term development contracts

Receivables in accordance with the percentage-of-completion method arise when revenues are recognised but cannot yet be invoiced according to the contractual conditions. These amounts are recognised on the basis of various performance criteria such as the achievement of specified milestones, the ratio of planned labour hours to labour hours worked by internal employees, the completion of specified units or the completion of the contract. This item of the balance sheet comprises directly attributable costs (personnel expenses and purchased services) as well as an appropriate portion of general overhead costs and profit shares.

The receivables measured according to the percentage-of-completion method include the following components:

in EUR thousand	2017	2016
Costs incurred	88,768	88,946
Share of profits	15,028	15,963
Contract revenues	103,796	104,909
Advance payments received	- 83,965	- 92,453
Thereof offset against contract revenues	- 70,678	- 66,725
Receivables from long-term development contracts	33,118	38,184
Liabilities from long-term development contracts	13,287	25,728

Liabilities from long-term development contracts comprise advance payments received that exceed the corresponding receivables from long-term development contracts.

Receivables from long-term development contracts in the amount of EUR 33,118 thousand (previous year: EUR 38,184 thousand) were neither past due nor impaired as at 31 December of the respective year.

With regard to the development contracts work accepted, there are warranty obligations in the ordinary course of business.

### 5 Other assets

in EUR thousand	2017	2016
Receivables from tax credits	3,468	2,292
Prepaid expenses	1,256	1,215
Advance payments	317	896
Subsidies	135	70
Miscellaneous	603	1,158
	5,779	5,631

The prepaid expenses chiefly include accrued prepayments for maintenance and will be recognised as expenses within one year.

No specific impairment allowance was recognised for other assets; there are no past-due or impaired receivables.

### 6 Cash and cash equivalents

in EUR thousand	2017	2016
Bank balances	34,742	40,269
Fixed term deposits	3,366	2,716
Cash in hand	24	23
	38,132	43,008

The fixed term deposits and bank balances are not past due; specific valuation allowances are not required.

### 7 Equity

With regard to the development of equity, please refer to the statement of changes in Group equity (page 56 et seq.).

### a) Share capital

The fully paid-in share capital entered in the commercial register amounts to EUR 40,185,256.96 (previous year: EUR 40,185,256.96) and is divided into registered shares representing a pro rata amount of the share capital of EUR 2.56 per share.

### b) Contingent capital and authorised capital

By way of resolution of the Annual General Meeting on 16 May 2017, the Board of Directors of the Company was authorised to issue convertible and warrant-linked bonds as well as profit-sharing rights and/or income bonds (or combinations of these instruments) on one or more occasions, with the option of disapplying subscription rights in each case, until 15 May 2022.

To fulfil any rights exercised in the above context, a new "Contingent Capital 2017" was created at the Annual General Meeting on 16 May 2017. Under the Contingent Capital 2013, the Company's share capital is contingently increased by up to EUR 8,035,840.00, divided into 3,139,000 shares.

The contingent capital from an authorisation from 7 May 2013 (CC 2013) was replaced by the new Contingent Capital 2017.

By way of resolution of the Annual General Meeting on 12 May 2015, new authorised capital (AC 2015) was created. The Board of Directors was authorised, with the approval of the Supervisory Board, to increase the Company's share capital on one or more occasions by a total of up to EUR 8,035,840.00 by issuing new registered shares in exchange for cash or contributions in kind in the period until 11 May 2020.

Contingent capital and authorised capital break down as follows:

in EUR thousand	2017	2016
Authorised capital (AC)		
AC 2015 (until 11 May 2020)	8,036	8,036
	8,036	8,036
Contingent capital (CC)		
CC 2017 (until 15 May 2022)	8,036	8,036
	8,036	8,036
	16,072	16,072

### c) Capital reserves

The capital reserve includes the premium from capital increases. The costs attributable to issuing equity instruments were deducted directly from equity as a negative premium, taking account of tax effects.

### d) Reserve for treasury shares

24,885 shares were repurchased in the financial year (previous year: 0). A total of 28,889 treasury shares were transferred as part of an employee share programme. As at 31 December 2017, the number of treasury shares came to 37,346 (previous year: 41,350).

### e) Other reserves

Other reserves break down as follows:

in EUR thousand	2017	2016
Reserve for exchange differences	- 2,333	- 681
Actuarial losses	- 24,116	- 24,708
Deferred tax	7,626	7,801
	- 18,823	- 17,588

The deferred tax resulted from actuarial losses.

### f) Dividends

The Annual General Meeting approved the Board of Directors' proposal for the appropriation of net profit for 2016. Based on this resolution, a dividend of EUR 3,438,848.82 was distributed for the 2016 financial year. This corresponds to EUR 0.22 per entitled share. In the previous year, a dividend of EUR 3,277,017.87 was distributed.

The Board of Directors is proposing the distribution of a dividend of EUR 0.23 per entitled share. This corresponds to an anticipated total payment of EUR 3,602 thousand. The payment of this dividend depends on the approval of the Annual General Meeting on 16 May 2018.

### **Non-current liabilities**

### 8 Pension provisions

Pension provisions are recognised for obligations (old-age pensions, disability benefits, widows' and orphans' pensions) from future entitlements and from current benefits to eligible current and former employees of the PSI Group and their surviving dependants.

In the PSI Group, there are three different models of defined benefit pension commitments that grant retirement benefits to employees depending on their length of service at the Company and their remuneration before the start of the pension. On 5 December 2006, the Board of Directors of PSI AG and the Group Works Council concluded a Group works agreement governing the Company pension plans and compensation payments within the PSI AG Group, which covers all existing models of defined benefit pension commitments. As a Group works agreement, the agreement between the Board of Directors of PSI AG and the Group Works Council thus superseded the existing individual agreements.

