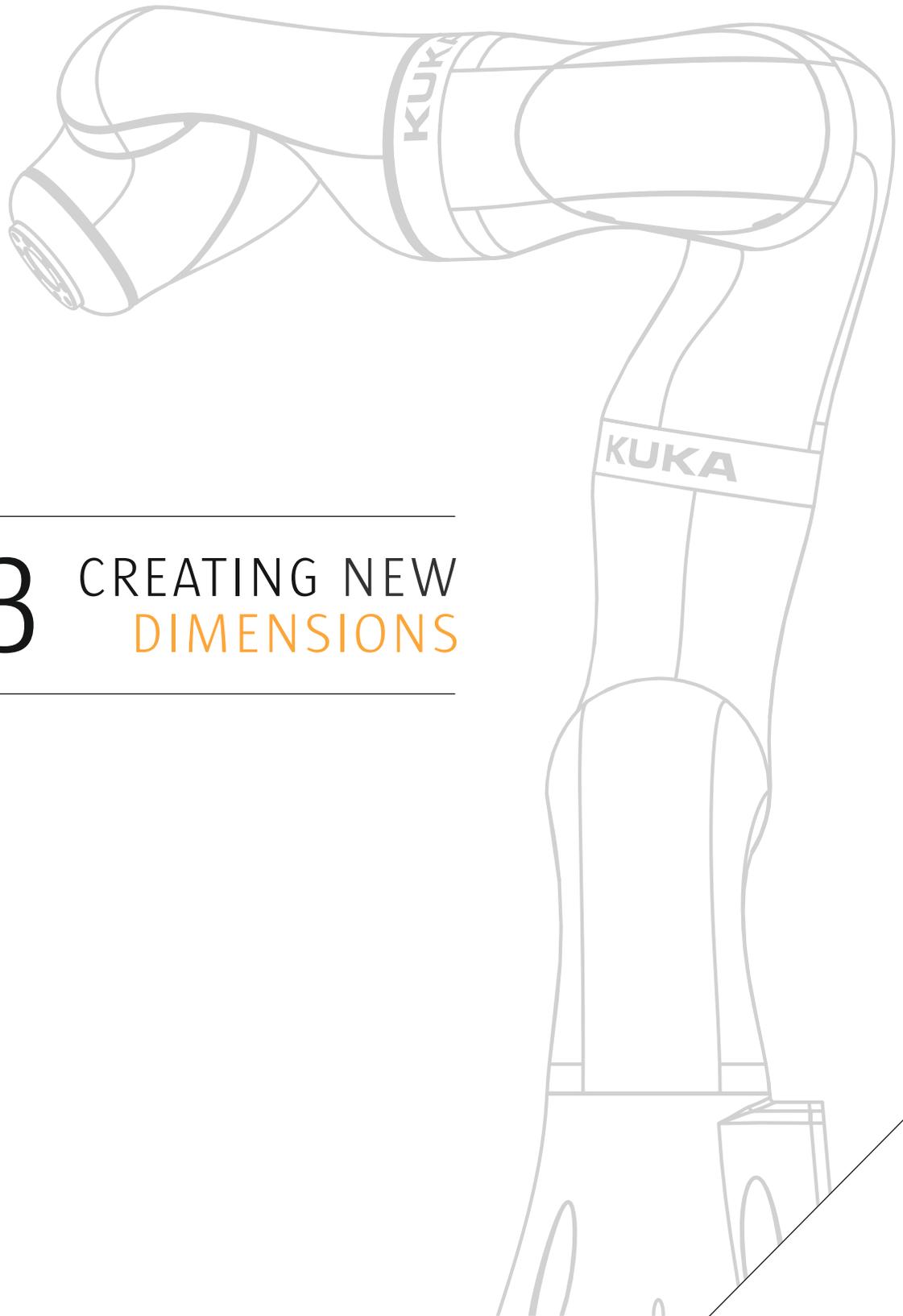


KUKA



ANNUAL REPORT

2013

CREATING NEW
DIMENSIONS

KEY FIGURES

in € millions	2012	2013	Change in %
Orders received			
Robotics	803.1	793.5	-1.2
Systems	1,115.1	1,111.6	-0.3
Group	1,889.6	1,881.9	-0.4
Sales revenues			
Robotics	742.6	754.1	1.5
Systems	1,025.3	1,045.9	2.0
Group	1,739.2	1,774.5	2.0
Order backlog (Dec. 31)	909.4	991.6	9.0
EBIT			
Robotics	80.2	77.1	-3.9
Systems	47.7	60.8	27.5
Group	109.8	120.4	9.7
EBIT in % of sales			
Robotics	10.8	10.2	-
Systems	4.7	5.8	-
Group	6.3	6.8	-
Earnings after taxes	55.6	58.3	4.9
Financial situation			
Free cash flow	77.1	95.4	23.7
Capital employed (annual average)	339.8	326.2	-4.0
ROCE (EBIT in % of capital employed)	32.3	36.9	-
Capital expenditure	42.8	74.7	74.5
Employees (Dec. 31)	7,264	7,990	10.0
Net worth			
Balance sheet total	1,137.4	1,377.1	21.1
Equity	297.5	379.1	27.4
in % of balance sheet total	26.2	27.5	-
Share			
Weighted average number of shares outstanding (in millions of shares)	33.9	33.9	-
Earnings per share (in €)	1.64	1.72	4.9
Dividend per share (in €)	0.20	0.30*	50.0
Market capitalization (Dec. 31)	938.4	1,154.8	23.1

* subject to approval by shareholders at the Annual General Meeting

THE WORLD OF KUKA

KUKA is a global company with sales of about euro 1.8 billion and approximately 8,000 employees worldwide. KUKA offers its worldwide customers automation solutions comprising robots, software and assembly systems. The company is one of the world's leading suppliers of robot technology and systems engineering. KUKA's technologies set standards the world over. KUKA has its manufacturing and development headquarters in Augsburg, Bavaria and 45 subsidiaries internationally.

EUROPE

AUSTRIA	NETHERLANDS
BELGIUM	ROMANIA
CZECH REPUBLIC	RUSSIA
FRANCE	SWEDEN
GERMANY	SWITZERLAND
GREAT BRITAIN	SLOVAKIA
HUNGARY	SPAIN
ITALY	

NORTH / SOUTH AMERICA

BRAZIL	MEXICO
CANADA	USA

ASIA / AUSTRALIA

CHINA	SOUTH KOREA
INDIA	TAIWAN
JAPAN	THAILAND
MALAYSIA	VIETNAM
	AUSTRALIA



EBIT MARGIN IN %



ROCE IN %



EARNINGS PER SHARE IN €



CREATING NEW DIMENSIONS

KUKA sets automation trends – trends that will shape the future. One such trend is the increasing sensitivity and safety of robots that are also mobile and can be used more universally than ever before. KUKA combines its manufacturing and engineering expertise to make components and design sophisticated production plants, up to and including the associated control systems. The company's products and services are used by a wide range of industrial manufacturers, and even by other industries. For the longest time, KUKA products have also been applied in non-industrial sectors such as health care. KUKA is developing a new control environment based on mainstream IT technologies that will very soon open the door to entirely new applications. Our employees' solutions thus create new dimensions for our customers – across the globe.

KUKA



KUKA SYSTEMS

KUKA Systems is the reliable specialist for innovative joining and forming processes using all kinds of materials and a provider of automated production and assembly solutions for sustainable industrial manufacturing. As an international systems integrator for systems, tools and customized mechanical engineering, KUKA Systems is the technological leader in its segments and provides optimized, customer-oriented services and solutions.



KUKA ROBOTICS

Industrial Robotics

KUKA Robotics is one of the world's leading suppliers of industrial robots. KUKA Robotics' core competence is in the development, production, sales and service of industrial robots suitable for any application and any industry sector, mobile platforms, control systems and software solutions.

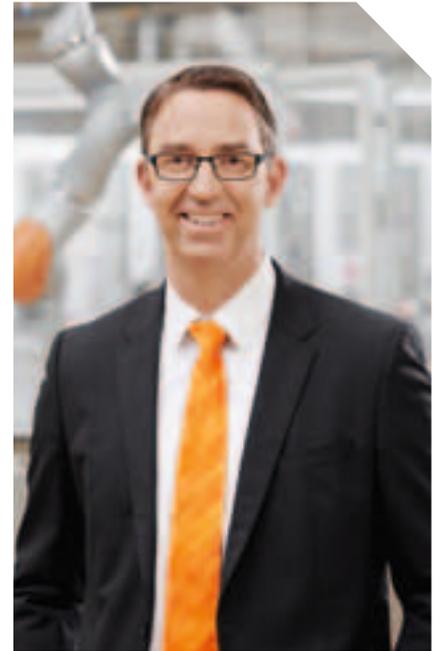


KUKA Laboratories

KUKA Laboratories develops and markets products for the service robotics and health care sectors. The company is also responsible for the Group's research and development activities.

EDITORIAL

DR. TILL REUTER
CHIEF EXECUTIVE OFFICER



Dear Shareholders,

KUKA continued to perform successfully in 2013. Orders received reached €1,881.9 million and sales revenues were up two percent to €1,774.5 million, building on last year's results. EBIT margin was 6.8 percent. Free cash flow reached a record high of €95.4 million. We hit all of our targets. Both divisions, Robotics and Systems, contributed to this excellent growth.

On the road to becoming a global automation company

KUKA is evolving into a global automation company. Customers around the world trust our innovations and products. Still, we can only secure our international success if the employees who supply our products and our services are close to our customers and understand their needs.

With the acquisition of UTICA Enterprises' systems business, KUKA Systems became the number one car body manufacturer in North America and expanded our product portfolio enormously. But with 800 extremely well qualified employees, KUKA North America's success is not restricted to the automotive sector. KUKA's assembly systems expertise and our proven welding processes are increasingly

sought after by general industry companies; for example, in the aerospace sector. Our customers greatly value KUKA's engineering expertise, sound process knowledge and innovative technologies. KUKA's ability to supply total solutions has earned it new customers in the aerospace industry.

KUKA has also expanded its presence in the market of the future, Asia. Already today, China is the world's second-largest robot market. According to estimates published by the IFR, the International Federation of Robotics, demand in this region will continue to rise. Now only European premium carmakers, but also more and more Chinese automotive customers are turning to robots made by KUKA.

Right on schedule, in December our colleagues in China were able to move into the new factory in Shanghai and assemble the first robots. The factory has an annual output capacity of over 5,000 robots, complete with control cubicles. The location serves as a base that enables us to offer local products and services to our customers throughout all of Asia.

Investing in innovation

We continuously invest in our innovation capabilities so that we may always offer our customers throughout the world the latest solutions. This also secures our long-term competitiveness. At Hannover Messe, we showcased the entire Group's products and services, which span from components to work cells and complete systems. We unveiled LBR iiwa, the first sensitive lightweight robot for industrial manufacturing, at the fair. The product's sensitivity and integrated safety systems will bring an entirely new dimension to manufacturing.

These days, the media is intensively discussing the many aspects of human-machine collaboration. For us, the key aspect is safety. Our product's integrated sensors and a highly sophisticated safety system are uncompromising. But the issue of safety becomes even more challenging when a robot is applied in a real world situation, because every application comes with a realm of new considerations.

At KUKA, an entire team is engaged in developing applications to ensure that robots designed to work with humans are also useful and safe – without protective barriers or external safety measures. The Applications Technologies team, in collaboration with our partner Daimler, has come up with potential applications in the field of automotive assembly.

But potential applications for our lightweight robot go far beyond that. For example, when mounted on a mobile platform, it can be used as an assistant in industrial plants. In other words, it can be moved to exactly where it is needed.

Mobile platforms enable customers that need to handle large parts to increase the flexibility of their manufacturing facility. KUKA presented a conceptual study called "Moiros" at Hannover Messe to demonstrate how this can be done. The company received the trade show organizer's Robotic Award for the display.

Presence in new sectors

The products and solutions I outlined above are only a few of the ones that KUKA has developed so that it can grow in new sectors. For example, we also see a potential for using robots in conjunction with machine tools. Only about two percent of the 500,000 machine tools sold annually come with robots. Yet robots can be applied very efficiently in this sector. We are so sure of this that we have installed robots alongside the machine tools at our own facility in Augsburg. They are used for machining or to unload parts.

A further strategic initiative in this market is our collaboration with Siemens Drive Technologies. The aim of the project is to integrate KUKA robots and Siemens machine tool control solutions. KUKA robots will be used for handling tasks, such as loading and unloading machine tools, as well as machining tasks. Support will be provided for the entire process chain: from the planning and design of a workpiece, to simulating the machining and engineering, right through to fabrication at the factory.

Captivating the future with our employees

To progress along its path as a successful global automation company, KUKA continues to need top employees. At Hannover Messe, we launched a comprehensive employer branding campaign under the heading "Captivating our future", which aims to attract qualified, motivated people to our company.

Of course a campaign of this type can only be successful over the long term if we keep our promises. Employees all have their own idea about what makes a good employer. After all, the needs of our employees are as diverse as the various phases of their lives at present. At KUKA, we want to accommodate these needs. In this connection, I am particularly proud of the Orange Care day care center that opened on KUKA's premises in Augsburg. The aim is to enable parents to better reconcile their families and careers. After a successful re-audit, KUKA again received the "Career and Family" certificate awarded by the charitable organization "Beruf und Familie GmbH". We had to work hard for it, and continue to do so. For example, flexible work hours and the opportunity to work from home are designed to make our people feel good about KUKA and continue to deliver outstanding performance.

THE EXECUTIVE BOARD

Right:

DR. TILL REUTER
CEO

Dr. Till Reuter (born 1968) has been CEO of KUKA Aktiengesellschaft since 2009. Prior to that he worked as a lawyer and investment banker in Europe and the United States. In May 2008, he founded the holding company Rinvest AG, of which he is Supervisory Board Chairman.

Left:

PETER MOHNEN
CFO

Peter Mohnen (born 1968) has been CFO of KUKA Aktiengesellschaft since 2012. Previously he was CFO at E.ON in Hungary, after having worked for many years in leading positions in accounting at E.ON in Essen.

KUKA is becoming a global team. We will implement a group-wide management guideline this year to support this evolution.

Creating new dimensions

KUKA is benefiting from the global trend toward automation. Our systematic strategic positioning is what allows us to take advantage of this development. However, the trend will change the future. Not only in the field of automation, but certainly also in our daily environment. Robots are becoming sensitive, mobile and more and more useful universally. A key element of this evolution is a new control environment that will be feasible when it is developed based on mainstream IT technologies. Our vision of the future is that our customers will be able to utilize a new KUKA control platform to design and implement their own applications. This will expand potential robotic applications many times over.

We will contribute to shaping the automation trend and create new dimensions in automation for our customers together with our employees. Of this I am certain, because we have the right people around the globe, who give their utmost every day. Thank you very much for that.

But I also want to thank you, our shareholders, for your interest in our technology and your confidence in our company.

Sincerely,



Till Reuter



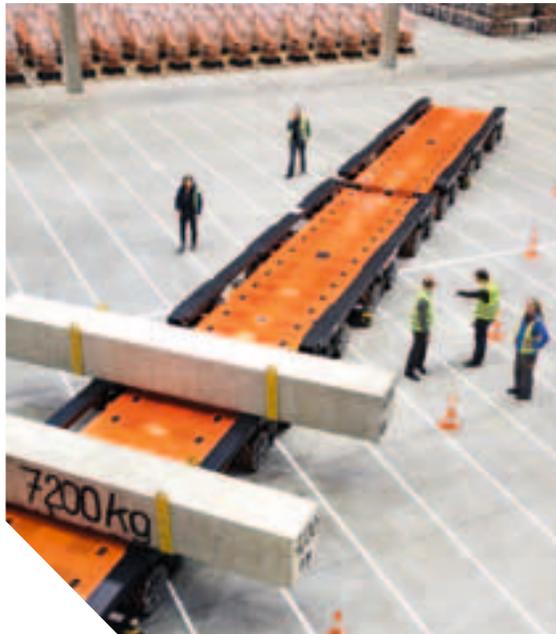
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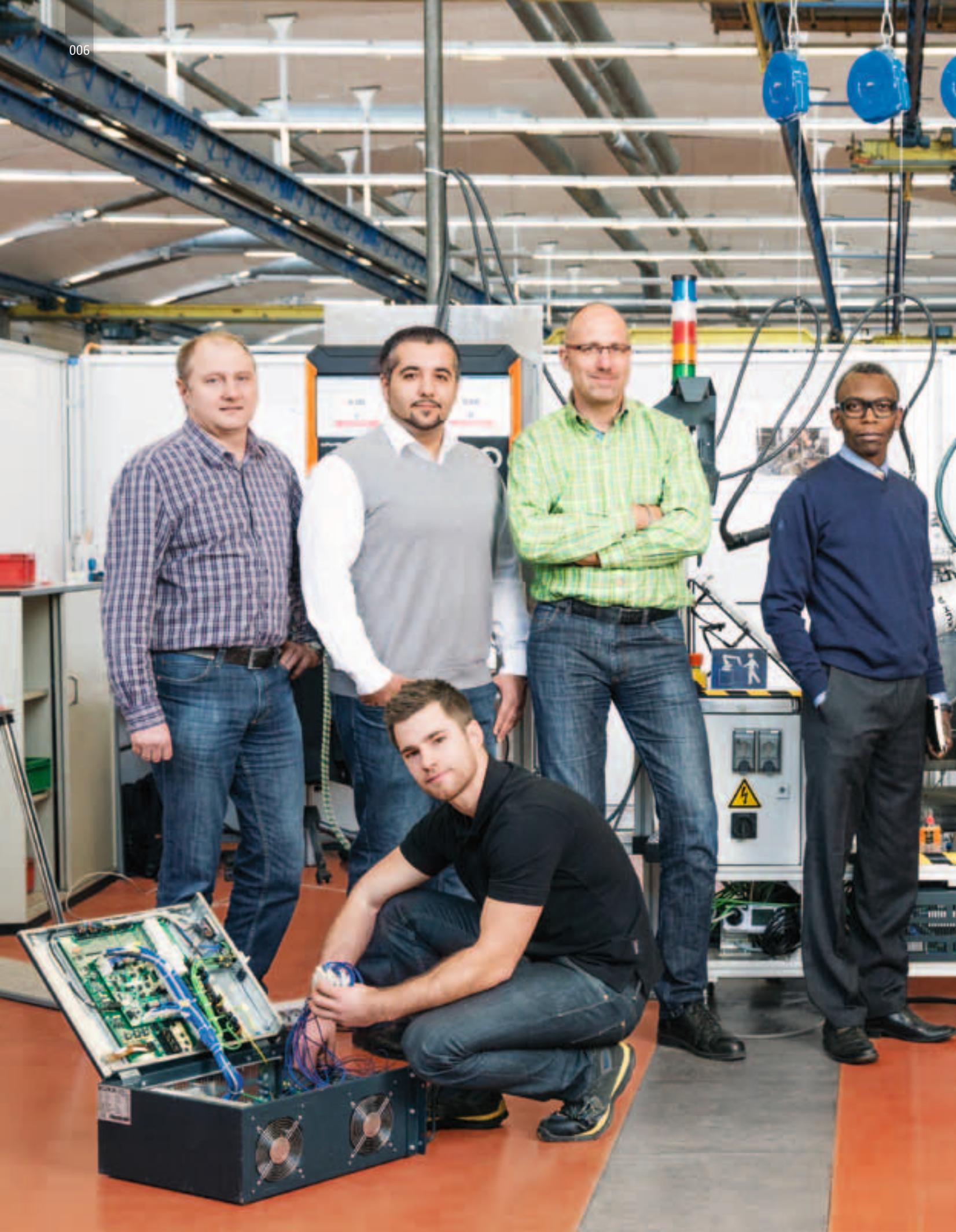
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A group of six men are posed in a factory or laboratory environment. One man is seated in the foreground wearing a green sweater and glasses. Five other men stand behind him, dressed in a mix of casual jackets and business-casual shirts. To the left, a white KUKA robot arm is visible. The background shows industrial infrastructure like overhead cranes and pipes.

A POWERFUL TEAM

Robots working directly with people. For many, a vision of the future. For others, virtually inconceivable. For some time now, research institutes and robot manufacturers have been looking into ways for humans and robots to collaborate. And KUKA is no exception here. The company is working with Daimler to develop applications that focus on safe human-robot collaboration.

There are robots with amazing abilities. Robots known as “humanoids” that can walk, run and even play soccer. Others are equipped with vision systems and grippers that bear an astonishing resemblance to the human hand. True household helpers are already vacuuming, window washing and lawn mowing their way into people’s hearts, although most robots specialize in a single service or task. Until now, this list did not include the universal “Robot Colleague”, which works as part of a team with humans. We demand a lot from these types of robots. They must be flexible, light and sensitive. And above all, safe.

Only robots that meet these requirements can become a part of a team and work with humans without the need for a protective barrier. Then, KUKA Systems Product Manager Dr. Richard Zunke is certain, a world of new possibilities will open up for industrial manufacturing. Zunke is testing how sensitive robots can be used in industrial applications in KUKA’s Advanced Technology Solutions (ATS) division with the LWR iiwa lightweight robot. Originally developed for totally different tasks in service robotics, the LWR iiwa must now undergo an endurance test in an industrial environment.

High demands on humans and technology

Production lines of the future face tremendous challenges. Both for people and robots. More and more versions of the same product are being manufactured in today’s production landscape. For example, in the automotive sector, countless versions of engines are manufactured and then installed into vehicles. There is a wide variety of features and equipment options. The electronics industry also produces countless different models, cell phones being an excellent example here. This is why production lines need to be flexible and adaptable. It must be possible to use the same means of production for a range of products precisely when and where needed.

People are also facing a vast array of new challenges. Demographic change means that the workforce is growing older. “Businesses have a responsibility to relieve the burden on their “aging workforce” and offer a workplace that does not place undue stress on such employees,” explains Frank Klingemann, CEO of KUKA Systems GmbH. But younger workers are also showing an increasing interest in finding workplaces equipped with the latest technology. “Here as well, enabling humans and robots to work hand in hand will be a key advantage. This will allow robots to take care of difficult, unergonomic, monotone or dangerous work and allow people to focus on work that demands specialized knowledge and expertise. One person can supervise several robots and need only intervene when necessary,” Klingemann explains using another example.



LEFT

DR. RICHARD ZUNKE, PRODUCT MANAGER AT KUKA, SEES MANY POTENTIAL FIELDS OF APPLICATION FOR LWR IIWA.

RIGHT

MOBILE HELPERS CAN TAKE CARE OF DIFFICULT, UNERGONOMIC AND DANGEROUS WORK SO THAT PEOPLE CAN FOCUS ON TASKS THAT DEMAND SPECIALIZED KNOWLEDGE AND EXPERTISE.





A new generation of robots

The key challenge in developing a sensitive robot for industrial use lies in producing a robot that is robust and can handle the required payload on the one hand, but is also sensitive and safe enough to move around in a space that is also occupied by humans. And the latter is not that easy for the simple reason that safety standards were not designed with robots that can move around and work directly with people in mind. “Robots are machines, in essence, and must therefore be placed behind a protective barrier,” notes Zunke. “A robot that stands still when someone crosses its path, that can be pushed aside when it is in someone’s way – no exact standard has been developed yet to fit this scenario.” So how safe does a robot need to be if no set of rules exists to govern its behavior? Very safe, according to the engineers at KUKA.

“We need to draw a clear line between industrial robots and the new generation of sensitive robots. The latter were designed right from the start for use outside of protective barriers. They are

made for human-machine collaboration and therefore must satisfy the most exacting safety requirements,” explains Zunke. KUKA’s LWR iiwa is precisely this type of robot. The responsive motor function in its arm enables this lightweight robot to feel and examine objects with a high degree of sensitivity. Consequently, the robot can be positioned and programmed to offer its coworker optimum ergonomic support, acting as a “third hand” for the worker. For instance, these robots can take over strenuous tasks such as overhead work. Sensitive collision detection enables them to recognize obstacles, avoid them, yield to them or stop in time.

A powerful partnership

In the rapidly changing world of automation, strong partners are needed to help perform practical tests. KUKA understands this, which is why the company enlisted Daimler AG in Stuttgart for a collaborative partnership. The development cooperation will test the lightweight robot in the field of human-robot collaboration (HRC).



LEFT AND TOP
THE LWR IIWA AT WORK
INSIDE A VEHICLE FRAME.

Put more precisely: KUKA and Daimler are conducting operational experiments to develop and test a recognized standard for the cost-effective use of HRC in the automotive sector. The aim is to prepare sample applications for practical use to effectively address the complexity in production. This means reaching the highest safety standards in order to satisfy Daimler's work safety requirements. Some of the experiments have been set up in KUKA's production halls in Augsburg, while others take place on Daimler's assembly lines.

Examples of human-robot collaboration

But which tasks can a robot actually take over? One example could include what is known as "plug insertion". During vehicle production, manufacturers must leave holes in the car bodies so that the paint can drain from the vehicle after it is sprayed on. Rubber plugs are used to re-close these holes – an arduous, unpleasant task for workers. "It makes sense to automate this task," says Zunke. "Employees can work on other areas of the vehicle while the robot "plugs" the holes."

But the LWR iiwa can also be put to work in the vehicle's interior space. It can move from the front to the rear of the vehicle and screw in safety bolts, on seatbelt tensioners for example. People can work on the car simultaneously here as well. Equipped with an ultrasound sensor, the LWR is able to recognize obstacles, stop in time and assist its human "colleague".

In "robot farming" a single worker has an entire "herd of robots" at his or her disposal and can put the robots to work precisely where they are needed in the production hall.

These are just a few of the possibilities on the road to safe human-robot collaboration now being tested by KUKA and Daimler. This road should lead to a safe method for people and robots to cooperate. Humans and robots should optimally complement each other, work together on a single task or work on different tasks in the same area. Regardless of the tasks they perform – together as a team, with all members contributing according to their own, unique strengths – this is what their work should look like in the future. Then, on the production lines of tomorrow, work will be carried out, "Hand in hand with robot coworkers."



KUKA MOBILIZES

Robots on mobile platforms that move autonomously to transport things or process large workpieces. That find their own way without any floor markings, induction loops or magnets, and avoid obstacles. Robots like these open up new dimensions not only in industry, but also in non-manufacturing sectors and possibly even in public and private life. They can move large parts and flexibly assist people, opening up entirely new fields of application.



READY FOR DELIVERY.
KUKA OMNIMOVE PLATFORMS ON
THEIR WAY TO THE CUSTOMER

It's 7:10 am on a winter morning in Augsburg, Germany. It's cold, and you can see every breath in the crisp, clear air. Footsteps hurry over the frosty ground heading to a large hall. A sliding gate quickly opens up, it's dark and the eyes need a moment to adjust. You can see the contours of an object; it is large and moving, accompanied by a whirring sound that gets louder and louder as the object heads straight toward the sliding gate. Like a ghost ship. Completely autonomous. A deep voice sounds from the hall: "Done! We can get started."

omniMove – the mobile platform for heavy loads

Now, an entire "fleet" is heading toward the hall exit. Trucks are already waiting there to load them. But this isn't a fleet of ships we're talking about here. In reality, it's eight mobile platforms from KUKA. They come in all sizes. The largest versions, the omniMoves, are designed to move XXL parts like components for the aviation industry, for example. "An omniMove can be as long and wide as the customer needs it to be. Individually or together with multiple vehicles



TOP

CHRISTOPH BICK, PROJECT MANAGER R&D OMNIMOVE NAVIGATION (LEFT) AND ROBERT WITTE, BUSINESS DEVELOPMENT MANAGER OMNIMOVE, (RIGHT) FOCUSED ON THE TASK

RIGHT

KUKA OMNIMOVE PLATFORMS WITH A TEST WEIGHT OF 7.2 TONNES



it can effortlessly travel under a 90 tonne load and pick it up,” explains Dr. Patrick Pfaff, Head of the Development Team for Autonomous Navigation and Control at KUKA Laboratories. The young man wearing a blazer and jeans, glasses and sneakers looks like he might have just come from a Hollywood set. His choice of career alone would qualify him for a role in “Back to the Future” ...

But back to the omniMove fleet that is scheduled to be delivered today. What’s unique about these battery-powered platforms, explains Pfaff, isn’t their payload. Or the fact that they are able to move on their own, either. This is quite remarkable, but nothing new. What is new? They don’t need any floor markings, magnets or induction loops to move. The platforms find their way

on their own. They use KUKA navigation software to guide them. With the help of the SLAM (Simultaneous Localization and Mapping) method, it creates maps and determines the position of the platform within the respective map. Smaller platforms can also be equipped with this software. And you can add robots to these platforms to further expand the range of applications.



Robots navigate autonomously without floor markings, magnets or induction loops

“Imagine – you can completely automate individual steps in production like transferring workpieces to the next production step. Or even replace them entirely if all production steps take place at the same site. This is possible when our KUKA robots like the KR QUANTEC, KR AGILUS or LWR iiwa are

mounted on our mobile platforms. Then the robot comes to the workpiece and not the other way around,” says the computer scientist enthusiastically. “He swipes his iPad and pulls up a picture showing many people crowded around a mobile platform with a KUKA robot mounted on it. The picture was taken at the Hannover Messe trade fair and shows the “moiros” concept vehicle processing a rotor blade from a wind tur-

bine. A KR QUANTEC mounted on the KUKA omniMove is doing the work. The “Robotics Award” shines in gold in the foreground. It’s the award KUKA won at Hannover Messe for this concept study due to its high practical relevance.

Mobile helpers for everyday life

This scenario can be applied to any number of applications, not just production. Mobile

helpers can also be used in offices thanks to KUKA navigation software. KUKA Laboratories demonstrates how this works with a robot “lady” named Mail-E. Team Assistant Margit Trummer has already made friends with her. “She’s responsible for our mail. She brings it to us on her morning, noon and evening rounds. If I want to forward documents to colleagues I just call her on the system and she takes care of it for me. Sometimes I cross Mail-E’s path. Then she stops and frowns at me,” says Trummer with a grin. “She’s probably annoyed that she has to go around me. But her digital face smiles again as soon as she passes by.” The fact that Mail-E is able to avoid obstacles at all has to do with KUKA navigation software and safety engineering.

Avoid collisions and obstacles

Mail-E and her mobile robotic colleagues from KUKA use a digital map for orientation. A platform moves throughout the surroundings one time and scans them with its laser scanners. The robot can take this map and provide it to all of its “colleagues” via the Vehicle Coordination System. The entire fleet of mobile robots is digitally mapped; it is possible to control the robots and see where they are at any given time. The way they are mapped looks kind of like an ant trail. But how can an “ant” like Mail-E avoid colliding with Ms. Trummer? “Every single mobile robot is controlled by a second component of the KUKA navigation software called the “Navigation Core” installed on a PC in the robot. Mail-E knows precisely where she is – down to a few millimeters – at any given moment thanks to the positioning in her location map. If she detects objects with her safety sensors and the maps says they should not be there, she stops and takes a different path,” explains Pfaff. This is no problem thanks to the flexible drive concept that all mobile KUKA robots are equipped with. It enables her to change positions in any direction, and even rotate 360 degrees. An omniMove platform has mechanical wheels that even let it turn around any point in a room while it is in motion for much more effective maneuvering and positioning.

Acceptance for robots that act autonomously

But how do people react to these mobile helpers? What if an omniMove suddenly crosses the path of a forklift operator? Pfaff has had to respond to this concern many times: “We developed autonomous route planning specifically for this purpose: The platform travels exclusively on virtual “tracks” with strictly defined paths. This means the vehicles can move more or less freely in a room, but only in certain predefined areas.” So workers always know the routes the platform takes or the areas in which it can move autonomously. “This helps employees “get used to” their new

colleague.” The virtual track can be changed at any time – without affecting the flexibility of the robots – to adapt to any changes in their environment.

Countless applications

The areas of use include all kinds of completely different environments. Whether for industrial use in production halls, in logistics or at offices – mobile robots with KUKA navigation software are even conceivable in the services sector in social applications. KUKA demonstrated a possible application at the MEDICA trade show. In this scenario a robot stacked trays on a shelf in a hospital kitchen to help relieve the staff.



O BEN
MARGIT TRUMMER, TEAM
ASSISTANT, RECEIVES POST
FROM MAIL-E.



“The fields of application are very broad. Basically, there are as many uses for this technology as there are ideas for it,” says the engineer pointing to the KUKA LWR iiwa lightweight robot. Its sensitivity and flexibility enables it to work directly with humans. Without a protective barrier. LWR iiwa plus KUKA navigation software plus mobile platforms = spatially flexible, autonomous, sensitive helpers. Think of all the possibilities ...

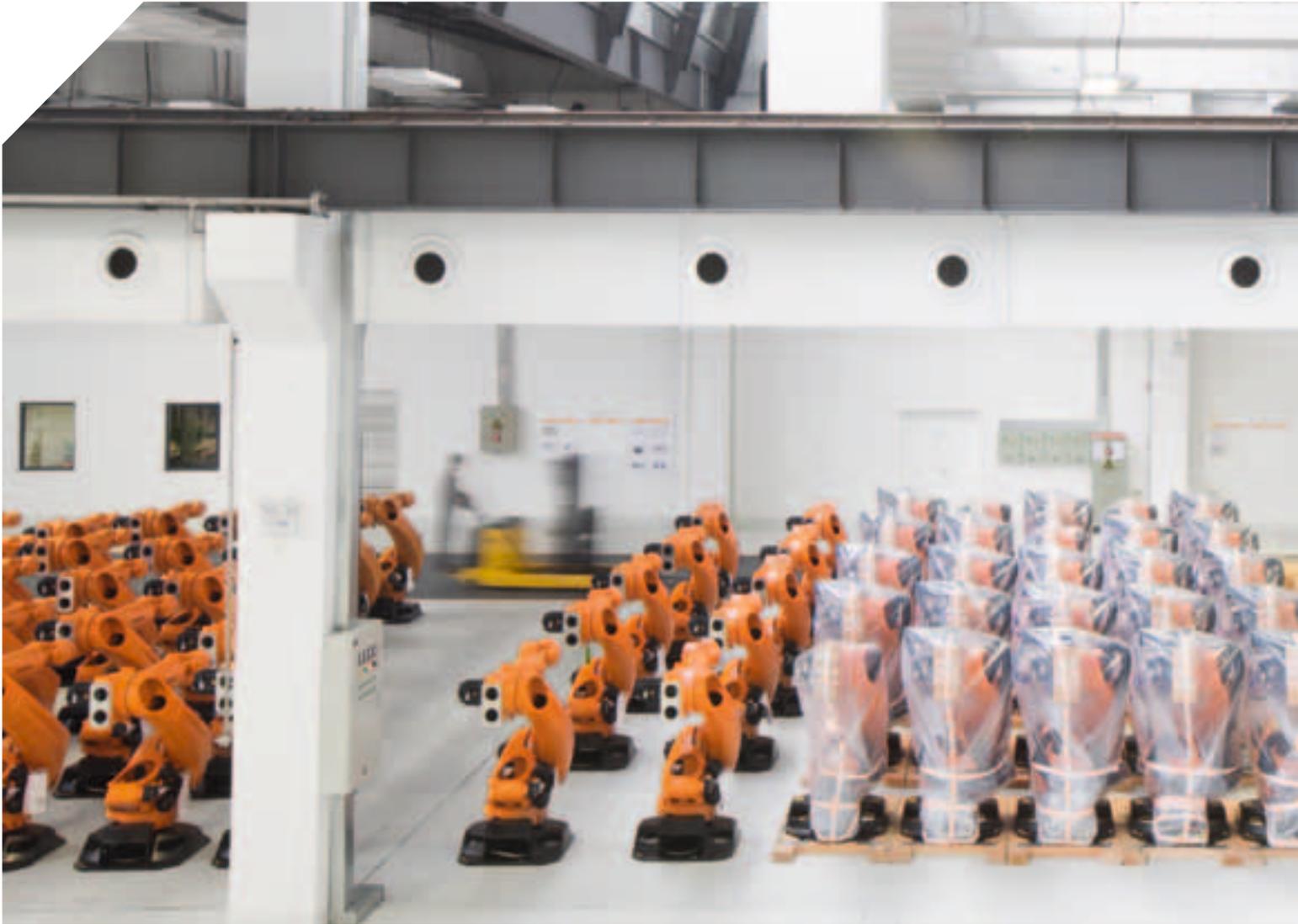
Pfaff sends the platforms with autonomous navigation on a trip to a customer. He pulls the sliding gate closed with the words “I have to go” and makes his way – back to the future.

**TOP**

DR. PATRICK PFAFF, HEAD OF THE DEVELOPMENT TEAM FOR AUTONOMOUS NAVIGATION AND CONTROL, IS VERY EXCITED ABOUT THE DEVELOPMENT OF MOBILE ROBOTICS.

LEFT

ROBERT WITTE (LEFT), OMNI-MOVE BUSINESS DEVELOPMENT MANAGER, AND CHRISTOPH BICK, PROJECT LEADER F&E OMNIMOVE NAVIGATION, ACCOMPANIE THE ACCEPTANCE PROCESS.



AUGSBURG – SHANGHAI – SHANGHAI – AUGSBURG

The world over, the use of robotic automation is trending higher. The Middle Kingdom's market is growing at ten to fifteen percent annually according to the IFR. China manufactures about twenty million cars, and here too, the trend is upwards. Industry analysts estimate that the number could double by 2018. The electronics industry is also betting on robotic automation. KUKA foresaw this some time ago and in December opened a new factory.



TOP
KUKA ROBOTS BEING PREPARED
FOR SHIPMENT.

RIGHT
CAROLIN WEISHAAPT AND
JASMINE CHEN PREPARE FOR THE
GRAND OPENING.

T

uesday, Augsburg, 10 am

Carolyn Weishaupt does not seem the least bit nervous this Tuesday morning. Similar to what she does every day, the media liaison officer takes calls, works on an article about mobile robotics and posts new photos on the company's home page – as if it were a normal Tuesday morning instead of the day before she leaves for China. She's going there to help prepare for a major event at the newly constructed factory in Shanghai and will be trading her desk in Augsburg for one at KUKA Robotics' marketing department in Shanghai.

"Now that I've booked the flight and know where I'll be staying, I'm not nervous anymore," says the twenty-five-year-old. "I'm just so happy!"

She has worked for KUKA for about three years and has not been bored for a minute since she started the job. Her assignments range from employee events to the employee newspaper, the Internet and intranet, press releases and the annual report. "But having the opportunity to go to China tops everything!"

She has always been entrepreneurial and inquisitive – and ambitious. That's why she focused on finishing her studies – before going abroad. "That's probably also because there were five of us back home," muses Weishaupt. "My parents always supported me, but I never wanted to spend their money unnecessarily and tried to become independent as quickly as possible. Now that I have the opportunity to catch up, it makes the experience of traveling abroad even nicer." She glances at her watch and turns quickly back to her laptop keyboard.





She still has to send a quick e-mail to Shanghai. The seven-hour time difference makes it harder to work with her colleagues. “Sometimes you don’t even think about it. Quite often a ‘good morning’ slips out, even though there they are almost ready to call it a day.”

Tuesday, Shanghai, 5 pm

Jasmine Chen receives Carolin’s e-mail. She is sitting at her desk at the new factory in Shanghai and is working hard to prepare for the grand opening, which is only four weeks away. About 800 guests have been invited. It will be a colorful event for customers, employees and the public, and needs to be well planned.

“Yes, the time difference is really a problem sometimes,” she confirms. “At the end of the day in China, you generally have an inbox full of e-mails. That’s why she often divides her workday into two segments, handling local issues until early afternoon, and then it’s Germany’s turn. And by twenty past five, the office is almost empty. That’s when the shuttle buses that take the employees back to the city depart. The new factory is situated outside the city center and many employees don’t own a car, or don’t use it to come to work to avoid being stuck in traffic for hours.



OTHER SIDE

AT PRESENT, ABOUT 3,000 KUKA ROBOTS ARE MADE ANNUALLY AT THE NEW FACTORY IN SHANGHAI.

LEFT

CAROLIN WEISHAUP AND JASMINE CHEN ARE GLAD THEY WERE ABLE TO MEET FACE-TO-FACE. IT MAKES WORKING ACROSS CONTINENTS EASIER.

Alwin Berninger, Executive Vice President Asia / Pacific, brought his entire family to Shanghai to move KUKA's business in Asia forward. The colleagues in China take the time difference in stride and adapt to the Augsburg time zone. "Flexibility is one of the people's strengths here," says Berninger. "They respond quickly and can get a lot done in a very short time."

He wants to return to Germany in summer. "My family and I had a nice, exciting time. I will miss Chinese spontaneity and the people's ability to get things done quickly, but I am also looking forward to getting back to Germany," says Berninger.

"Jasmine closes her laptop and heads for the shuttle with her colleagues. On the way, she explains that her name is actually Chen Yanling (陈妍伶), which is equivalent to beauty and wisdom. Chinese people typically give themselves an English moniker to go with their Chinese name, so that they can more easily communicate with foreigners.

Jasmine hopes she won't be too late getting home. If traffic is backed up, the return trip can take up to several hours. But it's actually not a problem for Jasmine, who was born here and loves the city.

"There are so many great things about Shanghai," she says. "I like the public parks best of all. I like to just sit there and enjoy nature." She says that the parks also reflect the city's culture. There are many migrants living here, including expats. "Many cultures live here in harmony. Shanghai is a melting pot."

Jasmine takes only two hours to get home today – there was hardly any congestion.

Wednesday, Augsburg, 8:30 pm

There is hardly any traffic on the road between Augsburg and the Munich airport and Carolin makes it in one hour. At gate H48, she says goodbye to her friend Berni. Life is going to be quite different for the next month.

Friday, Shanghai, 11 am

Carolin is now sitting across from Jasmine and has already sent her first e-mails to her colleagues in Germany. "I'm glad that someone from headquarters came here to work with us," says KUKA Robotics China Manager Bing Kong, who personally welcomed Carolin this morning. "We have a lot to do and can use all the help we can get," he says, "and I think the teamwork between the two continents works a lot better after we meet face-to-face."

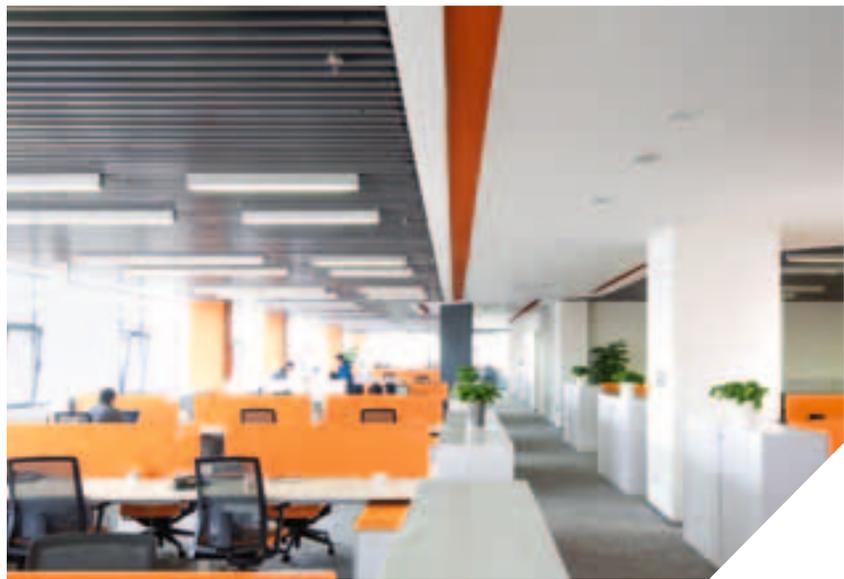
Communication is mainly via e-mail and telephone conferences. Carolin is already supposed to participate in one this afternoon. "It's a little strange to suddenly be talking to your own boss in English," she says. Maybe the jet lag is bothering her today, or the many kilometers between the participants, because: "It seems to me we talk in circles a lot until everyone knows what the others mean. Even though everyone speaks English well, occasional



TOP
KONG MING (孔明) LENDS A HAND.

RIGHT
THE NEW BRIGHT, MODERN
OFFICES

OTHER SIDE
THE ASSEMBLY LINE AT THE NEW
FACTORY IN SHANGHAI IS USED TO
MAKE KR QUANTEC ROBOTS WITH
UNIVERSAL KR C4 CONTROLLERS.



misunderstandings do crop up.” The communications director in Augsburg wants to know whether the core messages the marketing department has come up with will work in China. The response from the Chinese is not quite clear. They drop the topic, then revisit it. Would it perhaps be better to think of different core messages after all? At least, that’s what Carolin thinks she hears. “Cliché or not, it is quite true that we Germans are often much more direct. In our meetings, people are often at odds with one another. It seems to me that here, there is much more subtlety and more diplomacy.”

Monday, Shanghai, 11 am

By now, Carolin has spent her first weekend in Shanghai. “We went to Yuyuan Garden. It was incredibly busy.” Next day she rode the Transrapid. “The top speed of 430 km/h feels a little bit like riding on a roller coaster.” The flyer that Carolin picks up on her way back to the hotel says “German engineering”.

Yes, “German engineering”; the same thing that ties KUKA loyalists to their employer. “KUKA is high quality. Once they test a KUKA robot, they never want to change.”



Are the people here proud of their employer? Carolin thinks so. “Of course that’s what all KUKA loyalists have in common,” she concludes. “A passion for technology and pride in working here.” KUKA employees think orange – also in China. It becomes obvious the minute you set foot in the company premises. Not only the robot that is impressively staged in the courtyard – even part of the facade, the lighting and the furnishings display the company colors. Jasmine tells her that in China, orange symbolizes good luck and happiness. “Our company color is part of our image. People often ask us about it; for example, at trade shows,” says Jasmine.

Speaking of trade shows, two still have to be prepared before the opening celebrations. Carolin will be tagging along for a day so that she can experience how Asian visitors perceive KUKA. Once

a year, Jasmine goes to the Global Marketing Conference – also to Germany – where all of KUKA’s marketing people meet. Are the clichés about Germans accurate? “Some are. Germans really are very diligent, work very precisely and like to plan for the long-term,” she thinks.

The thirty-one-year-old has been working at KUKA Robotics China in marketing since 2010 and has been corresponding with headquarters a lot. She speaks English fluently. Still, working directly on a team with a colleague from Bavaria is something new for her. “Writing and telephoning is one thing, but talking face-to-face is quite another. Quite often, it’s suddenly quite easy to get things done.”



RIGHT SIDE
KUKA ROBOTS ARE ORANGE.
FANG JIANPING (方建平)
PAINTS THE KUKA ROBOTS
THE COMPANY COLOR.

THREE QUESTIONS FOR ...

MR. BING KONG
CEO KUKA ROBOTICS CHINA

Mr. Kong, KUKA started manufacturing in Shanghai in December 2013.

The new factory officially opened in March. Lots to do?

For sure. Just imagine, it took us only about a year to build a brand new factory. The assembly line is now running at high speed. We want to reach our output target for number of robots manufactured before the year is out. There really is always a lot to do.

How many robots are you planning to build here?

We are aiming for about 3,000 robots a year. But we will be able boost that to roughly 5,000 units over the course of the next few years. I have a team of about 300 people to do just that, and we are all working feverishly to make it happen. We have been operating with two shifts since March.

How would you describe the manufacturing facility?

We make KR QUANTEC series robots with KR C4 controllers. The factory is equipped with state-of-the-art equipment and we continuously train our employees. The plant meets KUKA quality specifications and German quality standards.

Thanks very much!

Tuesday, Shanghai, 4:50 pm

Carolyn has now spent her second weekend here and the girls have had a chance to spend some time together outside the office. Jasmine and her colleague Nina had lunch with Carolyn. "I like the food here. Not only in the restaurants, but in the cafeteria too," raves Carolyn. European as well as local dishes are served. For example, spaghetti Bolognese and carbonara are on the menu.

Thursday, Shanghai, 3:10 pm

The grand opening is drawing near. Every day the organizers make calls and check off to do lists. Jasmine is an all-rounder. "We work

well together, especially when we're under pressure – both on the local team and with Augsburg. Things just fall into place as we pass the ball to one another." The assignments include trade shows and events, PR and advertising, promoting sales and online marketing. And sometimes Jasmine acts as a moderator; for example, at a press event in December, when she really got the public going. But she doesn't want to take the stage at the grand opening. She has too much to manage that day.

She beckons to Carolyn. They have to get going – to join in on the next conference call with Augsburg.



A NEW WORLD

KUKA builds robots for use in medical applications such as x-ray imaging and tumor irradiation. Michael Otto is Head of the Medical Robotics division. He and his team are responsible for bringing robot-based technologies for the medical sector to market. Delivering applications to this very challenging market with demanding customers offers enormous potential.



MICHAEL OTTO, HEAD OF THE
MEDICAL ROBOTICS DIVISION AT
KUKA LABORATORIES, EXPLAINS
APPLICATIONS IN THE FIELD OF
MEDICAL ROBOTICS

“WE DON’T WANT TO OFFER SPECIAL ROBOTIC SOLUTIONS, WE WANT TO PROVIDE SOLUTIONS THAT ARE FLEXIBLE.”

? The slogan on KUKA’s homepage for its service and medical robotics products is “creating a new robotic world”. Isn’t it quite a bold statement to say you want to “create a new robotic world”? What do you mean by this?

! The slogan is a claim that we want to live up to: We want to help shape the future of medical and service robotics with our developments. After all, we actually already entered a new robotic dimension a long time ago. Much is possible thanks to new safety concepts and sensitive systems – things that we hadn’t even thought of before.

? Some of these developments are already established in many areas such as radiology, imaging systems, radiation therapy and patient positioning. Even Augsburg Central Hospital has a KUKA robot “on duty”. What does it do there?

! That’s right. You are talking about classic applications for our robots in the medical products sector, like the Artis zeego from Siemens Healthcare. It takes x-rays in the operating room that the physician can use immediately. A 6-axis robot guides the x-ray machine. The angiography system has been on the market since 2008 and is in use at various hospitals including Augsburg Central Hospital.

? So it’s an application that simplifies patient treatment and speeds up surgery. What tasks are the robots responsible for in radiation therapy or patient positioning?

! They are used in radiation therapy to treat tumors more precisely and ultimately more gently. Accuray, a partner of ours, developed a robotic radiosurgery system based on KUKA technologies that employs a high-power x-ray instead of a scalpel. The x-ray is guided by a KUKA robot arm. Thus, the “CyberKnife” was created. Patient positioning – as the name already implies, a system to position patients – was created with basically the same objectives in mind. It doesn’t simply “move” the patient somehow; it positions the patient in line with the radiation source with submillimeter accuracy. But we also provide robotics technologies that facilitate patient rehabilitation.

? Can you help me visualize this? Are robots now responsible for physiotherapy?

! No, but they can help the therapist do his job. One example is at our Austrian partner intelligent motion where they are used as mechatronic assistants in hippotherapy. The robot is used in place of a horse.



TOP AND RIGHT
THE ROBOT INTEGRATED IN ARTIS ZEEGO FROM SIEMENS HEALTHCARE ENABLES THE PHYSICIAN TO POSITION THE C-ARM AROUND THE PATENT.



? But the psychological component plays a very important role here ...

! The main goal of this type of therapy is to re-learn certain movements and train the sense of balance. The robot accurately mimics the movements of a horse – but correct, without the psychological effect that the animal has on the healing process, of course. Treatment of stroke patients using this method has proven very effective in terms of the patient progress.

? Treatment programs like this mean that the robot comes in very close contact with the patient ...

! Yes, that's true. And this wouldn't be possible without safety engineering. The robot can only operate within a defined "safety zone". The system stops as soon as the patient goes outside of this zone. This is true for all of our applications, of course.

? Robot-based applications only make sense if there is market demand for them. How do you determine if the medical products market needs these solutions?

! We collaborate on research projects with renowned universities and institutes like the German Aerospace Center (DLR), Karlsruhe Institute of Technology (KIT), RWTH Aachen University and many



“ROBOTICS IS OUR CORE COMPETENCE; QUALITY, RELIABILITY, PRECISION AND SAFETY.”

other leading laboratories across the globe. We equip major university hospitals in the United States and Europe, and are present at all relevant research and development campuses. This is where many of the fields of application come from. In addition, we have been a supplier and development partner to leading enterprises in the medical robotics segment for years. Siemens Healthcare and Accuray are just two examples. Start-ups are also behind many developments, and often they are able to deliver some pretty amazing solutions.

? What projects are you working on right now?

! We see our new lightweight robot (LWR) as a key to many new applications. It is delicate, sensitive and can guide people in complex motions, which, at an advanced stage as the “LWR med”, makes it ideal for medical applications in rehabilitation. But we are also testing it as a surgical assistant. We are working together with KIT on solutions for minimally invasive surgery, which is also called “keyhole surgery”. Other areas in which we are active include laser osteotomy, or bone surgery using lasers, where we are collaborating with the Institute of Mechatronic Systems in Hanover (IMES). These are just a few of the concepts we are currently working on.

? Why do universities and university hospitals, research institutes and medical equipment manufacturers like Siemens Healthcare and Accuray work with KUKA?

! Robotics is our core competence. No other provider in this industry has a comparable level of expertise. So far no other conventional (industrial) robot manufacturer besides us is active in medical robotics. What’s more, we also take advantage of all the knowledge we have acquired over the years in the automotive and general industry sectors and incorporate this in our developments to ensure quality, reliability, precision and safety. These are all very important attributes in the medical field. Customers can trust our products. Another reason is certainly our multi-purpose approach.



? The multi-purpose approach?

! Right. Our aim is to build robotic technologies that are so flexible they can be used in any kind of application. We want to create something like a “technology platform” for medical applications. We don’t want special robotic solutions, we want solutions that are flexible. That’s why we built both the KR AGILUS and KR QUANTEC series robots based on our proven industrial robots, but weren’t afraid to break new ground – for example, with our LWR.



LEFT
MICHAEL OTTO WITH MEDICAL APPLICATIONS IN THE KUKA SHOW-ROOM

BOTTOM
THE C-ARM OF THE ARTIS ZEEGO ANGIOGRAPHY SYSTEM

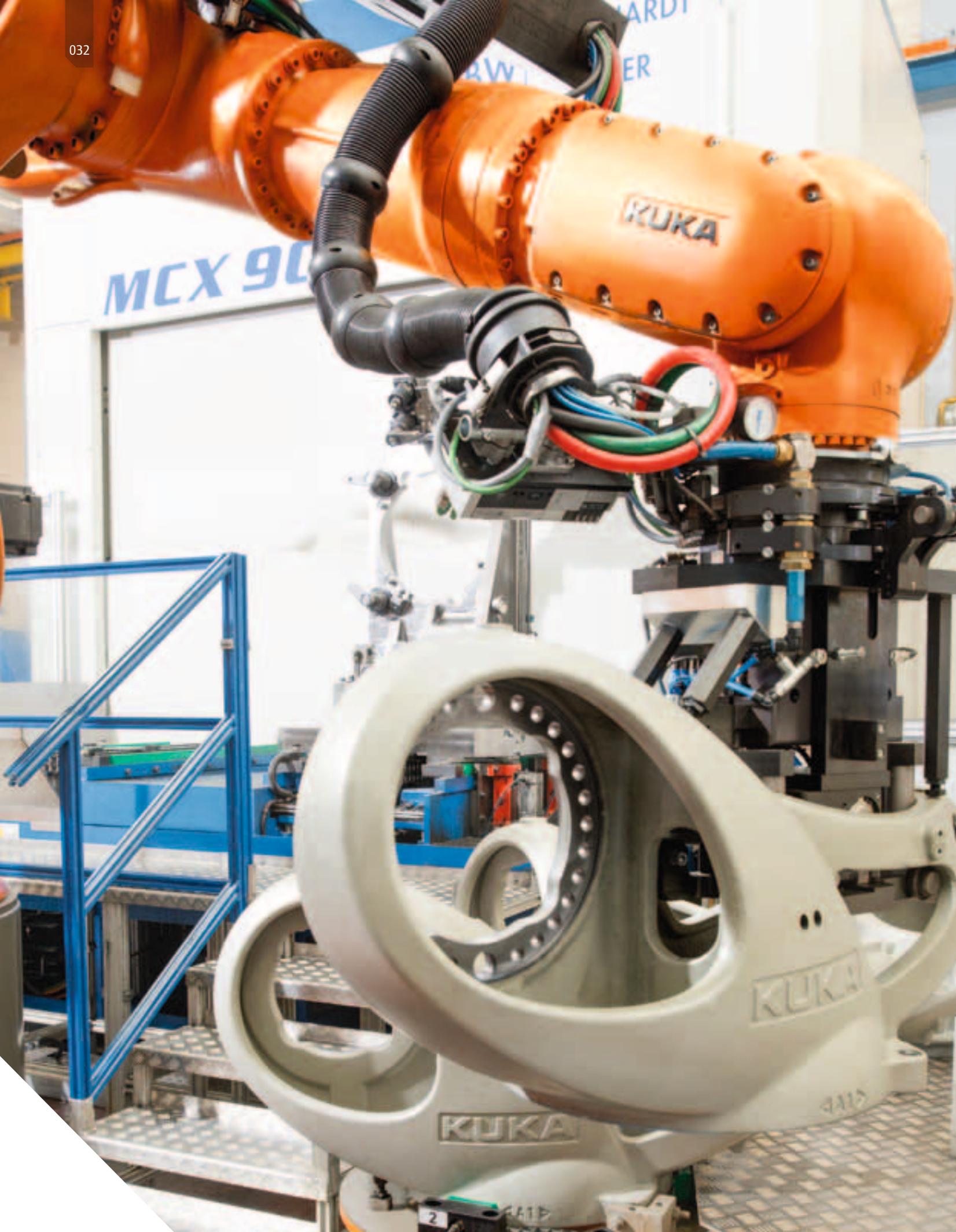


? Where is the field of medical robotics headed in your opinion? Do you have a vision?

! I see a very clear trend in hybrid operating rooms. This means ORs will be flexibly equipped, enabling doctors to perform a variety of different procedures in the same room. This will eliminate the need to move a patient during surgery and is only possible with flexible components. Together with Siemens Healthcare, we've already taken a huge step in this direction with the Artis zeego.

My general opinion is that robots will continue to be "assistants" in medical applications. In other words, they will always interact with people. I also see the future here, with sensitive robot systems that are flexible, mobile and safe.





ROBOTS BUILD ROBOTS

LEFT

ROBOTS ARE USED AT KUKA IN IN-HOUSE MANUFACTURING FOR A NUMBER OF TASKS SUCH AS LOADING MACHINE TOOLS AND DOWNSTREAM PROCESSING STEPS.

