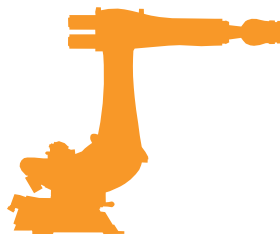


# KUKA



ANNUAL REPORT 2014  
**THE POWER  
OF AUTOMATION**

# THE POWER OF AUTOMATION

KUKA is a global automation company that offers its customers in a wide variety of sectors the entire spectrum from components to cells and fully automated systems. Together with its customers and partners, KUKA sets trends for the future. People are the central focus, and they are supported in their tasks by intelligent systems. With the LBR iiwa, KUKA has established the basis for sensitive and safe robot-based automation systems. When combined with a modular controller based on mainstream IT technology, KUKA is well equipped to meet the requirements of tomorrow's factories.



# R

## 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 develops and markets products for the service robotics and healthcare sectors. The company is also responsible for the Group's research and development activities. KUKA Laboratories is integrated into KUKA Robotics as of 2015.



# S

## 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.

Having been successfully integrated, Reis Group is being merged with the Technology division of KUKA Systems in 2015 to form KUKA Industries. KUKA Industries will promote the cell business in the general industry sector, concentrating particularly on the market segments of laser technology, arc welding, foundry technology, special machine engineering for friction and Magnetarc welding systems and on new technologies in the field of solar energy and battery manufacture.

# EDITORIAL

Dear Shareholders,

KUKA can look back on a year that has been both successful and eventful in equal measure. With orders received amounting to € 2,229.0 million and sales revenue totaling € 2,095.7 million, the previous year's values were significantly exceeded. We achieved an EBIT margin of 6.8 percent. This means we have met our targets. The year under review was one full of new challenges. KUKA is operating in a dynamic environment driven by innovation. Sensitive, mobile systems and the fast pace of development in the world of IT are creating new opportunities for us; however, at the same time they do present challenges in a changing world.



DR. TILL REUTER,  
CHIEF EXECUTIVE  
OFFICER

During the year under review, we thus concentrated heavily on setting the course for the long-term success of the company. The “Integral Organizational Transformation” project was inaugurated under the slogan of “KUKA 2020”. An integral view of the organization means looking not only at the organizational structures with their processes and products but also at the knowledge and the multitude of skills of the employees. Aspects of the corporate culture and safeguarding innovative potential also play a role in this, as does expanding the global market positions of the KUKA companies. We want our companies to focus even more on our customers and markets. We offer our customers automation solutions worldwide ranging from components and cells to fully automated systems.

## **Automation strength for general industry**

With our acquisition of Reis Group, we have gained access to new markets and have been able to expand our general industry business further. Integration into KUKA is taking place successfully. The expertise contributed by Obernburg puts us in a great position, above all in the segments of arc welding, laser welding and foundry technology. However, we can achieve a stronger position in new markets as well, for example battery and photo-voltaics production.

With Alema, we have acquired technological expertise in the area of automated drilling and riveting of aircraft components; as a result, we can now provide complete solutions in the aviation industry. Together with Boeing, we worked on automation solutions in aircraft production last year.

During the second half of the year, we succeeded with the biggest takeover in KUKA's history. At the same time, we took an important step on the path to transforming ourselves into a global automation powerhouse. By purchasing Swisslog, we have boosted our general industry sales share to 50 percent, while also gaining access to future markets such as warehouse logistics and the healthcare sector.

Internationally too, we are benefiting from our acquisitions. Reis operates a strong sales and service network in China, while Swisslog has established itself firmly in the US market above all. KUKA is becoming a global team.

### New technological impulses

The KUKA brand stands for innovation in automation. We took account of this image in the first half of the year at AUTOMATICA, the flagship fair for robotics and automation. We celebrated a premiere there: we were the first and only exhibitor to show the visitors to the fair our robots without any safety fence at all. Visitors were able to experience the LBR iiwa in twelve practical applications. We are using it to put people into the center of production, allowing the automation of processes that could not be automated before. At the same time, the new KUKA Sunrise controller creates the link to the world of IT because it is based on Java, a commonly used programming language. Our products meet important preconditions for the factory of the future. They are suitable for direct collaboration with people, and can be linked to new technologies and developments. As a result, our customers have a wide range of possibilities for shaping their own production for the future.

Worldwide, about 12,000 people are now working for KUKA. We are consequently facing new challenges within our company both when it comes to cooperation and also in the tasks facing management. We have established a new leadership model that we are going to roll out internationally. With this, we have created the basis for a shared understanding of the KUKA culture.

### Investments for our colleagues at the Augsburg site

To be successful internationally, we need to have the best employees – worldwide and at the Augsburg site. Our powerful growth has the effect that we need more room as well. Our new building is progressing according to plan, and I am keenly anticipating our Development and Technology Center, which will house a new training area to provide more scope for the creative ideas of our colleagues to flourish. After all, it is only if employees feel good in their workplace and are provided with the right general conditions that they can achieve the performance a technological company needs if it is going to remain in the group of top players. As an employer, we thus feel responsible for creating these general conditions. Striking a better work/life balance forms part of this, as does offering a health management system that encourages colleagues to participate in sports and pursue a healthier lifestyle.

### The Power of Automation

The world of work is changing at breakneck speed. In a networked age, we at KUKA are working on delivering greater automation potential for our customers and partners. The Power of Automation – for a competitive and versatile production environment. The focus is on human beings, surrounded by intelligent, sensitive and mobile systems to facilitate their work. This is what KUKA stands for, and it is what our colleagues worldwide are working towards – day in and day out. They are what makes KUKA successful. And for this I wish to express my gratitude to them.

However, I would also like to thank you, our shareholders, because of your interest in our ideas, our products and our company.

Sincerely,



Till Reuter



## 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.



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AWARD WINNERS

# MORE SPACE FOR THE KUKA SPIRIT

Money is being invested in the Augsburg site. Colleagues will have more space in the new Development and Technology Center and innovative concepts will be implemented to increase efficiency and flexibility.





THE VIEW OVER AUGSBURG  
IS PART OF THE PACKAGE:  
OVER 30 METERS TALL, THE  
SIX-STORY DEVELOPMENT  
AND TECHNOLOGY CENTER  
TOWERS ABOVE ALL THE  
NEIGHBORING BUILDINGS  
ON THE KUKA SITE.





DAYLIGHT IN THE LARGE ATRIUM AND AT EACH WORKPLACE: LIGHT PERVADES THE ENTIRE NEW BUILDING THANKS TO THE GLASS ROOF AND THE ARRANGEMENT OF THE OFFICES IN A RING SHAPE.

T

he trend is for robot-based automation. In 2014, about 200,000 industrial robots were installed worldwide. Based on estimates by the International Federation of Robotics, the market will expand considerably. KUKA is benefiting from this. The company is growing and therefore investing globally in target markets such as China, but also at home base in Augsburg. A new Development and Technology Center is being built here. Also, robot assembly is being converted to lean production in order to do justice to our expectations for quality and the great demand for KUKA products.

Gracefully, the robot arm grips the body of the bottle, pries off the crown cork with a solid “plop”





and even pours the content into a glass that it previously set in position. A mechanical humming accompanies each of its movements.

Of course, the “wheat beer application” in which the LBR iiwa lightweight robot pours a glass of beer with a perfect head is purely a show application. It illustrates what sort of ideas KUKA employees come up with, how many ideas are being created and above all that they can be implemented with KUKA products.

### KUKANS DELIVER HIGH TECH FROM BAVARIA TO THE WORLD

automation. They deliver high tech from Bavaria to the world.” Augsburg is KUKA’s home location. And significant investments are being made here. In the site and in the workforce. “After all, they are the locomotive of our success,” said the CEO.

Dr. Till Reuter, CEO of KUKA Aktiengesellschaft, referred to it as the “KUKA spirit” during the AGM. “KUKA colleagues develop, produce and market

### **A new center for development and technology in Augsburg**

The new building arising in Augsburg’s Zugspitzstrasse has a €60 million price tag. It forms part of the “KUKA site concept”, as do a parking garage and a daycare center on the company’s premises, which have already been opened. In 2012, bids were invited to build the new office building with a total floorspace of just less than 39,000 square meters. Excavations began in November and the foundation stone was already laid in April. By a robot, it goes without saying. The topping-out ceremony was held in autumn. “Everything is going according to plan. We’ve



## DTC – Facts and figures

- ▲ Workplaces: more than 850
- ▲ Dimensions: 90 m x 80 m (longest side in each case)
- ▲ Footprint: 6,260 m<sup>2</sup>
- ▲ Gross floor area of building (GFA): 38,750 m<sup>2</sup>
- ▲ Building height: road level to glass roof 31 m
- ▲ Steel quantities: approx. 3,860 metric tons
- ▲ Concrete quantities: approx. 23,000 m<sup>3</sup>



been lucky with the weather, as a result of which we ought to be finished as planned this autumn. We'll therefore be able to move in at the end of 2015." While Johannes Schmid is explaining the progress, he is walking through the large atrium of the new Development and Technology Center (DTC). He is followed by twelve KUKA colleagues. Schmid is supervising the project for Facility Management and is currently taking a group of interested colleagues on a tour of the new building once a week. "We're doing this because everyone keeps asking us how the construction work is progressing." The construction team has set up a webcam to allow colleagues to see for themselves

the progress of the building work on the intranet. However, it's natural for everyone to be keen to see what it looks like on the inside. The colleagues who registered for the tour this morning are astonished. Open-mouthed, they stand in the large atrium, craning their necks to look upwards towards the glass roof 26 meters over the heads of the visitors. There are five floors in between, stacked in a ring shape right up to the roof level. Below the visitors' feet there is the underground car park. The new building has a footprint of 6,000 square meters and will offer workplaces for more than 850 people. Alongside that there will be a 400 square-meter showroom and a large confer-

ence area, where the biggest room will hold up to 250 people. The training center, KUKA College, will take up a large portion of the ground and first floors. Gerhard Müller, Head of KUKA College: "We are going to have 13 training rooms in which we can instruct about 6,000 to 7,000 people every year how to use KUKA robots. Here, we'll have more space and we'll also be able to show the participants some of our developments in the showroom or even take a tour through the production area. That wasn't possible before, simply because of the time needed for the transfer from Gersthofen to Augsburg." Gersthofen is where KUKA College is located at the moment. As soon



LEFT:  
JOHANNES SCHMID  
TAKES INTERESTED COL-  
LEAGUES ON A WEEKLY  
TOUR THROUGH THE  
NEW BUILDING.

BELOW: THE KUKA  
CONSTRUCTION TEAM  
(FROM LEFT TO RIGHT):  
WERNER WÖRL, ANTJE  
SCHMID, STEFANIE  
GUBO, ENGELBERT TITZ,  
MICHAEL WOMBACHER,  
JOHANNES SCHMID,  
GISELA ÖLKE, RICHARD  
REITMAYER, THOMAS  
GOLLING, JAN SCHMITZ



as the DTC is completed, all colleagues will then be in the same place and their expertise will be pooled. Also and above all in research and development. The DTC is the new center at KUKA for development and technology. Dr. Michael Haag, Senior Vice President R&D, appreciates above all that all colleagues will soon be working together in the same location: "As a result, we can network much more effectively and benefit more from particular insights. Also, the modern test cells will open up entirely new opportunities and allow us to make significant progress." Soon, about 2,300 square meters will be available to the colleagues. We are also investing in the quality of workplaces.

Heating and cooling sails on the ceiling regulate the climate in the offices automatically. Each workplace benefits from daylight because the offices are arranged in a ring shape. The DTC is connected to the plant's local heating supply. The entire site is scheduled to be converted to district heating in 2015. Cooling is accomplished by well water. "For us, it was important for the new building to be designed in line with state-of-the-art energy supply requirements. Now, not only do we comply

### THE BUILDING IS DESIGNED IN LINE WITH STATE-OF-THE-ART ENERGY SUPPLY REQUIREMENTS

with legal standards, we actually undershoot the value demanded in the energy saving directives by 30 percent," declares Michael Wombacher, the DTC project manager. Not only the energy supply but also, last but not least, the high-quality building envelope are responsible for the building's good energy saving index. However, it takes more than an insulating facade and good heating to provide a good working atmosphere. The mood music amongst colleagues has also got to be in tune.

A MULTI-LINE SYSTEM IS BEING TURNED INTO SINGLE-LINE PRODUCTION: IN THE FUTURE, ALMOST ALL KUKA ROBOT TYPES WILL BE PRODUCED ON THE 140-METER LINE.



The new canteen provides space for exchanging views. 530 people can eat there at the same time. In summer, they will even be able to enjoy the restaurant's sun terrace with a view of the "green lung". The small park in the middle of the company premises is intended to be an oasis of calm for colleagues amidst the stress of everyday work. Equally the new bistro where colleagues can meet one another, customers or visitors to partake of a tasty cappuccino served by a barista. So, is all the effort worthwhile?

Dr. Till Reuter is convinced it is: "This location is of essential importance for our future, which is why we're investing here." And not just in new workplaces and research & development, but also where the robots are built, in production.



## LEAN PRODUCTION IN ROBOT ASSEMBLY

# T

he majority of the robots that are shipped from Augsburg to customers all over the world come from Hall 7. And have done for many years. However, the “Cradle of KUKA robots” will be bursting at all its seams sooner or later. Since 2009, the number of robots assembled here has more than doubled. And the tendency is rising.

“We’ve got to change over our production to keep pace with demand for our robots. The goal is to produce more than 20,000 robots per year here at the Augsburg site. We have to adapt our processes in robot assembly accordingly,” says Andreas Ostermann von Roth. As the Executive Vice President Operations at KUKA Robotics, he is responsible for the changeover to lean production.



A multi-line system is being turned into single-line production over a length of some 140 meters. In the future, almost all KUKA robot types will be produced there in around 40 stations, from body and in-line wrist assembly through to the paint shop and electrical assembly. This is followed by calibration and acceptance testing, after which the robots are packaged. With only a few exceptions, such as the LBR iiwa or the KR AGILUS, which are already being built in compliance with lean production principles a couple of halls further on, or the KR titan, which is simply too big for the line. The large number of variants is also a reason for changing over to a single line. "We've got something like 240 different robot types. The

line enables us to remain flexible," says Sebastian Bodenmüller, head of robot production.

#### Sequence planning sets the pace

Sequence planning forms the heart of the entire line. It sets the pace, controls the sequence in which the robots are produced and when which parts have got to be available at which station. Route trains bring the necessary material directly to the workers on the production line. As a result, material stocks are removed from the hall; order picking takes place in advance in the logistics department and deliveries are made just-in-sequence. This saves a lot of time as well as valuable space.

#### "The conversion is like open-heart surgery."

Work islands and individual workplaces are swept away; the work inventory of an assembly station is distributed along the entire line. "This means our colleagues are not devoted to just one type of robot, but rather they develop into area experts," says Bodenmüller. The workforce is already being trained for this. In parallel with the conversion and while production continues because the required quantities still need to be built. The project is "like open-heart surgery" with a successful outcome. After all, in spite of the conversion work, the target number of robots was produced even before 2014 drew to a close. "An unbelievable performance by the team, and one that makes me very proud," says Bodenmüller. "In winter, the hall doors were often open as a result of the conversion. It was sometimes cold and drafty," remembers Mete Kurt, an assembly colleague. "But we keep the goal in mind. After all, capacity has got to be increased, and in the final analysis it's also a question of your own job." Colleagues were also involved in developing the project. "We were split up into project teams. Our task was to describe the individual stations in assembly, how the procedures have been so far and what we could do better," explains Tobias Rößle, who works in in-line wrist assembly. As a result, there were many practical impulses, also relating to working conditions in the assembly facility.

#### Ergonomic and modern

Health aspects were also taken into account in the planning. Lift tables now enable the workers to alter the height of their workstation, lowering it into the floor for large robot types or raising it when it comes to smaller models. The workstations will also be made more ergonomic with a rail system by means of which the robots can be moved to the next workstation much more easily. 7,000 square meters of floor were renewed, the walls painted in the company colors and modern LED lighting installed. In addition, ceiling sails provide a better room climate by distributing heat downwards in a conical pattern. And as you would expect from an automation company: in future, the human workers will be assisted by robots.



BOTTOM LEFT:  
AN LBR IIWA COLLABORATING DIRECTLY WITH  
A HUMAN WORKER. THE  
ROBOT SCREWS BOLTS  
INTO A RING OF TAPPED  
HOLES.

TOP:  
ROBOTS SUPPORTING  
THEIR COLLEAGUES IN  
PRODUCTION

### Robots built by robots

Right at the beginning of the line, the heavy-duty giant KR titan lifts heavy structural parts, thereby dispensing with crane fixtures. In link arm assembly, a KUKA flexFELLOW is used, which is an LBR iiwa on a mobile platform. At the assembly station, it now operates directly with the worker: hand in hand. The robot supports the worker by screwing bolts into a ring of tapped holes. Automation is also being introduced into in-line wrist assembly. A KMR iiwa, an LBR iiwa on a newly developed KUKA platform, collects bins of screws from the central shelf and independently stocks the corresponding robot assembly workstation. The robot navigates through the production facility completely autonomously. Just like a KUKA KMP omniMove at the end of the assembly line. The mobile platform picks up the assembled robots using forklift tines and transfers them to the adjacent hall where they are calibrated and undergo the acceptance procedure.

The work will be completed in summer 2015 and production will be changed over to the single line.



### Sustainable construction concept

In all the construction work, KUKA aims to undercut the legal requirements laid down in the EEG & EnEV (Renewable Energies Act and Energy Saving Ordinance) by up to 30%.

The selected construction materials are particularly suitable for ecologically compatible dismantling and recycling at a later date.

Surface water from the covered areas runs off directly on site via culverts without affecting the groundwater.

The climate in the offices of the DTC will be automatically regulated via heating and cooling sails and meets the latest energy supply requirements.

In addition, well water and a compression chiller provide cooling.

Ceiling sails in the production shops improve the indoor climate by distributing heat downwards in a conical pattern.

The DTC is connected to the plant's local heating supply to ensure an eco-friendly energy supply solution.

The entire site will be converted to district heating in 2015.



# WHY YOU SHOULD ALWAYS RECKON WITH A KUKA ROBOT ...



A KUKA ROBOT IS RESTORING SANDSTONE FRESCOS IN CANADA WHILE ANOTHER HELPED TO BUILD A WOODEN PAVILION IN SCHWÄBISCH-GMÜND.

# R



obots have long since ceased to be unusual features in industry. Welding, machining, loading and unloading are classic applications for the six-axis robots. However, KUKA robots can do even more: building architectural projects, renovating frescoes or even serving cocktails – the possible applications for the orange virtuosos are practically unlimited, which means you might well encounter them anytime in your everyday life.

## Chiseled in stone

The parliament buildings in Ottawa, the Canadian capital, were designed in 1859 and have fallen victim to the ravages of time. As a result, all three buildings – the Centre Block, West Block and East Block – are going to be renovated over the coming ten years. At the same time, many of the 4,500 sculptures inside and outside the parliament will have to be restored. A perfect task for a KUKA robot, as illustrated by the example of a sandstone sculpture.

The relief is located on the facade of the East Block. It shows an owl amongst thistles and is carved from a 1,725 mm x 1,120 mm large slab of Berea sandstone. The reconstruction process started with a digital copy of the sculpture obtained by image measurement. This digital model was used for milling a copy

from highly compressed polyurethane foam using a 3-axis CNC milling machine at the Carleton University School of Architecture. This was used as the basis for the Dominion Sculptor of Canada to rebuild the damaged areas using putty before the model was scanned once again.

Using this second digital model, a KUKA KR 120 R2700 robot milled a series of foam test pieces in an application from the integration company, New Age Robotics. After the suitable milling parameters had been established, the robot milled the definitive relief out of sandstone to within 1.5 millimeters of the specified surface of the digital model. A sculptor then applied the finishing touches.

## Inspired by the sea urchin

Wood is one of the oldest construction materials and is used above all in architecture. At the State Garden Festival in Schwäbisch-Gmünd, students from Stuttgart University together with Müllerblastein Holzbau GmbH and KUKA displayed an innovative as well as high-performance and resource-conserving construction made of this natural building material – a pavilion milled by the robot.

The idea for the complex shape of the forest pavilion derives from nature, and more specifically the exoskeleton of a sea urchin. Its structure gives it particular capabilities and makes efficient use of materials. No one panel is the same as any other. In the forest pavilion, this means 243 different panels were designed on the computer. In this case, the panels were not modeled or drawn individually. Instead, their

WOOD IS ONE OF THE  
OLDEST CONSTRUCTION  
MATERIALS AND IS  
USED ABOVE ALL IN  
ARCHITECTURE

## THE STUDENTS USED TWO COOPERATING KUKA ROBOTS WHEN BUILDING THE LIGHT- WEIGHT PAVILION

position, shape and size were determined automatically in the digital process. The greatest challenge and innovation involved producing the 7,600 geometrically different finger joints that lend the pavilion its stability and are visible on the inside. This is where the KUKA KR QUANTEC robot came into play. On a turntable, it cut the individual panels automatically and with the greatest of accuracy from 50 mm thick beech slabs. With an ideal result: when the pavilion was assembled, the parts fitted together perfectly, meaning that the unusual shape of the pavilion almost built itself.

### **Pavilion built for lightness**

Another experimental construction by Stuttgart University was also inspired by mother nature: based on the wing cases (elytra) of flying beetles, the researchers developed a pavilion made efficiently from composite fiber materials. This is because the elytra can support particularly high loadings as well as having a shape which saves a great deal of material and weight – to enable the beetle to fly.

The students used two cooperating KUKA robots when building the pavilion: these guided frames onto which the resin-impregnated glass and carbon fibers were wrapped. Not only does this save significant amounts of material in mold making, it also represents a manufacturing process that is very efficient in terms of material and resources because there is no waste and no trimmings during the process.

In total, 36 different components were manufactured in this way, every single one of which has an individual fiber profile. The research pavilion spans a surface area of 50 square meters with an overall weight of only 593 kilograms and an enclosed volume of 122 cubic meters.

In the research pavilion, the trainee architects from Stuttgart University show how the computer-based synthesis of biological structural principles and a complex interaction between material, form and robot-based manufacture can lead to innovative composite fiber construction methods. In this way, not only high-performance and resource-conserving lightweight constructions are created, but also an innovative spatial quality and expanded tectonic possibilities in architecture.

### **Shaken, not stirred**

Mixing, shaking, pouring – martinis are only served by robots in science fiction films, or on the cruise ship, MS Quantum of the Seas. Two KUKA robots are working there as deck bartenders. They take care of the drink orders for about 4,000 passengers in the Bionic Bar from Makr Shagr.

The bar's customers order their drinks online using a smartphone or tablet app. The sky's the limit when it comes to what they can order, because the selection ranges from alcoholic to non-alcoholic drinks, from elaborate blends to simple soft drinks. As soon as the guest's order has been sent, the KR 5 arc robots get to work. They grip the cocktail mixer, fill it with the desired ingredi-



ents, shake it and pour the finished cocktail into the glass. The robot requires just one minute to make two drinks. Compact and agile, the robot bartenders blend optimally into the surroundings of the bar. They are also elegant, because they copy the gestures of the Italian choreographer, Marco Pelle from the New York Theater Ballet. To allow the bar's guests to observe this better, the robots behind the bar can be seen on a large screen. The Bionic Bar from Makr Shagr was unveiled on November 12 on board the ship at the Cape Liberty Cruise Port in New York.

### **I came, I sawed, I conquered**

Integrated in the outdoor scenery for the presentation of the new BMW 2 Series Active Tourer, a KUKA robot took its place in the BMW Brand Store in Brussels for three months during the autumn. Equipped with a chainsaw, the goal was to combine classic outdoors activities with innovation and technology. Amidst these spectacular surroundings, the robot was intended to attract the interest of new target groups and potential customers even in the entrance area. Positioned within a glass case, it sawed two three-legged stools from a tree trunk at the



WHETHER WITH A SAW IN FIBER-LAYING, AS A MASTER BUILDER OR BARKEEPER – KUKA ROBOTS MAKE A GOOD IMPRESSION IN MANIFOLD APPLICATIONS.



same time. Each piece of furniture required about 15 minutes to make.

Wood logs, a chainsaw and a robot matched the store's autumn design very nicely. Real trees created a woodland atmosphere and the natural look was rounded off with many small wooden cases that functioned as presentation boxes or planter boxes. The wood processed for this elaborate decoration came from sustainable forestry production by the "Echtwald" company, and was put to further use afterwards. The robot performance was developed by Tom Pawlofsky in the course of his teaching in the Prod-

uct Design department of Karlsruhe University of Arts and Design. The "7Xstool" that was produced came about in a cooperative venture with Tibor Weissmahr. The stools made in the BMW Brand Store in Brussels could later be seen as props in the winter exhibition at BMW Welt in Munich.

# INGENIOUSLY SIMPLE, SIMPLY INGENIOUS

Five decades have gone by since KUKA established friction welding as an industrial joining process. Now, the company is responsible for another revolution: the new KUKA Genius friction welding machine from the KUKA Systems division represents a unique and innovative step.

# T

he new machine has been designed to be both ingenious and simple. That was the objective. "In Sales, we were hearing too many comments about KUKA machines being over-engineered, too complex," says Walter Weh, the sales manager responsible for this product. This is actually a compliment on the high level of innovation and performance delivered by German engineering. But: the market has not always appreciated everything that is technically feasible. So, a new approach was called for. An approach that involves questioning the status quo, picking up trends and customer requirements, anticipating developments in tomorrow's production – and using the synergy effects offered by the entire KUKA Group.



AN INTERDISCIPLINARY  
PROJECT TEAM WAS ABLE  
TO ACT WITH A GREAT  
DEGREE OF FREEDOM  
AND DISCUSS ISSUES  
ON AN EQUAL FOOTING;  
THAT'S HOW INNOVA-  
TIONS COME ABOUT.



### Questioning the status quo

How can we accelerate the production process at our customers and at KUKA, at the same time as making it more flexible? How can we further improve quality and precision? What is required to make it easier to operate and maintain the machine, at the same time as making it safer? How can work be made simpler – for a changing generation of operators in the world market? How can energy and cost savings be achieved? Mechanical, hydraulic and electrical systems, software and processes – everything was subjected to a rigorous appraisal and a rethink.



RIGHT: OTMAR FISCHER  
AND MICHAEL BÜCHLER,  
PROJECT MANAGER  
MECHANICAL DESIGN  
IN CONVERSATION  
(FROM LEFT TO RIGHT)

BELOW: SEBASTIAN  
FÜLLER, PURCHASER



### **Interdisciplinary project team**

A core team of ten was given responsibility for the task; they met for the first time in summer 2012 for brainstorming sessions. It was not only the free rein granted to the team to think, decide and act that proved decisive. The interdisciplinary interaction between the departments also proved to be an important new feature right from the word go: sales, product management, design, research & development, purchasing, assembly, quality assurance and marketing all took their places at the table. "It wasn't always easy: we were dealing with personalities that had different ideas and impressions from one another," reports Harald Heinrich, head of the Development department and responsible for project coordination. It





was an established procedure for the project manager: “Of course, we had already built other large machines, and found innovative solutions in many individual projects. However, the starting point and the course of this project were unique. All decision-makers were permanently involved. This ensured that a broad consensus could be achieved, leading to a high level of acceptance in the company.” The common goal welded the team together: More than 40 specialists from all areas were involved in bringing the machine to life.

**MORE THAN 40 SPECIALISTS FROM ALL AREAS WERE INVOLVED IN BRINGING THE MACHINE TO LIFE.**

relevant technologies and process sequences. At the same time, we considered the human operators and their working environment in the entire development,” reports Heinrich. “The entire development followed the value stream principle according to which every single part was decisive and was analyzed within its overall context. It may be worth using a more expensive component if it will save maintenance costs down the line, for

**One machine instead of two**

“Right from the start, we paid attention to integrating the products that customers would possibly want,

example. With this development concept, we pursued an approach oriented towards customers and costs alike.” The outcome is a flexible and powerful machine that uses resources efficiently, and is able to implement friction welding processes for a wide range of products. In this way, KUKA has also streamlined the range of machines it offers: of the nine different machine types with contact pressures ranging from two to 1,000 metric tons, the KUKA Genius replaces both the RS 12 and the RS 30 in the medium segment.