The content of this agreement concerns the modification of the existing retirement benefit plans:

- The vested rights of the majority of employees as at 31 December 2006 were frozen as a fixed amount. This freezing means that the acquired entitlement to an old-age pension does not rise beyond the level reached as at 31 December 2006, neither as a result of future service nor due to future salary increases.
- As compensation for the loss of future increases in the Company pension (increases in entitlements), either steadily increasing contributions are paid into a provident fund with pension liability insurance until the end of the employment relationship, or at the latest until the employee reaches a certain age limit, or the employees are granted an increase in the gross cash compensation in the form of a steadily increasing annual lump sum payment. These compensation amounts are calculated in accordance with actuarial principles.

• In calculating the compensation amounts, the first step is to determine what constant annual premium would have to be paid to a notional insurer if this insurer had to continue paying the retirement benefits under the previous pension plans with no changes. In the first year, the amount of the compensation payment to the employees corresponds to 70% of the constant annual premium of a notional insurer calculated in this way, and subsequently it is increased by a constant percentage each year. If an employee leaves the Company early and the contributions paid into the provident fund have not yet reached 100% of the employee's compensation entitlement, the PSI Group is not required to pay the difference to the employee.

The amount of the pension obligation (present value of the pension commitments) was calculated using actuarial methods based on the following assumptions:

Discount factorImage: Constraint of the sector	in %	2017	2016
Austria         1.80         1.10           Salary trend	Discount factor		
Salary trend         Image: Salary trend           Germany         0.00/1.301         1.301           Austria         2.75         2.75           Pension trend         Image: Salary trend         Image: Salary trend           Germany         1.50         1.50           Austria         0.00         0.00           Austria         0.00         0.00           Staff turnover         Image: Salary trend         Image: Salary trend           Germany         0.00/4.502         4.502	Germany	1.70	1.56
Germany         0.00/1.30 <sup>1</sup> 1.30 <sup>1</sup> Austria         2.75         2.75           Pension trend	Austria	1.80	1.10
Austria2.75Pension trend2Germany1.50Austria0.00Staff turnover0Germany0.00/4.5024.5024.502	Salary trend		
Pension trendImage: Constraint of the second se	Germany	0.00/1.30 <sup>1</sup>	1.30 <sup>1</sup>
Germany         1.50         1.50           Austria         0.00         0.00           Staff turnover	Austria	2.75	2.75
Austria         0.00         0.00           Staff turnover         0 </td <td>Pension trend</td> <td></td> <td></td>	Pension trend		
Staff turnover	Germany	1.50	1.50
Germany         0.00/4.50 <sup>2</sup> 4.50 <sup>2</sup>	Austria	0.00	0.00
	Staff turnover		
Austria 0.00 0.00	Germany	0.00/4.50 <sup>2</sup>	4.50 <sup>2</sup>
	Austria	0.00	0.00

#### Mortality tables used:

Germany	RT Heubeck 2005 G	
Austria	AVÖ 2008	
1 A portion of the pension commitments was superseded on 31 December		

2006. For this portion, salary trends are not relevant to calculating the obligation.

2 A portion of the pension commitments was superseded on 31 December 2006. For this portion, staff turnover assumptions are not relevant with regard to calculating the obligation.

The salary trend comprises anticipated future salary increases that are estimated on an annual basis depending on factors such as inflation and length of service at the Company.

As at 31 December 2017, an age at the expiry of financing of 65 years and 5 months (previous year: 65 years and 5 months) was assumed when calculating the German pension obligation. The age at the expiry of financing is based on statistics on retirement ages in the PSI Group. For calculating the severance provision in Austria, the APG 08 (Austrian General Pension Act) applies.

Expenses for retirement benefits break down as follows:

in EUR thousand	2017	2016
Service cost reported under personnel expenses	39	46
Interest expense reported under net interest	806	1,073
Expenses for retirement benefits	845	1,119

The following overview shows the development of the net amount of the provision:

Pension liability	50,540	52,037
Plan assets	- 11,578	- 12,360
Present value of defined benefit obligation	62,118	64,397
in EUR thousand	2017	2016

The following overview shows the development of the present value of the defined benefit obligation:

in EUR thousand	2017	2016
Pension liability, start of period	64,397	59,107
Actuarial gains and losses from chan- ges in demographical assumptions recognised in other comprehensive income	- 727	4,768
Actuarial gains and losses from chan- ges in financial assumptions recognis- ed in other comprehensive income	83	- 282
Actuarial gains and losses based on experience-related assumptions and recognised in other comprehensive income	52	500
Pension payments	- 1,750	- 1,634
Expenses for retirement benefits	845	1,119
Present value of insured defined benefit obligation	- 782	234
Additions/disposals	0	585
Pension liability, end of period	62,118	64,397

The following overview shows the development of the present value of the plan assets:

in EUR thousand	2017	2016
Present value of plan assets, start of period	12,360	12,126
Change in plan assets	- 782	234
Present value	11,578	12,360

The table below shows a quantitative sensitivity analysis of the key assumptions as at 31 December 2017:

Assumption	Interest rate sensitivity		Pension sensit	
Scenario	Increase Decrease of 0.2 % of 0.2 %		Increase of 0.2 %	Decrease of 0.2 %
Effects on defined benefit obligation (in EUR thousand)	- 1,333	1,392	1,077	- 1,043

As at 31 December 2016, the quantitative sensitivity analysis broke down as follows:

Assumption	Interest rate sensitivity		Pension sensit	
Scenario	Increase Decrease of 0.2 % of 0.2 %		Increase of 0.2 %	Decrease of 0.2 %
Effects on defined benefit obligation (in EUR thousand)	- 1,431	1,496	1,129	- 1,094

The above sensitivity analysis was performed using a method that extrapolates the effect of realistic changes in the key assumptions as at the end of the reporting period on the defined benefit obligation.