They are used to optimize and automate processes. In Augsburg, KUKA uses robots to unload parts from machine tools and machine them further.

If you've ever taken a tour of the KUKA robot production plant in Augsburg you may have asked yourself: "Where can I see your robots in action?" During the tour through production halls 6 and 8 you will mostly see people performing the individual worksteps to build the robots. This has to do with the high number of variants. Many of the worksteps are so detailed that they need to be done by hand. The KR QUANTEC series six-axis colleagues don't come into the scene until the machining area in Hall 10, where they are an integral part of the production: This is where various elements for the mechanical systems of KUKA robots are produced. The in-house robots work in concert with the machine tool to significantly increase productivity in the machining of cast parts.

A KR QUANTEC series KR robot fits a Deckel Maho "DMC80 U duo Block" machining center with blank parts and then removes them after machining. But this task alone is not nearly enough to utilize the full capacity of a robot that can work non-stop. "This is the reason we gave it additional tasks," explains Florian Hofmann, Head of Machining. Now the robot removes the clamping tabs that held the parts in the machine tool, drills blind holes and screws in

threaded inserts. The two-millimeter bore hole the KR QUANTEC drills for the nameplate is extremely delicate and precise. Then the entire component is deburred with special industrial brushes using a modern technique. The robot takes the different tools from a tool change station set up in the robot cell.

"The machine tool market has potential"

"The robot takes care of processing steps for the machine tool, cutting the spindle running time per part by 16 percent, down to 40 minutes," explains Andreas Schuhbauer, Key Technology Manager for Machine Tools. This means that two additional components can be machined per shift. It also relieves colleagues, who used to have to process the components at a second workstation during their shift. "This ultimately gives them more time for other worksteps," explains Hofmann.

But productivity improvements like this are not exclusive to the KUKA production halls. "The machine tool market offers great potential for robot-based automation," says Manfred Gundel, CEO of KUKA Roboter. "500,000 machine tools are sold every year; but not even two percent of these are equipped with robots."

RIGHT
AUTOMATION INCREASES PRODUCTIVITY
AND RELIEVES COLLEAGUES.

NEXT PAGE
BENJAMIN EBERHARDT LOADS
THE SYSTEM WITH BLANKS FROM
AUTOMATED MACHINING.

Faster set-up times, increased productivity

There's another colleague in machining who works directly at the machine tools. The KR 500 loads and unloads an MCX 900 machine tool from Burkhardt+Weber Fertigungssysteme GmbH, Reutlingen parallel to production time. A rocker and carousel are interchangeably machined here for two variants of the KR QUANTEC series. The machine has a double pallet changer for this purpose. One pallet is equipped with jigs for the rocker, the second pallet has the clamping devices for the carousel. While one workpiece is being machined, the other pallet moves completely out of the machine where it can be loaded with a new workpiece.

"We've increased our productivity ten percent by automating these steps. This means we can machine up to 300 more components annually compared to conventional methods," says Hofmann, explaining the application. The higher productivity of the machining center has to do with the fact that the system runs unmanned up to 70 percent of the time, with fully-automated operation during the night shifts. Before, operators were always tied to a single machine for each shift. Now one worker can set multiple components on the material supply units at the same time. The units are linked up with the robot controller so they can also be controlled.

"Prior to automation it took up to 15 minutes to clamp a workpiece. The robot only needs two minutes for this," explains Robert Bader, Machining Master at KUKA Roboter GmbH. The laborious manual loading of heavy parts with the help of a crane, aligning and clamping the part are a thing of the past.



But quick and easy loading is not the only advantage the robot has to offer here. It also assumes downstream tasks such as deburring of machined workpieces.

If a machined component leaves the machine, the robot switches to "machining mode", replaces its handling gripper with a machining spindle, and takes the tool it needs from its well-stocked tool magazine.

Robot and machine tool speak the same language

KUKA implemented a complete CNC core in its control system to simplify robot setup and programming, and developed KUKA.CNC software, which makes it possible to program the movement of the robot completely in G-code. Machine tool programs can be used with the KUKA control system without post-processors – in other words, no translation into the robot language is required. "This is important since companies often shy away from robot-based automation because their staff doesn't know how to operate a robot," says Schuhbauer. KUKA.CNC software has a GUI adapted to the operation of machine tools, so it isn't necessary for operators to understand robots at all. They simply use the intuitive programming interface for operation.

KEY FIGURES FOR ROBOT PRODUCTION AND MACHINING:



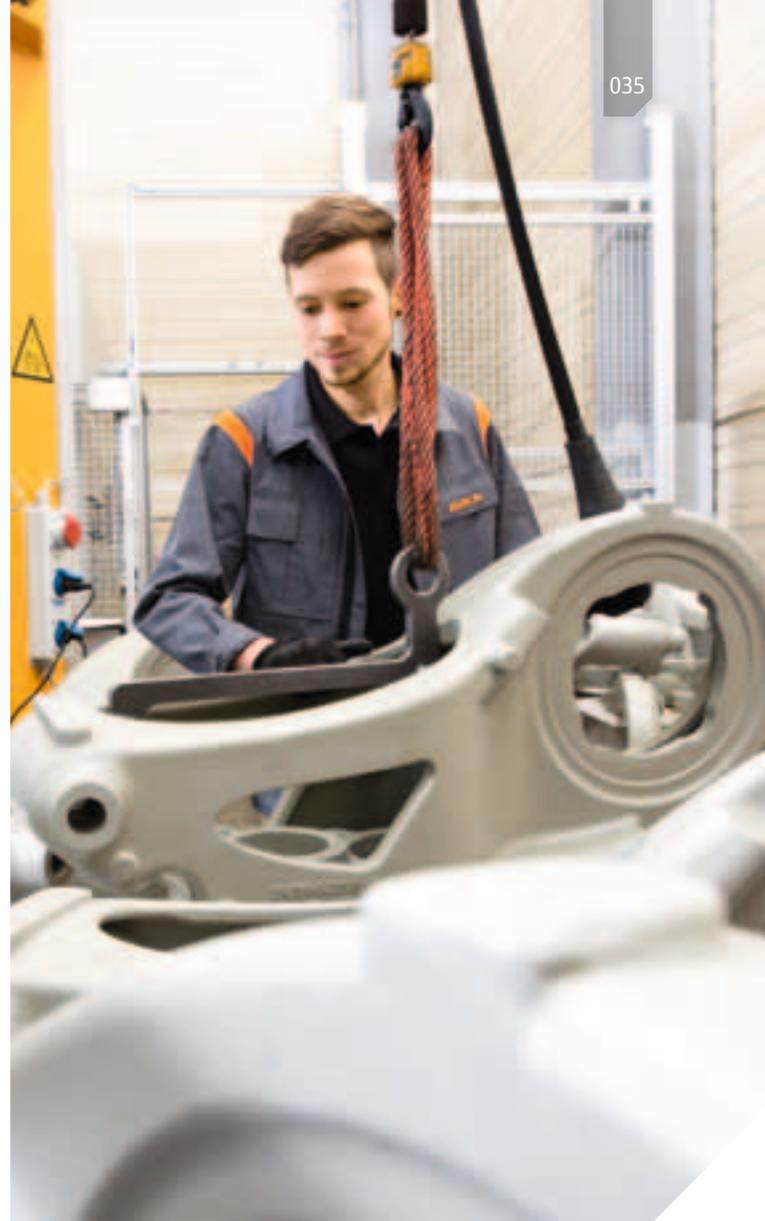
Production automation is nothing new. Intelligent control systems and special software programs are what makes it possible. Employing robots at machine tools is extremely efficient. KUKA uses robots at its Augsburg site to process components.

Number of employees in robot production	approx. 210
Number of robots produced per day.....	60
Of these, special robots.....	25
Total area for robot production	approx. 10,000 m²
CNC machine tools with robotic automation.....	5

LWR iiwa assembles gearboxes

Now the LWR iiwa, the youngest member in the KUKA family, also has a job to do in in-house robot assembly. "Advanced Technology Solutions" is a KUKA Systems division specialized in assembly solutions based on lightweight and small robots with a focus on human-robot collaboration.

"The LWR iiwa is a small, compact robot that is extremely flexible owing to its seven-axis design," explains KUKA Roboter's CEO Manfred Gundel proudly. "Thanks to integrated tactile sensors, it is able to "feel". This enables it to perform production steps that could not be automated in the past because they required a certain degree of sensitivity. For example, it can provide a worker with components, assemble these itself, or take care of assembly inspection." The engineers at KUKA used this to their advantage and incorporated two LWR iiwa robots to assemble gear components for robot production. They are responsible for parts handling, joining, support and inspection. The production parts are fed in by a pallet chute – the KUKA CycleMove.



Components such as bearings and retaining rings are fed in using removable magazines. The magazines are specially designed to meet the specific part geometries to ensure automated separation and removal by the two lightweight robots. But that's not all. The robots also support pressing operations, apply retaining rings guided by external forces, position components and perform an automatic positioning and presence check.

The integrated sensors make the lightweight robot easy to operate and reliable. In fact, the system becomes less complex with the robot since many peripheral components are no longer required. In addition, the cell can be quickly converted thanks to the flexibility of the robot.

Whether it's a KR QUANTEC or LWR iiwa – robots can build robots. Visitors are very impressed. Man and machine have come closer together at KUKA.

BOTTOM
MEALTIME WITH THE CHILDREN

RIGHT
DAYS ARE FILLED WITH GROUP ACTIVITIES AND GAMES WITH LOTS OF MOVEMENT AND MOTION, WHICH IS PART OF THE ORANGE CARE EDUCATIONAL CONCEPT.

CHALLENGE ACCEPTED!

KUKA's staff policy considers the different stages of life of its employees to support them in achieving a better work-life balance. Child care is a key factor. By building the Orange Care daycare center at the company site in Augsburg, KUKA has made another important contribution to balancing work and family commitments.



S

oftware developer
Rodrigue Simo has one more meeting today before he goes home for the evening: the daily appointment with his son to pick him up from daycare. "It's a huge relief now to have the Orange Care daycare center on the company premises. No more rushing back and forth from work to the daycare," he says. "As soon as we heard that KUKA was building an on-site daycare facility, we made an appointment with the director to find out more."



Parents in a hurry? Not here!

Since the center opened in October, seven teachers and caregivers have been busy slowly integrating the children in everyday life at the daycare. And soon they will be complete, taking care of 30 kids ages six months to three years. But what you won't find here is parents rushing to pick up their kids just before the daycare closes. The center's hours are from 7 am to 6 pm, and parents can bring their kids here from three to ten hours a day according to their schedule. This gives parents maximum flexibility so they can pick up their kids without any extra stress before they go home for the evening. It was also an easy decision for KUKA employee Antje Schmid to entrust the daycare team with caring for her daughter. "I liked the friendly atmosphere, modern facilities and the care concept. I simply feel that my child is in good hands here," says Schmid, who is a lawyer.

Parents and children benefit from the daycare center

Employees aren't the only ones excited about enrolling. "In general, all Augsburg children are welcome," says Ulrike Steinherr. She is on the board of trustees of Orange Care e.V., the non-profit organization founded by KUKA employees that supports people in need and is especially active in youth and family needs. "We wanted to help working parents balance their work and family commitments," explains Steinherr.

Bettina Geißler, director of the daycare center, remembers her first meetings very well. "We initially met in the meeting rooms at KUKA, which was a challenge for parents," she says, "because they naturally wanted to know where their children would be taken care of. But the only thing I could show them was a small model of the facility. So it was nice to see that this didn't discourage them."

Giving children room to live

Bettina Geißler and her team want to offer a place for children that complements their family surroundings by building trusting relationships with them in an atmosphere that satisfies their desire to learn and be active. "It is fundamentally important for children to move and actively interact with their environment. This is how they gain critical skills to develop their personalities," she says. She designed the center with plenty of space for kids to discover and try out different things in their surroundings for exactly this reason. It's a perfect match for KUKA.

Career and family – more than meets the eye

Resting assured that your children are taken care of is just one of many elements that KUKA offers to help its employees find the right balance between professional and personal life. Kirsten Glassmann from the HR department is responsible for "Career and Family" at KUKA. She knows there are many things that can make balancing the commitments of work and family more difficult. "For example, one employee has to care for a family member at home and it is a huge relief for him to be able to work part-time from home. We try to find solutions that address individual needs," says Kirsten Glassmann, a mother of a three-year-old son who also takes advantage of the flexible work times in her part-time schedule.



LEFT
RODRIGUE SIMO, LOIC'S FATHER
AND KUKA EMPLOYEE, IS VERY EXCITED
ABOUT ORANGE CARE.

TOP
PLAYING, CRAWLING AND RUNNING AROUND –
WHAT COULD BE MORE FUN?

Finding individual solutions

If you want to retain employees for the long term you must be able to offer them solutions for everyday work that are tailored to their own unique circumstances. Responding to changes as employees enter different stages of life is a part of KUKA's corporate culture. "It is very natural for priorities to change at different stages of life, for instance when employees have children. Our approach is to continuously work on measures that help make everyday work more flexible," continues Glassmann. Employees already take advantage of arrangements such as flextime, personalized part-time, home office and even sabbaticals that give them more freedom. Additional services are also offered including health courses, presentations and screenings as part of occupational health management, a laundry service, assistance in caring for family members, and childcare services during the school breaks.

A win-win situation for everyone

Last year KUKA was again awarded the "berufundfamilie" ("Career and Family") certificate following the audit. This is further proof of KUKA's commitment to offering flexible work schedules tailored to each employee's personal circumstances. Companies are only re-certified if they have implemented the measures to balance work and family commitments and prove in the audit that they have actually met the targets set for three years. Everyone in the company has to work together to achieve this. KUKA Aktiengesellschaft CEO Dr. Till Reuter reiterated his clear position on this topic by taking

over sponsorship of the "Career and Family" efforts at KUKA himself. "Our employees are the foundation of our success. So we need a working environment that adapts to their needs. In my view, the most important thing here is to have a corporate culture based on trust," says Reuter. It's a win-win situation for all: Workers stay with the company through their various stages of life, increasing their motivation, performance and satisfaction, which in turn strengthens their commitment to the company. The children agree: "It's fun to go to work with dad," says little Loic when he joins his father on his way to KUKA in the morning.

DAYCARE CENTER FACTS AND FIGURES

Opened	October 2013
Number of children	30
Age range	6 months – 3 years
Staff	7



BETTINA GEISSLER
DIRECTOR OF THE DAYCARE CENTER

CHILD-SAFE

KUKA FLEXIBLECUBE IN USE AT STROLLER MANUFACTURER HARTAN

When choosing a stroller for their child, many Germans – and many other nationalities, by the way – look for premium products “Made in Germany”. They literally “grow up” with quality in mind. If you want the best for your child, then you will look for a high-quality stroller – for example, one made by Hartan from Sonnefeld, Germany.

This family-owned company applies state-of-the-art manufacturing technologies and certified quality assurance systems for all of its products. Hartan uses materials that are free from harmful substances and places great importance on safety and maximum comfort. And now the company relies on the process expertise of KUKA from Augsburg.

Hartan has been designing and making high-quality strollers since 1950 in Sonnefeld near Coburg, Germany and is now one of the leading stroller manufacturers in Europe. Every stroller is assembled

in Germany and must pass a quality check before it is shipped. Only “perfect” products are sent to customers. This is a very important step for the TÜV-certified company. “Quality and safety are our top priority. We build strollers as if they were for our own children,” says Philipp Bernreuther, Head of Metal Manufacturing.

This means premium quality and the highest standards for small children. These same standards also apply to KUKA Systems GmbH when it supplies Hartan with flexible welding cells. This is no problem for KUKA, since it has been working with very high quality standards for years. Customers from the automotive industry for example appreciate the Augsburg-based company for its process quality and expertise. KUKA leads the industry in joining technology.



LEFT
QUICK AND ACCU-
RATE – THE INERT GAS
WELDING PROCESS
FOR JOINING STROLLER
COMPONENTS

RIGHT
QUALITY CHECK AFTER THE
WELDING PROCESS

KUKA FLEXIBLECUBE

The KUKA flexibleCUBE is a space-saving automation solution that is also ideal for the first automation projects. The welding cell offers 100 percent process monitoring during the welding process and marks scrap material. This saves on rework. The cell is pre-configured and ready for immediate use.



And if KUKA's welds hold at high Rpm in high-horsepower sedans, then they are just good enough for safely moving the most valuable freight: our children.

High quality standards

Each stroller is made to order according to the customer's preferences. The company produces up to 2,000 strollers per week – and the trend is rising. More than 3,000 components need to be welded in perfect quality. These "safety-relevant" parts are components that are decisive for the geometry, travel and stability of the stroller as a whole, so every weld seam must be just right. A perfect application for KUKA and its flexible, standardized KUKA flexibleCUBE robotic welding cell.

Entry-level automation

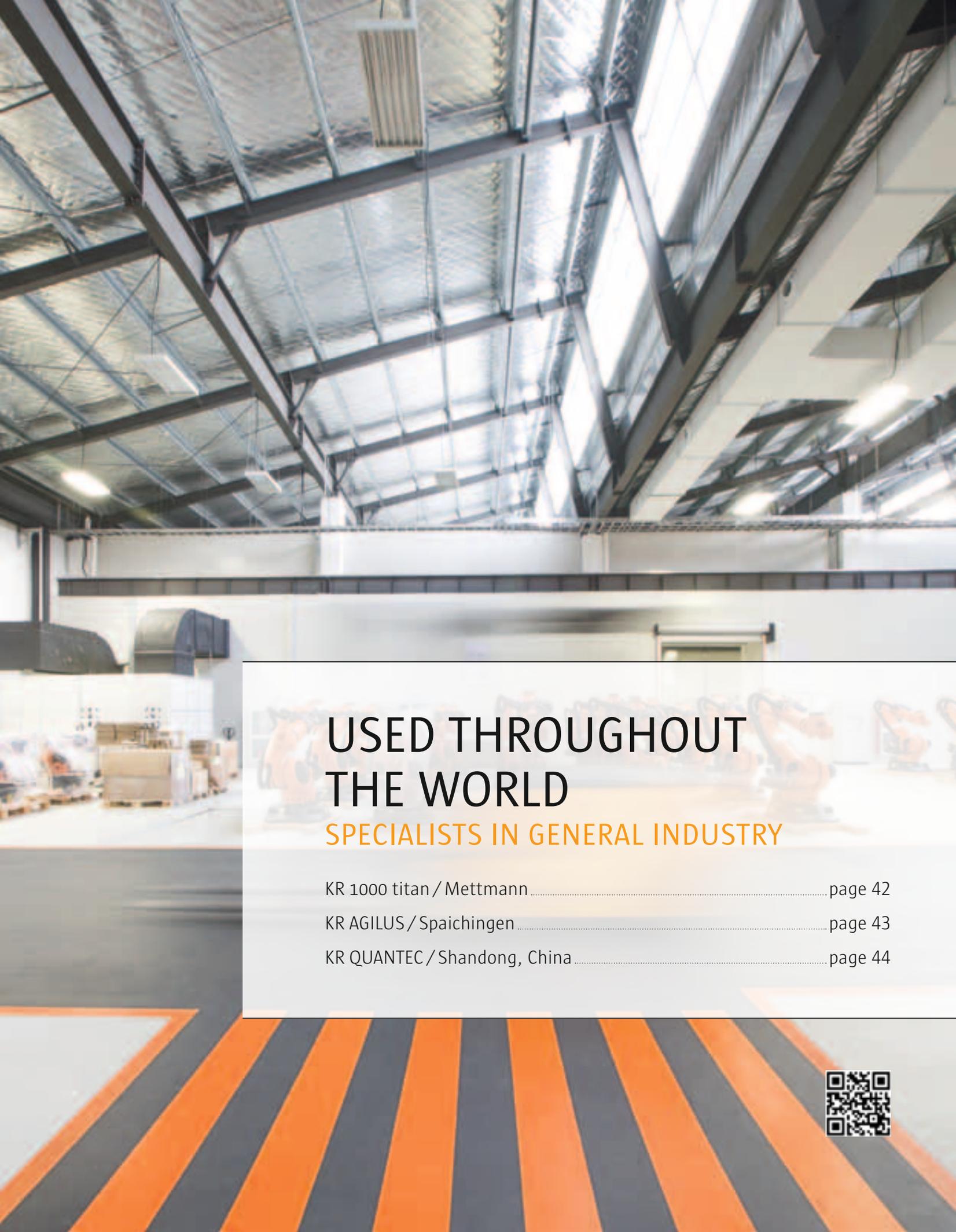
"The arc welding cell is ideally suited for entry-level automation because it seamlessly integrates in the manufacturing process," says Karl Christian Messer, Head of Strategic Sales, Welding Solutions, KUKA Systems GmbH, explaining the advantages of the product. The welded steel connections are permanent, so they can even handle "off-road" walks with the stroller. And the strollers must be durable – after all, junior's first "sports buggy" is often passed on to his siblings.

"The KUKA flexibleCUBE is user-friendly thanks to its plug & play solution that offers a high degree of investment security, is extremely flexible since the cell can easily adapt to the production environment, and is known for its high process quality," continues Messer, "It is modular and equipped with KUKA components, and it can be combined with proven welding equipment from leading manufacturers. We supported Hartan in process development and offered advice on equipment options based on the specifications."

The modular welding cell was ultimately equipped with a KR 5 arc, power source with welding equipment, turntable, central extraction system, torch cleaning and TCP control and is the flexible answer to the challenges of an automated welding cell.

Quality control

Process and quality control plays a crucial role in robot-based manufacturing at Hartan. Thanks to the KUKA TCP control – an instrument for measurement and calibration tasks – everything is always "under control". It is a fast, contactless measuring system for the welding torch that prevents welding errors. The process itself takes only a few seconds, then the components can be removed from the turntable. Employees perform random batch tests that include subjecting the frame to extreme bending. The welds hold 100 percent. Only the best for the next generation.



USED THROUGHOUT THE WORLD

SPECIALISTS IN GENERAL INDUSTRY

KR 1000 titan / Mettmann	page 42
KR AGILUS / Spaichingen	page 43
KR QUANTEC / Shandong, China	page 44



HOT IRON

How the giant KR 1000 titan robot stays cool in the foundry at Georg Fischer AG.

Y

ou shouldn't touch hot iron without the right equipment. Unless you are a specially-equipped KUKA robot, that is.

Georg Fischer AG in Mettmann, a manufacturer of cast products and machining and piping systems, commissioned a complete, new foundry last year. The plant produces axle components and engine parts for cars

and trucks. "We were looking for a technical solution that could handle filling extremely hot, liquid iron into the molding box at any position to achieve maximum molding box flexibility and utilization," explains Stephen Schott, AMR production line project manager at Georg Fischer Mettmann.

This meant finding a specialist robot that is not only big and strong, but most importantly can handle the heat – the KUKA KR 1000 titan F. The "F" stands for "Foundry" since the even the toughest robot needs to be specially equipped for such applications.

This heavyweight from KUKA is the first robot to cast 1,400 degree hot liquid iron.

A heat-resistant shell protects the titan from the extreme ambient temperatures at the foundry. The robot flange has a casting trough on it that can be filled with 1,400 degree molten iron. A weighing cell is also integrated between the casting trough and the robot flange that can be used to weigh the quantity of liquid iron. This makes it possible to precisely dose the missing amount of iron during the next casting cycle. This means that the casting trough always contains only the optimal amount of liquid iron. The flexibility of this six-axis robot enables pouring of the iron at any position of the molding box. The sand molds cool to less than 700 degrees until the cast parts can be removed. After further cooling to room temperature, the parts are blasted and visually inspected before they are ready for delivery.

This was a new field of application for all parties involved, so the system was initially pre-tested using a leased robot. "The KR 1000 titan was impressive in the testing stage, both in its payload and especially its size and mobility," says the project manager. The KUKA KR 1000 titan F features a compact design and is comparably light, weighing in at 4,700 kg, which makes it excellent for integration in complete plants without the need for expensive special foundations. "The product impressed us in many ways," explains Schott. "Using this robot opens up new possibilities for us that give us a clear competitive edge."



LEFT AND TOP
THE KUKA KR 1000
TITAN DEFIES EXTREME
HEAT AND DIRT AT
GEORG FISCHER AG

KS Metallbearbeitung GmbH in Spaichingen (Swabia) decided to venture into the field of automation – a decision that is paying off. Applying automation solutions that bring together industrial robots and machine tools gives the company a real competitive advantage when it comes to milling aluminum workpieces. And the extremely fast and compact KR AGILUS from KUKA is a part of this solution.

KS is a specialist in aluminum machining. The company's technical expertise in this area is primarily focused on the machining of aluminum profiles – from cutting and CNC machining to vibratory finishing. While searching for a new high-speed machining center KS found out that KUKA systems partner Dreher AG based in Denkingen had developed a complete solution consisting of a machine and an automated robot cell.

In high-speed applications it's not just the milling cell that counts, but also the speed of loading and unloading the machine tool. This was yet another key factor in the decision to choose the KUKA KR AGILUS. A conveyor belt carries the workpieces into the robot cell. The KR AGILUS then picks up the workpieces from the selected position and temporarily stores them on a special jig in the cell. The configuration was programmed and saved in advance on the separate user interface. The robot grabs the workpieces, which are now aligned to the zero point, and places them into the machine tool. The machine carries out the drilling and milling work. After machining, the robot removes the workpieces and places them into a chute where they fall into a container attached outside the cell.

"This automation solution consisting of a robot cell and machine tool completely satisfies all of our requirements. It is fully-automated manufacturing that allows us to produce a higher number of units 24 hours a day, 7 days a week. Set-up times are faster, which gives us the flexibility to produce different components," says Bernd Haller, Head of Production, CNC Machining at KS. "At first, an automated plant appears to be a very expensive affair," adds Martin Dreher, Dreher AG CEO and KUKA Roboter GmbH systems partner. "Automated solutions are in fact more expensive in the initial investment. But if you add all the numbers correctly, you will see that the hourly rates for automated systems are only a third compared to manual operation. This means we can manufacture at more competitive rates internationally, and continue to produce right here in Germany!"

ROBOTS WORK ON MACHINE TOOLS

The KR AGILUS, one of the newest members of the KUKA family, quickly became a top seller in general industry. The robot works on a machine tool at KS Metallbearbeitung GmbH.



LEFT
THE KR AGILUS GUARANTEES HIGHEST SPEEDS IN LOADING AND UNLOADING.

CHINESE COMPANIES RELY ON KUKA

Liuhe Rongda Feed Co. Ltd. in Shandong, China, uses a KUKA robot to palletize animal feed sacks.



Palletizing has always been one of the most labor-intensive segments in automated logistics systems. In such applications, industrial robots can significantly boost productivity and increase the competitiveness of products – as is the case with the palletizing system in use at Liuhe Rongda Feed Co. Ltd., a Chinese manufacturer of animal feed. The company uses a KR QUANTEC series KR120 R3200 PA to palletize 1,300 40 kg sacks of animal feed per hour.

Automation in the logistics management sector is becoming more and more essential in China compared to manual handling, palletizing and loading of goods. Many newly established industrial operations such as feed manufacturers, mills and chemical plants have incorporated automated palletizing systems into their facilities. New Hope Liuhe Co., Ltd. is a good example. It is one

of the leading agricultural companies in China, with total assets exceeding ¥ 20 billion, over 70,000 employees and close to 500 branch offices. In November 2011 the China Securities Regulatory Commission (CSRC) granted the company approval to restructure the agricultural and livestock breeding segments. Now the company produces an estimated 20 million tonnes of animal feed per year, making it the number one producer in China. The company is interested in expanding its production plants to meet the growing demand by incorporating automation. According to Shandong Johenndar Machinery, KUKA's systems partner, the new palletizing system is the most well equipped of its kind in the industry.

The Chinese company relies on the high speed, ruggedness and precision of the KR QUANTEC series palletizing robot.

Its sophisticated design, high rigidity, excellent continuity of motion and good acceleration make the robot ideal for various palletizing applications. And with its 3,200 mm reach, it can easily stack loads of up to 120 kg at the required heights.

RIGHT
STACKING KING:
THE KUKA KR QUANTEC
PALLETIZES WITH HIGH
SPEED AND ACCURACY.



BUSINESS HAS NEVER BEEN BETTER OR THE FUTURE BRIGHTER

A decade of organic growth and the acquisition of the UTICA Enterprises assets have made KUKA Systems North America successful. It's not just based on major contracts by automakers. Aerospace is a rising star, too.



These are heady days for KUKA Systems in North America. KUKA is one of the continent's largest – if not the largest – manufacturing systems providers for the automotive industry. “Revenues and orders in the pipeline are at record levels – with projects extending into 2016 and beyond,” says a pleased Larry Drake, CEO of KUKA Systems North America. The Big Three US automakers – Chrysler, Ford and General Motors, all key customers – have closed plants in response to economic developments and as part of corporate restructuring, and are investing in their remaining operations to boost productivity and install the advanced joining

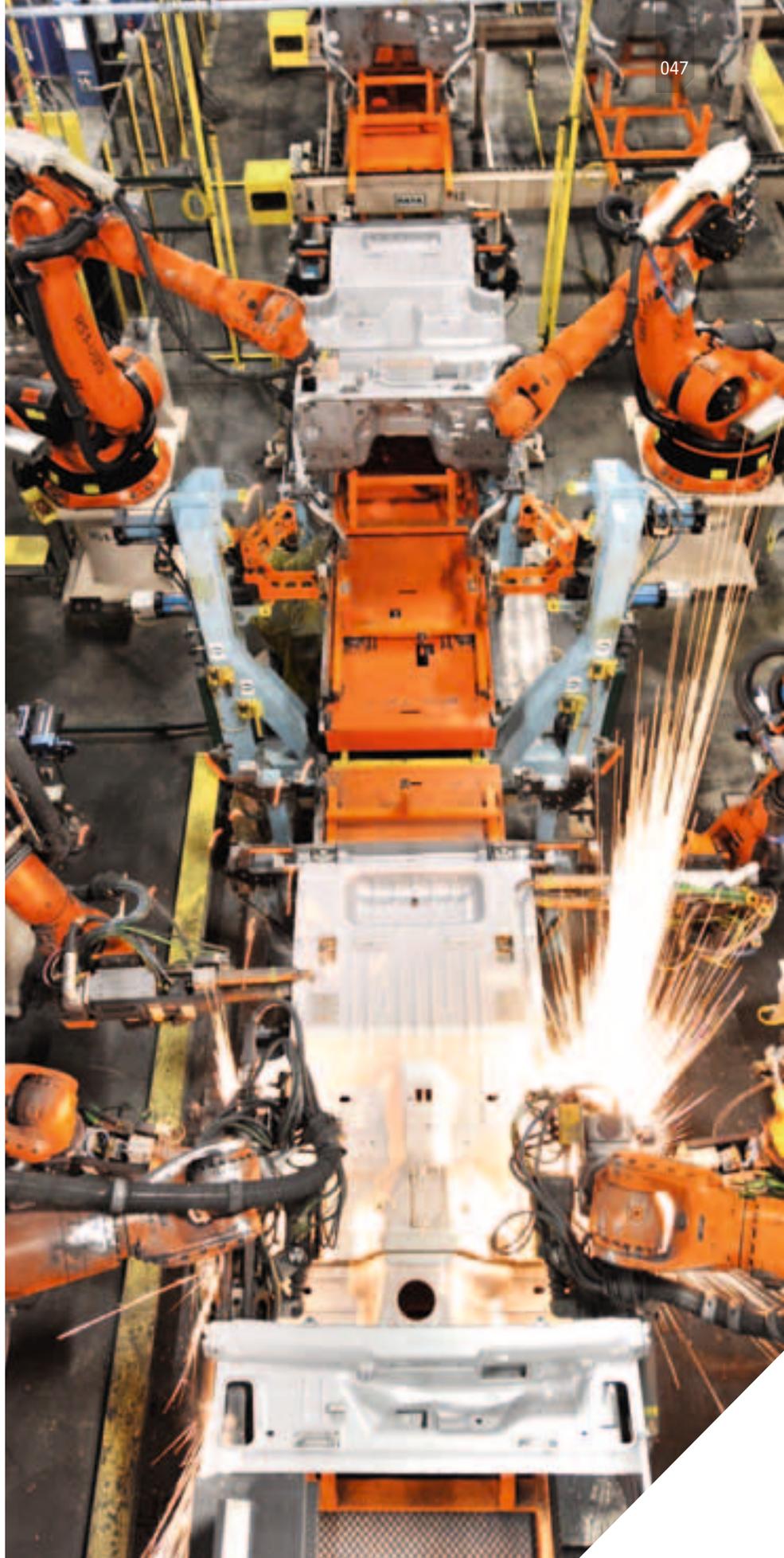
LEFT
CAR PRODUCTION LINE

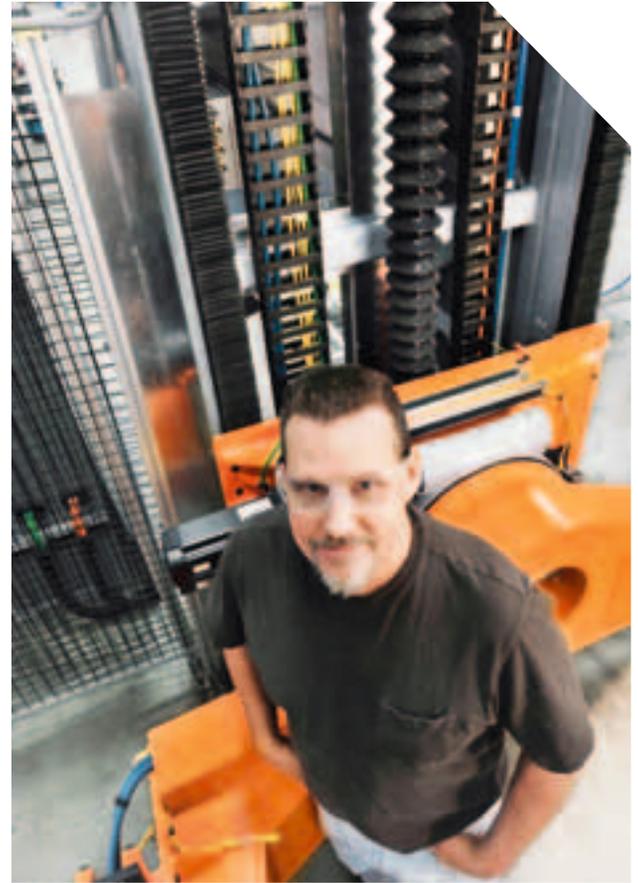
technologies to build lighter weight vehicles that will meet more stringent US government fuel efficiency standards. In some cases, they are resizing their in-house tooling production, relying more heavily on external systems providers like KUKA.

Automotive customers are a very good reference

KUKA Systems North America had a good year last year, driven by steady growth in the automotive sphere and recent breakthroughs introducing automotive-style assembly techniques and automated joining processes to other sectors. “What proves to be effective for automotive customers is a good reference,” continues Drake. The CEO is proud to see these innovative assembly technologies and automated joining processes making their way into the aerospace industry. A recent acquisition has also helped KUKA gain a foothold in this area: Last April, KUKA bought the automotive assembly-related businesses of UTICA Enterprises, which brought with it manufacturing capacity, hard-to-find employee skills and expertise as well as additional business lines that further enhanced the company’s extensive portfolio of products and services. Some 270 employees joined the KUKA family, which now numbers over 800 in the US. “This was a good deal for both parties,” says Drake. He greeted these new employees with a reassuring message: “Business is booming and you have a great future with us.” Besides the body structure business, UTICA’s products include net form and pierce systems for high accuracy in joining body sections, standard press room automation for metal stamping and hang-on technologies for installing doors, hoods and other parts on assembly lines.

RIGHT
WELDING WORK ON THE MAIN
SUBSTRUCTURE OF A BODY IN WHITE.





140,000 m² production capacity

With the addition of UTICA Enterprises and the leasing of another facility to handle work on a multi-year contract, KUKA Systems North America now operates 140,000 m² (1.5 million square feet) of production capacity at 12 sites in the US, Mexico and Brazil, including seven in the Detroit metropolitan area.

The smaller UTICA, also based just outside Detroit, now benefits from KUKA's advanced IT infrastructure, global presence and major R&D commitment. The KUKA production site in Toledo is another advantage, which produces all bodies in white for the Jeep® Wrangler and also allows KUKA to showcase its technologies and expertise for potential customers who can see the entire range of products and services in action here.

The future has never looked brighter. Aerospace giants are partnering with KUKA for both current and future projects. These relationships cover projects such as new



FROM LEFT
(CLOCKWISE)
ALEX SPAULDING INSTALLS
BOLTS ON THE CAR BODY.

ALLEN DAVIS, TECHNICIAN, IN
FRONT OF HIS MACHINE TOOL

ANTHONY FOXX CHECKS THE
ASSEMBLY SYSTEM.

assembly lines and the first steps toward automated production to meet rising demand. "They also offer the prospect of long-term benefits similar to KUKA's automotive partnerships," says Drake. "Many industries, from auto parts suppliers to heavy equipment manufacturers serving the railway, agriculture and natural resource

sectors, are candidates for automated production and handling solutions and joining technologies to improve their competitiveness," Drake is certain. The future is very bright for "Team USA".

LAWRENCE A. DRAKE

PRESIDENT AND CEO, KUKA SYSTEMS GROUP

“Our long-term partnerships are the best way to do business. They give us stability and serve as key references for new customers.”

“The UTICA Enterprises acquisition gave us important additional tools to take on more business. It underscores to current and potential customers that KUKA has the knowledge, skills and technologies – the horsepower – to work with them anywhere in the world.”

“KUKA is well-positioned in the US and globally with our multiple joining technologies to supply any industry requirement, whatever their engineering needs or type of materials they are employing.”



GARY TINO

VICE-PRESIDENT, FORD, FORMERLY DIRECTOR OF PROGRAM MANAGEMENT AT UTICA ENTERPRISES

“The move to KUKA was very positive. We received a great deal of support which was refreshing considering the recent economic downturn. The anticipated response was that people would be more concerned about protecting their job than helping someone new to succeed. On the contrary, everybody was quite helpful.”

“The KUKA culture is very positive. We have more of a family-like feeling – people watching out for each other, and the company strives to ensure the employees know that we care about them.”



NORM SCHMELZLE

MANAGER MECHANICAL DESIGN, FORMERLY DIRECTOR OF MECHANICAL ENGINEERING AT UTICA ENTERPRISES

“Over the years opportunities were presented me to move from UTICA Enterprises to KUKA. People who had done it earlier told me this is a great organization and very family-oriented. I can say with great confidence not only for myself but for my colleagues that made the switch to KUKA, the transition has been nothing short of first class.”

“KUKA has a phenomenal operating system in place that gives you the ability to track each item down to the detail level throughout its life cycle. This type of system allows you to be more efficient in your day to day operation.”





MAN AND MACHINE WORK SIDE BY SIDE – A ROBOT-BASED MOBILE HELPER ASSUMES STANDARDIZED TASKS.

A SMART MOVE

People are amazed whenever they hear Henning Borkeloh present his new concept. It's no wonder. What the Head of Advanced Technology Solutions at KUKA Systems presents has the potential to become the next revolution in automation.



HENNING BORKELOH
HEAD OF ADVANCED TECHNOLOGY
SOLUTIONS AT KUKA SYSTEMS

Standing side by side next to a human, the robot-based mobile helper assumes standardized tasks – without any protection. LWR iiwa Knight lightweight robot is sensitive and can quickly and flexibly be used where help is needed most. As a temporary replacement or as short-term help; like the knight in chess, it quickly springs into action. “We are creating a new type of automation,” says Borkeloh proudly. “We are now able to automate processes that were previously considered technically impossible or not economically viable.” It’s a smart “move” by KUKA, and a good move by all who will use the “Knight” in the future.

Ideas galore at KUKA Systems. The concept study is well conceived, documented and has been translated into the first practical applications. The prototype is ready, and the first order has already been placed. This points to something: KUKA is changing the approach with this concept. Until now, robots were used where processes had to be automated. Because people reached their limits

with certain tasks, because it was too hot, too cold, too unhealthy or too dangerous for them. Robots were used to replace humans. The LWR iiwa Knight is different. It joins the game as a practical helper. It provides support in ergonomically unfavorable conditions and takes over manual tasks that are tedious and thus prone to error. And because it is sensitive, it can work hand in hand with people without any protective barrier.

Right now, “Is that really possible?” is the most common question potential customers ask the plant engineering specialists at KUKA. At trade shows they discussed ideas for applications that until now were not possible to automate: difficult installation work, tedious machine assembly and demanding testing tasks, for example. In many cases, the answer is: “Yes, of course!” Using the “Knight” creates new and versatile systems concepts with a flexible degree of automation.

“THE NUMBER AND VARIETY OF APPLICATIONS THAT CAN BE AUTOMATED USING THE LWR IIWA ARE MANY.”

Spontaneous automation in electric motor production at Siemens

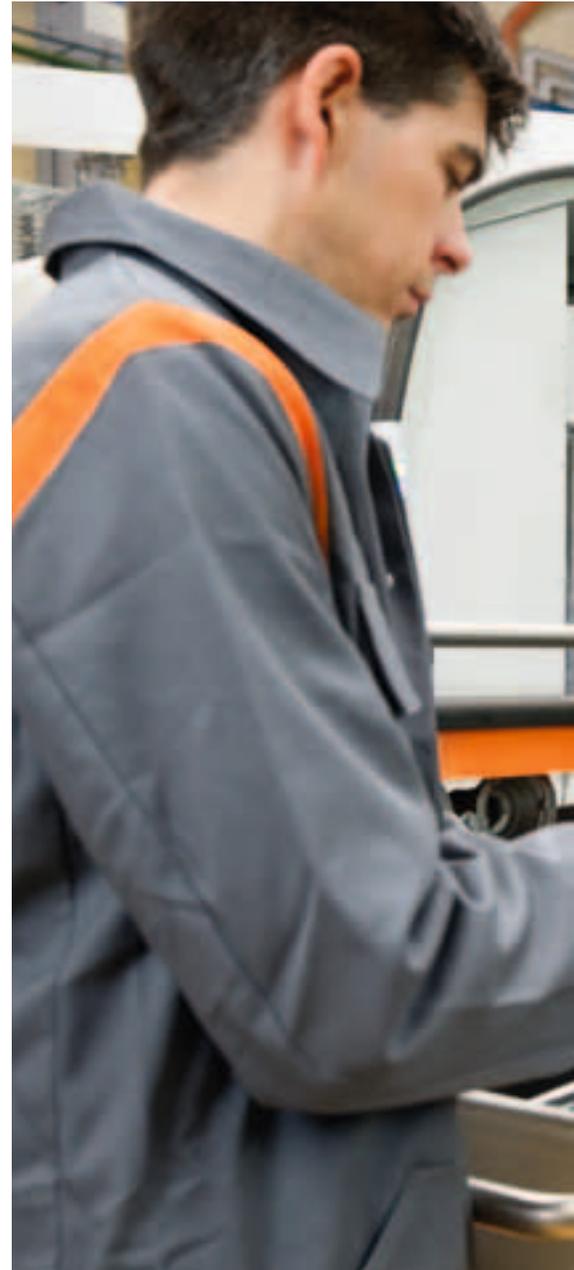
For example at Siemens. At its production plant for electric motors in Bad Neustadt the company entered the world of spontaneous automation with a flexible robot cell that can be used at any location. The “Knight” concept is applied in times of peak demand and staff bottlenecks. The LWR iiwa Knight is the core component. It handles and checks, precisely completes five worksteps and works together with human colleagues. First it sets blanks into a CNC machining system, after machining it removes them, cleans the workpieces and inspects them. At the end of these production steps the parts are finally placed into corresponding transport containers and made ready for further processing.

A job for the Knight in contract manufacturing

KUKA uses the Knight concept in its own contract manufacturing. These types of jobs often include producing very different workpieces in small quantities that require high setup costs. Until now, automation was not a viable option in such scenarios. But the LWR iiwa Knight makes this possible. It independently loads a friction welding machine, closes the door to the machine, removes the joined elements and places them. There are no more waiting times for workers during the welding process, which means they can concentrate on quality assurance. This method increases both the number of units and overall productivity. Moreover, the seven-axis LWR, which is mounted on a trolley, is in no way restricted to a certain component type.

Ready for operation in ten minutes

This also applies, for example, to force-controlled plugging of hoses in heat exchangers and to mounting blades in gear converters. The periphery is kept to a minimum. The LWR iiwa has its own force-displacement sensors in its joints so it is force sensitive, eliminating the need for complex image processing and making it possible to use a standard gripper. Complex externally attached sensors and a protective barrier are also not necessary. And this is precisely what enables flexible solutions. What is the idea behind it? The system in which the Knight is used should not need to be modified; thanks to the user-friendly controls, it should be possible to teach the Knight a new task so that it is ready to work within ten minutes. In the future, all the machine setter will have to do is take the robot arm in his hand and guide it to the relevant reference points of the worksteps that it is expected to do. And this doesn't have to be precise down to the last millimeter: The force/torque sensors in the arm help the robot learn to estimate sizes and distances and find its position.





LEFT AND RIGHT
FLEXIBLE AUTOMATION –
A MOBILE HELPER AS A
TEMPORARY REPLACEMENT
OR AS SHORT-TERM HELP

A flexible assistant for commercial kitchens

The robot is also very useful as a flexible helper outside of industry applications. Namely, in loading and unloading dining cars with trays in commercial kitchens. Together with partner OrgaCard, KUKA Systems developed an LWR iiwa Knight concept study for hospital kitchens. The sensitive helper independently and reliably completes unergonomic tasks on the portioning conveyor that would be harmful to workers if repeated over longer periods. It takes trays with patient meals from the conveyor and pushes these into the waiting

dining cars. Or the other way around: It removes trays from the cars and sets them on the conveyor. What are the advantages? Qualified staff can focus on their more demanding tasks because they no longer have to do this work. The number and variety of applications that can be automated using the LWR iiwa are many. “Certainly there are numerous applications and ideas for its use that we haven’t even thought of yet. We are working together with partners to create precisely these fields of application,” says Henning Borkeloh. “To do this you have to be able to think a step ahead.” Just like in chess ...

RIGHT
THE CENTERPIECE OF THE
SYSTEM – THE ROBOT-SUPPORTED
RESEARCH PLATFORM

THE FUTURE IS NOW

KUKA at the Innovation Park in Augsburg – nestled between science and industry. This robot facility is the only one of its kind in Europe and serves as a platform for conducting research and testing in the field of tomorrow's production engineering.

It is monumental, towering above spectators seven meters in the air. The multifunctional cell (MFC) soars majestically above visitors to the Innovation Park in Augsburg – or, more precisely, the German Aerospace Center – Center for Lightweight Production Technology (DLR-ZLP). Even for non-specialists the cell appears to be a masterpiece of technical precision combined with advanced technology. It is a staggering 32 meters long and 16 meters wide. The frame is made from a steel construction that weighs several tonnes.





The MFC is the heart of the new joint project between KUKA and the DLR-ZLP. It is a milestone marking the symbiosis between research and industry, and is positioned at a site where the institute will explore conditions for industrial use and efficient production steps for processing carbon fiber-reinforced composites (CFRP) in the future. KUKA completed its multifunctional cell (MFC) and other small testing cells almost a year ago here. The positioning accuracy of the suspended installation robot is roughly 0.2 millimeters. “This works with the help of an external measuring system by forwarding correction parameters to the robot controller via an interface,” explains Prof. Dr. Michael Kupke, Director of the Center for Lightweight Production Technology in Augsburg. Due to its size and unique technology, the cell forms the heart of the center. It is equipped with QUANTEC generation KUKA robots in order to conduct industrial scale research. “The cell must be wireable for research operations, and in some cases operable without separating protective equipment in order to transform the vision of human-robot collabo-



ration into reality soon,” says Stefan Bayer, Group Leader of Composites and Lightweight Solutions at KUKA Systems.

KUKA and aerospace

KUKA has been researching and developing innovative processes and automation solutions with the German Aerospace Center (DLR) for years. KUKA and the DLR-ZLP concluded a corresponding cooperation

agreement in 2009. Stefan Bayer explains: “The agreement’s primary areas of emphasis include industrializing carbon reinforced composites and building a multifunctional cell.” However, other topics, such as the interaction between humans and machines, i. e. how people and robots work together without a protective barrier, and using robots as a third human hand also play an important role. “We will need to conduct a



LEFT
FLORIAN KREBS EXAMINES THE ROBOT GRIPPERS, WHICH GENTLY WORK WITH THE MATERIAL AND CAN REACH SET PLACING RATES

CENTER
STEFAN BAYER, KUKA SYSTEMS, AND PROF. DR. MICHAEL KUPKE, DLR-ZLP, DISCUSS IMPORTANT ISSUES

RIGHT
THE SYSTEM IS USED TO EXAMINE VARIOUS AUTOMATION PROCESSES TO DETERMINE AUTOMATION CAPABILITY



great deal of research in the future, especially in the area of cooperation between humans and robots, because this field offers so many new application possibilities,” adds Stefan Bayer.

From theory to practice

The project was introduced to the public for the first time in May of last year. At the time the DLR-ZLP had just opened the doors to its Innovation Park in Augsburg. The new location tests production processes with lightweight materials for the aerospace industry.

The idea of creating a “Carbon Valley in Lechtal”, as the Innovation Park is fondly

called, first came about in 2007. It is a knowledge and technology transfer hub. Institutes and companies are located here that work together to research the technologies of tomorrow, in order to ensure that our valuable resources are used as efficiently as possible. Partnerships are formed between scientists and industry leaders. It’s an opportunity and a valuable chance for KUKA to advance its automation expertise and introduce it into production technologies. Materials research is another key aspect alongside technology and automation. Fiber reinforced polymers are the go-to technology here. These materials are not yet being processed

for full-scale, mechanized series production because the material costs are very high, the required quantities are low and processing is quite complicated for automotive scale applications. In addition to CFRP, other lightweight materials are being researched that are especially suited for industrial use. They are considered to be the materials of the future. “They are characterized by their high strength, rigidity and low weight. These properties make them ideal for use in a variety of industries such as aerospace, which often plays a pioneering role for other sectors,” notes Kupke. Science and production are expected to coalesce at the Innovation



Park in Augsburg. “The Innovation Park and its various R&D institutes and facilities will allow science and industry work to mesh,” says Bayer.

The joint development between science and industry is an important economic factor for the Augsburg region in particular. Local businesses will benefit from the synergistic effects created here. Science and industry can work together to develop their expertise for the technologies of the future and the automation solutions of tomorrow.

KUKA at “MAI Carbon”

KUKA is involved in additional research activities in MAI Carbon, the top cluster of cities in the Munich, Augsburg, Ingolstadt triangle. This cluster groups activities revolving around the topic of fiber composites. The aim is to network industrial partners from manufacturing, application and automation via universities of applied sciences and research facilities. “The idea here is to promote fiber composite processing for aerospace applications such as fuselage shells, but there are also uses in the auto-

motive sector or mechanical engineering in general as well. Innovations are used to develop technologies that transfer major industrial advances to other areas,” Stefan Bayer explains. The cluster in the Munich-Augsburg-Ingolstadt triangle is directing its efforts toward implementing carbon fiber reinforced polymers technology in mass series production for a variety of sectors in Germany by the year 2020.

The Innovation Park in Augsburg presents a major opportunity for science and industry. It’s a place where the future is now.



NEXT PAGE

THE SYSTEM IS USED TO EXAMINE VARIOUS AUTOMATION PROCESSES TO DETERMINE AUTOMATION CAPABILITY

LEFT

FLORIAN KREBS AND ANDREAS BUCHHEIM (DLR-ZLP) PROGRAM THE ROBOT TO PICK UP AND PLACE SEMI-FINISHED CARBON FIBER COMPONENTS



AUGSBURG INNOVATION PARK

Research areas: Fiber composites, resource-efficient technologies, mechatronics and automation, IT and the environment

Size of the research and development center: 70 hectares

Planned completion date: 2022

The first companies and institutes: ..KUKA, Fraunhofer Research Institute, German Aerospace Center (DLR-ZLP), the University of Augsburg Institute for Materials Resource Management

Total investment: €500 million

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-



SUPERVISORY BOARD REPORT

DEAR SHAREHOLDERS,

Last fiscal year was marked by a rise in both revenues and EBIT. The Supervisory Board reviewed the Executive Board's initiatives in an advisory role and was able to help move the company further forward. The Supervisory Board helped reach decisions on key strategic thrusts. This included, for example, optimizing the Group's financing by issuing and increasing the size of a convertible bond, or reviewing acquisition projects that formed part of the company's growth plans, after a long absence of such initiatives. Much of the Supervisory Board's work involved planning the strategic direction of the company.

In carrying out its work, the Supervisory Board held plenary sessions, sat in committees, held telephone conferences and circulated one resolution to all members. It also met regularly with the Executive Board, especially the Supervisory Board chairman. The Group's key indicators (e. g., orders received, sales, EBIT, headcount) were discussed at every Supervisory Board meeting in conjunction with the Executive Board's management report. The Supervisory Board asked for detailed explanations of any disagreement between the business results and the plans and targets, as well as the budgets. The Board then reviewed the submitted documents and analyzed any discrepancies. The Supervisory Board was thus continuously updated on the company's business situation and was able to offer timely advice.

The Supervisory and Executive Boards' cooperation was always expedient and based on mutual trust.

Changes to the Executive Board and Supervisory Board

There were no changes at the Executive Board level. Dr. Till Reuter continues to be the CEO of the company and Mr. Peter Mohnen the CFO. New members were elected to the Supervisory Board in fiscal 2013. Prof. Dr. Dirk Abel, Dr. Walter Bickel, Prof. Dr. Uwe Loos, Bernd Minning, Dr. Michael Proeller and Guy Wyser-Pratte were elected to the Supervisory Board as shareholder representatives at the Annual General Meeting on June 5, 2013. Ms. Carola Leitmeir and Mssrs Wilfried Eberhardt, Siegfried Greulich, Thomas Knabel, Armin Kolb and Thomas Kalkbrenner were appointed to the Supervisory Board after being elected by the employee representatives on April 18, 2013. Mr. Kalkbrenner resigned on August 29, 2013 with immediate effect and was succeeded by Mr. Michael Leppek effective September 12, 2013 by appointment of the courts.



BERND MINNING
CHAIRMAN OF THE
SUPERVISORY BOARD

At a constituent meeting following the Annual General Meeting, the Supervisory Board elected Mr. Minning as chairman and Mr. Kalkbrenner as the initial deputy chair. After the latter's resignation, Mr. Leppek was chosen as deputy chairman in a meeting held on September 26, 2013.

Our heartfelt thanks go out to former Board members Dr. Uwe Ganzer and Mr. Dipl.-Ing. Fritz Seifert (not re-elected to the Board) and Thomas Kalkbrenner (resigned) for their commendable contributions to the Supervisory Board of the company.

Meetings of the Supervisory Board and its subcommittees

The Supervisory Board held five plenary sessions. It passed resolutions three times in telephone conferences and in one instance reached a decision by exchanging written correspondence.

In a telephone conference on January 31, 2013, the Supervisory Board discussed the placement of a convertible bond with a face value between €50 and 60 million. It handed down a decision on the basic terms and formed a committee to reach consensus on the final conditions. This successfully placed convertible bond was increased to a nominal value of €150 million in July 2013. The approval required for issuing an additional convertible bond with the total nominal value of €91.2 million was also granted by telephone on July 21, 2013.

The financial review meeting was held on March 25, 2013. At this meeting, the Supervisory Board dealt with the financial statements of KUKA Aktiengesellschaft and the Group prepared by the Executive Board for fiscal 2012. The chairman of the Audit Committee commented on the report prepared by the auditor, KPMG. The Supervisory Board agreed with the contents of both sets of financial statements. KUKA Aktiengesellschaft's financial statements were thus adopted. The Supervisory Board also had to discuss the appropriation of KUKA Aktiengesellschaft's retained earnings for 2012. The Executive Board recommended distribution of a dividend of €0.20 per share and to carry forward the remaining profit. The Supervisory Board agreed to this proposal. The Supervisory Board also approved the Corporate Governance report and dealt with the proposed resolutions for the Annual General Meeting planned for June 5, 2013. In its meeting on March 25, 2013, the Board also discussed the takeover of the business activities of UTICA Enterprises by KUKA Systems North America LLC. Other items on the agenda included executive compensation, achievement of staff performance targets for 2012 and agreeing on targets for 2013. The key parameters of the Phantom Share Program for 2013 – 2015 were also defined. At this meeting, the Supervisory Board was finally advised of the company's intention to construct a new development and technology center at the Augsburg-Lechhausen site. The Board agreed with the proposed new construction.

The Supervisory Board met before and after the Annual General Meeting held on June 5, 2013. The agenda included a compensation issue and regular business, such as the election of members to the various committees, as well as an IKS report and the marketing strategy (Robotics) for China.

The Supervisory Board strategy meeting was held on September 26, 2013. The meeting was kicked off with the report from the Strategy and Development Committee. The Executive Board explained the Group's strategic aims, such as expanding the business in China as part of its globalization initiative and growing the general industry business to further diversify the Group's activities. KUKA's innovation leadership is being driven primarily by sensitive robotics (LWR). The Board reviewed the Robotics (including Laboratories) and Systems divisions one at a time. The Supervisory Board acknowledged and approved the strategy 2014 – 2018 presented by the Executive Board. Personnel issues were again discussed at this meeting; for example, whether it would be necessary to meet with executive management regarding caps for the variable compensation components or their total compensation in view of the most recent changes to the German Corporate Governance Code. Given the pending contract negotiations for 2014, the Supervisory Board saw no reason to act at that particular time.

The last meeting of the Supervisory Board was held in December 2013, at which it focused on the budget for 2014 and the mid-range plans to 2016. The Board approved the material presented by the Executive Board. The committees also gave an update on their work at the same meeting. One discussion centered on the potential participation of a Supervisory Board member in a robot development company. Finally, the Executive Board introduced the M&A project related to the Reis corporation.

Approval to acquire the Reis Group of companies was granted by telephone on December 20, 2013.

All members of the Supervisory Board participated in at least half of the Supervisory Board meetings (German Corporate Governance Code section 5.4.7). The Executive Board was always in attendance at the Supervisory Board meetings, except when the Executive Board's remuneration was on the agenda (German Corporate Governance Code section 3.6). For further comments about corporate governance, please refer to the Corporate Governance section, which forms part of this annual report.