**Individual product on the basis of standard modules**

The principle is reminiscent of the platform strategy pursued by car manufacturers: one technical



ABOVE:  
ASSEMBLY AND COMMISSIONING WORK CLOSELY TOGETHER.

RIGHT:  
KUKA GENIUS FRICTION WELDING MACHINE

platform, many models. With the KUKA Genius, it is possible to configure a large number of technology modules with customers according to their requirements – precisely as necessary for the component, production planning and manufacturing strategies of the future user. One might need the “Power Model” with a wide range of functions, whereas another might be best served by the “Eco” equipment variant for their production. 80 percent standard, 20 percent individualization – that

THE MACHINE CAN BE PICKED UP AND TRANSPORTED TO ANOTHER LOCATION AT ANY TIME, IN LINE WITH THE PLUG & PLAY PRINCIPLE.

machine was a time-consuming special fabrication. “The predefined modules mean that the development phase can now be truncated from several weeks to just a few days,” reckons Otmar Fischer, project manager in mechanical design. Throughput times have also been reduced in assembly:

delivers many advantages: customers only pay for functions that they actually require; KUKA incurs less time and effort, and lower costs, in design and assembly. In the past as well, no two machines were alike, but each

the material ordering process has been simplified because the assembly station is more efficient and ergonomic, and the machine is more easily accessible. “Previously, we used to look for a suitable pathway for the wiring harnesses through each machine. Now, everything has its allotted place, and everyone knows where they need to be working – not just during assembly, but also later during maintenance. In the new machine, all the parts relevant for maintenance are easily accessible,” explains the assembly specialist Michael Recher.

**New procedures**

KUKA also invested a great deal of care in the selection of suitable suppliers for the necessary



components: the rollcall of 21 development partners supplying valuable parts reads like a Who's Who of the German engineering business. After all, the machine is intended to meet the exacting quality standards of KUKA and its customers. All outsourced parts are carefully measured and checked on delivery. Together with its partners, KUKA developed new solutions and procedures. "The protective enclosure of the machine is now delivered in one piece instead of individual parts. It can now be put on in one go, job done – and it doesn't even cost extra," declares Fischer. "This is possible now because the control cabinets and hydraulic unit are completely integrated into the compact device and there are no cables or hoses to be found in the peripherals any longer. The

machine can be picked up and transported to another location at any time, in line with the plug & play principle."

#### Simple operation

KUKA has taken another huge innovative step with control and operation. This is done using a touch-sensitive multitouch screen that also reacts to protective gloves. KUKA invited international customers with plenty of production experience to test the operator interface. "They were thrilled by the intuitive operation," reports Walter Weh. "However, they also made a few suggestions: for example, they wanted less text and instead a larger number of easily recognizable pictograms. Indeed, they would have loved to incorporate

the new controller into their existing machines straightaway." These wishes have come true, at least in part: the new Magnetarc machines are already equipped with the new controller.

The first machines have been sold off the drawing board to customers in Europe and Asia. There, for the first time, they will demonstrate their effectiveness in universal production, because flexibility is particularly important here.

# PERFECT VISION

## KUKA AT THE GLASSES MANUFACTURER SILHOUETTE

What started with a vision – eyeglasses as an accessory – back in 1964 has since grown into the world’s leading brand of lightweight glasses with sales in excess of €100 million: “Silhouette”.





# S

ilhouette is the brand name of the lightest glasses in the world, manufactured with painstaking detail and an individual design language. They are made in Austria using the best materials and latest technologies by a workforce numbering more than 800 people, and exported all over the world (export quota 95 percent). Since 2013, a KUKA KR 5 arc robot has been a firm feature of the production process at Silhouette.

### A clear vision of what matters

Silhouette has stood for technical perfection and innovative design for 50 years. These are eyeglasses without frames, screws and hinges, combining functional and esthetic appeal with vision. Right from the beginning, the product range has been characterized by a consistent approach to paring things down to the essentials. Silhouette glasses have been launched into space more

than 35 times on board NASA missions, and they are also worn by the Vienna Philharmonic Orchestra on its world tours as well as by a host of prominent celebrities, business-people and politicians.

The effects of wear over time combined with increasing maintenance costs of the facility prompted Silhouette to rethink its own production process in 2011. According to the Linz-based glasses producer, there are no fully automatic production systems available on the market able to handle the complete manufacturing process end-to-end; as a result, the existing equipment would have to undergo a complete overhaul. The project was taken on by Siemens and KUKA. It was possible to start operation after a conversion period lasting only four months. Since then, the system has been running smoothly in three-shift working.

### The solution in detail

High-quality Silhouette sunglasses are made in a manufacturing process that is first-class throughout. The polycarbonate glasses are cut precisely to shape using the modernized multiple-spindle production system in which a KR 5 arc ensures that the blanks are fed in with the necessary precision. The KUKA robot uses its vacuum grippers to take the allocated eyeglass blanks out of the stacking magazines, places them in

a centering station where they are exactly positioned and transfers them to the milling machine. This mills and drills the contours of the polycarbonate glasses in several steps. In this process, the multiple-spindle center is capable of achieving tolerances of  $\pm 0.015$  mm and surface qualities with an average surface roughness of  $Ra = 0.1 \mu\text{m}$ . At the end of the machining process, vacuum grippers come into play again, placing the completed glasses into transport boxes. The KR 5 arc makes it possible to run a fully automated night shift thanks to its great flexibility, reliability and extreme degrees of freedom.

The robot and the machine tool are controlled using a centralized, high-end CNC, a Sinumerik 840D sl. This was extremely important for Silhouette, because although the machining technicians know precisely how to operate the machine tools, they are not familiar with handling a multiple-axis jointed-arm robot. The Siemens RunMyRobot software interface meant that these inhibitions could be dispensed with.

From today's perspective, it is apparent that the investment has proven to be extremely sensible because of significant advantages in terms of productivity, reliability and user-friendliness. As a result, Silhouette, with KUKA and the mxAutomation software interface, always succeeds in producing optically correct lenses – 20 percent faster than before the system was renewed. “mxAutomation allows the KUKA robot to be programmed in the familiar environment of the machine tool – that saves long familiarization periods and helps overcome any initial reservations associated with robots,” says Joachim Strobel of KUKA Roboter GmbH.

[THE KUKA KR 5 ARC FEEDS IN THE BLANKS FOR THE GLASSES WITH PRECISION.](#)

# “IT MAKES ME PROUD TO ADVOCATE A HIGH- TECH BRAND”

# M

**Mr. Boll, you have been a brand ambassador for KUKA in China for one year now. What have been the highlights of the past twelve months?**

Without doubt, one highlight was the opening of the KUKA plant in Shanghai in March 2014. But it was also fascinating to see how many Chinese people subsequently talked to me about the video showing my duel with the KUKA robot. Additionally, a pleasant personal experience for me was my visit to KUKA inside, an in-house event for colleagues held before Christmas. I took this opportunity to take a tour of the plant as well. That was very interesting for me.

**Of course, there is more to KUKA as a brand than can be presented in two publicity videos. What is your personal experience of the KUKA brand?**

Above all, very appealing. At KUKA, I meet highly committed and open-minded people. And I experience cutting-edge technology that breaks new ground for me.

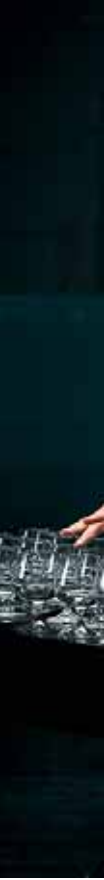
As a KUKA brand ambassador, table tennis star Timo Boll has taken on a role that breaks new ground for him, and also triggered an unusual Internet furore because he participated in a table tennis duel against a KUKA small robot, the KR AGILUS. In the meantime, the likeable sportsman has practically become another KUKA colleague. In this interview he talks about people, the brand and his personal experience with the automation company.

**Apart from filming the video of “The Duel”, what have you particularly enjoyed as the brand ambassador for KUKA in China?**

Chinese people greatly admire German engineering skill and Germany’s industry. So it makes me proud to represent a high-tech brand such as KUKA which perfectly embodies the “Made in Germany” cachet.

**You have already met a number of KUKA employees above all at the grand opening in Shanghai, but also here in Augsburg. What is your impression of these colleagues?**

They are certainly very open and straightforward people. Table tennis is one of the three sports in the world with the highest levels of participation, and because there are also many participants in the KUKA workforce, I meet “colleagues” everywhere who know me and are interested in what I do. So we soon find common ground and are able to get on well with one another.



ONE YEAR LATER:  
THE KR AGILUS IS READY  
FOR REVENGE. ON  
MARCH 11, 2015,  
TIMO BOLL AND THE  
KR AGILUS ENTERED  
THE NEXT ROUND.

**"THE REVENGE"**  
NEW YEAR –  
NEW MATCH



LEFT: TIMO BOLL AS  
BRAND AMBASSADOR:  
HIS "DUEL" WITH THE  
KUKA ROBOT ATTRACTED  
AN AUDIENCE OF MIL-  
LIONS ON THE INTERNET.



Awards for the marketing campaign  
"The Duel" featuring Timo Boll

Red Dot Design Award: "Best of the Best 2014"  
in the category "Advertising"

German Prize for Online Communication 2014:  
winner in the category "Best Image Film on the Web"

Digital Communication Award 2014:  
winner in the category "Image Film"

Nominated at the 2014 New York Festival  
in the category "World's Best Advertising"

European Excellence Awards 2014:  
winner in the category "Corporate Film and Video"

CommAward: third place in the category "the pixel"

Second place in the marconomy B2B Marketing Award 2014

iF DESIGN AWARD 2015 in the category "Communication"



“I HAVE LONG SINCE  
SPOKEN ABOUT CHINA AS  
MY SECOND HOME.”

**The plant opening by KUKA in China was not your first visit to this country, of course. Given the sport you pursue and the popularity of that sport in the country, it has almost become your second home. What does China mean for you personally? What do you like about the country?**

I have long since spoken about China as my second home. I have already visited the country countless times for various competitions. I like to see that the country is becoming more and more open, that it is hospitable and that people particularly appreciate a sportsperson who always attempts to uphold fair play as part of the contest.

**KUKA can also look back on many years of experience in the Chinese market, having been present there since 2000. What are your impressions of the economic and technological development in the country during those years?**

The Chinese people are obsessed by technology, and have taken huge strides forward in many areas. There are already many aspects in which they are on an equal footing with the West. The ubiquitousness of smartphones and tablets in the everyday life of city dwellers says a great deal about the technical development that has taken place. The significant economic growth is creating jobs and prosperity that is particularly striking compared to the situation ten or 15 years ago. Things really are progressing rapidly.

**What do you like doing when you are not playing table tennis or on duty as KUKA's brand ambassador?**

I certainly don't get bored (laughs). I have a wife and child, and we have just built a house which is stuffed full of technology, incidentally. Whenever I'm back in China, I can use my smartphone from there to switch on my wife's favorite music at home.





AS A TECHNOLOGY  
ENTHUSIAST, TIMO BOLL  
COMES RIGHT UP  
CLOSE TO THE LBR IIWA  
AND GETS OFFERED A  
REFRESHMENT.



**You won your first European championship at the age of 14. What is your personal recipe for success?**

There is certainly no standard recipe for it. Personally, I always try to concentrate on a few very important principles: even in stressful situations, enjoy the game and the contest, demonstrate fair play in every situation and keep a cool head.

**KUKA and Timo Boll advance to the next round: what are you most looking forward to as a brand ambassador?**

I'm looking forward to the new KUKA marketing film, "The Revenge", achieving similar results for the company and its standing as my first duel with the robot did last year.

# THE HUMAN-ROBOT PREMIERE

At the international flagship trade show for robotics, AUTOMATICA, innovations from KUKA set the trends in tomorrow's automation – KUKA was the first and only manufacturer to be bold enough to present a booth concept involving moving robots without safety fences.



THE TRADE FAIR VISITORS SHOWED GREAT INTEREST IN LEARNING ABOUT THE APPLICATIONS CENTERED ON THE SENSITIVE LBR IIWA.

# A

UTOMATICA is one of the world's most important flagship shows for automation and robotics. KUKA's presence at the show, held in Munich in April 2014, was all about human-robot collaboration. With a booth covering more than 800 square meters, KUKA impressed with various robot applications. The main protagonist in the harmonious interplay between humans and robots is the KUKA LBR iiwa lightweight robot. It made its premiere during the opening ceremony: together with Neelie Kroes, Vice-President of the EU Commission, the lightweight robot unveiled the new SPARC partnership, which is concentrating on retaining and expanding Europe's leading role in robotics.

In twelve real applications, the robot manufacturer and systems integrator from Augsburg also presented twelve sample applications with the future product in a highly diverse range of applications: from performing complex overhead work in automobile assembly and handling heavy meal trays in hospitals, through to assembling delicate transmission components and flexible operation in the form of the mobile KUKA flexFellow product.

"The show concept represented a particular challenge for us," explains Tanja Hillemann from the Marketing department of KUKA Robotics, "with twelve moving robots involving human-machine collaboration without a safety fence! This feat is yet to be imitated by anyone else."

## IN TWELVE REAL APPLICATIONS, EVERYTHING REVOLVED AROUND THE COLLABORATION OF HUMANS AND ROBOTS

In this way, KUKA provided its own response to the question that has been setting the agenda in robot-based automation for some time now: how can people and robots work together in a team? Quite simply by harmonizing the precision, load capacity and flexibility of the robot with the planning, control and intelligence of a human being. However, the conventional indus-

trial robots from Augsburg were also widely represented: a total of about 70 KUKA robots were on show at the booths of cooperation partners and integrators in the various exhibition halls at AUTOMATICA. Among them the Reis company, taking its place for the first time under the KUKA umbrella in the immediate vicinity. The link to the new parent company was shown by orange elements on the booth, which was otherwise designed in Reis blue.

Innovative technologies based on KUKA products also featured away from the applications shown at the booths: in the contest for the KUKA Innovation Award, the four teams selected as finalists were given the opportunity to present their developments to the specialist audience directly at AUTOMATICA. An international panel of judges selected the University of Zurich's research team as the winner of the € 20,000 award.





AUTOMATED HIGH-BAY  
WAREHOUSE FOR THE  
LIVZON PHARMACEUTICAL  
GROUP IN CHINA

# KUKA ON THE WAY TO BECOMING A GLOBAL AUTOMATION POWERHOUSE

By purchasing the Swiss automation specialist, Swisslog, KUKA is strengthening its general industry business.

It is the largest acquisition in KUKA's history, and made September one of the most exciting months in the year under review.

On September 26, KUKA announced a takeover offer to the shareholders of Swisslog Holding AG in the course of a press conference in Zurich.

"Together, KUKA and Swisslog will become a globally active all-round supplier in the automation segment. By working together, they will benefit from the use of shared technology and combined expertise," says Dr. Till Reuter, CEO of KUKA Aktiengesellschaft, explaining the step. "Both companies will be able to build on their leading positions in their particular markets."

KUKA has developed well in recent years. Based on technology, innovation and quality, the company is at home in many automation sectors worldwide. From the component, the industrial robot, to the cell and even the entire system, it offers customers everything they need for automation. Also, the company maintains a large network of sales, service and production units all over the world. With Swisslog,

KUKA will gain access to particularly attractive growth markets, namely warehouse logistics and the health-care industry.

This fits with the strategy. The acquisition of Swisslog will enable KUKA to diversify and to strengthen its own revenue and earnings base. The transaction boosts general industry's contribution to sales revenues from around 35 percent to 50 percent.

Management also sees additional sales potential for Swisslog in the link-up to KUKA's technology and sales platform. Swisslog gains access to automotive customers and will enhance its market presence, in particular in the USA in the warehouse logistics sector.

These arguments convinced the Swisslog Management and the Swisslog shareholders. The target two-thirds majority was quickly achieved. In December, KUKA announced its intention of a complete takeover after the 90 percent mark had been exceeded.

## Company overview

Based in the Swiss city of Buchs, Swisslog has a sales volume of over € 500 million and is divided into two segments:

The Warehouse & Distribution Solutions (WDS) division implements leading automation solutions for warehouse and distribution centers, which enable customers to deliver the right products to the right place at the right time. Here, the focus is on three particularly attractive and demanding industry sectors: e-commerce, pharmaceuticals and temperature-controlled foodstuffs. On the product side, the range includes automated guided vehicles, materials handling technology, warehouse systems and rack feeders. However, the cornerstones of each installation are Swisslog's warehouse management systems (WM6) and control software.

In the Healthcare Solutions (HCS) division, Swisslog is the leading provider of pneumatic tube solutions in hospitals for transporting medicines, laboratory samples and blood products. Furthermore, Swisslog offers automated guided vehicles for transporting containers, e.g. for hospital laundry and meals. A growing field within the HCS division is constituted by automation solutions for hospital pharmacies which ensure the right medicines are brought to the right patients at the right time.

Two case studies on the following pages provide a more in-depth insight into the Swiss company and its technologies.

# E

-commerce is fundamentally changing the nature of the retail supply chain. The typical e-commerce consumer expects crosschannel services, wider online SKU offerings, order accuracy, fast and free delivery, free returns, and so on. A proven approach to meeting these challenges is automation that is flexible enough to adapt to changing e-commerce conditions in an efficient and reliable manner. One such solution was embraced by the Swiss Competec Group, a major e-commerce IT trading company specializing in the import, distribution and sale of computer hardware, software and consumer electronics.

After performing an in-depth comparison of various goods-to-person concepts, the company decided in favor of the new Click&Pick® solution from Swisslog. It consists of ergonomic goods-to-person workstations, which are available for pick-and-pack selection of items and small cases. This is coupled with the AutoStore small parts storage system consisting of 80,000 bins and 90 robots as well

as integrated warehouse management and control software. Swisslog also installed 600 linear meters of QuickMove light-goods conveyors to facilitate the swift movement of products throughout the Competec distribution center. "The new system has enabled us to reduce our labor costs by 20 percent. Additionally, we have achieved a ten percent reduction in other operating costs," says Rolf Geisser, Manager of E-Commerce at Competec.

As a consequence of its ongoing growth, Competec is already moving to expand the logistics center it put into operation in 2012. In 2014, the company contracted Swisslog to build a second AutoStore module which, when completed, will comprise an additional 123,700 bins and 180 robots. Together with the existing module, it will constitute the largest AutoStore system ever implemented by Swisslog.

## FLEXIBLE AUTOMATION SOLUTIONS FOR E-COMMERCE



[AUTOSTORE IS AN  
AUTOMATIC SMALL PARTS  
STORAGE SYSTEM – HERE  
AT SWISS IT TRADING  
COMPANY COMPETEC](#)



LEFT: INTERIOR VIEW OF  
THE BOXPICKER STORAGE  
SYSTEM FOR HOSPITAL  
PHARMACIES

BELOW: PATIENT-  
SPECIFIC DISPENSING  
OF MEDICATION



# P

arkland Memorial Hospital has a rich history as a public hospital in Dallas County, USA. With the population of Dallas County projected to double by 2025 and given the changes in healthcare over the 50 years since the building was constructed, it was time for Parkland Hospital to address the city's new requirements.

In addition to meeting the needs for future growth, the new Parkland Hospital – the biggest hospital construction project in the United States – is designed to deliver better

patient care. Parkland chose a suite of Swisslog hospital automation solutions to achieve its vision. Its new inpatient pharmacy features the PillPick® packaging and dispensing system and the BoxPicker™ pharmacy storage system to ensure the safe packaging, labeling, storage and dispensing of medications. The TransLogic® pneumatic tube system is the key to making this new campus work as it will connect multiple buildings, including the old facility. The new tube system is a critical lifeline for Parkland, supporting

the main lab – which performs over nine million tests a year – and integrating with the existing system at the original facility to provide a seamless campus-wide transport solution.

Installation of the Swisslog solutions was completed in 2014, and Parkland is planning to have patients moved into the new facility in summer 2015.

## GREATER SAFETY FOR PATIENTS

# A

## ASSISTANT WITHOUT SAFETY FENCE

Siemens is relying on a flexible KUKA cell for human-robot collaboration in electric motor production

At the site in the town of Bad Neustadt an der Saale, Siemens operates a lead factory for electric motors. There, among other items, the motors for numerous KUKA robots are produced. With the expertise derived from hundreds of thousands of electric motors and employing a workforce of about 1,700 people, the lead factory is an innovative example of high tech with the “made in Germany” label.

For its stator manufacturing operation, the company was on the lookout for a flexible solution to automate the simple activity of passing on and positioning workpieces which had previously been done by hand – while retaining the high quality and continuous, barrier-free access to the working area for people. Together with the Augsburg-based company, KUKA Systems GmbH, and its Advanced Technology Solutions department, a flexible cell was developed for this application using KUKA’s LBR iiwa lightweight robot. Its sensitive capabilities make this robot weighing less than 30 kilograms ideal for human-machine





collaboration. With its seven axes, it is not only more agile and more mobile than most models of its kind, it also features torque sensors in all axes, making the robot sensitive – as a result of which it can detect obstacles in the room and respond accordingly.

In the Siemens plant in Bad Neustadt, the robot functions as a roving multitasker (Knight) mounted on a carriage with the task of taking the part to be processed – the stator consisting of a basic body made from punched magnetic steel sheet and an aluminum bearing plate – out of a workpiece carrier and supplying it to a lathe for machining the stators. But that is not all: the robot is also used for the quality check. It grips the machined parts and scans the barcode. After the workpieces have been cleaned, the lightweight robot feeds them to the measuring station in a tilting device. If there are any deviations, they are found there. Thanks to networked technology, precise measurement and identification of each component makes it possible for

any necessary corrections to be immediately calculated and implemented in the system. This is consequently organized by the system itself. After that, the robot places the part in a plastic box so it can be delivered.

Parts that have to be recalibrated in the machine are placed into a buffer that is defined as the “HRC zone”, for human-robot collaboration. Here, the safe technology means the worker can be in the same area as the robot and, if required, remove or modify parts. Jochen Weber, the man in charge of the product launch and developing production technology at the lead factory, explains the situation as follows: “At first, we were thinking about having the process carried out by a conventional industrial robot.” However, this would have meant building a protective fence around the cell for safety reasons. “We wanted more flexibility, though, so that the worker can also intervene at any time and take over from the robot depending on the situation.” As a result, the decision was taken to use a flexible LBR iiwa

lightweight robot combined with the KUKA solution of a “Knight concept”. This allows the robot to be deployed or simply moved away depending on the situation. Torsten Franz, project manager in the technology development team, adds: “An HRC application was also something new for us. We wanted to use the system as a learning tool ourselves, allowing us to bootstrap our development incrementally. This has been very successful in the joint project with KUKA. The solution is convincing.”

Using sensitive robot technology makes human-robot collaboration possible. As a result, the enclosure that used to be required can be dispensed with, as can additional sensors for parts detection.



[TEAMWORK BETWEEN HUMANS AND MACHINES: AN LBR IIWA WORKS AS A FLEXIBLE ASSISTANT IN THE SIEMENS FACTORY.](#)



The Motion Control business unit of the SIEMENS Digital Factory (DF) division with its headquarters in Erlangen specializes in producing high-performance motors, inverters and controllers. With an extensive range of comprehensively integrated hardware and software as well as technology-based services, the Digital Factory (DF) division helps production companies all over the world to boost the flexibility and efficiency of their manufacturing processes, and to bring new products to market faster.

# COMMUNAL SPORT = COMMUNAL FUN





RUNNING WORKSHOP  
PARTICIPANTS (FROM  
LEFT TO RIGHT): RICHARD  
WASCHAUSER, MICHAEL RUF,  
DR. SIEGFRIED HLAWATSCH,  
KAROLINE STROBL, MARINA  
MERK, MICHAEL SEDLMAIR,  
WALTER DUSCHEK, ANDRE  
HERMANN, HERBERT KAISER,  
DOROTHEA RAICH, MATTHIAS  
BINSWANGER, MARKUS  
MAYER (RUNNING COACH).

## 2014 was literally a year in motion at KUKA

KUKA colleagues keep fit and enjoy movement. For a long time now, sport and leisure activities have been features of the company culture. Consequently, the concepts promoted by the corporate health management are popular with the workforce. KUKA places particular emphasis on creating a motivational working environment. Health management represents a further aspect alongside systematically encouraging personal and professional development, and numerous measures to improve the work/life balance.

# 2

“Performance, commitment, enthusiasm – these are the central properties with which KUKA colleagues contribute to the success of the company,” explains KUKA Systems CEO Frank Klingemann, who has taken over responsibility for the corporate health management scheme ‘fit for KUKA’. “The increasing requirement for flexibility in the world of work, ever-growing competitive pressure and high expectations for quality and speed are imposing increasing demands on colleagues. So, it is important for a balance to be struck between pro-

### THE CORPORATE HEALTH MANAGEMENT SCHEME ‘FIT FOR KUKA’ MOTIVATES MANY KUKA COLLEAGUES TO PURSUE A HEALTHY LIFESTYLE

fessional and private interests.” The manager knows what he is talking about, because his everyday work is characterized by long meetings, business trips and deadline pressure. “I attempt to compensate by jogging,” says Klingemann. He sets himself one goal after another in this, and takes part in competitive races when time allows.

“Those of us involved in health management want to support our colleagues in developing or maintaining a healthy lifestyle alongside the everyday demands of their work and private sphere,” declares Kirsten Glassmann, the point of contact for health management at KUKA.

“Each year, the corporate health management policy takes on a new focus. In 2014, the focus was on movement. In 2015, it will be on nutrition,” says Glassmann, explaining the concept. The focus topics are selected to counteract the main causes of various diseases of civilization, such as lack of movement, incorrect nutrition, excess weight and stress.

The movement courses are also selected according to these criteria. Once a year, a needs assessment is carried out for this purpose, and the courses offered to colleagues are adapted accordingly.

#### **KUKA in motion**

Taking the slogan of “KUKA in motion”, a wide range of programs and campaigns has got KUKA colleagues moving.

The sport campaign ran throughout the entire year. For example, various KUKA walking and running groups were organized for colleagues to meet regularly for training. The goal was to participate jointly in the Augsburg corporate challenge run in May. To get in shape for the 6.8 kilometer distance, many KUKA colleagues had already tested themselves in the AOK road race that was also held in Augsburg. As the second largest team from a company, they even won a prize of money which they donated to the charitable association Orange Care e.V. “We were running for fun, not to win prizes,” said Tanja Wehner



from Corporate Marketing. The charitable association promptly used the money for an appropriate cause: children’s mobility.

#### **Sporting showdown in the Augsburg corporate challenge run**

Some 500 KUKA staff members took part in the Augsburg corporate challenge run in May. They gave the race an orange tinge and took third place in the category for the number of people competing from a company. “It was a lot of fun,” says Ines Rietzler from the Communication department. “I’m not a runner at all, but my colleagues signed me up, so that gave me the motivation to get up and get running. It is a superb feeling when you are cheered home by colleagues and friends along the finishing straight.” The CEO, Dr. Till Reuter, has competed in the last three corporate challenge runs: “This run is a firm fixture in the KUKA calendar. I’m already looking forward to May.”



HURRAH! WE’VE MADE IT.



And because everyone enjoyed it so much, KUKA colleagues once again participated in the 10th Munich ladies' race in October to raise money for the Bavarian cancer charity.

### New concepts time and time again

2014's health day was another sporting highlight. In line with the year's slogan of "KUKA in motion", there was a diverse range of activities ranging from the soccer tournament to Pilates and forklift driving. Information booths and presentations on various health topics rounded off what was on offer.

"The health day is intended to encourage colleagues to participate, to raise their awareness of their own health and, of course, to be fun," explains Dr. Frank Weinand, Head of Human Resources at KUKA.

