ANNUAL REPORT 2015

# Strong values. Steady course.



# KÖRBER GROUP KEY FIGURES

In EUR million	2011	2012	2013	2014	2015
Operating business					
Incoming orders	2,016	1,965	2,252	2,320	2,191
Sales	1,943	2,004	2,194	2,342	2,317
EBITA <sup>1</sup>	229	229	222	258	141
Return on sales (EBITA) <sup>1</sup>	11.8%	11.4%	10.1%	11.0%	6.1%
Net income after taxes <sup>2</sup>	159	151	137	150	34
Cash flows from operating activities <sup>3</sup>	193	138	218	167	244
Capital expenditure on tangible fixed assets	53	48	54	58	65
Research and development expenses	104	99	120	129	145
Research and development ratio	5.3%	4.9%	5.4%	5.5%	6.2%
Balance sheet indicators as of December 31 reporting date					
Equity	1,339	1,470	1,578	1,727	1,769
Total equity and liabilities	2,109	2,194	2,352	2,535	3,241
Equity ratio <sup>4</sup>	63.5%	67.0%	67.1%	68.1%	54.6%
Employees as of December 31 reporting date					
Employees <sup>5</sup>	9,595	9,553	11,190	11,950	11,578
Farnings before interest taxes and amortization of intangible fixed ascets					

<sup>1</sup> Earnings before interest, taxes, and amortization of intangible fixed assets <sup>2</sup> Includes scheduled amortization of goodwill in accordance with the HGB <sup>3</sup> Since 2014 according to DRS 21 <sup>4</sup> Equity as a percentage of total equity and liabilities <sup>5</sup> Including unconsolidated companies

# We are Körber

Körber – a name that stands worldwide for powerful innovations, technological progress and unique expertise – all unfailingly focused on achieving success and satisfaction for our customers.

We are global market leaders in all of our Business Areas. Our knowledge and experience in process technology, precision engineering and controls, but also in the area of printing and processing technology are our unique selling points in the market. We operate globally without losing sight of local requirements. This benefits our customers across the world. They value our reliability and our specially tailored solutions. The Körber Group is built on strong foundations – our joint Fundamentals and Corporate Values are the sound basis of our activities throughout the Group. They provide a touchstone as we continually update our strategy which is geared towards our

target: long-term profitable growth.

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# Masthead

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# Our strategic long-term growth target

Our clearly defined long-term growth target for the period until 2025 is an ambitious one. We will achieve this growth by continuing to impress our customers on a permanent basis. We intend to more than double our total earnings by comparison with 2013 through organic growth and strategic acquisitions.

# **Our Körber Vision**

Körber is creating the future! – We are technology leaders, strong together, and inspire our customers and partners as sector experts in all business fields.

# **Our Körber Mission**

As an international technology group with a strong regional presence, we create measurable benefits and added value for our customers. As a solid, reliable partner, we develop and supply pioneering, innovative solutions and perfectly tailored services worldwide with and for our customers.

# Our group-wide Corporate Values

Our Corporate Values form the foundation of everything we do. They are what strengthens and connects us across all the companies and functions in the Group and what we pledge to uphold in all our dealings with one another and third parties.

## **Customer Satisfaction**

We are Körber and we add value for our customers by inspiring our customers and partners as industry experts. We are a solid, dependable partner who supplies innovative, cutting-edge solutions and highly tailored services worldwide with and for our customers.

## Innovation

We are Körber and we create innovations by putting our experience, expertise and creativity to work for our customers. We defend our technological leadership through tireless innovation and the improvement of our products, services and business processes.

## **Connecting People and Knowledge**

We are Körber and we connect people and ideas by recognizing and leveraging the full breadth of our knowhow and experience. We encourage and require everyone within our international Group to share ideas and experiences in order to apply all our knowledge to developing efficient, best-practice solutions.

## Responsibility

We are Körber and we take responsibility by putting our Corporate Values at the heart of everything we do. We keep our promises and act reliably toward employees, partners and customers. Our success depends on close, long-term relationships with our employees and business partners.

## Focus on the Future

We are Körber and we strive for sustained and profitable growth by viewing long-term success and financial independence as a motivating challenge. Together, we develop profitable, sustainable solutions. We count on our employees worldwide and support everything they do with modern, attractive work conditions.



# Foreword by the Chairman of the Group Executive Board

# "We are Körber – The future is ours to create!"

luctuations in the economy and changes in our Business Areas' markets and our customers' sectors are things we deal with every day. But the volatility of all these points is steadily increasing. In the face of these winds blowing from different directions, we need to stay on course, while at the same time reacting flexibly as a team. And the guiding principles of this effort are our group-wide Corporate Values. We've gained additional momentum for our drive toward the future from valuable discussions with our approximately 12,000 Körber employees worldwide about Customer Satisfaction, Innovation, Connecting People and Know-ledge, Focus on the Future, and Responsibility.

The business year 2015 was a challenging one. Our turnover of €2,317 million represented a slight decrease of one percent from the record we set in 2014. Our earnings of €141 million were clearly lower than the figure for the previous year (€258 million). Although some of our Business Areas attained new heights, others faced dramatic decreases of demand as well as market upheavals. Political crises and the slowdown of the global economy also had an impact on our business operations.

In consideration of these challenges and those of the future, we have continued to reakign our operations to make them more focused and more flexible. As part of this process, we have streamlined our portfolio and made structural and capacity adjustments. One significant measure was the restructuring of our Business Area Tobacco in response to the long-term changes in the market. As a result of pressures on our Swiss companies due to the stronger Swiss franc, we also took the measures that were necessary to maintain our competitiveness. Our main focus was on making our production and customer relations processes more efficient over the long term. The layoffs that these adjustments sometimes required were painful but unavoidable. We implemented them in full awareness of our social responsibility.

In 2015 we sold the Winkler+Dünnebier company to the Barry-Wehmiller Group, thus divesting ourselves of the last company of our former Paper Systems Division. We are convinced that W+D will have a good future in its new business environment. The sale of Baltic Elektronik and the Grevesmühlen facility of Baltic Metalltechnik will safeguard the future of both companies, because their respective new owners are more broadly based in their specific markets.

Meanwhile, acquisitions have supported our internationalization process and accelerated our technology transfer activities – a key prerequisite for innovations. Through the establishment of the joint venture Irpd AG we are strengthening our know-how in the area of additive manufacturing. Our acquisition of Efacec Handling Solutions, a Portuguese supplier of automated materials-handling technology and storage systems with locations in southern Europe and Asia, supports our global growth strategy. Our customers also benefit directly from the integrated spectrum of products and services we have gained through the merger of Rondo-Pak and Contemporary Graphic Solutions in the USA.



All of these developments demonstrate that our systematic pursuit of added value for our customers is the main goal of all of our strategic and operational activities. Satisfied customers are the basis of our strategy for achieving sustainable growth combined with long-term profitability. This strategy matches our corporate roots and comprehensive technological expertise with a focus on new markets, sectors, and technologies.