The Supervisory Board has the following committees: Personnel Committee (chaired by Mr. Minning), Audit Committee (chaired by Dr. Ganzer and then Dr. Bickel), Strategy and Development Committee (chaired by Mr. Minning), Technology and Production Committee (chaired by Prof. Dr. Loos) and Mediation Committee in accordance with section 27 para. 3 of the German Codetermination Act (MitbestG) (chaired by Mr. Minning). A Nomination Committee was also formed in accordance with section 5.3.3 of the German Corporate Governance Code (chaired by Mr. Minning).

The Personnel Committee met twice in 2013 and adopted a resolution by written correspondence once. The focus was on Executive Board compensation issues in preparation for plenary meetings of the Supervisory board.

The Audit Committee met five times. The meetings dealt primarily with the company's financial statements. Moreover, the risk management report was reviewed and the Chief Compliance Officer provided a report.

The Strategy and Development Committee met four times. The issues discussed included the R&D road map, various technology topics relevant to the strategic direction of the company and the individual divisions' strategies.

The Technology and Production Committee met six times. It dealt with topics such as the ongoing efficiency program, manufacturing at KUKA Laboratories GmbH, robot development productivity and monitoring of the Systems division's projects.

The Nomination Committee met twice and adopted a resolution by telephone. It was tasked with nominating the candidates for the Supervisory Board elections for the shareholder representative side of the Supervisory Board.

The Mediation Committee had no reason to meet.

The Supervisory Board submitted its Declaration of Compliance in writing.

Independence and declaration of compliance

The Supervisory Board chairman, Mr. Minning, had already pointed out before that it was well-known that he was a major shareholder and business partner of Grenzebach. In the Supervisory Board meeting of December 13, 2013, it was reported that the Supervisory Board chairman also wanted to take an indirect stake in a robot development company in which KUKA planned to acquire a share of less than 50 percent. The Supervisory Board hired a law firm to advise the plenum whether it was proper that it approves this participation in a competitor. The Supervisory Board chairman did not participate in the discussions regarding this agenda item.

The Supervisory Board members also fully complied with the arms-length provisions outlined in section 5.4.2 of the German Corporate Governance Code. There were no other conflicts of interest as defined in section 5.5.2 of the German Corporate Governance Code during 2013.

The Supervisory Board and the Executive Board submitted identical declarations in accordance with section 161 of the German Stock Corporation Act (AktG). In fiscal 2013, the Executive Board made its annual declaration on February 5, 2013 and the Supervisory Board followed suit on February 15, 2013. The declaration of compliance was made permanently available to shareholders at the company's website.

Work with the auditors

The annual financial statements of KUKA Aktiengesellschaft and consolidated financial statements of KUKA Group as of December 31, 2013, as well as the consolidated management report of KUKA Aktiengesellschaft and KUKA Group, including the bookkeeping, were audited by auditors KPMG Aktiengesellschaft, Wirtschaftsprüfungsgesellschaft, Berlin, which issued an unqualified audit opinion on each of them on February 28, 2014. The auditor also checked the monitoring system as per section 91, para. 2 of the German Stock Corporation Act (AktG), the purpose of which is early detection of developments that could threaten the company's existence. KUKA Group's mid-year report dated June 30, 2013 was also reviewed by the auditors. KUKA Aktiengesellschaft's consolidated statements were prepared in accordance with section 315 a of the German Commercial Code (HGB) based on the International Accounting Standards (IFRS) as adopted by the European Union.

The Supervisory Board's Audit Committee appointed the external auditors, KPMG, as per the resolution at the Annual General Meeting of June 5, 2013. During the course of appointing the auditors of the financial statements of the company and the Group, the chair of the Audit Committee and the chairman of the Supervisory Board conducted a review with the auditors regarding key audit issues, scope and fees. The auditors agreed to immediately inform the chairman of the Audit Committee about any disqualification or bias issues encountered during the audit, provided such disqualification or bias issues could not immediately be resolved. The auditor also agreed to report on an ongoing basis during the audit all material findings and developments arising during the audit that were within the scope of the Supervisory Board's responsibilities. Furthermore, the auditors were instructed to inform the Supervisory Board, or make a note in the audit report, if information was encountered during the audit that is contrary to the declarations released by the Executive and Supervisory Boards as per section 161, para. 1, sent. 1 of the German Stock Corporation Act (AktG).

Finally, the Audit Committee obtained the arm's-length declaration of the auditor in accordance with section 7.2.1 of the CGC and monitored the independence of the auditor.

As in previous years, each year with different topics, the company asked the auditor to focus especially on a number of items during the annual review of fiscal 2013, such as the valuation of joint projects as relates to the POC method, capitalization and intrinsic value of internally generated intangible assets, the approach to and valuation of deferred taxes, elimination of intermediate results and expense and earnings consolidation as well as accounting for business combinations. The auditor found no major issues regarding these items.

In December 2013, the auditor gave the Audit Committee chair a detailed explanation of the preliminary audit results.

Because they had been contracted to review the June 30, 2013 mid-year financial report, the auditors attended the August 6, 2013 Audit Committee meeting.

In a joint meeting with the auditor on March 10, 2014, the Audit Committee reviewed the two sets of financial statements for fiscal 2013, taking into consideration the auditor's reports. The Executive Board and the auditor presented the highlights of the financial reports to the panel. The Audit Committee members reviewed, discussed and checked in detail the documentation relating to the financial statements and discussed the audit report in depth with the auditor. The auditor answered the questions posed by the Audit Committee members. The Audit Committee reported to the Supervisory Board on the results of its discussions during the board's meeting on March 25, 2014 and recommended that the Board approve KUKA Aktiengesellschaft's annual financial statements and KUKA Group's consolidated annual financial statements.

The Supervisory Board reviewed the draft annual financial statements and the Executive Board's recommendation on appropriation of net income on March 25, 2014. The auditor, KPMG, attended the Supervisory Board meeting in order to report on material findings in the audit and to provide additional information. All members of the Supervisory Board were in possession of the audit reports provided by the auditor. KPMG explained in detail the financial position and performance of the company and the Group. The auditor also reported that there are no material weaknesses in the internal controlling of the accounting system or the risk early detection system. The Board and the auditor jointly reviewed and discussed the financial statements and KPMG answered all questions posed by the Audit Committee.

2013 financial statements adopted

After completing its own review of the financial statements for 2013 for KUKA Aktiengesellschaft and KUKA Group, and with full knowledge and consideration of the Audit Committee report, the auditor's reports and the explanations provided in the meeting of March 25, 2014, the Supervisory Board raised no objections to the results and concurred with the auditor's findings. In the opinion of the Supervisory Board, the auditor's reports comply with the legal requirements stipulated in sections 317 and 321 of the German Commercial Code (HGB).

The Supervisory Board is satisfied that the management report compiled for KUKA Aktiengesellschaft and KUKA Group is complete. The assessments made by the Executive Board in the management report are in agreement with its reports to the Supervisory Board, and the statements made in the consolidated management report are also in agreement with the Supervisory Board's own evaluations. At the conclusion of its review, the Supervisory Board found no cause to raise objections to the consolidated management report.

In its financial statements meeting on March 25, 2014, the Supervisory Board therefore approved KUKA Aktiengesellschaft's financial statements for fiscal 2013 as prepared by the Executive Board. The annual financial statements are thereby adopted.

The Supervisory Board also approved KUKA Aktiengesellschaft's Group consolidated financial statements and the Corporate Governance report for the 2013 financial year as prepared by the Executive Board.

The Executive Board recommended that a dividend of €0.30 per common share entitled to dividends be paid from retained earnings and the balance in retained earnings be carried forward. We reviewed this recommendation and endorsed it.

Thanks to the staff

Fiscal 2013 was marked by further growth. Some of the growth is attributable to acquisitions that met strategic consolidation criteria, as already mentioned herein. The company will face new challenges as it moves forward with integrating the companies after their merger. The company, which has no net debt, is financially solid and well-positioned to face the future. Net retained earnings were higher and the dividend for fiscal 2013 was raised by 50 percent, thanks not only to the efforts of the Executive Board, but all KUKA Group employees.

The Supervisory Board would especially like to thank all employees of the KUKA companies for their commendable commitment. Again in 2013, the employees worked hard to achieve success in their businesses and can be proud of their company. The Supervisory Board also thanks the Executive Board members, the CEOs of the Group companies and the employee representatives. The contribution of their performance to the well-being of the company, its customers and its shareholders was outstanding.

Augsburg, March 25, 2014

The Supervisory Board



Bernd Minning
Chairman

CORPORATE GOVERNANCE REPORT

The Executive Board reports on corporate governance at KUKA on its own behalf and on behalf of the Supervisory Board in accordance with section 3.10 of the German Corporate Governance Code (GCGC) as follows:

Responsible and transparent corporate governance is one of KUKA's core principles. This also applies to the interaction between the Executive and Supervisory Boards.

DECLARATION OF COMPLIANCE

All of the declarations of compliance issued by the Executive Board and the Supervisory Board for every fiscal year since 2002 are available on the company's website at www.kuka-ag.de.

The identical declarations of the Executive Board (dated February 3, 2014) and the Supervisory Board (dated February 12, 2014) in accordance with section 161, para. 1, sent. 1 of the German Stock Corporation Act (AktG) and the GCGC read as follows:

"Since issuing the most recent declarations of compliance of the Executive Board (February 5, 2013) and the Supervisory Board (February 15, 2013), KUKA Aktiengesellschaft has complied with, and continues to comply with, the recommendations of the Government Commission on the German Corporate Governance Code as amended on May 13, 2013, which were published in the electronic edition of the Bundesanzeiger (electronic Federal Gazette) of June 10, 2013, subject to the following exceptions:

1. KUKA Aktiengesellschaft does not follow the recommendation for the Supervisory Board outlined in section 3.8, sent. 5 of the GCGC. The Group's D&O insurance policy does not provide for a deductible for members of the Supervisory Board. In KUKA Aktiengesellschaft's view, Supervisory Board members do not require a deductible to ensure that they properly fulfill their monitoring role.

2. KUKA Aktiengesellschaft does not follow the recommendation for the Executive Board outlined in section 4.2.3, para. 2, sent. 6 of the GCGC. The executives in office have signed contracts and can be confident that the terms of same will not be changed. Retroactively capping total compensation (for overall salaries and variable payment components) would constitute a change in the terms of the contract, which cannot be unilaterally implemented by the Supervisory Board. Furthermore, it does not appear appropriate given the expected cooperation based on mutual trust between the Supervisory and Executive Boards (which is in fact expected by the GCGC).

KUKA Aktiengesellschaft adheres to nearly all other suggestions contained in the code."

The identical declarations of the Executive Board and Supervisory Board have been available on the company's website at www.kuka-ag.de since February 26, 2014.

MANAGEMENT AND CORPORATE STRUCTURE

KUKA Group consists of KUKA Aktiengesellschaft – the Group's managing holding company – and its two divisions, Robotics and Systems. With just a few exceptions, all Group companies have been allocated to the two management companies, KUKA Roboter GmbH and KUKA Systems GmbH, which hold – in most cases – 100 percent of those companies, either directly or indirectly. This legal structure also extends to KUKA Laboratories GmbH, a wholly owned subsidiary of KUKA Roboter GmbH, of which the "Advanced Robotics" section is a part. At the beginning of 2014, KUKA Aktiengesellschaft acquired a 51 percent stake in Reis Group, owned by Reis Group Holding GmbH & Co. KG. Reis Group has been allocated to KUKA Systems GmbH as management company.

Similarities between the business divisions in terms of markets and production areas, customers, and geographic focus are identified, and intense efforts are made to further develop these similarities. However, the divisions are responsible for their business and thus also for their earnings. Moreover, as in the past, project and risk managers monitor implementation of the established targets by focusing intensively on key indicators, as well as developing executive staff and maintaining brand strategy.

The Executive Board of KUKA Aktiengesellschaft has consisted of two persons since January 1, 2011: the Chairman of the Executive Board and Chief Executive Officer (CEO) and the Chief Financial Officer (CFO). KUKA Aktiengesellschaft's Articles of Association expressly state that the Executive Board may consist of two persons (section 6, para. 1 of the company's Articles of Association).

RESPONSIBLE COOPERATION BETWEEN THE EXECUTIVE BOARD AND THE SUPERVISORY BOARD

The common goal of the Executive Board and the Supervisory Board is to sustainably increase shareholder value. To this end, the Executive Board and Supervisory Board work closely together in the interest of the company. With the exception of Dr. Bickel (Executive Board member until December 31, 2010), no former Executive Board members belong to the Supervisory Board. The Executive Board reports to the Supervisory Board regularly, in a timely manner, and comprehensively regarding all matters relevant to the company with respect to planning, business development, risk exposure, risk management and any corresponding action taken. In doing so, the Executive Board also addresses any deviations in the business results from the established plans and targets and explains the causes of such deviations. The Executive Board also reports to the Supervisory Board regarding Corporate Compliance. The Articles of Association and the Supervisory Board's Rules of Procedure contain provisions ensuring the right of the Supervisory Board to withhold its consent on significant transactions. Further information on cooperation between the Executive Board and the Supervisory Board can be found in the Supervisory Board Report on pages 61 to 65.

In fiscal 2013, no consulting or other contracts for work or services existed between Supervisory Board members and the company.

EXECUTIVE BOARD

In fiscal 2013, the Executive Board consisted of two members responsible for the following departments:

Dr. Till Reuter, Chairman of the Executive Board and CEO, is responsible for (i) investor relations, (ii) strategic corporate development, (iii) public relations, (iv) senior Group executives, (v) internal audit, (vi) personnel and (vii) legal affairs/compliance. Dr. Reuter is also director of industrial relations at KUKA Aktiengesellschaft.

Mr. Peter Mohnen, Chief Financial Officer (CFO), is responsible for (i) finances and controlling, which includes the financial accounting, controlling, treasury and tax departments, (ii) risk management, (iii) IT and (iv) facility management.

The Executive Board members normally convene at least every fourteen days, and otherwise keep in constant close contact. The Executive Board avoids conflicts of interest. No conflicts of interest between Executive Board members occurred in fiscal 2013.

In accordance with the recommendations of the GCGC (section 4.1.5), the Executive Board takes diversity into consideration when filling managerial positions in the company and, in particular, aims for an appropriate consideration of women. The "Female Inspiration" initiative aims to permanently increase the number of women in management positions at KUKA Group.

EXECUTIVE BOARD COMPENSATION

Executive Board compensation is outlined in the compensation report.

SUPERVISORY BOARD

The Supervisory Board is composed pursuant to the German Act on Company Co-Determination and consists of twelve members; six members are elected by the shareholders and six by the employees.

The election of employee representatives to the Supervisory Board was held on April 18, 2013. The results of the vote were published in the electronic Federal Gazette (Bundesanzeiger) on April 24, 2013.

A new election of Supervisory Board shareholder representatives was held at the Annual General Meeting on June 5, 2013.

The term of office of the Supervisory Board employee and shareholder representatives ends upon adjournment of the Annual General Meeting in 2018. This also applies to one employee representative who was appointed to the Supervisory Board by order of the local court of Augsburg dated September 10, 2013, notified on September 12, 2013.

When a member of the Supervisory Board steps down prior to the end of his or her term of office, the term of office of the newly elected or newly appointed Supervisory Board member is until the end of the original term of office of the Supervisory Board member who stepped down (section 10, para. 4, sent. 1 of the Articles of Association).

The Supervisory Board established the following targets for its future makeup to address the requirement regarding diversity in section 5.4.1 of the German Corporate Governance Code, which are also to be taken into account when recommending candidates to the shareholders at the Annual General Meeting:

- (i) At least two Supervisory Board members shall have sector-specific experience.
- (ii) At least one Supervisory Board member shall have considerable career experience abroad.
- (iii) At least two Supervisory Board members shall not be on executive or supervisory bodies of, employed by, or consultants for customers, suppliers, lenders, or other business partners of the company.
- (iv) At least two Supervisory Board members to be elected at the Annual General Meeting shall be independent in terms of section 5.4.2 of the GCGC.
- (v) Normally, Supervisory Board members shall be no younger than 35 and no older than 72 years of age at the time of their election.
- (vi) Appropriately qualified women shall be reviewed as candidates. Within two election periods, at least two Supervisory Board members shall be female.

To the extent that members of the Supervisory Board held or hold key positions with important business partners, transactions with them were subject to the standard terms and conditions for arm's-length transactions.

Given the criteria for independence outlined under section 5.4.2 of the GCG, Mr. Minning, Chairman of the Supervisory Board, addressed a letter to the Deputy Chairman of the Supervisory Board in 2012 referring to his known association with the major shareholder of Grenzebach Maschinenbau GmbH and the latter's business relations with KUKA Group companies. All other members of the Supervisory Board fully comply with independence criteria.

In fiscal 2013, the Supervisory Board chairman indicated that that he may have a potential conflict of interest (section 5.5 of the GCGC). For details, please refer to the Supervisory Board Report on page 63 of this annual report. There was no indication of other conflicts of interest in fiscal 2013.

The Supervisory Board formed six committees consisting of Supervisory Board members: These are:

- (i) the Mediation Committee as per section 27, para. 3 of the MitbestG (German Act on Co-determination),
- (ii) the Personnel Committee
- (iii) the Audit Committee (section 5.3.2 GCGC),
- (iv) the Nomination Committee (section 5.3.3 GCGC),
- (v) the Strategy and Development Committee and
- (vi) the Technology and Production Committee

In accordance with the provisions of the Corporate Governance Code, the Supervisory Board or the Audit Committee dealt with compliance issues, and the Executive Board reported to these committees accordingly.

It has been agreed with the independent auditor that the independent auditor will immediately report to the Supervisory Board any material findings or occurrences related to the Supervisory Board's work that arise in the course of auditing the financial statements. Finally, it was also agreed with the independent auditor that the independent auditor will inform the Supervisory Board and/or note in its audit report any finding of facts during the performance of the audit indicating that the declarations issued by the Executive Board and the Supervisory Board with respect to the Code are in any way incorrect (section 7.2.3 of GCGC). As stipulated in the audit contract, the auditor reviewed the interim report as of June 30, 2013.

The Supervisory Board regularly reviews the efficiency of its activities (section 5.6 of the GCGC). A multi-year review, which was completed in April 2011, was recently carried out by the Institute for Corporate Governance of the University of Witten/Herdecke as part of a research project entitled "High-Performance Boards – Quality and Efficiency on Supervisory Board Committees". The Supervisory Board intends to have the efficiency of its activities professionally reviewed at reasonable intervals in the future as well.

SUPERVISORY BOARD COMPENSATION

The compensation of the Supervisory Board is described in the compensation report.

SHAREHOLDINGS

Mr. Guy Wyser-Pratte holds shares in KUKA Aktiengesellschaft totaling over one percent. The remaining members of the Executive Board and Supervisory Board hold less than one percent of the shares in circulation.

CORPORATE COMPLIANCE

KUKA has always applied a high standard of ethical principles. Essential components are strict obedience to the law and value-oriented conduct. These form the basis of the Corporate Compliance Program adopted by the Executive Board in November 2007 and approved by the Supervisory Board in December 2007, which took effect throughout the Group on February 1, 2008. The key contents of the Corporate Compliance Program are contained in the Corporate Compliance Handbook, which comprises several compliance-related guidelines. The Corporate Compliance Handbook was updated and revised in fiscal 2010. It was again reviewed and updated in fiscal 2013 and the version now applicable is dated April 1, 2013.

The Executive Board passed a resolution making the Chairman of the Executive Board ultimately responsible for the Corporate Compliance Program. A Compliance Committee consisting of persons employed by the Group was established to manage, implement, monitor, and develop the Corporate Compliance Program. In addition, compliance officers reporting to the Compliance Committee were established at the Group companies for the individual divisions and regions. The compliance officers are intended to be the employees' direct and first point of contact for compliance-related issues. The position of external ombudsman was also established.

For KUKA, regular training of its employees and continuous development of the existing compliance system are key to anchoring our value-based standards in the company and avoiding any violations of law. For example, since 2011, all KUKA employees have participated in online compliance training based on an in-house e-learning program designed especially for this purpose. The e-learning program was successively expanded to include the foreign Group companies. In 2013, a survey related to the online compliance training was issued to measure the acceptance and understanding of the compliance program at KUKA Group. The company also held a series of seminars on selected topics.

ANNUAL GENERAL MEETING

The 2014 Annual General Meeting will take place in Augsburg on May 28, 2014.

Each shareholder is entitled to one vote. No-par-value shares have been issued and global certificates created. The shares are bearer shares. The Executive Board makes it easier for shareholders to exercise their voting rights at the Annual General Meeting by offering them the right to issue powers of attorney to proxies who are appointed by the company and bound by the instructions of the shareholder. The proxies appointed by the company are also available at the Annual General Meeting to the shareholders who are present. In addition, powers of attorney may be issued to financial institutions, shareholder associations, or other third parties.

ACCOUNTING AND ANNUAL AUDITING

Since 2004, the annual financial statements of KUKA Group have been prepared in accordance with the International Accounting Standards (IAS) and the International Financial Reporting Standards (IFRS) as adopted by the European Union. An independent auditor elected at the Annual General Meeting audits the annual financial statements and the consolidated financial statements. At the recommendation of the Supervisory Board, shareholders at the 2012 Annual General Meeting chose KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, as auditor for the annual reports and Group auditor for fiscal 2013 as well as for a potential review of the half-year report for fiscal 2013. The half-year report for fiscal 2013 was reviewed by the auditor based on the aforementioned resolution.

In accordance with the provisions of the Corporate Governance Code, the Supervisory Board's Audit Committee reviewed the independence of the auditor, commissioned the auditor to carry out the audit, determined the key audit points and agreed on the fee.

OPPORTUNITY AND RISK MANAGEMENT, CONTROLLING

Opportunity and risk management at KUKA Group is described in the annual report on pages 106 to 111 (risk report). In accordance with legal requirements, the aim of risk management is early identification of any risk that could jeopardize the existence of KUKA Group and its operating companies as going concerns to enable measures to minimize, transfer, or avoid risk to be taken. The risk strategy and risk policy is guided in particular by business risks, financial risks (including currency risks), and the specific risks of the divisions – in each case from a short, intermediate and long-term perspective. Controlling in particular is an essential tool for efficient risk management at KUKA Group.

KUKA further optimized opportunity and risk management in 2013. The Executive Board is tasked with adapting opportunity and risk management to changes in the business environment on an ongoing basis.

FINANCIAL PUBLICATIONS

The company informs its shareholders, participants in the capital markets, and the media of its position and of significant business events, in particular by publishing quarterly financial reports, a half-year financial report, and an annual report, holding a financial statements press conference on the annual financial statements, and conducting the Annual General Meeting each year. In addition, it issues ad-hoc releases under section 15 of the German Securities Trading Act (WpHG), notices under section 15a of the WpHG (Director's dealings) and under section 26 of the WpHG (Disclosure of shareholders' notifications and owners of certain financial instruments), holds conferences with analysts, meets with analysts and investors in Germany and abroad and issues other press releases.

All information is published in both German and English and is also available on the company's website from the time of publication. All regular financial reporting dates are published in the company's financial calendar, which can be found on the back cover page of this annual report and on the website at www.kuka-ag.de.

DECLARATION REGARDING CORPORATE MANAGEMENT

The management declaration as per section 289 a of the German Commercial Code (HGB) is posted at the company's website at www.kuka-ag.de.

COMPENSATION REPORT

The compensation report summarizes the basic principles used to determine the compensation of the Executive and Supervisory Boards of KUKA Aktiengesellschaft and describes the structure and remuneration of the members of the Executive and Supervisory Boards. The compensation report is an integral part of the combined management report.

EXECUTIVE BOARD COMPENSATION

1. Compensation structure

KUKA Aktiengesellschaft's Executive Board compensation contains fixed and variable components. The latter consist of several variable compensation elements. The Executive Board compensation system thus conforms with section 87 of the German Stock Corporation Act (AktG) and the requirements of the GCGC regarding sustainable corporate performance. The variable components take into consideration both positive and negative business developments.

The fixed compensation consists of a base salary and payments in kind. The base salary is paid in twelve equal monthly installments. The payments in kind made to Executive Board members consist mainly of the use of company vehicles.

One-half of the variable compensation is based on achievement of personal targets and the other half is dependent on the performance of KUKA Group's key indicators, EBIT and free cash flow. The associated details are agreed for each specific year. The variable compensation component is capped, and achievement of the financial targets is linked to business performance over several years.

In addition, phantom shares have been offered to members of the Executive Board since 2006 as part of annual phantom share programs (hereinafter also referred to as the "programs") as an additional variable compensation component designed to provide a long-term incentive. Phantom shares are virtual shares that grant the holder the right to cash payment in the amount of the company's applicable share price. In contrast to stock options, the proceeds from phantom shares reflect not only on the increase in share value, but also the full value of the stock. Moreover, a dividend equivalent that mirrors the actual dividend distributed on real KUKA shares is paid annually during the life of the plan for each virtual share held. There are no voting rights associated with phantom shares.

Each program has a term of three calendar years. The first program was rolled out for the period from 2006 to 2008. The program established as a component of compensation for fiscal 2013 refers to the years 2013 – 2015. At the beginning of the three-year period, the Supervisory Board establishes the amount to be allocated. To calculate the preliminary number of phantom shares, such amount is divided by the initial price determined for KUKA shares, which is calculated from the average price of KUKA shares (opening price in XETRA trading on the Frankfurt stock exchange) between January 2, 2013 and March 22, 2013 (the last trading day prior to the Supervisory Board's financial review meeting). The Supervisory Board also establishes an EVA (economic value added) for continuing operations (before taxes) at the beginning of the three-year performance period. The EVA is based on the operational planning for the three years of the program, which is geared toward the budget for the first fiscal year of the three-year period and the projections for the two subsequent fiscal years.

The cumulative EVA (actual EVA) for the three-year performance period is divided by the EVA for continuing operations in accordance with the operational planning for the three program years in order to determine a success factor. The success factor may fluctuate between 0 and 2.0. The final number of phantom shares depends on the success factor achieved, which is multiplied by the preliminary number of phantom shares. The upper limit is capped at twice the number of phantom shares; i. e., it reflects a success factor of 2.0. Payment is based on the final number of phantom shares at the closing share price (average price of KUKA shares between January 2 of the year subsequent to the three reference years [the "subsequent year"] and the day prior to the financial review meeting of the Supervisory Board in the subsequent year).

Each Executive Board member is obligated to apply 25 percent of the gross amount paid out in April of the subsequent year to the purchase of KUKA shares at the then applicable share price. The share purchase serves to build up the established holding volume of 50 percent of the annual base compensation in the form of KUKA shares starting in March of the subsequent year. The obligation ends with the participant's departure from KUKA Group. In the event of termination of an Executive Board member's contract – regardless of which party initiates the termination – all phantom shares allocated to that member expire.

The initial price for the 2013 – 2015 phantom share program was set at €31.26.

Unless fixed benefits have been contractually granted, the Supervisory Board decides each year on the amount of the Executive Board's share-based payments. The objective of the program is to ensure that every member of KUKA's Executive Board is also a shareholder. The program promotes share ownership among members of KUKA's Executive Board and thereby ties the interests of these governing body members more closely to the interests of shareholders. The profit targets and comparative parameters may not be changed retroactively.

No loans were granted to Executive Board members during the reporting year.

2. Compensation for 2013

Payments granted to members of the Executive Board during the 2013 business year totaled €3,147,000.

Total remuneration for Executive Board members consists of a fixed salary (including payments in kind) that was actually paid out in fiscal 2013, plus variable and share-based payment components that count as part of the total compensation – at the corresponding fair values or allocation values on the date granted for the 2013 – 2015 phantom share program – without having been actually paid out to the Executive Board members.

The following table outlines the compensation paid to the Executive Board members in office as of December 31, 2013, as well as that paid to the entire Executive Board.

in € thousands	Base salary including payments in kind*	Variable compensation**	Phantom share program 2013–2015***	Total compensation
Dr. Till Reuter	519	1,001	386	1,906
Peter Mohnen	379	656	206	1,241
Total	898	1,657	592	3,147

* Depending on the contractual arrangements made with the individual Executive Board members, payments in kind comprise the use of company vehicles and premiums for accident insurance.

The premium for D&O insurance – unlike that for accident insurance – is not included in the payments in kind because it cannot be allocated on an individual basis, since the company pays a flat premium for a protected group of persons that extends beyond the members of the Executive Board.

** The fair value taken into account for each Executive Board member in the table corresponds to the entire value of provisions for fiscal 2013 as of Dec. 31, 2013. The variable compensation paid to the Executive Board can only be determined on a preliminary basis at present. At its meeting on March 25, 2014, the Supervisory Board will make a final determination of the Executive Board members' variable compensation based on achievement of their personal targets. The Supervisory Board will not decide on achievement of the corporate targets for sustainable corporate performance requirements until 2015.

*** The allocation value equals the average price for KUKA shares on the date the phantom share program was established by the Supervisory Board. The allocation value thus calculated is multiplied by the preliminary number of phantom shares.

Dr. Till Reuter: Allocation value = €34.49 (XETRA closing price on June 5, 2013)

Peter Mohnen: Allocation value = €32.20 (XETRA closing price on Mar. 25, 2013)

Provisions, which took the total expected expense from the phantom shares programs into account, were recognized as of December 31, 2013 for all phantom share programs in effect on that date (i. e., the 2011 – 2013, 2012 – 2014 und 2013 – 2015 programs).

Apart from a few exceptions, former Executive Board members whose terms of office ended no later than 2008 were granted company pension benefits that included old age, professional and employment disability, widows' and orphans' pensions. The total sum for the provisions recognized in 2013 for current pensions and expected pension benefits for this group of persons totaled €9,763,000 (German Commercial Code) (2012: €10,016,000).

SUPERVISORY BOARD COMPENSATION

1. Compensation structure

Based on a resolution at the company's Annual General Meeting on January 1, 2006, the Articles of Association were amended to require fixed compensation for members of the Supervisory Board.

In addition to reimbursement of expenses, each member of the Supervisory Board is paid a fixed amount of €30,000, payable at the end of the fiscal year.

The chair of the Supervisory Board is paid four times that amount, and the deputy chair receives double the compensation. Supervisory Board members receive additional compensation of €30,000 for chairing the Annual General Meeting, provided this task is not fulfilled by the chair of the Supervisory Board, and for membership in one or more committees that are not of an interim nature. Committee chairs are paid at most one and one-half times the annual compensation, even if they chair more than one committee or are members of another committee; this does not apply to the committee formed pursuant to section 27, para. 3 of the German Act on Co-Determination (MitbestG).

In addition, for each Supervisory Board meeting (including meetings of Supervisory Board committees), each Supervisory Board member has the choice of either being reimbursed for expenses or receiving a lump-sum payment of €450 per meeting, plus the applicable value added tax. The employee representatives on the Supervisory Board who are employed by KUKA Aktiengesellschaft or a KUKA Group company are still entitled to their regular salaries based on their employment contracts.

2. Compensation for 2012 and 2013

The following table compares the compensation paid to members of the Supervisory Board in fiscal 2012 and 2013.

in € thousands	Payment in 2013 for 2012	Payment in 2014 for 2013
Bernd Minning Chairman of the Supervisory Board and Chairman of the Personnel Committee, Strategy and Development Committee, Mediation Committee, and Nomination Committee	165	165
Michael Leppek Deputy Chairman of the Supervisory Board (from Sept. 12, 2013)	0	25
Dr. Walter Bickel Chairman of the Audit Committee (from June 5, 2013)	0	43
Prof. Dr. Dirk Abel	60	60
Dr. Uwe F. Ganzer Chairman of the Audit Committee (until June 5, 2013)	75	32
Thomas Kalkbrenner Deputy Chairman of the Supervisory Board (until August 29, 2013)	31	59
Jürgen Kerner Deputy Chairman of the Supervisory Board (until June 6, 2012)	39	0
Armin Kolb (from June 5, 2013)	0	35
Dr. Michael Proeller	60	60
Prof. Dr. Uwe Loos Chairman of the Technology and Production Committee	75	75
Carola Leitmeir	60	60
Fritz Seifert (until June 5, 2013)	60	26
Wilfried Eberhardt	30	30
Siegfried Greulich	60	60
Thomas Knabel	60	60
Guy Wyser-Pratte	60	60

KUKA AND THE CAPITAL MARKET

KUKA SHARES RISE

KUKA shares are listed on the MDAX, Germany's stock market index for mid-cap publicly traded companies. Reporting is as per Prime Standard rules. KUKA's share price rallied 23 percent over the course of 2013, up from €27.67 at the end of 2012 to €34.05 at the close of 2013. In comparison, the MDAX rose 39.1 percent in 2013, beating the DAX, which

was up 25.5 percent for the year. The MDAX set several new records over the course of the year and closed at a near all-time high of 16,574 at the end of December 2013. The easing of the euro crisis and the expansionary monetary policy of the central banks were the main factors that drove German stock markets higher. KUKA Aktiengesellschaft's market capitalization was up in 2013, closing at about €1.15 billion on December 31, 2013. The average daily trading volume rose from 122,000 shares in 2012 to 144,000 in 2013.

		2009	2010	2011	2012	2013
Weighted average number of shares outstanding	millions of shares	25.67	30.33	33.43	33.92	33.92
Earnings per share	€	-2.95	-0.28	0.89	1.64	1.72
Dividend per share	€	-	-	-	0.20	0.30*
High for the year (closing price)	€	12.67	16.93	20.00	29.02	38.50
Low for the year (closing price)	€	9.02	9.87	12.50	14.68	26.46
Closing price for the year (closing price)	€	11.95	16.60	14.14	27.67	34.05
Change compared to prior year	%	-5.7	38.9	-14.8	95.7	23.1
Market capitalization (Dec. 31)	€ millions	350	548	472	938	1,154
Average daily volume	No. of shares	98,300	113,000	132,000	120,000	144,000

* subject to approval by shareholders at the Annual General Meeting on May 28, 2014

INVESTOR RELATIONS

KUKA places a high priority on communicating regularly with the capital markets. In order to further boost investor confidence in the company, it provides transparent, timely reports. The investor relations team engages in intensive dialogue with the capital markets, reporting on all important events at KUKA Group. It met with investors and analysts at Augsburg headquarters and organized road shows and conferences. Additional information is available to investors around the clock at www.kuka-ag.de/de/investor_relations. In addition to corporate presentations, the company's quarterly and annual reports can be downloaded from the site. The company's financial calendar with key dates for 2014 is available at the website and at the end of this annual report.

HIGH FREE FLOAT

KUKA continues to have a high volume of free-floating shares. At the end of 2013, the free float, including shares held by institutional investors, was 80.2 percent of total share capital. According to the mandatory disclosures submitted to the company, the following investors hold more than 3 percent of the share capital (as of December 31, 2013): Grenzbach Group, Asbach-Bäumenheim 19.8 percent, Oppenheim Asset Management Services S.a.r.l. 5.2 percent, BlackRock Group 5.0 percent, AXA S.A. 3.2 percent, Franklin Templeton Investment Fund 3.1 percent und Franklin Mutual Advisors LLC 3.0 percent.

MAJORITY OF ANALYSTS RECOMMEND KUKA SHARES POSITIVE

Many investors and banks continued to focus on robot-based automation in 2013. Twenty-two banks and brokerage houses regularly evaluated KUKA's share performance last year. Most bank analysts rated the shares as a buy or a hold, the same as the year prior. At the end of 2013 six were recommending a "buy" for the stock (2012: eleven). Eleven recommended investors "hold" (2012: five), and five said "sell" (2012: four). The target price for the shares ranged between €27 and €40.50. The average of all of the analysts target prices to the end of the year was slightly over €34. For further details, please go to www.kuka-ag.de/de/investor_relations.

CORPORATE BOND VALUE HIGH

KUKA Aktiengesellschaft has a €202 million corporate bond bearing interest at 8.75 percent per annum (ISIN: DE000A1E8X87). The bond matures in 2017 and KUKA AG has the option to buy back the bond prior to maturity. In the second quarter of 2013, KUKA started to buy back parts of the bond on the open market. The total value of the bonds the company had repurchased to the end of 2013 was €42.6 million (nominal) and the value of the outstanding bonds as of December 31, 2013 was €159.4 million (nominal). The value of the bond over the course of 2013 was above 110 percent.

Standard & Poor's gave KUKA AG a rating of "BB- (outlook: stable)" and Moody's rated the company at "Ba3 (outlook: stable)".

KUKA SHARE PRICE PERFORMANCE FROM JANUARY 1 – DECEMBER 31, 2013*



CONSOLIDATED MANAGEMENT REPORT

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GROUP BASIS

Group structure and business activities

KUKA Group consists of KUKA Aktiengesellschaft and the two divisions, Robotics and Systems. KUKA Aktiengesellschaft headquartered in Augsburg is the Group's holding company and is responsible for managing corporate activities within the group of companies. The management of the individual divisions coordinates the operational business activities in the respective segments. Both divisions operate globally and are supported by their regional subsidiaries in both their sales efforts and their assembly and field service work.

KUKA Group is an internationally active robot and plant engineering company focused on robot-based automation of production processes and offers its customers solutions to improve the efficiency of their processes and the quality of their products. The Systems division offers its customers innovative engineering services along with automation components and automated production cells. KUKA Systems develops and delivers new automated assembly lines, and also redesigns installed systems as part of services to guarantee the sustainability and increase the efficiency of existing installations. The Robotics division develops, installs and sells industrial and service robots together with robot control systems and the associated software. Robotics also offers its customers a wide range of services.

Robotics division

The Robotics division supplies key components for the automation of production processes in the form of industrial robots complete with controllers and software. The division's product portfolio is modular, which enables it to offer custom solutions based on a series of standard products – with payloads ranging from 5 to 1300 kg. The robots are designed and assembled in Augsburg; control cabinet assembly is carried out at two Hungarian factories in Taksony and Füzesgyarmat. KUKA also produces robots and control cabinets for the Asian market in Shanghai, China.

KUKA enlarged its product portfolio in 2012 when it introduced the KR AGILUS, a small robot characterized by its energy efficiency, precision and speed with a low payload class of up to 10 kg. With this broad product range KUKA is able to offer automation solutions in all payload classes to meet any number of customer requirements. This includes the KR C4 control unit, which was further enhanced to not only deliver improved motion, sequence and process control but also features integrated safety engineering.

KUKA Laboratories GmbH is the company within the Robotics division responsible for the development of new technologies, products and applications. Alongside research and development, the main focuses of KUKA Laboratories are the development of new markets and the sale of products for robotics in the service and health care sector. One of the company's core tasks is advancing a totally new generation of robots – the LWR iiwa lightweight robot. The LWR iiwa's unique combination of sensors and safety features enables it to be used in applications that until now were impossible to automate using robot-based solutions due to safety reasons.

Systems division

The Systems division plans, designs and builds automated manufacturing systems. The range of products and services offered covers the entire value chain of a plant – from stand-alone system components, tools and jigs to automated manufacturing cells. The division also acts as a systems integrator, delivering turnkey systems. The division's expertise is in automating individual production processes such as welding and soldering, processing a variety of materials and integrating various manufacturing steps or building fully-automated systems.

The division supplies the automotive industry with assembly lines for car bodies and automated systems, engine and transmission assembly systems, as well as machine tools for sheet metal processing. KUKA Systems also operates a Jeep Wrangler car body manufacturing line (KTPO) located at the Chrysler site in Toledo, Ohio.

The Systems division works with regional centers of excellence. Markets in Germany and Europe are serviced from Augsburg, North and South America from greater Detroit, Michigan, and Asia from Shanghai, China. Other business segments include tool manufacturing at the site in Schwarzenberg/Erzgebirge and in Slovakia, as well as automated assembly lines and test stands for engines and transmissions at the sites in Bremen, Germany, greater Detroit, Michigan, and now also in Shanghai, China.

Markets and competitive positions

The automotive industry is KUKA Group's largest customer segment and generates roughly 70 percent of total sales. KUKA has been developing and implementing robot-based automation solutions for this market segment for forty years. During this time, KUKA has become a recognized brand name for innovative technologies in compliance with the automotive industry's stringent productivity, quality and reliability standards. KUKA Robotics is one of the world's most renowned robot manufacturers and a market leader for industrial robots in Europe. KUKA Systems is likewise a leading provider of car body manufacturing systems in the automotive industry. After the recent acquisition of UTICA Enterprises, KUKA Systems is now the market leader in North America.

Moreover, to continuously expand its business, KUKA specifically targets sectors outside the automotive industry in general industry. KUKA Robotics is already one of the key global players in markets such as the machine tools, plastics, food and health care industries. Systems partners and integrators that target specific markets are primarily responsible for sales and service of robot-based automation systems for general industry. The share of sales to general industry and automotive industry customers is nearly balanced at KUKA Robotics. KUKA Systems is also expanding its activities into non-automotive sectors to service customers from industries such as aerospace, rail vehicle manufacturing, construction machinery, energy and even manufacturers of consumer goods.

Corporate strategy

KUKA employs a three-pronged strategy to grow profitably. It is based on the market leadership of its two divisions, the company's innovation strength and its strong customer relationships, and is summarized below:

1. Expand KUKA's innovation and technology leadership

For over forty years, the KUKA brand has been associated with innovations in the area of plant engineering and robot-based technologies. The largest share of investments in research and development are made in the Robotics division. KUKA Laboratories takes a cross-functional approach within the company to develop technologies and applications for the entire Group. In order to maintain and expand its high level of innovation, the Robotics division employs about ten percent of its workforce in research and development at the Augsburg headquarters and reinvests between seven and nine percent of its sales revenues in R&D annually. R&D at the Systems division is conducted in conjunction with customer projects and as part of various development efforts; spending in this area is reported as research and development expense.

Robot-based automation is influenced by the different trends identified by the International Federation of Robotics (IFR) in its forecast data, which sees the next generations of robots as being not only mobile and easy to program, but also fast and flexible in their application. Technological innovations such as improved safety, vision and sensor systems will enable humans and machines to work together in the future. KUKA's newly developed LWR iiwa has precisely these capabilities, and will make it possible to automate processes that were previously only partly automated or not at all.

2. Diversify business activities into new markets and regions

KUKA is a market leader in the automotive industry. But there are also many opportunities for growth outside the automotive sector in general industry. KUKA Systems takes advantage of these by drawing on its automation expertise and applying it to other markets such as aviation, while KUKA Robotics works with systems partners to develop new applications for robots in target markets such as the electronics, foundry, plastics, food, and health care industries. General industry markets are especially important because the growth and profit potential in these sectors is greater than in the automotive industry. The degree of automation in these sectors is relatively low compared to the automotive industry. Customers from general industry are primarily interested in automation to make their production processes more efficient, raise their production numbers and, of course, improve overall quality. With this in mind, KUKA concentrates on expanding target markets in general industry while promoting regional diversification. KUKA has a strong position in the European market, and sees growth potential in the expansion of global sites with a key focus on high-growth countries in Asia and South America. The objective here is to achieve sustainable benefits from the rising demand for automation, particularly in these regions. KUKA often successfully enters new markets via automotive projects with existing customers, and then establishes relationships with local carmakers and customers from general industry. The Chinese market offers many opportunities in this area. According to IFR forecasts, this market is expected to grow faster than other markets in coming years; estimates suggest that the average annual growth on a global scale will be about six percent from 2014 to 2016, while growth in China is expected to average around 15 percent in the same period. KUKA is therefore focused on this growth potential, with targeted investments in these markets and regions such as in the new production site in Shanghai, China, which the company opened in December 2013. KUKA Robotics will use this site to better cater to customers in the Asian market.

3. Optimize cost structure and continuously improve efficiency

For several years now, KUKA has been reviewing all of its internal processes as part of its ongoing efficiency and process improvement initiative. The aim is to achieve profitable growth based on efficient corporate structures, sustainable product and process alignment tailored to customer needs, and on quality and efficiency. The growth KUKA has experienced in recent years has resulted in corresponding adjustments to the structures, processes and responsibilities. Areas identified as having a potential for optimization include supplier management and procurement from countries with lower cost structures. Against this backdrop, KUKA Systems acquired CMA Technology in the second quarter of 2013, a Romanian company that specializes in the production of metal parts for the systems business. Efficiency improvements and cost optimization measures have effectively helped to lower the company's breakeven point for the long term.

Financial control system and objectives

The Group's strategy is aimed at sustainably increasing shareholder value. Various key financial performance indicators are used as part of Group management and to monitor the business performance and position of the Group. KUKA Group's financial targets are key performance indicators (KPIs) that track the enterprise value of the company. The most important KPIs for KUKA Group are revenues, EBIT, ROCE and free cash flow. The development of these variables is presented in the "Business performance" section starting on page 88 and under "Financial position and performance" from page 90 on. Earnings before interest and taxes (EBIT) are compared to sales revenues to determine return on sales, which results in the EBIT margin. EBIT is compared to average capital employed to determine return on capital employed, or ROCE. EBIT and ROCE are measured for KUKA Group and the Robotics and Systems divisions. Free cash flow – cash flow from operating and investment activities less capital spending – shows whether the investments can be funded from cash flow, and how much cash is available to pay a dividend and service debt. These key indicators are components of the target and remuneration system in place at KUKA Group and are published. This ensures that all employees share the same goals. See the glossary that begins on page 182 for definitions of key performance indicators.

Medium term, i. e. between three and five years, the EBIT target margin for the Robotics division is 12 percent, and at least 6 percent for Systems. Currently, the largest share of revenues (over 50 percent) is generated in Europe. KUKA plans to further expand activities in Asia and expects about 30 percent of revenues to be generated here in the medium term. The ability to reach these targets is largely dependent on the expertise and dedication of our employees. This is another reason why it is essential for KUKA to be an attractive employer globally.

An important early indicator of business performance for mechanical and plant engineering companies is orders received. Order backlog for a certain period is determined by subtracting sales revenues from orders received during that time. Order backlog is a key indicator of the expected utilization of operational capacities in the coming months. Orders received and order backlog are determined for KUKA Group and for the Robotics and Systems divisions.

All key indicators are continuously tracked and reviewed by KUKA Group's management companies and its corporate accounting and controlling departments. Management analyzes any deviations from plan and decides on the necessary corrective actions required to achieve the targets.

KEY PERFORMANCE INDICATORS OVER A 5-YEAR PERIOD

in € millions	2009	2010	2011	2012	2013
Revenue	902.1	1,078.6	1,435.6	1,739.2	1,774.5
EBIT	-52.6	24.8	72.6	109.8	120.4
ROCE	-16.6	7.9	21.8	32.3	36.9
Free cash flow	-22.2	-37.3	6.5	77.1	95.4

2013 targets achieved

The Executive Board presented its outlook for fiscal 2013 in the 2012 annual report and at its financial results press conference on March 26, 2013. The high order backlog and continued strong demand at the beginning of the fiscal year gave KUKA high visibility for the entire year. Growth in robot-based automation was expected to continue, with around € 1.8 billion in sales revenues forecast for KUKA Group. An above-average increase in the EBIT margin of approximately 6.5 percent was planned. The focus for the Systems division was largely on improved prices for backlogged orders and efficiency measures in project management and purchasing. The target was specified in greater detail at the financial results press conference, where an improved EBIT margin for the year of over 5.0 percent was forecast. Robotics had anticipated

rising expenditures on research and development on the one hand, and economies of scale as part of business expansion on the other. Higher expenses were also planned for the expansion of general industry activities. This led to the forecast of a slight decline in the EBIT margin for the Robotics division compared to 2012. The target margin for 2013 was set at between 10.0 and 10.5 percent.

The Executive Board confirmed the outlook for revenue and EBIT targets for KUKA Group at the end of each quarter as part of quarterly reporting. The following statements were made regarding targets:

2013 target values	Sales revenues	EBIT margin
First quarter 2013	~€1.8 billion	~6.5%
Second quarter 2013	~€1.8 billion	~6.5%
Third quarter 2013	~€1.8 billion	~6.5%

The target frame specified for both revenues and the EBIT margin was met in the year under review. KUKA Group revenues for 2013 came in at €1,774.5 million. The main reason that revenues just missed the €1.8 billion mark was the 6 percent weaker than internally expected USD/EUR exchange rate. KUKA generated roughly 25 percent of sales in the United States. Sales in the automotive industry and general industry remained at a high level.

The EBIT margin reached 6.8 percent in 2013 and was likewise above the projected target. The Systems division made the greatest contribution to this improved margin thanks to continuous process improvements and the associated cost optimization measures together with the high degree of utilization owing to strong demand. The Robotics division's EBIT margin was slightly lower than last year as expected. The main reasons for this were higher expenditures on research and development as well as the expansion of general industry activities.

Net earnings in 2013 came in at €58.3 million, slightly higher than last year's €55.6 million. This development was the result of both higher sales, administration and R&D costs and higher interest expense for the redemption of high-yield bonds. After all high-yield bonds have been redeemed at the end of 2014, interest payments will fall significantly, which in turn will have a positive effect on net income from 2015 on.

Investments totaled €74.7 million, €31.9 million more than the €42.8 million spent in 2012. Higher investments were made in both fixed assets and research and development.

The free cash flow of €95.4 million in fiscal 2013 was significantly higher than the €77.1 million reported last year, and reached a new all-time high.

See the section titled "Financial position and performance" beginning on page 90 for more detailed information.

Research and development

Research and development (R&D) is a key pillar of KUKA Group's strategy. It secures the innovation and technology leadership of the entire Group. The Robotics division conducts most of the research and development. KUKA Laboratories is the technology incubator and innovation driver for all of the Group's divisions. Most of KUKA Systems' development work is conducted in conjunction with customer orders.

Strengthening the technology position

To advance its technology leadership position, KUKA Group intensified its new product and applications development activities, especially in the Robotics division.

R&D spending in fiscal 2013 rose to €59.7 million from €42.6 million in 2012. As a result, the research and development ratio; that is, R&D over sales revenues, was 3.4 percent, compared to 2.4 percent in 2012. Furthermore the capitalization ratio; that is, the share of R&D costs capitalized was 16.5 percent, compared to 22.2 percent last year.

For further details, please refer to the chapter Financial position and performance starting on page 90.

Robotics applied for 102 patents and was awarded the same number in fiscal 2013. The Systems division's development work relates almost exclusively to that required to complete customer projects. During the fiscal year, the division submitted 56 patent applications and was awarded 52 patents.

Robotics

AGILUS small robot series expanded

After the successful launch of the new AGILUS small robot series at Automatica 2012, KUKA followed up with new models for general industry customers in fiscal 2013. New versions with greater payload and reach capabilities were added to the portfolio, as was a fast five-axis robot with four degrees of freedom especially suitable for pick and place tasks. A waterproof version of the KR AGILUS conforming to protection class IP67 was presented at the international machine tool tradeshow EMO 2013. Stainless steel covers, durable surfaces and additional seals prevent dust and water from entering the robot enclosure. This makes the KR AGILUS suitable for use in environments containing chips, lubricants, oil or spray water. Machine tools is one of the primary industries in which the robot is applied.

New robot for arc welding

KUKA unveiled its new KR5 R1400 robot at the Welding and Cutting trade show in Shanghai. The robot is designed to meet the special requirements of the arc welding segment in emerging nations. The robot is controlled by the KR C4 smallsize controller, which is based on the proven KR C4 controller and is also used to control the AGILUS small robot series.

Siemens and KUKA collaborate in the machine tool market

At the EMO machine tool trade show in Hanover, KUKA and the Siemens Drive Technologies division announced that they would collaborate on integrating KUKA robots and Siemens machine tool control solutions. KUKA robots will be used for handling tasks, such as loading and unloading machine tools, as well as machining tasks. Support will be provided for the entire design process chain: from the design of a workpiece, to simulating the machining and engineering, right through to fabrication at the factory.

Less is more: KUKA robots save energy

Sustainability goals such as CO₂ reduction on the one hand and rising electricity prices on the other are causing the manufacturing industry to look increasingly for energy-saving automation components. For robot manufacturers, this means that energy consumption needs to be cut by means of lightweight construction, energy optimized drive and control technologies and intelligent trajectory planning. In the high payload range, KUKA's QUANTEC series robot with the current KR C4 controller generation cuts energy consumed during motion by about 30 percent. But energy can also be saved when the robot is not in motion. The KUKA controller supports the PROFIenergy profile, which in turn is based on

the Ethernet-based Profinet Fieldbus standard used for energy management in manufacturing plants. The KR C4 controller cuts energy consumption between 15 and 80 percent based on the standby modes specified by PROFIenergy. KUKA Robotics is also a member of the VDMA "Blue Competence" sustainability initiative.

Hand in hand: production machines and robots

KUKA Robotics presented an enhanced version of the flexible automation interface mxAutomation at the SPS IPC Drives trade show in Nuremberg. It is used to program and operate KUKA robots in a production machine environment. The interface supports Siemens and Rockwell controllers as well as the open CODESYS PLC platform from 3S. This greatly simplifies engineering when integrating KUKA robots and production machinery and improves operator acceptance. The machine handles the machining or production of the workpiece while the robot takes care of flexibly loading and unloading the machine, while still relying on the core mechatronics and safety features of the KR C4 robot controller.

Robotic Award for "KUKA moiros"

If the part can't come to the robot, the robot has to go to the part. This is especially true for large components, such as those used to build aircraft or wind turbine rotor blades, which can be many meters long. For such applications, KUKA has developed a mobile transporter consisting of a KUKA omniMove platform, a QUANTEC industrial robot and a KR C4 controller. The device is supplemented by intelligent navigation software, also developed by KUKA, which enables it to roam freely. The "KUKA moiros" conceptual exhibit captured the Robotics Award presented by Hannover Messe organizers.

KUKA linear unit a flexible modular system

KUKA has designed a new linear unit called KL 2000 to expand the work envelope of the QUANTEC robot series. The motor and drive have been integrated into the carriage for the first time, which makes the package smaller. The new linear unit boasts a high degree of flexibility and positioning accuracy. It can be modified to suit customer requirements until shortly before shipment. The product portfolio covers everything from ceiling assembly to a high-speed version and linear unit with protective cover. The linear axis is managed as a supplementary axis in the KR C4 robotic controller, which means no separate controller is required.

Integrated vision makes robots even more flexible

KUKA's KUKA.VisionTech technology package is a 2D and 3D vision system integrated directly into its KR C4 controller. Separate computer hardware is thus not required to analyze what the system sees. The vision system is integrated into KUKA's smartPad operator interface, which means it can be operated and configured without additional hardware. Up to three compact KUKA Gigabit Ethernet cameras can be connected. This allows robots to be flexibly applied in unstructured and changing environments.

Advanced Robotics section – KUKA Laboratories

KUKA Laboratories GmbH's R&D focuses on developing sensitive helper robots. Such robots can be used both in manufacturing and the service sector; for example in health care and medical systems. KUKA Laboratories also develops technology for other KUKA companies.

LBR iiwa – intelligent industrial work assistant

KUKA's LBR iiwa lightweight robot was presented for the first time at Hannover Messe 2013. The LBR iiwa is available to handle payloads of 7 kg or 14 kg and thus meets specifications for industrial applications.

Last fiscal year, the lightweight robot's dual-channel safety systems were further enhanced. A dual channel circuit measures and monitors the articulation position and torque. The dual-channel PC-based master safety system continuously monitors the trajectories for potential collisions.

The LBR iiwa's cables are integrated into the robot. Customer-specific energy supplies are also enclosed in the housing. A media adapter module was fastened to the flange. This reduced the number of different models and generated savings in developing different models.

KUKA Laboratories' R&D department assisted with quality assurance during the startup phase of LBR iiwa assembly. This included developing test processes and test stands to check mechatronics components that had to be integrated into the robot.

Lightweight robotics applications expertise

Available adjustments for the LBR iiwa include position and path trajectories, as well as maximum force and yield settings. Programming the lightweight robot for assembly and other industrial applications therefore requires additional expertise. KUKA established an application team to assist and help speed up the process during the startup phase. This team is tasked with helping customers with new LBR iiwa applications during the conceptual phase or conducting feasibility studies for customers. Repeats of typical applications and quality tasks involving the robot are organized into software libraries and can be reused.

KUKA Sunrise – the new controller core

The new KUKA Sunrise controller core will be shipped with the LBR iiwa for the first time in 2014. It was tested with the help of a major automotive customer during fiscal 2013. The software can be used to program sensor-based assembly tasks and implement initial basic human-robot cooperation tasks.

Not only can the KUKA Sunrise controller core be programmed to control mechatronics robotic systems with stringent real-time control specifications using only mainstream IT tools, but it can also be seamlessly integrated into the IT world of industrial companies. As such, KUKA's lightweight robot already now fulfills the optimum prerequisites for Industry 4.0 technologies; for example, task-oriented programming. The modular controller core was coded using C++. For general users, the robot can be programmed in JAVA by calling up KUKA Sunrise functions via an object-oriented KUKA Sunrise application interface (API). Programming is part centric.

The human-machine interfaces were optimized for the KUKA Sunrise controller core and implemented on the basis of the field-tested KUKA Microsoft Windows world. KUKA's smartPad is used to operate the robot. The graphic operator interface features were revamped and it is available with a design optimized for mobile IT devices. It is programmed via an open IT engineering platform, which the customer can customize at will. The engineering platform can be installed and implemented on any PC-based hardware.

KUKA youBot gets a hand

The KUKA youBot is a mobile robot arm developed for research and learning. Users can develop and operate their own controller software on the youBot platform. A three-fingered gripper was developed for the KUKA youBot arm to supplement the two-fingered gripper available to date. The gripper was unveiled at last year's Hannover Messe.

Mobile Robotics and autonomous navigation

KUKA's navigation software for autonomous, mobile robotic systems for use in manufacturing environments was further enhanced. It is based on laser distance sensors and requires no markers in the environment in which it is applied. A navigation map is created using the vehicle's manual controller and is subsequently adapted independently by the navigation system during operation.

The new functions include coordination of several vehicles based on a navigation map and programming virtual tracks. The virtual tracks can be used to organize platform traffic along prescribed tracks as a supplement to automatic track planning in open areas. The virtual track can be easily created on the navigation map with a few mouse clicks using KUKA's navigation software. This eliminates the need to add costly optical, inductive or RFID tracks for the initial layout or when changing the track route.

An application module of KUKA's navigation software was developed for the KUKA omniMove heavy load platform and delivered to an aviation industry customer. The application package can be used for up to three networked vehicles.

Medical robotics

The existing medical robotics portfolio was expanded. A higher payload medical robot that offers customers new options is now available.

The KR C4 and KR QUANTEC product platform was further enhanced to meet the needs of a medical application for a customer project. The robot is programmed to replicate various movements of horses so that it can be used for hippotherapy, therapeutic riding under controlled conditions. The treatment can be used for patients who have suffered a stroke, for example. The treatment allows patients to relearn various movements and train their equilibrium.