The average term of the defined benefit obligation as at the end of the reporting period is shown below.

in years	2017	2016
Germany	13.24	14.01
Austria	5.90	6.80

The table below shows the expected payout structure for the coming years:

in EUR thousand	2017	2016
Pension payments made	1,750	1,634
Expected pension payments		
2017	1,940	1,916
2018	2,011	1,997
2019	2,144	2,137
2020	2,227	2,217
2021	2,304	n.a.
Another 5 years	11,747	11,648

### **Current liabilities**

### 9 Financial liabilities

The financial liabilities of EUR 2,622 thousand (previous year: EUR 0 thousand) consist of liabilities from overdrafts.

The PSI Group uses short-term, floating-rate overdrafts for financing purposes. The financial liabilities are repaid on a monthly basis and bear interest at a rate of between 2.73 % and 3.25 %. No special collateral is provided. Continuous refinancing of current financial liabilities is targeted. The fair values of the financial liabilities correspond to their carrying amounts. As at 31 December 2017, the PSI Group had undrawn borrowing facilities from overdrafts in the amount of EUR 24,278 thousand (previous year: EUR 22,097 thousand).

Expenses for interest from overdrafts amounted to EUR 109 thousand in the 2017 financial year (previous year: EUR 147 thousand).

### 10 Other liabilities

in EUR thousand	2017	2016
Personnel-related liabilities	14,974	13,567
Taxes payable	3,870	5,081
EUR 3,125 thousand in wage tax and sales tax (previous year: EUR 4,067 thousand)		
EUR 745 thousand in income tax (previous year: EUR 1,014 thousand)		
Deferred income	6,196	7,496
Social security liabilities	315	411
Miscellaneous	3,851	4,364
	29,206	30,919

Personnel-related liabilities mainly include obligations for holiday entitlements, overtime and special payments. The deferred income (primarily prepaid maintenance income) will affect profit or loss within one year, with the exception of EUR 159 thousand (previous year: EUR 1,355 thousand) that will affect profit or loss in the coming years.

### 11 Deferred taxes/income taxes

German trade tax is levied on the taxable profit of the German Group companies, which is calculated by deducting certain income that is not subject to trade tax and adding certain expenses that are not deductible for trade tax purposes. The effective trade tax rate depends on the municipality in which the respective German Group company operates. As in the previous year, the average trade tax rate in 2017 was approximately 15%. A corporation tax rate of 15% applied in the 2016 and 2017 financial years. In addition to corporation tax, a solidarity surcharge of 5.5% is levied on the corporation tax determined. This therefore results in an effective tax rate of 29.83% (previous year: 29.83%) for the calculation of current income taxes for the 2017 financial year. Income tax expense for the current financial year breaks down as follows:

in EUR thousand	2017	2016
Current tax expense		
Current year	- 2,339	- 1,908
Deferred tax expense		
Change in intangible assets	111	- 22
Change in long-term development contracts	- 661	- 1,699
Partial retirement and anniversary bonus provisions	7	3
Changes in trade receivables	654	2,287
Change in pension provisions	- 300	- 190
Project-related provisions	425	- 174
Other provisions	98	- 183
Fixed assets	11	- 37
Deferred income	- 1,033	- 759
	- 688	- 774
Income tax expense	- 3,027	- 2,682

The following overview shows a reconciliation of tax expense/ income:

in EUR thousand	2017	2016
Earnings before taxes	12,524	11,233
Theoretical income tax expense		
(29.83 %; previous year: 29.83 %)	- 3,736	- 3,351
Non-capitalisation of tax losses	- 683	- 359
Non-deductible operating expenses and trade tax additions	- 427	- 229
Use of non-capitalised tax loss carry- forwards	1,943	
Effects from tax rate differences in foreign countries	- 75	238
Tax expense for previous years	- 29	- 4
Tax-exempt foreign income	31	44
Write-downs on equity investments/ securities	- 11	0
Miscellaneous	- 40	121
Current tax expense	- 3,027	- 2,682

The deferred taxes reported in the PSI Group break down as follows:

in EUR thousand	2017	2016
Deferred tax		
Pension provisions	7,370	7,846
Intangible assets	- 675	- 786
Goodwill amortisation with impact on tax	- 470	- 470
Partial retirement and anniversary bonus provisions	39	32
Project-related provisions	1,074	649
Receivables from long-term development contracts	- 4,408	- 3,747
Fixed assets	- 5	- 16
Trade receivables	2,556	1,902
Other provisions	180	133
Deferred income	- 840	193
Miscellaneous	62	11
	4,883	5,747
thereof recognised in profit or loss	- 688	- 774
thereof recognised in other comprehensive income	- 175	1,485
Amounts recognised in balance sheet		
Deferred tax assets	8,377	8,663
Deferred tax liabilities	- 3,494	- 2,916

The PSI Group has the following tax loss carryforwards:

in EUR million	2017	2016
Loss carryforward for trade tax in Germany	29.9*	36.3*
Loss carryforward for corporation tax in Germany	32.7*	38.6*
Loss carryforwards for foreign countries	9.4	9.3

The loss carryforwards in Germany do not expire.

\* The disclosures on loss carryforwards in Germany take account of the fact that the acquisition that occurred in the 2009 financial year and the allocation of a total of 28.60 % of the voting rights in the Company by Kajo Neukirchen GmbH, Eschborn, since 1 January 2009 resulted in the loss of 25.65 % of the eligible tax loss carryforwards. In May 2017, the German Federal Constitutional Court declared the underlying law to be unconstitutional based on an order for reference submitted by the Hamburg Fiscal Court. As a result of this judgement, the legislators are required to draw up new regulations for loss deduction for corporations in compliance with the constitution by no later than 31 December 2018, with retroactive effect from 1 January 2008.