He is not yet ready to reveal what will feature in the 2015 health day. "There are a lot of ideas and requests – including from colleagues themselves. Let's see what we can get off the ground."

Incidentally, sport is not just a feature at the Augsburg site. There are also health programs at other KUKA subsidiaries, such as the KUKA Cares wellness program in the USA, as part of which the colleagues are encouraged to take part in a walking challenge or a weight loss challenge, for example. At KUKA Robotics in the Czech Republic, the team gets together regularly for athletic events. These involve preparing for the VW Marathon in Prague, which

has now become a traditional event, or taking walking tours in the mountains together.

"It goes without saying that comprehensive health management includes more than sport and health courses," observes the Head of Human Resources. "We can and want to do even more, but it's undeniable that communal sport is an important element which KUKA colleagues enjoy and is in tune with our corporate culture."

[KUKA EMPLOYEES ARE ALWAYS ON THE MOVE. WHETHER IN THE CORPORATE CHALLENGE RUN OR, AS HERE, IN THE RUNNING WORKSHOP.](#)

# FROM SCIENCE FICTION TO REALITY

For almost a century, ever since aircraft have been made primarily of metal, the task of riveting together fuselages has been manual labor. It's exacting work, repetitive, stressful on the body – a leading cause of job-related injuries. It's a logical task to automate, but automated riveting is a recent development for aerospace, still used in a limited way. That's about to change.

**T**he future is taking shape in a building in Anacortes, Washington, near Seattle, temporary home of the FAUB project. FAUB, which stands for Fuselage Automated Upright Build, is a robotic system for automatic riveting being developed by KUKA Systems for Boeing. It has the potential to change how aircraft are assembled. The pairs of robots are equipped with multi-function end effectors from KUKA's new subsidiary, ALEMA Automation. They will build up much of the fuselage for both current 777 twin-engine jetliners and their successors, the next generation 777X family. The robots will drill and fill more than 60,000 fasteners per airframe. FAUB is the largest automated assembly system ever built for aircraft production, designed for one of the world's largest commercial airliners.

## **A reference project for KUKA**

"The importance of the project to KUKA and the aerospace industry cannot be stressed enough," emphasizes Larry Drake, President of KUKA Systems North America. "It's a bold step forward in automating aircraft assembly and KUKA's largest project ever for the aerospace sector."

As a reference project for KUKA in the aerospace industry, FAUB establishes the company in this sector and allows it to position itself as an outstanding developer of advanced assembly concepts. "This project has captured the attention of the aerospace industry," enthuses Robert Reno, head of the Aerospace Group at KUKA Systems. "This is partly due to the large scope of the project and the technological competence we are demonstrating, and partly, of course, due to the fact that Boeing



AUTOMATION OF AIR-  
CRAFT ASSEMBLY IS  
A BOLD STEP FORWARD.

is a global customer that is known for its innovative capacity. This is a technological partnership that will last for many years,” says Reno with confidence.

Rivets typically have a head like a screw and a narrower shaft. Installing them to hold two pieces of sheet metal together requires two robots working in tandem. One drives the rivet through a drilled hole from the outside, against the resistance pro-

vided by the robot on the inside. This means the end of the shaft is flattened, giving the rivet a head on both sides of the metal for a tight, strong join. These robotic teams move along the aircraft hull, joining sheet metal together to build up sections of the fuselage. The exterior robots are mounted on a KUKA omniMove mobile platform, comprising an eight-meter-long unit, thus making the robots mobile.

“With this concept, the project has pushed back the frontiers in manufacturing,” explains Randy Woolridge, Boeing Integrated Project Team Manager at KUKA Systems. “Various work steps that are currently performed separately in production have been uniquely combined.”

## ROBOTIC TEAMS WORK IN TANDEM TO INSTALL THE RIVETS





### Robotic riveting

When aircraft riveting is not done manually, it is usually performed in large stationary machines. The work pieces thus produced are then brought to the aircraft. With the robots, it is precisely the opposite approach that is adopted. The robots navigate autonomously on the mobile platforms and move along the fuselage layout to where they are to work. “KUKA was the only supplier to propose this concept. In this way,

all work steps, from drilling and filling to the insertion and hammering of the rivets, are carried out in one place. Robotic riveting is extremely precise, with repeatable quality.

“The robot platforms can be put on the floor in any position, and as long as they have power and pneumatic feeds in place, they can position themselves and do the job precisely as required to build up the fuselage,” says Kevin Reilly, Group Manager of the Aerospace Group.

The KUKA engineers involved in the FAUB project also had to think ahead to the future. The new manufacturing process is to be used not only for production of the current Boeing 777 aircraft, but also for the successor generation.

The innovative FAUB project was unveiled to the public in time for last year’s Farnborough Air Show in Great Britain.

“This project has made KUKA a trend-setter in this sector,” declares

Reilly. “For our technology team that developed this solution, the task initially sounded like something from the realm of science fiction. Now it has become reality. We are naturally immensely proud that Boeing put their faith in us to bring about this revolution in aerospace production.”



The FAUB project development cell was pre-assembled and integrated at KUKA Systems in Michigan.

It is currently being tested in Anacortes.

The production version consists of two cells working fore and aft respectively, with a combined robotic contingent that includes eight pairs of opposing robots.

FAUB is expected to be phased into 777 production starting in 2016.

It will be housed in a dedicated fuselage production facility that is currently under construction at the Boeing complex in Everett, Washington.

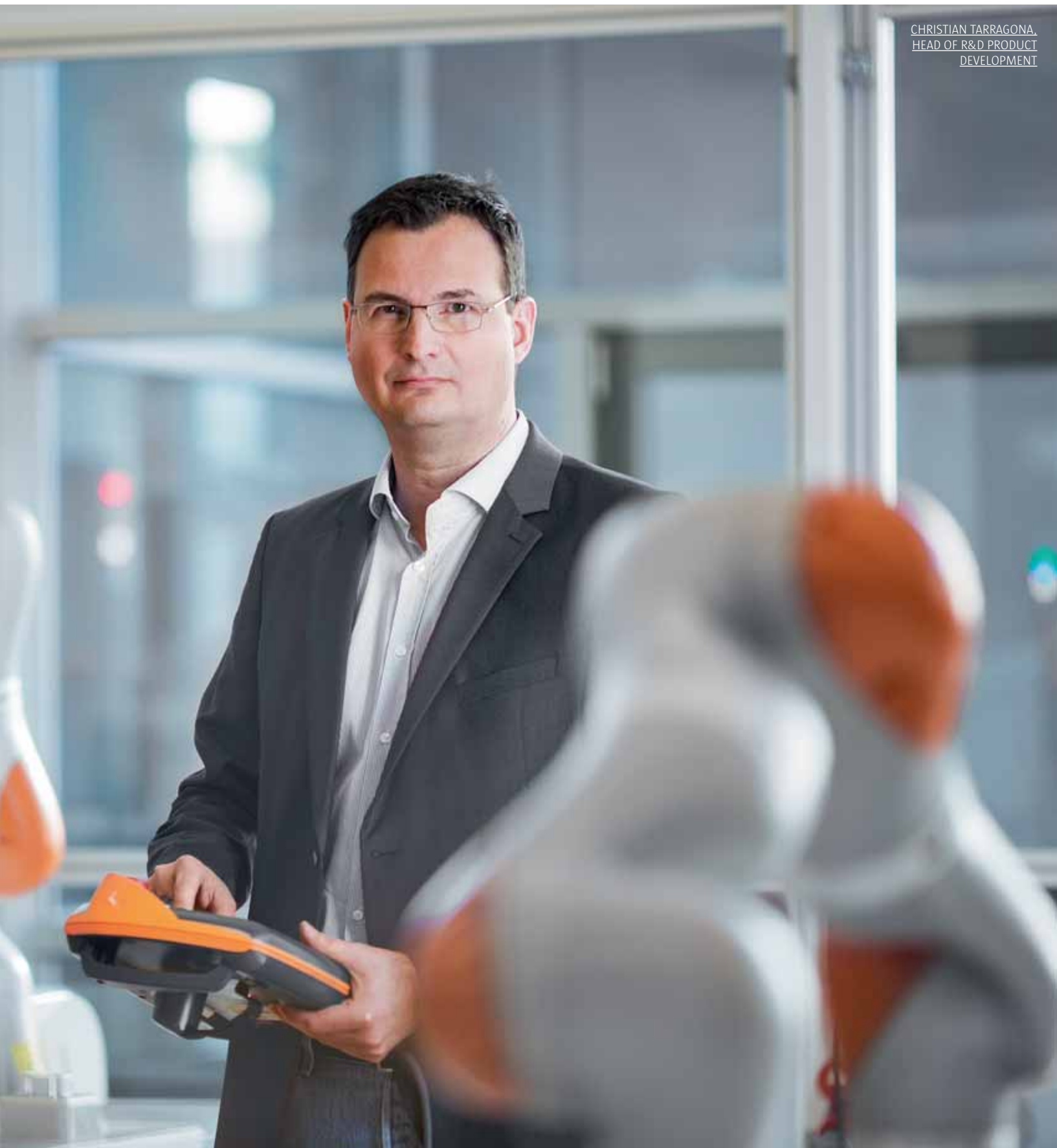
# ONE FOR ALL – THE BRIDGE BETWEEN IT AND INDUSTRY

Christian Tarragona, Head of Research & Development, Product Development and Strategic Clusters, on the new controller generation KUKA Sunrise, the link between robotics and IT, and Industry 4.0.

If you want to download an app onto your smartphone or tablet, there are more than a million to choose from. These apps are not written by the mobile network companies themselves, but by countless developers who can submit their suggestions. It works because mobile network operators allow their users to input their own ideas through the devices' operating systems. This is what the success of apps is based on. KUKA shares precisely this vision, namely to harness other people's ideas and knowledge for the company's own ends.



CHRISTIAN TARRAGONA,  
HEAD OF R&D PRODUCT  
DEVELOPMENT





As a result, the company has developed the KUKA Sunrise controller, the robot controller of the future. It is the key to combining robotics and IT. Why this is so, and what this has to do with Industry 4.0 and the Factory of the Future, is explained by Christian Tarragona, Head of Research & Development, Product Development.

**Mr. Tarragona, LBR iiwa has a new controller – the KUKA Sunrise. What’s so great about that?**

Up to now, a special programming language has been used for robot programming. For example KRL, the KUKA Robot Language. Although this is known by industrial users and training courses are available for it, it would of course be easier to program the robots if we used a language that many

people already understand. The new Sunrise controller is based on Java, a programming language that is one of the most widely used in the world with about nine million users. Java is a platform by means of which millions of ideas are developed and exchanged. There are Java communities, conferences and even social events. We intend to put this enormous innovative potential to use. Please don’t misunderstand me: KRL is an outstanding language, but the new challenges facing robotics call



CHRISTIAN TARRAGONA  
WITH PART OF THE SUN-  
RISE TEAM: MATTHIAS  
ROHMER, UWE BONIN,  
KATHARINA STAMM AND  
JESSICA RADEMACHER  
(FROM LEFT TO RIGHT)

“WE HAVE GOT TO  
SPEAK THE SAME  
LANGUAGE AS THE GLOBAL  
IT COMMUNITY.”

for user languages that address this complexity. Modern IT languages with their object and service-oriented concepts are ideal for this.

**How, precisely, should we picture this for ourselves?**

Just ask yourself why you learned English at school. It was because a lot of people in the world speak or at least understand English, so with this

language you can communicate with many more people than if you had learned Norwegian.

**And this is the approach that is also being taken towards the world of IT?**

Exactly. First and foremost, we have got to speak the same language as a large proportion of the global IT community, and one of the most common languages is indeed Java. We are granting

researchers access to our innermost control processes down to the millisecond. Only in this way can they develop new algorithms and applications. In addition, they can access an extensive software library. One advantage of the Sunrise controller is namely its modularity. This means Sunrise can very quickly be extended and adapted to applications. The connectivity means that users can quickly and easily access control functions. Modules that users need for their applications can be added very easily by the users themselves. This means a pipeline of new ideas will be created, which we will be able to use in industry.

**And what does that have to do with Industry 4.0 and the Factory of the Future?**

Nowadays, we are networked all the time, and wherever we happen to be. We are constantly online with our smartphones or tablets, and can be reached anytime. We want the devices to be easy and intuitive to operate. It is our intention to transfer these two trends, ‘networking’ and ‘ease of use’, from the IT world into industry.



[ROBOTS CAN BE EASILY AND INTUITIVELY OPERATED USING THE KUKA SMARTPAD AND ITS REDESIGNED USER INTERFACE.](#)

Consequently, it is our aim for production to organize and optimize itself to the greatest possible extent. For this purpose, components, controllers, machines and sensors must be networked with one another so they can respond flexibly.

### **Does that mean we won't be needing any people at all for production in the future?**

No, quite the contrary. At KUKA, we're working on integrating people seamlessly into this production landscape by building robots that can work together hand in hand with humans. Then, the robot can carry out the fatiguing or physically strenuous tasks and human workers can concentrate on more challenging activities or monitoring.

### **Returning to the subject of the Sunrise controller. Does this also need to have certain properties for human-robot collaboration?**

## “THE CONTROLLER WILL HAVE TO ADAPT TO TOMORROW'S TRENDS, JUST LIKE THE ROBOT.”

Yes, the controller will have to adapt to tomorrow's trends, just like the robot. We want robots to be able to act with the same level of sensitivity as human beings. To this end, we need sensor-guided motions and for that, in turn, sensor-based and safe control systems. Robots can only feel and see through their integral consideration of sensors – perception in general. This means not only can they carry out complex tasks, but they can also cooperate with humans. In brief: robots have got to be able to feel and the controller act intelligently.

### **You mentioned “sensor-guided motions” – what does that mean exactly?**

If a man reaches for a bottle, for example, he sees the position of his hand all the time during the movement and can make a correction if necessary so as to avoid missing the bottle. This rapid interaction between vision and movement is something we also want to achieve with the robot. To do this, it is necessary for sensor data to be evaluated integrally. We can do this with the Sunrise controller.

### **And what do you do with the data once you've collected them?**

We evaluate them, learn from them as much as possible and thereby make our production more and more effective and efficient.

### **Can you give an example?**

Let's take two everyday examples: voice recognition in mobile systems and search engines on the Internet. Voice recognition has taken a significant stride forward since the evaluation function was transferred to the Cloud with its large data volumes and high-performance computers. This means the phrases you speak into a telephone are transferred to the Cloud, analyzed and the result is sent back. There is no way the computing power, data and algorithms could be carried around and kept up to date on every mobile device. And the system is able to learn and improve with every speech evaluation. The same applies to search engines, which are constantly learning and automatically expanding their knowledge base. Let's apply this to industrial production, for example the assembly of mobile phones. If the speed of assembly varies considerably, the data can be evaluated and the settings found at which the mobile phones were assembled at the fastest rate. In future, this can be used as a reference, thereby improving production on a continuous basis. Even data relating to energy consumption can be found in this way.

### **And what does all that mean for KUKA?**

First of all: exciting and thrilling times. Entirely new business models are evolving for us as a result of the networking of things on the one hand and the possibilities that cloud computing affords us on the other. Energy-efficient systems are possible examples of modern services of a KUKA 4.0 – optimized by access to relevant data from the production equipment connected to central, cloud-based evaluations and optimized application processes which can be used for accessing central knowledge databases and algorithms.

### **Can you reveal what you are planning for the near future?**

Over the coming years, we intend to combine the best of the KR C4 and Sunrise controllers, and develop a KR C5 controller generation. The goal is then for this to be used for all KUKA systems. In other words: one for all.



THE DEVELOPMENT  
METHOD TOO WAS  
ADOPTED FROM THE IT  
SECTOR: THE SUNRISE  
CONTROLLER WAS DEVEL-  
OPED IN SCRUM TEAMS.



THE FINISHED AMAROK  
LADDER FRAME WEIGHS  
230 KILOGRAMS AND IS  
ALMOST FIVE METERS  
LONG AND ONE AND A  
HALF METERS WIDE.



# EVERYTHING IN THE FRAME

## ARC WELDING SYSTEM FROM KUKA SYSTEMS AT GESTAMP UMFORMTECHNIK



The VW Amarok is popular all over the world. The vehicle's ladder frame plays a major role in ensuring safe off-road driving. As the central component between the body and the chassis, it guarantees the necessary stability. In the past, Volkswagen Commercial Vehicles contracted out production of the frames in Argentina, and they were largely manufactured manually. In June 2014, to accommodate growing demand in European markets while ensuring high product quality, Gestamp Umformtechnik Bielefeld took over fully automated production of the ladder frame for the VW production facility in Hanover.

### **Competent partner for efficient automation**

Gestamp relied on the engineering expertise of KUKA Systems to design its production line; after all, over decades of cooperation with VW, KUKA has got to know exactly what the automobile manufacturer expects. As a general contractor for the arc welding system, the Augsburg-based automation specialist's job was to ensure efficient production of the Amarok ladder frame at Gestamp. KUKA also had to meet VW's deadline for changeover to production in Bielefeld. This meant that a strict schedule had to be maintained and the right solutions for Gestamp's requirements had to be found.

Whether potholes, bumps or dirt roads – pick-ups like the VW Amarok have to withstand a lot. To ensure stability on any type of terrain, Volkswagen uses extremely rugged ladder frames. These frames are manufactured for the VW plant in Hanover by the metal-forming and chassis specialists at Gestamp. The Gestamp plant in Bielefeld is now using a fully automated gas metal arc welding system from KUKA Systems to ensure good quality, proven process reliability and high output.

### **From concept to system**

The very tight deadlines and space restrictions presented a special challenge during the planning stage. Every last bit of the 3,000 square-meter facility had to be used efficiently for production and logistics. Together with Gestamp, KUKA planned each step of the production: the subassemblies of the ladder frame (side members, cross members and add-on parts) are manufactured in 14 highly standardized welding stations, each with one component loading station and two fixtures. KUKA dual turnover positioners are used to place all components in the best position with

regard to ergonomics or processes. This way, operators and robots have optimal access to the components at all times. The finished side members and cross members are then picked up by fully automated linear gantries.

The various subassemblies are joined and processed on a highly automated production line with nine processing stations. Several compact buffers are integrated between subassembly production and the line which establishes the geometries, as well as within the system itself. These buffers ensure that the loading process is sufficiently independent of the system



cycle in accordance with material flow simulations, which are used as a basis for calculating the optimal output in advance. Together with KUKA, Gestamp's specialists evaluated all tasks that affected components and processing. During the reengineering phase, all peripheral criteria and process requirements were optimized. This involved studying the motion sequences of the individual robots in order to prevent collisions and to ensure that the planned reach and accessibility satisfied the challenging process requirements. This is done using the RobCad simulation program. As a result, the robot-automated arc welding tasks were able to be programmed offline even before start-up.

### THE KUKA EXPERTS COMBINE PROFESSIONAL PROJECT MANAGEMENT WITH CREATIVE SOLUTIONS

#### **Proven and integrated KUKA technology**

The finished Amarok ladder frame weighs 230 kilograms, is almost five meters long and nearly one and a half meters wide, making it the largest part ever produced at the Gestamp plant in Bielefeld. Well over 200 individual steel parts are used to produce it. This is a big challenge for KUKA as a system integrator because not all components were inherently suitable for an automatic joining process. In addition,

the long cycle time means that many work steps must take place in a very limited space. As a result, perfectly harmonized solutions were needed. These solutions would have to meet vehicle-specific requirements, such as very large components with long weld seams, as well as complying with the high quality standards. Handling robots with a maximum payload of 500 kilograms are used in Bielefeld. There is also an array of welding robots that are equipped with the KUKA

KS Arctec function package. Specially designed for robotic arc welding, KS Arctec includes coordinated hardware components such as the torch, wire feeder and weld power source. Thanks to the sustainable, automated and monitored welding process, a highly stable and uniform joint is created. This is an important feature for joining operations like the welding of Amarok ladder frames, which have weld seams totaling some 80 meters in length.

#### **Precision control**

This was the first time that the relatively new KUKA standard control system miKUKA was used in an arc welding system. "mi" stands for "machine interface" and refers to the extremely close integration with



ARC WELDING  
SYSTEM FROM KUKA  
SYSTEMS AT GESTAMP  
UMFORMTECHNIK

the machinery: information about the machine status is displayed transparently and standardized functions simplify operator control. miControl and miView are integral components of the KUKA standard control system. This means that end customers receive tried-and-tested program modules (miControl) based on the Siemens S7 controller. The operator control system (miView) is also very easy to use.

### **Complex and compact technology**

To compensate for space restrictions in material transfer, three linear gantries measuring up to 75 meters in length are installed high above the production cells. Twelve carriages, several of which are equipped with

rotary units, move along these gantries. In addition, the entire ladder frame is rotated by 180 degrees in several GEO stations to provide further buffer capacity in these stations. This presented another highly complex challenge with respect to space limitations and workflows. If faults occur in downstream areas and a frame is ready for the next station, it is rotated sideways. This frees up space in the station so that another frame can be moved in and processed.

After the line which establishes the geometries, a range of feeding and fetching tasks are performed in the finishing area by a 500 kilogram robot mounted on a KUKA linear axis. This robot has to move the 230 kilogram ladder frame before it is

handed over to a power & free conveyor system.

“We were able to complete this project two to three months faster than usual,” says Markus Keese, with a hint of pride. He is the team leader for order processing at KUKA Systems GmbH, Technology Solutions. “Our standardized and effective solutions for the whole range of automation tasks were just as important as our closely controlled project and deadline management. When we reached the first production milestones,” continues Markus Keese, “both Gestamp and VW were very impressed by how rapidly we constructed the system.”

In March the first run of ladder frames was produced with the KUKA welding system and a Gestamp

CDP/waxing system and stored in a very large facility at Bielefeld. The VW commercial vehicles plant in Hanover switched over to production of the ladder frames in June.

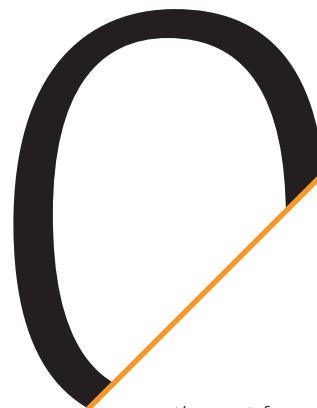
Harald Becker, Gestamp lead project manager for Amarok production and the point of contact at VW is happy that the project was completed on schedule. “Although VW moved the deadline forward, we were still able to meet their challenging schedule. From design to commissioning, we completed all of our agreed services for the Amarok welding system promptly and decisively.”

# GOOD LEADERSHIP IS HALF THE BATTLE





A small booklet with a great effect. The leadership principles for the Group as a whole are the result of teamwork. Now they need to be put into practice.



GREAT EFFORT WAS PUT INTO IT: THE LEADERSHIP MODEL WAS ELABORATED ON THE BASIS OF THE SPIRAL DYNAMICS THEORY AND SUBSEQUENTLY DISTILLED INTO TWELVE PRINCIPLES.

Over the past few years, KUKA has developed into a successful global technology group. Robot-based automation is a global trend. KUKA is benefiting from this. However, this is also attracting new competitors into the sector. Operating amidst dynamic competition driven by innovation represents both an opportunity and a challenge for KUKA. Sensitive, mobile systems and the fast pace of development in the world of IT are opening up new possibilities. Now it is important to stake our place within the new competitive environment so as to assure the company's success in the long term despite growing market expectations.

#### Geared up for the future

When a company grows as quickly as KUKA has over the past few years, it becomes necessary sooner or later for its structures to be adapted to reflect the new conditions. If the external conditions are also changing, the process of change in the company becomes all the more important. "Of course, we could carry on doing things like before," ponders Dr. Stefan Müller, Head of Corporate Strategy KUKA Group. "KUKA is currently more successful than it has ever been. Maybe we'd be able to feed on this for a few more years until we arrive at the point where growth peters out. We've got to set the course now for our long-term, sustained growth."



THE MANAGERS CARRYING OUT A STATUS ANALYSIS: WHERE ARE WE AT PRESENT IN OUR TEAMS AND WHERE DO WE WANT TO GO?



INITIAL IDEAS AND THOUGHTS ON IMPLEMENTING THE LEADERSHIP PRINCIPLES ARE GATHERED IN A BRAINSTORMING SESSION

What is essential is to establish a clear picture of how KUKA must be placed in the future. The company will be orienting itself to an even greater extent on its technological expertise and towards global markets. For this approach to succeed, we need above all people who share a common goal and a joint understanding of values and principles. Common leadership principles form the basis for this.

**The leadership principles provide orientation**

KUKA colleagues deliver top performance all over the world, time and time again. They are the basis for a successful future. "The leadership principles are intended to offer man-

agers a framework within which to orientate their conduct," explains Günther Gasslbauer, Head of Corporate Human Resources. "They are aimed at helping them to understand their role within the KUKA team and to make their contribution to the future." Managers bear particular responsibility in processes of change, and play a significant role in shaping them. "As a result, it must also be possible to measure them against the yardstick of the leadership principles in future," emphasizes Gasslbauer. In times of change, it is particularly important for colleagues to be able to trust their managers, so that they, too, support the processes. The quality of leadership is also related to the

HUMAN RESOURCES  
MANAGER ANGELA  
KÖRNER (2ND FROM  
RIGHT) DISCUSSING THE  
PRINCIPLES IN VARIOUS  
EVERYDAY SITUATIONS  
WITH A PARTICIPANT.



### Different leadership principles for different countries?

Those were examples of what the German participants had to say. But can leadership principles such as these be applied everywhere in the world? How should we deal with different cultures and different national customs when it comes to a project such as this? “The international aspect is very important,” confirms Gasslbauer. As a result, he and his team traveled to all the major KUKA sites such as in China, the USA and Hungary, to gather ideas. “We took care to ensure that the leadership principles offer freedom for culturally specific interpretations.” After all, the twelve leadership principles should apply to all KUKA colleagues worldwide.

### Practical implementation

Theory is all well and good. But how should the leadership principles be put into practice as part of our everyday work? “In further workshops, we will now work through scenarios with managers, using the most practical possible examples, dealing with how the code of conduct can be implemented in the teams,” says Körner. According to the principle of “train the trainer”, they should then be capable of working on implementing them together with their team members. The team should analyze where they are currently placed, what can and should be changed, and how. In subsequent meetings, they should repeatedly reflect on the current status. Angela Körner is now looking forward to the process of implementation. “It’s time to breathe life into the leadership principles.”

company’s success. After all, it really does have a decisive effect on the colleagues’ level of motivation.

### Managers hold themselves up for scrutiny – how it came about

“We wanted to elaborate the leadership principles ourselves, rather than have them imposed on us,” says Angela Körner, Human Resources manager. In accepting this, the Human Resources managers laid an important foundation stone for the project’s success from the very beginning. Colleagues appreciate the fact that they were included right from the word go. After all, it is easier to identify with the leadership model if you were involved in

defining it. As a way of gathering ideas for possible leadership principles, the participants examined the topic from four perspectives:

- ▲ my basic attitude towards myself and others,
- ▲ my own displayed behavior,
- ▲ common understanding of Leadership,
- ▲ common understanding of principle orientation and structure of the company.

It was by no means an easy task, but one which clearly proved enjoyable. “I particularly appreciated the combination of participants from different divisions of the company and management levels. This made

it possible to take a broader view. The members of my group complemented one another excellently,” commented Engelbert Titz, Head of Technology in Corporate Facility Management in his subsequent feedback. The ideas were distilled further in follow-up workshops until, in the end, three leadership principles were formulated for each of the four perspectives. “I really must say that the workshops have enriched my work at KUKA,” concludes Peter Weigele, Director Development Control. “Right from the first workshop, I was motivated to tackle the topic in greater depth. I’m excited to see how the result will be demonstrated and experienced in daily contact between colleagues and managers.”