The lightweight robot is also being tested by medical systems companies for various applications. KUKA provided assistance for initial user tests, which went well.

Overarching technology development for KUKA companies

In 2013, KUKA consolidated its technology development activities in a single department, the focus of which is to secure the Group's technology and innovation leadership. The aim is to bring products and solutions with unique features to the state of market readiness as quickly as possible and then hand them over to the prototype and serial manufacturing development departments of the individual KUKA companies for further enhancement and to make them into marketable products. The key technologies and long-term knowledge building in specific specialty areas are based on a technology road map that has been coordinated throughout the Group. It addresses primarily five areas:

1. Mechatronics: Better mechatronics improves the performance of robots and thus makes them cheaper.
2. Sensors: New algorithms, sensors and modeling the environment lead to greater autonomy and intelligence.
3. Operability: New concepts and devices for intuitive operation and programming make it easy to handle complex robotic systems effectively and efficiently.
4. Safety: New safety concepts and technologies allow humans to work with robots in very tight spaces.
5. Process: New process technologies maintain KUKA's leadership in applying robotic systems.

All newly developed technologies are integrated into working models and demonstrators. The maturity of a new technology development is strictly tested in a realistic application context. The KUKA technology development department has contacts to the world of research in the area of robotics and the factory of the future, as well as contacts to funding institutions. The company collaborates with the best institutes worldwide on publicly funded research projects such as those sponsored by the Federal Ministry of Education and Research or the European Union, as well as bilateral projects between two or more countries. Funded projects are seen as a key strategic component of building knowledge over the long term and to ensure best practices and as such are assigned a top priority in the technology and preliminary development strategy.

Funded projects encourage networking with the community and best practice

The KUKA omniRob mobile manipulator serves as a technology demonstrator and is the focus of several research projects. The system consists of an omnidirectional mobile platform and the LBR iiwa, which serves as a manipulator. For example, new programming methods for such mobile systems are being developed in projects such as First-MM (Flexible Skill Acquisition and Intuitive Robot Tasking for Mobile Manipulation in the Real World), TAPAS (Robotics-enabled Logistics and Assistive Services for the Transformable Factory of the Future) and ISABEL (innovative autonomous service robots featuring intuitive operation for efficient handling and logistics). The aim is to enable flexible transportation and complex manipulation tasks to be programmed using simple instructions. KUKA's omniRob is being evaluated in end users' real world production environments.

The SAPHARI (Safe and Autonomous Physical Human-Aware Robot Interaction) project deals with safety aspects of human-robot collaboration. Here the focus is on improving the safety and everyday usability of robotic systems used directly in environments where humans are present. The aim of the SMErobotics project is to find new applications in small and medium-size enterprises (SMEs). To address the ever-increasing model variety in demand today, technologies are being developed that enable flexible and scalable manufacturing, from large-scale

serial runs to small series production. The project focuses especially on improving the perceptive and cognitive capabilities of robotic systems. The technologies are being developed based on specifications for real-world production scenarios. In 2013, KUKA also participated in two newly launched projects: RoCKIn (Robot Competitions Kick Innovation in Cognitive Systems and Robotics) and EuRoC (European Robotics Challenges). The aim of these projects is to compare the solutions proposed by the best researchers on the basis of practical tasks in near real-world environments. To achieve this, researchers are developing and defining the respective benchmark for environments, tasks and measurable criteria. Reference platforms such as KUKA youBot, KUKA omniRob and KUKA's lightweight robot are used in the competitions and thus presented to a large number of researchers.

Public Private Partnership with the EU founded

Last fiscal year, KUKA again headed up the European robotics association. Since its founding at the end of 2012, 100 new members have been enticed to join the European non-profit organization euRobotics AISBL based in Brussels. During the first year, the focus was on founding a public-private partnership (PPP) for robotics in Europe between euRobotics AISBL and the European Commission. Following successful negotiations with the European Commission, a deal was signed in December 2013 under the terms of which robotic research in Europe may see €700 million invested in the new general research program "Horizon 2020" (2014–2020). This gives Europe the largest civil robotic research program in the world. The EU's future bid invitations will be based on a road map, which will be updated every two years under the direction of euRobotics AISBL.

Systems division

KUKA RoboSpin – spot welding aluminum components

KUKA Systems continued to invest in its new welding technology, KUKA RoboSpin, in fiscal 2013. The system is an enhanced version of the classic resistance spot welding system. Systems integrator KUKA Systems is already the leader when it comes to joining steel parts. But there is a clear trend in industrial manufacturing to use more lightweight materials such as aluminum, which presents an entirely new set of challenges to existing processes. By keeping the welding robot continuously moving, KUKA RoboSpin is able to weld aluminum as quickly and easily as steel. The activities focused on process-related investigations into various laminations and surface conditions.

Process reliability in automated manufacturing – KUKA TCP Control

Process reliability and quality assurance are key aspects of robotic welding processes. To manage these parameters, contactless measuring and calibration systems are required for the welding torch. KUKA customers using Tool Center Point Control (TCP) enjoy higher process reliability and thus reduce their manufacturing costs because there is less scrap or need for rework. To enhance the automation module TCP Control, it was necessary to extensively modify the software to improve functionality and copy protection, optimize the operator interface to make the visualization more user friendly and migrate the changes into the new KUKA robot control generation KR C4.

Energy efficiency for plant engineering and construction

Customers are increasingly focusing on determining the energy consumed by an automated manufacturing system at an early design stage. Improvement steps can be identified and evaluated based on the consumption values determined. KUKA Systems developed a calculation tool for this purpose. Using this tool, customers can achieve an energy optimized design and select energy and resource-saving automation components. The tool retrieves archived measurements and consumption parameters based on user input regarding the configuration of the system and its operation, and projects the amount of energy and materials that the system will consume.

New "KUKA Magnetarc" welding power supply

One of the key objectives of KUKA Systems' development activities, aside from the quality assurance of the process itself, is to sustainably enhance the components it uses to automate processes. An example of this is the improved efficiency and ergonomics of the power supply used for the Magnetarc welding process and the Magnetarc welding machines installed worldwide. The power consumed by this new source has been reduced by about 20 percent and far-reaching operating and installation benefits have been achieved by using ultramodern inverter technology. The dimensions and weight of the equipment have been cut from about 600 kg to 90 kg, which saves space on the production floor and facilitates maintenance.

Market introduction of LBR iiwa continues

KUKA Systems' Advanced Technology Solutions business unit has also invested heavily in developing applications for the lightweight LBR iiwa robot. At Motek, the international trade fair for manufacturing and assembly automation in Stuttgart, KUKA Systems unveiled an engineering process that can be used to implement leaner and more flexible robot cells for complex assembly processes. It is being developed in conjunction with customer projects and development alliances. Collaborating on projects enables KUKA Systems to offer automated solution concepts in new sectors and industries; for example, catering logistics in hospitals.

Resource conserving press tool design uses 25 percent less material

The machine tool business unit developed several machine tool sets to manufacture single-piece car side parts specifically for use on a German press line.

The sets used about 25 percent less material than conventional tools. The savings were achieved by designing the equipment specifically for the loading it would see. The business unit also met the customer's challenge of delivering compact tools for side parts in order to minimize the space occupied by the presses. This enables the customer to better load its own capacities, saves the cost of storing an alternative press line and thereby enormous logistics costs. These machine tool sets were developed by KUKA and subsequently built and started up at KUKA. Today they produce car side parts for three sports car models of a reputable German premium carmaker.

Procurement

Procurement at KUKA Robotics

After expanding capacities in Augsburg in 2013, the site now has a 10,000 m² production area and can produce up to 22,000 robots annually. This is much higher than the previous capacity limit of 15,000 robots per year. Industrial robots are assembled in two shifts. All process steps – from the production order to delivery to the sales warehouse – are strictly monitored and documented. Each component has a bar code to enable precise tracking of which components are installed in which robots.

Regular audits of processes and measures guarantee maximum efficiency. And, by increasing the production capacity, actions were also taken to ensure that vendor parts are available for the necessary quantities. Costs and quality are monitored regularly based on material group, an area in which KUKA has acquired the expertise needed to respond quickly to changes. Savings were achieved in 2013 mainly by focusing on design-to-cost and economies of scale. In addition, selected materials are used as part of developments in robot mechanics, with close attention being paid to energy efficiency as early as the design stage. Such efforts have helped to cut the weight of the KUKA QUANTEC robot by 12 percent. There were no negative effects from fluctuations in commodity prices in the reporting year. Altogether, Procurement makes a positive contribution to business results.

New production site in China

China is one of KUKA's strategic target markets. KUKA has further expanded its capacities in China through consistent implementation of the company's growth strategy. The opening of a new production facility in greater Shanghai in December 2013 is therefore part of KUKA's strategy. This capacity expansion in China is KUKA's response to the market potential and the growth expected in Asia in the coming years. Proximity is key to ensure that the company can respond quickly to customer inquiries.

Until recently, primarily cast and electronic components were procured from Asia. Local purchasing volumes increased with the rising production volumes, as was seen for example with sheet metal and plastic parts. As a general rule, the same standards and quality requirements apply globally to all vendor parts. A larger network of suppliers was built up locally, which not only expanded the two-supplier strategy but also secured the production volume. The increased capacity also ensures that KUKA and its suppliers are able to respond quickly and flexibly to fluctuations or potential bottlenecks.

Procurement at KUKA Systems

As a global automation company, KUKA's procurement activities are international. Regular global analyses are conducted to ensure that quality, time and costs are optimized. KUKA enters into international framework agreements or intensifies local procurement activities depending on the respective requirements profile.

The timely provisioning of components and materials represents a major challenge when setting up an automated production line under tight time constraints. KUKA Systems has aligned its procurement process to meet this challenge. Milestone planning throughout the project phases makes it possible to identify shifts at an early stage. Schedule controlling, i. e. the active management of project schedules, has been further enhanced over the entire process chain (frontloading). The entire procurement process as such is continuously reviewed to determine optimization potential. New suppliers are built up, qualified and further developed. For example, when developing new products, KUKA discusses the requirements and the corresponding adaptations with key suppliers to optimize the technical manufacturing processes. This exchange of knowledge helped to identify and take advantage of the various opportunities for optimization.

Ultimately, customers expect to achieve process optimization and cost savings with the automation solutions from KUKA Systems. The necessity of each and every component is therefore verified as early as the development and construction stage.

Employees also play an integral role in the procurement process by using the suggestion system to submit their ideas on how to improve processes, which are then implemented after review.

Expansion of the regional centers of excellence

The responsible purchasing managers from Europe, America and Asia coordinate decisions about global and local procurement as part of their regular coordination meetings. Countries are identified according to the “best cost country” principle to get the best prices.

KUKA Systems acquired CMA Technology, a Romanian manufacturing company, in 2013. The site produces both standard components and components tailored for special applications. The regional center of excellence within the framework of the HUB concept was expanded to serve as a base for procurement. Systems can respond quickly and flexibly, especially for just-in-time jobs, while also taking advantage of both the quality assurance and cost optimization offered here.

ECONOMIC REPORT

Macroeconomic and industry conditions

World economy growing at a slower pace – positive outlook for Germany

In 2013 the International Monetary Fund (IMF) revised its growth forecast for the world economy down four times. According to the IMF’s January 2014 forecast, the global economy is expected to grow only 3.0 percent in 2013, which is a slower pace than still forecast at the beginning of the year. A recovery is expected in 2014 with 3.7 percent growth predicted for the year. In recent years it was largely the industrialized nations that had to face lower growth rates. Europe was still dealing with the fallout from the financial and debt crises in 2013, which was the main reason for the decline of GDP by 0.4 percent. The forecast for 2014 predicts a slow recovery, with slight GDP growth of 1.0 percent. The IMF economists likewise lowered their outlook for the U.S. economy. Growth is expected to be around 1.9 percent in 2013. Austerity measures and the government shutdown in the United States were among the reasons for this. The IMF’s outlook for 2014 is much more positive. The conditions for growth are in place; the budget stand-off has been settled and unemployment continues to fall. The economy is therefore expected to grow at around 2.8 percent in 2014. The IMF forecasts lower growth rates for emerging countries than was still predicted at the beginning of 2013. Nevertheless, these nations are still growing at a faster pace than most industrialized countries. China is one of KUKA’s strategic markets and is expected to grow 7.7 percent in 2013 and 7.5 percent in 2014 according to IMF forecasts. The IMF revised its forecast for Germany up slightly; the economy here is expected to grow 0.5 percent in 2013 and 1.6 percent in 2014.

The Ifo Business Climate Index, which is considered a leading indicator for economic development in Germany, continued to rise in 2013 and reached 109.5 points at year-end. In comparison, the index was still at 102.5 points in December 2012. This is a sign that companies have a positive outlook with regard to future business performance. 109.5 points is the highest the index has been since early 2011.

Global car market on track for growth – slow recovery in Europe

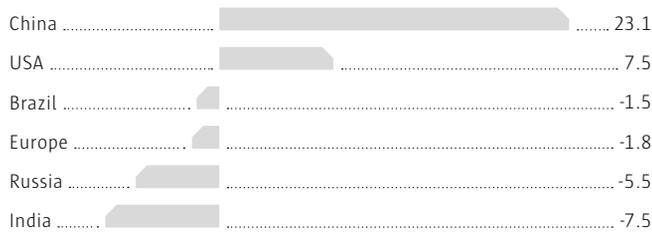
Overall, the 2013 automotive year ended on a positive note and beat expectations according to VDA (the German Association of the Automotive Industry) forecasts with around 72.2 million light vehicles (cars and light commercial vehicles) sold, which was 5 percent more than in 2012. However, there were major differences in the regional sales volumes. According to the VDA, new light vehicle registrations in the U.S. market were up by roughly 8 percent to just under 15.5 million. German carmakers now hold nearly 12 percent of the U.S. market. The Chinese market grew by no less than 23 percent, surpassing prior-year figures and is now the world’s largest market with over 16 million vehicles sold in 2013. Together, these two countries alone represent nearly 45 percent of the world market. In contrast, growth in Europe was much slower. The Western European market was unable to match the high level of growth it achieved in 2012, falling around 2 percent with 11.6 million passenger vehicles sold. The market weakness is particularly evident in Southern European countries such as Italy, Spain and even France.

Western Europe is a key market for German automakers considering that, statistically, every second vehicle registered in Western Europe is either a German car or a brand owned by a German company. Nevertheless, the potential demand for new cars in Western Europe is significantly higher according to the VDA, with around three million potential buyers of new cars holding back on their purchases mainly because of the economic situation in Europe. This coincides with the increasingly competitive environment, which poses major challenges for the automotive industry in Europe. The German car manufacturers that are important customers for KUKA recognized this trend early on and have responded to this by investing more heavily in flexible production lines and model platforms. At the same time, German carmakers are using their international position to their advantage. Strong demand from Asian and American markets has largely compensated for the weak demand in Europe. German manufacturers in particular are benefiting from the pace of growth in China and now control over 20 percent of the market. Based on VDA reports, car exports to China fell 36 percent in the first five months of 2013, but local production was up.

The global trend of manufacturing passenger vehicles in the respective markets is continuing to grow. According to the VDA, more German cars are produced abroad than in Germany – a trend that has continued since 2010. German automakers now build only around 5.45 million of the 14.2 million vehicles in Germany. New vehicle registrations in Germany fell by approximately 4 percent year-over-year to 2.93 million in 2013. The German market is expected to slowly stabilize next year.

The VDA forecast 3 percent growth for 2014, to 74.4 million vehicles. The Chinese market is expected to grow 7 percent and top 17 million, while a 3 percent growth rate is forecast for the U.S., which corresponds to nearly 16 million vehicles. For the first time in four years, Western Europe is expected to begin growing again by around 2 percent compared to the previous year.

2013 CAR SALES BY REGION / COUNTRY
CHANGE YEAR-ON-YEAR (IN %)



Source: VDA

Mechanical and plant engineering orders at prior-year levels

The orders from mechanical and plant engineering companies in 2013 were 2 percent below the previous year's level as the VDMA (German Engineering Federation) had forecast. Both domestic and foreign market demand dropped 2 percent, which was partly attributable to the moderate economic outlook in 2013. As a result, companies held back on capital expenditures. Orders in the robotics and automation sector were below last year's level on a cumulative basis. One reason for this was that orders received at the beginning of 2013 were relatively low compared to the prior year's high growth rates.

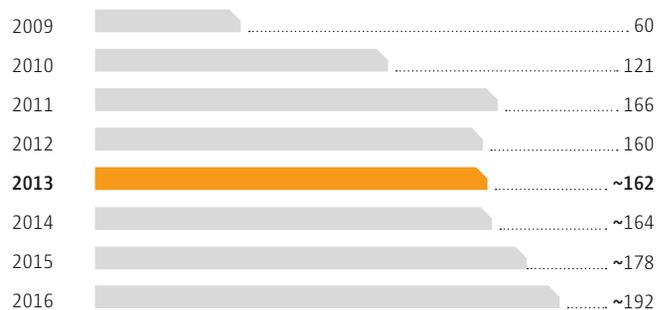
The VDMA expects orders to rise again in the 2014 financial year. An upswing in the global economy in 2014 should also boost demand in the mechanical and plant engineering sector. Production is therefore expected to increase by 3 percent compared to 2013.

Continued rise in robot installations

The global trend toward robot-based automation continued unabated in 2013. Processes that were previously only partly automated or not at all provided opportunities for growth due to higher labor costs, increasing quality requirements and efficiency gains. New technologies related to usability and human-machine collaboration will play a more important role in this area in the future. Even industrial sectors that are already highly automated offer additional potential for automating further production steps such as final assembly in automotive applications where robots can assist humans in completing their tasks.

The International Federation of Robotics (IFR) forecast that 162,000 industrial robots would be sold globally in 2013, which represents a 2 percent growth rate compared to the 159,346 industrial robots sold in 2012. As a region, sales in America should grow by over 9 percent from 28,137 robots in 2012 to 30,800 in 2013. Sales in Asia are expected to reach 86,000 robots in 2013, topping the 84,645 robots sold in 2012. According to forecasts, 39,800 robots will be sold in Europe in 2013, slightly below the previous year's figure of 41,218. The IFR predicts an average global growth rate of 6 percent for the years 2014 to 2016.

GLOBAL SALES OF INDUSTRIAL ROBOTS
IN THOUSANDS OF UNITS



Source: IFR-study 2013

Business performance

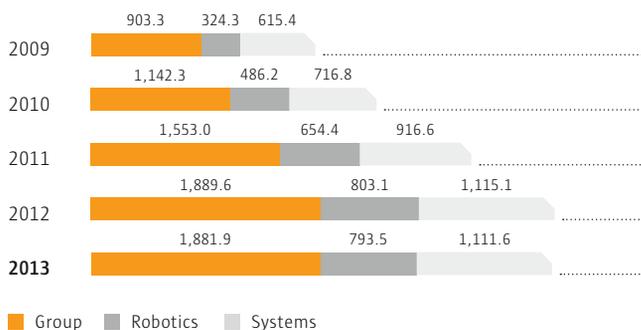
Orders received

KUKA again benefited from the growing global trend toward automation in 2013. Orders received by KUKA Group already passed the €1 billion mark in the first two quarters, and reached a value of €1,881.9 million by the end of 2013. The development in 2013 was therefore very stable and nearly in line with the record €1,889.6 million reported in 2012.

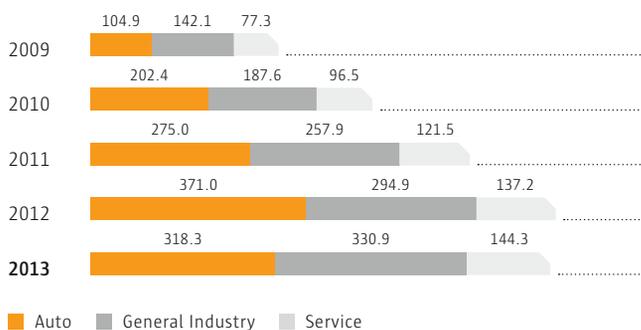
€793.5 million came from **KUKA Robotics**, just 1.2 percent lower than the previous year's figure of €803.1 million. The slight decline can be attributed to customer investment cycles for model launches in the automotive industry, which brought in some major orders at the beginning of 2012. Total orders received from the automotive industry in 2013 fell by 14.2 percent to €318.3 million from €371.0 million the year prior. Orders received from general industry were up again and came in at €330.9 million, which was 12.2 percent higher than the €294.9 million reported last year. General industry orders are typically greater in number but smaller in scale and come from various sectors. Expanding general industry business is one of KUKA's key strategic objectives, which is why the company introduced specific measures in 2013 to further strengthen its position. These include a strategic partnership with the Drive Technologies division at Siemens for machine tool loading and unloading solutions, or expanding the product portfolio by adding different versions of the AGILUS robot, for example. The share of orders received from general industry was slightly above that of the automotive industry in the fiscal year just ended. Service business continued to grow year-on-year by 5.2 percent to €144.3 million from €137.2 million in 2012.

KUKA Systems received orders totaling €1,111.6 million in fiscal 2013, a mere 0.3 percent below last year's record of €1,115.1 million. The division benefited from strong demand from the automotive industry and gained new customers in North America through the acquisition of UTICA Enterprises. In 2013 Systems once again reported at its own global branches in Brazil, Russia, China and Germany orders from leading car manufacturers for the engineering and construction of automated production stations and lines, tools for press lines, assembly and test systems, and for the delivery of special machines for friction and Magnetarc welding. This included a €250 million project for subassembly production lines in North America. The order was of strategic importance for KUKA Systems, and helped further strengthen the division's position in North America. Apart from the automotive and automotive supplier industry, orders received were also up in the aerospace sector for the development and implementation of aircraft and helicopter production lines. Systems also delivered more solutions and products for joining and welding tasks to an increasing number of SMEs.

ORDERS RECEIVED – KUKA GROUP, ROBOTICS, SYSTEMS IN € MILLIONS



ORDERS RECEIVED – ROBOTICS: AUTO, GENERAL INDUSTRY, SERVICE IN € MILLIONS



Revenues

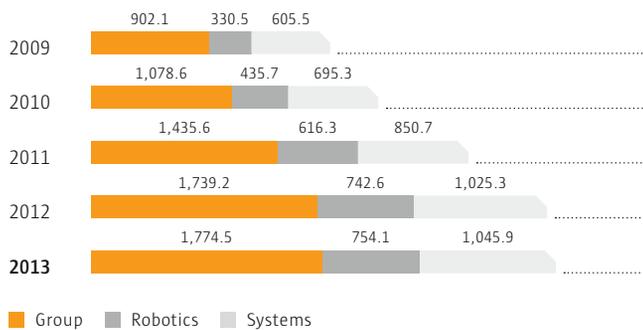
KUKA Group's sales revenues benefited from the high order intake in previous quarters and climbed to €1,774.5 million in 2013. Sales were higher by 2.0 percent compared to the previous year's figure of €1,739.2 million. This is nearly double the €902.1 million in revenues generated by KUKA in 2009.

KUKA Robotics once again increased year-over-year sales revenues, this time by 1.5 percent to €754.1 million, reaching an all-time record after the €742.6 million reported in 2012. This is the fifth year in a row that the division has reported an increase in sales revenues; the average annual growth rate has been 17.9 percent since 2009. Growth has been exceptionally strong in Asia, where the average annual growth rate is 55.1 percent. And, in order to take advantage of the growth opportunities in China, KUKA opened a new production facility in greater Shanghai. Customers in Asia benefit from the proximity and shorter delivery times.

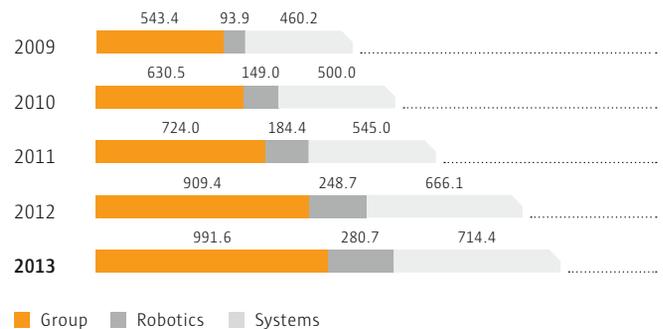
KUKA Systems posted total sales revenues of €1,045.9 million, exceeding the prior year's €1,025.3 million by 2.0 percent and setting a new record of over €1 billion in sales for the second consecutive year. The acquisitions of UTICA Enterprises and CMA Technology were one of the drivers of this development. Utica was successfully integrated into the KUKA Systems organization in 2013, making KUKA Systems the market leader in North America.

The book-to-bill ratio remained well above 1 and came in at 1.06 at the Group level in 2013; the ratio was 1.05 for Robotics and 1.06 for Systems.

SALES REVENUES – KUKA GROUP, ROBOTICS, SYSTEMS IN € MILLIONS



ORDER BACKLOG – KUKA GROUP, ROBOTICS, SYSTEMS IN € MILLIONS



EBIT

KUKA Group earnings before interest and taxes (EBIT) broke the €100 million mark for the second year in a row, rising €10.6 million to €120.4 million. With a year-on-year increase of 9.7 percent from the prior year's total of €109.8 million, EBIT grew at a faster rate than sales revenues. The improvement was driven by higher business volumes and the resulting economies of scale as well as the effective implementation of measures to increase efficiency. EBIT margin came in at 6.8 percent, beating last year's margin of 6.3 percent with gains made in each and every quarter. KUKA achieved its highest EBIT margin in eight years in the year under review.

Order backlog

KUKA Group's order backlog amounted to €991.6 million at the end of 2013. This represents an increase of 9.0 percent compared to the €909.4 million reported for the period ending December 31, 2012. This large order backlog means that the workload will be high for KUKA through fiscal 2014 and into part of 2015.

KUKA Robotics' share of the order backlog at the end of the year (neglecting blanket orders from the automotive industry) was €280.7 million, rising 12.9 percent from the €248.7 million reported in 2012. The order trend in China had a positive impact on business and now accounts for 20 percent of the order backlog.

The order backlog at **KUKA Systems** rose 7.3 percent to €714.4 million from the previous year's figure of €666.1 million and reached a new record high. KUKA Systems' high order backlog means that the division will have high capacity utilization through 2014 and into part of 2015.

KUKA Robotics generated EBIT of €77.1 million, which was 3.9 percent lower than last year's record level of €80.2 million. EBIT margin declined slightly, moving from 10.8 percent in 2012 to 10.2 percent in 2013. The Robotics division's EBIT margin was at least 10 percent in all four quarters of the financial year just ended. The main reasons for the slight decline were higher expenditures on research and development as well as on hiring staff for general industry.

KUKA Systems generated EBIT of €60.8 million in the past fiscal year, which was 27.5 percent higher than last year's €47.7 million. The EBIT margin rose from 4.7 percent in 2012 to 5.8 percent in 2013; the segment's fourth quarter EBIT margin was even higher at 6.4 percent. The increase was primarily due to improved process structures, the expansion of centers of excellence in countries with lower cost structures and the high degree of utilization owing to the strong demand.

EBIT + EBIT MARGIN (KUKA GROUP, ROBOTICS, SYSTEMS)

in € millions	2009	2010	2011	2012	2013
Group	-52.6	24.8	72.6	109.8	120.4
in % from revenues	-5.8	2.3	5.1	6.3	6.8
Robotics	-11.5	20.8	51.0	80.2	77.1
in % from revenues	-3.5	4.8	8.3	10.8	10.2
Systems	-28.8	20.0	33.7	47.7	60.8
in % from revenues	-4.8	2.9	4.0	4.7	5.8

Financial position and performance

Earnings

Orders received in 2013 reached the same high level of the previous year. Sales revenues and EBIT rose again year-over-year to new record levels.

KEY FIGURES KUKA GROUP

in € millions	2009	2010	2011	2012	2013
Orders received	903.3	1,142.3	1,553.0	1,889.6	1,881.9
Sales revenues	902.1	1,078.6	1,435.6	1,739.2	1,774.5
EBIT	-52.6	24.8	72.6	109.8	120.4
in % from revenues	-5.8	2.3	5.1	6.3	6.8
% from capital employed (ROCE)	-16.6	7.9	21.8	32.3	36.9
Capital employed	317.5	312.5	332.9	339.8	326.2
Employees (Dec. 31)	5,744	5,990	6,589	7,264	7,990

Gross margin higher again

KUKA Group's gross profit – sales revenues less cost of sales – grew faster than revenues, rising 13.6 percent from 385.9 million in 2012 to 438.5 million in 2013. This development was largely attributable to the lower material usage ratio within cost of sales due to procurement and production process optimization. These cost reductions helped to offset the slight increase in personnel costs; the Group's gross margin – gross profit in relation to sales revenues – rose from 22.2 percent to 24.7 percent as a result.

The Robotics division contributed € 32.8 million to the increase in gross profit. At the same time, gross margin increased considerably to 36.0 percent from 32.1 percent in 2012 as a result of the slightly higher production volumes and the significant performance improvements at all segments in the field of robotics. Other influencing factors included the higher share of sales of KR QUANTEC / KR C4 models and the AGILUS small robot series.

KEY FIGURES KUKA ROBOTICS

in € millions	2009	2010	2011	2012	2013
Orders received	324.3	486.2	654.4	803.1	793.5
Sales revenues	330.5	435.7	616.3	742.6	754.1
EBIT	-11.5	20.8	51.0	80.2	77.1
in % from revenues	-3.5	4.8	8.3	10.8	10.2
% from capital employed (ROCE)	-9.5	16.1	38.3	57.2	49.6
Capital employed	120.5	129.1	133.2	140.2	155.6
Employees (Dec. 31)	2,009	2,347	2,753	3,180	3,416

The Systems division contributed € 18.6 million to the increase in gross profit, which was 14.2 percent higher than last year. Gross margin was 14.3 percent and thus notably higher than the prior-year level of 12.8 percent. Adjusted for interest expenses included in manufacturing costs, the margin was even higher at 15.0 percent compared to 13.6 percent in 2012 primarily due to the improved material usage ratio. Other important factors in this context included the implementation of project and risk management and the acquisition of CMA TECHNOLOGY SRL, Romania finalized in the second half of the year. This acquisition helped further secure procurement at more favorable conditions while increasing vertical integration. One-time compensation for deficit orders from previous years in the low seven-figure range also played a positive role.

KEY FIGURES KUKA SYSTEMS

in € millions	2009	2010	2011	2012	2013
Orders received	615.4	716.8	916.6	1,115.1	1,111.6
Sales revenues	605.5	695.3	850.7	1,025.3	1,045.9
EBIT	-28.8	20.0	33.7	47.7	60.8
in % from revenues	-4.8	2.9	4.0	4.7	5.8
% from capital employed (ROCE)	-14.5	10.4	16.1	23.8	43.0
Capital employed	198.6	192.4	209.6	200.5	141.5
Employees (Dec. 31)	3,534	3,456	3,643	3,902	4,362

KUKA Group's operating costs – the costs of administration and sales as well as research and development – rose from €260.9 million in 2012 to €299.9 million in 2013 in connection with the increase in business activity. Total operating costs thus made up 16.9 percent of sales revenues compared to 15.0 percent in 2012. The increase in distribution costs in both absolute (2012: €119.7 million; 2013: €130.2 million) and relative terms (2012: 6.9 percent; 2013: 7.3 percent) was influenced by various factors such as the division's stronger focus on general industry and the associated recruitment of additional sales staff. The average number of sales representatives grew accordingly from 546 in 2011 to 627 in 2012 and is now at 706 in 2013.

The research and development costs recognized in the income statement rose to €59.7 million in 2013, up €17.1 million from the prior-year figure. Adjusted for development costs capitalized in the financial year and write-downs of development costs capitalized in prior years, expenses for 2013 totaled €55.2 million and €47.0 million in 2012. This reflects the Group's strategic orientation through increased investment in new and future technologies as well as in consistent development improvements. Such technologies include:

- Sunrise control software
- Developments in human-machine collaboration based on the LWR iiwa
- Applications in the field of mobile robotics
- New methods in the area of friction welding

For more information about current issues, see "Research and development" on page 80.

Activities to promote project diversity included the scheduled increase in the number of staff involved in research and development. This brought the total number of employees in this area up to 360 on December 31, 2013, 35 more than at the end of 2012. Personnel expenses for R&D rose by €4.7 million to €31.7 million as a result.

Costs incurred in the year under review for new developments in the amount of €9.1 million (2012: €10.4 million) were capitalized and will be recognized through depreciation as an expense in subsequent periods.

Depreciation included in the research and development expenses for 2013 totaled €16.6 million compared to €8.7 million last year. This was reflected, among other things, in the fact that some of the LWR model series were completed by the end of 2012 and are now being actively marketed. Capitalizations in prior periods will now be depreciated. The rollout of the new KUKA Sunrise control software, which is being actively pursued in different levels of development, was delayed for strategic reasons in specific areas of technology; this resulted in the recognition of a one-time expense in the amount of €4.9 million. On the whole, however, a number of important milestones were reached with KUKA Sunrise in 2013.

General and administrative expenses totaled 6.2 percent of sales revenues compared to 5.7 percent in 2012. Preparatory measures in conjunction with the construction of the new Development and Technology Center in Augsburg, maintenance work and variable, share-based compensation components played a role in this. External consulting services performed as part of the acquisitions made in 2013 and ahead of the purchase of Reis Group (cf. "Events after the balance sheet date") in 2014 led to higher expenditures than in 2012.

The net amount of other expenses and income was an expense of €24.9 million, which was slightly higher than the €22.5 million reported in 2012. This figure includes losses and gains from foreign exchange transactions, particularly in USD, CNY, JPY, and BRL.

EBIT continues to improve

The positive development described above, especially the higher gross profit for KUKA Group, directly impacts earnings before interest and taxes (EBIT). EBIT rose by €10.6 million to €120.4 million. KUKA Group EBIT climbed to 6.8 percent from 6.3 percent in 2012. Systems, with EBIT of €60.8 million and EBIT margin of 5.8 percent, was the main driver behind the increase in earnings before interest and taxes from €47.7 million and 4.7 percent, respectively, in 2012. The Robotics division generated EBIT of €77.1 million in 2013 with an EBIT margin of 10.2 percent.

In line with the performance of EBIT, EBITDA (earnings before interest, taxes, depreciation and amortization) increased to €158.4 million from €138.5 million in 2012. Total depreciation, amortization and write-downs totaled €38.2 million in the reporting period compared to €28.7 million in 2012. Of this total, €25.0 million is attributable to Robotics (2012: €15.8 million), €10.2 million to Systems (2012: €10.1 million), and €3.0 million to Other (2012: €2.8 million).

Non-recurring items weigh on the financial result

The current financial result declined slightly from €-12.8 million in 2012 to €-13.1 million in 2013.

in € millions	2012	2013
Interest income from finance lease	7.1	6.5
Remaining interest and similar income	2.5	2.3
Other interest and similar income	9.6	8.8
Guarantee commissions	2.6	1.5
Interest expense for the convertible bond	-	4.1
Interest expense for the corporate bond	18.8	17.5
Transaction costs of Syndicated Senior Facilities Agreement (2010)	1.4	1.3
Financing costs reclassified to operating results	-7.8	-6.9
Remaining interest and similar expenses	7.4	4.4
Current other interest and similar expenses	22.4	21.9
Current financial result	-12.8	-13.1
Expenses from the early termination of the old Syndicated Senior Facilities Agreement (2010)	-	0.4
Interest expense from the repurchase of corporate bond shares	-	6.5
Non-recurring other interest and similar expenses	-	6.9
Financial result	-12.8	-20.0

Interest income totaled €8.8 million in the year under review versus €9.6 million in 2012, and mainly included income from finance leases and income from pension funds.

External bank guarantees were replaced with lower-cost internal Group guarantees during the financial year thanks to the company's improved credit standing. As of the reporting date, the external guarantee facilities had been utilized in the amount of €104.3 million compared to €148.9 million in 2012. Guarantee commissions totaled €1.5 million in the reporting year versus €2.6 million in 2012. The interest result includes €4.1 million related to the €150.0 million convertible bond issued in two tranches in February and July. Interest for the bond issued in November 2010 was recognized in the amount of €17.5 million, whereas €18.8 million was reported last year. The early redemption of bond shares with a nominal value of €42.6 million in the second half-year helped to save money on interest. Repurchasing took place on the open market, which resulted in one-time interest expense from the difference between the repurchase price and the carrying amount totaling €6.5 million. The old Syndicated Senior Facilities Agreement also included deferred financing items in the amount of €1.3 million and non-recurring expenses of €0.4 million from the early termination of the agreement. Due to accounting regulations, finance charges in the amount of €6.9 million (2012: €7.8 million) had to be reclassi-

fied from net interest income to operating profit and recognized under internally generated intangible assets. Other interest and similar income / expenses included earnings effects in connection with pensions in the amount of €2.4 million compared to €3.1 million last year.

The total tax expense for KUKA Group in 2013 was €35.4 million; this figure was slightly higher than the total tax expense of €34.1 million in 2012 and mainly resulted from current tax expenses in the U.S. and the planned reduction of tax loss carryforwards recognized in previous years in the German consolidated tax group. The tax rate was 37.8 percent in 2013 compared to 38.0 percent in 2012.

Dividend increased to €0.30 per share

Earnings after taxes have been positive now for the third year in a row, climbing €4.9 million to €58.3 million in 2013 from €55.6 million last year. Earnings per share improved accordingly, rising from €1.64 in 2012 to €1.72 in 2013. The Executive Board wants shareholders to participate in this positive development and will therefore propose at the Annual General Meeting that a dividend of €0.30 per share be paid for fiscal 2013. KUKA paid a dividend of €0.20 per share in 2012.

CONSOLIDATED INCOME STATEMENT (CONDENSED)

in € millions	2009	2010	2011	2012	2013
Sales revenues	902.1	1,078.6	1,435.6	1,739.2	1,774.5
EBIT	-52.6	24.8	72.6	109.8	120.4
EBITDA	-29.5	47.0	98.7	138.5	158.6
Financial result	-11.5	-22.1	-18.2	-12.8	-20.0
Taxes on income	-11.4	-4.1	-16.1	-34.1	-35.4
Net result for the year	-75.8	-8.6	29.9	55.6	58.3

Financial position

Principles and goals of financial management

KUKA Aktiengesellschaft is responsible for the central financial management of all KUKA Group companies. Group financing and interest rate and currency risk management are controlled centrally via KUKA Aktiengesellschaft. The financing and investment needs of Group companies and hedges as part of interest rate and currency management are bundled by KUKA Aktiengesellschaft, which concludes the necessary internal and external financial transactions. KUKA Aktiengesellschaft performs these tasks on the basis of a uniform planning and reporting system in which risks related to credit, liquidity, interest rates and exchange rates are recorded. The objective of interest rate and currency management is to minimize the risks involved. Only standard derivative financial instruments are used to hedge risk. The hedging transactions are concluded exclusively on the basis of the hedged item or expected transactions. KUKA has issued a standard set of guidelines for all Group companies for the purpose of managing financial risk. As in previous years, the guidelines were continuously reviewed and optimized during the fiscal year to ensure that they remained up to date.

Group financing and cash pooling

The Group's financing policy is aimed at securing sufficient liquidity reserves and guaranteed credit lines at all times to be able to ensure the operating and strategic financing requirements of the Group companies and also to have sufficient reserves as a buffer against unforeseen events. The financing requirements of the Group companies are calculated on the basis of the multi-year budget and financial projections and monthly rolling liquidity forecast over twelve months, each of which includes all companies consolidated in the Group accounts.

Payments received on the basis of the operating activities of Group companies represent the Group's most important source of liquidity. KUKA Aktiengesellschaft cash management uses the liquidity surpluses of individual Group companies to meet the liquidity requirements of other Group companies. This central, intragroup cash pooling optimizes the Group's liquidity position and has a positive impact on net interest income.

Additional enhancements to the financing structure

KUKA Group took additional steps in the financial year to successfully optimize the financing structure.

Taking advantage of the favorable market conditions, KUKA Aktiengesellschaft issued a €150.0 million convertible bond in two tranches in February and July 2013. The convertible bond carries an interest coupon of 2.0 percent and matures in February 2018. The placement of the first tranche was already oversubscribed multiple times. This shows that this instrument, which combines a bond and an option for KUKA shares, is not only an effective method of financing for KUKA but also an attractive type of investment for capital market investors.

KUKA Aktiengesellschaft received a total cash injection of €158.7 million as a result of the convertible bond issue, which was used in part to repurchase shares of the corporate bond issued in 2010 totaling €42.6 million (nominal) at market rates. The original volume of the bond was €202 million with a coupon of 8.75 percent and a term until 2017. The buyback led to a one-time charge of €6.5 million in the financial result for the year under review. However, the nominal interest savings will be approximately €14.0 million until maturity in November 2017. Additional shares of the corporate bond with a nominal value of €11.0 million were acquired in January 2014.

In yet another step, KUKA terminated the existing Syndicated Senior Facilities Agreement, which would have expired in March 2014, in exchange for a new Syndicated Senior Facilities Agreement with a term until December 2018. The volume of the new syndicated loan is €160.0 million, i. e. lower than the old €200.0 million syndicated loan, and consists of a €50.0 million cash credit line that can also be used as guaranteed credit lines and a €110.0 million guarantee facility. The reduction of the guaranteed credit line by €40 million is more than offset by the expansion of the permissible framework for bilateral guarantee facilities with credit insurers by €55.0 million to €100.0 million. The new syndicated loan is designed to improve the credit quality of KUKA Group. In addition to obtaining better conditions and eliminating restrictions and reporting obligations, it was essential for KUKA that the new syndicated loan is now unsecured and contains only the customary equal treatment clauses ("pari passu") and negative pledges.

In addition to the guaranteed credit line from the syndicated loan, the Group has additional guarantee facilities via bilateral agreements with various surety companies and banks for the purpose of supporting operating activities. Overall, KUKA has access to external guarantee facilities totaling €182.8 million as of December 31, 2013, which compares with the €212.0 million the year prior. These have been utilized in the amount of €104.3 million as opposed to €148.9 million in 2012. The Group's improved credit rating gave KUKA Aktiengesellschaft's financial management a strong negotiating position, which it utilized to convince additional customers to accept "Group guaranteed credit lines". KUKA Aktiengesellschaft acts as guarantor for these guarantees in lieu of a bank; they therefore do not draw down any external guaranteed credit lines for a fee and increase the leeway in existing external guarantee facilities.

KUKA Group's financing requirements are primarily covered by the following available elements:

- 1) The new €160.0 million Syndicated Senior Facilities Agreement signed in December 2013 with a term extending to December 2018. Cash advances up to a volume of €50.0 million are possible with this agreement.
- 2) The €202.0 million corporate bond issued in November 2010 maturing in 2017 (shares of this bond worth €42.6 million (nominal) were bought back in the financial year).
- 3) The convertible bond with a total volume of €150.0 million issued over the course of fiscal 2013 in two tranches (see "Notes to the consolidated financial statements" / note 25 for more detailed information).
- 4) Bilateral guarantee facility agreements with banks and surety companies in the amount of €72.8 million (as of December 31, 2013).

From the perspective of the Executive Board, the measures taken ensure that KUKA Group has appropriate long-term financing and the necessary leeway to quickly implement important strategic decisions.

Positive rating

In November 2010, KUKA Aktiengesellschaft was for the first time awarded a rating by ratings agencies Standard&Poor's ("B"; stable outlook) and Moody's ("B2"; stable outlook) in connection with the launch of the corporate bond. The bond itself received a rating of "B-" from Standard&Poor's and "B3" from Moody's.

Both Moody's and Standard & Poor's raised their ratings twice in 2013 (for the first time in February and then again in July/August) in response to the improved financial data for KUKA Group. Moody's rating is now at "Ba3; stable outlook"; Standard & Poor's was "BB-; stable outlook". Standard & Poor's documented its continued positive assessment of the company's creditworthiness by raising its outlook in December 2013 to "positive". The bond rating was likewise raised and is now at "Ba3" and "B+", respectively.

CONSOLIDATED CASH FLOW (CONDENSED)

in € millions	2009	2010	2011	2012	2013
Cash earnings	-43.7	23.4	65.9	92.4	115.3
Cash flow from operation activities	4.8	-24.8	36.4	117.9	221.0
Cash flow from investment activities	-27.0	-12.5	-29.9	-40.8	-125.6
Free cash flow	-22.2	-37.3	6.5	77.1	95.4

Cash flow from operating activities up significantly again

Cash earnings, consisting of profit after tax adjusted for cash-neutral depreciation and write-downs of property, plant and equipment and amortization and write-downs of intangible assets as well as other non-cash income and expenses, again improved significantly. The positive value of €92.4 million reported in 2012 was increased by 24.8 percent to €115.3 million in fiscal 2013. With earnings after taxes of €58.3 million in 2013 at around last year's level of €55.6 million, this is mainly the result of higher amortization and write-downs of intangible assets (see Earnings – R&D expense for more details) as well as other non-cash expenses, particularly changes to deferred tax recognized

Cash flows from operating activities also reflected the business growth. Trade working capital was as follows at the end of the reporting year:

TRADE WORKING CAPITAL

in € millions	2009	2010	2011	2012	2013
Inventories less advance payments	76.7	109.0	128.3	126.9	133.9
Trade receivables and receivables from construction contracts	238.5	291.8	339.8	340.6	348.6
Trade payables and liabilities from construction contracts	127.9	188.2	260.6	231.7	304.4
Trade working capital	187.3	212.6	207.5	235.8	178.1

Inventories less advance payments received were higher year-over-year by €7.0 million. Trade receivables and receivables from construction contracts were approximately at the prior-year level (€+8.0 million), while trade payables and liabilities from construction contracts were well above the previous year by €72.7 million. The increase resulted among other things from the improved advance payment behavior of customers as part of long-term order-related production and from measures to extend supplier-side payment terms. Thus trade working capital reduced by a total of €57.7 million on the prior year to €178.1 million.

KUKA Group's cash flows from operating activities rose accordingly to €221.0 million as of the balance sheet closing date from €117.9 million in 2012.

Another record figure for free cash flow

Capital expenditure totaled €74.7 million in the fiscal year, up from €42.8 million in 2012. Continued strong investments in research and development and higher spending on fixed assets were the main drivers. The carrying amount of own development work completed in 2013 and projects still in the capitalization phase totaled €18.1 million compared to €17.6 million the year prior. See the section titled "Research and development" for information on the main R&D focuses.

KUKA GROUP CAPITAL EXPENDITURES
IN € MILLIONS

2009	27.2
2010	15.4
2011	30.3
2012	42.8
2013	74.7

KUKA ROBOTICS CAPITAL EXPENDITURES
IN € MILLIONS

2009	16.3
2010	6.7
2011	20.1
2012	30.1
2013	30.8

KUKA SYSTEMS CAPITAL EXPENDITURES
IN € MILLIONS

2009	8.9
2010	7.5
2011	8.2
2012	9.6
2013	15.2

Investments in property, plant and equipment totaled €57.0 million in 2013 (2012: €26.1 million) and were primarily attributable to technical equipment and machinery in the amount of €14.6 million (2012: €10.0 million), €10.1 million to other assets/ operating and office equipment (2012: €9.0 million) and €27.6 million mainly to advances paid and construction in progress (2012: €4.8 million).

Broken down by division, capital expenditure was as follows in 2013: In the Robotics division, capital expenditure totaled €30.8 million versus €30.1 million in 2012. In addition to the capitalized development work described above, most of the investments were made in technical equipment and machinery such as a lathe and milling machine, in engine and performance test stands and in equipment and machines for the new office and factory building in China. The Systems division registered additions of €15.2 million (2012: €9.6 million), among other things, for a software extension, technical systems such as a paint shop and laser tracker, and for operating and office equipment. Other capital spending by KUKA Aktiengesellschaft totaled €28.7 million (2012: €3.1 million) and consisted mainly of advance payments on construction in progress including the new Development and Technology Center that will be built in Augsburg.

Payments for the acquisition of consolidated companies and other business units totaled €16.6 million, including the acquisitions of UTICA Enterprises in the United States, which made KUKA Systems the market leader in North America, and CMA Technology, a Romanian company that gives Systems access to an attractive production site.

As part of corporate liquidity management, in December 2013 KUKA Aktiengesellschaft invested €35.0 million of freely available funds that remain so indefinitely with maturities of between three and twelve months.

Due to the increase in investment volume and the payments received from disposals of fixed assets of €0.7 million in 2013 (2012: €2.1 million), cash flows from investing activities now totaled €-125.6 million from €-40.8 million a year earlier.

Cash flows from investing activities together with cash flows from operating activities resulted in another new record for free cash flow of €95.4 million after €77.1 million in 2012.

Net liquidity continues to expand significantly

The high, positive free cash flow made it possible to more than triple net liquidity (positive balance of cash and cash equivalents less current and non-current financial liabilities) from €42.8 million in 2012 to €146.5 million in fiscal 2013. Thus, even if the Group were to repay all of its financial liabilities in full, it would still possess cash and cash equivalents of €146.5 million. The financing structure of the Group is therefore still very robust and geared toward the long term, with the share of current financial liabilities in the amount of €6.5 million making up only 2.2 percent of the €294.6 million in total financial debt. The respective share was 3.3 percent in 2012.

Net worth

On the assets side, non-current assets rose €27.3 million year-on-year to €327.7 million from €300.4 million in 2012, which was mainly due to higher capital spending; fixed assets increased by €48.3 million as a result. Receivables from finance leases attributed to the earlier assumption of financing by KTPO declined by €8.3 million due to scheduled incoming payments and exchange rate fluctuations of the USD. Income tax receivables were €1.5 million lower.

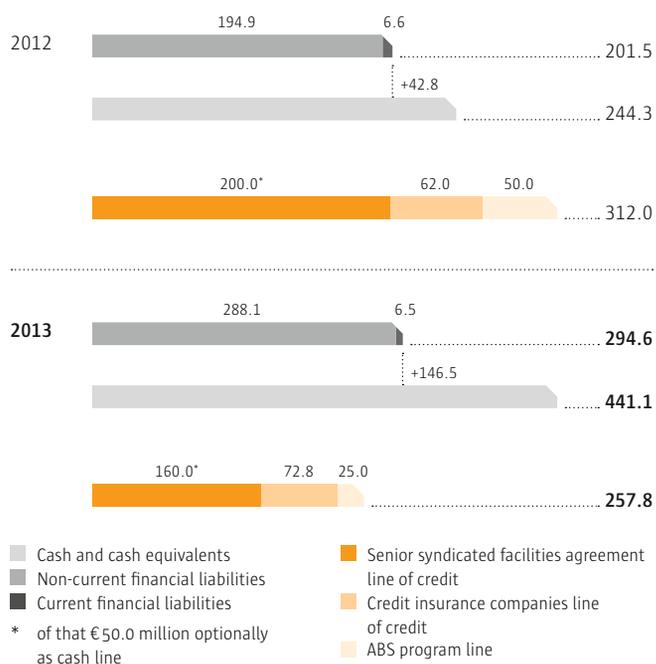
With respect to deferred tax assets, the deferred taxes were used for loss carryforwards due to positive tax results, particularly in the German consolidated tax group, bringing the total amount of deferred tax assets much lower to €25.6 million from €36.3 million last year.

NET WORTH

in € millions	2009	2010	2011	2012	2013
Balance sheet total	726.2	984.7	1,078.0	1,137.4	1,377.1
Equity	160.8	198.1	252.4	297.5	379.1
in % of balance sheet total	22.1	20.1	23.4	26.2	27.5
Net liquidity/debt	-48.5	-60.3	-32.6	42.8	146.5

CONSOLIDATED NET LIQUIDITY

IN € MILLIONS



Asset-side trade working capital, which is the sum of inventories and trade receivables from construction contracts, declined by €19.2 million. Further details are provided in the information on the financial position. Other assets, prepaid expenses and deferred charges posted at €61.1 million and were thus €34.2 million higher than the previous year. This increase was largely due to the investment of funds in short-term securities (€35.0 million). Cash and cash equivalents totaled €441.1 million as of the balance sheet closing date; this compares with €244.3 million in 2012. Total current assets totaled €1,049.4 million at year-end, which represented an increase of €212.4 million from €837.0 million in 2012.

The rise in total assets of KUKA Group was primarily the result of higher cash and cash equivalents in the amount of €1,377.1 million as of December 31, 2013, which were €239.7 million or 21.1 percent higher than the total assets of €1,137.4 million reported for the period ending December 31, 2012.

Equity up significantly again

Net income of €58.3 million (2012: €55.6 million) and the share of equity from the convertible bond (2012: €27.0 million) were main factors that increased equity. Actuarial effects from pension accounting totaling €5.3 million also had a positive impact on equity, and were mainly due to the 0.55 percentage points higher discount rate for measuring German pension commitments versus the prior year. Overall, equity rose by €81.6 million to €379.1 million as of December 31, 2013. The equity ratio, i. e. the ratio of equity to total assets, rose accordingly, increasing by 1.3 percent from 26.2 percent to 27.5 percent.

The rise in non-current financial liabilities mainly reflected the issue of the €150.0 million convertible bond, which was partly offset by the €42.6 million repurchase of corporate bond shares at market rates. Total financial liabilities as of the balance sheet date were €294.6 million as compared to €201.5 million on December 31, 2012. Current financial liabilities included the deferred interest on the bond and convertible bond as well as lower utilization of cash lines on the part of an international subsidiary.

Trade working capital liabilities – trade payables, advance payments received and liabilities from construction contracts – increased year-over-year by €38.5 million, primarily due to a continued improvement in the advance payment behavior of key accounts for long-term construction contracts. Other liabilities relate primarily to personnel liabilities such as those for flextime, vacation entitlements and variable compensation elements, as well as for contingent purchase price liabilities associated with the two acquisitions made in 2013. Total current liabilities amounted to €597.3 million at the end of the year under review; the respective figure at the end of 2012 was €523.4 million.

Significant reduction in working capital and capital employed

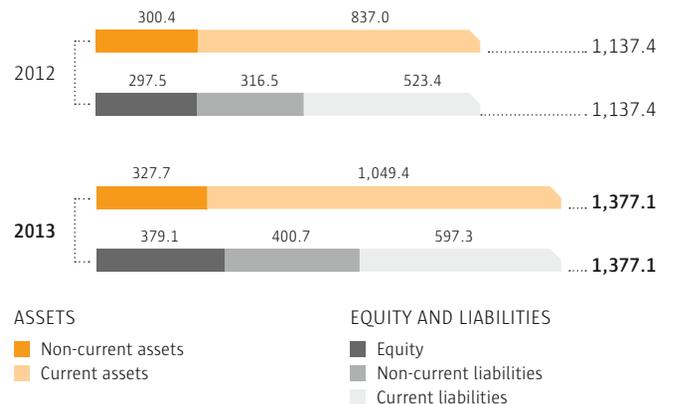
Despite the rise in business volume, working capital decreased by €64.7 million in the reporting year to €25.8 thanks to active management and the optimization of supplier-side payment terms.

A key ratio at KUKA Group is return on capital employed (ROCE). To calculate ROCE, the capital employed at the start and at the end of the fiscal year is averaged. KUKA Group's capital employed was slightly lower on average, from €339.8 million in 2012 to €326.2 million in 2013. The return on capital employed was 36.9 percent in 2013 versus 32.3 percent in 2012.

The Robotics division generated average capital employed of €155.6 million in 2013 (2012: €140.2 million) and thus ROCE of 49.6 percent (2012: 57.2 percent). The Systems division generated average capital employed of €141.5 million in 2013 (2012: €200.5 million) and thus ROCE of 43.0 percent (2012: 23.8 percent).

GROUP ASSETS AND FINANCIAL STRUCTURE

IN € MILLIONS



Notes to the financial statements of KUKA Aktiengesellschaft

KUKA Aktiengesellschaft acts as the Group's management holding company with central management responsibilities such as accounting and controlling, financing, human resources, legal and financial communications. Its financial position is determined primarily by the activities of its subsidiaries, as illustrated by the direct allocation of KUKA Roboter GmbH and KUKA Systems GmbH, the management companies of the Robotics and Systems divisions.

KUKA Aktiengesellschaft prepares its annual financial statements in accordance with the provisions of the German Commercial Code (Handelsgesetzbuch – HGB) and the German Stock Corporation Act (Aktiengesetzbuch – AktG).

The financial statements of KUKA Aktiengesellschaft are published in the electronic Federal Gazette (Bundesanzeiger) and are also available on the company's website at www.kuka.com.

INCOME STATEMENT OF KUKA AKTIENGESELLSCHAFT (HGB)

in € millions	2012	2013
Other company-produced and capitalized assets	1.6	0.3
Other operating income	43.9	41.5
Personnel expense	-21.2	-23.6
Depreciation and amortization of tangible and intangible assets	-3.0	-3.1
Other operating expenses	-34.0	-38.4
Income from participations	65.3	81.0
Income from other securities	-	0.2
Other interest and similar income	24.5	16.4
Interest and similar expenses	-20.9	-30.0
Income from ordinary activities	56.2	44.3
Taxes on income	13.2	21.9
Net profit	69.4	66.2
Profit (previous year: loss) carry-forward from previous year	-61.1	1.5
Transfer to retained earnings	-	-33.1
Balance sheet profit	8.3	34.6

KUKA AKTIENGESELLSCHAFT BALANCE SHEET (HGB)

ASSETS in € millions	2012	2013
Non-current assets		
Intangible assets	2.1	2.7
Property, plant and equipment	15.6	40.4
Financial investments	173.6	173.6
	191.3	216.7
Current assets		
Inventories	0.1	0.1
Receivables from affiliated companies	220.7	184.7
Other receivables and assets	11.4	8.1
Securities	-	35.0
	232.2	227.9
Cash and cash equivalents	162.2	346.1
	394.4	574.0
Prepaid expenses	1.4	0.9
	587.1	791.6

EQUITY AND LIABILITIES in € millions	2012	2013
Equity		
Subscribed capital	88.2	88.2
Capital reserve	73.0	83.5
Other retained earnings	24.4	57.5
Balance sheet profit	8.3	34.6
	193.9	263.8
Provisions		
Pension provisions	11.9	11.6
Provision for taxes	0.1	1.9
Other provisions	19.1	21.5
	31.1	35.0
Liabilities		
Bond	202.0	309.4
Liabilities due to banks	2.4	3.0
Trade payables	1.2	3.2
Accounts payable to affiliated companies	153.8	172.0
Liabilities to provident funds	2.5	2.5
Other liabilities	0.2	2.7
	362.1	492.8
	587.1	791.6

Results of operations of KUKA Aktiengesellschaft

The earnings of KUKA Aktiengesellschaft are determined primarily by the earnings of its subsidiaries and its financing activities. The result from ordinary activities was €44.3 million in 2013, €11.9 million less than the €56.2 million reported in 2012.