Through the closer networking and inclusion of our employees, in 2015 we became even better at systematically exploiting our strengths. Through numerous internal initiatives and projects, we took measures that are making us even faster and more flexible in our customers' interest, while increasing the quality of our products, services, and processes. You can find examples in this report.

In the years ahead, we will continue to pursue this approach. Our sincere thanks go to our employees, who are helping to implement these changes through their commitment and creativity. That's because every day they are making our customers more successful, driving innovations, and thus taking on responsibility for the future of our Group. We also thank our customers, business partners, and service suppliers, who have worked with us on the basis of mutual trust.

In 2016 we will continue to shape our path into the future with the clear goal of establishing the Körber Group as the technology supplier of choice in all of our Business Areas.

That's because "We are Körber – The future is ours to create!"

Hamburg, March 2016

R. Barres

Richard Bauer Chairman of the Group Executive Board of Körber AG

Christopher Somm Member of the Group Executive Board

Hildemar Böhm Member of the Group Executive Board

Stephan Seifert Vice Chairman of the Group Executive Board

0

Richard Bauer Chairman of the Group Executive Board

(2)

# Körber worldwide

The Körber Group unites leading-edge technology companies with over 100 production, service, and sales entities. At locations around the world, Körber combines the advantages of a global organization with the strengths of highly specialized and flexible mid-size enterprises that offer their customers solutions, products, and services in the Business Areas Automation, Logistics Systems, Machine Tools, Pharma Systems, Tissue, Tobacco, and Corporate Ventures.

# 13 NORTH **AMERICA**

# Mexico

• Querétaro

# USA

- Cary
- Clearwater
- Fredericksburg
- Green Bay
- Lenexa
- Miamisburg
- Mechanicsburg
- Norristown
- North Chesterfield
- Richmond
- Parsippany
- San Francisco

# **EUROPE I**

### Germany Bad

26

 Neuwied • Röllbach Sankt

• Siegen

• Unna

• Stuttgart

• Tübingen

Augustin

Schloß Holte-

Stukenbrock Schwarzenbek

- Nauheim Eisenberg
- Freiberg
- Garbsen
- Göppingen
- Greves-
- mühlen
- Hamburg
- Hausach
- Lahnau
- Lahnau-
- Waldgirmes
- Leingarten
- Leipzig
- Löhne
- Lüneburg
- Mainz • Markt
  - Schwaben
- Neuss

# 2 SOUTH AMERICA

- Brazil • Joinville
- São Paulo

# EUROPE II Austria

• Wels

29

# Czech Republic

- Ejpovice
- Kuřim

# France

- Chilly-Mazarin
- Fleury-les-
  - Aubrais
- Lyon • Toulouse

# Hungary

• Pécs

## Italy

**AFRICA** 

• Cape Town

• Bregnano

# • Lucca

 Milan • Paese (Treviso)

# Portugal

• Moreira da Maia

# Russia

# • Moscow

• St. Petersburg

# Spain

• Sant Cugat del Vallès

# Switzerland

- Allschwil
- Bern
- Biel
- Etziken
- Fehraltorf
- Grabs
- Rüti
- St. Gallen
- Steffisburg
- Winterthur

# UK

- Surrey • Warwickshire
- Winchester

# ASIA China

18

# • Beijing

- ChongqingGuangzhou
- Kunming Shanghai

- Hong Kong
- Hong Kong
- India
- Bangalore • Mumbai

# Indonesia

- Jakarta
- - Van

• Shizuoka • Tokyo

## Malaysia

Japan

• Ánjo City

- Petaling Jaya • Shah Alam

# Singapore

- Singapore
- Taiwan

# • Hsinchu

- Turkey
- Izmir

# Our Business Areas



**AUTOMATION** The Business Area Automation develops, produces, and markets high-quality, innovative products and services for international markets in its Business Units Motion Technology, Sensor Technology, Energy Technology, and Electronic Manufacturing Services. All of these are renowned for their cutting-edge technology that sets new standards in order to guaranteeing their customers long-term competitive advantages.



LOGISTICS SYSTEMS The Business Area Logistics Systems offers its customers high-quality, intelligent, and efficient logistics solutions along the entire value chain. These range from project planning and consulting services through software, materials handling, palletizing and warehousing technology, down to comprehensive systems integration for production, distribution, and transport logistics. The five companies - Aberle, Aberle Software, Inconso, Langhammer, and Efacec Handling Solutions – offer a mix of expertise, experience and the highest standards of quality and service for designed customized logistics solutions that ensure sustained long-term market succes for their

customers.



**MACHINE TOOLS** The Business Area Machine Tools comprises the world leaders in precision machines for grinding, eroding, laser finishing, combined finishing, and gauging. With its eight brands - Studer, Schaudt, Mikrosa, Walter, Ewag, Mägerle, Blohm, and Jung - it offers what is in each case the broadest knowledge of applications, the largest product portfolio, and the most comprehensive range of services in the international market.



PHARMA SYSTEMS The Business Area Pharma Systems offers solutions for safe and efficient processes in the manufacture and packaging of pharmaceutical products as well as pharmaceutical traceability. This Business Area's unique combination of process know-how and cutting-edge technology makes it one of the leading systems providers to the pharmaceutical and biotech industry. It brings together the leading international companies -Dividella. Mediseal. Rondo. Seidenader, and Werum, which operate development and production locations in Germany, Switzerland, the Czech Republic, and the USA.



# TISSUE

The Business Area Tissue is synonymous with innovation, state-of-the-art technologies, and end-toend solutions for processing and packaging machinery and equipment for toiletpaper and kitchenrolls. Fabio Perini is the industry market leader thanks to its outstanding technological innovations and its unswerving focus on customers.



## TOBACCO

The Business Area Tobacco, comprising the Borgwaldt, Decouflé, Garbuio Dickinson, Hauni, and Sodim brands, is the world's leading provider of technologies, technical services, and consultancy services for the international tobacco industry. The companies in this **Business Area support** clients in locations around the world in the areas of tobacco processing, filter and cigarette manufacture, smoke measuring and analysis equipment, and flavorings.



### **CORPORATE VENTURES**

The Körber Group plans to continue its growth in the coming years. That includes expanding its strategic investments. It is therefore focusing on key future technologies and markets. The Business Area Corporate Ventures offers the ideal framework for those companies that represent new territory for the Group. It is also the perfect environment for companies facing special market conditions. So far the Business Area has held one company – Winkler + Dünnebier (W+D), a leading technology partner of the envelope and mailing industry. W+D also offers special applications for the tissue and hygiene industry.

# Responsibility @ Körber

Through closer networking and increased inclusion of our employees, in 2015 we became even better at systematically taking on responsibility for ourselves and our environment – through numerous initiatives and projects.



This was the slogan of the day of action for waste prevention organized by the trainees at Hauni in Bergedorf. Thanks to 2,500 self-designed ceramic "coffee to go" cups, the annual consumption of 50,000 disposable plastic cups will be significantly reduced.