# D. Disclosures on the consolidated income statement

The consolidated income statement is prepared using the nature of expense method.

### 12 Revenues

in EUR thousand	2017	2016
Software development and maintenance	158,917	149,479
Licences	12,125	13,581
Merchandise	15,054	13,794
	186,096	176,854

### 15 Personnel expenses

in EUR thousand	2017	2016
Wages and salaries	95,192	92,697
Social security contributions	17,151	16,572
	112,343	109,269

Personnel expenses include expenses for payments to private pension institutions of EUR 576 thousand (previous year: EUR 624 thousand) and payments to state pension funds of EUR 5,832 thousand (previous year: EUR 5,490 thousand) in connection with defined contribution pension commitments.

### 16 Depreciation and amortisation

	4,351	4,294
Of intangible assets and property, plant and equipment	4,351	4,294
in EUR thousand	2017	2016

### 13 Other operating income

in EUR thousand	2017	2016
Project income	1,248	2,028
Income from currency translation	1,207	947
Income from 1 % regulation for leasing cars	843	871
Miscellaneous	909	1,171
	4,207	5,017

### 14 Cost of materials

in EUR thousand	2017	2016
Cost of purchased services	14,685	14,155
Cost of purchased goods	12,543	12,055
	27,228	26,210

### 17 Other operating expenses

in EUR thousand	2017	2016
Travel costs	6,715	6,083
Rental, leasing of real estate	6,222	6,130
Project-related expenses	1,882	262
Advertising and marketing activities	4,145	3,995
Lease costs for moveable assets	1,980	2,029
Data line, IT and telephone costs	2,981	3,014
Legal and consulting costs	1,999	2,393
Contributions, fees and levies	446	304
Miscellaneous	6,646	6,053
	33,016	30,263

### 18 Net finance costs

in EUR thousand	2017	2016
Financial income	206	486
Financial expenses	- 1,189	- 1,235
Net income from associated companies	142	147
	- 841	- 602

#### 19 Earnings per share

In accordance with IAS 33, basic earnings per share are calculated by dividing the Group net result or loss by the weighted number of shares.

Net profit or loss for the period (EUR thousand)	9,497	8,551
Weighted number of shares (thousands)	15,641	15,618
Basic/diluted earnings per share (EUR per share)	0.61	0.55

To calculate diluted earnings per share, the net profit attributable to ordinary shareholders and the weighted average number of shares outstanding are adjusted for the effects of all dilutive potential ordinary shares that could arise as a result of subscription rights being exercised.

### E. Disclosures on the cash flow statement

The reported cash and cash equivalents are not subject to any restrictions on their availability due to third parties. During the year under review, a dividend of 22 euro cents per share (previous year: 21 euro cents per share) was distributed to the shareholders for the 2016 financial year. The breakdown of cash and cash equivalents is shown in the table under C. 6 (page 76). Overdraft liabilities were not included in cash and cash equivalents.

# F. Disclosures on segment reporting

The PSI Group has three main segments that are reportable and applies IFRS 8 "Segment Reporting". This standard includes regulations on the disclosure of information on business areas and geographical segments.

### **Description of the segments**

- Energy Management: Intelligent solutions for utility companies in the electricity, gas, oil and water sectors. The focus here is on reliable and cost-effective solutions for grid management and for trade and distribution in liberalised energy markets.
- Production Management: Software products and individual solutions for production planning, particularly tasks relating to production control and efficient logistics. The focus is on optimising the use of resources and increasing quality and cost-effectiveness.
- Infrastructure Management: High-availability control system solutions for the monitoring and cost-effective operation of infrastructure in the areas of transport, public safety, environmental protection and disaster management.

### Reconciliation

Revenues from transactions with other segments are grouped in the "Reconciliation" column. Revenues between business segments amounted to EUR 11,502 thousand as at 31 December 2017 (previous year: EUR 8,526 thousand). Certain expenses are not allocated to the individual segments. The result from reconciliation amounts to EUR –906 thousand (previous year: EUR –1,185 thousand).

### Additional geographical disclosures

In the 2017 financial year, the PSI Group generated revenues of EUR 104.7 million (previous year: EUR 97.0 million) in Germany and revenues of EUR 81.4 million (previous year: EUR 79.9 million) in foreign countries. Non-current assets of EUR 35,762 thousand (previous year: EUR 37,239 thousand) are attributable to foreign countries.

### G. Other disclosures

### Other financial obligations and contingencies

### Operating rental agreements and leases – PSI Group as lessee

Cars, office equipment, data processing systems and other equipment were rented under operating leases. In the 2017 financial year, rent and leasing fees of EUR 1,022 thousand (previous year: EUR 1,012 thousand) were incurred in this context. PSI AG concluded a rental agreement for an office building in Berlin in the 1996 financial year. The rental agreement was renegotiated in 2010 and had a term until 31 March 2017. In June 2015, an option agreed in the rental agreement for its renewal was exercised. The rental agreement now has a term until 31 March 2022.