Other operating income mainly related to cost allocations of €22.7 million in 2013 (2012: €16.5 million), direct costs passed on – for example from facility management – of €11.4 million (2012: €11.3 million), income of €4.7 million from the rental of buildings to KUKA Group companies (2012: €4.8 million), and currency translation gains of €2.3 million (2012: €5.2 million). The rise in other operating expenses was driven by various factors including higher consulting expenses, especially in connection with acquisitions and changes to the financing structure.

Income from participations totaled €81.0 million and was thus significantly higher than the €65.3 reported in 2012. Earnings contributions from the German companies played a large role in this development. The contribution amount allocated to KUKA Aktiengesellschaft is governed by existing profit and loss transfer agreements. The balance of income from profit transfers and expenses from loss assumptions totaled €61.4 million versus €21.3 million in 2012. As in the previous year, a dividend payment in the amount of €19.6 million by the American subsidiary was also included in 2013; the amount recognized in 2012 was €44.0 million.

The net interest result was €-13.6 million, which was well below last year's €3.6 million. Interest from the convertible bond issued in 2013 and non-recurring items related to the repurchase of corporate bond shares on the open market impacted the net interest result. The largest change, however, was due to the lower market interest rates and significantly improved refinancing costs of KUKA Aktiengesellschaft from financing costs credited or charged to subsidiaries. Last year KUKA Aktiengesellschaft earned net interest income of €21.9 million together with associated companies; the value this financial year was €14.4 million.

Net income for the year of KUKA Aktiengesellschaft amounted to €66.2 million, slightly lower than net income of €69.4 million in 2012. This figure includes tax income of €21.9 million (2012: €13.2 million), which resulted primarily from tax allocations from consolidated tax group companies. After deducting the dividend for 2012 and offsetting the remaining amount, net retained earnings totaled €67.7 million.

Financial position of KUKA Aktiengesellschaft

One of KUKA Aktiengesellschaft's most important tasks is to provide funds and guarantees for its subsidiaries' current operations. In February and July 2013, KUKA Aktiengesellschaft obtained external financing by placing a €150.0 million convertible bond on the capital market.

€42.6 million worth of shares in the €202.0 million corporate bond issued in November 2010 were bought back on the capital market in the financial year. Both the convertible bond and the corporate bond are shown in the balance sheet line item "Bonds".

In addition, KUKA Aktiengesellschaft entered into a new Syndicated Senior Facilities Agreement with a consortium of banks in December 2013, which superseded the old agreement in effect since November 2010. Along with the provision of cash credit facilities, the agreement provides for guaranteed credit lines (guarantee facilities), which are particularly important for business in the Systems segment. For more details, see "KUKA Group financial position" starting on page 163.

KUKA Aktiengesellschaft's financing role is reflected in its receivables from and liabilities to affiliated companies, which are predominantly the result of cash pooling accounts with subsidiaries and loans provided. The balance of these receivables and liabilities was net receivables of €12.7 million (2012: €66.9 million). The change in the subsidiaries' liquidity requirements was mainly the result of profit transfers during the fiscal year. The resulting financing was reduced to well below prior-year level thanks to active working capital management with regard to the subsidiaries involved in cash pooling. All in all, cash and cash equivalents of KUKA Aktiengesellschaft more than doubled from €162.2 million to €346.1 million.

The financial liabilities of KUKA Aktiengesellschaft amounted to €312.4 million, which compares with €204.4 million in 2012.

Net assets of KUKA Aktiengesellschaft

The net assets of KUKA Aktiengesellschaft are impacted by the management of its equity investments as well as the way in which it executes its management function for the companies in KUKA Group. For information on receivables from and liabilities to affiliated companies, please refer to the information on KUKA Aktiengesellschaft's financial position.

Capital expenditure for intangible and tangible fixed assets in the amount of €28.6 million (2012: €3.7 million) was offset by depreciation, amortization and write-downs amounting to €3.1 million (2012: €3.0 million). Major investments in the financial year included the construction of the new daycare center and the Development and Technology Center in Augsburg, which is currently under construction. The daycare center opened in November; the Development and Technology Center is expected to be completed in 2015. KUKA Aktiengesellschaft's direct equity investments in its subsidiaries are reported under financial assets.

Short-term securities relate to freely available funds that remain so indefinitely invested in December 2013 as part of corporate liquidity management.

Earnings for the fiscal year are reflected in the changes in equity as well as the premium from the issue of the second tranche of the convertible bond in June 2013 in the amount of €10.5 million. Dividend payments totaling €6.8 million in fiscal 2012 had the effect of reducing equity. The equity ratio of KUKA Aktiengesellschaft amounted to 33.3 percent as of December 31, 2013, which was slightly higher than the 33.0 percent as of December 31, 2012.

The net impact of these changes on the total assets of KUKA Aktiengesellschaft was an increase of €204.5 million year-on-year to €791.6 million.

Non-financial key performance indicators

Sustainability

Sustainability – always improving

Sustainability management at KUKA is a continuous improvement process. This means the company must grow both economically and in social and ecological terms to continue to be successful on a global scale. KUKA has a social responsibility to its employees, customers, investors and the general public.

An attractive working environment is becoming increasingly important

As an innovative, global automation company, KUKA relies on employees who are not only highly qualified but also very dedicated. They are the basis for the company's success. To achieve superior results on a daily basis, employees need to have a good working environment in which they feel comfortable. A key factor here is how well their career balances with their personal life. KUKA has been awarded the "Career and Family Audit" ("berufundfamilie") certificate since 2010 as proof that it is a "family-conscious" company. The company was re-audited in 2013 and certified as part of an official awards ceremony in Berlin. This certification reflects KUKA's commitment to optimizing its family-conscious personnel policy. This includes reconciling corporate goals and the interests of employees.

KUKA's staff policy considers the different stages of life of its employees to support them in achieving a better work-life balance. The company implemented a number of measures over the course of the financial year to promote this effort. For example, KUKA offers employees future-oriented working time models with flexible working hours, teleworking and home office options for the Augsburg staff. The opening of KUKA's on-site daycare center "Orange Care" and daycare programs in the school breaks give parents more options for childcare. But that's not all. KUKA also assists employees who are responsible for caring for family members.

Company health management was also promoted during the reporting period to further improve the working environment. This need-based program supports employees in living healthier by offering a number of free sports and exercise courses as well as various seminars on the topic of care, nutrition and burn-out prevention to name just a few. Employees can also take advantage of health examinations such as colorectal cancer and skin screenings.

The demographic shift and the changing working and living environment have an impact on employee performance; this calls for forward-looking solutions that are sustainable and help to maintain health. Work processes were further revised in 2013 in response to this. Measures included establishing age-appropriate workstations with the aim of reducing the physical demands placed on employees in production. An anonymous employee survey was used to develop seven optimization approaches to workplace design, which were then analyzed to determine their efficacy and feasibility. One of the measures implemented was the introduction of ergonomic workstations with robot lifting tables that enable production staff to adjust their workstation to their individual needs with less effort and less strain on the back so that they can work in an upright position.

KEY SOCIAL FIGURES

	2012	2013
Number of employees (Dec. 31)	7,264	7,990
of which apprentices	230	236
Average length of service (years)	8.8	8.5
Sick leave ratio in %	2.7	2.8
Fluctuation in %	9.8	10.1
Accidents per 1,000 employees (Germany)	10.8	10.3

The sick leave ratio of 2.8 percent is very low compared to other companies in the industry. At 8.5 years, the average length of service at KUKA is relatively stable and on par with other companies. This figure has remained at a consistently high level in recent years.

At 10.1 percent, staff turnover (fluctuation) appears to be relatively high for industry standards. The reason for this high rate is that it includes not only employees who leave the company but also those who move internally between KUKA Group companies.

Even though the workload at KUKA is high in comparison with other companies in the industry, the number of accidents reported is very low. 10.3 accidents per 1,000 employees were reported in 2013, which was even less than the 10.8/1,000 in 2012. KUKA will continue to take measures to increase work safety and reduce this number even further.

See "Employees" on page 103 for details on figures related to the number of employees and trainees, and years of service.

Social responsibility at KUKA and beyond

Taking social responsibility is important to both KUKA and its employees. In some cases they even take their own initiatives, for example with Orange Care e.V. – an association established by KUKA employees with the aim of supporting people in need that is especially active in assisting youth and families. For example, the association supports Prisma e.V. Familien- und Jugendhilfe's "füreinanderda" ("there for each other") project that brings together volunteers and single mothers to support them in their everyday lives. In addition, Orange Care began sponsoring St. Gregor Kinder-, Jugend- und Familienhilfe in 2013, assisting the non-profit organization in its supervised curative education and therapeutic living community project for youth and young adults. Young people between the ages of 14 and 16 who have trouble dealing with the challenges of puberty and the demands placed on them by today's complex society live together in this community on a temporary or long-term basis. The "Phoenix" community responds to the stresses young adults face by offering them intensive educational support and a highly structured daily routine with mandatory curative educational courses on addiction and violence prevention paired with exploratory educational activities. Orange Care has allocated a fixed amount to help finance these projects, which group supervisors can access for various activities. For example, hiking shoes and bicycles were purchased for the group.

But Orange Care efforts don't stop at the home base. In Akansha, India, for example, the association made a donation to a school near the local KUKA branch to build a library and a small science lab.

Orange care daycare center – by KUKA employees for parents

KUKA's on-site Orange Care daycare center opened in November 2013. It was established to help parents better balance their career and personal lives. The daycare center is open from 7 AM to 6 PM for children ages six months to three years and caters not only to KUKA employees, but also to Augsburg parents who need support in balancing work and family commitments, which was an important criterion for the association.

Daycare center and parking garage incorporate sustainable building concepts

Investments were made in new buildings at the KUKA site in Augsburg over the course of 2013. Construction projects included the completion of the daycare center, a new parking garage and work on the new Development and Technology Center.

KUKA takes special care in all of its construction projects to not only meet but exceed the legal requirements of the current standards outlined in the EEG & ENEC (Renewable Energy Act and Energy Saving Ordinance) by up to 30 percent. The outer insulation of the planned new building and the insulation of windows and doors will be up to 30 percent more efficient than stipulated by the statutory requirements. This is just another example of KUKA's commitment to energy-efficient building concepts. The choice of environmentally-friendly materials will make it possible to remove and recycle these building components later.

KUKA already implements innovative environmental concepts for all new construction, expansion and modernization projects at the site in Augsburg. Surface water from the covered areas runs off directly in a groundwater neutral manner via culverts (drainage system) and is not diverted into the sewer system.

To reduce energy consumption and thus CO₂ emissions, KUKA uses the most eco-friendly energy supply solutions available. In this spirit, the new building is set to be hooked up to Augsburg's district heating network. Existing buildings will gradually be retrofitted for district heating as well; connecting the KUKA areal not only represents a sustainable alternative to fossil fuels but is also a measure that will expand the areas in which district heating will be available.

Promoting excellence in technology and sports

KUKA promotes top performance in technology and sports. This raises brand awareness for KUKA and is also a way to take social responsibility. Here, KUKA concentrates on local projects at its various sites. For instance, KUKA has supported the Bundesliga soccer team FC Augsburg and the first division hockey team Augsburger Panthers for years. The company has also sponsored university teams near the KUKA sites in Augsburg and Zwickau for Formula Student – a worldwide racing series for electric racing cars.

Research partnerships to promote sustainability

KUKA is a partner in EU-funded projects that promote research activities in the field of sustainable, innovative technologies:

AREUS, an EU-funded project

The EU-funded project "AREUS – Automation and Robotics for EUropean Sustainable manufacturing" was launched in September 2013, with participants from industrial enterprises, universities and institutes from all over Europe such as Daimler AG, Chalmers University of Technology, Danfoss A/S, Danmarks Tekniske Universitet, Delfoi OY, Engrotec Consulting GmbH, Rigas Tehniska Universitate, SIR Spa och Università degli studi di Modena e Reggio Emilia and, of course, KUKA. All research work in this project is based on advanced solutions with robotic systems under the theme "Factory of the Future".

The objective is to develop innovative, intelligent and technological solutions that are also energy efficient and create a technology platform to optimize energy efficiency in car body manufacturing. Another focus is to develop and test technologies for regenerative braking systems. The project also aims to validate renewable energies in industrial production and test these in real production scenarios.

euRobotics AISBL

euRobotics AISBL (Association Internationale Sans But Lucratif), a non-profit European organization, entered into a public-private partnership (PPP) with the European Commission for “robotics in Europe”, whose research and innovation program will receive over €700 million in funding over the next seven years and includes sustainability targets outlined in a common roadmap. The development of sustainable industrial production methods is one of the objectives. See the section on “Research and development” starting on page 84 for more information.

EFFRA

KUKA is also involved in a partnership with the EFFRA (European Factories of the Future Research Association). Members make important contributions that influence the development of sustainable production and manufacturing processes, for example. KUKA's role here is to advance key topics in robot-based automation.

KUKA showcases multifunctional cell at augsburg innovation park

With reference to sustainability, lightweight construction is a key topic in industrial manufacturing. Within the scope of a project at the Augsburg Innovation Park, experts from industry and the scientific community work together on the industrialization of carbon reinforced components and on taking human-robot interaction to the next level.

The Center for Lightweight Production Technology (DLR ZLP) opened in May 2013. In collaboration with the German Aerospace Center (DLR), KUKA has been involved for years in the research and development of innovative processes and automation solutions. Industrial scale production processes with lightweight materials are developed at the new location for aerospace applications. KUKA and the DLR installed a multifunctional cell (MFC) together that is 32.5 m long and 16 m wide. The frame is made from a steel construction that weighs several tonnes. Due to its size and unique technology, the cell forms the heart of the center. It is equipped with QUANTEC generation KUKA robots in order to conduct industrial scale research.

KUKA partners with MAI Carbon

KUKA is part of MAI Carbon, a cluster in the Munich-Augsburg-Ingolstadt triangle that is directing its efforts toward developing carbon fiber reinforced polymer (CFRP) technology for a variety of sectors in Germany by the year 2020. One of the focus topics here is the representation of an integrated process chain and precise machining with industrial robots.

Savings through energy consumption forecast simulation

New simulation modules help to improve the energy efficiency of robot applications and even entire plants and systems as early as the planning stage. The expected energy consumption is calculated and displayed while a robot “travels” virtually on the offline programmed path. A change in the position of the robot or paths, for example, can be used to determine the desired, energy-efficient path for the customer without any time loss and help create additional energy savings of around 15 percent. The new KR QUANTEC generation, KUKA's “green” robot, is already 35 percent more efficient than previous models. KUKA was able to achieve this goal by reducing the robot's weight, implementing pioneering control technology, redefining stand-by modes and integrating an intelligent drive system. The additional savings potential afforded by energy path optimization during the simulation makes it possible to cut energy costs in half.

Energy consumption improvements can also be made when planning entire production systems. A new tool enables estimations to be made on the amount of energy required by production systems at an early stage in the planning process to quickly develop more energy-efficient alternative concepts. The software tool is based on reference measurements of systems that have already been implemented. It shows the anticipated power consumption for various components in the quantity breakdown and suggests components that are more energy efficient where feasible. This facilitates collaboration with customers as early as the proposal phase to streamline the production system and its layout to achieve optimum energy efficiency. Measurements are made to the system to provide a comparison between estimated and actual energy consumption. This information ensures that the content of the database is continually enhanced.

Recycling and retooling

The recycling concept for KUKA robots comprises a number of different aspects including proper disposal and sustainable utilization. KUKA also focuses on recyclable materials as early as the parts selection phase.

KUKA offers customers refurbishing services for used robots, which can then be returned to customers for productive use (retooling). Ideas for replacing or optimizing components or giving robots a new coat of paint are discussed with the customer on a case-by-case basis.

KUKA offers its customers a return program for robots that are no longer in use. The used robots are refurbished or retooled to meet new requirements. Then they are available again for purchase as used robots. KUKA disassembles and professionally disposes of robots that can no longer be refurbished. All of KUKA's recycling partners must undergo a strict confirmation process.

Power, gas and water consumption reduced

KUKA significantly reduced absolute consumption of power, gas and water compared to the previous year. Power consumption dropped by 4.4 percent, while gas consumption fell by 2.5 percent. These reductions are chiefly attributable to energy saving measures that were introduced including new heating pump installations and more streamlined operating and work times. KUKA also tore down a factory building in mid-2013. The associated savings resulted in a drop in energy demand. Energy-saving lighting, in particular in outdoor areas and factory buildings, helped further reduce power consumption. Water consumption is relatively low overall and plays a less important role here, because water is only available for normal daily use, with production only requiring a fraction of all of the water consumed.

Compared to the decline in power, gas and water use, CO₂ emissions increased slightly in 2013. The reason for this is the type of power production in use. When power is generated using alternative energies, CO₂ emissions are lower than when lignite and hard coal are used, for example. The energy used was primarily obtained from non-renewable energy sources provided by the power supplier.

KEY ECOLOGY FIGURES

	2012	2013
Number of locations worldwide	37	37
with ISO 9001 certification	14	20
of which ISO 14001 certified	10	10
Consumption (Augsburg only)		
Electric power (MWh)	13,587	12,984
Gas (MWh)	15,272	14,885
Water (m ³)	21,822	20,619
CO ₂ GHG emissions (t)	11,593.50	11,690.20

KUKA participates in carbon disclosure project

KUKA Aktiengesellschaft has been part of the Carbon Disclosure Project since 2008. This organization publishes information on the life-cycle assessments of listed companies and on business prospects for sustainable products once a year. The Carbon Disclosure Project is supported by a number of investor groups (www.cdproject.net). Moreover, KUKA also participated in various ratings on the subject of sustainability, one notable example being that conducted by the Vigeo agency. Interested parties can request a copy of the results by sending an email to contact@vigeo-belgium.com. Information is available on corporate governance, human resources and the environment.

Employees

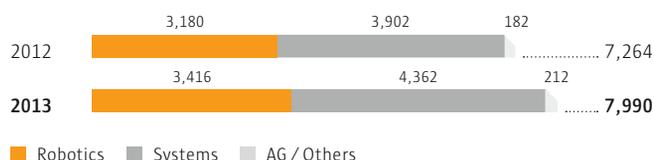
KUKA Group employees

KUKA Group human resources has three major areas of emphasis: strategy, organization and operating activities. In the past fiscal year operating business units had to create sufficient capacity in order to handle the business volume and fortify innovation strength. Staff increases were made primarily in the strategic target markets, such as in the growth regions of Asia and the Americas. Employees were also added in the research and development department of the Robotics division. KUKA also invested in enhancing its image as an employer and launched a major publicity campaign at Hannover Messe. Moreover, KUKA further expanded its family-friendly human resources policy. Furthermore, the company's global structure required organizational changes in the personnel area. Divisions that were previously part of business operations were centralized under the Group's holding company, KUKA Aktiengesellschaft. These include the training division and personnel development.

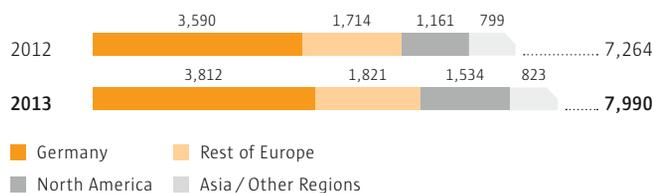
Targeted staff increases

KUKA Group launched a concerted effort to hire new personnel in order to achieve its strategic business objectives. As a result, most of the Group's new hires were in the United States and China. In Germany more specialists were added in research and development. The company's staff increased from a total of 7,264 at the end of 2012 to 7,990 at the end of 2013. This corresponds to an increase of 10.0 percent, or 726 employees. Most new members of staff were added at KUKA Systems. The number of employees rose year-over-year from 3,902 to 4,362, or 11.8 percent at this division. Reasons for this included the acquisitions of UTICA Enterprises and CMA Technology with a total of 346 employees. The Robotics workforce grew from 3,180 to 3,416, or 7.4 percent. Research and development, sales, and service saw the greatest expansion along with China following the opening of a new plant.

EMPLOYEES BY DIVISION (DEC. 31)



EMPLOYEES BY REGION (DEC. 31)



Stable age structure

During the reporting year the age structure remained stable with an average employee age of 41 – the same as in the 2012. The number of employees celebrating company anniversaries also remained the same. Last year 41 employees were honored for 25 years of service, while six were honored for 40 years of service.

Successful efforts to promote vocational training

In the face of demographic developments and the many firms competing for qualified applicants worldwide, KUKA was able to further enhance its appeal to potential employees and hired more entry-level candidates in the reporting year than in the same period the preceding year. For example, at the end of December 2013 the company employed 236 apprentices at its German sites in Augsburg, Bremen and Schwarzenberg/Erzgebirge – six more than in the previous year (2012: 230).

Previously, the training division was decentralized – i. e. organized and managed in the individual business divisions. In fiscal 2013 training was centralized in the holding, KUKA Aktiengesellschaft. This enables the company to train more employees throughout the Group, which in turn offers employees more opportunities for growth and development. Equally importantly, it teaches the company's youngest staff members to think and act globally on an enterprise-wide scale.

Wide range of training and continuing education options

KUKA offers a variety of training programs ranging from technical to commercial apprenticeships:

- Industrial mechanic and machinist
- Mechatronics and electronics technician for automation systems
- Industrial accountant / clerk
- Computer specialist

The share of female apprentices in technical jobs has remained constant for the past few years at 20 percent. This percentage is expected to increase, in particular thanks to the company's participation in the annual Girls' Day program, introductory apprenticeships for girls and cooperative partnerships with girls' schools.

In addition, graduating seniors from local high schools can take part in a dual studies program hosted by one of a number of cooperative education institutes or the Augsburg University of Applied Sciences with the goal of obtaining a Bachelor of Engineering (BA). In addition to the dual-system degree program in mechatronics and electronics, KUKA also offers a dual studies program for majors in mechanical engineering, computer science and business information technology.

During the reporting year the company also expanded its contacts with schools in the region. Now students at all forms of German secondary schools can learn more about work life at KUKA in a week-long introductory apprenticeship. Around 130 students took advantage of this opportunity at the company's Augsburg site in 2013. In addition, school classes were able to learn more about the company's training center as part of company tours.

The KUKA Academy also offers employees a range of training and continuing education courses. Among others, these include computer application, sales, purchasing, business administration, tax and legal seminars along with project and quality management training courses. But the company's "soft skills" seminars focusing on leadership, social skills or health were also quite popular. In 2013, 1,102 employees took part in a total of 121 seminars at the Augsburg site. Of these, 318 improved their skills in foreign languages such as English and Spanish.

Personnel development creates global perspectives

KUKA is working on an enterprise-wide personnel development process to help the company compete for qualified applicants worldwide. The aim is to use an employee qualification history to develop a personalized qualification analysis. This will allow the company to offer employees customized personnel development measures to enhance their individual career planning efforts. KUKA will benefit not only from improved internal organizational management but also from targeted succession planning efforts. Another area of emphasis for personnel development lies in implementing an expert career path program featuring personalized career planning in research and development. The company launched a pilot project in this area during the reporting year. Plans are underway to roll out the enterprise-wide personnel development project in the coming year.

Unified leadership model

In light of KUKA Group's international orientation, the company launched a project to help develop a unified, enterprise-wide leadership model during the reporting year. It will serve as a basis for creating a unified leadership culture in an intercultural context. The actions planned for the leadership model are scheduled to begin in 2014.

Enhanced employer brand

During the reporting year, KUKA worked on a recruiting strategy to hire qualified employees. Part of this strategy involved enhancing the company's image as an employer brand. As part of a comprehensive "Employer Branding Campaign" the company developed targeted ads, image designs and trade show presentations. The campaign was rolled out at Hannover Messe in April 2013. Around 500 contacts were established with prospects for internships, dissertations, entry-level positions and permanent positions at this trade show alone. Tours were arranged for college and high school students and an info booth was set up to answer visitors' questions. This also marked the first ever Professors' Day at Hannover Messe. Here, KUKA discussed collaboration possibilities in the field of research and development with distinguished university professors. The company also revamped its career pages on the web and posted new job ads in online and print media within the scope of the Employer Branding Campaign.

Cooperation partnerships with renowned universities from around the world

KUKA has partnerships with renowned universities from around the world, including Tongji University in Shanghai, TU Munich and the universities of applied sciences in Augsburg and Kempten. During the reporting year, KUKA participated in 12 university contact fairs and was the principal sponsor of the "Pyramid" fair in Augsburg. "Pyramid" is designed to establish contacts between businesses and people entering the workforce. KUKA also took part in Academica's "Career Day" in Augsburg and sponsored the "Best Thesis Award" at TU Munich.

Titles and awards

The appeal of the company's working environment is also reflected in external reviews. KUKA was ranked 43rd in the Engineering Edition of the 2013 Trendence Graduate Barometer and 90th as a newcomer in the IT Edition, making it one of the top 100 companies to work for. In a survey conducted by Universum, the company ranked 54th among the 130 companies surveyed, moving up four places from 58th the previous year. In addition, KUKA supported the "Fair Company" initiative in 2013, which promotes fair internships and real opportunities for college graduates. This means, for example, that KUKA primarily offers internships geared toward providing career orientation and does not propose internships as alternatives to graduates seeking permanent employment.

Employee share program

KUKA employees identify with the company's success. Their interest in the employee share program is proof of this. 212 employees participated in the program during the reporting year. 48,195 shares were transferred to employees.

EVENTS AFTER THE BALANCE SHEET DATE

In an ad hoc release on December 13, 2013, KUKA issued a declaration of intent outlining its tentative plans to invest in the Reis Group. That same month the parties agreed that KUKA would take a 51 percent share in Reis Group Holding GmbH & Co. KG with profit-sharing rights starting on January 1, 2014 and would later have the option of increasing its share in the company to 100 percent. The agreement reached in December 2013 was subject to anti-trust laws and fulfillment of the condition precedent regarding the repayment of the Reis Group's financing obligations. Both conditions were met in January 2014, meaning that Reis Group will be fully integrated in KUKA Group's consolidated financial statements in 2014.

Beyond this, there were no other reportable events from the beginning of the new fiscal year to the date of this management report that had an impact on the financial position and performance of the company.

FORECAST, OPPORTUNITIES AND RISK REPORT

Opportunities and risk report

General principles

KUKA Group is a global enterprise with international operations. Any entrepreneurial activity provides new business opportunities, but also involves many risks, especially technical ones. KUKA Aktiengesellschaft's Executive Board aims to systematically and sustainably improve the value of the company for all stakeholders and shareholders by seizing potential opportunities and minimizing said risks.

Risk management

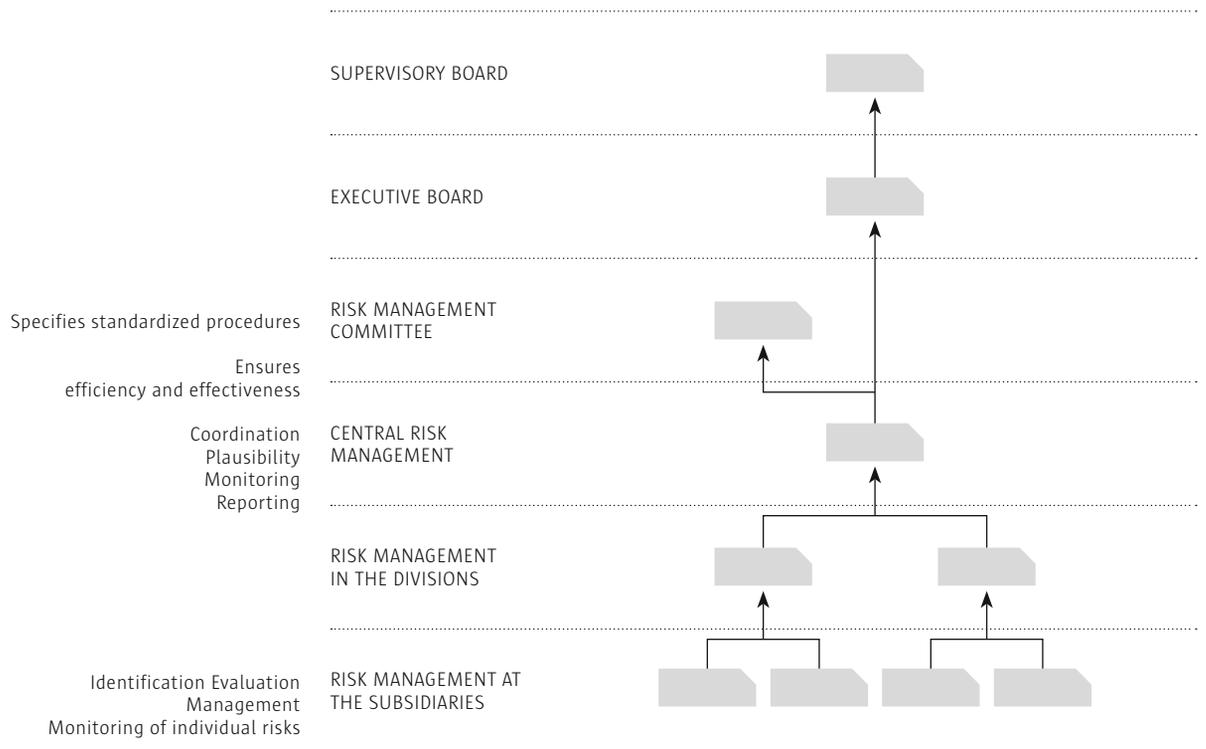
To achieve this objective, the Executive Board has implemented a comprehensive corporate risk management system to systematically and consistently identify, evaluate, manage, monitor and report the internal and external risks to which its divisions and subsidiaries are exposed. Group management regularly assesses the likelihood that identified risks will occur and their potential impact on expected profits. Risks are categorized according to worst, medium and best case scenarios, including the expected impact of the occurrence of an event. Accruals and write-downs associated with these risks are recognized in the financial statements in accordance with applicable accounting principles. The monthly risk report includes the top ten risks for the divisions and the holding company KUKA Aktiengesellschaft, as well as an overview of the Group's risk exposure. The top ten risks are a fixed part of monthly reporting. The risk report is also reviewed during Executive and Supervisory Board meetings, especially by the Audit Committee. The identified risks are presented and explained in more detail to the Executive Board each quarter by the Risk Management Committee. The committee also determines whether any measures already implemented to minimize risk are adequate or whether further steps need to be initiated. These plenums also assess the plausibility of the reported risks and determine how to avoid similar risks in future.

The managers of the divisions and subsidiaries are directly responsible for the early identification, control and communication of risks. Risk managers in the central and decentralized business units ensure that the reporting process is uniform, with clearly defined reporting channels and reporting thresholds that are in line with the size of the company. Internal ad hoc announcements are mandatory whenever risks exceed the Group's defined reporting thresholds. The standard risk management procedures applied throughout the Group are efficient and effective. The head of risk management coordinates the risk management systems. He compiles, communicates and monitors the individual risks identified and determines the Group's risk exposure. The head of risk management resides within KUKA Aktiengesellschaft's Group controlling department, which reports directly to KUKA Aktiengesellschaft's CFO. This ensures that risk management is an integral component of the KUKA Group's overall planning, control, and reporting process.

The Group's risk management system enables the Executive Board to identify material risks at an early stage, initiate appropriate steps to counter such risk, and monitor implementation of the steps. The internal audit department regularly monitors whether KUKA Group's employees adhere to the risk management guidelines and whether existing procedures and tools are effective. It also audits those responsible for the risks if this is relevant. The internal audit department also regularly audits the risk management process to ensure efficiency and continuous improvement. Furthermore, external auditors check that the early risk identification system is suitable for early identification of risks that could threaten the existence of the company as a going concern.

The Group's risk exposure, based upon evaluating operating risks according to the aforementioned procedures, is described below. The report includes the total aggregated maximum risk (worst case) and expected risk value, which is calculated on the basis of the various weighted scenarios and their respective likelihood of occurrence. Opportunities are evaluated by the individual divisions and are not further aggregated.

RISK MANAGEMENT ORGANIZATION



Internal and external auditors check the risk management system and the risk early detection system

GROUP RISK EXPOSURE

in € millions	Worst case	Expected risk value
Legal risks	16.0	4.7
Economic risks	11.8	1.2
Total for the Group	27.8	5.9

	Maximum loss	Likelihood of occurrence
Low	to € 5 million	to 10%
Medium	€ 5 to 10 million	10 to 25%
High	€ 10 to 20 million	25 to 40%
Very high	over € 20 million	over 40%

Legal and economic risks occur primarily as a result of the activities of the Robotics and Systems divisions (from page 108). Further details regarding this risk exposure are outlined in the following sections under the individual risk categories. We also evaluate the potential worst-case damage that could be caused by the individual risks and the likelihood that they will occur, categorized as follows:

Please refer to the notes for details regarding the precautionary balance sheet measures for the identified risks.

KUKA Group's opportunities and risk-related controlling process ensures that the company's managers take both opportunities and risks into consideration. Further details regarding associated opportunities are provided in the description of the various risk categories. The opportunities and risks managed at the divisional level are primarily performance-

related. Cross-segment opportunities and risks such as financing, personnel and IT are analyzed and managed at the Group level, not by the individual operating divisions, which is why said risks are only addressed from the Group perspective in the opportunities and risk report.

In addition to the risk management system, KUKA Group has an internal controlling system (see page 116, IKS-System) above and beyond the risk management system, which it uses to continuously monitor the appropriateness of the corporation's business and accounting processes and identify potential improvements.

Strategic risks and opportunities

KUKA's business divisions aim to be among the technology and market leaders in their target markets. The key to achieving this is to consistently enhance their core technologies on the basis of coordinated innovation programs. One important task is to identify opportunities and risks associated with technical innovations early and to evaluate the innovations' manufacturability. The company mitigates the impact of faulty market assessments by conducting regular market and competitor analyses, some of which are decentralized. The risk of developing non-marketable products and systems is reduced through application-oriented development, partnerships with systems integrators, and alliances and cooperative research projects with, for example, the German Aerospace Center (DLR) in Wessling near Munich, the RWTH technical college in Aachen, and several institutes of the Fraunhofer Society. Strategic risks and opportunities are not quantified.

Legal risks

Since KUKA conducts business around the world, it is obliged to comply with many international and country-specific laws and regulations issued by, for example, tax authorities. The company employs specialists familiar with the respective countries' laws on a case-by-case basis. Opportunities and risks arise as a result of changes to legal frameworks. For example, tax audits discovering non-compliance issues could negatively impact the Group in the form of payment of interest charges, penalties and back taxes. At the present time, there are no foreseeable tax or legal issues that could have a significant negative impact on KUKA Group. Appropriate provisions have been recognized for tax risks based on experience. For further details please see page 146 and following of the notes.

Standard general contracts are used whenever possible to cap legal risks. The Group's legal department supports the operating companies to help limit risks associated with in-house contracts, warranty obligations and guarantees, as well as country-specific risks such as the lack of patent and brand protection in Asia. KUKA has developed an independent strategy to safeguard its intellectual property, which is primarily secured by patents and trademark rights.

In addition, Group-wide Directors' and Officers' (D&O) liability insurance policies are in place that cover the managing bodies (Executive Board and managing directors) and supervisory bodies (Supervisory Board, administrative and advisory boards) of the German and foreign Group subsidiaries. Existing insurance policies are reviewed annually in order to weigh the relationship between the insurance protection and deductible amount versus the risk premium.

Performance risks and opportunities in the divisions

KUKA is exposed to the cyclic investment behavior of its customers in the various market subsectors. A major portion of the Systems and Robotics divisions' business volume is in the automotive sector, where oligopolitical structures and constant price pressure are ongoing concerns. Fluctuations in the industry's capital spending plans are also considered in the respective strategic and operative plans by analyzing public announcements and disclosures. The company continuously strives to be as flexible as possible with its own capacities and cost structure to address the cyclic nature of the business.

KUKA benefited from high investment activities in both the automotive industry and in the general machinery and plant engineering sector throughout 2013. Additional opportunities arose because KUKA Group's key automotive customers enjoy an excellent competitive position in their markets. In comparison to its own competitors, KUKA Group sees business growth opportunities due to its customer portfolio, particularly with respect to the growth of its customers' market shares. Further opportunities arise due to the general trend toward greater automation in non-industrial sectors, such as the long-term prospects associated with assisting an aging society.

KUKA works with suppliers that focus on quality, innovation strength, continuous improvement, and reliability so that it can supply its own customers with products of the highest possible quality. Generally, KUKA sources product components from several suppliers in order to minimize the risk of sharp price rises for key raw materials, but in a few cases, due to lack of alternate sources, is dependent on single suppliers that dominate their markets.

KUKA Robotics

Demands for continuous product innovation from international customers and unrelenting cost consciousness are the key challenges for this division's product portfolio; especially when it comes to the automotive industry and its sub-suppliers. The result is permanent price pressure and potentially longer life cycles for the robotic applications, combined with demands for ever-improving quality and longer warranties.

KUKA Robotics responds to such trends by continually developing new products and applications that offer customers in existing markets quantifiable financial benefits driven by quick paybacks. Launching new products goes hand-in-hand with product performance risks and quality guarantees, which could generate additional costs if rework is required. KUKA employs a comprehensive quality management system that includes extensive validation and test processes to manage such risks or avoid them altogether.

KUKA sees an opportunity to continuously expand its customer base into general industry. One of the corporation's key strategic thrusts is to penetrate new, non-automotive markets. The aim is to penetrate the health care sector and other consumer related markets in which human-machine collaboration will in future be essential. Systems used for human-machine collaboration can operate without protective barriers or similar safety measures. One of the division's sections, KUKA Laboratories, focuses on developing the technology for such innovative products and applications. The company is also further prioritizing sales in the Americas region and the BRIC nations. The company's profitability will become less and less dependent on exchange-rate fluctuations as it increasingly spreads its value added across different local currencies.

ROBOTICS RISK EXPOSURE

in € millions	Worst case	Expected risk value
Legal risks	6.6	2.5
Economic risks	2.0	0.8
Total for Robotics	8.6	3.3

The assessed potential damage associated with all individual risks is low (to €5.0 million) and the likelihood of occurrence is medium to high (to 40.0 percent). Please refer to the notes for details regarding the precautionary balance sheet measures for the identified risks.

KUKA Systems

This division's sales and profits are subject to general business risks due to the length of time it takes to process project orders, the revisions to the specifications that are often necessary while already processing the orders, the infrequency of the orders received and the price and competitive pressures. Other risks associated with these projects include inaccurate prediction of the actual costs as well as penalties for late deliveries. The division thus uses appropriate risk checklists for individual orders in order to assess the associated legal, economic and technical risks prior to preparing a quotation or accepting a contract. One of the components of project execution is to monitor and track insolvency risks and mitigate them using a strict project and receivables management process. Other risks are continuously monitored and if necessary accounted for by way of accruals or write-downs. Opportunities associated with the project business arise mainly when parts can be purchased at a lower cost than originally estimated, and by invoicing the customer for any change orders received over the course of the project.

Major automakers throughout the world are currently feverishly expanding their global manufacturing capacities. KUKA increasingly works jointly with internal partners, whereby several of the division's regional subsidiaries collaborate on a project, especially in South America and Asia. In these situations, risks involve information exchange, the value-added process, and the IT-based master project management system. There are also organizational risks associated with extraordinarily rapid and strong growth in business volume, particularly in emerging markets. KUKA mitigates these risks by harmonizing its global IT systems and deploying experienced internal and contract employees when establishing and expanding the local organizations.

The increasing variety of models offered by the automotive industry has a positive impact on the potential market volume, since this generates increasing demand for flexible manufacturing systems, which in turn spurs demand for new or revamped assembly lines. This creates new business opportunities for systems integrators and sub-suppliers. Scarce resources are driving demand for smaller and more fuel-efficient vehicles that will use alternative energy sources. This means automakers, especially American manufacturers, will soon have to invest in new production lines or upgrade their existing assembly lines.

Pay-on-production contracts such as KTPO's (KUKA Toledo Productions Operations) offer additional opportunities, but also risks. The Jeep Wrangler brand continues to promise above-average growth prospects compared with other American car models. KUKA participated in this growth again in 2013. Here risks involve greater dependence on the volumes produced for the global car market.

Thorough market analyses have shown that KUKA Systems also has long-term business opportunities outside the automotive industry; namely, in general industry. A current example is the aerospace industry, from which new orders were again received in 2013. Although this presents an opportunity to penetrate new markets, it also entails risk, above all in relation to technical requirements, since customers in these sectors often have no experience with automated systems. The aforementioned checklists to review the technical risks associated with applying new automation techniques are thus an especially important tool for mitigating risks.

SYSTEMS RISK EXPOSURE

in € millions	Worst case	Expected risk value
Legal risks	9.4	2.2
Economic risks	9.8	0.4
Total for Systems	19.2	2.6

The assessed potential damage associated with all individual risks is medium (to €10.0 million) and the likelihood of occurrence is low to high (to 40.0 percent). Please refer to the notes for details regarding the precautionary balance sheet measures for the identified risks.

Financial risks

One of KUKA AG's primary tasks is to coordinate and control the Group's financing requirements and to ensure that KUKA remains financially independent. With this goal in mind, the holding company optimizes the Group's financing and limits its financial risk via the Group's standard treasury reporting system. In addition, liquidity risk is reduced for the Group as a whole by closely monitoring the Group's companies and their management of payment flows.

Over the course of the past few years, several measures have been implemented to strengthen KUKA Group's solvency. One of these was to restructure the company's debt with respect to time to maturity and the type of financing instruments used. In 2013, this included issuing two convertible bond tranches, one in February and one in July, and signing an unsecured syndicated senior facilities agreement in December. Please refer to the financing section on page 162 and following for further details.

The syndicated senior facilities agreement, which runs until December 2018, contains the usual covenants. A fundamental risk associated with this type of covenant-based financing exists when business performance is significantly below plan and the resulting earnings and financing situation precludes adherence to the defined limits. KUKA monitors adherence to these covenants monthly. The company complied with all covenants during the course of fiscal 2013. As of December 31, 2013, all ratios regulated by covenants were well within the contractually defined limits. Please see page 163 for comprehensive details about the syndicated senior facilities agreement and the extent to which the agreed credit lines have been utilized.

One risk that will also impact business performance after 2013 is the increasing fluctuation in currency exchange rates, especially as relates to the Japanese yen, the US dollar, the Chinese yuan and the Hungarian forint; for example, the apparent devaluation of the yen in relation to the euro gives Japanese competitors an advantage. Transaction-related currency exchange risks are hedged using forward foreign exchange contracts. Internal guidelines govern the use of derivatives, which are subject to continuous internal risk monitoring. Details on the central currency management process are provided under "Financial Instruments" starting on page 165 of the notes to the financial statements. Currency translation risks; i. e., measurement risks associated with balance sheet items whose value has been converted from a foreign currency, are not hedged, but are continuously monitored. The risk associated with the volatility of leading currencies and the resulting economic exchange risk (competitive risk) is mitigated by having production facilities in several countries (natural hedging).

Personnel risks and opportunities

The success of KUKA Group, a high-tech enterprise, depends to a great degree on having qualified technical and management staff. Personnel risk arises mainly from employee turnover in key positions within the Group. Improvements in both business and economic prospects enable the company to strengthen the loyalty of its core personnel, train new, highly skilled employees, and entice new recruits to join the Group. This applies to the traditional markets in Europe and the United States, but especially to recruiting employees in growth markets, where the need for skilled employees is growing steadily. Last but not least, in-house continuing education programs such as those offered by KUKA Academy, or employee suggestion programs, generate opportunities resulting from the improved motivation and qualification of the workforce.

IT risks and opportunities

IT risks have risen over the past number of years, not least because of the importance of IT to business processes. These risks relate to both the frequency of viruses or hacking and the damage they could potentially cause. The existing IT security and Business Continuity Management systems as well as guidelines and organizational structures are continuously optimized and reviewed in an effort to predict and minimize possible IT-related risks such as failure of computer centers or other IT systems. One way this is addressed is by continuously upgrading hardware and software. Ongoing optimization of IT-supported processes generates long-term cost reduction potential and leads to continuous quality improvements. By systematically monitoring the associated processes, the company reduces the risks associated with an increasing number of external threats as well as dependence on the ever-expanding digitization of business processes.

Compliance risks

Compliance violations may lead to fines, sanctions, judicial orders regarding future conduct, forfeiture of profits, exclusion from certain transactions, loss of trade licenses or other restrictions. Furthermore, involvement in potential corruption proceedings could harm the overall reputation of KUKA Group and could have a negative impact on efforts to compete for business in both the public and private sectors. Such proceedings could also have a negative impact on the relationship KUKA Group has with business partners upon which it depends, as well as its ability to find new business partners. They could furthermore negatively impact the company's ability to pursue strategic projects and transactions of potential importance for the business, such as joint ventures or other forms of cooperation. Ongoing or future proceedings could lead to the suspension of some existing contracts, and third parties, including competitors, could initiate legal proceedings against KUKA Group for substantial sums of money.

KUKA therefore rolled out a Corporate Compliance Program in early 2008 to make such risks transparent and controllable. The Compliance Committee established through this program meets at regular intervals and ad hoc and reports to KUKA Aktiengesellschaft's CEO, who in turn reports directly to the Supervisory Board's Audit Committee. The CEO is ultimately responsible for the corporate compliance program, which is regularly updated and subject to strict internal controls. The program did not uncover any substantial risks in 2013 due to the active countermeasures taken to mitigate risk at an early stage and to eliminate risk sources; e. g., by realigning business processes.

Other risks

KUKA Group continuously monitors other risks and mitigates these to the greatest extent possible. There is no evidence of environmental risks from operational activities, since the company does not use hazardous materials. The Group makes use of buildings and properties for its business operations, some of which it owns. As a result, the company is exposed to risks associated with any residual pollution, soil contamination, or other damaging substances that may be discovered on its properties. There is currently no evidence of any situations that would have a negative impact on the measurement of balance sheet items. However, it cannot be ruled out that any such situations, which could, for example, require costly cleanup operations to be undertaken, will occur in the future.

Please refer to page 121 and following about material agreements subject to conditions related to a change of control. The shareholder structure is periodically analyzed to assess the possibility of takeover of the company.

Summary

Overall, KUKA Group's named risks relate to the business performance of the divisions and financial risks associated with currency exchange rate fluctuations and corporate financing. The Executive Board is not aware of any individual or aggregated risks that could threaten the company's existence. Strategically and financially, the company is positioned to be able to take advantage of business opportunities.

Forecast

General economic environment

Over the past few years, the growth of the world's key economies was moderate and in some cases even negative. Still, according to the International Monetary Fund (IMF) the world's gross domestic product grew 3.0 percent in 2013. This compares to 3.1 percent in 2012 and 3.9 percent in 2011. The industrial nations suffered from financial and debt crises, and the emerging and developing countries' economies were also weaker. But their growth rates are significantly higher than in the developed industrial countries.

The IMF expects the world economies to grow more rapidly in 2014 and has forecast an increase in the global gross domestic product of 3.7 percent. Thanks to increasing stabilization after the debt crisis, Europe is expected to recover. The IMF expects Germany's growth rate for 2014 to come in at 1.6 percent. According to VDMA, the German engineering Federation, the mechanical engineering sector's orders received were down 2 percent year-over-year in 2013. A slight recovery is expected for 2014, with growth forecast at 3 percent. According to the IMF, the economic recovery in the United States should continue as consumer spending rises, supported by excellent job market growth. Economic performance in the emerging countries is also expected to

improve again in 2014. However, in China, economic growth is expected to decline slightly compared to last year. The purchasing manager index, which forecasts economic outlook for the next six months, in January came in at 49.6, according to Markit and HSBC below the critical threshold of 50. One of the reasons given is the planned economic reforms in China, which aim to boost domestic demand. The Chinese government will therefore accept a short period of slower growth. Compared to the rest of the world however, the forecast growth of 7.5 percent is still higher than the growth rates in the major industrial countries.

The outlook for KUKA's key markets for fiscal 2014 shows rising growth rates.

GROSS DOMESTIC PRODUCT

in %	2011	2012	2013	2014
World	3.9	3.1	3.0	3.7
Eurozone	1.5	-0.7	-0.4	1.0
USA	1.8	2.8	1.9	2.8
China	9.3	7.7	7.7	7.5
Germany	3.4	0.9	0.5	1.6
Developing/emerging countries	6.2	4.9	4.7	5.1

Source: IMF, January 2014

Automation trend

The trend towards automation continues. Companies around the world will increasingly automate their production plants and processes, especially using robots. In its most recent study, the International Federation of Robotics (IFR) forecast expansion of the global robot markets. Here the growth is driven primarily by the benefits for the manufacturing industries. This includes not only improved production process efficiencies and better product quality, but also higher output and product variety driven by flexible manufacturing systems.

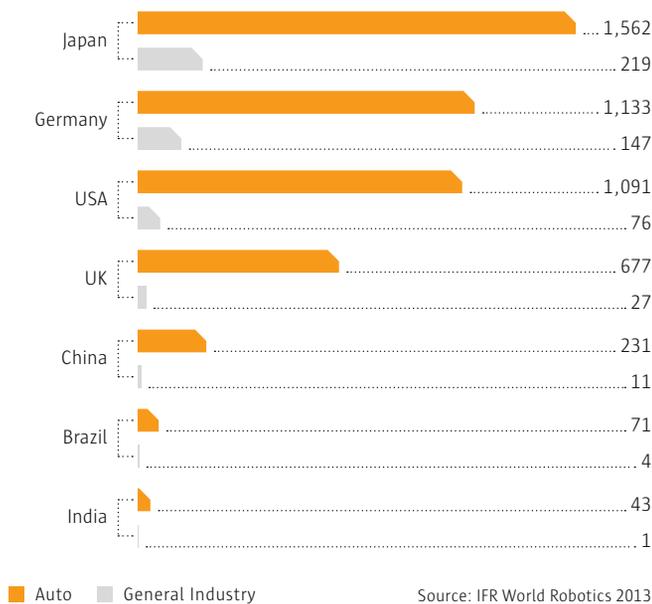
The most important growth drivers for robot-based automation are:

- 1) General industry:** Robot density (number of robots per 10,000 employees) is still relatively low compared to the automotive sector. See graph on page 113. On average, the automotive industry's robot density is eight times higher than in general industry. General industry companies are facing unrelenting cost pressures. This is why the potential for the automation sector is huge. The trend to automation is supported by the shortage of qualified skilled workers, rising wage costs and the increasing demand for high quality products. In addition, technology advances enable solutions to be found for production processes that in the past were unable to automate.
- 2) Automotive Industry:** The international automotive industry has a decisive impact on growth, as it buys more than one-third of the robots sold annually. In the mature manufacturing regions such as Europe, the United States and Japan, the growth potential is driven mainly by the need to modernize or upgrade existing manufacturing plants to improve efficiencies. But the automotive sector also invests in the emerging countries' growth markets. In these areas, it meets the strong customer demand and takes advantage of favorable conditions created by governments seeking to increase the share of vehicles produced locally. Additional potential is created by the increasing number of local carmakers in the emerging countries. In order to improve production output and quality, manufacturers are investing in automating their processes.
- 3) Technology/service robotics:** The pace of development of various robot types, applications, controls and above all software solutions has risen dramatically in the past few years. New markets are being created by new technologies in the field of cooperation between humans and machines, safety, flexibility and user-friendliness. But new applications will also be created at existing customer sites, where solutions will now be available for production processes that could not be automated in the past.

4) Developing and emerging countries: Robot density, and thus the degree of automation, is still relatively low in the developing and emerging countries compared to industrial countries. Due to rising labor costs and international competition, more and more companies in these regions are investing in automation. It enables them to improve their product quality, increase the number of units produced in a given time and optimize their cost structures. China especially is investing very heavily in automation. Already today, China is the world's second-largest robot market.

Overall, the IFR expects the world's robot market to grow at an average rate of 6 percent annually from 2014 to 2016. Europe and the Americas are expected to grow at a below-average rate of 4 percent each and Asia at an above-average rate of 8 percent. According to the IFR, the growth will primarily come from the emerging countries and the United States. Moreover General industry in particular is also expected to be a growth driver. Automotive industry growth on the other hand will shrink in 2014 and 2015 according to IFR forecasts. This is due to the strong investments of the past few years. However, the IFR estimates that automotive will return to growth no later than 2016. By then, spending on modernizations and upgrades will again be required in the established markets.

ROBOT DENSITY AUTO / GI + COUNTRIES
ROBOTS PER 10,000 EMPLOYEES



General conditions for KUKA

General industry

Automation in general industry continues to increase. This includes sectors such as electronics, machine tools, foundries, aerospace and the food and beverage industry, all of which continue to exhibit a strong need to automate. Rising labor costs and high quality requirements increase the need to automate. KUKA responds with solutions especially tailored to meet the needs of these industries. For example, for the Robotics division, there is a huge potential in the machine tool sector. Robots can be used for both loading and unloading machines, as well as machining parts. According to KUKA's own estimates, only 2 percent of machine tools sold worldwide are equipped with robots. In order to benefit from the worldwide trend toward automation in general industry, KUKA is investing more heavily in the products required in these industries; for example, robots with low payloads such as the KR AGILUS. The success of KUKA Robotics is reflected in the orders received numbers of the past few years. Orders received are up 133 percent, from €142.1 million in 2009, to €330.9 million in 2013. The share of general industry business in the Robotics division in 2013 was just over 40 percent, slightly higher than the automotive sector share. For the Systems division, there is huge automation potential in the aerospace sector. The demand for quality and precision here is high, similar to the automotive sector. Aerospace customers are demanding innovative solutions for processing large components and new materials. Sales staff has been added by both divisions to expand the general industry business. Over the course of the next few years, KUKA Group is expecting increasing sales from general industry.

Automotive Industry

Car manufacturing and sales numbers will continue to rise worldwide. According to estimates released in January 2014 by IHS Automotive (IHS), the number of cars manufactured across the globe will rise from 84 million vehicles in 2013 to about 103 million vehicles in 2019. Over 60 percent of these will be made in Asia. According to a PriceWaterhouseCoopers (PWC) estimate published in July 2013, about 28 million cars and light trucks will be sold in China alone in 2019. Sales in Europe in 2019 will be about 17 million cars and between 16 and 17 million in the Americas. According to IHS, the average number of units manufactured annually worldwide will grow at a rate of about 3.4 percent from 2013 to 2019. According to the forecast, growth in the Americas and Europe will be below average at about 3.0 and 2.4 percent respectively. The Chinese market is expected to grow at an above-average annual rate of about 6.1 percent. In order to meet the rising demand of these markets, automakers have spent heavily on manufacturing plants, especially in the last few years. As a result, KUKA expects that capital spending in 2014 will slow, as forecast by the IFR. But spending is expected to pick up again no later than 2016. The trend in the

automotive industry to offer an increasing variety of models and falling lifecycles of existing vehicle types will spur the growth. To standardize the model platforms and improve efficiencies, assembly lines will need to be highly flexible and maintain high production quality, which can only be guaranteed by automation.

Technology / service robotics

New technologies enable robot-based automation to be used in areas that have not or partially been automated until now. This includes professional service robotics, a relatively new technology segment. More and more manufacturers are interested in this segment and the pace of progress in development has been dramatic. Already today, service robots are being used for important farming, medical and logistics applications, as well as defense and security. The Fraunhofer Institute for Production Technology and Automation (IPA) defines a service robot as a freely programmable motion device that provides services semi or fully automatically. Services are defined as tasks that are not directly used to produce capital goods, but rather assist people and equipment. According to an IFR study, the number of service robots sold in 2012 rose 2 percent to 16,100. A subsegment, the medical robot market, grew at an above-average rate of 20 percent. The IFR expects a significant increase in sales in the professional segment, and is predicting that 23,000 service robots will be sold between 2013 and 2016 annually.

KUKA embraced new technologies and new markets very early. The LBR iiwa with its sensitivity features is not only useful in existing markets, but is also usable in sectors that to date have not been automated. KUKA Systems supplements this offering by acting as a systems integrator at customer sites. KUKA Robotics has already applied robots from its existing portfolio for health care applications. KUKA expects rising sales from this segment in the mid to long-term.

China

The Chinese market has seen strong growth in the past few years and today is one of the largest robot markets in the world. According to the IFR, the number of robots sold more than tripled from just under 8,000 in 2008 to about 25,000 in 2013. Compare this to Japan, the world's largest robot market, where it is estimated that 27,200 robots were sold in 2013. The robots installed in China were made almost exclusively by non-Chinese manufacturers. But according to IFR, Chinese robotmakers will become increasingly important and will produce more and more robots in the coming years. Market players are supported by government programs. KUKA responds to this challenge with research and development, in order to expand its technology leadership globally.

For China, the IFR is forecasting an average annual growth rate of about 15 percent between 2014 and 2016, reaching 38,000 sold robots in 2016. KUKA will benefit from this market growth and expanded its market presence in the region by adding a new KUKA Robotics factory in greater Shanghai at the end of 2013. KUKA Robotics is thus able to offer customers service, sales, and above all, manufacturing in close proximity to their sites. This will significantly reduce lead times and speed up service. KUKA will continue to treat China as a strategically important location in the coming years and assign appropriate resources to the market. In 2014, the company will have an additional location in this market following the acquisition of Reis Group. KUKA Group is forecasting rising sales numbers in China over the next few years, driven by the high demand for robot-based automation and its market presence in China.

Company-specific factors

Summary

Given the current economic forecasts from the IMF, KUKA expects increased demand in fiscal 2014, especially from North America and Asia, in particular from China. Overall, current economic trends should have a positive impact on earnings. From a sector perspective, general industry growth is expected to be strong. This is due in part to the high potential for automation solutions, as well as the positive economic prospects for general industry customers. Automotive customers invested heavily over the past few years. These high levels of spending are not expected to be repeated in 2014. Investments by this sector are therefore expected to decline slightly compared to last year. Please refer to the notes starting on page 165 for comments on currency effects. A weaker yen / EUR exchange rate will not impact the Systems division's results. However, it is expected to have a negative impact on Robotics' earnings. In contrast to Systems, Robotics' main competitors are located in Japan and will benefit from a weaker yen / EUR exchange rate.