# ⊙ **1,500 T CO**₂

# **MACHINE COMPONENTS**





# **PHARMA SYSTEMS**

Secure packaging for vaccines thanks to the WorldStar winner for vaccine packaging.

More environmentally friendly thanks to
**100 percent paper**

 Volume reduced by more than 50 percent compared to plastic holders

• More than **1 million dollars** in cost savings for customers



# SENSITEC COUNTS ON **"GREEN POWER"**

At the sensor manufacturer Sensitec, 2015 began with a show of green. In January Sensitec and ENTEGA, the energy supplier for its Mainz facility, switched to power from renewable resources, demonstrating their commitment to people and the environment.

# **BE BETTER, BE GREEN**

Measures for reducing energy waste in the Business Area Tissue

**O**329 HECTARES OF FOREST CLEARED

**984** 

CARS ON THE ROAD

12% ENERGY SAVED

Installation of motion sensors

Conversion of the entire fleet to environmentally friendly models

**MEASURES IN** THE BUSINESS AREA LOGISTCS SYSTEMS

Installation of LED lighting in the new assembly hall

**ENERGY-SAVING** 

New paint mixing systems cut compressed air consumption by more than 50%

Greater energy efficiency through a switch from piston to screw compressors

Energy feedback for frequency-controlled drive systems and servo motors

# **Business Area Automation**

# Shaping one's own workstation

The production at LTI Motion now has a new lean layout that was extensively influenced by the employees themselves.







utomated processes are increasingly shaping today's industry. Robots and gripper systems are controlling many processes. But there are important exceptions to this development - in the area of electronics and drive controller production, for example. In many cases, printed circuit boards are still fitted with wired components and assembled into innovative automation systems by hand. Why doesn't this change? "For technical reasons," replies Martin Majohr, Head of Operations at the Körber company LTI Motion in Lahnau, Germany. "In many cases, in particular when components or modules have different dimensions, the human motor skills are still unsurpassed when it comes to efficiency and precision." In view of this fact, the focus is being put on the assembly workers' workstations. How do they have to be designed to ensure a fast and flawless production process on the one hand, and very good ergonomic conditions for the employees on the other?

To obtain precise answers to this question, production planners in Lahnau took an unusual approach that enabled the employees to design their own workstations. This enabled all of the participants to optimally contribute their skills and ideas. The result of this targeted networking of knowledge can be viewed since September 2015 at the equipment manufacturing unit of LTI Motion. It took about one year to complete the project. The planning phase began after a three-month analysis was completed. "We first created an ideal typical production line from cardboard and wood. We then used this model to simulate the production process," says Alexandra Städele, the group organizer for ServoOne CM. "That way we could check whether our workstations are ergonomically designed and all the handling areas are ideally positioned. If any problems cropped up, we simply changed the cardboard and wood structure." This method of "cardboard engineering" has become a standard technique for the development of lean manufacturing processes. The electronics experts even went a step further, Städele says. "We also helped set up the finished workstations," she explains. "This was a key step, because it enabled the improvement of additional details. The fitting of the components and the subsequent assembly process are demanding tasks that have a profound influence on the quality of our products. That's why the result had to be perfect." The primary aim of all the changes is to ensure that the customers are always completely satisfied.

The redesign of the workstations is only one element of the far-reaching transformation process. In the end, the automation experts changed the entire layout of their halls in order to make production processes extremely lean. The focus was on the paths the employees took as well as the material flows, the energy management, and the information pathways. This approach can be clearly explained by using the ServoOne CM machine automation system as an example. The system is manufactured in four steps: the equipping of the printed circuit boards, the testing of the individual modules, the assembly of the complete system, and the final tests. "In the past, the employees had to walk long distances in order to carry the finished and tested printed circuit boards to the assembly area. These paths have now been eliminated. All of the sub-processes are part of an interconnected assembly line," says Majohr.

In addition to these improvements, LTI Motion is gradually introducing a one-piece flow, in which every single module goes through all the production steps without any interruption. At the moment, the employees first complete about eight assemblies, which are then forwarded as a group. The planners want to reduce the number of these "pre-produced" units step by step. Once that is done, every finished module will be immediately sent on to the final production area. Many material flows can be optimized in this way - for example, by enabling the logistics unit to supply the required material to the production line just in time and in precise amounts. Among other things, this greatly reduces an automation system's throughput time. "We develop and produce innovations to contend with the tough competition we face," concludes Majohr. "That's why these changes are vital for our future and for profitable growth. We are implementing them in order to become better in many ways, further improve our quality, and permanently cut costs - we're doing it so that our customers can always experience our claim of 'Performance.Sustained' when they work with us."





HARTMUT BRAUN CEO, BUSINESS AREA AUTOMATION How exactly do the process changes benefit your customers?

To begin with, the quality of our automation technology is being continually improved because production mistakes are becoming rarer and rarer. Moreover, we can now respond more flexibly and implement customer wishes more quickly. That's a very important competitive factor for our customizable technology.

# Did you also invest in the production technology?

Certainly. The best example of this is our fully automatic robot-controlled testing system. Thanks to our know-how and experience, we were able to largely develop this innovation on our own. This system increases the testing depth and accelerates processes.

# Have you already received feedback from your customers?

Not directly – but it's still too early for that. However, our customers are impressed when we take them on a tour of our assembly area. This is a decisive factor for us, because our automation technology greatly influences the customers' final product: the machine. This is why our customers always check the quality of our production processes as well.

"Changes are essential for our future." Business Area Logistics Systems

# Working smarter instead of harder

The Business Area is permanently improving its production processes.





n his own words, Roland Fuchs has a "huge pot full of data" - the result of a phase of intensive work last year. Over several weeks, the new Head of Operations of the Business Area Logistics Systems visited the four production locations in Germany and Portugal. During this time, Fuchs held in-depth discussions with managing directors and production managers and worked together with a business consultant to analyze the production data on material flow, assembly steps, and final inspection processes. "We got a very good overview and created the basis we need to efficiently compare the various companies. You could say this analytical phase kicked off a process that will permanently improve our production activities," he says.

It took until the end of last year to evaluate and classify this huge amount of data. The results have already been presented to the colleagues in charge of the various locations. "Our ultimate aim is to establish lean processes at all locations. We want to further reduce the time needed to produce a facility, avoid wastefulness as much as possible, and further raise our quality standards," says Fuchs. The next step is being developed in cooperation with the employees at the plants. A key principle is that the lean management methods are being adapted to the respective situation. "We will make targeted use of our employees' knowledge and experience and promote their sharing. Valuable ideas are being generated as a result of the networking within the Business Area," says Fuchs.

The logistics experts are drawing up the detailed plans step by step. This process begins with the value stream mapping of the respective production unit. To do this, the experts visualize the unit's material flows in order to make weak points in the process visible. "We compare it with an ideal process and work with our employees to develop an appropriate solution," says Fuchs.