# MORE POWER FOR NEW SECTORS

## ONE YEAR OF REIS GROUP INTEGRATION UNDER THE KUKA UMBRELLA

Reis Group was incorporated into KUKA one year ago. Since then, a great deal has happened in Obernburg, Augsburg and at the international sites.

REIS' EXPERIENCE IN  
SYSTEMS INTEGRATION IS  
AN IDEAL COMPLEMENT  
TO THE KUKA PORTFOLIO.

# A

### successful strategy

It quickly became apparent that both companies are a good match for one another. "Reis is a good fit for us," said Dr. Till Reuter, CEO of KUKA Aktiengesellschaft, one year ago in the course of the acquisition, referring not only to the technologies and sectors, but also the people. At the AUTOMATICA show in Munich in April, although both companies were still represented with their own booths, they were situated in the direct vicinity of one another and with colors indicating a mutual commitment. "We worked with orange color elements in our booth concept," declared Dr. Eberhard Kroth, Managing Director Technology KUKA Industries, "which was wonderfully supplemented by our Reis blue. We moved away from the red color for KUKA," he says with a grin. On the KUKA side, there is great respect for the flexibility displayed by the Obernburg personnel. "Cooperation with colleagues from Reis marketing ran smoothly right from the very first day. The show concepts for both companies had already been decided on. I think it's great that we present such a coherent public face within such a short time of the acquisition," says Knut Bickmann from the Marketing department at KUKA Robotics, describing the first days of the cooperation. Strategically speaking, there are many good arguments in favor of both companies pursuing a joint approach. For example, sales, service and support can be shared at all locations around the globe. The portfolios complement one another, for the benefit of our customers. This is





**KUKA Industries** is the reliable partner for intelligent, process and customer-oriented cells and solutions. Experienced employees adopt a visionary approach to developing and integrating automation ideas for tomorrow's efficient and sustainable production.

From the initial idea through to production support, customers receive all products and solutions from a single source. Extensive automation expertise and in-depth process knowledge enable KUKA Industries to offer its customers a decisive competitive edge in the market.

For customers in the automotive, consumer goods, energy & storage and electronics industries, as well as many other fields, KUKA Industries offers innovative joining and processing technologies, laser and special welding processes, as well as all process steps in the foundry sector, photovoltaics and battery production, at its locations worldwide.



[ASSEMBLY OF TILTING  
CASTING MACHINES FOR  
FULLY AUTOMATED  
COMPLETE TURNKEY  
SYSTEMS](#)

demonstrated, for example, by the innovative reisPAD robot control panel which it will be possible to use with KUKA hardware in future, in conjunction with the ROBOTstar software from Reis.

Reis is at home with KUKA and KUKA is playing its part in Reis. A situation that has also been apparent from the external perspective since January 2015. Reis is being merged with sections of KUKA Systems GmbH to form the new KUKA Industries division. "Our order books are full!" reports Alwin Berninger, spokesperson for the Board of Management at KUKA Industries. "We've got very good levels of capacity utilization, above all in the areas of foundry technology, arc welding, laser welding and in sectors such as photovoltaic module production," says the managing director happily. He has moved close to the Obernburg site

for the purpose of his new task. There, he works in the management team together with Dr. Eberhard Kroth, who knows Reis like the back of his hand and as CTO (Chief Technology Officer) is responsible for dealing with all the technological challenges. Furthermore, Michael Wombacher as COO is responsible for operations and Gernot Schödel as CFO is in charge of finance. Both of them have worked at KUKA for many years, in the course of which they have been able to acquire experience and input their expertise.

#### **Successful as a team**

"We have forged an effective team at management level, and set a clear objective: success through working together," states Dr. Eberhard Kroth.

However, good teams have also been cre-

ated at other levels as well. Colleagues from the individual departments as well as Controlling, Accounting, Marketing or Communication already got to know one another personally some time ago. "Many KUKA colleagues have already visited Reis, and vice versa. I've also been to Augsburg on several occasions to get to know my new colleagues there," says Petra Reus. As PA to the Board of Management, she has known Reis for many years. "I think it's good that we're gradually being integrated into the in-house communication at KUKA," continues Reus, "we receive the ON employee magazine and we also contribute articles to it. We get a live video stream for information events. Colleagues at the Obernburg site are kept informed about new features and changes via the intranet."

# 3 QUESTIONS TO ALWIN BERNINGER, SPOKESPERSON FOR THE BOARD OF MANAGEMENT AT KUKA INDUSTRIES

**Mr. Berninger, you have been overseeing the integration of Reis into KUKA since last October. What has happened since then? Can you identify a few highlights?**

“A lot has been done. We turned the corner in the third quarter of 2014, and all the segments are once again in a good position. In China, we’re currently enjoying great demand for production systems for photovoltaic modules. We’re building them for the Chinese market at our site in Kunshan near Shanghai.”

**Where do you see the challenges?**

“It will be a very exciting year. We are currently busy reorganizing ourselves. This means we intend to operate successfully in the market together with the “Technology Solutions” division, a subsection of KUKA Systems GmbH in Augsburg. This presents us with tough challenges. Despite the distance between Augsburg and Obernburg, we have got to grow together into a real team, while at the same time taking account of the diversities in the particular com-

pany cultures. It is especially important for us to continue providing good service to our customers. After all, they are used to receiving high-quality products, mature solutions and reliable service from both companies. And it is our aim for that situation to remain unchanged. We intend to continue to improve our processes and offer our customers the best of both companies. To do this, we have focused our offering in divisions: tried-and-tested solutions for arc welding, innovative components and cells for laser machining, revolutionary products for all aspects of the joining technologies friction and Magnetarc welding, as well as technological benchmarks for areas such as automated photovoltaic production or battery manufacture. The task now is to work out the approach while continuing with implementing the efficiency program on a sustainable basis.”

ALWIN BERNINGER,  
SPOKESPERSON FOR THE  
BOARD OF MANAGEMENT

**You worked for KUKA in China for four years prior to taking over your new post at Reis and KUKA Industries. Those are quite contrasting roles, aren’t they? What was the change like for you, and how have you been received in Obernburg?**

These four years were characterized by setting up the KUKA Robotics structures in the extremely dynamic Asian market environment. I would like this élan and the willingness to change to continue and I hope this will encourage my new team to act in an even more independent and entrepreneurial way.

The relocation from Shanghai to Obernburg was made very easy for my family and me thanks to the efforts of many colleagues, and we have been warmly welcomed in our new home.

China – the growth market for automation – is a focus for KUKA Industries too of course. I am delighted that I can contribute to this here with my experience gained in that market and its culture. And it is nice that each business trip I make there is accompanied by the feeling of returning home.

# AWARD WINNERS

In 2014 KUKA received many awards in diverse areas and from internationally operating partners. A particular highlight is the “Best of the Best” Red Dot award for the supreme design quality and pioneering form of the LBR iiwa with the new KUKA Sunrise controller. Through its international renown, the prestigious Red Dot label helps to raise the recognition level of a product and to ensure that a brand is lastingly associated with outstanding design quality. On July 7, 2014, some 1,200 guests from the international design scene met in Essen to celebrate the winners of the Red Dot Design Awards 2014. Also worthy of note is the German Design Award, which features twice in last year’s list of honors. The LBR iiwa additionally won the IDEA Award 2014 USA.

## AWARDS FOR LBR IIWA

### **International Design Excellence Awards**

**Organizer:** International Designers Society of America (IDSA)

**Award:** “Gold IDEA”

**Number of entries:** about 2,000 finalists, approximately >15,000 participants

### **Red Dot Design Awards**

**Organizer:** International Designers Society of America (IDSA)

**Award:** “Best of the Best” for supreme design quality and pioneering style

**Number of entries:** 4,815 products (1,816 manufacturers / 53 nations – only 60 rated “Best of the Best”)

**Award ceremony:** Red Dot Gala in Essen, July 7, 2014

### **Industrieforum Hannover iF 2014**

**Organizer:** Hannover Messe

**Award:** iF Award for high design quality

**Award ceremony:** February 2014

### **German Design Award 2014**

**Organizer:** German Design Council

**Award:** “Industry” category

**Award ceremony:** October 2014

### **iF Design Award**

## AWARD FOR THE NEW SUNRISE TECHNOLOGY

**Award:** Java Business Innovation Award

**Award ceremony:** at JavaOne 2014 in San Francisco

## FURTHER AWARDS

### **“KUKA Energy Cinema” – trade show installation**

**Organizer:** German Design Council

**Award:** German Design Award – Special Mention 2014

**Award ceremony:** February 2014

HENNING BORKLOH,  
OTMAR HONSBERG,  
WOLFGANG MALCHER  
(FROM LEFT TO RIGHT) ARE  
DELIGHTED ABOUT THE  
MM INNOVATION AWARD  
FOR THE KUKA FLEX-  
FELLOW IN THE “SERVICE  
ROBOTICS” CATEGORY AT  
AUTOMATICA 2014



**“KUKA flexFELLOW” in the “Service Robotics” category**

**Organizer:** Maschinenmarkt trade journal

**Award:** MM Innovation Award 2014

**Award ceremony:** June 2014

**“KUKA Systems Assembly & Test”**

**Organizer:** ZF Friedrichshafen

**Award:** ZF Supplier Award 2014

**Award ceremony:** November 2014

**Organizer:** Volvo Cars Corporation

**Award:** Supplier Award

**Award ceremony:** November 2014

**AWARDS FOR THE 2013 ANNUAL REPORT**

**Award:** Red Dot Design Award

**Category:** Communication Design

**Award:** LACP Vision Award Overall Gold

**Organizer:** League of American Communications Professionals

TIMO HEIL, PROJECT MANAGER AT KUKA SYSTEMS ASSEMBLY & TEST, CEO DR. TILL REUTER AND BERND VOHL, BUSINESS UNIT MANAGER AT KUKA SYSTEMS ASSEMBLY & TEST (FROM LEFT TO RIGHT) ARE PRESENTED THE ZF SUPPLIER AWARD 2014.



THE KUKA TEAM IS DELIGHTED TO HAVE WON THE AWARD.

# THE POWER OF AUTOMATION

## 1976



KUKA decides to develop a completely new robot model: the IR 6/60. This robot has six electromechanically driven axes and is fitted with an offset wrist.

## 2010



KUKA presents its new KR QUANTEC robot series – the successor to the bestselling comp and 2000 series. For the first time, a single robot family covers the entire high payload range from 90 to 300 kg, with reaches from 2,500 to 3,100 mm.

## 2013



40 years after the first industrial robot was used, KUKA is opening a new chapter in the history of industrial robotics with the LBR iiwa. “LBR” stands for “Leichtbauroboter” (German for lightweight robot), “iiwa” for “intelligent industrial work assistant”. As the first series-produced sensitive robot suitable for human-robot collaboration, the LBR iiwa is opening up new areas that were previously closed to automation.

## 2015



Robots which can navigate independently and perform tasks would make the ideal helpers in the service sector. This is possible with the autonomous navigation software developed by KUKA. Mobile robots can be used without artificial marks in large rooms. Safety laser scanners and wheel sensors record information about the robot’s surroundings, thereby creating a map. The platform can then localize itself within this map.



# THE WORLD OF KUKA

KUKA is a globally active automation company with sales of around 2.1 billion euro and a workforce of about 12,000 worldwide. KUKA offers its customers around the globe automation solutions ranging from components and cells to fully automated systems. The company is one of the world's leading suppliers in the fields of robotics, automation and systems engineering. KUKA's technologies set standards the world over. In addition to the headquarters at the production and development site in Augsburg, Bavaria, KUKA is internationally represented with about 100 companies.



## NORTH/SOUTH AMERICA

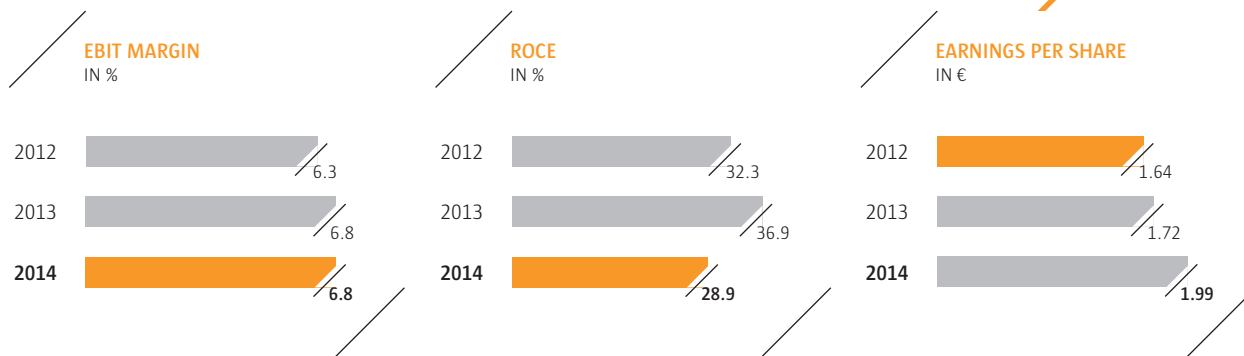
BRAZIL                      MEXICO  
CANADA                      USA

## EUROPE

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

## ASIA/AUSTRALIA

CHINA                      THAILAND  
INDIA                      VIETNAM  
JAPAN                      AUSTRALIA  
MALAYSIA  
SOUTH KOREA  
TAIWAN







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# KEY FIGURES

in € millions	2013	2014	Change in %
<b>Orders received</b>			
Robotics	793.5	805.5	1.5
Systems	1,111.6	1,456.0	31.0
Group	1,881.9	2,229.0	18.4
<b>Sales revenues</b>			
Robotics	754.1	834.6	10.7
Systems	1,045.9	1,285.6	22.9
Group	1,774.5	2,095.7	18.1
<b>Order backlog (Dec. 31)</b>	<b>991.6</b>	<b>1,702.5</b>	<b>71.7</b>
<b>EBIT</b>			
Robotics	77.1	89.5	16.1
Systems	60.8	80.2	31.9
Group	120.4	142.0	17.9
<b>EBIT in % of sales</b>			
Robotics	10.2	10.7	-
Systems	5.8	6.2	-
Group	6.8	6.8	-
<b>Earnings after taxes</b>	<b>58.3</b>	<b>68.1</b>	<b>16.8</b>
<b>Financial situation</b>			
Free cash flow	95.4	-198.5	-
Capital employed (annual average)	326.2	492.0	50.8
ROCE (EBIT in % of capital employed)	36.9	28.9	-
Capital expenditure	74.7	94.3	26.2
Employees (Dec. 31)	7,990	12,102	51.5
<b>Net worth</b>			
Balance sheet total	1,377.1	1,979.5	43.7
Equity	379.1	541.1	42.7
in % of balance sheet total	27.5	27.3	-
<b>Share</b>			
Weighted average number of shares outstanding (in millions of shares)	33.9	34.2	0.9
Earnings per share (in €)	1.72	1.99	15.7
Dividend per share (in €)	0.30	0.40*	33.3
Market capitalization (Dec. 31)	1,154.8	2,106.0	82.4

\* Subject to approval by shareholders at the Annual General Meeting on June 10, 2015

# THE VIRTUAL WORLD OF KUKA

Three KUKA short films present exclusive insights into development and construction at the different sites.

## KUKA GENIUS

Have a look at the development of the new friction welding machine "KUKA Genius".



[http://www.kuka-ag.de/en/press/photo\\_archive/kuka\\_genius/start.htm](http://www.kuka-ag.de/en/press/photo_archive/kuka_genius/start.htm)

## LBR IIWA

The LBR iiwa brings the human-robot collaboration to life.



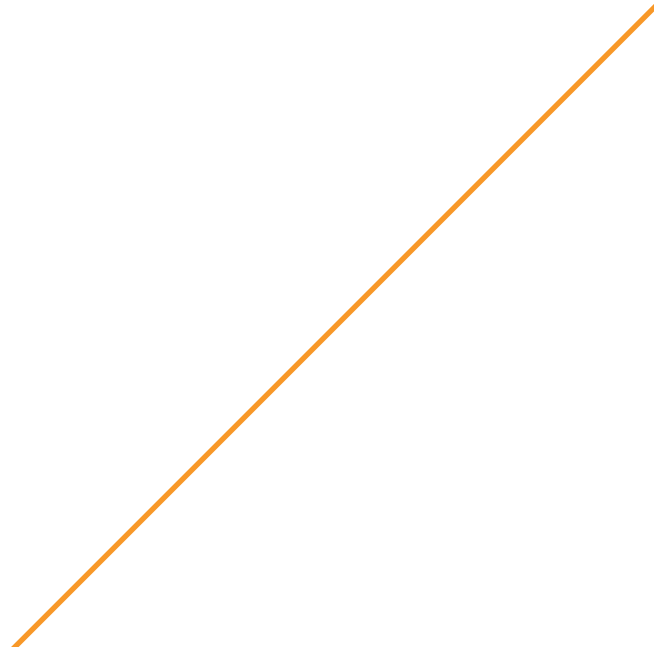
[http://www.kuka-ag.de/en/press/photo\\_archive/kuka\\_iiwa/start.htm](http://www.kuka-ag.de/en/press/photo_archive/kuka_iiwa/start.htm)

## REIS GROUP

KUKA and Reis successfully live the integration of both companies.



[http://www.kuka-ag.de/en/press/photo\\_archive/integration\\_Reis/start.htm](http://www.kuka-ag.de/en/press/photo_archive/integration_Reis/start.htm)



# SUPERVISORY BOARD REPORT

## DEAR SHAREHOLDERS,

The Supervisory Board has great pleasure in presenting its report for the past financial year, for this was the most successful year so far in the history of KUKA. The Supervisory Board supported the Executive Board with advice and carried out its control function. Much of the Supervisory Board's work involved planning the strategic direction of the company. At this point we should already point to the acquisition of Swisslog with the establishment of the additional corporate division of Logistics.

The Supervisory Board held plenary sessions and telephone conferences. Copious work on details was accomplished by the various committees. The Supervisory Board attended the company's Annual General Meeting on May 28, 2014. The Supervisory Board continuously monitored business development, particularly through the regular management report presentations by the Executive Board at the meetings of the Supervisory Board. The Executive Board informed us of orders received, sales revenues, EBIT, staffing numbers and other key indicators. Deviations from the budgets were discussed in detail. Outside the Supervisory Board meetings the Chairman was in constant contact with the Executive Board and was thus kept up-to-date with the economic situation of the company. The other members of the Supervisory Board too, particularly those chairing the committees, had repeated bilateral contact with the Executive Board members, during which they discussed various business transactions. This rendered the Supervisory Board capable of giving optimal attention to its control and advisory function.

Risk and compliance management was a particular issue concerning the Supervisory Board. It had to deal with transactions that required approval and were submitted to it in line with the company's internal regulations. Corresponding to the legal requirements, it resolved in plenum concerning all questions of Executive Board emoluments.

## CHANGES TO THE EXECUTIVE BOARD AND SUPERVISORY BOARD

The Executive Board is unchanged, with Dr. Till Reuter, CEO, and Mr. Peter Mohnen, CFO. It should be mentioned at this juncture that their appointments were extended during the year under review, Dr. Till Reuter from April 26, 2015 until April 25, 2020 and Mr. Peter Mohnen from August 1, 2015 until July 31, 2020. The Supervisory Board has thus ensured the long-term continuity of the company's management.

There have been equally no changes among the members of the Supervisory Board.

## MEETINGS OF THE SUPERVISORY BOARD AND ITS SUBCOMMITTEES

The Supervisory Board held five plenary sessions. It reached two resolutions during telephone conference calls and one passed by written circulatory procedure.

On March 25, 2014 the Supervisory Board met for its financial statements meeting. During this meeting, the Executive Board presented the annual financial statements for 2013 and the consolidated financial statements and consolidated management report for KUKA Aktiengesellschaft and the Group. In discussing this item on the agenda, the Executive Board explained the annual financial statements and KPMG in its role as auditor along with the Chairman of the Audit Committee presented their reports concerning them. The Supervisory Board approved the annual accounts of KUKA Aktiengesellschaft. The Supervisory Board then supported the Executive Board's proposal to the Annual General Meeting to approve the distribution of a dividend of € 0.30 per share, carrying forward the remaining balance sheet profit. The Supervisory Board also approved the 2013 consolidated financial statements for the Group. The Supervisory Board approved the Corporate Governance report and dealt with the proposed resolutions for the Annual General Meeting planned for May 28, 2014. A further item on the agenda was the resolution and approval of the report of the Supervisory Board for the 2013 financial year. At the meeting on March 25, 2014 the Supervisory Board also received reports on the latest Mergers and Acquisitions (M&A) projects, acquisition of the company Alema Automation SAS in France operating in the aerospace segment and investment in the newly established company KBee AG, which is active in the field of robot development. With regard to KBee AG, the Supervisory Board also had to deal with the investment by members of the supervisory and executive bodies or a related party in this company. At this meeting, much attention was given to decisions on the variable emoluments of the members of the Executive Board, as well as the achievement levels for the personal targets of 2013 and the specification of personal targets for the 2014 financial year, as well as the definition of key parameters for the phantom share program for 2014 – 2016.

On April 28, 2014 there was a telephone resolution by the Supervisory Board concerning extension of the appointment of Dr. Till Reuter as CEO of the company. The resolution on the five-year extension specifically included appointment as Labor Relations Director pursuant to section 33 of the Co-determination Act (MitbestG). In addition, Dr. Reuter's emoluments for the period from April 26, 2014 until April 25, 2020 were arranged.

The Supervisory Board met before and after the Annual General Meeting held on May 28, 2014. A report on the internal control system (ICS) was presented to it, the concept for the AUTOMATICA trade fair was explained

and an introduction to new robotics technologies was given. As part of continuing training, it was also given specialist information on the latest rights and obligations of the Supervisory Board members.

On August 1, 2014 the Supervisory Board was convened for a further telephone conference on issues concerning the Executive Board. This time it involved extension of the appointment of Mr. Peter Mohnen as CFO for five years. In addition to the decision concerning Mr. Mohnen's role as CFO, we reached agreement on his emoluments for the period from August 1, 2014 to July 31, 2020.

The meeting on September 25, 2014, held at the site of Reis in Obernburg, focused on matters of Group strategy. The Group strategy as well as the detailed strategies of Robotics and Systems were discussed. The Supervisory Board then also agreed to the combination of Reis with the Technical Solutions department of Systems under the umbrella of KUKA Industries. It additionally considered the verification of its efficiency and had a presentation on relevant Best Practice scenarios. It then resolved initially to have a new situation analysis carried out in 2015. Finally it turned to the investment of the CEO in the company KBee AG and to the sale of shares in that company to him by KUKA Aktiengesellschaft. In this connection, the Supervisory Board was given expert advice by a law firm. A further main topic of this meeting was the purchase of Swisslog Holding AG in Switzerland. The Supervisory Board agreed to the submission of a public bid to its shareholders at a price of CHF 1.35 per share and the financing concept presented for this. In this

connection, approval was also granted to increase the company's share capital by nominally up to €4,661,498.40 taken from the authorized capital through the issue, without granting subscription rights, of up to 1,792,884 no-par-value shares. To establish the actual conditions for the issue of the shares, the Supervisory Board created a special committee.

The final meeting of the full Supervisory Board in 2014 took place on December 12, 2014. This meeting focused on planning. The Supervisory Board passed a resolution to approve the 2015 budget and the medium-term planning up to 2017. The work of the committees was reported on at this meeting. The Supervisory Board also received a report on the current state of development activities at the affiliate KBee AG and discussed the progress of the Development and Technology Center being built in Augsburg.

The written resolution concerned the declaration of compliance.

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 extension of its appointment and matters of its remuneration were on the agenda (German Corporate Governance Code section 3.6). Special cases concerning further items on the agenda are addressed under "Independence and conflicts of interest" on page 4. In addition, reference is made to the report on corporate governance with the same title, forming part of the business report.



BERND MINNING,  
CHAIRMAN OF THE  
SUPERVISORY BOARD

The Supervisory Board has the following committees: Personnel Committee (chaired by Mr. Minning), Audit Committee (chaired by 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 Co-determination Act (MitbestG) (chaired by Mr. Minning). A Nomination Committee also exists in accordance with section 5.3.3 of the German Corporate Governance Code (chaired by Mr. Minning).

The Personnel Committee met four times during 2014 and passed one resolution in telephone conference. It prepared all the items on the agenda of the plenum concerning issues relating to the Executive Board. The principal agenda items were the appointments to and remuneration of the Executive Board. With regard to the Executive Board remuneration structure, the committee also issued a consultancy mandate to assess the appropriateness.

The Strategy and Development Committee was convened three times. Topics dealt with included the technology platforms of Reis, the software strategy of Robotics, the marketing of the LBR iiwa and prospective partners of Robotics for medical technology.

The Audit Committee convened six meetings during the year under review. Regular discussions took place on the results in connection with the treatment of the respective financial statements. The committee also dealt with compliance and R&D controlling.

There were five meetings of the Technology and Production Committee. The development of the LBR iiwa featured prominently in these. Operational excellence was a regular item on the agenda program.

There was no occasion to convene either the Nomination Committee or the Mediation Committee.

## INDEPENDENCE AND CONFLICTS OF INTEREST, DECLARATION OF COMPLIANCE

The Supervisory Board dealt with the investment by the son of the Supervisory Board chairman in KBee AG. As has already been mentioned, the investment by the CEO in this company through the purchase of shares from KUKA Aktiengesellschaft now also required discussion. The Supervisory Board appointed a law firm to advise the committee on both these issues. The chairman of the Supervisory Board and the CEO left the meeting during discussion of the relevant agenda items on account of their involvement and any conflicts of interest. Regarding discussion of the takeover of Swisslog and the associated capital increase, Mr. Minning – in view of his role as managing director of Grenzebach Maschinenbau GmbH, i. e. the largest shareholder in Swisslog Holding AG, as well as his membership of the administrative board of that firm – and Dr. Proeller – in view of his link to the Grenzebach family – did not take part.

The Supervisory Board members also fully complied with the independence 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 2014.

The Supervisory Board and the Executive Board submitted identically worded declarations in accordance with section 161 of the German Stock Corporation Act (AktG). The Executive Board made its annual declaration on February 3, 2014 and the Supervisory Board followed suit on February 12, 2014. The declaration of compliance was made permanently available to shareholders on 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, 2014, 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 March 4, 2015. The auditors 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, 2014 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 May 28, 2014. 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 chair 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 auditors 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 sentence 1 of the German Stock Corporation Act (AktG).

Finally, the Audit Committee obtained the independence declaration of the auditors in accordance with section 7.2.1 of the GCGC and monitored the independence of the auditors.

As in the previous years – always in respect of other topics – the company asked the auditors to focus especially on a number of items during the annual review of fiscal 2014, such as presentation of non-financial performance indicators in the management report, presentation of the cash flow statement, valuation of cross-selling transactions over several companies, capitalization and fair values of self-generated intangible assets, recognition and valuation of deferred taxes and relationships with intermediaries as well as correctness of performance and counter-performance. The auditors found no major issues regarding these items.

In December 2014, the auditors gave the Audit Committee chair a detailed explanation of the preliminary audit results. Because they had been contracted to review the June 30, 2014 mid-year financial report, the auditors attended the August 5, 2014 Audit Committee meeting.

In a joint meeting with the auditors on March 10, 2015, the Audit Committee reviewed the two sets of financial statements for fiscal 2014, taking into consideration the auditors' reports. The Executive Board and the auditors 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 auditors. The auditors 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 24, 2015 and recommended that the Board approve KUKA Aktiengesellschaft's annual financial statements and KUKA Group's consolidated annual financial statements.

The full Supervisory Board reviewed the draft annual financial statements and the Executive Board's recommendation on appropriation of net income on March 24, 2015. The auditors, 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 auditors. 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 auditors jointly reviewed and discussed the financial statements and KPMG answered all questions posed by the Audit Committee.