EXPECTED GROWTH FOR KUKA GROUP

Summary	Earnings 2013	Outlook 2014*
Sales	€1,774.5 million	€1.9–2.0 billion
EBIT margin	6.8%	~6.0%
Net income for the fiscal year	€58.3 million	declining slightly
Investments	€74.7 million	rising slightly
Free cash flow	€95.4 million	mid-double-digit million range**
Dividend per share	€0.30	same as last year to slightly rising

* incl. Reis Group

** excl. financial investments

Definitions:

declining slightly / rising slightly: absolute change compared to prior year < 10%

declining / rising: absolute change compared to prior year >10%

Sales and EBIT margin

Based on current general conditions, KUKA expects sales revenues between €1.9 and 2.0 billion, up from last year. Sales should rise both in general industry and automotive. The newly acquired Reis Group will contribute to the sales growth. This would make KUKA's growth stronger than that forecast by VDMA, the German Engineering Federation, which is expecting 3 percent growth for 2014.

Based on the current economic general conditions, KUKA Group is expecting an EBIT margin of about 6.0 percent for fiscal 2014. The main reason it is expected to be lower than last year is because of the first-time consolidation of the Reis Group. We expect a one-time charge from the integration and planned restructuring of Reis. A positive contribution is expected in the following years.

Net income

In 2013, KUKA Group generated a net income of €58.3 million. Because of investments in growing the business operations and the expenses associated with integrating Reis Group, KUKA expects net income to decline slightly. However, in the following years, the acquisition of Reis Groups is expected to have a positive impact on net income, driven by the significant potential incremental sales and cost synergies that will result from the acquisition.

KUKA Aktiengesellschaft's earnings are dependent on the results of subsidiaries due to profit and loss transfer agreements and, in turn, can be derived from the forecast for KUKA Group.

Research and development / investments

The total expenses in this area will be allocated almost exclusively to the Robotics division, since Systems conducts its research primarily in conjunction with customer projects. The demand for KUKA robots and solutions is based primarily on innovations and the quality of the products. To safeguard and expand these competitive advantages sustainably, KUKA Group plans to substantially boost spending on research and development. Spending by the Robotics division will mainly be on enhancing robot applications, new software solutions, and programs to improve existing products and boost their efficiencies. Overall, KUKA Group plans to spend about €70 million on research and development in 2014. 20–25 percent of the investments will be capitalized and amortized over three to five years.

KUKA has budgeted for slightly rising total investments for 2014. The main investments will be in maintaining existing systems as well as constructing a new technology and innovation center in Augsburg. The new building is expected to be completed in mid-2015 and is being constructed to improve cooperation between research and development and other associated product areas, which are currently located at different sites.

Free cash flow

KUKA Group's free cash flow is primarily generated from operating earnings and the growth of working capital in the Robotics and Systems divisions. Based on the current general conditions and the budgeted sales growth, KUKA Group expects a free cash flow excluding financial investments in the mid-double-digit million range in 2014.

Dividend

The Executive and Supervisory Boards will recommend to shareholders at the Annual General Meeting in Augsburg on May 28, 2014 that a dividend of €0.30 per share be paid for 2013. KUKA's dividend policy is to pay out between 25 and 30 percent of net income to shareholders provided business performance is good and general conditions are stable. For fiscal 2014, KUKA plans to maintain its dividend and possibly increase it slightly.

INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM

Principles

Pursuant to section 289 (5) and 315 (2) no. 5 of the German Commercial Code (HGB), KUKA Aktiengesellschaft, as a publicly traded parent company, must describe the key characteristics of its internal control and risk management system in its management report. The description must include the accounting processes of the companies included in the consolidated financial statements.

KUKA regards the internal control and risk management system as a comprehensive system, and uses the definitions provided by the Institut der Wirtschaftsprüfer in Deutschland eV., Düsseldorf, of accounting-related internal control systems (IDW AuS 261 no. 1g et seq.) and risk management systems (IDW AuS 340, no. 4).

An internal control system is accordingly defined as all principles, processes, and measures introduced to the company by management that result in systematic and transparent risk management. The internal control system focuses on organizational implementation of management's decisions made to ensure the effectiveness and efficiency of business operations (including the preservation of assets, which includes preventing and exposing asset misappropriation), adherence to generally accepted accounting principles and the reliability of internal and external accounting, and compliance with the legal provisions relevant for the company. This approach allows risk to be better identified, measured and controlled.

The risk management system comprises all organizational rules and measures related to identifying risk and dealing with entrepreneurial risk.

In the area of financial reporting, the preparation of consolidated financial statements in compliance with the standards must be ensured regardless of possible risk. KUKA meets this requirement through implementation of an accounting-related internal control system at all KUKA Group companies. The internal control system is geared toward assuring early identification of possible sources of error and limiting the resulting risk. Various monitoring measures – both integrated into the process and independent of the process – contribute to the preparation of annual and consolidated financial statements that are in conformity with the legal provisions.

Structures and processes

With regard to the accounting process, the structures and processes described below have been implemented in KUKA Group. The Executive Board of KUKA Aktiengesellschaft bears full responsibility for the internal control and risk management system as it applies to the accounting process.

The system extends via clearly defined management and reporting structures to all subsidiaries that are included in the consolidated financial statements.

For the Group's German companies, the Shared Service Center of KUKA Aktiengesellschaft is responsible at a central level for accounting and human resource operations.

Intragroup tasks such as treasury, legal services and taxes are also performed centrally by KUKA Aktiengesellschaft on the basis of uniform Group processes.

The principles, organizational structures, and processes of the (Group) accounting-related internal control and risk management system are defined in guidelines and organizational procedures. Adjustments based on external and internal developments are integrated on a continuous basis and made available to all employees concerned.

Characteristics of the internal control and risk management system

With respect to the accounting process, KUKA regards those characteristics of the internal control and risk management system as material that can significantly impact the accounting and the overall presentation of the consolidated and annual financial statements, including the combined management report. At KUKA Group, these include, in particular:

- Identifying the main areas of risk (see page 106 et seq. of the Risk Report) and control that affect the (Group) accounting process;
- Quality controls to monitor the (Group) accounting process and the accounting results at the level of the Group Executive Board, the management companies, and the individual reporting entities included in the consolidated financial statements;
- Preventive control measures in the finance and accounting systems of the Group and the companies included in the consolidated financial statements as well as in operating business performance processes that generate key information for the preparation of the consolidated and annual financial statements and the combined management report, including a separation of functions of predefined approval processes in relevant areas;

- Measures to ensure proper, IT-supported processing of (Group) accounting-related facts and data. These include, for example, central management of access rights to the bookkeeping systems and automated plausibility checks when data is recorded in the reporting and consolidation system;
- Measures to ensure the accounting-related internal control and risk management system by the relevant departments and by internal audit, which monitors adherence to the internal control system by conducting systematic reviews.

In addition, the CFOs of all subsidiaries must provide an internal responsibility statement in the context of external reporting as of June 30 and December 31. Only then do the members of the Executive Board of KUKA Aktiengesellschaft provide an external statement of responsibility by signing the Group Responsibility Statement at mid-year and year-end, by which they confirm that they have adhered to the prescribed accounting standards of KUKA Group and that their figures give a true and fair view of the Group's financial performance, financial position and cash flows.

In its meetings, the Audit Committee of the Supervisory Board regularly reviews the effectiveness of the accounting-related internal control system. The Supervisory Board thus continuously obtains an appropriate view of the Group's risk situation and monitors ICS effectiveness. In so doing, the Executive Board of KUKA Aktiengesellschaft presents the risks associated with financial reporting at least once per year, outlines the control measures implemented, and monitors their correct execution.

Summary

The structures, processes, and characteristics of the internal control and risk management system ensure that the accounting processes of KUKA Aktiengesellschaft and KUKA Group are uniform and are implemented in accordance with the legal requirements, generally accepted accounting principles, international accounting standards, and internal Group guidelines.

They also ensure that transactions are recognized and measured uniformly and accurately throughout the Group and that accurate and reliable information is therefore provided to the internal and external recipients of the information reported.

DISCLOSURES IN ACCORDANCE WITH SECTION 289 PARA. 4 AND SECTION 315 PARA. 4 OF THE GERMAN COMMERCIAL CODE (HGB), INCLUDING ACCOMPANYING EXPLANATIONS

The information required by sections 289 para. 4 and 315 para. 4 of the German Commercial Code (HGB) is disclosed and explained in the following.

Composition of subscribed capital

As of December 31, 2013, the total share capital of KUKA Aktiengesellschaft amounted to €88,180,120.60 and consisted of 33,915,431 no-par-value bearer shares with a pro-rata amount of the share capital of €2.60 each. The share capital is fully paid up. All shares have equal rights and each share guarantees its holder one vote at the Annual General Meeting.

Shareholders are not entitled to have share certificates issued for their shares (section 4 para. 1 of the Articles of Association). When new shares are issued, the start of profit-sharing may be established at variance with section 60 para. 2 of the German Stock Corporation Act (AktG), (section 4 para. 3 of the Articles of Association).

Restrictions affecting voting rights or transfer of shares

KUKA Aktiengesellschaft regularly grants the company's Executive Board members and other selected executives from Group companies the right to participate in so-called "phantom share programs," i. e. virtual share programs, as per the terms of their individual contracts. The phantom share programs are part of the performance-based compensation system for executives and are aimed at sustainably increasing enterprise value. Each of the programs has a term of three years. The payout at the end of the term depends on the share price at that time and on the change in enterprise value. The phantom share programs stipulate that at the end of the term of the respective program, the executives entitled to participate must apply 25 percent of the gross sum paid out toward the purchase of KUKA shares until a pre-determined holding volume is reached. For the programs established to date, the holding volume amounts to 50 percent of the fixed annual remuneration of the executive in question. Shares acquired outside of the phantom share program also count toward the holding target. The holding obligation does not end until the participant leaves KUKA Group.

Again in 2013, KUKA Aktiengesellschaft set up an employee share program (MAP 2013). Under the terms of MAP 2013, employees were entitled to buy KUKA shares and, in addition to the shares purchased, received bonus shares at a pre-determined ratio as defined by MAP 2013. Employees are restricted from selling the KUKA shares purchased or bonus shares allocated until December 31, 2014.

The Executive Board is not aware of any other restrictions that would affect voting rights or the transfer of shares.

Shareholdings that exceed 10 percent of the voting rights

According to the German Securities Trading Act (WpHG), any shareholder who reaches, exceeds, or falls below the voting rights threshold pursuant to section 21 of the WpHG through purchase, sale, or by other means is obliged to report same to the company and the German Federal Financial Supervisory Authority (BaFin).

The most recent notifications were made to KUKA Aktiengesellschaft on November 20, 2013 by the following persons and companies, which reported the following shareholdings of more than 10 percent of the voting rights as follows:

1.	Grenzebach Maschinenbau GmbH, Asbach-Bäumenheim, Germany	19.80 %	held directly
2.	Grenzebach GmbH & Co. KG, Asbach-Bäumenheim, Germany	19.80 %	allocated pursuant to section 22 para. 1 sentence 1 no. 1 of the WpHG
3.	Grenzebach Verwaltungs-GmbH, Asbach-Bäumenheim, Germany	19.80 %	allocated pursuant to section 22 para. 1 sentence 1 no. 1 of the WpHG
4.	Rudolf Grenzebach, Deutschland	19.80 %	allocated pursuant to section 22 para. 1 sentence 1 no. 1 of the WpHG

Other than this, KUKA Aktiengesellschaft has no knowledge of any persons or companies whose direct or indirect shareholdings in the company exceed 10 percent of the voting rights.

Shares with special rights that confer powers of control

There are no shares with special rights conferring powers of control.

Method of voting rights control when employees hold an interest in the share capital and do not directly exercise their rights of control

No employees hold an interest in the share capital within the meaning of section 289 para. 4 no. 5 or section 315 para. 4 no. 5 of the German Commercial Code (HGB).

Legal provisions and provisions of the Articles of Association regarding the appointment and dismissal of Executive Board members and amendments to the Articles of Association

Pursuant to section 6 para. 1 of the Articles of Association, the company's Executive Board must consist of at least two persons. The Supervisory Board determines the number of Executive Board members pursuant to section 6 para. 2 of the Articles of Association. The appointment and dismissal of members of the Executive Board are governed in sections 84 and 85 of the Stock Corporation Act (AktG), section 31 of the Co-determination Act (MitbestG), and section 6 of the Articles of Association.

Pursuant to sections 119 para. 1 no. 5 and 179 para. 1 of the Stock Corporation Act (AktG), any changes to the Articles of Association require a resolution by the Annual General Meeting. Section 22 para. 1 of the Articles of Association states that a simple majority of the share capital represented at the Annual General Meeting is sufficient to pass a resolution, provided that a greater majority is not required by law. A greater majority is required in particular for resolutions concerning changes to the company's business purpose, a reduction in share capital, and changes to the form of incorporation.

Pursuant to section 11 para. 3 of the Articles of Association, the Supervisory Board is authorized to make amendments to the company's Articles of Association that only affect the wording. Furthermore, the Supervisory Board was authorized by resolution of the Annual General Meetings of May 26, 2011 and June 5, 2013 to amend the wording of section 4 para. 1, para. 5, para. 6 and para. 7 of the Articles of Association after utilizing (i) Authorized Capital 2011, (ii) Conditional Capital 2010 and/or (iii) Conditional Capital 2013 to (partially) increase the share capital and, in the event these have not been (fully) utilized by May 25, 2016 or June 4, 2018, after expiry of the respective authorization or deadlines for exercising conversion rights.

Executive Board authorization to issue and buy back shares

Authorized capital

As per the resolution of the Annual General Meeting on May 26, 2011 and section 4 para. 5 of the company's Articles of Association, which was added on the basis of such resolution, the Executive Board, subject to approval by the Supervisory Board, is authorized to increase the company's share capital on or before May 25, 2016 by up to €44,090,059.00 through the issue of new shares on one or more occasions (Authorized Capital 2011). When doing so, the shareholders must be granted subscription rights. However, subject to approval by the Supervisory Board, the Executive Board is authorized to exclude fractional amounts from the shareholders' subscription rights and to exclude shareholder rights if the capital increase takes place in exchange for capital contributions in kind for the purpose of acquiring companies or parts of companies, shares in companies, or other assets (including claims of third parties against the company). The Executive Board is further authorized, subject to approval by the Supervisory Board, to exclude shareholder subscription rights upon utilization on one or more occasions of the Authorized Capital 2011 in return for cash contributions in an amount not to exceed 10 percent of the share capital existing on the effective date of such authorization or, if lower, the share capital existing on the date such authorization is exercised, so that the new shares can be issued at a price that is not significantly lower than the price of the company's shares trading on the stock exchange at the time of finalizing the new share issue price. The above-mentioned 10 percent threshold applies to shares that are sold on the basis of the authorization of the Annual General Meeting of April 29, 2010 pursuant to section 71 para. 1 no. 8 sentence 5 of the German Stock Corporation Act (AktG) in conjunction with section 186 para. 3 sentence 4 of the AktG during the term of the existing authorization or that are to be issued to service bonds with warrants or convertible bonds, profit participation certificates or income bonds, or a combination of these instruments, provided the instruments were issued on the basis of an authorization resolved at the Annual General Meeting of April 29, 2010 pursuant to the corresponding application of section 186 para. 3 no. 4 of the AktG during the term of said authorization. The Executive Board, subject to approval by the Supervisory Board, may only use the aforementioned authorization to exclude shareholder subscription rights to the extent that the pro-rated sum of shares issued under exclusion of subscription rights does not exceed 30 percent of the share capital existing either on the date such authorization takes effect or on the date the authorization is exercised, should that amount be less. The Executive Board is authorized, subject to approval by the Supervisory Board, to stipulate additional details regarding the capital increase and its execution, in particular with respect to share rights and the terms and conditions related to the share issue.

Conditional Capital

Section 4 para. 6 of the Articles of Association stipulates a conditional increase in the company's share capital by up to €4,156,513.40, divided into up to 1,598,659 new no-par-value bearer shares (Conditional Capital 2010).

The conditional capital increase will only be carried out to the extent that the holders of the convertible bonds issued in exchange for cash contributions on February 12, 2013 exercise their conversion rights in accordance with the bond terms. The convertible bond issued on February 12, 2012 via a private placement (originally) had a total principle amount of €58,800,000.

The new shares will be issued at the respective conversion price in accordance with the bond terms. The new shares will participate in the profits as of the beginning of the fiscal year in which they are created, but not for previous fiscal years, even if no profit for these years has been distributed as of yet. The Executive Board is authorized, subject to approval by the Supervisory Board, to define the further details of the execution of the conditional capital increase.

Section 4 para. 7 of the Articles of Association stipulates a conditional increase in the company's share capital by up to €39,933,545.60, divided into up to 15,359,056 new no-par-value bearer shares (Conditional Capital 2013).

The conditional capital increase will only be carried out to the extent that the holders of options or conversion rights or obligations exercise their options or conversion rights arising from the bonds with warrants or convertible bonds, profit participation rights, or income bonds (or a combination of these instruments) that have been issued in return for cash contributions and which are issued or guaranteed by KUKA Aktiengesellschaft or a dependent Group company of KUKA Aktiengesellschaft on the basis of the authorization granted to the Executive Board by the Annual General Meeting resolution of June 5, 2013 until June 4, 2018, or – if the holders are obligated to exercise their conversion or option rights – to the extent that they fulfill their conversion or option obligations, or to the extent that KUKA Aktiengesellschaft exercises its option to grant shares in KUKA Aktiengesellschaft in whole or in part in lieu of paying the monies due, provided no cash settlement is granted or treasury shares or shares in another listed company are used to service the bonds. The new shares will be issued at the option or conversion price to be determined in accordance with the aforementioned authorization resolution. The new shares will participate in the profits as of the beginning of the fiscal year in which they are created. The Executive Board is authorized, subject to approval by the Supervisory Board, to define the further details of the execution of the conditional capital increase.

On July 26, 2013, KUKA Aktiengesellschaft partially exercised the authorization to issue bonds with warrants and/or convertible bonds and the aforementioned Conditional Capital 2013 by issuing another convertible bond in a total principle amount of €91,200,000 via a private placement.

Here, the convertible bond issued on July 26, 2013 represented tap offering of the convertible bond already issued on February 12, 2013. With the exception of the issue date, the two bonds have the same structure and represent a single convertible bond; they have the same securities identification number (ISIN DE000A1R09V9) and are admitted to trading on the Open Market of the Frankfurt Stock Exchange.

Under the terms of this (uniform) bond, the company incurs an obligation to the bondholders to convert each bond with a face value of €100,000.00 pursuant to the conversion right at any time during the exercise period in full, though not in part, to no-par-value bearer shares in KUKA Aktiengesellschaft with a pro rata amount of the share capital of €2.60 each at the current conversion price of €36.8067 per share. Should all holders of the convertible bonds make use of their conversion rights, the company's share capital would be increased by €10,595,897 through the issue of – currently – approximately 4,075,345 new shares with a pro rata amount of the share capital of €2.60 each, subject to the anti-dilution provisions of the bond terms.

Acquisition of treasury shares

As per the resolution passed by the Annual General Meeting of KUKA Aktiengesellschaft on April 29, 2010, the company is authorized, up until April 28, 2015, to buy back its own shares in an amount not to exceed 10 percent of the share capital existing at the time the resolution was passed via the stock market or in the form of a public purchase offer addressed to all shareholders by the company. In doing so, the purchase price (excluding transaction costs) may not be more than 10 percent higher or lower than the average market price defined in the authorization.

On the basis of the above resolution, the Executive Board is also authorized, subject to approval by the Supervisory Board, to treat the company shares acquired subject to the exclusion of shareholder subscription rights on the basis of that and earlier authorizations as follows:

(i) To sell the company shares acquired to third parties in connection with business combinations or the acquisition of companies or parts of companies or interests in companies, or for the purpose of acquiring other assets (including claims of third parties against the company);

(ii) To sell the company shares acquired by means other than via the stock exchange or an offer to all shareholders, provided the shares are sold for cash at a price that is not substantially lower than the quoted stock market price of company shares at the time of the sale. However, such authorization only applies subject to the proviso that the shares sold subject to the exclusion of subscription rights pursuant to section 186 para. 3 sentence 4 of the German Stock Corporation Act (AktG) may not, in total, exceed 10 percent of the share capital, whether on the effective date of the authorization or on the date on which it is exercised. The limit of 10 percent of the share capital is to include shares (i) that are issued to service bonds with warrants or convertible bonds, profit participation certificates or income bonds, or a combination of these instruments, provided the instruments were issued on the basis of an authorization resolved by the Annual General Meeting of April 29, 2010 pursuant to the corresponding application of section 186 para. 3 no. 4 of the AktG and (ii) that are issued by exercising an authorization – in effect on the date on which the above authorization took effect or that was resolved by the Annual General Meeting of April 29, 2010 – to issue new shares, subject to the exclusion of subscription rights, from authorized capital pursuant to section 186 para. 3 sentence 4 of the AktG;

(iii) To use the company shares acquired to introduce the company's stock on foreign stock exchanges on which they have not previously been admitted to trading;

(iv) To offer shares in lieu of paying variable compensation components and/or a thirteenth monthly salary to KUKA Group employees in or for the 2010 fiscal year in 2010 and 2011. Included are the following groups of employees: (i) members of the company's Executive Board; (ii) members of the management boards of companies associated with the company; (iii) employees of the company; (iv) employees of companies associated with the company. When offering the company's own shares in this connection, it must be ensured that (i) the shares are acquired at a price not substantially lower than the quoted stock market price of company shares at the time of accepting the offer; (ii) the acceptance period for the respective offer is four weeks, subject to regulations concerning collective agreements; and (iii) employees who have acquired shares must hold these for a period of four years.

To the extent that members of the Executive Board are to be given the option of purchasing company shares in lieu of payment of compensation components, the Supervisory Board of the company will be authorized to use the company shares and will determine the modalities of the company share offer subject to the preceding stipulations.

Moreover, subject to approval by the Supervisory Board, the Executive Board is authorized to withdraw the company shares acquired. Both the purchase and the disposal authorization may be executed on one or more occasions as well as in parts.

Significant company agreements that are conditional upon a change of control, and the resulting impact

Syndicated bank loan

On December 5, 2013, KUKA Aktiengesellschaft and its significant investment companies signed a new syndicated loan agreement with a banking syndicate led by Commerzbank AG, Deutsche Bank AG Filiale Deutschlandgeschäft, UniCredit Bank AG, and Landesbank Baden-Württemberg, under the terms of which the lenders provide an amount of up to €160,000,000. The facility covers the main credit requirements of KUKA Group (including the furnishing of bank guarantees). The contract includes a change of control clause that is typical in the industry, under the terms of which the syndicated banks may demand repayment of the loan in the event that a shareholder (or group of shareholders acting in concert) acquires control of at least 30 percent of the voting rights of KUKA Aktiengesellschaft, or otherwise has the ability to control the operating policies of the company.

2010 Corporate Bond (high-yield bond)

In addition, KUKA Aktiengesellschaft issued a high-yield corporate bond in a principle amount of €202,000,000.00 on November 18, 2010 under the lead of Deutsche Bank AG (London Branch) and Goldman Sachs International. The corporate bond is traded on the Luxembourg exchange (Euro MTF). The bond terms and conditions include a change of control clause that is customary for high-yield bonds. The clause states that a change of control has occurred when:

- (i) One or more persons acting in concert acquire(s) control of more than 30 percent of the share capital or voting rights of KUKA Aktiengesellschaft;

- (ii) As a result of one or several transactions, all or nearly all assets of KUKA Aktiengesellschaft or a subsidiary defined in the bond terms and conditions as a “restricted subsidiary” are sold or transferred by some other means to a person who is not a “restricted subsidiary”;
- (iii) For two years in succession, the majority of the shareholder representatives on the Supervisory Board is not made up of Supervisory Board members who were either members of the Supervisory Board on the date of issue of the corporate bond, or whose appointment to the Supervisory Board was not supported by or made upon recommendation of the Nomination Committee; or
- (iv) KUKA Aktiengesellschaft or a subsidiary qualified as a “restricted subsidiary” undertakes one of the transactions defined in section 3 of the bond terms and conditions as a “permitted investment”. These include significant shareholdings in third parties (for example joint ventures).

If an event occurs that qualifies as a change of control item under the bond terms and conditions, each bondholder has the right to demand that KUKA Aktiengesellschaft buy back its bond notes at a price of 101 percent of the face value plus interest.

2013 Convertible Bond

The terms and conditions of the convertible bonds (“terms and conditions of issue”) also contain the customary change of control provision, pursuant to which KUKA Aktiengesellschaft must publish any change of control immediately upon acquiring knowledge thereof in accordance with the terms and conditions of issue and announce the effective date of the change of control. Accordingly, each bondholder has the right to demand repayment of one or all held bonds at the principle amount plus interest from the bond issuer on the effective date of the change of control. Otherwise, the conversion ratio will be adjusted as required by the terms and conditions of issue. A “change of control” within the meaning of the terms and conditions of issue exists when a person or persons acting in concert (i) acquire(s) – directly or indirectly (within the meaning of section 22 of the WpHG) – legal or beneficial ownership totaling more than 50 percent of the voting rights of the bondholder or the ability to control the management of the bondholder in another manner within the meaning of section 17 of the AktG or (ii) [participate(s) in] a takeover bid for shares of the bondholder and (A) the shares already controlled by the bidder and the shares for which the offer has already been accepted grant a total of more than 50 percent of the voting rights of the bondholder at any time during the takeover bid and (B) the offer is or becomes unconditional (without prejudice to any regulatory approvals, particularly antitrust approvals that will not be obtained until after the end of the acceptance period in accordance with section 16 para. 1 of the German Securities Acquisition and Takeover Act (WpÜG)), or (iii) acquire(s) all or significantly all of the assets of bondholder from the bondholder by sale or transfer.

If an event were to occur that would be regarded as a “change of control” under the terms and conditions of the aforementioned financing instruments and if all holders or a significant portion of the holders of such financing instruments were to subsequently call in the loan agreements for repayment at the same time and make use of their rights of repurchase, this could impair the financial situation of KUKA Aktiengesellschaft, unless KUKA Aktiengesellschaft were to obtain alternative financing on the market. On the other hand, if holders of only one financing instrument or only a small portion of the creditors of all financing instruments were to make use of the change of control clauses, KUKA Aktiengesellschaft would possibly be able to meet the resulting financing gap through its own resources as matters stand today.

Agreements concluded between the company and members of the Executive Board or employees governing compensation in the event of a takeover bid

No agreements have been concluded between the company and members of the Executive Board or employees governing compensation in the event of a takeover bid.

Disclaimer

This management report contains forward-looking statements regarding expected developments. These statements are based on current estimates and are naturally exposed to risks and uncertainties. Actual results may differ from the statements contained herein.

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FINANCIAL STATEMENTS

GROUP INCOME STATEMENT

of KUKA Aktiengesellschaft for the period January 1 – December 31, 2013

in € millions	Notes	2012	2013
Sales revenues	(1)	1,739.2	1,774.5
Cost of sales	(2)	-1,353.3	-1,336.0
Gross income		385.9	438.5
Selling expenses	(2)	-119.7	-130.2
Research and development costs	(2)	-42.6	-59.7
General and administrative expenses	(2)	-98.6	-110.0
Other operating income	(3)	31.8	31.5
Other operating expenses	(3)	-54.3	-56.4
Earnings from operating activities		102.5	113.7
Reconciliation to earnings before interest and taxes (EBIT)			
Financing costs included in operating results		7.3	6.7
Earnings before interest and taxes (EBIT)		109.8	120.4
Interest income	(4)	9.6	8.8
Interest expense	(4)	-22.4	-28.8
Financial results		-12.8	-20.0
Earnings before tax		89.7	93.7
Taxes on income	(5)	-34.1	-35.4
Earnings after taxes		55.6	58.3
of which: attributable to minority interests		0.0	0.0
of which: attributable to shareholders of KUKA AG		55.6	58.3
Earnings per share (diluted / undiluted) in €	(6)	1.64	1.72

STATEMENT OF COMPREHENSIVE INCOME

of KUKA Aktiengesellschaft for the period January 1 – December 31, 2013

in € millions	Notes	2012	2013
Earnings after taxes		55.6	58.3
Items that may potentially be reclassified to profit or loss			
Translation adjustments		0.1	-2.1
Items that are not reclassified to profit or loss			
Changes of actuarial gains and losses	(22)	-13.5	6.3
Deferred taxes on changes of actuarial gains and losses		3.1	-1.6
Changes recognized directly in equity		-10.3	2.6
Comprehensive income		45.3	60.9
of which: attributable to minority interests		0.0	0.0
of which: attributable to shareholders of KUKA AG		45.3	60.9

CASH FLOW STATEMENT*

of KUKA Aktiengesellschaft for the financial year 2013

in € millions	2012	2013
Net income after taxes	55.6	58.3
Depreciation of intangible assets	11.4	20.3
Depreciation of tangible assets	17.3	17.9
Other non-payment related income	-2.7	-2.3
Other non-payment related expenses	10.8	21.1
Cash earnings	92.4	115.3
Result on the disposal of assets	0.2	0.3
Changes in provisions	13.4	10.4
Changes in current assets and liabilities		
Changes in inventories	-18.4	27.9
Changes in receivables and deferred charges	41.3	-0.1
Changes in liabilities and deferred income (excl. financial debt)	-11.0	67.2
Cash flow from operating activities	117.9	221.0
Payments from disposals of fixed assets	2.1	0.7
Payments for capital expenditures on intangible assets	-16.7	-17.7
Payments for capital expenditures on tangible assets	-26.1	-57.0
Payments for the acquisition of consolidated companies and other business units	-0.1	-16.6
Payments due to investment funds as part of short-term financial management	-	-35.0
Cash flow from investing activities	-40.8	-125.6
Free cash flow	77.1	95.4
Dividend payments	-	-6.8
Proceeds / payments from the issuance / repayment of bonds and liabilities similar to bonds	-	111.0
Proceeds from / payments for the acceptance / repayment of bank loans	-1.0	-0.4
Cash flow from financing activities	-1.0	103.8
Payment-related changes in cash and cash equivalents	76.1	199.2
Exchange rate-related and other changes in cash and cash equivalents	-0.6	-2.4
Changes in cash and cash equivalents	75.5	196.8
(of which net increase / decrease in restricted cash)	-	(6.1)
Cash and cash equivalents at the beginning of the period	168.8	244.3
Cash and cash equivalents at the end of the period	244.3	435.0
Restricted cash	-	6.1
Cash and cash equivalents according to balance sheet	244.3	441.1

* See notes page 172 for further disclosures on the cash flow statement

GROUP BALANCE SHEET

of KUKA Aktiengesellschaft as of Dezember 31, 2013

ASSETS

in € millions	Notes	Dec. 31, 2012	Dec. 31, 2013
Non-current assets			
Non-current assets	(7)		
Intangible assets	(8)	82.9	92.5
Property, plant and equipment	(9)	94.9	133.6
Financial investments	(10)	0.2	0.2
		178.0	226.3
Finance lease receivables	(11)	70.2	61.9
Income tax receivables		6.3	4.8
Other long-term receivables and other assets	(14)	9.6	9.1
Deferred taxes	(5)	36.3	25.6
		300.4	327.7
Current assets			
Inventories	(12)	213.4	186.2
Receivables and other assets			
Trade receivables	(13)	141.7	167.5
Receivables from construction contracts	(13)	198.9	181.1
Finance lease receivables	(11)	5.0	5.3
Income tax receivables		6.8	7.1
Other assets, prepaid expenses and deferred charges	(14)	26.9	61.1
		379.3	422.1
Cash and cash equivalents	(15)	244.3	441.1
		837.0	1,049.4
		1,137.4	1,377.1

EQUITY AND LIABILITIES

in € millions	Notes	Dec. 31, 2012	Dec. 31, 2013
Equity	(16)		
Subscribed capital	(17)	88.2	88.2
Capital reserve	(18)	67.5	94.5
Revenue reserves	(19)	140.4	195.1
Minority interests	(20)	1.4	1.3
		297.5	379.1
Non-current liabilities, provisions and accruals			
Financial liabilities	(25)	194.9	288.1
Other liabilities	(26)	13.4	14.7
Pensions and similar obligations	(22)	82.0	73.4
Deferred taxes	(5)	26.2	24.5
		316.5	400.7
Current liabilities	(24)		
Financial liabilities	(25)	6.6	6.5
Trade payables		136.2	171.7
Advances received		86.5	52.3
Liabilities from construction contracts	(13)	95.5	132.7
Accounts payable to affiliated companies		0.1	0.1
Income tax liabilities		9.2	7.1
Other liabilities and deferred income	(26)	109.1	132.2
Other provisions	(23)	80.2	94.7
		523.4	597.3
		1,137.4	1,377.1

DEVELOPMENT OF GROUP EQUITY

of KUKA Aktiengesellschaft for the financial year 2013

Notes		(17)	(18)
	Number of shares outstanding	Subscribed capital in € millions	Capital reserve in € millions
Jan. 1, 2012	33,915,431	88.2	67.5
Comprehensive income	-	-	-
Other changes	-	-	-
Jan. 1, 2013	33,915,431	88.2	67.5
Comprehensive income	-	-	-
Dividend of KUKA AG	-	-	-
Employee share program	-	-	-
Other changes	-	-	27.0
Dec. 12, 2013	33,915,431	88.2	94.5

	(19)			(20)		
	Revenue reserves					
	Translation gains/losses in € millions	Actuarial gains and losses in € millions	Annual net profit and other revenue reserves in € millions	Equity to shareholders in € millions	Minority interests in € millions	Total in € millions
	-0.2	0.2	95.2	250.9	1.5	252.4
	0.1	-10.4	55.6	45.3	-	45.3
	-	-	-0.1	-0.1	-0.1	-0.2
	-0.1	-10.2	150.7	296.1	1.4	297.5
	-2.1	4.7	58.3	60.9	-	60.9
	-	-	-6.8	-6.8	-	-6.8
	-	-	-0.1	-0.1	-	-0.1
	-	0.6	0.1	27.7	-0.1	27.6
	-2.2	-4.9	202.2	377.8	1.3	379.1

GROUP NOTES

GROUP SEGMENT REPORTING*

of KUKA Aktiengesellschaft for the financial year 2013

in € millions	Robotics		Systems	
	2012	2013	2012	2013
Order income	803.1	793.5	1,115.1	1,111.6
Order backlog	248.7	280.7	666.1	714.4
Group external sales revenues	716.5	732.2	1,022.7	1,042.3
as a % of Group sales revenues	41.2%	41.3%	58.8%	58.7%
Intra-Group sales	26.1	21.9	2.6	3.6
Sales revenues by division	742.6	754.1	1,025.3	1,045.9
Operating profit / loss	238.6	271.4	131.4	150.0
as a % of sales revenues of the division	32.1%	36.0%	12.8%	14.3%
EBIT	80.2	77.1	47.7	60.8
as a % of sales revenues of the division	10.8%	10.2%	4.7%	5.8%
as a % of average capital employed (ROCE)	57.2%	49.6%	23.8%	43.0%
EBITDA	95.9	102.1	57.8	71.0
as a % of sales revenues of the division	12.9%	13.5%	5.6%	6.8%
Capital employed (annual average)	140.2	155.6	200.5	141.5
Capital employed (end of financial year)	153.3	158.4	183.1	99.6
Assets	343.8	350.6	508.6	494.5
Liabilities	200.3	201.4	329.0	395.3
Capital expenditure	30.1	30.8	9.6	15.2
Depreciation / amortization of intangible and tangible assets	15.8	20.1	9.6	10.2
Impairment losses on intangible and tangible assets	-	4.9	0.5	-
Employees (Dec. 31)	3,180	3,416	3,902	4,362

* See notes page 173 for more information on Group segment reporting

	KUKA AG and other companies		Reconciliation and consolidation		Group	
	2012	2013	2012	2013	2012	2013
	-	-	-28.6	-23.2	1,889.6	1,881.9
	-	-	-5.4	-3.5	909.4	991.6
	-	-	-	-	1,739.2	1,774.5
	-	-	-	-	100.0%	100.0%
	-	-	-28.7	-25.5	-	-
	-	-	-28.7	-25.5	1,739.2	1,774.5
	-	-	15.9	17.1	385.9	438.5
	-	-	-	-	22.2%	24.7%
	-16.0	-19.3	-2.1	1.8	109.8	120.4
	-	-	-	-	6.3%	6.8%
	-	-	-	-	32.3%	36.9%
	-13.1	-16.1	-2.1	1.6	138.5	158.6
	-	-	-	-	8.0%	8.9%
	-0.2	29.6	-0.7	-0.5	339.8	326.2
	2.9	56.1	-0.8	-0.3	338.5	313.8
	173.5	232.6	-175.9	-172.1	850.0	905.6
	73.3	74.1	-9.3	-5.8	593.3	665.0
	3.1	28.7	-	-	42.8	74.7
	2.9	2.8	-0.2	-0.2	28.2	32.9
	-	0.4	-	-	0.5	5.3
	182	212	-	-	7,264	7,990

GENERAL COMMENTS

Accounting principles

KUKA Aktiengesellschaft headquartered in Augsburg has prepared its Group consolidated financial statements for the period ending December 31, 2013 according to the International Financial Reporting Standards (IFRS) of the International Accounting Standards Board (IASB) applicable and endorsed by the European Union as of the balance sheet date. The term IFRS also includes all valid international accounting standards (IAS). The interpretations of the Standing Interpretations Committee (SIC) and the International Financial Reporting Standards Interpretations Committee (IFRS IC) – supplemented by the guidelines stipulated in section 315a (1) of the German Commercial Code (HGB) – were also taken into consideration.

As a general rule, the accounting policies used conform to the methods applied in the prior year except for the standards and interpretations for which application is mandatory for the first time in the 2013 financial year (see “Changes in Accounting Policies”). The Group’s consolidated financial statements comply with German law and are prepared in euros. Unless otherwise noted, all amounts are stated in millions of euros (€ million).

With the exception of specific financial instruments reported in fair values, the Group’s consolidated financial statements are prepared based on historical costs. Thereby, fair value is defined under IFRS 13 as the price that would be paid by independent market participants in an arm’s length transaction on the measurement date if an asset were sold or a liability transferred.

KUKA Group does not carry any assets with an undefined useful life with the exception of goodwill.

The Group’s consolidated income statement is prepared using the cost of sales method. The consolidated financial statements comply with the classification requirements of IAS 1. The presentation in the Group’s consolidated balance sheet distinguishes between current and non-current assets and liabilities.

The Executive Board prepared the consolidated financial statements on February 26, 2014.

Scope of consolidation

A total of 51 companies (2012: 49) are included in the Group’s consolidated financial statements. In addition to KUKA Aktiengesellschaft, six companies registered inside Germany and 44 firms domiciled outside Germany are included that KUKA Aktiengesellschaft either directly or indirectly controls.

In comparison to the previous year, the scope of consolidation has changed to the extent that CMA TECHNOLOGY SRL, Sibiu, Romania, has been added due to its acquisition and KUKA Robotics Australia Pty. Ltd., Victoria, Australia, as a result of its establishment. The former company is part of the Systems division and the later the Robotics division.

Acquisitions

Two acquisitions were made in the Systems segment to strengthen the market presence and increase vertical integration. On April 14, 2013, an asset deal was concluded for the systems business of UTICA Enterprises based in Shelby Township, Michigan. The acquired company builds assembly lines for car bodies and subassemblies. Other product segments include laser welding systems and joining and punch riveting technologies.

The second purchase took place on June 28, 2013 with the acquisition of all shares of CMA TECHNOLOGY SRL, Sibiu, Romania, a company that specializes in the low-cost production of metal parts for the systems business.

Of the purchase price of €26.6 million, €16.6 million was immediately paid in cash. The rest of the purchase price is divided into a fixed payment of €0.4 million with sales and profit-related components totaling €1.0 million and €8.7 million. Cash and cash equivalents of €0.1 million were transferred as part of the deal. Additional shares of fully consolidated companies were not acquired.

As of December 31, 2013, sales of €37.8 million and net earnings of €0.8 million were attributable to the acquisitions. If the businesses had already been consolidated at the beginning of 2013, this would have contributed €54.5 million to revenues and €3.0 million to net earnings.

The following table shows the carrying amounts assumed as a result of the purchase of the divisions immediately prior to the acquisition as well as the opening balance sheet in fair values.

in € millions	Carrying amounts assumed	Opening balance sheet in fair values
Intangible assets	1.6	2.6
Tangible assets	2.0	2.0
Inventories	11.3	11.3
Inventories and other assets	1.1	1.1
Liabilities	0.8	0.8

In addition to software licenses, the acquired intangible assets consist mainly of customer lists and orders on hand. Receivables and inventories primarily concern orders in house at the time of the acquisition. Contingent liabilities were not assumed. No deferred tax liabilities were recognized.

The transaction resulted in a total goodwill of €10.2 million, which has been allocated to the cash generating unit Body Structure and Engineering. The goodwill reflects expectations of business growth from the stronger market presence and synergies resulting from the vertical integration of semifinished goods.

Consolidation principles

Subsidiaries directly or indirectly controlled by KUKA Aktiengesellschaft ("Control Concept" according to IAS 27 or SIC 12) are consolidated in the Group financial statements according to the rules of full consolidation.

The consolidated financial statements are based on the financial statements of KUKA Aktiengesellschaft and those of the consolidated subsidiaries and were prepared according to the uniform accounting policies for the Group. Capital consolidation takes place by offsetting carrying amounts of investments against the proportionate newly measured equity of the subsidiaries at the acquisition date. In line with IFRS 3, any positive differences are capitalized as goodwill under intangible assets. Any negative differences are recognized in the income statement.

Intra-Group sales, expenses, earnings and receivables and payables are offset, and inter-company profits and losses are eliminated. The deferred tax entries required in connection with the consolidation processes have been recorded.

Guarantees and warranties that KUKA Aktiengesellschaft issues on behalf of consolidated subsidiaries are eliminated provided they do not have an external effect.

Currency translation

Receivables and payables denominated in foreign currency are translated as of the balance sheet date using the average rate of the year. Any associated translation gains or losses are recorded as gains or losses under other operating income or expenses.

The annual financial statements of the consolidated foreign subsidiaries are translated from their functional currency (IAS 21) into euros. With the exception of KUKA Robotics Hungária Ipari Kft., Taksony, Hungary, whose functional currency is the euro, this is the respective local currency, since the foreign subsidiaries operate predominantly within their currency area. The Group treats newly resulting derivative goodwill from the acquisition of foreign subsidiaries as assets of the economically independent subsidiary and translates this goodwill at the closing rate, if necessary (IAS 21.47). The resulting exchange differences are recognized in the foreign currency translation reserve.

Assets and liabilities are translated at the rate effective on the balance sheet date. Derivative goodwill and equity recognized prior to January 1, 2005 are translated using historical rates. Income and expenses are translated using average rates for the year. Differences arising from the translation of assets and liabilities denominated in foreign currencies compared to the prior year as well as translation differences between the income statement and the balance sheet are recognized in the revenue reserves. In the event of the departure of Group entities, existing exchange differences are then recognized in profit or loss. The following table shows the currency values compared to the previous year:

Country	Currency	Balance sheet date		Average rate	
		Dec. 31, 2012	Dec. 31, 2013	2012	2013
Brazil	BRL	2.704	3.258	2.510	2.867
Canada	CAD	1.314	1.467	1.285	1.368
China	CNY	8.221	8.349	8.109	8.165
Czech Republic	CZK	25.151	27.427	25.146	25.987
Hungary	HUF	292.300	297.040	289.324	296.941
India	INR	72.560	85.366	68.629	77.875
Japan	JPY	113.610	144.720	102.623	129.659
Korea	KRW	1,406.230	1,450.930	1,448.195	1,453.855
Malaysia	MYR	4.035	4.522	3.969	4.186
Mexico	MXN	17.185	18.073	16.909	16.964
Romania	RON	4.445	4.471	4.458	4.419
Russia	RUB	40.330	45.325	39.924	42.325
Sweden	SEK	8.582	8.859	8.707	8.650
Switzerland	CHF	1.207	1.228	1.205	1.231
Taiwan	TWD	38.450	40.981	38.165	39.342
Thailand	THB	40.347	45.178	39.944	40.823
USA	USD	1.319	1.379	1.286	1.328
United Kingdom	GBP	0.816	0.834	0.811	0.849
Vietnam	VND	27,596.485	28,967.590	26,928.960	27,881.596

Accounting and valuation

Revenue recognition

Sales revenues are recognized upon the performance of services or transfer of risk to the customer. Thus, sales revenues are recognized when the products or goods have been delivered or the services performed, the material risks and rewards associated with ownership have been transferred to the purchaser, the amount derived from the sale can be measured reliably, the inflow of economic benefits resulting from the transaction is probable, and the costs associated with the transaction can be measured reliably.

Revenues for long-term construction contracts that meet the criteria of IAS 11 are recognized according to the percentage of completion (POC) method. As a rule, the percentage of completion to be recognized by contract is determined by the cost of work to date as a percentage of the estimated total costs (cost-to-cost method). The profit from the contract is recognized on the basis of the percentage of completion thus determined. To the extent that services performed to date exceed advances received, the contracts are recorded as receivables from construction contracts. If there is a negative balance after deduction of advances, this is recognized as liabilities from construction contracts. Borrowing costs are considered for construction contracts in accordance with IAS 23. If necessary, provisions or asset-side impairment losses are recognized for impending losses.

Cost of sales

The cost of sales comprises the cost of production of the goods sold as well as the acquisition cost of any merchandise sold. In addition to the cost of attributable direct materials and labor, this also comprises indirect costs, including the depreciation and amortization of production plants and intangible assets, write-downs of inventories and the recognized borrowing costs. KUKA Group accounts for provisions for product warranties as part of the cost of sales at the time of revenue recognition. Impending losses from contracts are recognized in the reporting period in which the current estimate for total costs arising from the respective contract exceeds the expected contract revenue.

Business combinations

Business combinations are accounted for using the acquisition method. As the acquirer, KUKA and the acquired company may have already had a relationship that existed before the business combination was intended. If the business combination does in fact lead to a settlement of this preexisting relationship, KUKA recognizes the resulting gain or loss as the acquirer. The cost of acquisition is measured at the fair value of the assets given up and the liabilities incurred or assumed at the acquisition date. An agreed contingent consideration from KUKA as the acquirer is recognized at fair value at the acquisition date. The identifiable assets acquired and the liabilities (including contingent liabilities) assumed in a business combination are initially measured at their fair values at the acquisition date, irrespective of the extent of any non-controlling interests. Uniform accounting policies are used here. After initial recognition, gains and losses are attributed without limit in proportion to the interest held; a negative balance with respect to non-controlling interests can arise as a result. The non-controlling interests are involved in profit-sharing during the reporting period.

Goodwill

Goodwill is tested for impairment at least annually. Here, impairment tests are performed in which the carrying amount of goodwill allocated to the defined cash generating units (CGUs) is compared to the recoverable amount. If the carrying amount exceeds the recoverable amount of the cash generating unit, an impairment loss is recognized for the goodwill allocated to this cash generating unit. The recoverable amount is the higher of the cash generating unit's fair value less costs to sell and its value in use. KUKA uses a cash generating unit's value in use to determine its recoverable amount. The data from the detail planning phase from the business plan for the next three years was used as the underlying data to determine the value in use, assuming in subsequent years that the annual cash flows will generally equal those in year three. For the sake of simplification, the perpetuity calculation further assumes that investments equal depreciation / amortization expense and the working capital remains unchanged.

With respect to the segment-specific discount rates as well as the further parameters and their derivation, and also for the identification of the principal items of goodwill, please refer to the discussions under note 8.

Self-developed software and other development costs

Development costs for newly developed products or internally generated intangible assets (e. g. software) are capitalized provided that the technical feasibility and commercialization of the newly developed products are assured, and that this will result in an inflow of economic benefits to the Group (see IAS 38.57 for further requirements). In this context, the costs of production encompass the costs directly and indirectly attributable to the cost of development. Provided they are material, borrowing costs are capitalized for qualifying assets. Those assets are defined as qualifying assets within KUKA Group for which a period longer than 12 months is required to get them ready for their intended use or sale (IAS 23.5). Examples here within KUKA Group in particular are manufacturing plants, internally-generated intangible assets and long-term construction contracts.

Depreciation commences when the asset is put into use and is recognized over the expected useful life of, as a rule, one to three years, using either the straight-line or unit-based method. Moreover, the value recognized for capitalized costs of development projects not yet completed is subject to annual impairment tests.

Research and development costs that are not eligible for recognition as an asset are recognized as expenses when they are incurred.

Other intangible assets

Purchased intangible assets, predominantly software, are recognized at their acquisition cost and are amortized over their expected useful life of three to five years using the straight-line method.

Property, plant and equipment

Property, plant and equipment are recognized at acquisition or production costs. Depreciation is generally applied using the straight-line method. The selected depreciation method is continuously reviewed.

Depreciation is based predominantly on the following periods of useful life:

	Years
Buildings	25 – 50
Property facilities	2 – 15
Technical plant and equipment	2 – 15
Other equipment	2 – 15
Factory and office equipment	2 – 15

Impairment losses on intangible and tangible assets are recorded in accordance with IAS 36 if the recoverable amount of the asset is less than its carrying amount. In this context, the recoverable amount is the higher of the fair value less costs to sell and the value in use of the asset in question. If the reasons for an impairment recorded in prior years no longer apply, the impairment is reversed.

In addition to directly attributable costs, the costs of production for internally generated assets also include a proportionate share of overhead costs in accordance with IFRS. Borrowing costs are capitalized for qualifying assets. Under the provisions of IAS 23, finance costs must be accrued for qualifying assets (for a definition of qualifying assets, see the information under “Self-developed software and other development costs”).

Due to the way the corporation is internally managed and to increase transparency, finance costs included in operating results are eliminated in the reconciliation for the earnings before interest and taxes (EBIT).

Government grants

In accordance with IAS 20, government grants are recognized only if there is reasonable assurance that the conditions attaching to them will be complied with and that the grants will be received. Government grants related to assets (e. g. investment subsidies and allowances) are deducted from the acquisition or production costs of the relevant asset. Grants related to income are recognized immediately in the income statement.

Finance and operating lease

In the vast majority of cases, KUKA Group acts as the lessee. In connection with finance leases, ownership is attributed to the lessee in cases in which the lessee assumes substantially all the risks and rewards incidental to ownership (IAS 17). In such cases, leases are capitalized as of the date of the lease agreement at their fair value or at the lower present value of the minimum lease payments. Depreciation is recognized by the straight-line method over the useful life or over the lease term if it is shorter. The discounted value of payment commitments in connection with the lease payments is disclosed under other liabilities.

Finance lease agreements for which KUKA Group is the lessor are recognized as a sales and financing transaction. A receivable is valued at the amount of the net investment in the lease and the interest income is recognized in the income statement.

To the extent that KUKA Group has entered into operating leases (as a lessee) according to IAS 17, lease or rent payments are directly recognized as an expense in the income statement and distributed using the straight-line method over the term of the leasing agreement, unless a different systematic basis more closely corresponds with the utilization period. Relevant total future costs are reported in note 28.

Financial instruments

KUKA Group holds both primary financial instruments (e.g. trade receivables or trade payables) and derivative financial instruments (e.g. transactions to hedge the risks of changes in fair value).

Derivative financial instruments are financial contracts whose value is derived from the price of an underlying asset (e.g. stocks, bonds, money market instruments or commodities) or a reference rate (such as currencies, indices or interest rates). They require little or no initial investment and are settled at a future date. Examples of derivative financial instruments include options, forward contracts and interest rate swap transactions. KUKA Group only uses derivative financial instruments to hedge foreign currency risk.

IAS 39 differentiates between the following categories of financial instruments that are relevant for KUKA Group:

- Loans and receivables
- Financial instruments held to maturity
- Financial assets and financial liabilities held for trading
- Available-for-sale financial assets
- Financial liabilities measured at amortized cost
- As a general rule, financial instruments are initially recognized when the asset is delivered to or by KUKA (settlement date accounting). Subsequent measurement takes place either at fair value or at amortized cost, depending on the measurement category.
- Measurement of loans and receivables, financial instruments held to maturity and other financial liabilities takes place at amortized cost after initial recognition.
- Subsequent measurement of financial assets or financial liabilities held for trading takes place at fair value through profit or loss.
- Available-for-sale financial assets are subsequently measured at fair value but are not recognized in profit or loss.

Derivatives

KUKA Group recognizes all derivatives at fair value as of the settlement date. The fair value is determined with the aid of standard financial mathematical techniques, using current market parameters such as exchange rates and counterparty credit ratings (mark-to-market method) or quoted prices. Middle rates are used for this calculation.

Derivatives are used to hedge currency fluctuations. Accounting for hedging instruments within the restrictive framework of the hedge accounting rules is not undertaken.

Investments in non-consolidated companies and financial investments

In the KUKA Group, investments in continuing business units that are not material to the financial position and performance of the Group are reported under available-for-sale financial assets. They are recognized at cost of purchase. Current market values are not available, since no shares are traded in an active market.

Receivables and other assets

Receivables and other assets are recognized at amortized cost, applying the effective interest method with appropriate discounts for all identified individual risks. General credit risk, if detectable, is also accounted for by appropriate valuation allowances. For this purpose, these financial assets are grouped in accordance with similar default risk characteristics and are collectively tested for impairment, and written down if necessary. When calculating any such impairment losses, the empirical default history is taken into account in addition to contractually stipulated payment flows.

The carrying amount of the assets is lowered using separate allowance accounts for impairment losses. Actual defaults result in a write-off of the receivables in question. The maximum theoretically possible default risk corresponds to the carrying amounts. The carrying amounts largely correspond to the market values.

Derivatives with a positive fair value are recognized under other assets.

Cash and cash equivalents

Cash and cash equivalents are measured at cost and include all cash funds recognized on the balance sheet, i. e. cash on hand, checks and cash balances at financial institutions with a remaining term of three months or less.

Liabilities

Liabilities are recognized on the balance sheet at amortized cost. Payables arising from finance leases are recognized at the present value of future lease payments.

Long-term liabilities with a term of more than one year are discounted to the balance sheet date on the basis of appropriate interest rates where the interest effect is material.

On initial recognition, financial liabilities are carried at fair value less transaction costs. They are measured at amortized cost in subsequent periods; any difference between the amount paid out (less transaction costs) and the settlement value is recognized in the interest result for the term of the loan using the effective interest method. Fees incurred when setting up credit lines are capitalized as credit transaction costs and are recognized as interest expense over the term of the corresponding loan commitment.

Trade payables also include payments due on outstanding supplier invoices. KUKA Group launched a "supplier finance" program for the purpose of managing trade payables. A separate agreement is made for each supplier based on a framework agreement with banks in which the supplier can discount authorized receivables at the bank at any time (i. e. those that have been approved by KUKA). KUKA Group pays the liability to the bank on the due date, irrespective of the supplier's discounting date. This gives both suppliers and KUKA added flexibility and security.

If the fair value of derivatives is negative, this results in recognition under other liabilities.

Inventories

According to IAS 2, inventories are valued at average cost of acquisition or production. In addition to the direct unit costs, production costs also include appropriate costs for indirect materials and production overheads according to IAS 2. Write-downs to lower net realizable value have been taken to the extent required. In addition to valuation allowing disposal at no net loss, these write-downs also cover all other inventory risk. If the reasons that led to a devaluation of inventories in the past no longer exist, impairment losses are reversed.

Current and deferred taxes

Tax receivables and liabilities are assessed using the expected amount of the reimbursement from or payment to the tax authorities.

Deferred tax assets and liabilities are recorded according to IAS 12 for all temporary differences between the carrying amounts of assets and liabilities on the Group balance sheet and their recognized value for tax purposes (liability method) as well as for tax loss carryforwards. Deferred tax assets for accounting and valuation differences as well as for tax loss carryforwards are only recognized to the extent that there is a sufficiently probable expectation that the corresponding benefit will be realized in the future. Deferred tax assets and liabilities are not discounted. Deferred tax assets are netted against deferred tax liabilities if the tax creditor is the same.

Pension provisions and similar obligations

The measurement of pension provisions and similar obligations is performed according to IAS 19. Pensions and similar obligations comprise obligations of KUKA Group to pay benefits under defined benefit plans. Company obligations from defined benefit plans are determined separately for each defined benefit plan according to actuarial principles. First the retirement benefits are estimated that employees have earned in return for their service in the current period and prior periods. Then these benefits are discounted using the projected unit credit method. In addition to known pensions and vested benefits as of the balance sheet date, this method also takes expected future increases in salaries and pensions into account. The calculation is based on actuarial reports that must be prepared annually based on biometric data. Actuarial gains are recognized in the period in which they arise in other comprehensive income. The company determines the net interest expense (net interest income) by multiplying the net liability (net asset value) at the beginning of the period with the underlying interest rate of the discount of the gross defined benefit pension obligation at the beginning of the

period. Past service cost due to changes to the plan is recognized directly in the period in which the change occurs. The standard return on plan assets is recognized in the amount of the discount rate applied to pension obligations. Administrative expenses for plan assets are recognized as part of the revaluation component in other comprehensive income, whereas other administrative costs are allocated to operating profit at the time the costs are incurred. Insurers hold reinsurance coverage for excess obligations from pre-retirement schemes (Altersteilzeit) based on the “block model”. This is recognized using the same interest rate as the corresponding liability. The amount added for obligations from pre-retirement schemes is proportional to the amounts in the applicable collective bargaining agreements.

Other provisions

Other provisions are recognized in the event that there is a current obligation to third parties arising from a past event. It must be possible to estimate the amount reliably, which must then more likely than not lead to an outflow of future resources. Provisions are only recognized for legal and constructive obligations to third parties.

Provisions are recognized for costs of restructuring to the extent that a detailed, formal restructuring plan has been created and communicated to the parties affected by it and it is highly probable that the company can no longer withdraw from these obligations.

No provisions are recognized for future expenses, since these do not represent an external obligation.

Liabilities in the personnel area such as vacation pay, flex-time credits and the statutory German pre-retirement scheme (Altersteilzeit) are recognized under other liabilities.

Liabilities for outstanding vendor invoices are recognized under trade payables.

Long-term provisions with a term of more than one year are discounted to the balance sheet date on the basis of appropriate interest rates where the interest effect is material.

Share-based compensation

Also in this year KUKA employees of German companies had the opportunity to purchase KUKA shares as part of an employee share program. Arranged according to a holding period (vesting period) of one, three and five years, employees receive an additional share as a bonus share for every ten KUKA shares acquired. Rights to additional shares are forfeited if the employment relationship of the beneficiary is terminated before the end of the vesting period. A 50 percent incentive was granted in addition to the subscribed shares. The total number of incentive shares was limited to 75,000 as in the previous year. KUKA employees acquired a total of 32,130 shares; 16,065 incentive shares were credited. The market value of KUKA shares at the performance date was €34.41 (2012: €18.70) per share. This results in an expense of €0.6 million (2012: €1.0 million) for the 2013 financial year, which was recognized as personnel expenses.