Basically, the aim is to examine the entire range of traditional lean management techniques and determine their applicability. The spectrum of possible measures extends from the 5S method, which can be used to easily improve a workstation's structure, to the creation of an idea management system and the introduction of audits and key figures for determining success. The management's underlying idea is that the early selection of a single method excessively restricts the employees' freedom to help shape their working environment. The goal is to prevent this from happening. "In all of the talks I held with our managing directors, I encountered a great deal of openness and support for this approach," says Fuchs. "My colleagues have already brought the individual locations' capabilities to a very high level. They feel that additional potential could be exploited by

introducing lean management." However, customer requirements and the Business Area's economic capabilities are not the only factors that are being focused on, as the companies also want to improve the quality of the work." The maxim here is to "work more intelligently instead of harder." According to Fuchs, this is the fundamental precondition for success. "The real feat is to initiate a change in people's mindsets," says Fuchs, who is also the Technical Director of Langhammer GmbH. "Once that is done, our employees will begin to optimize their own processes. Experience has shown that this approach considerably boosts motivation and the generation of ideas." Moreover, this happens not only during the early stages of the program, as the employees turn it into a continuous process. Such an approach is especially important for logistics technology, because hardly any other field of technology produces such customized facility solutions. Every customer in this industry sector poses a different challenge. At the same time, the demands put on complex conveyor, palletizing, and storage technology are steadily increasing. The systems are required to perform all handling tasks even faster and more precisely than before. "As a result, the upstream machine production sector always has to be a step ahead and continuously develop innovations. That is precisely what we are aiming to achieve for our customers with the introduction of a systematic lean management approach. This is a key component in the further development of our Business Area."





### HUBERT KLOSS

CEO, BUSINESS AREA LOGISTICS SYSTEMS Is it even possible to transfer the lean management methods that are used in series production to individual production in the logistics sector?

We're sure it's possible. Individual production has many processes and material flows that one can standardize and perfect. This leads, for example, to huge reductions in production throughput times and fault rates. This greatly benefits our relations with the customers – and that's what really matters!

# Do you expect resistance to the new approach?

Not at all. Our employees have already realized that it creates opportunities for them as well. The overall package also includes training and coaching measures. It will be a comprehensive further education program that will benefit many of our employees. All of them will be proud when we receive the first positive feedback from our customers.

## What's the key to the program's success?

The solution is to get our employees fully involved so that the measures fit to the location in question. We aren't applying a one-size-fits-all approach to the various companies, but are instead working together with them to develop our own lean management system.

"The capabilities of our locations are already at a very high level." **Business Area Machine Tools** 

# When the production begins to flow

A revolution in machine construction: Fritz Studer AG relies on continuous flow manufacturing.





he grinding machines flow through the production hall slowly and steadily. They move just 5.50 meters over a period of four hours – but they do so continuously, without interruption. In this

way, each one goes through several stations where up to four workers apply their expertise to finish the high-precision machines. "Many people are probably familiar with continuous flow manufacturing in auto plants, but this is an innovation for the production of machine tools," says Gerd König, one of the Managing Directors of Fritz Studer AG, which is based in Steffisburg, Switzerland. "Since last October we've been using this PuLs-lean technique to produce nearly our entire product range – from standard machines to specific customer solutions."

Ideally, each of the 16 assembly stations is working on a machine at any time. As soon as a machine leaves an assembly station, it is immediately replaced by another one coming from the next station upstream. In some cases the new machine will be a completely different model from the previous one. The required materials have to be on hand nevertheless, and this fact makes continuous flow manufacturing a big logistical challenge for the specialty machine construction industry. Moreover, an assembly worker's task varies depending on the type of machine he or she is working on. That's because the workers stay at their respective stations and do not move along with the machines through the hall. "The previous assembly process was totally different," says assembly worker Jozo Kovacevic at Fritz Studer. "The machine remained stationary at a single place within the hall, and all the parts were brought to it. We assembled the machine in one place over several weeks." In addition, many workers specialized in specific models. "That's no longer the case, because continuous flow manufacturing requires all of the employees to know how to perform their respective sub-process for every model, so they therefore have to be familiar with the entire model range," adds König, putting to rest the cliché that continuous flow manufacturing is more boring than other techniques. The employees also have to take on more responsibility and reliably implement all the required assembly processes. "The

introduction of continuous flow manufacturing is therefore accompanied by a comprehensive training program for the employees," says König. What's more, the changes are made to the entire value chain. The processes in pre-assembly, purchasing, and merchandise management were also adjusted – and by no means "from the top down." Instead, many of the measures were developed by the employees themselves. "Fritz Studer AG is in the midst of a far-reaching transformation that will prepare us for the future. We want our production solutions to be innovative and get better all the time. That's what we need to make us fit for the future," says König.

The development and implementation of this machine assembly revolution took about three and a half years. König says it all began with "innumerable meetings" during which the production planners discussed the conditions that first had to be met. In addition, the grinding experts conducted extensive lab tests. For example, they documented thousands of assembly processes in detail. They also answered critical questions such as how grinding tests could be carried out on movable platforms, since grinding machines require an extremely stable base. "The development of the guiderails in the hall floor was another part of our planning activities," says König. "The stable technology they use is comparable to the axle guidance of a machine tool. It ensures perfect test conditions."

After they have completed their small tour through the production hall, the machines are ready for delivery. The entire main assembly process (including the tests) only takes eight days now – an outstanding achievement in machine tool production. While standard machines are produced in the new assembly unit, the workers are also creating customized solutions, because the assembly line always flows forward at the same pace. "We've set a milestone in machine construction here and come a big step closer to our goal of being best in class. We could hardly offer our customers more planning security than we do now," König concludes.



GERD KÖNIG MANAGING DIRECTOR, FRITZ STUDER AG AND SCHAUDT MIKROSA GMBH How do customers benefit from the faster pace of continuous flow manufacturing? Our customers' production situation often changes very quickly. To produce more units, they might need a new facility at short notice. We are now offering an appropriate

solution to this problem.

How do you respond to order fluctuations? We have a flexible system. The assembly line now moves for four hours twice a day, but it would also be possible to introduce other shift models that increase output. The opposite of that is to use "idle strokes," in which the employees don't do any assembly work and thus reduce the number of units that can be delivered.

Does this approach also benefit employees?

Definitely. For example, before we changed the system our assembly workers had to walk long distances – mostly to collect components – during the eight-week assembly period. That's now a thing of the past because all the materials are located within the workers' reach at every assembly station. Production is now optimally arranged and the work is more targeted and thus more efficient.

"We are preparing for the future through a sustained transformation."