## 2014 FINANCIAL STATEMENTS ADOPTED

After completing its own review of the financial statements for 2014 for KUKA Aktiengesellschaft and KUKA Group, and with full knowledge and consideration of the Audit Committee report, the auditors' reports and the explanations provided, the Supervisory Board raised no objections to the results and concurred with the auditors' findings at its meeting on March 24, 2015. In the opinion of the Supervisory Board, the auditors' 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 consolidated 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 24, 2015, the Supervisory Board therefore approved KUKA Aktiengesellschaft's financial statements for fiscal 2014 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 2014 financial year as prepared by the Executive Board.

The Executive Board recommended that a dividend of €0.40 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

2014 was a grand year for KUKA. As a result, the dividend can be increased once again this year. The acquisition of Swisslog and therefore the entry into the logistics business constitutes a milestone in terms of the company's ongoing strategic development. Without the committed support of the workforce, all this would not have been possible. Not just the Executive Board but also the workforce in the entire KUKA Group merit our high recognition.

The Supervisory Board therefore thanks all staff of the KUKA companies for their extraordinary commitment. They have rendered outstanding service to their company during 2014. However, the Supervisory Board also extends its thanks to the members of the Executive Board, the management boards of the Group companies and the employee representatives. All have served the welfare of the company, its shareholders and customers in an impressive way through their performance. KUKA can be inspiring. All this feeds our confidence in the future success of our company.

Augsburg, March 24, 2015  
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:

The Executive Board and Supervisory Board of KUKA Aktiengesellschaft have examined the requirements of the GCGC in detail in its current version as of June 24, 2014. 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

The declarations of compliance of the Executive Board and the Supervisory Board that have been issued for every financial year starting in 2002, have in each case been made available on the company's website at [www.kuka-ag.de](http://www.kuka-ag.de).

The identical declarations of the Executive Board dated January 20, 2015 and of the Supervisory Board dated February 6, 2015 in accordance with article 161, clause 1, sentence 1 of the German Stock Corporation Act (AktG) and the German Corporate Governance Code ("DCGK") read as follows:

"Since issuing the latest declarations of compliance of the Executive Board (February 3, 2014) and of the Supervisory Board (February 12, 2014), KUKA Aktiengesellschaft has complied with, and continues to comply with, the recommendations of the Government Commission on the German Corporate Governance Code as on June 24, 2014, which were published in the Bundesanzeiger (German Federal Gazette) dated September 30, 2014, subject to the following exceptions:

1. KUKA Aktiengesellschaft does not follow the recommendation for the Supervisory Board outlined in section 3.8, clause 5 of the DCGC. The Group D&O insurance policy does not provide for a deductible for members of the Supervisory Board. In KUKA Aktiengesellschaft's view, the deductible for Supervisory Board members is not required to ensure they properly fulfill their monitoring role.
2. KUKA Aktiengesellschaft does not follow the recommendation for the Executive Board outlined in section 4.2.3 paragraph 2, clause 5 of the DCGK. This is due to the fact that currently running Phantome Share-Programmes, which are a part of the variable Executive Board's remuneration, have no defined maximum limits. In addition to the maximum limits as to the fix and variable remuneration, it is now agreed that future Phantome Share-Programmes, which will be issued as of 2015 and will be settled as of 2018, shall also be limited. Thus, the complete remuneration will then be capped in future. A subsequent implementation of maximum

limits (total remuneration and variable parts of remuneration) would be a contract modification which cannot be implemented by the Supervisory Board unilaterally, and does not seem to be appropriate with regard to a trustful cooperation between Executive Board and Supervisory Board (as expected by the DCGK).

KUKA Aktiengesellschaft adheres to nearly all other proposals 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](http://www.kuka-ag.de) since February 20, 2015.

## CORPORATE AND MANAGEMENT STRUCTURE

KUKA Group consists of KUKA Aktiengesellschaft – the Group's managing holding company – and the divisions Robotics, Systems and Swisslog. With just a few exceptions, all Group companies are allocated to these divisions and are – in most cases – 100 percent held by the management companies of the individual divisions directly or indirectly. 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 the management company KUKA Systems GmbH. In addition, KUKA Aktiengesellschaft acquired about 91.80 percent of the shares in Swisslog Holding AG, which is listed on the Swiss stock exchange, within a public tender, and about 2.32 percent of the shares in subsequent purchases after conclusion of the takeover offer. Taking account of the shares held by Swisslog Holding AG itself, the stake of KUKA Aktiengesellschaft in Swisslog Holding AG as of December 31, 2014 comes to about 94.5 percent of the quoted Swisslog shares.

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.

## EXECUTIVE BOARD AND SUPERVISORY BOARD

As a German stock corporation, the statutory rules impose on KUKA Aktiengesellschaft a dual management system comprising the Executive Board and Supervisory Board. The Executive Board is responsible for managing the company. The members of the Executive Board share this responsibility



for company management. The Chairman of the Executive Board and Chief Executive Officer coordinates the work of the entire Board; he is responsible for representing and leading the Board in its cooperation with the Supervisory Board and its members. The Supervisory Board appoints, monitors and advises the Executive Board. The Chairman of the Supervisory Board coordinates the work of the Supervisory Board.

## RESPONSIBLE COOPERATION BETWEEN THE EXECUTIVE BOARD AND THE SUPERVISORY BOARD

The common goal of the Executive Board and 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. 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. 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 2 to 5.

In fiscal 2014, no consulting or other contracts for work or services existed between Supervisory Board members and the company.

In fiscal 2014, conflicts of interest of members of the Executive and Supervisory Boards were notified to the company. For the details and resolution of these conflicts of interest, please refer to the Supervisory Board Report (pages 2 to 5).

## EXECUTIVE BOARD

The Executive Board of KUKA Aktiengesellschaft consists of two persons: the 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 Articles of Association).

In fiscal 2014, the responsibilities of the members of the Executive Board were assigned as follows:

Dr. Till Reuter, Chief Executive Officer (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.

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. The "SMT" Office (personnel department for the Senior Management Team) places particular emphasis on promoting women.

## 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 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.

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 GCGC, 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 GCGC, 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 Grenzbach Maschinenbau GmbH and the latter's business relations with KUKA Group companies. In November 2014, Grenzbach Maschinenbau GmbH sold its shares to J.M. Voith GmbH & Co. Beteiligungen KG. From this date onwards, Mr. Minning therefore again fulfills the independence criteria set out in the GCGC. Mention of Mr. Minning's son's stake in KBee AG, the robot development company, has already been included in the Supervisory Board Report (pages 2 to 5). Also reported there in connection with the takeover of Swisslog Holding AG by KUKA Aktiengesellschaft are Mr. Minning's role as managing director of Grenzbach Maschinenbau GmbH and as member of the administrative board of Swisslog Holding AG, as well as the resolution of the potential conflict of interest (page 4). On execution of the public purchase offer on December 15, 2014 Mr. Minning stepped down from the administrative board of Swisslog Holding AG.

All other members of the Supervisory Board fully comply with the independence criteria.

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 Company 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 or Chief Compliance Officer reported to this committee 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 GCGC). As stipulated in the audit contract, the auditor reviewed the interim report as of June 30, 2014.

The Supervisory Board regularly reviews the efficiency of its activities (section 5.6 GCGC). It reviewed the "Best Practice Scenarios" presented to it in 2014 and decided to have an initial analysis of the situation carried out in fiscal 2015. The last efficiency check carried out over several years ("High Performance Boards – Quality and Efficiency on Supervisory Board Committees") was completed in April 2011.

## SUPERVISORY BOARD COMPENSATION

Supervisory Board compensation is also outlined in the Compensation Report.

## SHAREHOLDINGS

All the members of the Executive Board and Supervisory Board hold less than one percent of the shares in circulation. The overall investment in KUKA shares held by all the members of the Executive and Supervisory Boards is also less than one percent of the shares in circulation.

Members of the Executive and Supervisory Boards or related parties are obliged according to section 15a of the Securities Trading Act (WpHG) to disclose the purchase or sale of shares in KUKA Aktiengesellschaft, or financial instruments relating thereto, if the value of these transactions within one calendar year reaches or exceeds the sum of €5,000. The transactions by persons with management roles or their related parties reported to KUKA Aktiengesellschaft in fiscal 2014 were duly published and can be examined on the company website at [www.kuka-ag.de](http://www.kuka-ag.de).

## 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 revised and updated 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 CEO ultimately responsible for the Corporate Compliance Program. A Compliance Committee consisting of persons employed by the Group was established to steer, implement, monitor, and develop the Corporate Compliance Program. In addition, a Chief Compliance Officer was appointed and compliance officers 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 progressively expanded to include the foreign Group companies and is currently being updated. 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 2015 Annual General Meeting will take place in Augsburg on Wednesday, June 10, 2015.

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 2013 Annual General Meeting chose KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, as auditor for the annual financial statements and Group auditor for fiscal 2014 as well as for a potential review of the half-year report for fiscal 2014. The half-year report for fiscal 2014 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 risk report included in the annual report on pages 45 to 49. 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 2014. 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 a business 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 (directors' dealings) and under section 26 of the WpHG (disclosure of notifications by shareholders and holders 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 the annual report and on the website at [www.kuka-ag.de](http://www.kuka-ag.de).

## DECLARATION REGARDING CORPORATE MANAGEMENT

The management declaration as per section 289 a of the German Commercial Code (HGB) is posted on the company's website at [www.kuka-ag.de](http://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 amount of compensation 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 non-cash benefits for the provision and use of a company vehicle.

One half of the variable compensation is based on the 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 (maximum target achievement of 200 percent), 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 a 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 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 ("performance period"). The first program was rolled out for the period from 2006 to 2008. The program established as a component of compensation for the 2014 financial year refers to the years 2014–2016. 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, this amount is divided by the initial price determined for the KUKA share, which is calculated from the average price of the KUKA share (opening price in XETRA trading on the Frankfurt Stock Exchange) between January 2, 2014 and March 24, 2014 (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 first three years of the program, which is geared towards the budget for the first financial year of the three-year period and the projections for the two subsequent financial 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 the KUKA share between January 2 of the year subsequent to the three reference years ("subsequent year") and the day prior to the financial review meeting of the Supervisory Board in the subsequent year).

In the event that an Executive Board member's contract is terminated – regardless of which party initiates the termination – all phantom shares allocated to that member expire.

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 April of the subsequent year. The obligation ends with the participant's departure from KUKA Group.

The initial price for the 2014–2016 phantom share program was set at €35.65.

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 phantom share program and its configuration 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.

The payment amounts of the current phantom share programs are not yet limited (the Executive and Supervisory Boards reported on the resulting discrepancy from the recommendation in their joint declarations in accordance with section 4.2.3 paragraph 2 sentence 6 of the German Corporate Governance Code).

The payment amount (to be paid out in 2018) for future phantom share programs, i. e. for the first time for the phantom share program 2015 – 2017, is restricted to an amount that equals three times the allocation volume. The Executive Board compensation as of 2018 is therefore limited by the accumulation of caps on individual items (fixed annual salary, variable bonuses and payments from a phantom share program).

The employment contracts of Executive Board members contain “severance payment caps”. This means that a restriction is agreed upon in the event of the employment contracts being terminated prematurely without good cause in relation to potential severance payments. The regulations specifically stipulate that the settlement shall not exceed the compensation value for the remaining term of the employment contract restricted to twice the annual compensation.

The employment contracts of Executive Board members additionally contain “change-of-control” clauses. In the event of a change in control within the company (sections 29 para. 2 and 30 WpÜG), the Executive Board members are entitled to terminate the employment contract within three months of the change in control occurring with a notice period of three months. In the event of a termination, the Executive Board members will be entitled to a severance payment, which is measured against the compensation due for the remainder of their contract, but is restricted to twice the annual compensation at most.

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

## 2. COMPENSATION FOR 2014

For the first time, Executive Board compensation for the 2014 financial year is disclosed for each individual member in accordance with the standardized reference tables recommended in the GCGC. Following this, the compensation is disclosed separately according to “granted benefits” (table 1) and “actual inflow” (table 2). The target values (payment for 100 percent target achievement) and the minimum and maximum values achieved are also disclosed for the benefits. In addition to this, the share-based compensation is disclosed separately (table 3).

Payments granted to members of the Executive Board – taking into account the actual inflow – totaled € 3,689,000.

### EXECUTIVE BOARD COMPENSATION FOR 2014 – OVERVIEW OF BENEFITS

in € thousands	Dr. Till Reuter CEO				Peter Mohnen CFO			
	FY 2013	FY 2014	FY 2014 (Min)	FY 2014 (Max)	FY 2013	FY 2014	FY 2014 (Min)	FY 2014 (Max)
Fixed compensation	500	568	568	568	350	381	381	381
Fringe benefits <sup>1</sup>	19	25	25	25	29	29	29	29
<b>Total</b>	<b>519</b>	<b>593</b>	<b>593</b>	<b>593</b>	<b>379</b>	<b>410</b>	<b>410</b>	<b>410</b>
One-year variable compensation <sup>2</sup> :								
Bonus	305	347	0	694	200	210	0	420
Multi-year variable compensation:								
Company targets bonus for 2013 <sup>3</sup>	305	–	–	–	200	–	–	–
Company targets bonus for 2014 <sup>3</sup>	–	347	0	694	–	210	0	420
Phantom share program 2013 – 2015 <sup>4</sup>	386	–	0	n.a. <sup>5</sup>	206	–	0	n.a. <sup>5</sup>
Phantom share program 2014 – 2016 <sup>4</sup>	–	426	0	n.a. <sup>5</sup>	–	296	0	n.a. <sup>5</sup>
<b>Total</b>	<b>1,515</b>	<b>1,713</b>			<b>985</b>	<b>1,126</b>		
Pension cost	0	0			0	0		
<b>Total compensation</b>	<b>1,515</b>	<b>1,713</b>			<b>985</b>	<b>1,126</b>		

Table 1

<sup>1</sup> The fringe benefits include expenses and non-cash benefits for the provision of company cars and insurance allowances. The premium for D&O insurance is included in the fringe benefits because, unlike the accident in-surance, it cannot be allocated individually, as the company pays a lumpsum premium for the insured group of persons which goes beyond the members of the Executive Board.

<sup>2</sup> Variable compensation of the financial year with a target achievement of 100 percent (potential target achievement of 0 to 200 percent). The deviation in the values compared to the 2013 annual report is based on the fact that the value for 100 percent target achievement is disclosed instead of the value of the provision as of December 31 (in accordance with the requirements of the GCGC).

<sup>3</sup> Percentage (50 percent) of variable compensation (for 100 percent target achievement) deferred on the allocation date.

<sup>4</sup> The allocation value equals the price of the KUKA share on the date the phantom share program was established by the Supervisory Board. This allocation value is multiplied by the preliminary number of phantom shares. As far as the phantom share program 2013 – 2015 is concerned, the allocation value for Dr. Till Reuter amounted to € 34.49 (XETRA closing price on June 5, 2013) and the allocation value for Peter Mohnen amounted to € 32.20 (XETRA closing price on March 25, 2013). The allocation value for the phantom share program 2014 – 2016 amounted to € 42.14 (XETRA closing price on May 28, 2014).

<sup>5</sup> n. a. = not applicable; maximum compensation for phantom share programs cannot be determined as this compensation is dependent on the share price, among other things, and the payment amounts for the current phantom share program are not yet limited.

## EXECUTIVE BOARD COMPENSATION FOR 2014 – OVERVIEW OF INFLOW

in € thousands	Dr. Till Reuter CEO		Peter Mohnen CFO	
	FY 2013	FY 2014	FY 2013	FY 2014
Fixed compensation	500	568	350	381
Fringe benefits <sup>1</sup>	19	25	29	29
<b>Total</b>	<b>519</b>	<b>593</b>	<b>379</b>	<b>410</b>
One-year variable compensation <sup>2</sup> :				
Bonus	419	587	113 <sup>6</sup>	390
Multi-year variable compensation:				
Company targets bonus for 2011 <sup>3</sup>	456		–	
Company targets bonus for 2012 <sup>3</sup>		524		141 <sup>6</sup>
Phantom share program 2010-2012 <sup>4</sup>	1,017	–	–	–
Phantom share program 2011-2013 <sup>4</sup>	–	1,022	–	–
Other share-based compensation <sup>5</sup>	11	14	4	8
<b>Total</b>	<b>2,422</b>	<b>2,740</b>	<b>496</b>	<b>949</b>
Pension cost	0	0	0	0
<b>Total compensation</b>	<b>2,422</b>	<b>2,740</b>	<b>496</b>	<b>949</b>

**Table 2**

- <sup>1</sup> The fringe benefits include expenses and non-cash benefits for the provision of company cars and insurance allowances. The premium for D&O insurance is included in the fringe benefits because, unlike the accident insurance, it cannot be allocated individually, as the company pays a lumpsum premium for the insured group of persons which goes beyond the members of the Executive Board.
- <sup>2</sup> Variable compensation paid out during the financial year.
- <sup>3</sup> Percentage (50 percent) of deferred variable compensation from the 2011 and 2012 financial years, which was paid out in the 2013 and 2014 financial years.

- <sup>4</sup> Phantom share program 2010 – 2012 payout at an end price of € 31.26 (average KUKA share price (opening price in XETRA trading on the Frankfurt Stock Exchange) between January 1, 2013 and March 22, 2013). Phantom share program 2011-2013 payout at an end price of € 35.65 (average KUKA share price (opening price in XETRA trading on the Frankfurt Stock Exchange) between January 1, 2014 and March 22, 2014).
- <sup>5</sup> Payout of dividend equivalents in 2013 of € 0.20 per preliminary share from the phantom share programs 2011 – 2013, 2012 – 2014, 2013 – 2015 and in 2014 of € 0.30 per preliminary share from the phantom share programs 2012 – 2014, 2013 – 2015 and 2014 – 2016.
- <sup>6</sup> Only proportionate amount due to commencement of employment during the year with effect from August 1, 2012.

Provisions, which took the total expected expense from the phantom share programs into account, were recognized as of December 31, 2014 for all phantom share programs in effect on that date and that have yet to be paid out (i. e. the 2012 – 2014, 2013 – 2015 and 2014 – 2016 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 2014 for current pensions and expected pension benefits for this group of pensions totaled € 9.846 million (German Commercial Code) (2013: € 9.763 million).

## 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 include 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 financial 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 a 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 lumpsum 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 2013 AND 2014

The following table compares the compensation paid to members of the Supervisory Board in the 2013 and 2014 financial years:

#### SUPERVISORY BOARD COMPENSATION IN 2014

in € thousands	Payments in 2014 for 2013	Payments in 2015 for 2014
<b>Bernd Minning</b> Chairman of the Supervisory Board and Chairman of the Personnel Committee, Strategy and Development Committee, Mediation Committee and Nomination Committee	165	165
<b>Michael Leppek</b> <sup>1</sup> Deputy Chairman of the Supervisory Board (from September 10, 2013)	25	90
<b>Dr. Walter Bickel</b> Chairman of the Audit Committee (from June 5, 2013)	43	75
<b>Prof. Dr. Dirk Abel</b>	60	60
<b>Dr. Uwe F. Ganzer</b> Chairman of the Audit Committee (until June 5, 2013)	32	0
<b>Thomas Kalkbrenner</b> <sup>1</sup> Deputy Chairman of the Supervisory Board (until August 29, 2013)	59	0
<b>Armin Kolb</b> <sup>1</sup> (from June 5, 2013)	35	60
<b>Dr. Michael Proeller</b>	60	60
<b>Prof. Dr. Uwe Loos</b> Chairman of the Technology and Production Committee	75	75
<b>Carola Leitmeir</b> <sup>1</sup>	60	60
<b>Fritz Seifert</b> (until June 5, 2013)	26	0
<b>Wilfried Eberhardt</b>	30	30
<b>Siegfried Greulich</b> <sup>1</sup>	60	60
<b>Thomas Knabel</b> <sup>1</sup>	60	60
<b>Guy Wyser-Pratte</b>	60	60

**Table 3**

<sup>1</sup> The employee representatives on the Supervisory Board who are also members of IG Metall have declared that they shall pay their Supervisory Board compensation to the Hans Böckler foundation in line with the guidelines of the Federation of German Trade Unions.

# KUKA AND THE CAPITAL MARKET

The KUKA share is listed on the MDAX, the German stock market index for mid-cap companies. Reporting is conducted in line with the Prime Standard rules of Deutsche Börse. The company also attends road shows and investor conferences both domestically and abroad on a regular basis. The daily

trading volume of KUKA shares on the stock exchange has increased again and averaged 157,000 shares in 2014. Market capitalization was at around € 2.1 billion by the end of 2014.

		2010	2011	2012	2013	2014
Weighted average number of shares outstanding	millions of shares	30.33	33.43	33.92	33.92	34.17
Earnings per share	€	-0.28	0.89	1.64	1.72	1.99
Dividend per share	€	-	-	0.20	0.30	0.40*
High for the year (closing price)	€	16.93	20.00	29.02	38.50	62.51
Low for the year (closing price)	€	9.87	12.50	14.68	26.4	33.85
Closing price for the year (closing price)	€	16.60	14.14	27.67	34.05	58.98
Change compared to prior year	%	38.9	-14.8	95.7	23.1	73.2
Market capitalization (Dec. 31)	€ millions	548	472	938	1,154	2,106
Average daily volume	No. of shares	113,000	132,000	120,000	144,000	157,000

\* Subject to approval by shareholders at the Annual General Meeting on June 10, 2015

## KUKA SHARE – BEST STOCK IN THE MDAX IN 2014

The value of the KUKA share increased in the previous year from €34.05 to €58.98 and recorded an increase of 73.2 percent. The share thus outperformed all other stocks in the MDAX. This development was driven by positive key financial figures in the past financial year, the continued excellent growth opportunities provided by robot-based automation on a global scale and the high level of interest shown by investors in companies that are active in the automation sector. The MDAX, on which the 50 medium-sized stocks in Germany are listed, improved by 2.2 percent in 2014 from 16,574 points (end of 2013) to 16,935 points (end of 2014). This meant that the MDAX was almost able to close on December 31, 2014 at its record high, which was achieved in mid-December 2014 with 17,184 points. The MDAX benefited from the relatively healthy development of the German economy and the expansive monetary policy of the European Central Bank. KUKA also outperformed the peer group (companies that have a similar business base and are of a comparable size): the share prices within the peer group developed within the range of -20 percent to +29 percent.

## INVESTOR RELATIONS

KUKA places a high priority on communicating regularly with the capital market. In order to further boost investor confidence in the company, it provides transparent, timely reports. The investor relations team engages in intensive dialog with the capital markets, reporting on all important events which have an impact on the KUKA share. KUKA held meetings at the sites in Augsburg and Shanghai and was present at investor conferences and road shows worldwide. The activities in Germany were primarily focused on the financial centers in Frankfurt am Main and Munich. Additional events were held in Berlin, Cologne/Dusseldorf and Baden-Baden. The focus of communications abroad was on the financial centers in New York, London and Zurich/Geneva, which were visited on multiple occasions. The company held additional road shows at the financial centers of Boston, Kansas City, Chicago, Toronto, Amsterdam, Paris, Milan, Vienna and in Scandinavia. All investors can access further details at any time on the Internet at [www.kuka-ag.de/de/investor\\_relations](http://www.kuka-ag.de/de/investor_relations). This is where quarterly, semi-annual and annual reports and corporate presentations are published. You can find the financial calendar with the schedule for 2015 on this website as well as at the end of this financial report.



## SHAREHOLDER STRUCTURE

As of December 31, 2014, the KUKA share had a relatively high volume of free-floating shares in accordance with the definition of Deutsche Börse AG. At the end of 2014, the free float, including shares held by institutional investors, was 64.9 percent of share capital. Compared to the end of 2013 however, the free float had declined (December 31, 2013: 80.2 percent). According to the mandatory disclosures submitted to the company, the following investors hold more than 3 percent of share capital (as of December 31, 2014): Voith Group 25.1 percent, SWOCTEM GmbH 10.0 percent and AXA Group 5.0 percent.

## INVESTMENT RECOMMENDATIONS ARE PREDOMINANTLY “BUY” AND “HOLD”

Many investors and banks continued to focus on robot-based automation. In 2014, a total of 25 banks and brokerage houses regularly evaluated the KUKA share’s performance; three more institutions than in the previous year. As was the case in the previous year, most bank analysts rated the share as a buy or a hold: at the end of 2014, seven were recommending a “buy” for the stock (2013: six). Eleven recommended investors “hold” (2013: eleven) and seven said “sell” (2013: five). The average target price for the share was € 46.52 as of December 31, 2014 (December 31, 2013: € 34.68). For further details, please go to [www.kuka-ag.de/de/investor\\_relations](http://www.kuka-ag.de/de/investor_relations).

## HIGH-YIELD BOND BOUGHT BACK PRIOR TO MATURITY

In November 2010, KUKA Aktiengesellschaft issued a corporate bond with a volume of € 202 million, an interest rate of 8.75 percent per year and an original term until November 2017. This bond was bought back in full and prior to maturity in May 2014 due to the extremely positive business development, with correspondingly high cash flows. The interest expenditure will therefore drop considerably over the next few years.

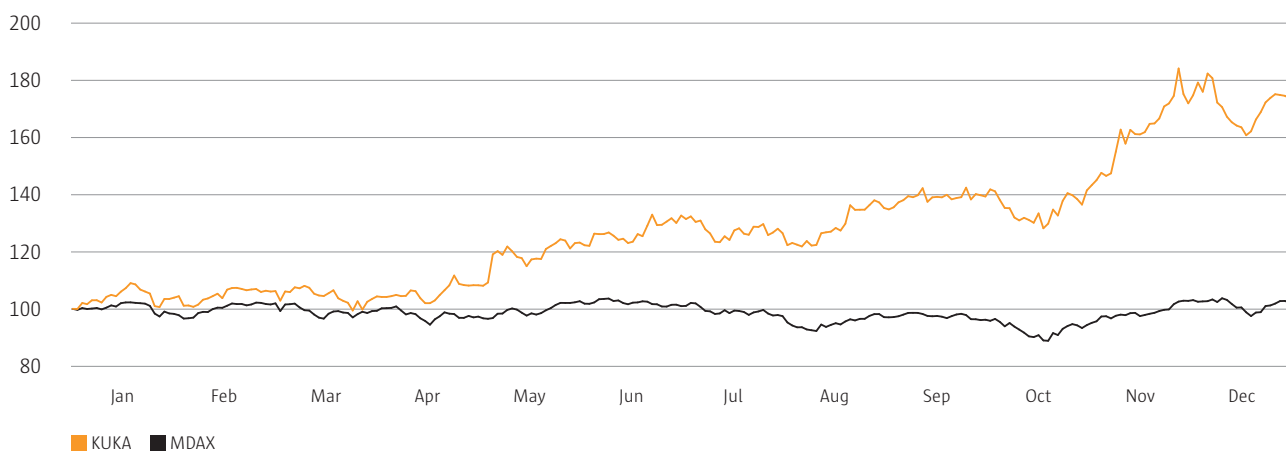
The convertible bond (ISIN: DE000A1R09V9) with a volume of € 150 million and a term lasting up to February 2018 performed extremely well until the end of 2014 and closed at a price of over € 160.

The rating agencies rated KUKA Aktiengesellschaft as follows: Standard & Poor’s gave KUKA Aktiengesellschaft a rating of “BB (outlook: stable)” and Moody’s rated the company at “Ba2 (outlook: stable)”.

## CAPITAL MARKET DAY AT AUTOMATICA

The Capital Market Day was held at the industry’s flagship trade show for robotics, AUTOMATICA, on June 3, 2014 in Munich. Numerous analysts and investors accepted the company’s invitation. The presentations were focused on the introduction of automation solutions in the context of Industry 4.0, the further development of human-robot collaboration (HRC), concepts for flexible production coupled with energy and resource efficiency and new software solutions from KUKA.

KUKA SHARE PRICE PERFORMANCE FROM JANUARY 1 – DECEMBER 31, 2014\*



\* December 30, 2013 = 100, stock performance indexed, XETRA stock price

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## GROUP BASIS

### GROUP STRUCTURE AND BUSINESS ACTIVITIES

In the year under review, KUKA Group consisted of KUKA Aktiengesellschaft and the Robotics, Systems and Swisslog divisions. 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. The divisions operate globally and are supported by their regional subsidiaries in both their sales efforts and their assembly and field service work.