In addition to the employee share program, KUKA also has an annual phantom share program for the executive management team, which was introduced in 2012. The phantom share program for the years 2013 to 2015 is measured as a cash-settled, share-based compensation instrument using the fair value at each respective balance sheet date. The measurement parameters correspond to the phantom share program of KUKA Aktiengesellschaft’s executive board. The entitlements are paid out at the end of the contractually agreed period. Early payment is possible only under certain conditions when leaving the Group. An amount of €4.6 million (2012: €1.5 million) was set aside at December 31, 2013 for future claims arising from the phantom share program for the executive management team. See the compensation report for further details about the structure of the phantom share program.

Assumptions and estimates

KUKA prepares its consolidated financial statements in compliance with the IFRSs mandatory in the EU. In certain cases it is necessary for management to make assumptions and estimates. This is common practice in the preparation of the Group's consolidated financial statements. These assumptions and estimates may change over time and differ from the actual amounts determined at a later time. Moreover, management could have made different assumptions and estimates in the same reporting period for similarly justifiable reasons. In the application of accounting policies, the company has made the following discretionary decisions, which have a significant effect on the amounts in the annual financial statements. These do not include those decisions that represent estimates.

It is necessary to make assumptions and estimates, in particular when addressing the following accounting items:

- Development costs
- Goodwill impairments
- Deferred tax assets
- Trade receivables
- Receivables and liabilities from construction contracts
- Pensions and other post-employment benefits
- Provisions

Development costs

Development costs are recognized as assets in accordance with the methods described under accounting policies. For the purpose of testing the potential impairment of the amounts recognized as assets, management must make assumptions concerning the expected future cash flows from assets, the applicable discount rates and the timing of the inflow of expected future cash flows. Moreover, assumptions must be made regarding cost yet to be incurred and the period until completion for projects that are still in the development stage.

Goodwill impairments

Assets recognized as goodwill are tested at least once a year for impairment in the KUKA Group. This requires an estimate to be made of the value in use for each cash generating unit to which the goodwill has been allocated. To determine the value in use, management must estimate the future cash flows of the respective cash generating units and select an appropriate discount rate for calculating the present value of these cash flows. The selected discount rate, for example, is influenced by volatility in capital markets and interest rate trends. The expected cash flows are also influenced by fluctuations in exchange rates and the expected economic developments. Furthermore, continuous review is necessary to determine whether there is any indication of impairment. In addition to changes in individual parameters that affect computation such as a significant increase in market yields, a particular focus is placed on changes with an adverse effect on the company in the technological, market, economic or legal environment in which it operates. For details about the carrying amounts of the assets recognized as goodwill and the performance of the impairment tests please refer to the discussion under note 8.

Deferred tax assets

Deferred tax assets for loss carryforwards are recognized to the extent that it is probable that taxable income will be available such that the loss carryforwards can actually be used. The determination of the amount of deferred tax assets requires an estimate on the part of management of the expected timing and amount of anticipated future taxable earnings as well as future tax planning strategies. For details please refer to the discussion under note 5.

Trade receivables

Impairment of doubtful receivables involves making significant estimates and assessments regarding individual receivables based on the creditworthiness of the respective customer, the current economic trends and the analysis of historical bad debts on a portfolio basis. As far as the company derives the impairment on a portfolio basis using historical default rates, a decrease in the volume of receivables reduces such provisions accordingly and vice versa.

Receivables and liabilities from construction contracts

Long-term construction contracts are recognized using the percentage of completion method. A significant share of business in the Systems segment in particular is related to long-term construction contracts. Revenues are reported based on the percentage of completion. A careful estimate of the progress toward completion is essential here. Depending on the method used to determine the percentage of completion, the most important estimates include the total order costs, the costs yet to be incurred until completion, the total project revenues and risks as well as other assessments. The management team responsible for the respective project continuously monitors all estimates on a monthly basis and adjusts these as needed.

Pensions and other post-employment benefits

Expenditures under defined-benefit plans and other post-employment benefits are determined on the basis of actuarial calculations. The actuarial calculations are prepared on the basis of assumptions with respect to discount rates, future increases in wages and salaries, mortality rates and future pension increases. In line with the long-term orientation of these plans, such estimates are subject to significant uncertainties. Please see note 22 for further details.

Provisions

To a large degree, the designation and measurement of provisions for impending losses from contracts, of provisions for warranty obligations and of litigation provisions involve making estimates.

Long-term construction contracts in particular are awarded based on invitations to tender. KUKA recognizes a provision for impending losses when the current estimated total costs arising from the respective contract exceed the expected total revenue. These estimates may change due to new knowledge as the project progresses. Deficit orders are identified based on continuous project costing. This requires an assessment of the performance standards and warranty costs.

KUKA Group is confronted with litigation in different areas. These proceedings can lead to criminal or civil sanctions or fines. A provision is always recognized when it is likely an obligation will result that will lead to future cash outflows and the amount of which can be reliably assessed. The underlying issues are often complex and associated with great uncertainties. Judgment whether a present obligation arising from a past event is to be recognized on the balance sheet date, whether future cash outflows are probable and the obligation can be reliably assessed is therefore largely at the discretion of management. The company, with the assistance of external legal professionals, regularly assesses the respective stage of the proceeding. New findings can change the assessment and it may be necessary to adjust the provision accordingly. For further details please refer to note 23.

Changes in accounting policies

KUKA Group did not apply any standards or interpretations for the first time in the 2013 financial year that have a material effect on the Group's financial position or performance. The following revised standards were applied for the first time in the 2013 financial year:

- IAS 19 (revised 2011), Employee Benefits
- IFRS 13, Fair Value Measurement
- Improvements to IFRS (2009 – 2011)
- Amendments to IFRS 7, Financial Instruments: Disclosures – Offsetting Financial Assets and Financial Liabilities
- Amendments to IFRS 1, Government Loans
- IFRIC 20, Stripping Costs in the Production Phase of a Surface Mine

IAS 19 (revised 2011) – Employee Benefits

The revision of IAS 19 (revised 2011), “Employee Benefits”, eliminated the elections for the treatment of actuarial gains and losses. Gains are now recognized in the period in which they arise, as was previously the case, in other comprehensive income. Moreover, returns on plan assets are recognized in profit or loss based on the returns from corporate bonds – independent of the actual portfolio structure. Past service cost due to changes to the plan is recognized directly in the period in which the change occurs. In addition, the standard return on plan assets is now recognized in the amount of the discount rate applied to pension obligations.

Effective 2013, administrative expenses for plan assets are recognized as part of the revaluation component in other comprehensive income, whereas other administrative costs are allocated to operating profit at the time the costs are incurred. Overall, the changes have no material impact on KUKA Group’s pension obligations.

IAS 19 (revised 2011) also has an impact on the accounting of pre-retirement (Altersteilzeit) obligations according to the “block model”. Insurers hold reinsurance coverage for excess obligations. This is recognized using the same interest rate as the corresponding liability. The amount added for obligations from pre-retirement schemes is now proportional to the amounts in the applicable collective bargaining agreements.

IAS 19 (revised 2011) is to be applied retrospectively. However, since there is no material impact on KUKA Group’s earnings, no adjustments to previous periods will be made.

In detail, the amendments to IAS 19 (revised 2011) will have the following impact on equity – before accounting for deferred taxes – for pension provisions and obligations related to pre-retirement schemes:

in € millions	as of Jan. 1, 2012	Jan. 1 – Dec. 31, 2012
Pension provisions	0.1	0.1
Pre-retirement obligations	1.1	-0.2

IFRS 13 – Fair Value Measurement

IFRS 13 describes how to determine fair value and expands the disclosures on fair value. The standard does not include any requirements regarding the cases in which fair value is to be used. Here, fair value is defined as the price that would be paid by independent market participants in an arm’s length transaction on the measurement date if an asset were sold or a liability transferred. In accordance with IFRS 13, assets and liabilities measured at market values are to be attributed to the three levels of the fair value hierarchy. The three levels of the fair value hierarchy are defined as follows:

Level 1

Quoted prices in active markets for identical assets or liabilities

Level 2

Inputs other than quoted prices that are observable either directly or indirectly

Level 3

Inputs for assets and liabilities that are not based on observable market data.

Affected by this in the KUKA Group are primarily forward exchange transactions carried as an asset (€3.6 million; prior year: €1.7 million) and those carried as a liability (€2.2 million; prior year: €5.0 million). These are measured according to level 2. The value is determined with the aid of standard financial mathematical techniques, using current market parameters such as exchange rates and counterparty credit ratings (mark-to-market method) or quoted prices. Middle rates are used for this calculation. The initial application has no effect on the Group’s financial position and performance.

Annual Improvement Project 2009 – 2011

The IASB issued amendments in May 2012 as part of its “minor editorial amendments to various standards”; these included amendments to IAS 1 “Presentation of Financial Statements”, IAS 16 “Property, Plant and Equipment”, IAS 32 “Financial Instruments: Presentation” and IAS 34 “Interim Financial Reporting”. The initial application has no effect on the Group’s financial position and performance. The amendments to IAS 1 “Presentation of Financial Statements” result in a restructuring of how the statement of comprehensive income is presented. In particular, items that can be reposted to the income statement (e. g. recycled in case of derecognition) must now be reported separately from items where this is not the case.

IFRS standards and interpretations that are not yet mandatory

The following new and amended standards and interpretations had been issued by the preparation date of the Group's consolidated financial statements. However, these will become effective at a later date. The initial application always occurs in the year in which first-time adoption is required. Their impact on the consolidated financial statements has not yet been completely analyzed. Consequently, the anticipated effects only represent a first estimate.

IFRS 10 – Consolidated Financial Statements

IFRS 10 replaces the guidance on control and consolidation provided by IAS 27 “Consolidated and Separate Financial Statements” and SIC 12 “Consolidation – Special Purpose Entities”. The new standard changes the definition of “control” so that the same criteria are used to determine control over all companies. Discretionary power and variable returns are prerequisites for control. We do not expect this new standard to affect the consolidated financial statements of KUKA Group. This standard is mandatory in the EU for financial years starting on or after January 1, 2014.

IFRS 11 – Joint Arrangements

This new standard introduces two types of joint arrangements: joint operations and joint ventures. The prior election of proportionate consolidation for jointly controlled entities has been eliminated. The equity method of accounting is now mandatory for partners in a joint venture. Currently there are no joint arrangements in the KUKA Group, therefore it is not expected that the standard will have any impact on the company. This standard is mandatory in the EU for financial years starting on or after January 1, 2014.

IFRS 12 – Disclosure of Interests in Other Entities

This new standard supersedes the current disclosures included in IAS 28 and determines the required disclosures for entities that report in accordance with the two new standards “IFRS 10 – Consolidated Financial Statements” and “IFRS 11 – Joint Arrangements”. The new standard is expected to increase the scope of disclosure for notes. This standard is mandatory in the EU for financial years starting on or after January 1, 2014.

In addition to the aforementioned standards, we expect the further standards, standard adjustments and interpretations to have little or no material impact on KUKA Aktiengesellschaft's consolidated financial statements. Altogether, the following standards, standard adjustments and interpretations have already been approved and in part already adopted into EU law:

Standard/ Interpretation	Effective date	Planned application by KUKA AG
IFRS 10, Consolidated Financial Statements	January 1, 2014	financial 2014
IFRS 11, Joint Arrangements	January 1, 2014	financial 2014
IFRS 12, Disclosure of Interests in Other Entities	January 1, 2014	financial 2014
Revision of IAS 27, Consolidated and Separate Financial Statements	January 1, 2014	financial 2014
Revision of IAS 28, Investments in Associates and Joint Ventures	January 1, 2014	financial 2014
Amendments to IAS 32, Adjustment for Offsetting Financial Assets and Financial Liabilities	January 1, 2014	financial 2014
Investments Entities Amendments to IFRS 10, IFRS 12 and IAS 28	January 1, 2014	financial 2014
Amendments to IAS 36 Recoverable Amount Disclosures for Non-Financial Assets	January 1, 2014	financial 2014
Amendments to IAS 39 Novation of Derivatives	January 1, 2014	financial 2014
IFRIC 21 Levies	January 1, 2014	financial 2014*
Amendments to IAS 19, Employee Contributions	July 1, 2014	financial 2015*
Annual Improvements 2010–2012	July 1, 2014	financial 2015*
Annual Improvements 2011–2013	July 1, 2014	financial 2015*
IFRS 9 Financial Instruments	January 1, 2015	financial 2015*
Amendments to IFRS 9 and IFRS 7: Disclosures – Effective Date of Transfer	January 1, 2015	financial 2015*
IFRS 14 Regulatory Deferral Accounts	January 1, 2016	financial 2016*

* Pending adoption (endorsement) by the European Union.

EXPLANATION OF ITEMS IN THE FINANCIAL STATEMENTS

NOTES TO THE GROUP INCOME STATEMENT

1 Sales revenues

Sales revenues include fees and charges billed to customers for goods and services less any sales deductions. Sales revenues primarily include delivered products and downstream services. Services account for €145.0 million (19.2 percent) in sales revenues in the Robotics division as compared to €131.9 million (17.8 percent) reported last year. Services play a less significant role in the Systems division. The breakdown of sales revenues by business division and region is shown in Group segment reporting.

In connection with construction contracts, sales revenues in the amount of €902.7 million were recognized in the reporting year (compared to €879.1 million in the prior year) according to the percentage of completion method.

2 Cost of sales, selling expenses, research & development expenses and general and administrative expenses

The following is a breakdown of the cost of sales, selling expenses, research and development expenses and general and administrative expenses:

in € millions	Cost of sales		Selling expenses		Research and development expenses		General and administrative expenses		Total	
	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013
Cost of materials	1,038.0	931.0	2.4	2.3	9.7	7.3	0.2	0.1	1,050.3	940.7
Personnel expense	294.0	320.9	61.3	69.0	27.1	31.7	52.7	61.7	435.1	483.3
Amortization	13.0	14.4	1.4	1.8	8.7	16.4	5.6	5.6	28.7	38.2
Other expenses and income	8.3	69.7	54.6	57.1	-2.9	4.3	40.1	42.6	100.1	173.7
Total	1,353.3	1,336.0	119.7	130.2	42.6	59.7	98.6	110.0	1,614.2	1,635.9

The cost of sales comprised under other expenses includes finance costs for receivables from construction contracts totaling €6.5 million compared to €7.3 the previous year. This was calculated on the basis of the Group capitalization rate of 6.1 percent (2012: 6.6 percent). Research and development expenses include depreciation in the amount of €0.2 million (2012: €0.0 million) related to borrowing costs capitalized in previous years.

Personnel costs are directly allocated to the functional areas, which results in the following figures:

in € millions	2012	2013
Wages and salaries	365.8	406.1
Social security payments and contributions for retirement benefits and provident funds	69.3	77.2
(of that for retirement benefits)	(4.4)	(6.0)
Total	435.1	483.3

Annual average employees and employees at the balance sheet date
by KUKA Group:

	Annual average		Balance sheet date			
	Total 2012	Total 2013	Total 2012	Total 2013	of that, Germany	of that, abroad
Manufacturing	5,251	5,735	5,380	5,934	2,483	3,451
Sales	627	706	660	744	368	376
Administration	607	655	631	685	375	310
Research and development	307	341	325	360	354	6
Trainees	38	40	38	31	20	11
	6,830	7,477	7,034	7,754	3,600	4,154
Apprentices	198	207	230	236	212	24
Employees	7,028	7,684	7,264	7,990	3,812	4,178

3 Other operating income and expenses

The line items under other operating income and expenses capture income and expenses that are not allocated to the functional categories cost of sales, selling expenses, research and development expenses, general and administrative expenses or otherwise reported separately.

in € millions	2012	2013
Income from foreign currency transactions	24.2	23.4
Reimbursements from damages claims	0.1	0.1
Other income	7.5	8.0
Other operating income	31.8	31.5
Expenses for foreign currency transactions	30.8	39.0
Donations	0.1	0.2
Other taxes	13.2	8.5
Other expenses	10.2	8.7
Other operating expenses	54.3	56.4
Other operating income and expenses	-22.5	-24.9

4 Financial result

in € millions	2012	2013
Interest income from finance lease	7.1	6.5
Remaining interest and similar income	2.5	2.3
Other interest and similar income	9.6	8.8
Guarantee commission	2.6	1.5
Interest expense for the convertible bond	-	4.1
Interest expense for the corporate bond	18.8	24.0
Deferred transaction costs of Syndicated Senior Facilities Agreement (2010)	1.4	1.7
Financing costs reclassified to operating results	-7.8	-6.9
Remaining interest and similar expenses	7.4	4.4
Remaining interest and similar expenses	22.4	28.8
Financial result	-12.8	-20.0

Remaining interest and similar income comes from short-term deposits of cash and cash equivalents at banks. Remaining interest and similar expenses include the net interest component under IAS 19 in the amount of €2.4 million. (2012: €0.3 million return on plan assets; €3.4 million interest expense for pension provisions).

Financing costs reclassified to operating results and capitalized concern finance costs to be accrued according to IAS 23. Remaining interest and expenses primarily include ongoing expenses for accessing cash lines from the Syndicated Senior Facilities Agreement. The deferred transaction costs of the syndicated loan (2010) include a one-time charge in the amount of €0.4 million from the early termination of the agreement.

Interest expense for the corporate bond includes a non-recurring item in the amount of €6.5 million from the buyback of nominal €42.6 million in shares at market rates.

5 Taxes on income / deferred taxes

Tax expense

Income tax expense breaks down by origin as follows:

in € millions	2012	2013
Current taxes	25.6	27.8
(of that relating to other periods)	0.2	-0.9
Deferred taxes	8.5	7.6
from temporary differences	7.2	-1.1
from loss carryforwards	1.3	8.7
Total	34.1	35.4

Of the current expenses for tax on earnings, €4.8 million is attributable to domestic expenditure compared to €4.5 million in the previous year, whereas €23.0 million is attributable to foreign expenditure compared to €21.1 million last year.

Deferred tax expenses of €7.5 million are attributable to domestic operations and €0.1 million to foreign. This compares with the figures from the previous year of €7.2 million and €1.3 million, respectively.

The expected tax expense based on earnings before taxes and the applicable tax rate for the KUKA companies in Germany of 30.0 percent (2012: unchanged) leads to the following actual tax expense:

in € millions	2012	2013
Earnings before tax expense	89.6	93.7
Expected tax expense	26.9	28.1
Tax rate-related differences	5.1	3.8
Tax reductions due to tax-exempt income	-1.6	-4.4
Tax increases due to non-deductible expenses	2.2	3.1
Tax arrears (+)/Tax credits received (-) for prior years	-1.2	-2.7
Changes to allowance on deferred taxes	4.7	10.2
First-time recognition of previously unrecognized deferred tax assets on tax loss carry-forward	-1.8	-1.7
Other differences	-0.2	-1.0
Taxes on income (actual tax expense)	34.1	35.4

The applicable tax rate in Germany comprises corporate income tax (Körperschaftsteuer) of 15.0 percent, earned income tax (Gewerbesteuer) based on a uniform tax rate of 14.2 percent and the reunification tax (Solidaritätszuschlag) of 5.5 percent.

In principle, deferred taxes were recognized on the basis of the applicable tax rate for each company in question.

In addition to an existing corporate income tax credit, an amount equal to €4.8 million (2012: €6.3 million) results after discounting as a non-current tax receivable effective December 31, 2013, and an amount of €1.8 million (2012: unchanged) as a current tax receivable.

There are no tax credits for which deferred taxes would need to be accounted.

Current tax income in other accounting periods totaling €0.9 million (2012: €0.2 million expense) is primarily the result of corrections in foreign operations.

There are currently still no material conclusions for the new domestic audit period 2005 to 2008.

Deferred taxes

The value of deferred tax assets and liabilities due to temporary differences and tax loss carryforwards in the Group is associated with the following items:

in € millions	Deferred tax assets		Deferred tax liabilities	
	Dec. 31, 2012	Dec. 31, 2013	Dec. 31, 2012	Dec. 31, 2013
Non-current assets	4.4	7.6	44.8	29.3
Current assets	62.6	48.3	71.3	54.4
Provisions	24.5	20.0	2.7	16.5
Liabilities	27.2	30.7	9.0	17.4
Subtotal	118.7	106.6	127.8	117.6
Balancing item	-101.6	-93.1	-101.6	-93.1
Valuation allowance	-4.7	-2.6	-	-
Subtotal	12.4	10.9	26.2	24.5
Deferred taxes on temporary differences	12.4	10.9	26.2	24.5
Deferred taxes on tax loss carryforwards	23.9	14.7	-	-
Total	36.3	25.6	26.2	24.5
thereof: from items recognized in equity			-4.5	-2.5

Valuation allowances to the carrying amount of deferred tax assets are recognized if the realization of the expected benefit of the deferred taxes is not sufficiently probable. The estimates made are subject to change over time, which may result in the reversal of the valuation allowance in subsequent periods.

The recognized values on the balance sheet are written off in the event that the tax benefits that they represent were no longer expected to be realized.

From the loss carryforwards and carried interest of € 223.9 million (2012: € 232.3 million), amounts totaling € 174.0 million (2012: € 150.9 million) are not considered in the accounting of deferred taxes.

Deferred tax income in the amount of € 1.7 million (2012: € 1.8 million) results from the recognition of deferred tax receivables on loss carryforwards from earlier periods which until now had not been included in or written down from the tax accrual / deferral. Deferred tax assets previously recognized and accrued but not recognized in the current year in the amount of € 10.2 million (2012: € 4.7 million) were not recognized.

In accordance with IAS 12, deferred tax items must be recognized for the difference between the proportionate equity of a subsidiary recognized on the Group balance sheet and the investment carrying amount of this subsidiary on the tax balance sheet of the parent company (so-called

outside basis differences) if it is likely that this difference will be realized. Since both KUKA Aktiengesellschaft and the subsidiaries in question are corporations, these differences are predominantly tax exempt under section 8b of the Corporation Tax Law (KStG) upon realization and thus permanent in nature. According to IAS 12.39, no deferred tax liability should be recognized even for temporary differences (e. g. those resulting from the five percent flat-rate allocation under section 8b KStG) if it is not likely, given control by the parent company, that these differences will reverse in the foreseeable future. Since no such reversal is expected, no deferred tax items had to be recognized on the balance sheet for this purpose. There are outside basis differences in the amount of € 3.2 million (2012: € 1.9 million).

Overall, the change to deferred tax assets and liabilities of € 9.0 million (2012: € 4.9 million) came from amounts affecting net income totaling € 7.6 million (2012: € 8.5 million) as well as amounts not affecting net income due to changes in pension obligations and currency effects.

To the extent that loss carryforwards have not been written off, it is expected in the planning period that this tax-reducing potential will be utilized via taxable income, which is likely based on the expectations of Group companies.

6 Earnings per share

Undiluted / diluted earnings per share break down as follows:

	2012	2013
Net income / loss for the year after minority interests (in € millions)	55.6	58.3
Weighted average number of shares outstanding	33,915,431	33,915,431
Earnings per share (in €)	1.64	1.72

Undiluted earnings per share due to shareholders of KUKA Aktiengesellschaft were calculated as per IAS 33 on the basis of Group consolidated earnings after taxes and the weighted average number of shares outstanding for the year. Some stock dilution could arise in the future if bondholders convert their convertible bonds issued in 2013 to shares, because capital was conditionally increased. During the reporting period the average price of the shares on the stock market was higher than the conversion price on 16 days. However, no conversion was made. On the last day of trading in 2013 the closing price for shares in Xetra trading on the Frankfurt Stock Exchange was € 34.05, which was clearly below the conversion price. This would have resulted in a loss if bondholders had converted, so there was no dilution at the balance sheet date.

NOTES TO THE GROUP BALANCE SHEET: ASSETS

7 Fixed assets

Schedule of changes in KUKA Group's fixed assets 2013

in € millions	Acquisition / manufacturing costs						Status as of Dec. 31, 2013
	Status as of Jan. 1, 2013	Exchange rate differences	Additions	Additions through business combinations	Disposals	Reclassifications	
I. Intangible assets							
1. Rights and similar assets	52.4	-0.7	8.5	2.6	1.7	0.0	61.1
2. Self-developed software and other development costs	34.1	-0.1	9.1	-	11.6	-	31.5
3. Goodwill	56.6	-0.4	-	10.2	-	-	66.4
4. Advances paid	1.1	-	0.1	-	0.4	0.0	0.8
	144.2	-1.2	17.7	12.8	13.7	0.0	159.8
II. Tangible assets							
1. Land, similar rights and buildings including buildings on land owned by third parties	117.1	-0.9	4.7	0.2	1.9	1.7	120.9
2. Technical plant and equipment	105.4	-0.6	14.6	1.7	2.9	3.8	122.0
3. Other equipment, factory and office equipment	78.5	-1.1	10.1	0.1	5.9	1.3	83.0
4. Advances paid and construction in progress	4.9	-	27.6	0.0	-	-6.8	25.7
	305.9	-2.6	57.0	2.0	10.7	0.0	351.6
III. Financial investments							
1. Participations in affiliated companies	4.6	-	-	-	-	-	4.6
2. Other participations	0.9	-	-	-	-	-	0.9
3. Other loans	-	-	-	-	-	-	-
	5.5	-	-	-	-	-	5.5
	455.6	-3.8	74.7	14.8	24.4	0.0	516.9

The following amounts have been capitalized under technical plant and equipment due to finance leases in which KUKA Group acts as the lessee. The additions of the financial year are related to the acquisition of the Romanian company.

Technical plant and equipment	4.5	-	0.4	-	0.2	-	4.7
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Accumulated depreciation and impairment losses						Net carrying amount
Status as of Jan. 1, 2013	Exchange rate differences	Additions	Disposals	Status as of Dec. 31, 2013	Status as of Dec. 31, 2013	
42.9	-0.6	6.3	1.7	46.9	14.2	
11.4	-	13.6	11.6	13.4	18.1	
7.0	-	-	-	7.0	59.4	
-	-	0.4	0.4	-	0.8	
61.3	-0.6	20.3	13.7	67.3	92.5	
71.8	-0.2	3.1	1.7	73.0	47.9	
79.5	-0.3	7.0	2.6	83.6	38.4	
59.7	-0.7	7.8	5.4	61.4	21.6	
-	-	-	-	-	25.7	
211.0	-1.2	17.9	9.7	218.0	133.6	
4.5	-	-	-	4.5	0.1	
0.8	-	-	-	0.8	0.1	
-	-	-	-	-	-	
5.3	-	-	-	5.3	0.2	
277.6	-1.8	38.2	23.4	290.6	226.3	
3.8	-	0.3	0.2	3.9	0.8	

Schedule of changes in KUKA Group's fixed assets 2012

in € millions	Acquisition / Manufacturing costs					Status as of Dec. 31, 2012
	Status as of Jan. 1, 2012	Exchange rate differences	Additions	Disposals	Reclassifications	
I. Intangible assets						
1. Rights and similar assets	47.9	-0.1	6.1	1.8	0.3	52.4
2. Self-developed software and other development costs	23.7	-	10.4	-	-	34.1
3. Goodwill	56.6	-	-	-	-	56.6
4. Advances paid	1.2	-	0.2	-	-0.3	1.1
	129.4	-0.1	16.7	1.8	0.0	144.2
II. Tangible assets						
1. Land, similar rights and buildings including buildings on land owned by third parties	115.7	-0.3	2.3	0.7	0.1	117.1
2. Technical plant and equipment	96.7	-0.1	10.0	2.2	1.0	105.4
3. Other equipment, factory and office equipment	73.3	-0.3	9.0	4.0	0.5	78.5
4. Advances paid and construction in progress	1.7	0.0	4.8	-	-1.6	4.9
	287.4	-0.7	26.1	6.9	0.0	305.9
III. Financial investments						
1. Participations in affiliated companies	4.6	-	-	-	-	4.6
2. Other participations	0.9	-	-	-	-	0.9
3. Other loans	0.0	-	-	0.0	-	-
	5.5	-	-	0.0	-	5.5
	422.3	-0.8	42.8	8.7	0.0	455.6

The following amounts have been capitalized under technical plant and equipment due to finance leases in which KUKA Group acts as the lessee:

Technical plant and equipment	4.5	-	-	-	-	4.5
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Accumulated depreciation and impairment losses					Net carrying amount
Status as of Jan. 1, 2012	Exchange rate differences	Additions	Disposals	Status as of Dec. 31, 2012	Status as of Dec. 31, 2012
38.2	-0.2	5.4	0.5	42.9	9.5
5.4	-	6.0	-	11.4	22.7
7.0	-	-	-	7.0	49.6
-	-	-	-	-	1.1
50.6	-0.2	11.4	0.5	61.3	82.9
68.6	-0.1	3.6	0.3	71.8	45.3
75.0	-0.1	6.1	1.5	79.5	25.9
56.2	-0.2	7.6	3.9	59.7	18.8
-	-	-	-	-	4.9
199.8	-0.4	17.3	5.7	211.0	94.9
4.5	-	-	-	4.5	0.1
0.8	-	-	-	0.8	0.1
-	-	-	-	-	-
5.3	-	-	-	5.3	0.2
255.7	-0.6	28.7	6.2	277.6	178.0
3.6	-	0.2	-	3.8	0.7

8 Intangible assets

Changes to the individual categories of intangible assets are disclosed in the schedule of changes in fixed assets.

Goodwill

Goodwill is recognized in the amount of €59.4 million (2012: €49.6 million) and is attributable to the profit centers listed below. The table also shows the discount rates before taxes used (weighted average cost of capital (WACC)).

PROFIT CENTER

in € millions	Dec. 31, 2012		Dec. 31, 2013	
	Goodwill	WACC (%)	Goodwill	WACC (%)
Body-Structure and Engineering	40.7	12.8	50.5	12.9
Assembly & Test	4.7	12.8	4.7	12.8
Robotics Automotive	3.8	11.9	3.8	14.4
Others / less than €1 million	0.4	11.9	0.4	14.4
Total	49.6		59.4	

Profit centers represent the smallest cash generating unit (CGU), making them the basis for the impairment test of goodwill according to IAS 36. As in previous years, the customer service business in the Robotics division is proportionately allocated to the profit centers "Automotive" and "General Industry". The increase at the profit center "Body Structure and Engineering" is attributable to the two acquisitions of companies made during the financial year (cf. p. 132 "Acquisitions").

The impairment test for all CGUs is based on a continuous detailed planning period and increased steadiness in the last year of the detailed planning, i. e. on a steady return on sales, investments and depreciation. As in the previous year, a perpetual growth rate of 0.5 percent is considered.

The cost of equity capital and borrowing costs were determined on the basis of segment-specific peer groups. The peer group is made up of KUKA's most important national and international competitors and thus includes companies with similar activity and product portfolios.

Material components used in determining WACC are the market risk premium of 6.25 percent (2012: unchanged) and the risk-free interest rate of 2.75 percent (2012: 2.50 percent). The beta factor was determined as a three-year average of the respective peer group; for the Systems segment it was 1.052 (2012: 1.070) and for the Robotics segment it was 1.186 (2012: 1.242).

The ratios for the cost of equity capital and the cost of borrowed capital were determined by segment based on the average leverage ratios of the respective peer group for the last three years. The tax rate used was 30.0 percent (2012: unchanged).

A one percent higher WACC would only marginally influence the impairment of goodwill – as marginally as a reduction in sales revenues over the entire planning period by ten percent with a correspondingly lower cash flow.

Self-developed software and other product development costs

Total expenditures for research and development for the reporting period were €59.7 million compared to €42.6 million in 2012.

According to IAS 38, self-developed software and other product development costs must be capitalized. For the purpose of such capitalization, KUKA Group uses the costs of production which include directly attributable costs as well as an appropriate allocation for overheads and depreciation. Borrowing costs are included in the production costs for qualifying assets based on the Group capitalization rate of 6.1 percent (2012: 6.6 percent).

In the past at KUKA Group, development costs were only recognized as assets at KUKA Roboter GmbH and KUKA Laboratories GmbH. A development at KUKA Systems GmbH was also capitalized for the first time during the financial year. The companies are working on several projects involving mechanical systems and performance and guidance software for robots as well as new applications in the area of medical technology and friction welding. Borrowing costs of €0.5 million (2012: unchanged) were accounted for.

Development costs with a carrying amount of €18.1 million (2012: €22.7 million) have been capitalized according to IAS 38. Additions for 2013 totaled €9.1 million compared to €10.4 million last year.

The depreciable amounts on intangible assets are as follows:

in € millions	2012	2013
Depreciation of tangible assets		
scheduled	11.2	15.0
non-scheduled	0.2	5.3
Total	11.4	20.3

Write-downs made in the financial year relate to a software project in the development stage and a project in connection with the electronic processing of documents. Last year's write-down related to the liquidation of a company.

The share of depreciation related to capitalized borrowing costs in previous years is recognized in the income statement initially under research and development expenses and eliminated in the reconciliation of the operating results to EBIT. An amount of €0.2 million (2012: less than €0.1 million) was reclassified in this area in the financial year under review.

9 Tangible assets

The breakdown of the items of tangible assets including changes over the reporting year and in 2012 are shown in note 7. The investment focuses of the financial year are described in the management report.

Subsidies in the amount of €0.8 million (2012: €0.2 million) were deducted from the cost of purchase or cost of production of property, plant and equipment. The amount primarily includes grants for the daycare center opened on the company premises in October.

The depreciable amounts are as follows:

in € millions	2012	2013
Depreciation of tangible assets		
scheduled	17.0	17.9
non-scheduled	0.3	0.0
Total	17.3	17.9

Government grants

Government grants totaling €4.1 million (2012: €1.7 million) were received and recognized as directly income-relevant. There were no contingently repayable grants as of the balance sheet date. The increase resulted primarily from additional government grants in China.

10 Financial investments

Financial investments relate primarily to other investments with less than ten percent ownership.

11 Finance lease

KUKA as a lessor

KUKA Toledo Production Operations LLC., Toledo, Ohio, USA (KTPO) manufactures Jeep Wrangler bodies under the terms of a pay-on-production contract with Chrysler. The first unpainted car bodies associated with the project were delivered to Chrysler in July 2006. The project was initially financed through an operating lease agreement with a local corporation and a consortium of financing banks. In 2008 KUKA Aktiengesellschaft reached an agreement with Chrysler LLC and the financing banks regarding the settlement of the €77.1 million financing, which resulted in the legal ownership of the buildings and production systems.

Because of the existing agreement to supply car bodies to Chrysler, the acquisition of the production system assets was not included on the balance sheet as an asset acquisition, but instead categorized as a finance lease in accordance with IFRIC 4/IAS 17 guidelines and booked as a receivable from finance leases. A non-current lease receivable of €61.9 million (2012: €70.2 million) and a current lease receivable of €5.3 million (2012: €5.0 million) exist as of the balance sheet date. Sales revenues shown on KTPO's balance sheet will thus be reduced by the fictitious leasing rate. The interest component included in the fictitious leasing rate is booked under interest result, while the repayment component of this repayment reduces the receivables as per schedule.

Due to the arrangement of the dealing as a full payout lease agreement, future minimum lease payments correspond to the gross investment. The following table shows the reconciliation to the present value of the outstanding minimum lease payments:

in € millions	2012	2013
Future minimum lease payments / Finance lease gross investments	111.0	95.0
of that not later than one year	11.6	11.1
of that later than one year and not later than five years	46.5	44.4
of that later than five years	52.9	39.5
Unrealized financial income	-35.8	-27.8
Present value of outstanding minimum lease payments	75.2	67.2
of that not later than one year	5.0	5.3
of that later than one year and not later than five years	25.4	26.5
of that later than five years	44.8	35.4

KUKA as a lessee

The finance leases for technical plant and equipment have interest rates between 2.25 and 8.8 percent p.a. Future payments due for finance lease agreements as well as the present values for future leasing payments (the corresponding amounts are recognized under other liabilities) amount to €0.3 million. In the previous year, both the minimum lease payments and the present values were less than €0.1 million.

For information on operating lease agreements please see note 28 "Contingent liabilities and other financial commitments".

12 Inventories

in € millions	Dec. 31, 2012	Dec. 31, 2013
Raw materials and supplies	65.4	71.3
Work in process	113.3	85.4
Finished goods	20.7	23.2
Advances paid	14.0	6.3
Total	213.4	186.2

The carrying amount of inventories with adjusted valuation in the amount of €112.1 million compares with €129.7 million in 2012 and has been recognized at net realizable value. Write-downs, relative to gross value, amounted to €32.1 million versus €35.2 million the year prior.

13 Receivables

in € millions	Dec. 31, 2012	Dec. 31, 2013
Trade receivables	141.7	167.5
Receivables from construction contracts	198.9	181.1
Total	340.6	348.6

Trade receivables and receivables from construction contracts have a term of less than one year.

The following table breaks down receivables by age and recoverability:

in € millions	Not impaired as of the balance sheet date but in arrears by					Total of past due, unimpaired receivables	Impaired trade receivables before recording of impairment losses	Impairment loss	Net carrying amount of impaired trade receivables	Neither impaired nor past due as of the balance sheet date	Net carrying amount
	Less than 30 days	30 to 60 days	61 to 90 days	91 to 180 days	More than 180 days						
As of Dec. 31, 2012	26.5	15.9	3.2	2.4	1.3	49.3	6.3	-6.0	0.3	92.1	141.7
As of Dec. 31, 2013	26.0	7.2	5.0	4.9	2.6	45.7	6.2	-5.9	0.3	121.5	167.5

With respect to existing receivables that were neither impaired nor in arrears, there were no indications as of the balance sheet date that the obligors would not meet their payment obligations. Receivables from construction contracts have no specific due date and are not impaired.

Receivables of KUKA Roboter GmbH are regularly sold as part of ABS programs. See note 25 for more details.

Trade receivables

Bad debt allowances on trade receivables developed as follows:

in € millions	2012	2013
Impairment losses / status as of Jan. 1	6.3	6.0
Additions (expenses related to impairment losses)	1.7	1.8
Use	-0.8	-1.1
Reversals	-1.2	-0.8
Impairment losses / status as of Dec. 31	6.0	5.9

The total amount of additions of €1.8 million (2012: €1.7 million) breaks down into additions for specific bad debt allowances of €1.7 million (2012: €1.6 million) and lump-sum bad debt allowances in the amount of €0.1 million (2012: unchanged).

Receivables from construction contracts

For receivables from construction contracts, advances received have been offset against costs incurred in connection with the contract, including contributions to earnings on a per contract basis. As at the balance sheet date, costs incurred and earnings recognized in connection with long-term construction contracts in the amount of €1,223.1 million were offset against advances received in the amount of €1,042.0 million. In 2012 these figures were €1,301.9 million and €1,103.3 million, respectively. This resulted in receivables of €181.1 million compared to €198.9 million the year prior and liabilities of €132.7 million versus €95.5 million a year earlier. For liabilities from construction contracts, advances received exceed the costs incurred and the earnings portion.

14 Other assets, prepaid expenses and deferred charges

in € millions	of that up to one year	of that more than one year	Dec. 31, 2012 Total	of that up to one year	of that more than one year	Dec. 31, 2013 Total
Other assets and deferred charges	26.9	9.6	36.5	61.1	9.1	70.2

Securities in the amount of €35.0 million (2012: €0.0 million) held at the balance sheet date are recognized under other assets, prepaid expenses and deferred charges. Such items include bonds of Federal States (Bundesländer) (€14.9 million), corporate bonds with an "A" credit rating (€10.2 million) and commercial papers (€9.9 million). All securities have a remaining term of between three and twelve months.

The following table shows the financial instruments recognized under other assets as outlined in IFRS 7 according to age and impairment:

in € millions	Impaired receivables before recording of impairment loss	Impairment loss	Carrying amount of impaired receivables	Neither impaired nor past due as of the balance sheet date	Carrying amount
Dec. 31, 2012	2.5	-2.5	0.0	13.4	13.4
Dec. 31, 2013	2.5	-2.3	0.2	44.9	45.1

There are no other assets that are past due but not yet impaired as of December 31, 2013 or December 31, 2012.

Impairment losses on other assets developed as follows:

in € millions	2012	2013
Impairment losses / Status as of Jan. 1	2.7	2.5
Additions (Expenses related to impairment losses)	0.2	0.2
Use	0.0	0.0
Reversals	-0.4	-0.4
Impairment losses / Status as of Dec. 31	2.5	2.3

15 Cash and cash equivalents

Cash and cash equivalents include all cash funds recognized on the balance sheet, i. e. cash on hand, checks and cash balances with financial institutions, provided that they are available within three months.

KUKA Group maintains bank balances exclusively at financial institutions with an excellent credit rating. Furthermore, funds to be invested are distributed across several financial institutions in order to diversify risk.

Cash with limited availability on the balance sheet date only exists in connection with the signing of the new syndicated loan (see page 163 "syndicated loan" for more details). No cash was subject to limited availability in 2012.

in € millions	Dec. 31, 2012	Dec. 31, 2013
Cash-on-hand	0.1	0.1
Cash and bank balances	244.2	434.9
Cash with limited availability	-	6.1
Total	244.3	441.1

NOTES TO THE GROUP BALANCE SHEET: EQUITY AND LIABILITIES

16 Equity

Changes in equity including changes without effect on profit or loss are presented in the Consolidated Statement of Changes in Equity and in the Statement of Comprehensive Income.

For more information on equity see the notes in the management report under "Disclosure as per section 315 (4) of the German Commercial Code, including accompanying explanation".

17 Subscribed capital

The total share capital of KUKA Aktiengesellschaft amounts to €88,180,120.60 and is subclassified into 33,915,431 no-par value bearer shares outstanding. Each share is equal to one vote.

18 Capital reserve

The capital reserve applies to KUKA Aktiengesellschaft. The change compared to December 31, 2012 resulted from the issue of the convertible bond in February and July 2013.

19 Revenue reserves

The revenue reserves include:

- The accumulated retained earnings of KUKA Aktiengesellschaft and its consolidated subsidiaries
- Consolidation and exchange rate effects
- Actuarial gains and losses included in provisions for pensions and the associated deferred taxes
- Components from the employee share program for KUKA employees

Deferred taxes totaling €-2.5 million (2012: €-4.5 million) from transactions not recognized in profit or loss are included in equity. These are primarily attributable to actuarial gains and losses from pensions.

20 Minority interests

This item primarily concerns the minority stake held by third parties in KUKA Enco Werkzeugbau spol. s. r. o., Dubnica, Slovakia and in HLS Vietnam Co. Ltd., Ho Chi Minh City, Vietnam. The stake in HLS Vietnam Co. Ltd was increased from 75.1 percent to 95.0 percent in 2012.

21 Management of capital

The primary goal of managing capital for KUKA Group is to support ongoing business operations by providing adequate financial resources and to increase shareholder value.

This requires sufficient equity (equity ratio), liquidity (net liquidity), and a sufficient return on capital employed (ROCE). Management and controlling of the business divisions therefore also takes place based on these key indicators.

		2012	2013
Equity	€ millions	297.5	379.1
/ Total equity	€ millions	1,137.4	1,377.1
Equity ratio	%	26.2	27.5
EBIT	€ millions	109.8	120.4
/ Capital Employed	€ millions	339.8	326.2
ROCE	%	32.3	36.9
Cash and cash equivalents	€ millions	244.3	441.1
Non-current finance liabilities	€ millions	-194.9	-288.1
Current finance liabilities	€ millions	-6.6	-6.5
Net liquidity / net debt	€ millions	42.8	146.5

22 Pension provisions and similar obligations

Provisions for pensions developed as follows in the financial year 2013:

in € millions	Status as of Jan. 1	Currency exchange difference	Consumption	Additions	Actuarial gains (-) and losses (+) (directly in equity)	Status as of Dec. 31
2012	70.4	-	5.6	3.7	13.5	82.0
2013	82.0	0.1	5.4	3.0	-6.3	73.4

Pension provisions include liabilities from vested benefits and from current benefits paid to vested and former employees of KUKA Group as well as their surviving dependents. Depending on the legal, economic and tax situation in each of the countries concerned, various retirement benefit systems are in place that are as a rule based on employees' length of service and compensation.

Defined benefit plans in the KUKA Group primarily concern plans in Germany and the United States. The country-specific characteristics and legal regulations are presented in the following.

Germany: Obligations in Germany arise from agreements on company pension schemes concluded with various insurance institutions. The prerequisites regarding the type and amount of the claim depend on the worker's age and number of years with the company. The benefits include the components old-age pension, disability pension, widow's pension, death benefits and emergency assistance.

USA: KUKA Assembly and Test Corp., Michigan, USA offers its employees pension payments after retirement. Employees who entered the worker's union before September 14, 2004 are eligible to participate in the pension plan. The benefits are calculated using the rate applicable at the time of entering retirement, which is based on the years of service credited to the employee.

Eligible employees are also provided with medical care.

Owing to their benefit character, the obligations of the US Group company KUKA Assembly and Test Corp., Michigan, USA for post-employment medical benefits are also disclosed under pension provisions according to IAS 19. These post-employment benefit provisions represent € 0.6 million (2012: € 0.8 million) of the total provisions and accruals.

The Employee Retirement Income Security Act (ERISA) in the United States provides the legal and regulatory framework for these plans.

Company retirement benefit coverage in the Group is provided through both defined contribution and defined benefit plans.

For the defined contribution plans, the company pays contributions to a public or private pension insurance carrier. Upon payment of the contributions, the company has no further obligations. Total payments for pensions under defined contribution plans in the amount of € 26.7 million compared to € 22.7 million in 2012 are disclosed as expenses.

Under defined benefit plans, the company incurs an obligation to provide the benefits promised by the plan to current and former employees. The only remaining funded benefit plans in effect are in the United States.

Disclosures on actuarial assumptions

The amount of pension obligations (defined benefit obligation) was calculated by actuarial methods for which estimates are unavoidable. In addition to assumptions related to life expectancy, this involves assumptions detailed below, which are dependent on the economic environment for each country in question:

in € millions	Germany		USA		Other	
	2012	2013	2012	2013	2012	2013
Demographic assumptions	RT 2005 G	RT 2005 G	RP 2000	RP 2000	IPS55 (I); TV88/90 (F)	IPS55 (I); TV88/90 (F)
Discount factor	3.00%	3.55%	3.90%	4.80%	3.25%	3.40%
Expected rate of return on assets	N/A	N/A	7.60%	4.80%	N/A	N/A
Wage dynamics	0.00–2.50%	0.00–2.50%	N/A	N/A	0.00–2.00%	0.00–2.00%
Pension dynamics	1.75–2.50%	1.75–2.50%	N/A	N/A	0.00–2.00%	0.00–2.00%
Changes in cost of medical services	N/A	N/A	5.00%–7.00%	5.00%–7.00%	N/A	N/A

The discounting factor is determined based on the returns from high-quality, fixed-rate corporate bonds.

Wage dynamics encompass future increases in wages and salaries that are estimated annually by reference to factors such as inflation and economic conditions, among others.

The expected returns are derived from consensus forecasts for the respective asset classes as well as bank discussions. The forecasts are based on experience, economic data, interest forecasts and stock market expectations.

For funded plans, the pension obligations are reduced by an amount equal to the fund assets. If the fund assets exceed the defined benefit obligation, an asset is recognized according to IAS 19 and disclosed under other assets. If the fund assets do not cover the commitment, the net obligation is recognized as a liability under pension provisions.

Increases or decreases in either the present value of the defined benefit obligation or the fair value of the plan assets may give rise to actuarial gains or losses. This may be caused by factors such as changes in actuarial parameters, changes to estimates for the risk profile of the pension obligations and differences between the actual and expected returns on the fund assets.

The sensitivity analysis illustrates the extent to which changes in actuarial assumptions would impact defined benefit obligations recognized as of December 31, 2013:

Nature of and degree of change in actuarial assumptions		Present value of the defined benefit obligation prior to change	Present value of the defined benefit obligation after change	Change
in € millions				
Increase in the discount rate	by 0.25%		75.8	-2.5
Decrease in the discount rate	by 0.25%	78.3	80.1	+1.8
Pension increase	by 0.25%		79.7	+1.4
Pension reduction	by 0.25%	78.3	76.6	-1.7
Increase in life expectancy	by 1 year		81.9	+3.6
Reduction in life expectancy	by 1 year	78.3	74.5	-3.8

No sensitivity analyses were calculated for the parameters “wage dynamics” and “retirement age” owing to the very small number of candidates who are still active.

The changes in the assumptions for the discount factor and pensions have no linear impact on the calculation of the present value of the defined benefit obligation due to specific effects such as compound interest.

Changing multiple assumptions simultaneously does not always correspond to the cumulative effect because there are interdependencies between factors. A new calculation of the defined benefit obligation must be made for each case.

Actuarial gains and losses are recognized directly in equity and offset against revenue reserves in the year in which they occur.

Funding status of defined benefit pension obligations

in € millions	Germany		USA		Other		Total	
	2012	2013	2012	2013	2012	2013	2012	2013
Present value of pension benefits covered by provisions	78.0	70.8	0.8	0.6	0.9	1.0	79.7	72.4
Present value of funded pension benefits	-	-	6.7	5.9	-	-	6.7	5.9
Defined benefit obligation	78.0	70.8	7.5	6.5	0.9	1.0	86.4	78.3
Fair value of plan assets			4.4	4.9			4.4	4.9
Net obligation as of Dec. 31	78.0	70.8	3.1	1.6	0.9	1.0	82.0	73.4

Reconciliation / Changes in the defined benefit obligation

The reconciliation of the obligation for key items from January 1, 2013 to the end of the financial year breaks down as follows:

in € millions	Germany		USA		Other		Total	
	2012	2013	2012	2013	2012	2013	2012	2013
Net obligations as of Jan. 1	67.1	78.0	6.6	7.5	0.6	0.9	74.3	86.4
Current service costs	0.3	0.4	0.1	0.2	0.2	0.1	0.6	0.7
Interest expense	3.1	2.3	0.3	0.3	0.0	0.0	3.4	2.6
Actuarial gains (-)/and losses (+)	12.7	-4.9	0.9	-0.8	0.1	0.0	13.7	-5.7
Past service cost	-	0.0	-	-0.1	-	0.0	-	-0.1
Payments made	-5.2	-5.0	-0.3	-0.3	0.0	0.0	-5.5	-5.3
Currency translation	-	-	-0.1	-0.3	0.0	0.0	-0.1	-0.3
Net obligations as of Dec. 31	78.0	70.8	7.5	6.5	0.9	1.0	86.4	78.3
of which funded in a separate fund	-	-	(6.7)	(5.9)	-	-	(6.7)	(5.9)
of which funded by provisions	(78.0)	(70.8)	(0.8)	(0.6)	(0.9)	(1.0)	(79.7)	(72.4)

Current service costs and interest expenses totaling €3.3 million (2012: €4.0 million) compare to benefit payments of €5.3 million during the financial year (2012: €5.5 million). The reduction of the defined benefit obligation results mainly from actuarial gains of €5.7 million (2012: actuarial losses of 13.7 million) during the financial year.

Reconciliation / Development of plan assets

The reconciliation of plan assets and asset classes at the close of the financial year breaks down as follows:

in € millions	Total 2012	Total 2013
Jan. 1	3.9	4.4
Fair value as of Jan. 1	0.3	0.2
Actuarial gains/ losses	0.2	0.6
Employer contributions	0.3	0.2
Payments	-0.2	-0.3
Currency translation	-0.1	-0.2
Fair value as of Dec. 31	4.4	4.9
Of which fixed-interest securities and cash	1.0	0.8
Of which investments in equity funds	3.4	4.1

Investment and risk strategy

The allocation of plan assets to the various asset classes is determined taking potential returns and risks into account. Ratings and forecasts from specialists are used as the basis for selecting high-quality stocks and bonds. An optimal portfolio is achieved by ensuring a good balance of risky and risk-free investments. The financing principles for defined benefit plans covered by assets are part of KUKA's commitment to sound financial management, which also includes ongoing analysis of the structure of obligations from defined benefit plans. The company has identified the deterioration of the funded status due to the unfavorable development of plan assets and/or defined benefit obligations as a main risk. KUKA monitors its financial assets and defined benefit obligations to identify this risk. A risk limit at the Group level provides the basis for determining the company's investment strategy, i. e. the strategic asset structure in plan assets for key plans and the scope of interest rate risk hedging. Both the risk limit and the investment strategy are regularly reviewed with the help of external experts to ensure a holistic view of plan assets and guarantee that benefit obligations are met (asset / liability matching).

Maturity profile of defined benefit obligations

The following table provides an overview of the expected benefit payments over the next ten years:

in € millions	Germany	USA	Other	Total
not later than one year	5.1	0.3	0.0	5.4
later than one year and not later than five years	19.0	1.3	0.1	20.4
later than five years and not later than ten years	21.2	2.0	0.1	23.3

23 Other provisions

in € millions	Status as of Jan. 1, 2013	Exchange rate differences	Consumption	Reversals	Additions	Status as of Dec. 31, 2013
Warranty commitments and risks from pending transactions	37.9	-0.2	12.2	1.3	25.4	49.6
Other provisions	42.3	-1.2	18.9	3.3	26.2	45.1
Total	80.2	-1.4	31.1	4.6	51.6	94.7

Other provisions for warranty commitments and risks from pending transactions include provisions for impending losses from pending transactions of €13.5 million (2012: €10.5 million) and warranty risk of €36.1 million (2012: €27.4 million).

Of the other provisions, €19.5 million (2012: €15.2 million) relates among other items to costs still to be incurred for orders already invoiced and litigation risk of €1.5 million (2012: €0.8 million).

The expected remaining term of the other provisions is up to one year.

24 Liabilities

2013 in € millions	Remaining maturity		Dec. 31, 2013 total
	up to one year	of more than five years	
Liabilities due to banks	3.5	0.1	3.6
Bond	1.9	154.9	156.8
Convertible bond	1.1	133.1	134.2
Financial liabilities	6.5	288.1	294.6
Trade payables	171.7	-	171.7
Advances received	52.3	-	52.3
Liabilities from construction contracts	132.7	-	132.7
Accounts payable to affiliated companies	0.1	-	0.1
Income tax payables	7.1	-	7.1
Other liabilities and deferred income	132.2	14.7	146.9
(of that for other taxes)	(22.6)	-	(22.6)
(of that for social security payments)	(8.7)	-	(8.7)
(of that liabilities relating to personnel)	(75.1)	(8.6)	(83.7)
(of that for leases)	(0.1)	(0.2)	(0.3)
(of that derivatives)	(2.2)	-	(2.2)
Total	502.6	302.8	805.4

2012 in € millions	Remaining maturity		Dec. 31, 2012 total
	up to one year	of more than five years	
Liabilities due to banks	4.2	0.0	4.2
Bond	2.4	194.9	197.3
Convertible bond	-	-	-
Financial liabilities	6.6	194.9	201.5
Trade payables	136.2	-	136.2
Advances received	86.5	-	86.5
Liabilities from construction contracts	95.5	-	95.5
Accounts payable to affiliated companies	0.1	-	0.1
Income tax payables	9.2	0.0	9.2
Other liabilities and deferred income	109.1	13.4	122.5
(of that for other taxes)	(19.0)	-	(19.0)
(of that for social security payments)	(3.4)	-	(3.4)
(of that liabilities relating to personnel)	(65.3)	(8.0)	(73.3)
(of that for leases)	(0.0)	-	(0.0)
(of that derivatives)	(4.9)	-	(4.9)
Total	443.2	208.3	651.5

25 Financial liabilities / financing

The existing financial liabilities mainly represent the bond issued in November 2010 and the convertible bond issued in two tranches in 2013.

Fixed interest rate agreements

in € millions	Net carrying amount		Fair value		Original maturity	Nominal interest rate
	2012	2013	2012	2013		
Bond	197.3	156.8	229.8	176.6	2010 – 2017	8.75% p. a.
Convertible bond	-	134.2	-	172.8	2013 – 2018	2.00% p. a.

The market value of the bond and the convertible bond was determined using the Xetra closing price of the Deutsche Börse Frankfurt on the last trading day of the respective year.

Variable interest rate liabilities to banks:

Financial instrument / in millions	Net carrying amount		Avg. nominal interest rate	Year of latest maturity
Liabilities due to banks as of Dec. 31, 2012	298.4 INR	€ 4.2	12.0% p. a.	2013
Liabilities due to banks as of Dec. 31, 2013	287.9 INR	€ 3.4	11.3% p. a.	2014

The nominal interest rates correspond to those interest rates which were payable on outstanding amounts at year end in the respective currency.

Bond

In November 2010, KUKA Aktiengesellschaft placed a bond with a face value of € 202.0 million. The issue price was 99.3605 percent, which corresponds to a cash inflow of € 200.7 million. The bond was issued in denominations of € 50,000.00 and carries an interest coupon of 8.75 percent p.a. Interest payments are made on May 15 and November 15 every year.

The bond matures at the latest on November 15, 2017 and will be redeemed by payment equal to the face value plus interest accrued up until that time. The issuer has the right to cancel the bond before maturity. The first possible call date is November 15, 2014. The fixed redemption price at this call date is 104.375 percent.

To adjust the financing portfolio, shares worth € 42.6 million were bought back during the reporting year at market prices ranging between 110.89 and 112.55. The outstanding notional amount is thus now only € 159.4 million.

The bond is listed on the Luxembourg stock exchange (ISIN DE000A1E8X87/WKN A1E8X8). The last price quoted for the bond on the Frankfurt Stock Exchange in 2013 was 110.75 percent versus 113.75 as of December 31, 2012.

On initial recognition the bond was carried at fair value less transaction costs totaling €8.0 million. The difference between the amount paid out (less transaction costs) and the redemption amount is recognized in the interest result for the term of the loan using the effective interest method. The effective interest rate at the balance sheet date is 9.63 percent.

Convertible bond

Last February, KUKA Aktiengesellschaft issued a convertible bond with a nominal value of €58.8 million maturing in February 2018 (tranche 1), and increased the size by €91.2 million in July 2013 (tranche 2). The convertible bond thus now has a total nominal value of €150.0 million. The bond was issued in denominations of €100,000. The initial conversion price is €36.8067 per share, which means the conversion ratio is 2,716.8967 shares per each €100,000 unit. In total, the bond entitles holders to convert their holdings into up to 4,075,344 new bearer shares of KUKA Aktiengesellschaft (of which 1,597,535 are for the tranche in February 2013 and 2,477,809 for the tranche in July 2013). The conversion rights are valid for the entire term of the convertible bond. The bond carries an interest coupon of 2.0 percent p.a. Interest payments are made twice a year, on February 12 and August 12; the first payment is on August 12, 2013.