As at 31 December 2017, these and other rental agreements and leases resulted in the following rent and lease payments:

in EUR thousand	Rent payments	Lease payments	Maintenance	Obligation from committed loan	Total
2018	4,519	1,556	863	132	7,070
2019	3,450	855	68	0	4,373
2020	2,591	399	42	0	3,032
2021	803	82	29	0	914
2022	621	5	16	0	642
2023 and thereafter	225	0	0	0	225
Total	12,209	2,897	1,018	132	16,256

## As at 31 December 2016, these and other rental agreements and leases resulted in the following rent and lease payments:

in EUR thousand	Rent payments	Lease payments	Total
2017	4,300	1,230	5,530
2018	3,461	780	4,241
2019	3,270	396	3,666
2020	2,921	62	2,983
2021	2,671	3	2,674
2022 and thereafter	883	0	883
Total	17,506	2,471	19,977

### **Bill of exchange guarantees**

Bill of exchange guarantees of EUR 34,972 thousand (previous year: EUR 41,278 thousand) were assumed for the PSI Group by various insurance companies and banks as at the end of the reporting period. The table below shows the undiscounted maximum amount for which PSI AG was liable at the end of the reporting period:

in EUR thousand	2017	2016
Advance payment guarantee	25,845	30,407
Contract performance guarantee	3,982	7,465
Warranty guarantee	4,321	2,417
Rent guarantee	824	789
Bid guarantee	0	200
Total	34,972	41,278

### Employees

The average number of employees in the PSI Group in the financial year under review was 1,641 (previous year: 1,637). The workforce breaks down by function as follows:

Total	1,641	1,637
Development	41	33
Sales	133	126
Administration	177	162
Production	1,290	1,316
	2017	2016

### **Equity statement**

	Shares in %	Equity <sup>1)</sup> as of 31.12.2017 in EUR thousand	Annual net profit <sup>1)</sup> 2017 in EUR thousand
PSI Automotive & Industry GmbH, Berlin	100	8,599	1,501
PSI Nentec GmbH, Karlsruhe	100	501	02)
PSI Metals GmbH, Düsseldorf	100	5,163	02)
PSI Information Technology (Shanghai) Co. Ltd., Shanghai, China	100	446	- 447 <sup>3)</sup>
PSI METALS NORTH AMERICA Inc., Pittsburgh, USA	100	931	640
PSI Transcom GmbH, Berlin	100	1,052	157
PSI AG für Produkte und Systeme der Informationstechnologie, Wil, Switzerland	100	1,384	552
PSI Logistics GmbH, Berlin	100	- 2,266	1,089
PSI Energy Markets GmbH, Hanover	100	1,330	02)
PSI Mines&Roads GmbH, Berlin	100	- 1,169	143
PSI Polska Sp. z o.o., Poznan, Poland	100	1,490	994
PSI Automotive & Industry Austria GmbH, Leonding, Austria	100	936	43
PSI FLS Fuzzy Logik & Neuro Systeme GmbH, Dortmund	100	378	02)
PSI Metals Non Ferrous GmbH, Aachen	100	1,005	02)
OOO 'PSI', Moscow, Russia	100	2,992	- 827
PSI Incontrol Sdn. Bhd., Selangor, Malaysia	100	7,493	- 1,898 <sup>3)</sup>
PSI Incontrol Private Limited, Chennai, India	100	14	6 <sup>3)</sup>
Incontrol Tech for Shares, Salmabad, Bahrain	100	860	133 <sup>3)</sup>
Incontrol Tech (Thailand) Ltd., Bangkok, Thailand	100	- 448	- 264 <sup>3)</sup>
Incontrol Tech Holdings (Thailand) Ltd., Bangkok, Thailand	100	- 369	3 <sup>3)</sup>
PSI Incontrol ANZ Pty Ltd, Australia	100	65	0 <sup>3)</sup>
PSI Metals Austria GmbH, Graz, Austria	100	4,665	1,461
PSI METALS INDIA PRIVATE LIMITED, Kolkata, India	100	235	- 65 <sup>3)</sup>
PSI Metals Belgium NV, Brussels, Belgium	100	969	384
PSI Metals Brazil Ltda, Rio de Janeiro, Brazil	100	992	842
Time-steps AG, Affoltern am Albis, Switzerland	100	448	98
PSI Metals UK Ltd., Watford, United Kingdom	100	2,765	337
PSIAG Scandinavia AB, Karlstad, Sweden	100	- 41	- 68 <sup>3)</sup>
OOO OREKHsoft, Moscow, Russia	49	88	20
OOO Gazavtomatika dispetcherskije sistemy, Moscow, Russia	33	1	04)
caplog-x GmbH, Leipzig	31.3	653	453 <sup>4)</sup>

1) Values according to legal and local accounting regulations before consolidation bookings

2) Profit-pooling contracts

3) Values according to IFRS before consolidation bookings

4) Values as of 31 December 2016, as values as of 31 December 2017 were not available at the date of the financial statements

PSI TURKEY BİLİŞİM TEKNOLOJİLERİ SANAYİ VE TİCARET A.Ş., Istanbul, Turkey, has discontinued its operations and it was resolved to apply for the deletion of the company with the responsible authorities in Turkey.

### Auditor's fees

The following fees were incurred in the financial year for services performed by the auditor:

Total	590	691
Other consultancy services	5	251
Tax consultancy services	402	272
Audit services	183	168
in EUR thousand	2017	2016

Audit fees comprise the audit of the financial statements of PSI AG and the PSI Group's consolidated financial statements.

### **Related party disclosures**

Parties are considered to be related if they have the ability to control the PSI Group or exercise significant influence over its financial and operating policies. In determining whether related parties of the PSI Group exercise significant influence over its financial and operating policies, the existence of fiduciary relationships was taken into account as well as existing control relationships.

### **Related companies**

The affiliated companies included in the Group financial statements are to be regarded as related companies. In addition, the associated companies caplog-x and OOO Gazavtomatika dispetcherskije sistemy are to be regarded as related companies. There are no other related companies.

There are transactions between PSI AG and its subsidiaries in the context of supplies and services, cash management, central administrative services and personnel provision; these are eliminated on consolidation.