KUKA is one of the world's leading suppliers of robot technology, automation and systems engineering. The internationally active technology group offers its customers advanced solutions in robot-based automation of industrial production processes and thus contributes to increasing their efficiency and improving product quality. In the Robotics division, the focus lies on the core component for automation, the robot. Robotics develops, assembles and sells industrial and service robots together with robot controllers and software. Robotics also offers its customers a wide range of services.

The core competence of the Systems division lies in customized solutions for automation of production processes. Systems plans and builds automated systems and individual production cells for its customers, and upgrades existing systems to increase sustainability and efficiency. By acquiring Reis Group, Systems has strengthened its cell business and growth in general industry. The newly acquired ALEMA Automation supplements the Systems portfolio, such that Systems is able to offer a full range of automation solutions for aircraft manufacture.

The company Swisslog AG acquired at the end of 2014 had no effect on sales revenues or earnings in the year under review.

### ROBOTICS DIVISION

The core component for automating production processes is provided by the Robotics division: industrial robots together with the robot controller and software. The diverse product portfolio covers payload ranges from five to 1,300 kg. This enables KUKA to optimally meet the various requirements of its customers. All robot models, including medical and service robots, are developed and assembled in Augsburg. The control cabinets are produced in two Hungarian plants, in Taksony and Füzesgyarmat. For the Asian market, KUKA also produces robots and control cabinets in its plant in Shanghai/China.

KUKA Robotics is continuously expanding its range of products so as to offer customers from all kinds of sectors the solutions that are appropriate for them and to allow even small and medium enterprises to use robots economically. The research and development area has an important role to play here. KUKA has created a new dimension in robotics with the LBR iiwa lightweight robot. The sensitive robot generation is equipped with intelligent safety technologies which make it possible to dispense with safety fences while the robot is operating. In this way, the robot can support the people in its immediate vicinity as an intelligent production assistant. With the development of advanced technologies and products, KUKA is opening up applications that used to be off-limits for robotics. The ground-breaking KUKA Sunrise control system also contributes to this. It has modular and open interfaces, combines motion and sensor systems, and uses Java as its programming language.

### SYSTEMS DIVISION

The Systems division offers its customers complete solutions for automating production process; it also plans, designs and builds automated production systems. The range covers the entire value-added chain of a system: from individual system components, tools and fixtures to automated production cells and even complete turnkey systems that are created by the division acting as a system integrator. The division's expertise lies in automating individual production processes such as welding and brazing, processing various materials and integrating different production steps to form a fully automatic system.

The Systems division supplies large-scale automated lines principally to the automotive industry for body-in-white production as well as assembling engines and transmissions. KUKA Systems also operates a production line for the entire body of the Jeep Wrangler (KTPO) at the site of the carmaker Fiat Chrysler Automobiles in Toledo/USA. The Systems division works with regional centers of competence. Markets in Germany and elsewhere in Europe are looked after from Augsburg, while the Greater Detroit area in the USA is responsible for the North/South America region and Shanghai in China handles the Asian market. Other business segments are tool and die making at the Schwarzenberg site in the Ore Mountains and Slovakia. Automated assembly lines and test rigs for engines and transmissions are designed at and supplied from the Systems sites in Bremen, Greater Detroit/USA and Shanghai/China.

As well as the automotive industry, more and more other sectors are coming to rely on the expertise that KUKA Systems has acquired over many years in the automation business. Take aircraft construction, for example, which offers significant potential for automation in production. For this, the division offers complete solutions from a single source in conjunction with the newly acquired company ALEMA Automation. With the purchase of Reis Group, Systems is also expanding its cell business in the general industry area.

## MARKETS AND COMPETITIVE POSITIONS

KUKA Group receives the majority of its orders from the automotive industry, alongside which it has grown over the past 40 years and become established as a specialist for robot-based automation solutions. This market continues to represent an important source of business, accounting for around 50 percent of total sales. Before the acquisition of Swisslog this proportion was 60–65 percent. To reduce its dependence on economic cycles, the Group has been working hard over recent years to expand its business in sectors other than the automotive industry (i. e. general industry). The systematic ongoing development of robot and control technology means that a large number of sectors are already benefiting from KUKA robots and systems nowadays. KUKA is opening up new markets by developing appropriate product types, first and foremost the all-rounders of the KR QUANTEC series, the KR AGILUS small robot series and the sensitive LBR iiwa lightweight robot. More and more work steps can thus be automated, for example in the plastics, food or electronics industries as well as in foundry technology, the machine tool sector and medical engineering. Through its acquisition of the Swisslog company in Switzerland, KUKA Group is also opening the door to the warehouse logistics and healthcare markets.

At KUKA Robotics, general industry and the automotive industry contribute about equally to overall sales. KUKA Systems is also expanding into sectors outside the automotive industry. Not only does this include aerospace, rail vehicle construction and the construction plant industry, but also the energy sector and the consumer goods industry.

KUKA Robotics is one of the leading robot manufacturers in the world, and is regarded as the market leader for industrial robotics in Europe. KUKA Systems is a top supplier for body-in-white construction activities in the automotive industry. KUKA Systems has been the market leader in North America since its purchase of the systems business from UTICA Enterprises. KUKA has also strengthened its presence in the growing Asian market. In its first year of production after opening at the end of 2013, the new plant in Shanghai shipped more than 3,000 robots to the Asian market.

## CORPORATE STRATEGY

KUKA moves in a highly dynamic, innovation-driven market environment, which is being continuously redefined. Robot-based automation is a megatrend. Sensitive mobile systems and rapid developments in the IT world are creating new opportunities for KUKA. The company must, however, stand its ground in a new and tougher competitive environment.

In order to guarantee the company's sustained success and to expand the leading global position in automation in the long term, the "Integral Organizational Transformation" project (IOT) was launched at the beginning of the financial year under the slogan "KUKA 2020". This is intended to provide KUKA with a strong momentum to grow on several levels. The emphasis here is being placed on an integral examination of the organizational structure.

Integral means looking not only at the organizational structure, processes and products but also at the knowledge and the multitude of skills of the employees. Furthermore, various aspects of the corporate culture, such as KUKA-wide cooperation and the assurance of the innovation abilities are also included.

The aim is to further expand the market positions of KUKA Systems and KUKA Robotics. Furthermore, in the future KUKA Industries is to expand the cell business in the field of general industry. This will be supported by an integrated value-creation chain as KUKA covers the entire spectrum from components through cells to complete systems. In order to benefit from global trends and to make optimum use of in-house expertise, the Group is concentrating on expanding its innovative and technological leadership by aiming for fast-growing global markets and continuing to work on efficient structures.

### **1. Expansion of KUKA's innovative and technological leadership**

The KUKA brand stands for innovation in robotics and systems engineering. The largest share of investments in research and development are made in the Robotics division. Accordingly, the Robotics division employs about 12 percent of its workforce in research and development at the Augsburg headquarters and reinvests 7 to 9 percent of its sales revenues in R&D annually. R&D in the Systems division is conducted partly in conjunction with customer projects and also in various development projects; spending in this area is reported as a research and development expense.

According to the predictions of the International Federation of Robotics (IFR), robot-based automation will be influenced by various trends. KUKA is gearing itself to these trends and is further expanding its own technological expertise in the focus sectors. The new generation of robots will therefore be mobile, easy to program and fast and flexible to deploy. Technological innovations such as improved safety, vision and sensor systems enable humans and machines to work together. The LBR iiwa, developed by KUKA, is equipped with precisely these properties. Supplemented by mobility and autonomous navigation, robots such as LBR iiwa can become sensitive and locationally flexible production assistants working hand in hand with people. Processes can therefore be automated and completely new production concepts created which are above all ergonomic and have health benefits.

During the year under review, KUKA concentrated not only on increasing its innovative strength but also added to this by means of targeted acquisitions.

By acquiring ALEMA Automation SAS based in Bordeaux, KUKA has gained specific expertise in automated drilling and riveting of aircraft components and has already won initial orders as an all-round supplier in this market.

With the integration of Reis GmbH & Co. KG Maschinenfabrik, KUKA has also extended its own technological portfolio, particularly in the market segments of laser technology, arc welding, foundry technology, special machine engineering for friction and Magnetarc welding systems and in new technologies in the field of solar energy and battery manufacture.

In the field of human-machine cooperation, KUKA has strengthened its position by acquiring a stake in FAUDE. As a result of the cooperation between KUKA Systems and FAUDE, an internationally active provider of solutions for production and process automation, which offers customer-specific special solutions and standardized HRC systems, KUKA has supplemented its expertise on applications in human-robot collaboration. KUKA was able to establish itself in this field over the past few years by means of various research cooperation projects.

By acquiring Swisslog Holding AG of Buchs in Switzerland, KUKA has gained access to automation technologies in warehouse logistics and the healthcare sector. Swisslog's specific strengths are in the field of software solutions for materials flows. KUKA technologies are very easy to combine with Swisslog's logistics technology. As a result future-oriented automation concepts will be created for new sectors.

## 2. Diversification of 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.

The general industry markets addressed by KUKA are especially important because the growth and profit potential in these sectors is high. The degree of automation in these sectors is still relatively low. 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. The diversification strategy is confirmed by the acquisitions. As a result of the takeover of Alema, KUKA Systems can now operate as an all-round supplier for aerospace customers and has thereby made the market easier to access. KUKA Robotics, on the other hand, works with systems partners to develop new applications for robots in target markets such as the electronics, machine tool, foundry, plastics, food and healthcare industries.

Also through the stake in Reis Group Holding GmbH & Co. KG, KUKA Systems was able to gain access to new sectors such as the foundry industry and solar energy and battery production.

Through Swisslog, KUKA can access particularly attractive growth markets such as warehouse logistics and the healthcare sector, and is therefore able to diversify into other customer segments. We consider that Swisslog will increase sales potential through the links with KUKA's technology and marketing platform; in particular Swisslog will gain access to KUKA's clients in the automotive sector. KUKA is benefiting from the stake in Swisslog by the broader market access, particularly in the USA, in the field of warehouse logistics.

KUKA has a strong position in the European market, which it aims to secure. The company sees growth potential in the expansion of global sites with a key focus on high-growth countries in Asia and the Americas. The objective is to achieve sustainable benefits from the rising demand for automation, particularly in these regions. The Chinese market offers many opportunities

in this area. According to IFR forecasts, the Chinese market is expected to grow faster than others in the coming years. Worldwide average annual growth of 12 percent is expected between 2015 and 2017. Chinese growth over the same period is estimated at around 25 percent per year.

As a result of the aforementioned acquisitions, KUKA is further diversifying and raised the share of sales revenues from general industry to 35 – 40 percent in 2014. When Swisslog is included in 2015, this share will increase further and be on a par with automotive.

Along with KUKA's base in Shanghai, Reis' site in Kunshan is strengthening the service network for customers in Asia.

## 3. Continuous establishment of sustainable and efficient cost structures

In order to support profitable growth and thereby secure long-term competitiveness, various measures are being implemented in the field of operational excellence.

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 during the financial year as having a potential for optimization include supplier management and procurement from countries with lower cost structures, as a result of which seven-digit savings were achieved in indirect purchasing.

In 2014 a pilot project was conducted at KUKA Robotics with the objective of shortening the delivery periods for the KR AGILUS from nine weeks to three and simultaneously reducing inventories. The KR AGILUS was developed specially for use in general industry, where delivery times play a particularly important role.

A project called "Orange Globe" was launched at KUKA Systems during the financial year, aimed at simplifying project management throughout the world using uniform software and at implementing PLM (Product Lifecycle Management) software.

An important aspect of operational excellence is the optimization and standardization of processes and procedures within the business. The "PowerON KUKA 2020" program launched by the Executive Board represents a key initiative which, over the coming years, will optimize and harmonize further procedures, the organizational structure and IT systems and tools throughout the Group. In the context of this program, standardized Group-wide ERP control (Enterprise Resource Planning) will also be introduced. The program covers KUKA's worldwide operations and encompasses all divisions and core functions in finance & controlling, human resources and production.

## 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 25 and under "Financial position and performance" from page 28 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 the return on capital employed, or ROCE. EBIT and ROCE are measured for KUKA Group and the 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 116 for definitions of key performance indicators.

Medium term, i. e. between three and five years, the EBIT target margin is at least 12 percent for the Robotics division and at least 6 percent for Systems. Currently, the largest share of revenues of 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 systems 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 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 5-YEAR PERIOD

in € millions	2010	2011	2012	2013	2014
Revenue	1,078.6	1,435.6	1,739.2	1,774.5	2,095.7*
EBIT	24.8	72.6	109.8	120.4	142.0
ROCE	7.9%	21.8%	32.3%	36.9%	28.9%
Free cash flow	-37.3	6.5	77.1	95.4	-198.5

\* including €135.8 million from acquisitions

## 2014 TARGETS ACHIEVED

KUKA Group continued on its course of profitable growth and achieved its financial objectives in 2014. In its outlook in the 2013 annual report and at the annual results press conference on March 26, 2014, the Executive Board predicted sales revenues of between €1.9 and 2.0 billion and an EBIT margin of approximately 6.0 percent for fiscal 2014. The costs of the integration and restructuring of Reis Group were included in those figures. Growth was anticipated to benefit from the first-time consolidation of Reis Group, particularly from the strong demand from the general industry and automotive sectors.

A slight decrease in the EBIT margin was forecast for the Robotics division for 2014 (2013: 10.2 percent). This was explained by the planned increase in R&D expenditure and the overall negative effects of the weaker yen/euro exchange rate.

The Executive Board forecast a slight increase in the EBIT margin for Systems (2013: 5.8 percent). This was expected to result from the better price quality in the order backlog, the improvement in process management and the successful implementation of the efficiency program.

When reporting the interim results for 2014, the Executive Board raised targets to around €2.0 billion for sales revenues and approximately 6.5 percent for the EBIT margin. The reason for this revision was the high demand mainly from the North American and China regions. KUKA had previously significantly extended its market presence in the Chinese growth market. This comprised the building of a robot production facility in Shanghai and also the acquisition of Reis Group. In addition, local automotive production was given a greater push by customers. The following statements were made regarding targets during the year:

2014 target values	Sales revenues	EBIT margin
First quarter 2014	~€1.9 – 2.0 billion	~6.0%
Second quarter 2014	~€2.0 billion	~6.5%
Third quarter 2014	~€2.0 billion	~6.5%

The raised targets were met for both sales revenues and the EBIT margin in the year under review. KUKA Group revenues amounted to €2,095.7 million and the EBIT margin reached the previous year's level of 6.8 percent. Both key figures therefore exceeded the predicted targets.

Contrary to expectations, the Robotics division's EBIT margin at 10.7 percent was slightly higher than in 2013 (10.2 percent). Both the good rise in sales revenues in general industry and also the growth in the automotive and service businesses contributed to the positive performance of profitability.

In line with the forecast, the Systems division's EBIT margin at 6.2 percent was slightly above the 2013 result (5.8 percent). Systems benefited from high capacity utilization and measures to improve efficiency. The high capacity utilization was driven in particular by the automotive customer segment in Europe, the USA and China and by aircraft construction.

KUKA achieved a net profit of €68.1 million during the fiscal year. This was higher than the previous year's figure of €58.3 million. The reason for this increase was the very good operational business performance.

Investments totaled €94.3 million, exceeding the €74.7 million expenditure in 2013. This was due to heavy investment in R&D as well as greater capital expenditure on tangible assets and on building the new Development and Technology Center in Augsburg.

A free cash flow in the mid-double-digit million range, excluding financial investments, was forecast for the 2014 financial year. Taking the impact of the company acquisitions into consideration, the figure for 2014 was €-198.5 million. Adjusted for the effects of the acquisitions, there was a positive free cash flow of €89.8 million, which was close to the 2013 level.

See the Financial position and performance section beginning on page 28 for more detailed information.

## RESEARCH AND DEVELOPMENT

Ensuring KUKA's own innovative and technological strength is of great strategic importance for the entire Group. As a result, the company made very substantial investments in research and development (R&D) during the year under review. Expenditure increased from €59.7 million (2013) to €78.2 million in 2014. Consequently, the R&D quota, i.e. the ratio of R&D expenditure to sales revenue, was 3.7 percent in 2014 compared to 3.4 percent in the previous year. Furthermore, the capitalization ratio, i.e. the proportion of capitalized R&D activities, amounted to 9.0 percent compared to 16.5 percent in the previous year.

For detailed information, please refer to the Financial position and performance section from page 28 onwards.

The majority of the research and development activities are undertaken in the Robotics division, which applied for a total of 134 patents in the year under review; of these, 105 were granted.

At Systems, the majority of development activities take place in the project business in the course of customer orders. There, 84 patent applications were filed in the year under review and 52 granted.

The year under review was characterized by human-machine collaboration, among other aspects. In particular, KUKA was involved in the continuing and application development of the LBR iiwa, twelve different applications of which were presented during AUTOMATICA. KUKA implemented a booth concept involving moving robots without any safety fences.

Visitors were able to interact with the robot directly. The practical examples included handling meal trays in commercial kitchens, inserting glass displays into a plastic frame, assisting in a surgical knee operation and fitting plugs into a vehicle body.

### Robotics division

#### **KUKA moiros developed further**

The KUKA moiros was also developed further. This is a concept study as part of which a KR QUANTEC moves independently on the KUKA omniMove mobile platform with the help of autonomous navigation software and with battery power. The robot and platform are now controlled in parallel by only one controller. This allows flexible processing of XXL components even when travelling.

#### **Portfolio in the heavy-duty range expanded by KR FORTEC**

KUKA Robotics expanded its product range with a new heavy-duty series. The new robots cover the payload range from 360 to 600 kg, thus filling the gap up to the KUKA KR 1000 titan. With the development of the KR FORTEC series, KUKA Robotics has succeeded in opening up a payload range which had previously not been provided for by one and the same market participant. 25 robot types cover payloads from 360 to 600 kg, with a reach of up to 3,326 mm. In addition to the standard robots, KUKA offers variants for ceiling mounting as well as for use on machine tools and in foundries.

#### **New robot for the food industry and cleanrooms**

Furthermore, KUKA Robotics launched the KR QUANTEC PA Arctic onto the market. It can work at temperatures down to -30°C, and is ideal for use in the food industry.

The KR QUANTEC PA Arctic is not a special solution from KUKA. Instead, it is a cold-resistant adaptation of the tried-and-tested standard palletizing robot from the KR QUANTEC series. The robot is available in three payload variants: with 120, 180 and 240 kg payload.

Not only the KR QUANTEC series but also the AGILUS small robot series have been expanded by variants for use in cleanrooms with the most exacting requirements for the absence of particles. The cleanroom models differ from standard KUKA robots in their specially ground and painted surfaces, which guard against the build-up of particle deposits. Modified seals prevent abrasion.

#### **Linear unit for the KR AGILUS series**

The KUKA KL 100 linear unit was developed for all robots in the KR AGILUS series. It can be mounted on the floor, ceiling or wall, and enlarges the working range of the small robots. The linear unit is operated as an external axis of the robot controller.

## Advanced Robotics division – KUKA Laboratories

### New KUKA Sunrise controller was presented to customers

The sensitive LBR iiwa lightweight robot is controlled with KUKA Sunrise. This is based on Java, the most commonly used programming language in the IT world, and is thus opening up new markets. The goal of this development is to implement a real-time system comprising parallel components that can be expanded in a modular way. On the basis of this technology, complex robot-based applications can be implemented and, in future, seamlessly implemented into companies' IT systems. High-performance, open IT interfaces will thus allow customers to integrate their applications even more effectively.

With release V1.5 of the Sunrise control software, additional functions are now available for HRC applications. New safety functions allow customers to dispense with an external safety controller for their cell/application to an increasing extent, thereby saving costs and installation space.

### Processing medical image data

In cooperation with the Leibniz University of Hanover, a new interface has been created which makes it possible to control the LBR iiwa from the open-source "3D Slicer" software. The extremely extensive software permits visualization and processing of medical image data. An initial sample application was successfully shown at the AUTOMATICA, CARS and CURAC trade fairs.

Additional elementary software functions have been developed and successfully implemented on the Sunrise technology platform for use with medical technology partners.

## KUKA Systems division

### Development of new "Genius" friction welding machine

At KUKA Systems, the design for the new "Genius" friction welding machine was presented in the year under review. The advantages for the customer concern the new user interface, the energy efficiency and significantly reduced space requirement.

### Energy efficiency in systems engineering

KUKA Systems is making further progress with developing the calculation and simulation tool for energy-efficient configuration of production systems. At present, a guideline is being prepared for the handling and configuration of resource and energy-efficient systems in the development process.

### KUKA navigation on omniMove – successful interim acceptances with customers from the aerospace sector in the USA

In the year under review, KUKA Systems was able to complete a customer project in the aerospace sector in the USA. This involves a robotic system for inserting rivets, mounted on the omnimove mobile platform. Two robots work in tandem to insert the rivets in the aircraft fuselage so that two pieces of sheet metal are joined together. One drives the rivet through a drilled hole from the outside, against the resistance provided by the robot on the inside. This means the end of the shaft is flattened, giving the rivet a head on both sides of the metal for a tight, strong join. These robotic teams move along the aircraft hull, joining sheet metal together to build up sections of the fuselage.

### Joining technology for "lightweight materials"

The "lightweight materials" technology development project has been primarily concerned with setting benchmarks in the area of pierce-&-roll riveting and flow drilling over the past few weeks. Other highly promising variants involve high-speed bolt setting and pierce riveting. The possibility of trialling the technology in KUKA's own laboratory means that the connections can subsequently be subjected to inspections and strength tests in-house as well. The technology data obtained in the project is recorded in an in-house technology guideline, and can be used for system projects.

### Special kinematic systems from Reis are being converted to KUKA technologies

To make use of synergy effects in the area of robot control, the process of porting the Reis robot controller to KUKA hardware has got underway at Reis in Obernburg. The ultimate objective is to streamline the hardware base, the drive engineering as well as the process functions of both controllers. Furthermore, the product portfolio has been developed further for the permanent mold casting market segment.

### Development projects throughout the Group from KUKA technology development

At KUKA, technology development is grouped together into its own division. Here, products and solutions with unique features in the global market are brought to the required degree of maturity at an early stage. Then, they are handed over to the preliminary and series development departments in the individual KUKA companies for further development and to turn them into products.

### Awards for KUKA LBR iiwa and new KUKA Sunrise controller

The KUKA lightweight robot won several prizes last year.

In July, KUKA garnered the Red Dot "Best of the Best" award for the LBR iiwa. The decision of the selection committee was swayed to a significant extent by the unmistakable design and innovative styling.

In addition, in the United States the product won the IDEA Award USA 2014, while it picked up the German Design Award 2015 in Germany. At present, it has also been nominated for the German Business Innovation Award – the world's first innovation prize – and is one of the four finalists.

The new Sunrise technology is also an award winner. It received the Java Business Innovation Award at JavaOne 2014 in San Francisco.

The Java Business Innovation Award recognizes Java customers and partners who have made exceptional innovations in their company and their products. With the Sunrise technology, we have succeeded in linking the worlds of automation and IT, thereby connecting KUKA's robots to the "Internet of Things".



The Maschinenmarkt trade journal selected the “KUKA flexFELLOW” from KUKA Systems as the winner of its “MM Award” in the “Service robot” category. KUKA flexFELLOW is a mobile automation concept by means of which sensitive and complex assembly tasks can be automated economically.

Since 2008, the editorial team has presented this award for the most innovative exhibits at the trade fair for robotics and automation. The award recognizes innovations that have been developed in the past twelve months and have set new technical standards, offer economical benefits and have an appealing design.

The Swiss company AOT AG was selected as the winner of the **Innovation Prize by the Zurich Kantonalbank** for its development of a robot-guided laser head for cutting bones in maxillofacial surgery. The development based on an LBR iiwa is supported by KUKA R&D.

#### **KUKA Innovation Award**

For the first time, KUKA itself presented an innovation award at AUTOMATICA. From the four finalists, the company gave the award in recognition of development activities in the field of mobile manipulation with the KUKA youBot. In the year under review, KUKA invited entries for the Innovation Award as well. On this occasion, it is for applications with the LBR iiwa. The prize will be awarded at the Hannover Messe trade show in April 2015. By calling for entries for the Innovation Award, KUKA is building up its own networks in research and encouraging young people in research and development.

## PROCUREMENT

Significant savings potential was achieved in indirect purchasing as part of a comprehensive Group project with the support of the Robotics and Systems divisions. The focus here was on reshaping the interface between purchasing and the consumers and on using new negotiation tools. The sustainability of this project is ensured by using a new organizational structure for indirect purchasing. The procedure for organizing the lead buyer concept was replaced with central strategic purchasing. The operational purchasers work in their companies and have a close professional link to central purchasing.

After the takeover of Reis GmbH & Co. KG Maschinenfabrik, the prices and delivery conditions for joint suppliers of KUKA companies were optimized. The next step will involve processes and the key figures (key performance indicators) being harmonized to exploit further synergies, especially in strategic purchasing.

These two projects led to savings in the mid-single-digit million euro range.

#### **Procurement at KUKA Robotics**

Back in 2013 and during the year under review, annual production capacities in Augsburg were increased from 15,000 robots previously to a current level of up to 22,000. The industrial robots are assembled in two-shift operation on a production space of 10,000 m<sup>2</sup>. All process steps from the production order to delivery to the sales warehouse are subject to a strict inspection and documented. A bar code on the individual components provides information on which components have been installed in which robot.

Significant enhancements were made to the efficiency of Robotics by performing regular audits of processes and measures. Production capacities have been increased to ensure that the right amount of outsourced components are available. Costs and quality are broken down into material groups and monitored on a regular basis. KUKA is able to react quickly and flexibly to changes by using the extensive knowledge of its experienced experts. Significant savings were made during the year under review particularly by focusing on design-to-cost measures and economies of scale.

The materials employed in the robot arms are carefully selected to ensure that the high demands in relation to quality and availability are met. The company was able to successfully cushion the impact of fluctuations in raw material prices during the year under review. In particular the expansion of the local sourcing concept in China promises potential for the future.

#### **Procurement at KUKA Systems**

Process enhancements along the entire value-added chain are being made by introducing a new product lifecycle system and a global enterprise resource planning system. Improvements can be made here by pooling activities globally, integrating purchasing at an early stage, using consistent basic data and scheduling, and reducing redundancies.

The purchasing department also provides support by means of supplier expertise in the field of energy efficiency and Industry 4.0, which is gaining ever more significance for KUKA. In order to be able to integrate suppliers as early as possible into the product development process, the decision was taken to place employees from the purchasing department in the development department. These employees will address new issues in this department at an early stage and serve as an interface to the purchasing department.

The expansion of the KUKA Systems company in Sibiu/Romania continues. The introduction of SAP systems made it possible to enhance transparency and therefore to ensure that the company is managed more efficiently. Efficiency benefits are reflected in costs. The continued expansion will be achieved through in-house training of young employees according to German standards. Regular meetings are held with the design department to generate feedback on designs optimized for manufacturing and on standardization.

## ECONOMIC REPORT

### MACROECONOMIC AND INDUSTRY CONDITIONS

#### Unbalanced global economic recovery – slow growth

In the past financial year the International Monetary Fund (IMF) reduced its forecast of world economic growth on a number of occasions. The latest forecast, in October 2014, was of a 3.3 percent increase. This is a rise of 0.3 percent compared with 2013. The global economy is slowly recovering, although the pace varies widely according to region. Major growth stimuli originated in the United States (+2.4 percent) and China (+7.4 percent). The global economy suffered from the crisis in Ukraine as well as the geopolitical tensions in the Middle East. The IMF moreover warned of a possible overheating on the financial markets. During the year it also stressed the risk of a global economic crisis and an urgent need for structural reforms in numerous countries. According to the IMF, the long-term effects of the financial crisis are more persistent than was initially assumed, with the result that recovery in the eurozone has been stagnating. With 1.5 percent growth, Germany outperformed the eurozone average of 0.8 percent. Private consumption was an important driving force in the growth of the German economy, but the low oil price and the decline of the euro exchange rate also played a role.