# **Business Area Pharma Systems**

# Becoming a little better every day

In a successful template for other businesses, the employees of Werum IT Solutions themselves initiate change processes at their company.





o matter whether its a smartphone app or a PC operating system, regular updates are needed to solve the problems found in software. Because applications are becoming more comprehensive and complex, programmers are finding it increasingly difficult to minimize the fault rate in new developments. This task is even more demanding for the developers at Werum IT Solutions. Their manufacturing execution system (MES) PAS-X is used in the heavily regulated pharmaceutical industry, where it controls a wide variety of production processes. Ensuring safety during medication production is therefore also dependent on the flawless operation of this software. In addition, the software can only be updated with a lot of effort and at great cost, due to the heavily regulated nature of the business.

How can faults be avoided in such an environment, especially since they often occur in even far simpler areas of application? "Faults can never be completely ruled out in a programming process. It's too complex for that. However, we want to reduce the occurrence of faults as much as possible," says Jens Blödorn, Senior Head of PAS-X Development at Werum. To achieve this goal, Blödorn and his team came up with an idea that is as simple as it is effective: PAS-X is continuously tested for faults. "This should be taken literally," says Blödorn. "We recently appointed a coworker to sit next to the programmer and test the software around the clock. Any faults that are found are immediately eliminated." Werum always has several small teams working in parallel to enhance PAS-X, and a person who does nothing but test the product will always be a part of this process in the future. "This approach has already significantly reduced the number of faults. We successfully demonstrated this in documented tests," adds Blödorn.

The applications architect Manfred Meyer also has his sights set on avoidable faults in the development process. Together with his team, Meyer is responsible for the adaptation of the PAS-X software to the customers' individual needs. Among other things, this work focuses on the interfaces with other programs within the system. "To do this, we work together with our customers to analyze local processes. I then write a detailed task description for our programmers. As a result, a lot depends on this briefing," says Meyer, whose team revised the previous process last year. The team developed a dozen measures, more than half of which have already been adopted in practice. "One of these is that I write a comparative description of the behavior of a customer's current software with the behavior desired for future software. This simple measure helps our programmers understand key interrelationships faster and better than before,"

says Meyer. "We've already received a lot of positive feedback from our customers as well."

Examples of the current transformation process at Werum include new testing processes and an altered documentation system for the programmers. The employees initiate their own improvements at many places within the company. To this end, they also form cross-company networks and contribute their knowledge and experience precisely where it's needed. "We purposely didn't stipulate any requirements or a written system for this," says Managing Director Hans-Peter Subel. In early 2015, Subel instead called on team leaders and managers to analyze their processes in cooperation with their employees. "Concentrate on concrete challenges – find out what can be improved in your unit," Subel told the audience at a company meeting. Since then, the employees have regularly come up with new ideas. Team leaders then present these ideas at company meetings and encourage the other employees to do the same. "We all benefit together in the end," says Subel, who thinks the new approach is appropriate for other employees besides the software developers. "For our customers, we stand for innovations and perfect service. Fulfilling this claim is an ongoing challenge for the entire company. Even simple accounting processes and sales measures have to be free of faults so that we make a good overall impression and customers have confidence in us. That's why everyone is called on to share our responsibility to become a little better every day."





HANS-PETER SUBEL MANAGING DIRECTOR, WERUM IT SOLUTIONS

How did you come up with the idea of putting the optimization process completely into the hands of your employees? We have been transforming and improving our internal structures for some time now. As a result of decentralization, many small teams now work independently on our software. It was only logical that optimization processes should occur in the same way.

## What is this model's recipe for success?

On the one hand, it lets people experience our open corporate culture, in which the employees can contribute to many areas. That's also the reason why this project is a success. On the other hand, the process soon developed a momentum of its own. Every successful improvement project inspires people to come up with new ideas. In this way we promote our customers' success, which spurs on all employees.

## What comes next?

After two years, we will again check to see how this principle affects our product quality. That's because we ultimately want it to create a strong spirit within the company. Everybody should always ask themselves what they can still do to make our products and services even better so that our customers will always be satisfied.

"In the end, we all benefit together."

# **Business Area Tissue**

# A Network of Experts for Success

All of the processes at Fabio Perini are closely scrutinized. In combination, the improvement measures are having a strong impact.





ngineering off the peg? At the Business Area Tissue, that's unthinkable. Here, each machine has to be adapted to a very different production environment. That's the only way we can guarantee innovative and sustainable solutions," says Michele Ceccarelli from Fabio Perini, a manufacturer of tissue-production machines. With his team, Ceccarelli, who is responsible for process optimization, has initiated a complete transformation that is helping the Business Area's companies to react even faster and more precisely to customers' wishes. Diverse processes are being continuously optimized, and some are being standardized across all company locations. "TISSUE GO Beyond Excellence" is the program that is making Business Area Tissue fit for the future and enabling sustainable growth.

It's not only about production. All processes are being scrutinized, as can be seen most clearly at the micro-level – for example, in procurement. "Depending on our customers' wishes, we often need extra fittings for our machines, such as protective elements, simple drive units or footboards," says Francesca Boffi from the Material Management unit at the production side in Lucca. "We used to order the components of these extensions in groups from suppliers and then assemble them ourselves. We needed about 20 different component groups for that. It was all very time-consuming, and it wasn't profitable." The simple components have little to do with the special know-how related to tissue production, she adds. "That's why we decided to buy completely assembled extensions. We've been doing that since mid-2015. It has reduced our costs in this field by about ten percent, and we pass these savings on to our customers."

How did the team zero in on this detail of the procurement process and exploit its cost-cutting potential? The answer points to broader relationships: Francesca Boffi is a "Green Belt," along with 52 other employees at the Lucca side and many more in the Business Area as a whole. Within the Lean Six Sigma quality management system, the Green Belts bear responsibility and play a role in the improvement process. "The system functions like an in-house network of experts that optimizes processes everywhere. It's a priceless advantage," says Ceccarelli, who introduced this method in Lucca a few years ago and since then has rolled it out at all of the Business Area's other locations as well. New "experts" from all over the world are continually joining the network. They link up with one another and share their experiences. "After completing the training course, you've got the know-how to develop new or optimized processes," says Boffi, who used a strictly applied Lean Six Sigma method to track down the unnecessarily expensive process of assembling the purchased components.

Recently the Lean Six Sigma spirit also caught on at the company's plant in Green Bay, Wisconsin. "The initial reactions to Six Sigma at a plant are always very similar," says Saransh Choudhury, Operations Manager. A few employees are initially hesitant, he explains. Others immediately see that the system offers big opportunities for them and the company. As soon as the transformation begins and people see the first successful applications, acceptance always increases guickly. For example, in 2015 the entire manufacturing area in the USA was restructured in line with lean production principles. This area now includes a testing facility for customers. Test production is now conducted in a precisely structured work environment, so robust results are available sooner. "We've received extremely positive feedback from our customers concerning these new processes, which help them save time and thus reduce costs," explains Ceccarelli, who is already looking forward to the next project in Green Bay: optimizing a service warehouse in line with lean production. The project will reduce the present storage space by almost 40 percent and completely reorganize the layout of the shelf warehouse. "Of course that will initially generate cost advantages for Fabio Perini. But another aspect is almost more important: It will directly benefit our customers by enabling us to react much faster to orders at the warehouse," Ceccarelli says. "In other words, the reorganization is a further step towards our ultimate goal: Becoming a company that is wholly oriented toward its customers."