The convertible bond is listed on the Open Market of the Frankfurt Stock Exchange (ISIN DE0006204407/WKN A1R09V). The last price quoted for the convertible bond on the Frankfurt Stock Exchange in 2013 was 115.26 percent.

On the balance sheet, the convertible bond is broken down into an equity and a debt component. The market value of the debt component including issue costs is €131.7 million, of which €50.2 million applies to the first tranche and €81.5 million to the second. As a result of the attractive market interest rate from a risk perspective, the company also issued a fixed-interest bond with no conversion rights at the same time it issued each of the convertible instruments (5.03 percent for tranche 1 and 4.80 percent for tranche 2). The resulting value of the equity component is €27.0 million (tranche 1: €7.5 million; tranche 2: €19.5 million including a premium of €10.5 million). It is recognized as part of the capital reserve in consideration of deferred taxes and will not be changed until the due date or conversion. The interest expense recognized for the bond in the 2013 was €4.1 million.

Syndicated loan

Given the significant improvements in the company's financial situation, KUKA refinanced the secured syndicated loan it had concluded in 2010 prematurely at considerably better conditions in December 2013. The number of underwriters fell from seven to five. Joint bookrunners and mandated lead arrangers are Commerzbank and Deutsche Bank. UniCredit and LBBW also function as mandated lead arrangers. The major French bank BNP Paribas is a lead arranger and a new member of the syndicate. The Syndicated Senior Facilities Agreement concluded in December 2013 has a volume of €160.0 million (€50.0 million as a cash credit line and €110.0 million as a guarantee line) and a five-year term. The cash credit line can also be used as a guarantee facility. The new syndicated loan is unsecured and contains only the customary equal treatment clauses and negative pledges.

The Syndicated Senior Facilities Agreement includes financial and non-financial covenants. The key financial covenants relate to minimums for the interest coverage ratio (ratio of earnings before interest, taxes, depreciation and amortization [EBITDA] to net interest expense), to upper limits for leverage (ratio of net financial liabilities to EBITDA) and to gearing (ratio of net financial liabilities to equity). The headroom to the respective limit values was more than 50 percent for all covenants.

The utilization of the guarantee facility as of the key date totaled €53.9 million (2012: €109.4 million); the existing working capital line of credit was utilized in the amount of €3.4 million (2012: €4.2 million).

Due to the changes in the consortium of banks from the old to the new Syndicated Senior Facilities Agreement, the guarantee volumes made available by the exiting banks had to be returned. This was achieved through cash collateralization of the open guarantees from these banks on pledged bank accounts, which took place on December 31, 2013 in the amount of €6.1 million. KUKA will have access to these funds only after the underlying guarantees expire or after these are returned. The corresponding amounts are therefore reported as restricted cash.

Guarantee facilities from banks and surety companies

The guarantee facilities promised by banks and surety companies outside the Syndicated Senior Facilities Agreement total € 72.8 million (2012: € 62.0 million) as of December 31, 2013, and can be utilized in full. In the previous year, utilization was still restricted to a maximum of € 45.0 million due to the provisions of the old syndicated loan. At the end of the reporting year, the company had utilized € 50.4 million versus € 39.5 million on December 31, 2012. Beyond these contractually agreed lines, KUKA Group has commitments from an existing surety company for line increases, so that the frame of € 100.0 million set by the new Syndicated Senior Facilities Agreement will be fully exhausted by contracted lines.

Asset-backed securities program

KUKA Group issued an asset-backed securities (ABS) program in December 2006 and again in June 2011. Under this program, trade receivables of KUKA Roboter GmbH can be sold in regular tranches to a special purpose vehicle (SPV) of BayernLB or Landesbank Baden-Württemberg. The SPV finances the purchase of the receivables by issuing securities on the capital market or through utilization of a special credit line provided by the respective bank. Covenants analogous to those of the Syndicated Senior Facilities Agreement are also in place for this financing program. The ABS program from 2006 was terminated by KUKA in June 2013, effective at the end of 2013, and fully repaid.

The key components of the ABS programs are included in the following table:

in € millions	ABS program 2006	ABS program 2011		Total	
	2012	2012	2013	2012	2013
Volume	25.0	25.0	25.0	50.0	25.0
Utilization	4.2	9.6	4.1	13.8	4.1
Expires			June 30, 2018		
Retained credit risk (in %)	1.15	1.15	1.15	1.15	1.15
Continuing involvement	0.2	0.2	0.2	0.4	0.2
Value adjustment of continuing involvement	0.2	0.2	0.2	0.4	0.2

Default guarantees from credit insurers ensure adequate credit worthiness of the receivables sold. KUKA Roboter GmbH assumes the first 1.15 percent of credit risk from the sale of receivables and as a further security provides a cash deposit each time, which is reported under other assets. KUKA Roboter GmbH manages and processes the receivables that are sold. As in the previous year, no claims to be recognized in the income statement resulted from this in 2013.

26 Other non-current / current liabilities and deferred income

The other liabilities for other taxes are primarily from sales, wage and church tax.

Other liabilities in the personnel area are mostly related to obligations from vacation entitlements (€ 6.7 million; prior year: € 8.3 million), flex-time credits (€ 15.1 million; prior year: € 12.9 million), variable compensation elements (€ 44.4 million; prior year: € 35.8 million) and pre-retirement (Altersteilzeit) (€ 7.6 million; prior year: € 7.0 million). Pre-retirement obligations have been reduced by the fair value of the corresponding fund assets (€ 7.4 million; prior year: € 8.0 million). The present value of entitlements from pre-retirement obligations (DBO) before offsetting was € 15.0 million, which was the same as last year.

Also reported under this item are, among other things, special payments, inventor's compensation, long-service awards and trade association fees.

Liabilities arising from finance leases are recognized at the present value of future lease payments and disclosed as other liabilities.

27 Financial risk management and financial derivatives

a) Principles of risk management

As part of its general business activities, KUKA Group is exposed to various financial risks, in particular from movements in exchange rates and interest rates as well as counterparty risk and liquidity risk. The purpose of financial risk management is to identify, assess and manage these risks. The aim is to limit the potential negative impact on the financial position.

Derivatives may be a part of financial risk management depending on the risk assessment. Derivatives are exclusively used as hedging instruments with reference to an underlying transaction and are thus not held for trading or other speculative purposes. To reduce the credit risk, hedging transactions are only concluded with financial institutions with an excellent credit rating.

The fundamentals of the Group's financial policy are established by the Executive Board and implemented by Group Treasury in close cooperation with Group companies. Certain transactions require the approval of the CFO, who is regularly briefed on the current risk exposures and how these are being managed.

b) Currency risk

Risks arising from fluctuations in exchange rates that may affect the Group's cash flow – for example from investments, financing and already fixed or planned incoming and outgoing operational payments in foreign currencies – are hedged as they arise or become known through the use of derivative financial instruments with banks or by offsetting opposing cash flows. Hedging may also cover future planned transactions such as planned purchases in foreign currencies, where hedging is used to cover exchange rate fluctuations congruent with the respective maturities and amounts. Group Treasury is principally responsible for the conclusion of hedging transactions with banks.

Exchange rate risks that do not influence the Group's cash flows, e. g. risks resulting from translation of balance sheet and income statement items of foreign KUKA companies into the Group currency (translation risks), are generally not hedged.

From the perspective of Group companies, there were no material financial liabilities in foreign currencies at banks at the reporting date. All intra-Group loans denominated in foreign currencies were hedged accordingly. KUKA was not exposed to any significant exchange rate risk in the area of financing at the reporting date on account of these hedging activities.

The individual KUKA companies handle their operating activities mainly in the relevant functional currency. However, some KUKA companies are exposed to corresponding exchange rate risk in connection with planned payments outside their own functional currencies. Such risks are hedged according to the policy outlined above. KUKA was not exposed to any significant exchange rate risks from its operating activities at the reporting date on account of these hedging activities.

Currency risk as defined by IFRS 7 arises on account of financial instruments that are denominated in a currency other than the functional currency and are of a monetary nature. Differences resulting from the translation of financial statements into the Group's presentation currency are not taken into consideration. Relevant risk variables are generally all non-functional currencies in which KUKA has financial instruments.

For the presentation of market risks, IFRS 7 requires sensitivity analyses that show the effects of hypothetical changes of relevant risk variables (e. g. interest rates, exchange rates) on profit or loss and shareholders' equity. The periodic effects are determined by relating the hypothetical changes in the risk variables to the balance of financial instruments at the reporting date. It is assumed that the balance at the reporting date is representative for the year as a whole.

Currency sensitivity analyses are based on the following assumptions:

- Major non-derivative monetary financial instruments (liquid assets, receivables, liabilities) are either directly denominated in the functional currency or are transferred as far as possible into the functional currency through the use of derivatives.
- Major interest income and interest expense from financial instruments are also either recorded directly in the functional currency or transferred into the functional currency by using derivatives. For this reason, there can be no material effect on the variables considered in this connection.

Owing to KUKA Group's delivery and service structure and the relationships with suppliers, the following currency scenarios arise at the balance sheet date for the main foreign currencies used by KUKA Group:

A ten percent gain of the euro against the US-dollar would have a positive effect on Group profits of plus €2.5 million (2012: plus €1.0 million). A ten percent decline of the euro against the US-dollar would have a negative effect on Group profits of minus €3.0 million (2012: minus €1.2 million).

A ten percent gain of the euro against the Japanese yen would have a negative effect on Group profits of minus €2.0 million (2012: minus €3.3 million). A ten percent decline of the euro against the Japanese yen would have a positive effect on Group profits of plus €2.5 million (2012: plus €4.0 million).

A ten percent gain of the euro against the Chinese renminbi would have a positive effect on Group profits of plus € 0.3 million (2012: plus € 1.1 million). A ten percent decline of the euro against the Chinese renminbi would have a negative effect on Group profits of minus € 0.4 million (2012: minus € 1.4 million).

A ten percent gain of the euro against the Hungarian forint would have a negative effect on Group profits of minus € 0.6 million (2012: minus € 0.6 million). A ten percent decline of the euro against the Hungarian forint would have a positive effect on Group profits of plus € 0.7 million (2012: plus € 0.7 million).

A ten percent gain of the euro against the Brazilian real would have a negative effect on Group profits of minus € 0.1 million (2012: plus € 0.3 million). A ten percent decline of the euro against the Brazilian real would have a positive effect on Group profits of plus € 0.1 million (2012: minus € 0.4 million).

Assumptions concerning the future cannot be derived from this presentation of currency effects. However, this analysis shows that the positive and negative effects of appreciation or depreciation of the euro in the Group are largely canceled out. This is due to the nearly balanced long and short positions with regard to the amounts involved.

c) Interest rate risk

Risks from interest rate changes at KUKA are essentially the result of short-term investments/borrowings in EUR (see note 25). These are not hedged at the reporting date.

Interest rate risk is presented by way of sensitivity analyses in accordance with IFRS 7. These show the effects of changes in market interest rates on interest payments, interest income and expense, other income components and shareholders' equity. Interest rate sensitivity analyses are based on the following assumptions:

- Changes in the market interest rates of non-derivative financial instruments with fixed interest rates only affect income if these are measured at their fair value. As such, all financial instruments with fixed interest rates that are carried at amortized cost (e. g. the issued bond) are not subject to interest rate risk as defined in IFRS 7.
- Changes in market interest rates affect the interest income or expense of non-derivative variable-interest financial instruments, the interest payments of which are not designated as hedged items of cash flow hedges against interest rate risks.

An increase in market interest rates by 100 basis points at December 31, 2013 would have a positive effect on results of plus € 4.3 million (2012: plus € 2.4 million). A decrease in market interest rates by 100 basis points would have a negative effect on results of minus € 1.0 million (2012: minus € 0.4 million). This hypothetical effect results solely from the financial investments (borrowings) with variable interest rates totaling € 434.9 million (€ 3.4 million) at the balance sheet date.

d) Credit risk

KUKA Group is exposed to credit risk from its operating activities and certain financing activities. A default can occur if individual business partners do not meet their contractual obligations and KUKA Group thus suffers a financial loss. With regard to financing activities, important transactions are only concluded with counterparties that have at least an investment grade credit rating.

At the level of operations, the outstanding debts are continuously monitored in each area locally. There are regular business relations with major customers at multiple KUKA Group companies. The associated credit risks are subject to separate quarterly credit rating monitoring as part of the risk management system at the Group's Executive Board level for early detection of an accumulation of individual risks. Added to these measures are comprehensive routine checks implemented at the segment level as early as the order initiation process (submission of offers and the acceptance of orders) to verify the credit rating of potential business partners. Credit risk is accounted for accordingly through individual impairments.

The maximum exposure to credit risk is represented by the carrying amounts of the financial assets that are carried in the balance sheet (including derivatives with positive market values). No agreements reducing the maximum exposure to credit risk had been concluded as of the reporting date.

e) Liquidity risk

One of KUKA AG's primary tasks is to coordinate and control the Group's financing requirements and to ensure the financial independence of KUKA and its ability to pay on time. With this goal in mind, KUKA Group optimizes the Group's financing and limits its financial risks. The standardized, Group-wide treasury reporting system implemented in 2007 is enhanced on a regular basis for this purpose. In addition, the Group's overall liquidity risk is reduced by closely monitoring Group companies and their control of payment flows.

As a first step to ensure the payment capability at all times and the financial flexibility of KUKA Group, a liquidity reserve is kept by KUKA Aktiengesellschaft in the form of credit lines and cash funds. Moreover, KUKA has issued a bond and a convertible bond, signed a Syndicated Senior Facilities Agreement with a consortium of banks and arranged for surety companies and banks to commit guarantee lines. The funding and guarantee requirements for business operations are ensured to a large extent internally by transferring cash funds (intercompany loans) and guarantees. This ensures that Group-wide liquidity management takes place at the individual company level, thereby further optimizing the Group's financing on the whole.

The following figures show the commitments for undiscounted interest and redemption repayments for the financial instruments subsumed under IFRS 7:

Dec. 31, 2013 in € millions	Cash flows 2014	Cash flows 2015	Cash flows 2016 – 2018	Cash flows 2019 et seq.
Non-current financial liabilities	16.9	17.0	345.0	–
Current financial liabilities	3.6	–	–	–
Trade payables	171.7	–	–	–
Liabilities from construction contracts	132.7	–	–	–
Accounts payable to affiliated companies	0.1	–	–	–
Other non-current liabilities and provisions	–	0.2	0.1	0.0
(of that for leases)	–	(0.2)	(0.1)	(0.0)
Other current liabilities and provisions	66.1	–	–	–
(of that for leases)	(0.1)	–	–	–

Dec. 31, 2012 in € millions	Cash flows 2013	Cash flows 2013	Cash flows 2015 – 2017	Cash flows 2018 et seq.
Non-current financial liabilities	17.7	17.7	255.0	–
Current financial liabilities	4.2	–	–	–
Trade payables	136.2	–	–	–
Liabilities from construction contracts	95.5	–	–	–
Accounts payable to affiliated companies	0.1	–	–	–
Other non-current liabilities and provisions	–	0.0	0.0	0.0
(of that for leases)	–	0.0	0.0	0.0
Other current liabilities and provisions	56.2	–	–	–
(of that for leases)	0.0	–	–	–

All financial instruments are included which were held at the balance sheet dates and for which payments have already been contractually agreed. Foreign currency amounts are expressed at the spot rate on the key date. The variable interest payments from the financial instruments were determined on the basis of the interest rates last fixed prior to December 31, 2013, i. e. 2012. Financial liabilities repayable at any time are always allocated to the earliest period.

f) Hedges

Hedges are used by KUKA Group exclusively in the form of forward exchange transactions to secure existing balance sheet items as well as to hedge future payment flows. These are exclusively for the purpose of hedging currency risk.

Other disclosures on financial instruments

The following shows the carrying amounts of the financial instruments by measurement category according to IAS 39:

in € millions	Abbr.	Dec. 31, 2012	Dec. 31, 2013
Available-for-Sale Financial Assets	AfS	0.2	0.2
Held-to-Maturity	HtM	0.0	35.0
Loans and Receivables	LaR	596.6	796.2
Financial Assets Held for Trading	FAHfT	1.7	3.6
Financial Liabilities Measured at Amortized Cost	FLAC	389.1	530.3
Financial Liabilities Held for Trading	FLHfT	4.9	2.2

The carrying amounts and the fair values are derived from the following table:

Carrying amounts and fair values by measurement categories for 2013

in € millions	IAS 39 – measurement categories	Net carrying amount / Status as of Dec. 31, 2013	of that: other assets and liabilities not covered by IFRS 7	of that: other assets and liabilities covered by IAS 17	Net carrying amount of the financial instruments / Status as of Dec. 31, 2013	Fair value / Status as of Dec. 31, 2013
Assets						
Financial investments		0.2	–	–	0.2	0.2
(of that participations)	AfS	(0.2)	–	–	(0.2)	(0.2)
Long-term finance lease receivables	n.a.	61.9	–	61.9	–	61.9
Other long-term receivables and other assets		9.1	5.6	0.0	3.5	9.1
(of that derivatives without a hedging relationship)	FAHfT	(0.0)	–	–	(0.0)	(0.0)
(of that trade receivables)	LaR	(0.0)	–	–	(0.0)	(0.0)
(of that from the category LaR)	LaR	(3.5)	–	–	(3.5)	(3.5)
(of that other)	n.a.	(5.6)	(5.6)	–	–	(5.6)
Trade receivables	LaR	167.5	–	–	167.5	167.5
Receivables from construction contracts	LaR	181.1	–	–	181.1	181.1
Current finance lease receivables	n.a.	5.3	–	5.3	–	5.3
Other assets, prepaid expenses and deferred charges		61.1	19.5	0.0	41.6	61.1
(of that derivatives without a hedging relationship)	FAHfT	(3.6)	–	–	(3.6)	(3.6)
(of that other from the category LaR)	LaR	(3.0)	–	–	(3.0)	(3.0)
(of that other from the category HtM)	HtM	(35.0)	–	–	(35.0)	(35.0)
(of that other)	n.a.	(19.5)	(19.5)	–	–	(19.5)
Cash and cash equivalents	LaR	441.1	–	–	441.1	441.1

in € millions	IAS 39 – measurement categories	Net carrying amount/ Status as of Dec. 31, 2013	of that: other assets and liabilities not covered by IFRS 7	of that: other assets and liabilities covered by IAS 17	Net carrying amount of the financial instruments/ Status as of Dec. 31, 2013	Fair value/ Status as of Dec. 31, 2013
Liabilities						
Non-current financial liabilities	FLAC	288.1	–	–	288.1	349.4
Other non-current liabilities and provisions		14.7	14.5	0.2	0.0	14.7
(of that for leases)	n.a.	(0.2)	–	(0.2)	–	(0.2)
(of that derivatives without a hedging relationship (held for sale))	FLHFT	(0.0)	–	–	(0.0)	(0.0)
(of that other from the category FLAC)	FLAC	(0.0)	–	–	(0.0)	(0.0)
(of that other)	n.a.	(14.5)	(14.5)	–	–	(14.5)
Current financial liabilities	FLAC	6.5	–	–	6.5	6.5
Trade payables	FLAC	171.7	–	–	171.7	171.7
Liabilities from construction contracts	n.a.	132.7	132.7	–	–	132.7
Accounts payable to affiliated companies	FLAC	0.1	–	–	0.1	0.1
Other current liabilities, prepaid expenses and deferred charges		132.2	66.0	0.1	66.1	132.2
(of that for leases)	n.a.	(0.1)	–	(0.1)	–	(0.1)
(of that derivatives without a hedging relationship (held for sale))	FLHFT	(2.2)	–	–	(2.2)	(2.2)
(of that other from the category FLAC)	FLAC	(63.9)	–	–	(63.9)	(63.9)
(of that other)	n.a.	(66.0)	(66.0)	–	–	(66.0)

Carrying amounts and fair values by measurement categories for 2012

in € millions	IAS 39 – measurement categories	Net carrying amount/ Status as of Dec. 31, 2012	of that: other assets and liabilities not covered by IFRS 7	of that: other assets and liabilities covered by IAS 17	Net carrying amount of the financial instruments/ Status as of Dec. 31, 2012	Fair value/ Status as of Dec. 31, 2012
Assets						
Financial investments		0.2	–	–	0.2	0.2
(of that participations)	AfS	(0.2)	–	–	(0.2)	(0.2)
Long-term finance lease receivables	n.a.	70.2	–	70.2	–	70.2
Other long-term receivables and other assets		9.6	4.1	0.0	5.5	9.6
(of that derivatives without a hedging relationship)	FAHfT	(0.1)	–	–	(0.1)	(0.1)
(of that from the category LaR)	LaR	(5.4)	–	–	(5.4)	(5.4)
(of that other)	n.a.	(4.1)	(4.1)	–	–	(4.1)
Trade receivables	LaR	141.7	–	–	141.7	141.7
Receivables from construction contracts	LaR	198.9	–	–	198.9	198.9
Current finance lease receivables	n.a.	5.0	–	5.0	–	5.0
Other assets, prepaid expenses and deferred charges		26.9	19.0	0.0	7.9	26.9
(of that derivatives without a hedging relationship)	FAHfT	(1.6)	–	–	(1.6)	1.6
(of that other from the category LaR)	LaR	(6.3)	–	–	(6.3)	(6.3)
(of that other from the category HtM)	HtM	(0.0)	–	–	(0.0)	(0.0)
(of that other)	n.a.	(19.0)	(19.0)	–	–	(19.0)
Cash and cash equivalents	LaR	244.3	–	–	244.3	244.3

in € millions	IAS 39 – measurement categories	Net carrying amount / Status as of Dec. 31, 2012	of that: other assets and liabilities not covered by IFRS 7	of that: other assets and liabilities covered by IAS 17	Net carrying amount of the financial instruments / Status as of Dec. 31, 2012	Fair value / Status as of Dec. 31, 2012
Liabilities						
Non-current financial liabilities	FLAC	194.9	–	–	194.9	229.8
Other non-current liabilities and provisions		13.4	13.4	0.0	0.0	13.4
(of that for leases)	n.a.	(0.0)	–	(0.0)	–	(0.0)
(of that derivatives without a hedging relationship (held for sale))	FLHfT	(0.0)	–	–	(0.0)	(0.0)
(of that other from the category FLAC)	FLAC	(0.0)	–	–	(0.0)	(0.0)
(of that other)	n.a.	(13.4)	(13.4)	–	–	(13.4)
Current financial liabilities	FLAC	6.6	–	–	6.6	6.6
Trade payables	FLAC	136.2	–	–	136.2	136.2
Liabilities from construction contracts	n.a.	95.5	95.5	–	–	95.5
Accounts payable to affiliated companies	FLAC	0.1	–	–	0.1	0.1
Other current liabilities, prepaid expenses and deferred charges		109.1	52.9	0.0	56.2	109.1
(of that for leases)	n.a.	(0.0)	–	(0.0)	–	(0.0)
(of that derivatives without a hedging relationship (held for sale))	FLHfT	(4.9)	–	–	(4.9)	(4.9)
(of that other from the category FLAC)	FLAC	(51.3)	–	–	(51.3)	(51.3)
(of that other)	n.a.	(52.9)	(52.9)	–	–	(52.9)

With the exception of financial investments and leasing claims, most assets have short terms to maturity. Their carrying amounts as of the financial reporting date therefore correspond approximately to the fair value. Long-term interest-bearing receivables including finance lease receivables are measured and, if necessary, impaired based on different parameters such as interest rates and customer-specific credit ratings. Thus, these carrying amounts also largely reflect the market values.

Liabilities – with the exception of long-term financial liabilities and the other non-current liabilities – have regular, short terms to maturity. The values shown on the balance sheet approximately represent the fair values. The market value of the bond is based on the quoted prices as of the balance sheet date.

The derivative financial instruments recognized at the balance sheet date have to do with forward exchange transactions to hedge exchange exposure. Recognition in the balance sheet occurs at the market value determined using standardized financial mathematical methods, among other things, in relation to the foreign exchange rates.

Net results listed according to valuation categories are represented as follows:

Net profit / loss by IAS 39 measurement categories for 2013

in € millions	Net gains/ losses	Total interest income / expenses	Commission income / expenses
Loans and Receivables (LaR)	-13.8	1.8	0.0
Available-for-Sale Financial Assets (AfS)	0.0	–	–
Held-to-Maturity (HtM)	–	0.2	–
Financial Instruments Held for Trading (FAHfT und FLHfT)	-3.0	–	–
Financial Liabilities Measured at Amortized Cost (FLAC)	4.5	-31.5	-1.5
Total	-12.3	-29.5	-1.5

Net profit / loss by IAS 39 measurement categories for 2012

in € millions	Net gains/ losses	Total interest income/ expenses	Commission income/ expenses
Loans and Receivables (LaR)	-4.2	2.2	0.0
Available-for-Sale Financial Assets (AFS)	-1.1	-	-
Held-to-Maturity (HtM)	-	0.0	-
Financial Instruments Held for Trading (FAHFT und FLHFT)	-2.5	-	-
Financial Liabilities Measured at Amortized Cost (FLAC)	1.7	-24.3	-2.6
Total	-6.1	-22.1	-2.6

As in the previous year, net losses from the category Loans and Receivables include for the most part exchange rate effects as well as results from additions and reversals of provisions for receivables and other assets. In addition to foreign currency effects, the net profits from Financial Liabilities Measured at Amortized Cost also include income from writing off liabilities.

Interest income for financial instruments from the category Loans and Receivables comes from the investment of cash and cash equivalents. The interest result from financial liabilities from the category Financial Liabilities Measured at Amortized Cost largely reflects interest expenses from the bond as well as from financial liabilities due to banks. In the previous year, this item also included interest expenses from the convertible bond.

Commission expenses are recorded as the transaction costs for financial liabilities due to banks and fees for the provision of guarantees.

28 Contingent liabilities and other financial commitments

The following contingent liabilities and other financial commitments existed as of the balance sheet date:

Contingent liabilities

in € millions	2012	2013
Liabilities from guarantees	0.1	4.3
Liabilities from warranty agreements	9.6	0.2
Contingent liabilities	9.7	4.5

The reduction in liabilities from warranty agreements was primarily the result of the settlement of a long-term construction contract and the increased issuance of corporate guarantees for new contracts.

Other financial commitments

in € millions	2012	2013
Purchase commitments (discounted notes)	2.4	42.2
Rent / lease liabilities	36.0	68.3
Other financial commitments	5.7	
Other financial commitments	44.1	119.9

The increase in purchase order commitments relates mainly to the Development and Technology Center. The rise in rent and lease commitments is largely related to Utica Township and the new building in China.

Commitments in connection with leases for passenger cars, office and factory buildings primarily include liabilities from leases and rental agreements in connection with operating leases. These items break down as follows:

in € millions	Dec. 31, 2012	Dec. 31, 2013
Due within one year	9.2	14.9
Due between one and five years	13.2	30.0
Due more than five years	13.6	23.4
Rental and lease commitments	36.0	68.3

Total rental expenses for the fiscal year were €19.0 million compared to €17.0 million in the prior year; rental income totaled €0.3 million, which was the same as in 2012.

NOTES TO THE GROUP CASH FLOW STATEMENT

The cash flow statement reports cash flows separately for incoming and outgoing funds from operating, investing and financing activities in accordance with IAS 7. The calculation of cash flows is derived from the consolidated financial statements of KUKA Aktiengesellschaft by using the indirect method.

Cash and cash equivalents in the cash flow statement comprise all cash and cash equivalents disclosed on the balance sheet, i. e. cash on hand, checks and cash with banks provided they are available within three months. Cash and cash equivalents in the amount of €6.1 million are subject to restrictions (see “syndicated loan” for more detailed information).

Cash flow from operating activities is derived indirectly from the earnings after taxes on income.

Under the indirect method, the relevant changes to the balance sheet items associated with operating activities are adjusted for currency translation effects and changes to the scope of consolidation.

Cash inflows/outflows from operating activities also include the following items:

in € millions	2012	2013
Interest paid	-22.0	-32.7
Interest received	8.6	8.5
Income taxes paid	-29.8	-26.5
Income taxes refunded	1.4	1.4

NOTES TO THE GROUP SEGMENT REPORTING

The data for the individual annual financial statements has been segmented by business field and region. The structure follows internal reporting (management approach). The segmentation is intended to create transparency with regard to the earning power and the prospects, as well as the risks and rewards for the various business fields within the Group.

Segment reporting is designed to accommodate the structure of KUKA Group. KUKA Group was engaged in the reporting year and 2012 in two major business segments:

KUKA Robotics

This segment offers customers from the automotive sector and general industry – as well as those supported by comprehensive customer services – industrial robots, from small models to the Titan robot now weighing in at 1,300 kg. The activities of KUKA Laboratories are also bundled in this segment.

KUKA Systems

This segment provides customers in the fields of automotive, aerospace and general industry with innovative solutions and services for automated production. Applications range from welding, bonding, sealing, assembling and testing, to forming solutions tailored to meet the specific customer needs.

KUKA Aktiengesellschaft and other investments that are supplementary to the operating activities of KUKA Group are aggregated in a separate segment. Cross-divisional consolidation items are shown in a separate column. The allocation of Group companies to the individual business segments is shown in the schedule of shareholdings.

The breakdown of sales revenues by region is based on the customer's registered office/delivery location. Non-current assets (tangible and intangible assets) are calculated by company location.

in € millions	Revenues acc. to customer location		Non-current assets acc. to registered office of the company	
	2012	2013	2012	2013
Germany	596.1	582.5	94.4	119.0
Europe (excluding Germany)	398.6	412.2	22.8	27.5
North America	427.3	492.2	54.2	65.9
Asia/other regions	317.2	287.6	6.4	13.7
Total	1,739.2	1,774.5	177.8	226.1

In 2013 KUKA Group achieved more than ten percent of total sales from three (2012: four) customers. These sales are attributable to both the Robotics segment and the Systems segment.

in € millions	Total 2012		Total 2013	
	in € millions	in %	in € millions	in %
Customer A	250.7	14.4	274.5	15.5
Customer B	195.4	11.2	188.1	10.6
Customer C	213.6	12.3	184.0	10.4
Other customers	1,079.5	62.1	1,127.9	63.5
Sales revenues	1,739.2	100.0	1,774.5	100.0

The calculations for segment reporting rely on the following principles:

- Group external sales revenues show the divisions' respective percentage of consolidated sales for the Group as presented in the Group income statement.
- Intra-Group sales revenues are related sales transacted between segments. In principle, transfer prices for intra-Group sales are determined based on the market.
- Sales revenues for the segments include revenues from sales to third parties as well as sales to other Group segments.
- EBIT reflects operating earnings, i.e. the earnings from ordinary activities before financial results; EBIT is adjusted for borrowing costs to be capitalized.
- ROCE (return on capital employed) is the ratio of EBIT to average capital employed, which is largely non-interest bearing. To calculate ROCE the capital employed is based on an average value.

The reconciliation of capital employed to segment assets and segment liabilities is shown in the following table:

in € millions	2012	2013
Capital employed		
Intangible assets	82.9	92.5
+ Tangible assets	94.9	133.6
+ Non-current lease receivables	70.2	61.9
+ Asset-side working capital	601.8	617.4
Inventories	213.4	186.2
Receivables from construction contracts	198.9	181.1
Trade receivables	141.7	167.5
Other receivables and assets	47.8	82.6
= Asset items of capital employed	849.8	905.4
./. Other provisions, excluding major provisions for restructuring	80.2	94.7
./. Liabilities from construction contracts	95.5	132.7
./. Advances received	86.5	52.3
./. Trade payables	136.2	171.7
./. Other liabilities except for liabilities similar to bonds (incl. deferred income)	112.9	140.2
= Liabilities items of capital employed (= liability-side working capital)	511.3	591.6
= Capital employed	338.5	313.8
Average capital employed	339.8	326.2
Segment assets		
Asset items of capital employed	849.8	905.4
+ Participations	0.2	0.2
= Segment assets	850.0	905.6
Segment liabilities		
Liability items of capital employed (= liability-side working capital)	511.3	591.6
+ Pension provisions and similar obligations	82.0	73.4
= Segment liabilities	593.3	665.0
Working capital		
Asset-side working capital	601.8	617.4
Liability-side working capital	511.3	591.6
Working capital	90.5	25.8

Additional elements of the segment reports are contained in the management report on the operating business divisions Robotics and Systems, as well as in the tables at the beginning of the Group notes.

OTHER NOTES

Related party disclosures

Persons or companies that may be influenced by or have influence on the reporting company must be disclosed in accordance with IAS 24, provided they have not already been included as consolidated companies in the financial statements.

Parties related to KUKA Group include mainly members of the Executive and Supervisory Boards as well as non-consolidated and associated KUKA Group companies in which KUKA Aktiengesellschaft directly or indirectly holds more than 20 percent of the voting rights or companies that hold more than 20 percent of the share of voting rights in KUKA Aktiengesellschaft.

Grenzbach Maschinenbau GmbH, Asbach-Bäumenheim, Bavaria, identified as a related party in 2012, announced on November 20, 2013 that it had reduced its KUKA AG holdings to under 20 percent and is therefore no longer reported as a related party (IAS 24.9 in conjunction with IAS 28.5). In the previous year, product and services-related business activities transacted between companies included in KUKA Group consolidation and defined as related parties existed for the most part only between the Grenzbach Group. In this context, KUKA Group companies performed services totaling €21.7 million and received services worth €36.0 million.

Services totaling €5.1 million were performed and services worth €17.5 million were received in the financial year.”

The other related parties to be reported this year are Freadix FryTec GmbH, Augsburg, IWK Unterstützungseinrichtung GmbH, Karlsruhe and KUKA Unterstützungskasse GmbH, Augsburg. As in the previous year there were no receivables from these parties, while liabilities were again recognized at €0.1 million (2012: €0.1 million).

Intra-Group purchases and sales are transacted under the “dealing at arm’s length” principle at transfer prices that correspond to market conditions. No business subject to reporting rules was conducted between any KUKA Group companies and members of KUKA Aktiengesellschaft’s Executive or Supervisory Boards with the exception of the legal transactions outlined in the compensation report.

Executive board and supervisory board compensation

Compensation paid to the Executive Board totaled €3.1 million (2012: €4.0 million). Altogether in the financial year 2013, the Executive Board received a fixed salary including payments in kind of €0.9 million (2012: €0.7 million). Target achievement and performance-based compensation amounted to €1.7 million (2012: €1.2 million). €2.4 million (2012: €1.7 million) was deferred for compensation in accordance with the phantom share program.

With a few exceptions, former Executive Board members have been granted benefits from the company pension scheme, which include old-age, vocational and employment disability, widow's and orphan's pensions. The amount of accruals included for this group of persons in 2013 for current pensions and vested pension benefits totals €9.8 million (HGB) compared to €10.0 million in 2012.

KUKA Aktiengesellschaft has no compensation agreements with the members of the Executive Board or with employees that would come into effect in the event of a take-over bid.

In the 2013 financial year the members of the Supervisory Board received a total of €0.9 million (2012: €0.8 million) for their activities as members of this body.

Please refer to the notes in the audited compensation report for further information and details about the compensation of individual Executive Board and Supervisory Board members. The compensation report is part of the corporate governance report and summarizes the basic principles used to establish the compensation of the Executive and Supervisory Boards of KUKA Aktiengesellschaft. The compensation report is an integral part of the management report.

Appropriation of net income

The Executive Board proposes to the Annual General Meeting that half of the net earnings of KUKA Aktiengesellschaft in the amount of €66.2 million, i. e. €33.1 million, be appropriated to other revenue reserves. It is furthermore recommended that a dividend of €0.30 per share, €10.2 million in total, be distributed from the remaining retained earnings in the amount of €34.6 million (including profits carried forward from the previous year of €1.5 million), and the balance of €24.4 million be carried forward.

Audit fees

The fee for the auditor KPMG AG, Wirtschaftsprüfungsgesellschaft, Munich, recognized as an expense in 2013 totals €0.9 million. €0.4 million was recognized for financial statement auditing services. The auditor performed other assurance services totaling €0.1 million. €0.4 million was recognized as an expense for tax advisory services performed by the auditor. €0.7 million was recognized as an expense for financial statement auditing services performed for foreign subsidiaries.

Declaration regarding the Corporate Governance Code

The identically worded declarations in accordance with section 161 German Corporation Act (AktG) that have been issued by the Executive Board (February 3, 2014) and of the Supervisory Board (February 12, 2014) are available for inspection by any interested party on the company's website (www.kuka-ag.de).

Events after the balance sheet date

In an ad hoc release on December 13, 2013, KUKA issued a declaration of intent outlining its tentative plans to invest in Reis Robotics. That same month the parties agreed that KUKA would take a 51 percent share in Reis Group Holding GmbH & Co. KG with profit-sharing rights starting on January 1, 2014 and would later have the option of increasing its share in the company to 100 percent. The agreement reached in December 2013 was subject to anti-trust laws and fulfillment of the condition precedent regarding the repayment of the Reis Group's financing obligations. Both conditions were met in January 2014, meaning that Reis Group will be fully integrated in KUKA Group's consolidated financial statements in 2014.

Beyond this, there were no other reportable events from the beginning of the new fiscal year to the date of this management report that had an impact on the financial position and performance of the company.

Augsburg, February 26, 2014

KUKA Aktiengesellschaft

The Executive Board

Dr. Till Reuter

Peter Mohnen

CORPORATE BODIES

Supervisory Board

Bernd Minning

Kaisheim

Chairman of the Supervisory Board of KUKA Aktiengesellschaft

President & CEO

- Grenzebach Maschinenbau GmbH, Asbach-Bäumenheim
- Grenzebach BSH GmbH, Bad Hersfeld
- Grenzebach Shanghai GmbH, Asbach-Bäumenheim
- Grenzebach International GmbH, Asbach-Bäumenheim

Board of Directors

- Grenzebach Machinery (Jiashan) Ltd., China (Chairman)**
- Grenzebach Machinery (Shanghai) Ltd., China (Chairman)**
- Grenzebach Corporation, Newnan (Georgia), USA**
- INOS Automation Software, Inc., Farmington Hills (Michigan), USA**
- Swisslog Holding (Switzerland)**

Michael Leppke*** (as at September 12, 2013)

Munich

Deputy Chairman of the Supervisory Board (as at September 26, 2013)

- 1st Authorized Representative of IG Metall trade union, Augsburg
- MAN Diesel & Turbo SE*
- SGL Carbon SE*
- MTU Aero Engines AG* (until December 31, 2013)
- Nokia Solutions and Networks Management GmbH* (until December 31, 2013)

Thomas Kalkbrenner*** (until August 29, 2013)

Offenbach

Deputy Chairman of the Supervisory Board (until August 29, 2013)

- Trade Union Secretary of the IG Metall Executive Board, Frankfurt

Prof. Dr. Dirk Abel

Aachen

University Professor

- Director of the Institute of Automatic Control at RWTH Aachen
- ATC GmbH (Aldenhoven Testing Center of RWTH Aachen University), Aachen**

Dr. Walter Bickel

Grünwald

Management Consultant

- Owner of the individual enterprise WB Consult
- Managing Partner of Bickel Jung Verwaltungs GmbH
- Limited Partner of Bickel Jung & Company GmbH & Co. KG

Wilfried Eberhardt***

Aichach

- Executive Vice President Marketing & Associations KUKA Roboter GmbH, Augsburg
- Authorized Signatory of KUKA Roboter GmbH, Augsburg

Dr. Uwe Ganzer (until June 5, 2013)

Bochum

Graduate in Business Management

- expert AG, Langenhagen*
- Curanum AG, Munich (Chairman of the Supervisory Board)*

Siegfried Greulich***

Augsburg

- Chairman of the Works Council of KUKA Systems GmbH, Augsburg

Thomas Knabel***

Zwickau

- 2nd Authorized Representative of IG Metall trade union, Zwickau branch

Armin Kolb***

Augsburg

- Chairman of the Works Council of KUKA Roboter GmbH, Augsburg

Carola Leitmeir***

Großaitingen

- Head of the Works Council of KUKA Roboter GmbH, Augsburg

Prof. Dr. Uwe Loos

Stuttgart

Industrial Consultant

- Dorma Holding GmbH +Co.KGaA, Ennepetal*
- Bharat Forge LTD, Pune, India**
- CDP Bharat Forge GmbH, Ennepetal**
- Bharat Forge Aluminiumtechnik, Brand-Erbisdorf**
- Kenersys GmbH, Münster**
- Fritz GmbH, Bietigheim Bissingen**

Dr. Michael Proeller

Augsburg

Business Administrator

- Managing Partner of Erhardt + Leimer GmbH, Augsburg
- Managing Director of Erhardt + Leimer Elektroanlagen GmbH, Augsburg
- Managing Director of Erhardt + Leimer Steuerungstechnik GmbH, Augsburg
- Managing Director of Erhardt + Leimer Corrugated GmbH, Bielefeld
 - Erhardt + Leimer Inc, Duncan (South Carolina), USA **
 - Erhardt + Leimer, India Pvt. Ltd., Ahmedabad, Indien **
 - Erhardt + Leimer S.r.l., Bergamo, Italy **
 - Erhardt + Leimer do Brasil Ltda., Guarulhos Sao Paulo, Brazil **
 - Erhardt + Leimer Limited, Burlington (Ontario), Canada **
 - Erhardt + Leimer Japan Ltd., Yokohama, Japan **
 - Erhardt + Leimer France SARL, Mulhouse, France **
 - Erhardt + Leimer (Hangzhou) Co., Ltd., Hangzhou, China **
 - Erhardt + Leimer Korea, Ltd., Seoul, South Korea **

Fritz Seifert* (until June 5, 2013)**

Schwarzenberg

- Member of the Works Council of KUKA Systems GmbH, Augsburg
Toolmaking Division, Schwarzenberg (until June 30, 2013)
- Deputy Chairman of the Group Works Council (until March 25, 2013)

Guy Wyser-Pratte

Bedford, New York, USA

Investment Manager

- President of Wyser-Pratte & Co., Inc. (FINRA Broker Dealer),
New York, NY, USA
- President of Wyser-Pratte Management Co., Inc. (RIA),
New York, NY, USA

* Membership in other legally stipulated supervisory boards

** Membership in comparable German and foreign controlling bodies of commercial enterprises

*** Employee Representative in Supervisory Board

Executive board**Dr. Till Reuter**

Pfäffikon, Switzerland

Chief Executive Officer

- Rinvest AG, Pfäffikon / Switzerland *
- Dr. Steiner Holding AG *

Peter Mohnen

Munich

Chief Financial Officer

SCHEDULE OF SHAREHOLDINGS OF KUKA AKTIENGESELLSCHAFT

As at December 31, 2013

Name and registered office of the company	Currency	Share of equity in %	Method of consolidation
Germany			
1 KUKA Roboter GmbH, Augsburg*	EUR	100.00	k
2 KUKA Systems GmbH, Augsburg*	EUR	100.00	k
3 KUKA Laboratories GmbH, Augsburg*	EUR	100.00	k
4 HLS Ingenieurbüro GmbH, Augsburg	EUR	100.00	k
5 KUKA Dienstleistungs GmbH, Augsburg*	EUR	100.00	k
6 Bopp & Reuther Anlagen-Verwaltungsgesellschaft mbH, Augsburg	EUR	100.00	k
7 Freadix FryTec GmbH, Augsburg	EUR	100.00	nk
8 IWK Unterstützungseinrichtung GmbH, Karlsruhe	EUR	100.00	nk
9 KUKA Unterstützungskasse GmbH, Augsburg	EUR	100.00	nk
10 Schmidt Maschinentechnik GmbH i.L., Niederstotzingen	EUR	100.00	nk
Other Europe			
11 HLS Czech s.r.o., Mlada Boleslav / Czech Republic	CZK	100.00	k
12 KUKA S-BASE s.r.o. v likvidaci, Roznov p.R. / Czech Republic	CZK	100.00	k
13 KUKA Automatisering + Robots N.V., Houthalen / Belgium	EUR	100.00	k
14 KUKA Automatismes + Robotique S.A.S., Villebon-sur-Yvette / France	EUR	100.00	k
15 KUKA Automotive N.V., Houthalen / Belgium	EUR	100.00	k
16 KUKA Enco Werkzeugbau spol. s.r.o., Dubnica nad Váhom / Slovakia	EUR	65.00	k
17 KUKA Nordic AB, Västra Frölunda / Sweden	SEK	100.00	k
18 KUKA Roboter CEE GmbH, Linz / Austria	EUR	100.00	k
19 KUKA Roboter Italia S.p.a., Rivoli / Italy	EUR	100.00	k
20 KUKA Roboter Schweiz AG, Dietikon / Switzerland	CHF	100.00	k
21 KUKA Robotics Hungária Ipari Kft., Taksony / Hungary	EUR	100.00	k
22 KUKA Robotics OOO, Moskau / Russia	RUB	100.00	k
23 KUKA Robotics UK LTD, Wednesbury / Great Britain	GBP	100.00	k
24 KUKA Robots IBÉRICA, S.A., Vilanova i la Geltrú / Spain	EUR	100.00	k
25 KUKA Sistemy OOO, Togliatti / Russia	RUB	100.00	k
26 KUKA Systems France S.A., Montigny / France	EUR	100.00	k
27 KUKA Systems SRL, Sibiu / Rumania	RON	100.00	k
28 C.M.A-Technology SRL, Sibiu / Rumania	RON	100.00	k
29 Metaalwarenfabriek 's-Hertogenbosch B.V., 's-Hertogenbosch / Netherlands	EUR	100.00	nk
30 Thompson Friction Welding Ltd., Halesowen / Great Britain	GBP	100.00	k
North America			
31 KUKA U.S. Holdings Company LLC., Shelby Township, Michigan / USA	USD	100.00	k
32 KUKA Systems North America LLC., Sterling Heights, Michigan / USA	USD	100.00	k
33 KUKA Assembly and Test Corp., Saginaw, Michigan / USA	USD	100.00	k

Name and registered office of the company	Currency	Share of equity in %	Method of consolidation
34 KUKA Systems de Mexico, S. de R.L. de C.V., Mexico City / Mexico	MXN	100.00	k
35 KUKA Recursos, S. de R.L. de C.V., Mexico City / Mexico	MXN	100.00	k
36 KUKA Toledo Production Operations, LLC., Clinton Township, Michigan / USA	USD	100.00	k
37 KUKA Robotics Corp., Sterling Heights, Michigan / USA	USD	100.00	k
38 KUKA Robotics Canada Ltd., Saint John NB / Canada	CAD	100.00	k
39 KUKA de Mexico S.de R.L.de C.V., Mexico City / Mexico	MXN	100.00	k
Latin America			
40 KUKA Roboter do Brasil Ltda., Sao Paulo / Brazil	BRL	100.00	k
41 KUKA Systems do Brasil Ltda., Sao Bernardo do Campo SP / Brazil	BRL	100.00	k
Asia and Australia			
42 HLS Autotechnik (India) Pvt. Ltd., Pune / India	INR	100.00	k
43 HLS VIETNAM CO., LTD., Ho Chi Minh City / Vietnam	VND	95.00	k
44 KUKA Automation Equipment (Shanghai) Co., Ltd., Shanghai / China	CNY	100.00	k
45 KUKA Flexible Manufacturing Systems (Shanghai) Co., Ltd., Shanghai / China	CNY	100.00	k
46 KUKA Robot Automation Malaysia Sdn Bhd, Kuala Lumpur / Malaysia	MYR	100.00	k
47 KUKA Robot Automation Taiwan Co. Ltd., Chung-Li City / Taiwan	TWD	99.90	k
48 KUKA Robotics Australia Pty. Ltd., Victoria / Australia	AUD	100.00	k
49 KUKA Robotics (China) Co. Ltd., Shanghai / China	CNY	100.00	k
50 KUKA Robotics Manufacturing China Co., LTD, Shanghai City / China	CNY	100.00	k
51 KUKA Robotics (India) Pvt. Ltd, Haryana / India	INR	100.00	k
52 KUKA Robotics Japan K.K., Tokyo / Japan	JPY	100.00	k
53 KUKA Robotics Korea Co., Ltd., Kyunggi-Do / South Korea	KRW	100.00	k
54 KUKA Systems (India) Pvt.Ltd, Pune / India	INR	100.00	k
55 KUKA Systems (Thailand) Co., Ltd., Bangkok / Thailand	THB	100.00	k

* Companies that have made use of the exemption pursuant to sec. 264 par. 3 or sec. 264 b of the German Commercial Code

Type of consolidation

c fully consolidated companies as of December 2013

ck non-consolidated companies as of December 2013

RESPONSIBILITY STATEMENT

“To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the management report of the Group 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.”

Augsburg, February 26, 2014

KUKA Aktiengesellschaft

The Executive Board

Dr. Till Reuter

Peter Mohnen

AUDIT OPINION

We have audited the consolidated financial statements prepared by KUKA Aktiengesellschaft, Augsburg, comprising the income statement, statement of comprehensive income, cash flow statement, balance sheet, statement of changes in equity, and the notes to the consolidated financial statements, together with the Group management report for the business year from January 1, to December 31, 2012. The preparation of the consolidated financial statements and the Group management report in accordance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to section 315a para. 1 HGB are the responsibility of the parent company's Executive Board. Our responsibility is to express an opinion on the consolidated financial statements and on the Group management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with section 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (IDW – "Institute of Public Auditors in Germany"). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable financial reporting framework and in the Group management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Group and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the Group management report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the annual financial statements of those entities included in consolidation, the determination of entities to be included in consolidation, the accounting and consolidation principles used and significant estimates made by the company's Executive Board, as well as evaluating the overall presentation of the consolidated financial statements and the Group management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the consolidated financial statements comply with IFRSs as adopted by the EU, the additional requirements of German commercial law pursuant to section 315a para. 1 HGB and give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with these requirements. The Group management report is consistent with the consolidated financial statements and as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

Munich, February 28, 2014

KPMG AG
Wirtschaftsprüfungsgesellschaft

Karl Braun
(German public auditor)

Rainer Rupprecht
(German public auditor)

GLOSSARY

ABS

Asset-backed securities. Asset-backed securities are bonds or notes that are collateralized with assets (usually receivables). Receivables of KUKA Roboter GmbH are purchased within the framework of an ABS program.

BRIC countries

Term that refers to the combination of Brazil, Russia, India and China.

Capital employed

Capital employed includes working capital as well as intangible assets and tangible fixed assets. Capital employed therefore represents the difference between operating assets and non-interest-bearing outside capital.

Cash earnings

Cash earnings are a measurement for the inflow or outflow of cash from the operating profits (EBIT). They are the resulting balance from operating profits, interest, taxes, depreciation as well as other non-payment-related expenses and income.

Corporate compliance

Corporate compliance means that all employees conform to the company's legislative framework and internal guidelines and do not contravene any applicable laws. Proactive risk minimization is also part of a company's compliance management system.

Corporate governance

Common international term for responsible corporate management and control that aims at creating long-term value.

DAX

German stock index of blue chip companies. It includes the 30 largest German companies admitted to the Prime Standard in terms of market capitalization and volume of stocks traded.

Declaration of compliance

Declaration of the Executive Board and the Supervisory Board in accordance with section 161 of the German Corporation Act (AktG) regarding the implementation of the recommendations of the Government Commission in the German Corporate Governance Code.

Deferred taxes

Temporary differences between calculated taxes on the commercial and tax balance sheets designed to disclose the tax expense in line with the financial accounting income.

Derivatives

Financial instruments whose value is largely derived from a specified price and the price fluctuations/expectations of an underlying base value, e. g., exchange rates.

EBIT

Earnings before interest and taxes.

EBIT margin

EBIT in relation to sales revenues.

Equity ratio

Ratio of equity to total assets.

Earnings per share

Earnings per share are calculated on the basis of Group consolidated earnings after taxes and the average number of shares outstanding for the year.

Exposure

A key figure used to assess risk. This key figure includes all incoming payments in a 90-day period prior to the record date of the down payments, payments based on percentage of completion or compensation after acceptance of the work carried out. In addition, the key figure also comprises all customer payments made within 90 days and which have not yet been supplied with deliveries/services including the sum of unpaid invoices following delivery or service supplied to the customer, the POC receivables and any purchase commitments.

Free cash flow

Cash flow from operating activities plus cash flow from investing activities. Free cash flow shows the extent of the funds generated by the company in the business year.

Free float

Shares of a public company owned by diverse shareholders.

GCGC

German Corporate Governance Code: The German Government Commission's list of requirements for German companies (since 2002).

General industry

General industrial markets not including the automotive industry.

Gross margin

Gross margin is determined by dividing gross profit by sales, expressed as a percentage.

Gross profit

Gross profit on sales is defined as total sales minus cost of goods sold. Cost of goods sold includes all direct costs associated with sales revenues generated. Other costs, such as research and development, marketing and administration, are not included.

HGB

German Commercial Code.

HUB Concept

The Systems division has established regional hubs to act as geographic centers of expertise. The aim is to minimize the cost of procuring, assembling and fabricating standard components and jigs / fixtures. In Europe the hub is located in Romania, in Asia it is the Chinese subsidiary and in the Americas it is the Mexican subsidiary. Engineering, design and project management for the regional centers are assigned to Germany for Europe, the United States for North and South America and China for Asia. The HUB concept enables the company to conduct business flexibly and efficiently in the regions. Rush orders can be cost-effectively handled internally.

IAS

International Accounting Standards.

IFRIC / SIC

International financial reporting interpretation committee – interpreter of the international financial reporting standards IAS and IFRS, formerly also SIC. IFRIC is the new name for the Standing Interpretations Committee adopted by the trustees of the IASC foundation in March 2002. SIC was created in 1997 to improve the application and worldwide comparability of financial reports prepared in accordance with International Accounting Standards (IAS). It outlines financial statement practices that may be subject to controversy.

IFRS

International Financial Reporting Standards: The IFRSs ensure international comparability of consolidated financial statements and help guarantee a higher degree of transparency.

MAP

KUKA Aktiengesellschaft's employee share program.

Market capitalization

The market value of a company listed on the stock exchange. This is calculated by taking the share price and multiplying it by the number of shares outstanding.

MDAX

This stock index comprises the 50 largest German companies (after those of the DAX) according to market capitalization and volume of stocks traded.

Net liquidity / Net debt

Net liquidity / net debt is a financial control parameter consisting of cash, cash equivalents and securities minus current and non-current financial liabilities.

Percentage of completion method (poc)

Accounting method of sales and revenue recognition according to the stage of completion of an order. This method is used for customer-specific construction contracts.

R&D expenses

Expenditures related to research and development.

Rating

Assessment of a company's creditworthiness (solvency) determined by a rating agency based on analyses of the company. The individual rating agencies use different assessment levels.

Reis Group / Reis Robotics

Reis Group or Reis Robotics refers to Reis Group Holding GmbH & Co. KG and its subsidiaries.

ROCE

Return on capital employed (ROCE) is the ratio of the operating profit / loss (EBIT) to the capital employed (see Capital employed). To calculate ROCE the capital employed is based on an average value.

SDAX

This stock index comprises 50 smaller German companies that in terms of order book turnover and market capitalization rank directly below the MDAX shares.

Trade working capital

Trade working capital is defined as current assets minus current liabilities directly associated with everyday business operations; that is, inventories minus advance payments, trade receivables and receivables for manufacturing orders minus liabilities for trade receivables and manufacturing orders.

Volatility

Intensity of fluctuations in share prices and exchange rates or changes in prices for bulk goods compared to market developments.

Working capital

Working capital consists of the inventories, trade receivables, other receivables and assets, accrued items and the balance of receivables and payables from affiliated companies, as far as these are not allocated to financial transactions, minus other provisions, trade payables, other payables with the exception of liabilities similar to bonds and deferred income.

WPHG

German Securities Trading Act.

FINANCIAL CALENDAR 2014

May 7 First quarter interim report

August 6 Annual report to midyear

May 28 Annual general meeting, Augsburg

November 5 . Interim report for the first nine months

This financial report was published on March 26, 2014 and is available in German and English from KUKA Aktiengesellschaft 's public / investor relations department. In the event of doubt, the German version applies.

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Concept and Design

Whitepark GmbH & Co., Hamburg

Text

KUKA Aktiengesellschaft
candid communications
p. 51–53

Print

Eberl Print GmbH, Immenstadt

Translation

HR Übersetzungsagentur, Saarbrücken

KEY FIGURES 5-YEAR OVERVIEW

in € millions	2009	2010	2011	2012	2013
Orders received					
Robotics	324.3	486.2	654.4	803.1	793.5
Systems	615.4	716.8	916.6	1,115.10	1,111.6
Group	903.3	1,142.30	1,553.00	1,889.60	1,881.9
Sales revenues					
Robotics	330.5	435.7	616.3	742.6	754.1
Systems	605.5	695.3	850.7	1,025.30	1,045.9
Group	902.1	1,078.60	1,435.60	1,739.20	1,774.5
Order backlog (Dec. 31)	543.5	630.5	724	909.4	991.6
EBIT					
Robotics	-11.5	20.8	51	80.2	77.1
Systems	-28.8	20	33.7	47.7	60.8
Group	-52.6	24.8	72.6	109.8	120.4
EBIT in % of sales					
Robotics	-3.5	4.8	8.3	10.8	10.2
Systems	-4.8	2.9	4	4.7	5.8
Group	-5.8	2.3	5.1	6.3	6.8
Earnings after taxes	-75.8	-8.6	29.9	55.6	58.3
Financial situation					
Free cash flow	-22.2	-37.3	6.5	77.1	95.4
Capital employed (annual average)	317.5	312.5	332.9	339.8	326.2
ROCE (EBIT in % of capital employed)	-16.6	7.9	21.8	32.3	36.9
Capital expenditure	27.2	15.4	30.3	42.8	74.7
Employees (Dec. 31)	5,744	5,990	6,589	7,264	7,990
Net worth					
Balance sheet total	726.2	984.7	1,078.00	1,137.40	1,377.1
Equity	160.8	198.1	252.4	297.5	379.1
in % of balance sheet total	22.1	20.1	23.4	26.2	27.6
Net liquidity	-48.5	-60.3	-32.6	42.8	146.5
Share					
Weighted average number of shares outstanding (in millions of shares)	25.7	30.3	33.4	33.9	33.9
Earnings per share (in €)	-2.95	-0.28	0.89	1.64	1.72
Dividend per share (in €)	-	-	-	0.20	0.30*
Market capitalization (Dec. 31)	350	548	472	938.4	1,154.8

* subject to approval by shareholders at the Annual General Meeting

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