### **Related persons**

The following individuals are to be regarded as related persons:

Members of the Board of Directors of PSI AG Dr. Harald Schrimpf (CEO)

Harald Fuchs

### Members of the Supervisory Board of PSI AG

Karsten Trippel Bernd Haus, until 16 May 2017 Prof. Ulrich Wilhelm Jaroni Andreas Böwing Prof. Uwe Hack, since 16 May 2017 Elena Günzler Uwe Seidel

### Transactions with related persons

There were no business transactions between the related persons and the PSI Group in 2017 or in 2016.

### **Supervisory Board**

The following persons were members of the Supervisory Board in the 2017 financial year:

Profession	Domicile	Membership of Supervisory Boards of other companies
Businessman	Großbottwar	<ol> <li>Berlina AG für Anlagewerte, Berlin (Chairman)</li> <li>Preussische Vermögensverwaltungs AG, Berlin (Chairman)</li> <li>Riebeck-Brauerei von 1862 AG, Wuppertal (Chairman)</li> <li>Ost-West Beteiligungs- und Grundstücksverwaltungs-AG, Köln (Deputy Chairman)</li> <li>Fleischerei-Bedarf Aktiengesellschaft von 1923, Coburg (Chairman)</li> </ol>
Engineering graduate	Aschau	None
Economics graduate	Ranstadt	None
Lawyer	Herten	Thyssengas GmbH, Dortmund
Professor of Inter- national Finance and Accounting	Metzingen	None
Mathematics graduate	Berlin	None
Chemistry graduate	Duisburg	None
	Businessman Engineering graduate Economics graduate Lawyer Professor of Inter- national Finance and Accounting Mathematics graduate Chemistry	BusinessmanGroßbottwarBusinessmanGroßbottwarEngineering graduateAschauEconomics graduateRanstadtLawyerHertenProfessor of Inter- national Finance and AccountingMetzingenMathematics graduateBerlin graduateMathematics graduateBerlin Duisburg

### Remuneration of Board of Directors and Supervisory Board

Compensation totalling EUR 1,092 thousand (previous year: EUR 958 thousand) was granted to the Board of Directors of PSI AG for the 2017 financial year:

in EUR thousand	2017	2016
Fixed remuneration		
Harald Fuchs	315	306
Dr. Harald Schrimpf	382	382
	697	688
Variable remuneration		
Harald Fuchs	180	120
Dr. Harald Schrimpf	215	150
	395	270
Total Board of Directors	1,092	958

In addition, provisions for long-term remuneration components for the Board of Directors amount to EUR 350 thousand (previous year: EUR 292 thousand).

There are no pension commitments for the Board of Directors members.

Pension provisions of EUR 628 thousand (previous year: EUR 669 thousand) are reported for former Board of Directors members. Besides pension payments to former members of the governing bodies in the amount of EUR 55 thousand (previous year: EUR 55 thousand), no other benefits were paid in the 2017 financial year.

The Supervisory Board received remuneration of EUR 291 thousand (previous year: EUR 181 thousand) in the year under review:

in EUR thousand	2017	2016
Andreas Böwing	41	22
Elena Günzler	42	27
Prof. Uwe Hack	28	_
Bernd Haus	17	29
Prof. Ulrich Wilhelm Jaroni	53	34
Uwe Seidel	42	27
Karsten Trippel	68	42
	291	181

The following numbers of shares were held by the Board of Directors and Supervisory Board members:

Number of shares	2017	2016
Dr. Harald Schrimpf	67,000	67,000
Harald Fuchs	6,023	5,023
Andreas Böwing	0	0
Prof. Uwe Hack	0	
Bernd Haus	n/a	1,000
Elena Günzler	1,739	1,427
Prof. Ulrich Wilhelm Jaroni	0	0
Uwe Seidel	100	62
Karsten Trippel	111,322	111,322

### Disclosures on the German Corporate Governance Code

PSI AG issued the statements required in accordance with section 161 of the German Stock Corporation Act on 5 December 2017. They are permanently available to the shareholders in the investor relations section of PSI AG's website (www.psi.de).

Berlin, 9 March 2018

Dr. Harald Schrimpf (CEO)

M. Fr

Harald Fuchs

# RESPONSIBILITY STATEMENT

To the best of our knowledge, and in accordance with the applicable accounting principles, the consolidated financial statements give a true and fair view of the Group's net assets, financial position and results of operations 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 principal opportunities and risks associated with the expected development of the Group.

Berlin, 9 March 2018

PSI Software AG

The Board of Directors

Dr. Harald Schrimpf

M. Fr

Harald Fuchs

# INDEPENDENT AUDITOR'S REPORT

To PSI Software AG

Report on the audit of the consolidated financial statements and of the group management report

### Opinions

We have audited the consolidated financial statements of PSI Software AG, Berlin, and its subsidiaries (the Group), which comprise the consolidated balance sheet as of 31 December 2017, consolidated income statement, consolidated comprehensive income statement, consolidated statement of changes in equity and consolidated cash flow statement for the fiscal year from 1 January to 31 December 2017, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of PSI Software AG for the fiscal year from 1 January to 31 December 2017. In accordance with the German legal requirements, we have not audited the content of the group statement on corporate governance contained under "Transparent and responsible corporate governance" in the sustainability section of the group management report, the declaration on the German Corporate Governance Code contained under "Transparent and responsible corporate governance" in the sustainability section of the group management report or the non-financial statement contained under "Non-financial statement" in the sustainability section of the group management report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB ["Handelsgesetzbuch": German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as of 31 December 2017, and of its financial performance for the fiscal year from 1 January to 31 December 2017, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on the group management report does not cover the content of the group statement on corporate governance, the non-financial statement or the declaration on the German Corporate Governance Code referred to above.

Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

### **Basis for the opinions**

We conducted our audit of the consolidated financial statements and of the group management report in accordance with Sec. 317 HGB and the EU Audit Regulation (No 537/2014, referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Art. 10(2) f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Art. 5(1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

### Key audit matters in the audit of the consolidated financial statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the fiscal year from 1 January to 31 December 2017. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon; we do not provide a separate opinion on these matters.

Below, we describe what we consider to be the key audit matters:

### 1. Revenue recognition

## Reasons why the matter was determined to be a key audit matter

The PSI Group recognized total revenue of EUR 186.1 million in fiscal year 2017. Revenue chiefly stems from selling software products and solutions as well as rendering associated services. Revenue is recognised when the significant risks and rewards of ownership of the goods are transferred to the customer.

Revenue from maintenance agreements is recognised on a pro rata basis over the term of the agreement.

We consider revenue recognition to be a complex matter on account of the large number of different contractual agreements for the various services of the PSI Group in the various segments as well as the extensive effects of revenue recognition on disclosures of assets and liabilities as well as income and expense items. The complexity associated with an increased risk of accounting misstatements means that we identified revenue recognition as one of the key audit matters.

#### Auditor's response

During our audit, we assessed the accounting and valuation principles applied for the recognition of revenue in the PSI Group's consolidated financial statements using the criteria defined in IAS 11 "Construction Contracts" and IAS 18 "Revenue". Our audit approach focused in particular on the question of whether the significant risks and rewards of ownership from selling software products and solutions as well as from rendering services had been transferred to the buyer as of the reporting date. We analysed the processes implemented by the executive directors of the PSI Group as well as the accounting and valuation principles applied for the recognition of revenue. We also tested the effectiveness of the controls of the significant group entities regarding revenue recognition as well as the correct allocation of revenue.

In addition, we examined the significant revenue for fiscal year 2017 by correlating it with the associated trade receivables as well as the payments received. We also analysed revenue recognition by comparing the contractual agreements with the requirements of the current revenue recognition standards for services, licenses and construction contracts on a sample basis.

We assessed whether revenue was allocated to the correct period by inspecting agreements, project documents such as correspondence with customers and evidence of hours booked as well as acceptance protocol for revenue transactions.

We examined the calculation of revenue allocation for transactions which have not yet been completed using analytical audit procedures as well as an analysis of the contractual bases and the effectiveness of the controls implemented in this area. In terms of proportional revenue recognition from prepaid services, we verified the development of prepaid expenses and deferred income on an analytical basis as well as the contractual bases on a sample basis.

Our audit procedures did not lead to any reservations relating to revenue recognition.

### **Reference to related disclosures**

Disclosures on the accounting and valuation principles applied for revenue are contained in section B "Presentation of accounting policies and financial risk management method" under "Significant judgements, estimates and assumptions" and "Recognition of revenues and income" of the notes to the consolidated financial statements.

Information about the breakdown of revenue can be found in the "Disclosures on the consolidated income statement" section under D. 12 "Revenues" of the notes to the consolidated financial statements. Additional information is included in the "Disclosures on the consolidated balance sheet" section under C. 3 "Net trade receivables"; C. 4 "Receivables from long-term development contracts" of the notes to the consolidated financial statements.

### 2. Goodwill impairment test

## Reasons why the matter was determined to be a key audit matter

Goodwill that makes up roughly 25 % of total assets is reported under "Intangible assets" in the consolidated financial statements of the PSI Group.

Goodwill is subject to an annual impairment test as of 31 December in order to determine any need to recognize an impairment loss. The impairment test is based on complex models covering multiple periods that use estimates based on judgment by the Board of Directors. The result of these tests is therefore highly dependent on the executive directors' estimate of future cash flows and the respective discount rates used. Against the background of the complexity and the judgment exercised during valuation, the goodwill impairment test was a key audit matter.

### Auditor's response

During our audit, we verified the procedure for performing impairment tests in terms of compliance with the requirements for an impairment test as defined by IAS 36 "Impairment of Assets" with the help of internal valuation experts. In this context, we analysed the planning process and had the executive directors explain the significant planning assumptions to us, and we compared this with the earnings and cash flows realized in the past. If we identified any significant differences, we examined the disclosures and evidence provided by the executive directors. In our assessment of the results of the impairment tests, we compared the general and industry-specific market expectations with the market models for the expected cash inflows and examined any differences. Based on our knowledge that even relatively small changes in the discount rates used can at times have significant effects on the amount of the business value calculated or the recoverable amount, we analysed the parameters used to determine the discount rates and verified them in terms of the requirements of IAS 36. We also performed sensitivity analyses in order to estimate any potential impairment risk associated with a reasonably possible change in one of the significant assumptions used in the valuation.

Our audit procedures did not lead to any reservations relating to the goodwill impairment test.

### **Reference to related disclosures**

Disclosures on the accounting and valuation principles applied for goodwill are contained in section B "Presentation of accounting policies and financial risk management method" under "Significant judgements, estimates and assumptions," "Goodwill" and "Impairment of non-current, non-financial assets" of the notes to the consolidated financial statements.

Information about the breakdown of goodwill and the impairment test can be found in the "Disclosures on the consolidated balance sheet" section under C. 1 "Intangible assets and property, plant and equipment" of the notes to the consolidated financial statements.

### **Other information**

The Supervisory Board is responsible for the Report of the Supervisory Board. In all other respects, the executive directors are responsible for the other information.