STEFANO DI SANTO CEO BUSINESS AREA TISSUE How is the "Customer First" strategy changing your Business Area?

We want each one of our customers to receive the best tissue production solution – anywhere in the world. That's why we are standardizing certain processes at all of our plants, establishing lean production processes, and scrutinizing the whole system with the help of audits and key performance indicators. In the process, we always regard our companies as a team with a shared mission.

# What role is played by the employees?

In order to reach our goals, we need top performance – and that is possible only in a perfect working environment. As a result, the structure of the workstations and the advanced training courses play a major role. Then too, one of our basic principles is that all of the measures for achieving optimal safety and health conditions have to be just right. In addition, our employees take on a lot of responsibility for the processes.

## Will this process be finished soon?

No, I have to honestly admit that it will never be finished. We have to go on inventing innovative technologies for our products over and over again. But we can only guarantee that if we continuously improve our performance. That way all of the small changes will add up to a big advantage for everyone and they will be ongoing.

"Our customers benefit directly."

# **Business Area Tobacco**

# Upping the pace of laser assembly

Can the throughput times for sophisticated lasers be cut in half? Hauni's employees and lean management experts have achieved amazing results through teamwork.


ven at first glance, it's obvious that the laser assembly area at Hauni Maschinenbau AG is streamlined and tidy down to the last detail. Compared to traditional
production halls, the facility seems a

little empty, even though a high-tech component for cigarette machines is manufactured here out of around 500 parts. Why so empty? "A lot has changed here," says André Flint, Head of the Laser Assembly department at Hauni. "We have consistently applied lean management principles in order to cut the throughput time of a laser from 15 working days to eight. One precondition for this was ideally designed working areas with short paths."

This solution is familiar to all production planners, because a lot of time is lost if employees have to walk around searching for the things they need. However, faster processes require much more than this, says management engineer Patrick Scheede. Since January 2015, he has been heading the FAST - Our Way of Working program, which will help to install a new mindset and working method at the Business Area by 2021. "It's not just about using lean management methods," he says. "On the contrary, we want to change our culture. Every employee should actively shape his or her own work environment and help to create a lean company." The employees at the laser assembly unit have also taken this ambitious goal to heart and largely changed their production method, because the previous material flow slowed down the processes. "In the past, many laser components were brought into the hall irrespective of the actual demand," says André Flint about the previous situation. As a result, the pallets and pallet cages were sometimes delivered too soon and the employees had to repeatedly move or resort them within the hall before the assembly process could begin. "Today, however, logistics orients itself to the colleagues' actual needs and delivers the required parts at the right time," says Flint.

This improvement was made possible by a completely revamped assembly environment. Since early 2015, every laser moves through three stations along with its assembly worker. Moreover, the components needed for a particular assembly step are provided in the right amounts at every station. To make sure this happens, the assembly department uses a pull principle to manage logistics. As a result, large "material buffers" are now a thing of the past. Logistics also puts the materials within easy reach for the assembly workers and sometimes even unpacks boxes. In the past, assembly workers had to perform all of these tasks themselves.

Shorter paths, direct access to all components, and the systematic processing of orders in the order they are received generate measurable benefits for the assembly unit every day. It currently takes around eight days to produce a laser, but the unit plans to reduce this time to only six days in the near future. The impetus for this reduction came once again from the assembly team, says Flint. "We are now continuously optimizing the workstations," he says. "For example, every workstation will in the future only be equipped with the tools that are actually required at a particular stage. This will greatly simplify many processes."



The new laser assembly process fits in very well with Hauni's comprehensive range of lean management changes, because since 2014 the Protos M machines have been assembled using a precisely timed production flow. The lasers are used for these machines and for any retrofitting of machines at the customers' facilities. Because laser assembly now takes much less time, the unit can respond to new requirements faster and more flexibly. This is a basic condition for the company's success. The pace of manufacturing should only be determined by the customers so that overproduction can be avoided. "That's why we want to create processes that are perfect down to the last detail. Our goal is to continuously become better in all areas of the company," says Scheede, who is supporting the FAST process with a clever qualification concept. "Above and beyond the benefits that it provides for our customers - with regard to delivery times, for example - the program considerably eases the workload for the employees," he says. "The wealth of positive feedback we've received from customers and employees confirms that we are on the right track."





DR. MARTIN HERMANN CTO, BUSINESS AREA TOBACCO What will happen to the FAST project in the years ahead?

FAST was launched as a pilot project at our facility in Bergedorf in order to significantly reduce the throughput times of our order fulfillment process. We then introduced the initiative FAST – Our Way of Working so that we can embed lean management methods in all of the Business Area's units and companies by 2021. The important thing is that the entire organization continuously calls existing processes into question at all units and steadily improves processes.

#### What does this entail?

We have three lean management experts in Hamburg alone to assist employees with the methods of the improvement process. We will soon have such experts at all our locations, as well as lean management practitioners who are part of the production teams and work together to optimize a process.

## Is production the only area that is being transformed?

No, we are applying lean management principles to all areas of the company. It's like a jigsaw puzzle. You begin with individual areas in the middle that have interconnected value streams, then add more parts of the puzzle. By 2021 we will have transformed all the processes within the Business Area.

"It's based on perfect processes that are down to the last detail."

## How important are megatrends and technology trends for the Körber Group?

Megatrends such as globalization, climate change, and digitization are influencing all sectors of society. Moreover, they are global by nature and evolve over long periods of time. As a result, consumers often require new or modified products and services. By contrast, a technology trend is more relevant for technologies, processes, products, and services. Thus it's far from encompassing all of the interconnections within society. Technology trends are therefore much more focused than megatrends. Megatrends and technology trends are nevertheless both of crucial importance for the Körber Group's strategic alignment. The technology experts therefore examine each trend's relevance for the current and future technologies, products, and services of the Group and its customers. They ask themselves whether the Group's products and services have to be adapted or if the existing know-how suffices to develop new products and services that meet the changed needs of consumers and markets. The answers to these questions are taken into account in all of Körber's strategic decisions and are of decisive importance for the further development of existing business and product-range models as well as the creation of new Business Areas.

#### **Business Area Corporate Ventures**

In October Körber AG and the strategic investor Barry-Wehmiller Companies, Inc. signed a contract concerning the aquisition of Winkler+Dünnebier GmbH (W+D – a part of the Business Area Corporate Ventures) by Barry-Wehmiller. The desinvestment encompassed the business operations of W+D (including POEM) in Neuwied and Löhne in Germany as well as of the U.S. subsidiary W+D North America and the Malaysian subsidiary W+D Asia Pacific. W+D was transferred to Barry-Wehmiller when the transaction was completed at the end of December. INTERVIEW WITH STEPHAN SEIFERT CHIEF FINANCIAL OFFICER AND DEPUTY CHAIRMAN OF THE GROUP EXECUTIVE BOARD OF KÖRBER AG

## "Responding to trends early on"



#### Mr. Seifert, Körber wants to continue to grow – and one of the ways it can achieve further growth is through strategic investments. How do technology trends influence the decisions you make?