For 2015, the IMF is predicting global economic growth of 3.5 percent. Compared with earlier forecasts, this figure has been reduced slightly. In fact, the low commodity prices and devaluation of the euro and yen ought to provide an impetus to the global economy. According to the IMF, however, these positive influences are counteracted by a number of inhibiting factors – for example, the low rate of investment in many industrial and emerging countries as well as the stagnation and low inflation in Japan and the countries of the euro. According to the IMF, the United States will benefit from private consumption, so that growth of 3.6 percent is predicted for 2015. Further weakening of the Chinese economy is anticipated. Yet compared to other regions, China is still expected to experience a high rate of growth (6.8 percent in 2015). For the eurozone, the IMF is predicting gross domestic product to rise by 1.2 percent in 2015. In Germany, the increase of 1.3 percent should be slightly lower than in 2014 (1.5 percent).

The Business Climate Index of the Institute of Economic Research (ifo) is regarded as an early indicator of economic development in Germany. In the year under review the ifo index dropped continuously from April onwards until it reached a low point of 103.2 points in October. This was the lowest figure since April 2013. By the end of the year, companies were more optimistic in their estimates of future business. However, at 105.5 points, it still lagged behind the previous year's mark of 109.5 points.

#### Car markets in USA and China take the lead – growth in Western Europe

According to the German Association of the Automotive Industry (VDA) 5.62 million new cars were manufactured in Germany during 2014. Compared to production in the previous year this represents an increase of 3.0 percent. There was a rise in domestic orders (+5.0 percent) and those from abroad (+7.0 percent). For exports the VDA recorded growth of 2.0 percent. Worldwide, the German automotive industry produces around 14.8 million cars, of which over 60.0 percent are manufactured outside Germany.

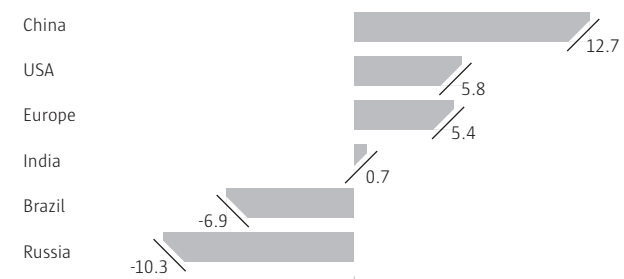
The VDA sees the United States as a dynamic growth market which is important for German carmakers. New registrations of light vehicles (passenger vehicles and light trucks) rose by just under 6.0 percent to 16.4 million units with light trucks in particular driving the growth. German manufacturers saw their US sales rising by 2.0 percent. According to the VDA, every seventh automobile exported by Germany goes to the United States. The value of exports rose to a peak level of over € 20.0 billion in 2014. To German manufacturers the USA is not just a valuable sales market but also a production location. According to the VDA German companies increased their output at US sites by 15.0 percent to 715,000 cars in 2014.

German manufacturers also registered growth in the sale of electric vehicles on the US market. Every tenth electric car sold in the USA during 2014 came from a German maker. The VDA also sees German and American carmakers in a pioneering role in the future-oriented field of networked and automated driving, in which IT is increasingly being integrated into cars.

Besides the USA, the VDA also reports growth in the two other important markets of Western Europe and China. The Western European market has recorded growth for the first time in four years. With a gain of almost 5.0 percent, the number of new registrations rose to 12.1 million cars. Seen overall, the individual countries of the European Union underwent highly varied development, although they all generally experienced a recovery during 2014. In Germany, 3.04 million new cars were registered. This is just under 3.0 percent more than in 2013. Sales in China grew by almost 13.0 percent to 18.4 million units. Trends on the Russian (-10.3 percent) and Brazilian (-6.9 percent) markets were negative.

The VDA sees the US and Chinese markets as the most significant for the automotive industry in the year 2014. For 2015, it predicts that growth will continue on both markets, although at a slightly slower rate. In Western Europe it expects a slight increase of 2.0 percent.

2014 CAR SALES BY REGION/COUNTRY  
CHANGE YEAR-ON-YEAR IN %



Source: VDA, January 2015

### Slight growth in mechanical and systems engineering

VDMA, the German Engineering Association, expects a low rate of growth in 2014. Sales revenues of €212.0 billion are estimated as of the end of the year and production should be worth about €199.0 billion. The production of machinery and systems has risen 0.7 percent compared to the previous year according to VDMA. Domestic sales revenues increased by 3.0 percent, whilst demand from abroad differed greatly according to region. For the year 2014, VDMA sees the stable export markets as the EU partners (+7.3 percent), USA (+7.2 percent), China (+3.8 percent) and Southeast Asia (+8.1 percent). Orders in the fields of robotics and automation have also risen according to VDMA (+9.0 percent in the first ten months of 2014).

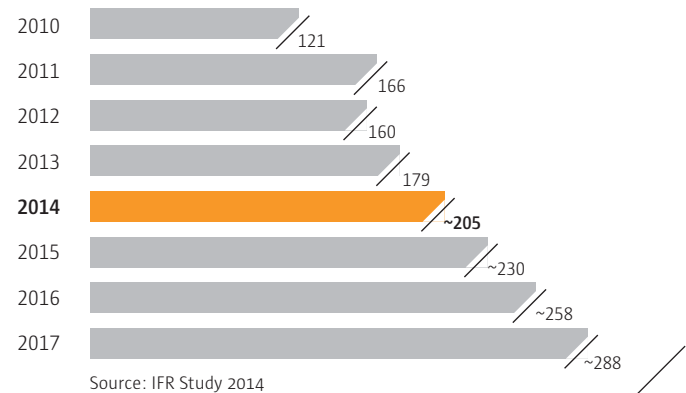
VDMA sees the low raw material prices as a stimulant for the global economy alongside the decline in the euro, which should boost exports. German mechanical and systems engineers also see an opportunity in the re-industrialization of the United States. A rise in production of 2.0 percent is expected in 2015. In terms of current order backlogs, the production value could exceed €200.0 billion for the first time with a figure of €205.0 billion. VDMA estimates sales revenues in 2015 to reach €218.0 billion.

### Pioneering robots open up new areas of application

In 2014, the global trend towards robot-based automation of production processes continued. Research and development is placing pioneering technologies and products on the market, leading to new fields of application. Numerous processes can now be automated where until recently it was hard to imagine robots could be used. Automation is attracting interest in many other sectors, including small and mid-sized enterprises. The focus is on technologies that allow safe human-robot collaboration. As well as the safety factor, intuitive operation and software play an important role. These issues are gaining significance particularly in the context of the “Industry 4.0” project. China, the market of the future, offers great potential for introducing automation. The reasons for this are the rising wage costs, growing demands for quality and the key issue of raising efficiency.

IFR, the International Federation of Robotics, predicted for 2014 worldwide sales of 205,000 industrial robots, of which 50,000 would be in China. This corresponds to an increase of 12 percent compared with the 179,000 industrial robots sold in 2013. For Asia, the largest of the growth markets, this equates to a gain of 21 percent. For 2015 to 2017 the IFR forecasts annual average growth worldwide of 12 percent, and even of 25 percent in China. At the end of 2017 about 2 million industrial robots are expected to be deployed in factories, with an estimated 400,000 used in China. The automotive and electronics industries are regarded as the major drivers of growth.

GLOBAL SALES OF INDUSTRIAL ROBOTS  
IN THOUSANDS OF UNITS



## BUSINESS PERFORMANCE

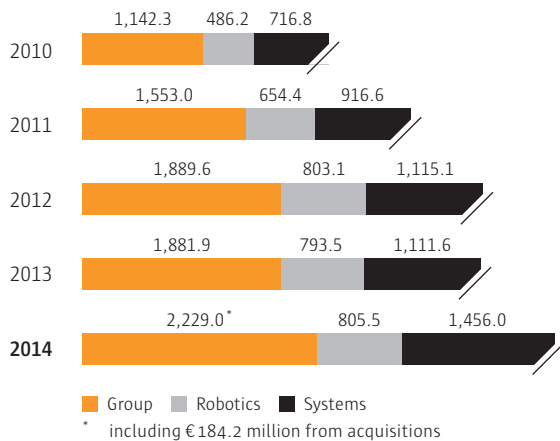
### Orders received

KUKA Group received orders amounting to €2,229.0 million in the year under review and was therefore able to significantly exceed the value of the previous year (2013: €1,881.9 million). The companies of Reis Group and Alema acquired at the beginning of 2014 contributed €184.2 million to this result. This meant that KUKA was also able to record a total that considerably exceeded both the value of the previous year and the previous record value from 2012 of €1,889.6 million in organic terms in 2014 by achieving €2,044.8 million. A particularly positive factor here is that both divisions attained a new record value.

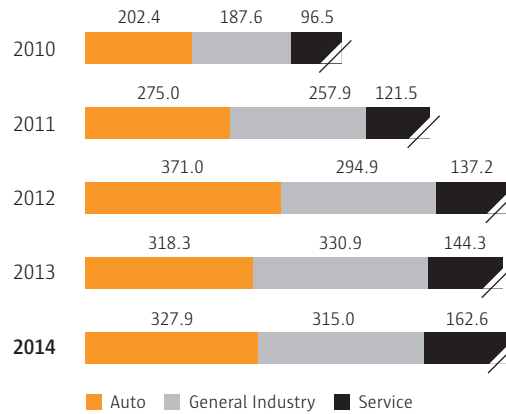
**KUKA Robotics** exceeded the orders received in 2013 of €793.5 million with a total of €805.5 million in 2014. The orders from the automotive industry totaled €327.9 million in 2014 (previous year: €318.3 million). Orders received from general industry continued to remain at a high level at €315.0 million, yet were slightly below the value for the previous year of €330.9 million. These were mainly smaller orders which tended to offer higher margins and came from different sectors. Expanding general industry business is therefore one of the main strategic objectives of the Robotics division. Overall, the sales organization is focusing more closely on the individual customer and market segments. For this purpose, the sales structure has been geared towards the market segments (Automotive, Consumer Goods, Electronics, Machine Automation and Metal & Arc Welding) and combined to form a new function at management level. Additional measures have already been taken to enhance market penetration; e. g. reducing delivery times and developing new products, specifically for selected customer and market segments. The service business was able to increase its share compared to the previous year mainly due to an increase in the number of robots installed and achieved a total of €162.6 million, which represents an increase of 12.7 percent compared to the figure of €144.3 million recorded in the previous year.

**KUKA Systems** was able to improve its order situation compared to the previous year with orders received amounting to €1,456.0 million (2013: €1,111.6 million). Reis Group and Alema contributed a total of €184.2 million to this amount. In addition to the improved order situation for Reis over the course of the year, the competitive advantages associated with the purchase of Alema played a significant part in being able to obtain larger orders in the aerospace industry and to increase the number of automation solutions in this industry sector. The Systems division was also able to record an increase in organic terms of 14.4 percent compared to the previous year, posting a total of €1,271.8 million. There is still significant demand in North America. However, orders were also received from leading car manufacturers in other regions such as Germany, China and Brazil for the engineering and construction of automated production stations and lines, tools for press lines, assembly and test systems and for the supply of special machines for friction and Magnetarc welding. KUKA won new orders in the aerospace sector for developing and implementing production lines for airplanes and helicopters. Special mention should be made here of a major contract from a North American aircraft manufacturer amounting to €88.5 million. The Systems division also supplied an increased number of solutions and products for joining and welding operations to medium-sized companies.

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



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



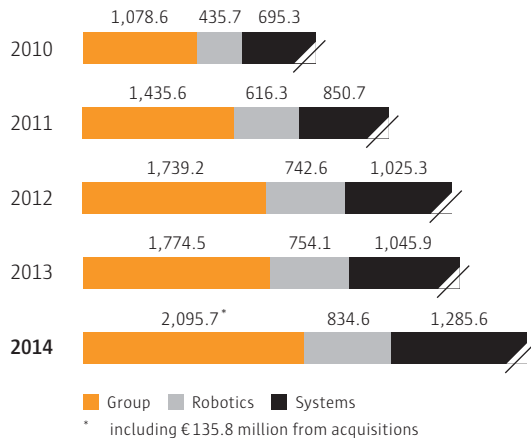
## Revenues

The sales revenues of KUKA Group benefited from the high levels of orders received in the previous quarters. They increased to a total of €2,095.7 million. This meant that the 2013 result of €1,774.5 million was significantly exceeded. The acquisitions that were made (Alema and Reis Group) generated revenues of €135.8 million. This meant that a new all-time high was achieved in organic terms with revenues of €1,959.9 million, representing a year-on-year increase of 10.4 percent. Both divisions contributed to this development too with record figures.

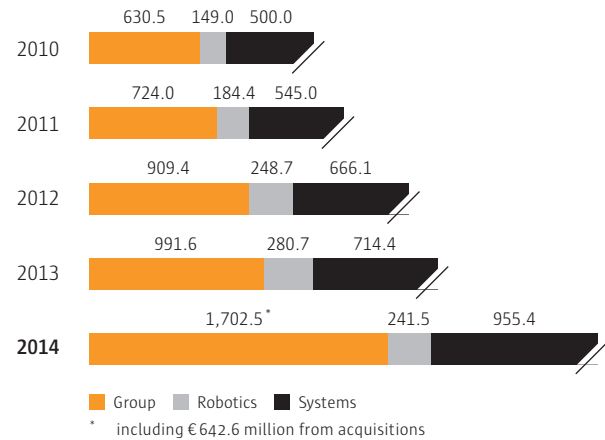
**KUKA Robotics** was again able to increase its sales revenues to €834.6 million. Compared to the previous year, revenues increased by 10.7 percent (2013: €754.1 million). This meant that KUKA Robotics reported an increase in revenues for the sixth year in succession. The average annual growth rate since 2010 is 13.9 percent. There was even greater growth in Asia. KUKA's focus on China and the Asian market with the development of its own production facility in Shanghai has led to an average growth rate of 59.5 percent being generated in this region since 2010.

**KUKA Systems** posted sales revenues exceeding the €1 billion mark in 2014 for the third time in succession. This division achieved revenues of €1,285.6 million and generated a significant increase of 22.9 percent compared to the previous year (2013: €1,045.9 million). Reis Group and Alema contributed €135.8 million to total revenues in this division. This meant that Systems was able to record revenues of €1,149.8 million in organic terms, therefore also beating the previous year's result by €103.9 million or 9.9 percent from this point of view.

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



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



#### Book-to-bill ratio and order backlog

The book-to-bill ratio was above 1, as was the case in the previous year, and came in at 1.06 at Group level. This indicates good capacity utilization. The ratio in the Robotics division amounted to 0.97 (previous year: 1.05), the reasons for this development lying primarily in the extremely strong revenues in the second half of the year and the delay in placing orders for some larger batches. The book-to-bill ratio for the Systems division amounted to 1.13 and was above the previous year's already positive value of 1.06.

KUKA Group's order backlog amounted to €1,702.5 million at the end of 2014. Compared to the value on the reporting date of the previous year, the order backlog increased by 71.7 percent (2013: €991.6 million). The company acquisitions (Reis Group, Alema, Faude, Swisslog Group) contributed €642.6 million to this amount. Over €500 million of this non-organic increase is attributable to Swisslog Group and is taken into account in the order backlog at the end of 2014 – in contrast to revenues, earnings and orders received – due to the consideration of the order backlog as at the reporting date. It was also possible to achieve an organic increase of 6.9 percent on the previous year's figure of €1,059.9 million. The high order backlog ensures a high degree of capacity utilization for the 2015 financial year and also to some extent for 2016.

KUKA Robotics had an order backlog (without taking framework agreements from the automotive industry into account) of €241.5 million at the end of the year (December 31, 2013: €280.7 million).

The order backlog of **KUKA Systems** increased substantially to €955.4 million compared to the previous year's value amounting to €714.4 million. KUKA Systems has therefore achieved a new record high. €125.4 million of this amount is attributable to Reis Group, Alema and Faude and the order backlog of €830.0 million was also significantly above the value of the previous year in organic terms. The new record values for this key figure will be reflected in the sales revenues in 2015 and to some extent in 2016 due to the delay in generating revenues in project business.

#### EBIT and EBITDA

Earnings before interest and taxes (EBIT) of KUKA Group exceeded the €100 million threshold for the third time in succession and increased by €21.6 million or 17.9 percent to €142.0 million. The EBIT margin adjusted to include the effects of company acquisitions amounted to 7.9 percent (previous year: 6.8 percent). This disproportionately high increase is attributable to economies of scale and the measures taken to increase efficiency over a sustained period of time. Taking into account the company acquisitions, this equates to an EBIT margin for the entire Group at the same level as the previous year (6.8 percent). Particularly important here is the positive development of Reis Group. The company was successfully integrated into KUKA Group following the takeover, the trust of customers which was initially lacking was restored and strengthened and all important key figures recorded significant growth rates. As planned, Reis Group was able to achieve the turnaround in EBIT as of the third quarter. In keeping with the EBIT development, EBITDA (earnings before interest, taxes, depreciation and amortization) also increased to €184.9 million (2013: €158.4 million).

**KUKA Robotics** achieved EBIT amounting to €89.5 million in 2014, significantly exceeding the previous year's level of €77.1 million. The EBIT margin of 10.7 percent was also well above the previous year's figure (2013: 10.2 percent). The EBITDA of Robotics increased in line with the development of EBIT from €101.9 million in 2013 to the new record high of €112.0 million in the period under review. At 13.4 percent, the EBITDA margin almost reached the previous year's level.

**KUKA Systems** experienced extremely positive development and generated EBIT of €80.2 million in 2014 (2013: €60.8 million), despite the contribution of company acquisitions to EBIT in this division still being negative overall. The EBIT margin amounted to 6.2 percent – an increase of 0.4 percentage points over the previous year. Systems recorded an EBIT margin in organic terms of 7.6 percent for the whole year and therefore significantly exceeded the previous year's value. This increase is primarily attributable to the improved process structures, the expansion of centers of expertise in countries with a lower cost structure and high capacity utilization due to the positive demand. The EBITDA of Systems increased in parallel with the development of EBIT from €71.0 million in 2013 to the new record high of €97.4 million in the period under review. The EBITDA margin of this division increased from 6.8 percent in 2013 to 7.6 percent in 2014.

#### EBIT AND EBITDA (GROUP, ROBOTICS, SYSTEMS)

EBIT					Group	Acquisitions	Organic
in € millions	2010	2011	2012	2013	2014	2014	2014
Group	24.8	72.6	109.8	120.4	142.0	-12.5	154.5
in % of revenues	2.3	5.1	6.3	6.8	6.8	-9.2	7.9
Robotics	20.8	51.0	80.2	77.1	89.5	-	-
in % of revenues	4.8	8.3	10.8	10.2	10.7	-	-
Systems	20.0	33.7	47.7	60.8	80.2	-7.3	87.5
in % of revenues	2.9	4.0	4.7	5.8	6.2	-5.4	7.6

EBITDA					Group	Acquisitions	Organic
in € millions	2010	2011	2012	2013	2014	2014	2014
Group	47.0	98.7	138.5	158.4	184.9	-7.3	192.2
in % of revenues	4.4	6.9	8.0	8.9	8.8	-5.4	9.8
Robotics	30.4	64.5	95.9	101.9	112.0	-	-
in % of revenues	7.0	10.5	12.9	13.5	13.4	-	-
Systems	29.5	43.0	57.8	71.0	97.4	-2.1	99.5
in % of revenues	4.2	5.1	5.6	6.8	7.6	-1.5	8.7

## FINANCIAL POSITION AND PERFORMANCE

### Summary

2014 was again highly successful for KUKA. For all important key figures, the company also achieved impressive results in organic terms – i. e. without the amount for acquisitions made in 2014 being included. Both the Systems and Robotics divisions generated new record highs. Orders received and revenues were above the €2 billion mark for the first time, earnings before interest and taxes (EBIT) were at the highest level historically, meaning that the 2014 financial year can be considered a complete success.

KUKA took over Reis Group and the French company ALEMA Automation S.A.S. at the start of the year. Both acquisitions are incorporated in the income statement with their pro rata earnings and have already been successfully integrated into the KUKA organization. Reis Group achieved the turnaround as predicted in the third quarter and access to the aerospace industry was significantly improved as a result of acquiring Alema. Faude Automatisierungstechnik GmbH, which was acquired at the end of the year, and Swisslog Group still did not have any impact on earnings figures in 2014, but once they are integrated into the Group, they will also be able to

make a valuable contribution to the company's success. KUKA is therefore continuing to follow the path to become a global provider of integrated automation solutions for a large number of different industries.

### Earnings

KUKA Group posted orders received amounting to €2,229.0 million in the year under review – a significant increase over the previous year's level (2013: €1,881.9 million). The company acquisitions made in 2014 contributed €184.2 million to this result. This meant that KUKA was also able to record a total that exceeded both the value of the previous year and the previous record from 2012 of €1,889.6 million in organic terms in 2014 by achieving €2,044.8 million.

### Revenues above €2.0 billion

Revenues increased to a total of €2,095.7 million. This means not only that the value from 2013 of €1,774.5 million was exceeded, but also that the guidance of €2.0 billion that was issued was comfortably met. The acquisitions that were made generated revenues of €135.8 million. This meant that a new all-time high was achieved in organic terms with revenues of €1,959.9 million. The equivalent figure for the previous year was exceeded

by €185.4 million or 10.4 percent. The analysis of earnings before interest and taxes (EBIT) shows a similar picture. The record value of the previous year amounting to €120.4 million was exceeded by 17.9 percent with a total of €142.0 million. The contribution of company acquisitions to earnings is still negative here primarily due to the integration of Reis Group. However, as reported, Reis was able to achieve the turnaround on a quarterly basis as of the third quarter of 2014 and the acquisitions were therefore able to make a net positive contribution to EBIT in the second half of 2014. Expenses in relation to the purchase of Swisslog Group amounting to €5.2 million had a negative impact on EBIT.

#### KEY FIGURES – KUKA GROUP

in € millions	2010	2011	2012	2013	Group	Acquisitions	Organic
					2014	2014	2014
Orders received	1,142.3	1,553.0	1,889.6	1,881.9	2,229.0	184.2	2,044.8
Order backlog	630.5	724.0	909.4	991.6	1,702.5	642.6	1,059.9
Sales revenues	1,078.6	1,435.6	1,739.2	1,774.5	2,095.7	135.8	1,959.9
EBIT	24.8	72.6	109.8	120.4	142.0	-12.5	154.5
% of revenues	2.3	5.1	6.3	6.8	6.8	-9.2	7.9
% of capital employed (ROCE)	7.9	21.8	32.3	36.9	28.9	-7.5	47.5
EBITDA	47.0	98.7	138.5	158.4	184.9	-7.3	192.2
% of revenues	4.4	6.9	8.0	8.9	8.8	-5.4	9.8
(Average) capital employed	312.5	332.9	339.8	326.2	492.0	167.0	325.0
Employees* (Dec. 31)	5,990	6,589	7,264	7,990	12,102	3,488	8,614

\* Figures for employees are based on full time equivalent for the whole annual report.

The Robotics division reported increases in sales revenues for the sixth time in succession in 2014. It was therefore possible to achieve a 10.7 percent increase in the very high level of the previous year from €754.1 million to €834.6 million. KUKA is further promoting this development with the factory building in Shanghai/China completed at the end of 2013 and the enhanced market presence in Asia associated therewith. Another gratifying development was that growth has been evident in all three sectors – Automotive, General Industry and Service. The 2013 figure of €793.5 million for orders received was also exceeded in 2014 with a total of €805.5 million. This division recorded a year-end order backlog totaling €241.5 million (December 31, 2013: €280.7 million).

The Systems division also achieved a record high in revenues once again. It was again able to generate revenues above the €1 billion mark in 2014. The division achieved sales revenues of €1,285.6 million and generated a further significant increase of 22.9 percent compared to the previous year (2013: €1,045.9 million). The company acquisitions made in 2014 contributed €135.8 million to total revenues in this division. This meant that Systems was able to record revenues in organic terms of €1,149.8 million and thus also topped the previous year's value by €103.9 million or 9.9 percent from this point of view. The order situation in this division was still exceptionally positive – with orders received amounting to €1,456.0 million (2013: €1,111.6 million). Reis Group and Alema were able to contribute a total of €184.2 million to this result. Reis recorded a steady increase in orders and earnings over the course of the year. The competitive advantages associated with the purchase of Alema were an extremely important factor in being able to gain major orders in the aerospace industry. The Systems division was also able to post an increase in organic terms, surpassing the figure for the previous year by 14.4 percent and recording a total of €1,271.8 million.

The order backlog at the end of the year amounted to €955.4 million (December 31, 2013: €714.4 million). €125.4 million of this amount is attributable to company acquisitions during the financial year, meaning that the order backlog of €830.0 million in organic terms was also a significant increase on the previous year. The new record values for this key figure will be reflected in the sales revenues in 2015 and to some extent in 2016 due to the delay in generating revenues in project business.

Compared to the already significant increase in revenues, KUKA Group's gross profit, i.e. revenues less cost of sales, rose disproportionately from €438.5 million (2013) to €525.5 million (2014) – this represents an increase of 19.8 percent.

Following the deduction of gross profit amounting to €23.8 million, which was generated from the acquisitions, the organic total was €501.7 million, corresponding to an increase of €63.2 million or 14.4 percent. The Group gross margin, i.e. gross profit in relation to revenues, increased from 24.7 percent to 25.1 percent. Both divisions had a part to play in the gross margin increasing.

The Robotics division generated gross profit of €309.3 million and therefore recorded an increase of €37.9 million over the previous year (2013: €271.4 million). The gross margin also increased year-on-year to 37.1 percent (2013: 36.0 percent). The improvement was due to material usage being two percentage points lower than the previous year, which is attributable, among other things, to the consistent focus on design-to-cost measures, the continuing increase in importance of the KRC4 robot controller generation and the proportion of revenues with Agilus. This meant that opposing effects, especially those resulting from increases in personnel costs, were more than counteracted.

### KEY FIGURES – KUKA ROBOTICS

in € millions	2010	2011	2012	2013	2014
Orders received	486.2	654.4	803.1	793.5	805.5
Order backlog	149.0	184.4	248.7	280.7	241.5
Sales revenues	435.7	616.3	742.6	754.1	834.6
EBIT	20.8	51.0	80.2	77.1	89.5
% of revenues	4.8	8.3	10.8	10.2	10.7
% of capital employed (ROCE)	16.1	38.3	57.2	49.6	53.5
EBITDA	30.4	64.5	95.9	101.9	112.0
% of revenues	7.0	10.5	12.9	13.5	13.4
Capital employed	129.1	133.2	140.2	155.6	167.3
Employees (Dec. 31)	2,347	2,753	3,180	3,416	3,644

The Systems division achieved an increase in gross profit of €63.6 million or 42.4 percent year-on-year from €150.0 million to €213.6 million. Taking into account the gross profit of €23.8 million from Alema and Reis Group, organic growth still amounted to €189.8 million, equivalent to an increase of 26.5 percent over the previous year. The gross margin was considerably above the previous year's level, no matter whether the amount from acquisitions was included or not (14.3 percent). The increase in wage and salary costs in the Systems division was also made up for by improving material usage to ensure that the gross margin developed positively. Particularly important here was the development in North America. Due to the positive development of the economy as a whole, especially compared to the stagnating or slightly declining level of orders received in Europe, we expect there to be a significant increase in orders received, revenues and the margin quality in this region. The acquisition of Utica Enterprises, USA made in 2013 also played a part in this development. Once the procedures, structures and employees were completely integrated into KUKA, this acquisition proved to be a success.