The other information comprises:

- the group statement on corporate governance contained under "Transparent and responsible corporate governance" in the sustainability section of the group management report
- the declaration on the German Corporate Governance Code contained under "Transparent and responsible corporate governance" in the sustainability section of the group management report
- the non-financial statement contained under "Nonfinancial statement" in the sustainability section of the group management report
- the responsibility statement and the Report of the Supervisory Board
- as well as the other parts of the annual report expected to be provided to us after the date of the auditor's report, with the exception of the audited consolidated financial statements and group management report as well as our independent auditor's report.

Our opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- · otherwise appears to be materially misstated.

### Responsibilities of the executive directors and the Supervisory Board for the consolidated financial statements and the group management report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB, and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

### Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sec. 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also

• Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, balance sheet and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report.
   We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

### Other legal and regulatory requirements

## Further information pursuant to Art. 10 of the EU Audit Regulation

We were elected as group auditor by the Annual General Meeting on 16 May 2017. We were engaged by the Supervisory Board on 5 December 2017. We have been the group auditor of PSI Software AG (formerly: PSI Aktiengesellschaft für Produkte und Systeme der Informationstechnologie) without interruption since fiscal year 1998.

We declare that the opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Art. 11 of the EU Audit Regulation (long-form audit report).

## German Public Auditor responsible for the engagement

The German Public Auditor responsible for the engagement is Gunnar Glöckner.

Berlin, 14 March 2018

Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft

Glöckner German Public Auditor Herlitz German Public Auditor

# PSI multi-year overview

in EUR million	2017	2016	2015	2014	2013
Order situation					
New orders	190	182	195	184	185
Order backlog	128	129	129	120	118
Consolidated income statement					
Revenues	186.1	176.9	183.7	175.4	176.3
thereof Energy Management	69.2	69.2	67.2	64.2	61.0
thereof Production Management	91.9	84.2	86.4	79.6	84.1
thereof Infrastructure Management	24.9	23.5	30.1	31.6	31.3
Export share in %	43.7	45.2	49.3	48.6	52.7
Licence revenues	12.1	13.6	13.2	12.9	19.4
Licence share in %	6.5	7.7	7.2	7.4	11.0
R&D expenses	18.5	16.8	19.5	16.1	20.4
R&D ratio in %	9.9	9.5	10.6	9.2	11.6
Operating result (EBIT)	13.4	11.8	11.1	7.72)	4.2
EBIT margin in %	7.2	6.7	6.0	4.42)	2.4
Earnings before taxes (EBT)	12.5	11.2	9.4	5.7	3.1
Group net result	9.5	8.6	7.5	4.1	0.4
Return on sales in %	5.1	4.9	4.1	2.3	0.2
Cash flow					
Cash flow from operating activities	1.2	13.3	14.0	24.1	- 0.1
Cash flow from investing activities	- 4.1	- 2.9	- 2.2	- 14.3	- 3.7
Cash flow from financing activities	- 1.1	- 6.7	- 2.1	- 1.7	- 7.2
Investments <sup>1)</sup>	4.4	3.2	2.9	13.3	5.1
Balance sheet					
Shareholders' equity	80.3	75.3	73.2	68.3	68.8 <sup>2)</sup>
Equity ratio in %	41.4	37.8	36.7	35.5	38.62)
Return on equity in %	11.8	11.4	10.2	6.0	0.6
Total assets	194.0	199.4	199.5	192.3 <sup>2)</sup>	178.1 <sup>2)</sup>
Share					
Earnings per share in EUR	0.61	0.55	0.48	0.26	0.02
Closing price at end of year in EUR	18.51	12.2	12.90	11.91	13.55
Market capitalisation on 31 December	290.6	191.5	202.5	187.0	212.7
Employees					
Number of employees on 31 December	1,665	1,619	1,650	1,714	1,692
Personnel expenses	112.3	109.3	106.8	103.6	104.2

<sup>1)</sup> Company acquisitions, intangible assets, property, plant and equipment

<sup>2)</sup> Adjusted

# **PSI quarterly overview for 2017**

in EUR million	Q1	Q2	Q3	Q4
Order situation				
New orders	78	33	36	43
Order backlog	163	148	141	128
Income statement				
Revenues	43.8	43.8	45.5	53.0
thereof Energy Management	15.9	16.3	18.6	18.4
thereof Production Management	23.0	21.7	22.5	24.7
thereof Infrastructure Management	4.8	5.8	4.4	10.0
Operating result (EBIT)	2.6	3.1	2.5	5.2
EBIT margin in %	6.0	7.0	5.5	9.8
Earnings before taxes (EBT)	2.5	2.9	2.2	5.0
Group net result	1.8	1.3	1.5	4.9
Return on sales in %	4.1	2.9	3.3	9.3
Share				
Earnings per share in EUR	0.11	0.08	0.10	0.32
Closing price at end of quarter in EUR	12.74	14.09	17.20	18.51
Employees				
Number of employees at end of quarter	1,613	1,626	1,650	1,665
Personnel expenses	28.6	27.8	27.0	28.9

### Financial calendar for 2018

Publication of annual results Analyst conference Report on first quarter Annual General Meeting Report on first half of year Report on third quarter German Equity Forum analyst conference 22 March 2018 22 March 2018 26 April 2018 16 May 2018 26 July 2018 31 October 2018 26 to 28 November 2018

### The PSI share

Stock exchange segment:Prime StandardStock exchange symbol:PSANSecurities identificationA0Z1JHISIN:DE000A0Z1JH9

### Your investor relations contact



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"After the investments made in the previous years, in 2017 we took a big step forward to becoming a product provider and returned to our growth trajectory – both in terms of revenues and in our stock market valuation."

We would be glad to add your name to our shareholder information mailing list. Please also get in touch if you would like a copy of the PSI AG Financial Statements. For the latest investor news, please visit our website at http://www.psi.de/en/psi-investor-relations/.

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