Today's technology trends impact tomorrow's business and financial success. That's why we strive to strengthen and expand the market-leading positions of our Business Areas through our own innovations as well as through acquisitions of future-oriented, technologically leading companies. Moreover, we also examine new developments and innovative technologies and companies outside our Group to see whether they might serve as future growth drivers or new Körber Business Areas. This is a crucial issue for us as a future-focused technology corporation.

## Which future-oriented technologies do you have in mind exactly?

We are currently focusing on future-oriented technologies that are relevant to "Industry 4.0," which involves the networking and digitization of our products and services. In addition to software for machines and facilities, we are also looking at pioneering software solutions for a variety of applications. Furthermore, we are examining innovative technologies such as additive manufacturing. Both of these fields can lead to the creation of completely new product and process solutions that could be of interest to our customers. The exploitation of such technology trends is therefore the key element in the implementation of our strategy, and thus of our decisions concerning future acquisitions.

## Have you already achieved successes with the implementation of your acquisition strategy?

Yes, of course! Examples include the acquisition of the software companies Werum IT Solutions and Inconso for the Business Areas Pharma Systems and Logistics Systems. With this step, we responded to these trends early on. We are already among the leaders in shaping the increasing interconnection of machines, processes, and data in the interests of our customers. We want to further intensify this approach so that we can offer our customers pioneering solutions appropriate to the requirements of the future. At the same time, these measures are promoting our transformation into a trendsetting international technology Group.

#### Do you also take startups into consideration? Can you imagine investing in new fields of business here as well?

Yes, we are doing this too. A good example of that is the joint venture Irpd AG, which we and a spinoff of ETH Zurich founded in 2015 within our Business Area Machine Tools. Here we are jointly enhancing pioneering additive manufacturing methods and laser-based production techniques.

In addition, we can imagine making strategic investments in startups that generate no direct synergies with our current Business Areas. The important thing is that we identify the companies with which we can successfully develop innovative technologies or new business models. Another requirement is that these companies or partners fit our long-term growth strategy.

# Companies of the Business Areas

#### **Business Area Automation**

- Baltic Elektronik GmbH, Grevesmühlen/Germany
- Dressel GmbH, Unna/Germany
- Heinz Fiege GmbH, Röllbach/Germany
- Körber Automation GmbH, Lahnau/Germany
- LTI AUSTRiA GmbH, Wels/Austria
- LTI DRiVES Co. Ltd., Hsinchu/Taiwan
- LTI Motion Germany GmbH, Lahnau/Germany
- LTI Motion GmbH, Lahnau/Germany
- LTI Motion Italia S.r.l., Milan/Italy
- LTI Motion Schweiz GmbH, Rüti/Switzerland
- LTI Motion (Shanghai) Co. Ltd., Shanghai/China
- LTI REEnergy A.S., Van/Turkey
- LTI REEnergy Co. Ltd., Hsinchu/Taiwan
- LTI REEnergy GmbH, Unna/Germany
- LTI USA Ltd., Mechanicsburg/USA
- Sensitec GmbH, Lahnau-Waldgirmes/Germany
- Sensitec GmbH, Mainz/Germany

#### Business Area Logistics Systems

- Aberle GmbH, Leingarten/Germany
- Aberle Logistics GmbH, Siegen/Germany
- Aberle Software GmbH, Stuttgart/Germany
- Efacec Handling Solutions S.A., Moreira da Maia/Portugal
- Efacec Singapore Pte. Ltd., Singapore/Singapore
- Godrej Efacec Automation & Robotics Ltd., Mumbai/India
- inconso Aktiengesellschaft, Bad Nauheim/Germany
- inconso Beteiligungs GmbH, Bad Nauheim/Germany
- inconso SASU, Lyon/France
- inconso Software S.L., Sant Cugat del Vallés/Spain
- Körber Logistics Systems GmbH, Bad Nauheim/Germany
- Langhammer GmbH, Eisenberg/Germany
- Langhammer GmbH, Freiberg/Germany

#### Business Area Machine Tools

- Blohm Jung GmbH, Göppingen/Germany
- Blohm Jung GmbH, Hamburg/Germany
- Ewag AG, Etziken/Switzerland
- Fritz Studer AG, Steffisburg/Switzerland
- Fritz Studer AG Kompetenzzentrum Innenschleifen, Biel/Switzerland
- Irpd AG, St. Gallen/Switzerland
- Mägerle AG Maschinenfabrik, Fehraltorf/Switzerland
- Schaudt Mikrosa GmbH, Leipzig/Germany
- StuderTEC K.K., Tokyo/Japan
- United Grinding GmbH, Moscow/Russia
- United Grinding GmbH, India Branch Office, Bangalore/India
- United Grinding Group AG, Bern/Switzerland
- United Grinding Mexico Sociedad Anonima de Capital Variable, Querètaro/Mexico
- United Grinding North America Inc., Fredericksburg/USA
- United Grinding North America Inc., Miamisburg/USA
- United Grinding (Shanghai) Ltd., Shanghai/China
- United Grinding (Shanghai) Ltd., Branch Office Beijing, Beijing/China
- United Grinding (Shanghai) Ltd., Branch Office Chongqing, Chongqing/China
- United Grinding (Shanghai) Ltd., Branch Office Guangzhou, Guangzhou/China
- Walter Ewag Asia-Pacific Pte. Ltd., Singapore/Singapore
- Walter Ewag do Brasil Importação e Exportação de Máquinas Ltda., São Paulo/Brazil
- Walter Ewag Italia S.r.l., Bregnano/Italy
- Walter Ewag Japan K.K., Anjo City/Japan
- Walter Ewag UK Limited, Warwickshire/United Kingdom
- Walter Maschinenbau GmbH, Garbsen/Germany
- Walter Maschinenbau GmbH, Tübingen/Germany
- Walter s.r.o., Kuřim/Czech Republic

#### Business Area Pharma Systems

- Dividella AG, Grabs/Switzerland
- Körber Medipak América Latina Soluções Farmacêuticas Ltda., São Paulo/Brazil
- Körber Medipak Systems AG, Winterthur/Switzerland
- Körber Medipak Systems GmbH, Hamburg/Germany
- Körber Medipak Systems Machinery s.r.o., Kuřim/Czech Republic
- Körber Medipak Systems NA Inc., Clearwater/USA
- Mediseal GmbH, Schloß Holte-Stukenbrock/Germany
- Mediseal GmbH, Shanghai Representative Office, Shanghai/China
- Rondo AG, Allschwil/Switzerland
- Rondo obaly s.r.o., Ejpovice/Czech Republic
- Rondo-Pak Inc., Norristown/USA
- Seidenader Maschinenbau GmbH, Markt Schwaben/Germany
- Werum IT Solutions America Inc., Parsippany/USA
- Werum IT Solutions America Inc., Cary/USA
- Werum IT Solutions America Inc., San Francisco/USA
- Werum IT Solutions GmbH, Hausach/Germany
- Werum IT Solutions GmbH, Sankt Augustin/Germany
- Werum IT Solutions GmbH, Lüneburg/Germany
- Werum IT Solutions GmbH, Allschwil Branch Office, Allschwil/Switzerland
- Werum IT Solutions K.K., Tokyo/Japan
- Werum IT Solutions Pte. Ltd., Singapore/Singapore
- Werum IT Solutions SARL, Toulouse/France

#### Business Area Tissue

- Engraving Solutions S.r.l., Lucca/Italy
- Fabio Perini Germany GmbH, Neuss/Germany
- Fabio Perini Indústria e Comércio de Máquinas Ltda., Joinville/Brazil
- Fabio Perini Japan Co. Ltd., Shizuoka/Japan
- Fabio Perini North America Inc., Green Bay/USA
- Fabio Perini (Shanghai) Co. Ltd., Shanghai/China
- Fabio Perini S.p.A., Lucca/Italy
- Körber Engineering (Shanghai) Co. Ltd., Shanghai/China

#### Business Area Tobacco

- ASL Analytic Service Laboratory GmbH, Hamburg/Germany
- Baltic Metalltechnik GmbH, Grevesmühlen/Germany
- Baltic Metalltechnik GmbH, Hamburg/Germany
- Borgwaldt Flavor GmbH, Hamburg/Germany
- Borgwaldt KC GmbH, Hamburg/Germany
- Borgwaldt KC Inc., North Chesterfield/USA
- Decouflé s.à.r.l., Chilly-Mazarin/France
- Dickinson Legg Inc., Richmond/USA
- Dickinson Legg Limited, Winchester/United Kingdom
- Garbuio Dickinson Group Holding S.r.l., Paese (Treviso)/Italy
- Garbuio (Shanghai) Trading Company Limited, Shanghai/China
- Garbuio S.p.A., Paese (Treviso)/Italy
- Hauni do Brasil Máquinas e Equipamentos Para Tabaco Ltda., São Paulo/Brazil
- Hauni Far East Limited, Hong Kong/Hong Kong
- Hauni Far East Ltd., Kunming Representative Office, Kunming/China
- Hauni Hungaria Gépgyártó Korlátolt Felelösségü Társaság, Pécs/Hungary
- Hauni Japan Co. Ltd., Tokyo/Japan
- Hauni (Malaysia) Sdn. Bhd., Shah Alam/Malaysia
- Hauni Maschinenbau AG, Hamburg/Germany
- Hauni Primary GmbH, Schwarzenbek/Germany
- Hauni Richmond Inc., Richmond/USA
- Hauni Singapore Pte. Ltd., Singapore/Singapore
- Hauni South Africa (Pty.) Ltd., Cape Town/South Africa
- Hauni St. Petersburg Ltd., St. Petersburg/Russia
- Hauni Teknik Hizmetler ve Ticaret Limited Sirketi, Izmir/Turkey
- Hauni Trading (Shanghai) Co. Ltd., Shanghai/China
- ISIS S.r.l., Paese (Treviso)/Italy
- PT. Garbuio Dickinson Indonesia, Jakarta/Indonesia
- Sodim S.A.S., Fleury-les-Aubrais/France
- UNIVERSELLE Engineering U.N.I. GmbH, Schwarzenbek/Germany

#### Business Area Corporate Ventures

- POEM PreOwnedEnvelopeMachines GmbH, Neuwied/Germany
- W+D Asia Pacific Sdn. Bhd., Petaling Jaya/Malaysia
- W+D Engineering (Shanghai) Co. Ltd., Shanghai/China
- W+D North America Inc., Lenexa/USA
- W+D UK Ltd., Surrey/United Kingdom
- Winkler+Dünnebier GmbH, Löhne/Germany
- Winkler+Dünnebier GmbH, Neuwied/Germany

### **CONSOLIDATED INCOME STATEMENT**

Fiscal	vear	ended	Decem	her	31	2015
i iscat	year	enueu	Decenn	nei	JI,	2013

In thousands of euros	2014	2015
Sales	2,342,332	2,317,277
Change in finished goods and services and work in progress	15,392	5,576
Other own work capitalized	3,821	2,573
Total operating performance	2,361,545	2,325,426
Other operating income	154,962	168,720
Cost of materials		
Cost of raw materials, consumables, and supplies, and of purchased merchandise	768,058	765,954
Cost of purchased services	119,306	128,816
	887,364	894,770
Personnel expenses		
Wages and Salaries	659,247	741,500
Social security, post-employment, and other employee benefit costs	135,286	146,627
of which in respect of old age pensions	23,369	25,646
	794,533	888,127
Depreciation, amortization, and writedowns of intangible assets and tangible assets	93,044	108,274
Other operating expenses	528,383	515,639
Income from long-term equity investments	256	2,422
of which from affiliated companies	256	2,422
Income from other securities and long-term loans among the fixed assets	25	33
Other interest and similar income	15,019	21,585
of which from affiliated companies	928	782
Writedowns of long-term financial assets	1,346	1,389
Interest and similar expenses	2,625	21,920
of which to affiliated companies	21	8
Result from ordinary activities	224,512	88,067
Extraordinary income	0	11,677
Extraordinary expense	0	13,326
Extraordinary result	0	-1,649
Taxes on income	74,386	52,679
Net income for the fiscal year	150,126	33,739
Minority interest in net income	-905	-912
Consolidated retained net profits	149,221	32,827

#### **CONSOLIDATED BALANCE SHEET**

In thousands of euros	2014	2015
Assets		
Fixed assets		
Intangible fixed assets	306.654	268,976
Tangible fixed assets	350,482	351,510
Long-term financial assets		
Shares in affiliated companies	12,483	18,101
Other long-term equity investments	3,462	4,920
Other loans	8,641	8,888
	24,586	31,909
	681,722	652,395
Current assets		
 Inventories	587,742	604,393
Receivables and other assets	563,331	516,282
Securities	420,213	511,015
Checks, cash on hand, and bank balances	215,623	877,276
	1,786,909	2,508,966
Prepaid expenses	6,388	6,197
Deferred taxes	59,988	65,060
Goodwill arising from asset offsetting	0	8,775
Balance sheet total	2,535,007	3,241,393
Equity and liabilities		
Equity	1,720,253	1,761,552
Minority interests	7,211	7,569
	1,727,464	1,769,121
Accruals	295,546	332,908
Liabilities	508,593	1,138,488
Deferred income	3,404	876
Balance sheet total	2,535,007	3,241,393



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