### KEY FIGURES – KUKA SYSTEMS

in € millions	2010	2011	2012	2013	Systems overall	Acquisitions	Organic
					2014	2014	2014
Orders received	716.8	916.6	1,115.1	1,111.6	1,456.0	184.2	1,271.8
Order backlog	500.0	545.0	666.1	714.4	955.4	125.4	830.0
Sales revenues	695.3	850.7	1,025.3	1,045.9	1,285.6	135.8	1,149.8
EBIT	20.0	33.7	47.7	60.8	80.2	-7.3	87.5
% of revenues	2.9	4.0	4.7	5.8	6.2	-5.4	7.6
% of capital employed (ROCE)	10.4	16.1	23.8	43.0	67.9	-58.9	82.8
EBITDA	29.5	43.0	57.8	71.0	97.4	-2.1	99.5
% of revenues	4.2	5.1	5.6	6.8	7.6	-1.5	8.7
Capital employed	192.4	209.6	200.5	141.5	118.1	12.4	105.7
Employees (Dec. 31)	3,456	3,643	3,902	4,362	5,810	1,119	4,691

KUKA Group's operating costs – the costs of administration and sales as well as research and development – rose year-on-year from €299.9 million (2013) to €372.7 million (2014). Operating costs therefore amounted to 17.8 percent (2013: 16.9 percent) of revenues. The increase in distribution costs in both absolute (2013: €130.2 million; 2014: €161.0 million) and relative terms (2013: 7.3 percent; 2014: 7.7 percent) is attributable to the acquisition of Reis Group and Alema as well as the divisionalization and associated broader restructuring of the sales organization in the Robotics division, among other things. It is also necessary to increase the number of sales team members to cope with targeted additional growth. 919 Group employees were employed in sales (excluding Swisslog) on the reporting date. This equates to a planned increase of 175 employees compared to December 31, 2013. However, KUKA is not only enhancing its own sales structure but also working closely with partners in important markets. The decision was therefore taken to create a joint venture together with Jiangsu Yawei Machine-Tool Co., Ltd., China under the name Yawei Reis Robot Manufacturing (Jiangsu) Co., Ltd., to support the global sales structure in China. The business license was granted by the Chinese authorities at the end of September 2014. The joint venture has enabled KUKA to gain further access to the Asian growth market.

The research and development costs realized in the income statement rose to €78.2 million in 2014, up €18.5 million from the prior year's figure of €59.7 million. Based on the strategy that has been developed and the Group's sustained focus on technology, investments are being actively promoted in ongoing developments and in new and future technologies. During the financial year, KUKA pursued a number of different innovations and in particular the following key topics:

- ▲ Further development of KUKA Sunrise control software (Version V1.5 has already been successfully presented to customers)
- ▲ Upgrading of and development of applications for LBR iiwa



- ▲ Automation solutions for more efficient coordination of production in systems engineering
- ▲ Development of the KR FORTEC, a new series of heavy-duty robots for payloads between 360 and 600 kg
- ▲ Applications in the mobile robotics field
- ▲ Application expertise in the aerospace sector – for example, a mobile platform with two collaborating robots has been successfully implemented for setting rivets in aircraft construction
- ▲ Development of the new “Genius” friction welding machine

Please refer to the research and development section of this management report for further information.

Activities to promote project diversity and develop marketable products in good time included the scheduled increase in the number of staff involved in research and development. 470 employees were working in this area (excluding Swisslog) on the reporting date. This means that KUKA has been able to increase its workforce by 110 employees since December 31, 2013, despite the labor market in this sector being highly-specialized and narrow. Expenses incurred for coordinating different lines of development throughout the Group, patent protection and the indirect expenses relating to the increased number of employees (e. g. rent for buildings, training for new colleagues) also increased. The Systems division also invested more heavily in research and development that was not project-related during the financial year. Compared to the previous year, this division posted a substantial increase in research and development costs from €3.1 million to €11.8 million. Intensive work was also carried out in 2014 on software features that could not be capitalized independently due to the international accounting principles. The lower capitalization resulting therefrom (2014: €6.8 million; 2013: €9.1 million) is reflected in higher expenses during the year under review. Depreciation included in the research and development expenses totaled €9.6 million and is therefore €4.0 million below the value for the previous year (2013: €13.6 million). This was mainly due to the previous year being negatively impacted by write-downs resulting from a development project and which were scheduled for the entire year; these write-downs have now expired. In addition to its own development activities, KUKA is also increasingly focusing on cooperating with other companies in the field of development. In February 2014, for example, KUKA bought shares in KBee AG, Munich, a company specializing in robot hardware, software and design. The company is included in KUKA Group’s consolidated financial statements based on proportionate equity. This resulted in expenditure of €2.6 million in 2014, which is reported as earnings from companies valued at equity.

The general and administrative expenses amounted to €133.5 million and therefore equate to 6.4 percent (2013: 6.2 percent) of revenues. In addition to the integration measures for Alema and Reis Group, the consulting costs in relation to the takeover of Swisslog Holding AG amounting to €5.2 million at the end of the year played a role in this development. If these effects were not taken into account, the administrative cost ratio would be around the low level of the previous year.

Other expenses and income amounted to a negative balance of €12.0 million (2013: €24.9 million). They include expenses and income from currency transactions and currency hedges (balance in 2014: €-5.7 million; 2013: €-15.6 million), primarily from CNY, JPY and USD.

### EBIT margin exceeds guidance revised upwards

The aforementioned positive development, especially the higher gross profit of KUKA Group, is reflected directly in earnings before interest and taxes (EBIT). EBIT increased by €21.6 million or 17.9 percent to €142.0 million. Viewing the year as a whole, the contribution of the acquisitions to earnings was still negative – also including the consulting costs associated with the purchase offer of Swisslog Group. Reis Group in particular was able to achieve a turnaround in the second half of the year and recorded a slightly positive EBIT figure. The measures identified during the acquisition of Reis Group for improving the income situation were pursued as planned and showed increasingly positive effects. These effects must now be stabilized and enhanced. The EBIT margin of KUKA Group continued to increase over the course of the financial year and amounted to 6.8 percent in 2014 (2013: 6.8 percent). This meant that it was possible to achieve the same result as the previous year – which was the highest value over eight previous years – despite the acquisition of companies with lower margins especially in the first half of the year and the aforementioned one-time negative effect. The guidance was increased over the course of the year from 6.0 percent originally to 6.5 percent upon achieving the stipulated revenue target of €2.0 billion and was ultimately surpassed again by 0.3 percentage points.

The increase in earnings before interest and taxes (EBIT) is attributable to both divisions – Robotics and Systems. The Systems division experienced extremely positive development and generated EBIT of €80.2 million in 2014 (2013: €60.8 million). The increase is even more remarkable considering that, over the entire year, the EBIT contribution from company acquisitions was still negative in this division. The EBIT margin amounted to 6.2 percent – a slight increase of 0.4 percentage points on the previous year. Systems recorded an EBIT margin in organic terms of 7.6 percent for the whole year and therefore significantly exceeded the previous year’s value.

The Robotics division achieved EBIT amounting to €89.5 million in 2014 and significantly exceeded the previous year’s level of €77.1 million by 16.1 percent. The even higher comparative value from 2012 of €80.2 million was also surpassed by a substantial amount of €9.3 million or 11.6 percent. The EBIT margin amounted to 10.7 percent (2013: 10.2 percent) and has therefore topped the corresponding value for the previous year.

In keeping with the development of EBIT, EBITDA (earnings before interest, taxes, depreciation and amortization) also increased to €184.9 million (2013: €158.4 million) and has therefore also reached a new record high. Write-downs totaling €42.9 million were posted in the period under review (2013: €38.0 million). These write-downs are attributable to Robotics with €22.5 million (2013: €24.8 million), to Systems with €17.1 million (2013: €10.2 million) and to the remainder with €3.3 million (2013: €3.2 million). The increase in write-downs for the Systems division is predominantly associated with the company acquisitions. There was therefore a considerable increase in EBITDA for both the Robotics division with a total of €112.0 million (2013: €101.9 million) and the Systems division with €97.4 million (2013: €71.0 million) compared to the previous year. The Group EBITDA margin amounted to 8.8 percent (2013: 8.9 percent) or in organic terms 9.8 percent. The EBITDA margin for the Robotics division amounted to 13.4 percent (2013: 13.5 percent) and for the Systems division totaled 7.6 percent (2013: 6.8 percent).

### Financial result negatively impacted by one-time effects

The current financial result improved compared to the previous year from €-13.1 million in 2013 to €-7.2 million in 2014.

in € millions	2013	2014
Interest income from finance lease	6.5	6.2
Remaining interest and similar income	2.3	2.5
<b>Other interest and similar income</b>	<b>8.8</b>	<b>8.7</b>
Guarantee commissions	1.5	0.7
Interest expense for the convertible bond	4.1	6.8
Current interest expense for the corporate bond	17.5	5.6
Expense for Syndicated Senior Facilities Agreement	1.3	0.4
Financing costs reclassified to operating results	-6.9	-3.5
Net interest expense from pension obligations	2.4	2.7
Remaining interest and similar expenses	2.0	3.2
<b>Current other interest and similar expenses</b>	<b>21.9</b>	<b>15.9</b>
<b>Current financial result</b>	<b>-13.1</b>	<b>-7.2</b>
Expense from the early termination of the old Syndicated Senior Facilities Agreement	0.4	-
Interest expense from the repurchase of corporate bond shares	6.5	17.7
<b>Non-recurring other interest and similar expenses</b>	<b>6.9</b>	<b>17.7</b>
<b>Financial result</b>	<b>-20.0</b>	<b>-24.9</b>

The interest income amounted to €8.7 million (2013: €8.8 million) and mainly included income from pension funds, income from short-term liquid assets invested in commercial papers and income from finance leases.

A total of €0.7 million of this amount was attributable to guarantee commissions (2013: €1.5 million). An amount of €6.8 million (2013: €4.1 million) is accounted for in the interest result for the convertible bond issued in 2013. The high-yield bond issued in November 2010 was completely paid off ahead of time. A one-time charge came about as a result of the difference between the buy-back value and the book value amounting to €17.7 million. This effect will be clearly overcompensated over the next few years with the savings from future interest payments totaling a nominal amount of

8.75 percent on the outstanding nominal volume of €140.4 million at the time of repayment (original term lasting until November 2017). Current interest until the bond was redeemed was recorded at €5.6 million (2013: €17.5 million). Due to accounting regulations, finance charges amounting to €3.5 million (2013: €6.9 million) had to be reclassified from net interest income to operating profit and recognized under internally generated intangible assets. The net interest expenses for pensions amounted to €2.7 million (2013: €2.4 million).

Earnings before taxes amounted to €113.3 million (2013: €93.7 million). The total tax expense of KUKA Group amounted to €45.2 million in 2014 (2013: €35.4 million). The tax rate amounted to 39.9 percent and was thus 2.1 percentage points above the previous year (2013: 37.8 percent). The increase in the tax rate was due to several one-off effects in the year under review such as Voith Group joining KUKA as a new major shareholder and the non-deductible expenses relating to company acquisitions.

### Dividend increased to €0.40 per share

Earnings after taxes were positive for the fourth year in a row and once again increased by 16.8 percent to €68.1 million (previous year: €58.3 million). This result is particularly significant for two reasons. On the one hand, earnings after taxes from the company acquisitions made in 2014 were impaired along with EBIT. On the other hand, as shown above in the information about the financial result, earnings increased despite the one-time negative effect resulting from redemption of the corporate bond. Earnings per share increased accordingly from €1.72 (2013) to €1.99 (2014). This represents an increase of 15.7 percent. The capital increase carried out in November (see comments on the financial position) increased the weighted average of shares in circulation in the financial year from around 33.9 million shares to 34.2 million shares. This resulted in a reduction of €0.02 in earnings per share. Since the share price on the balance sheet date was above the conversion price of the convertible bond, an additional 4,075,344 contingent shares were available and this resulted in diluted earnings per share of €1.90 for the whole year 2014 (there was no dilution effect in the previous year). However, no creditors of the convertible bond have made use of their conversion right up to now.

Due to this positive development, the Executive Board is proposing to the Annual General Meeting that a dividend of €0.40 per share be paid for the 2014 financial year. KUKA paid a dividend of €0.30 per share for 2013.

### CONSOLIDATED INCOME STATEMENT (CONDENSED)

in € millions	2010	2011	2012	2013	Group	Acquisitions	Organic
					2014	2014	2014
Sales revenues	1,078.6	1,435.6	1,739.2	1,774.5	2,095.7	135.8	1,959.9
EBIT	24.8	72.6	109.8	120.4	142.0	-12.5	154.5
EBITDA	47	98.7	138.5	158.4	184.9	-7.3	192.2
Financial result	-22.1	-18.2	-12.8	-20.0	-24.9	-1.4	-23.5
Taxes on income	-4.1	-16.1	-34.1	-35.4	-45.2	-2.3	-42.9
Earnings after taxes	-8.6	29.9	55.6	58.3	68.1	-16.9	85.0

## Financial position

### Principles and goals of financial management

KUKA Aktiengesellschaft is responsible for the central financial management of all KUKA Group companies. Acquired companies are included in the Group's financial management. 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 financing risk. As in previous years, the guidelines were continuously reviewed and optimized during the financial year to ensure that they remained up to date and also transferred to the acquired companies.

### 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 forecasts over twelve months, each of which includes all companies consolidated in the Group accounts.

Payments received on the basis of operating activities of Group companies represent the Group's most important source of liquidity. KUKA Aktiengesellschaft's 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.

### Capital increase successfully implemented

In November 2014, KUKA Group successfully completed the capital increase excluding subscription rights and stipulated the number of newly issued shares as 1,792,884 shares. The new shares were included in the existing listing of the KUKA share on the Frankfurt Stock Exchange and the stock exchange in Munich as of November 10, 2014. The cash inflow amounted to €86.6 million. These funds were used partly to finance the public purchase offer to the shareholders of Swisslog Holding AG, Buchs (AG).

### Additional enhancements to the financing structure

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

As a result of the Group's excellent financial situation, it was possible to completely redeem the high-yield bond issued in November 2010 prior to maturity in May 2014. A one-time charge came about due to the difference between the buy-back value and the book value amounting to €17.7 million. This effect will be clearly overcompensated over the next few years with the savings from future interest payments totaling a nominal amount of 8.75 percent and therefore around €50 million on the outstanding nominal volume of €140.4 million at the time of repayment (original term lasting until November 2017).

The convertible bond issued in two tranches in 2013 also benefited from the excellent business development and credit rating of KUKA Group in 2014 and remains an attractive and profitable investment for the investors. The market price of 164.34 percent at year-end significantly exceeded the issue price.

The Syndicated Senior Facilities Agreement concluded at the end of 2013 also remained in place with a term lasting until December 2018. The syndicated loan consists of a guarantee facility amounting to €110.0 million and a cash credit line totaling €50.0 million which can also be used as guaranteed credit lines. The syndicated loan is unsecured and only contains the customary equal treatment clauses ("pari passu").

In addition to the guaranteed credit line from the syndicated loan, the Group has additional guarantee facilities via bilateral agreements with various surety companies for the purpose of supporting operating activities. Excluding the Swisslog credit line (see below), KUKA has access to external guarantee facilities totaling €199.0 million as of December 31, 2014 (2013: €182.8 million). These have been utilized in the amount of €90.4 million (2013: €104.3 million). 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 a guarantor for these guarantees in lieu of a bank. They therefore do not draw down any external guaranteed credit lines and increase the leeway in existing external guaranteed credit lines.

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

- 1) The €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 convertible bond issued in the previous year with a total volume of €150.0 million
- 3) Bilateral guarantee facility agreements with banks and surety companies in the amount of €89.0 million (as of December 31, 2014)
- 4) The Syndicated Senior Facilities Agreement adopted with the acquisition of Swisslog Group, comprising a guaranteed credit line of CHF 130.0 million, of which CHF 60.0 million can be used as a cash credit line

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.

### Further increase by rating agencies

The stable financial situation is also reflected in the assessment by rating agencies. After the rating was increased twice in 2013, both Standard & Poor's (in the second quarter of 2014) and Moody's (August 2014) raised their assessment primarily due to the financial key figures that improved once again after the corporate bond was redeemed. The diversified development of additional markets associated with the integration of the acquisitions in 2014 in particular was evaluated positively, primarily in general industry (logistics, aviation, healthcare). Standard & Poor's increased its rating from "BB-, positive outlook" to "BB, stable outlook". Moody's also raised its assessment from "Ba3, positive outlook" to "Ba2, stable outlook".

### CONSOLIDATED CASH FLOW STATEMENT (CONDENSED)

					Group	Acquisitions	Organic
in € millions	2010	2011	2012	2013	2014	2014	2014
Cash earnings	23.4	65.9	92.4	115.3	127.3	-10.4	137.7
Cash flow from current business operations	-24.8	36.4	117.9	221.0	167.0	-4.3	171.3
Cash flow from investment activities	-12.5	-29.9	-40.8	-125.6	-365.5	-284.0	-81.5
Free cash flow	-37.3	6.5	77.1	95.4	-198.5	-288.3	89.8

### Cash earnings up significantly again

The cash earnings, consisting of earnings after taxes 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 €115.3 million reported in 2013 was increased by 10.4 percent to €127.3 million during the financial year. This effect is mainly attributable to the increase in earnings after taxes (2014: €68.1 million; 2013: €58.3 million) and the one-time effect from redemption of the company bond recorded under other non-cash expenses. The cash earnings continued to be burdened by the earnings after taxes of Reis Group, which were still negative, and the consulting costs in relation to the acquisition of Swisslog Group, with the effect that the value of said earnings was significantly higher at €137.7 million in organic terms.

Cash flow from current business operations of KUKA Group dropped to €167.0 million (2013: €221.0 million). The significant increase in trade working capital due to the company's performance was the main reason for this. Trading working capital was as follows at the end of the reporting year:

### TRADE WORKING CAPITAL

					Group	Acquisitions	Organic
in € millions	2010	2011	2012	2013	2014	2014	2014
Inventories less advance payments	109.0	128.3	126.9	133.9	194.1	44.2	149.9
Trade receivables and receivables from construction contracts	291.8	339.8	340.6	348.6	612.9	202.4	410.5
Trade payables and liabilities from construction contracts	188.2	260.6	231.7	304.4	522.2	179.6	342.6
<b>Trade working capital</b>	<b>212.6</b>	<b>207.5</b>	<b>235.8</b>	<b>178.1</b>	<b>284.8</b>	<b>67.0</b>	<b>217.8</b>

Overall, trade working capital increased by € 106.7 million to € 284.8 million. Inventories less advance payments received were higher year-on-year (€ +60.2 million, € 44.2 million of which came from acquisitions). Trade receivables and receivables from construction contracts increased by € 264.3 million to € 612.9 million (€ 202.4 million of which came from acquisitions) while trade payables and liabilities from construction contracts rose disproportionately by € 217.8 million to € 522.2 million (€ 179.6 million of which came from acquisitions). Overall, the company acquisitions made in 2014 contributed € 67.0 million to the increase in trade working capital and therefore to the reduction in cash flow from operating activities.

### High level of investment

Capital expenditure of € 94.3 million (2013: € 74.7 million) was made in the financial year. This included major capital expenditure in the research and development sector and increased investment in tangible assets. The carrying amount of the company's own development work completed in 2014 and projects still in the capitalization phase totaled € 15.2 million (2013: € 18.1 million). (For information on the development focuses, see the Research and development section, page 21 et seq.).

### INVESTMENTS IN INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT

in € millions	2010	2011	2012	2013	Group	Acquisitions	Organic
					2014	2014	2014
Group	15.4	30.3	42.8	74.7	94.3	3.9	90.4
of which Robotics	6.7	20.1	30.1	30.8	30.4	–	30.4
of which Systems	7.5	8.2	9.6	15.2	28.7	3.9	24.8

Investments in tangible assets amounted to € 78.4 million in the year under review (2013: € 57.0 million) and were attributable to technical equipment and machinery (2014: € 12.2 million, 2013: € 14.6 million), other assets/operating and office equipment (2014: € 13.4 million, 2013: € 10.1 million) and advances paid and construction in progress (2014: € 41.3 million; 2013: € 27.6 million).

Broken down by division, capital expenditure was as follows in 2014: in the Robotics division, capital expenditure totaled € 30.4 million (2013: € 30.8 million). In addition to the capitalized development work described above, most of the investments were made in technical equipment and machinery. The Systems division registered additions of € 28.7 million (2013: € 15.2 million). These additions related to a software extension, technical systems as well as operating and technical equipment. € 3.9 million of this amount was attributable to company acquisitions. These additions are mainly associated with the construction of a new production and administration building for Alema in Bordeaux, France. This investment will be used to continue to pursue the integration of the company into the Group and to further enhance the site conditions. The capital expenditure of KUKA Aktiengesellschaft amounted to € 35.2 million (2013: € 28.7 million) and consisted mainly of advance payments and construction in progress for the Development and Technology Center currently being built in Augsburg and scheduled for completion in the second half of 2015.

Payments for the acquisition of consolidated companies and other business units totaled € 284.6 million (2013: € 16.6 million) and are primarily attributable to the acquisition of Swisslog Group.

in € millions	2013	2014
<b>Company acquisitions</b>		
ALEMA Automation SAS, Bordeaux, France	–	11.4
Faude Automatisierungstechnik GmbH, Gärtringen, Germany	–	0.2
Reis Group*	–	0.0
Swisslog Holding AG, Buchs (AG), Switzerland	–	265.8
UTICA Enterprises, Shelby Township, Michigan, USA	15.1	1.4
Others	1.5	–
<b>Total</b>	<b>16.6</b>	<b>278.8</b>
<b>Investments accounted for at equity</b>		
KBee AG, Munich, Germany	–	3.3
Yawei Reis Robot Manufacturing (Jiangsu) Co., Ltd., China	–	2.5
<b>Total</b>	<b>–</b>	<b>5.8</b>
<b>Total payments</b>	<b>16.6</b>	<b>284.6</b>

\* The acquisition of Reis Group was cash-neutral in 2014. However, a limited partner's equity contribution of € 2.1 million was made internally within the Group.

The freely available funds invested on a short-term basis as of December 31, 2013 expired in the year under review as planned and led to a return flow amounting to € 35.0 million. As of December 31, 2014, there were new investments of € 22.3 million in this field.

### Free cash flow negatively impacted by acquisition of Swisslog – excluding this acquisition, it was extremely positive again

Cash flow from investment activities (2014: €-365.5 million; 2013: €-125.6 million) along with cash flow from current business operations resulted in a negative value for free cash flow of €-198.5 million (2013: €+95.4 million). Adjusted for the effects of the company acquisitions, there was a positive free cash flow in organic terms of €89.8 million for 2014. Amounting to €18.5 million, the adjusted free cash flow for the fourth quarter was also positive, now for the ninth time in succession.

### CONSOLIDATED NET LIQUIDITY

		Group	Acquisitions	Organic
in € millions	2013	2014	2014	2014
Cash and cash equivalents	441.1	192.1	58.1	134.0
Current financial liabilities	6.5	22.5	17.7	4.8
Non-current financial liabilities	288.1	137.0	0.0	137.0
<b>Consolidated net liquidity/debt</b>	<b>146.5</b>	<b>32.6</b>	<b>40.4</b>	<b>-7.8</b>
Cash and guarantee facilities from Syndicated Senior Facilities Agreement	160.0	268.1	108.1	160.0
Guarantee facility from banks and surety companies	72.8	89.0		89.0
ABS program line	25.0	25.0		25.0

Due to the redemption of the corporate bond and the company acquisitions made, especially the acquisition of a majority stake in Swisslog Group, net liquidity (the balance of liquid assets and current and non-current financial liabilities) at the end of the financial year amounted to €32.6 million. (2013: net liquidity amounting to €146.5 million). If the net liquidity is adjusted for the contribution of acquisitions, net indebtedness equals €-7.8 million. Despite the high cash flows from investment and financing activities, KUKA Group held cash and cash equivalents of €192.1 million as of December 31, 2014 (December 31, 2013: €441.1 million).

### Net worth

#### Increase in balance sheet total due to acquisitions

On the assets side, non-current assets rose to €798.0 million compared to December 31, 2013 (December 31, 2013: €327.7 million). This significant increase is primarily due to the acquisitions made in 2014. Intangible assets, especially expertise and technology, were acquired in the triple-digit million region. A value of €172.7 million was initially recorded for goodwill (the total is now €225.9 million). Goodwill was attributable to Alema with €9.6 million, Faude with €1.4 million, Reis Group with €13.5 million and Swisslog Group with €148.2 million. The increase in tangible assets amounted to €100.2 million. The majority of this amount is attributable to the construction of the Development and Technology Center in Augsburg and the property of Reis Group both domestically and abroad. An amount of €3.2 million was reported under financial assets for the shareholding in KBee AG,

Munich and €2.4 million for the shareholding in the Chinese joint venture Yawei Reis Robot Manufacturing Co., Ltd., Jiangsu, China (total of €5.6 million). Deferred tax assets amounted to €48.2 million (December 31, 2013: €25.6 million), €11.1 million being attributable to losses carried forward (December 31, 2013: €14.7 million).

### NET WORTH

in € millions	2010	2011	2012	2013	2014
Balance sheet total	984.7	1,078.0	1,137.4	1,377.1	1,979.5
Equity	198.1	252.4	297.5	379.1	541.1
in % of balance sheet total	20.1	23.4	26.2	27.5	27.3
Net liquidity/debt	-60.3	-32.6	42.8	146.5	32.6

Asset-side trade working capital, which is the sum of inventories and trade receivables from construction contracts, increased by €350.5 million. Further details are provided in the information on the financial position. The value of current assets amounted to €1,181.5 million as of December 31, 2014 (December 31, 2013: €1,049.4 million). The increase in trade working capital, which was primarily impacted by acquisitions and business development, mainly stands in contrast to the decline in cash and cash equivalents resulting from redemption of the corporate bond and the acquisition of Swisslog Group (€-249.0 million). As part of the planned sale of a business unit from the Systems division, €16.5 million was transferred into the item "Assets available for sale" and €7.3 million into the item "Liabilities from assets held for sale".

The balance sheet total of KUKA Group increased by €602.4 million or 43.7 percent from €1,377.1 million as of December 31, 2013 to €1,979.5 million as of December 31, 2014.

### Constant equity ratio

In particular the net income of €68.1 million (2013: €58.3 million), the capital increase in November (subscribed capital: €4.6 million, capital reserve of €82.0 million, see notes on the financial position) and translation adjustments have had a positive effect on equity. Actuarial losses from pension accounting totaling €12.3 million had an offsetting effect (2013: actuarial gains of €5.3 million). These effects were mainly due to the significantly lower discount rate for measuring German pension commitments compared to the previous year (for Germany in 2014: 1.90 percent; 2013: 3.55 percent). Overall, equity rose by €162.0 million or 42.7 percent to €541.1 million as of December 31, 2014. Equity thus increased in proportion to the balance sheet total. This led to an almost constant equity ratio of 27.3 percent (2014: 27.5 percent).

The non-current financial liabilities primarily relate to the current convertible bond extending to February 2018 (nominal volume €150.0 million). The significant decline mainly results from the complete redemption of the corporate bond. Current financial liabilities included the deferred interest on the convertible bond as well as the utilization of cash lines on the part of an international subsidiary and the advance payment from the Syndicated Senior Facilities Agreement of Swisslog.

The current liabilities increased from €596.7 million as of December 31, 2013 to €1,096.2 million as of December 31, 2014. In addition to the aforementioned change in trade working capital, the increase in other liabilities, prepaid expenses and deferred charges (€+158.6 million) and the increase in other provisions (€+55.4 million) were mainly responsible for this development. The increase in other liabilities was chiefly caused by the recognition of liabilities of the contingent purchase price payment for Reis Group and the increase in liabilities in the personnel sector such as accruals for unused leave. The increase in other provisions was caused by the higher provision for follow-up order costs and guarantee provisions as well as the integration of Reis Group.

#### Significant reduction in working capital and increase in capital employed

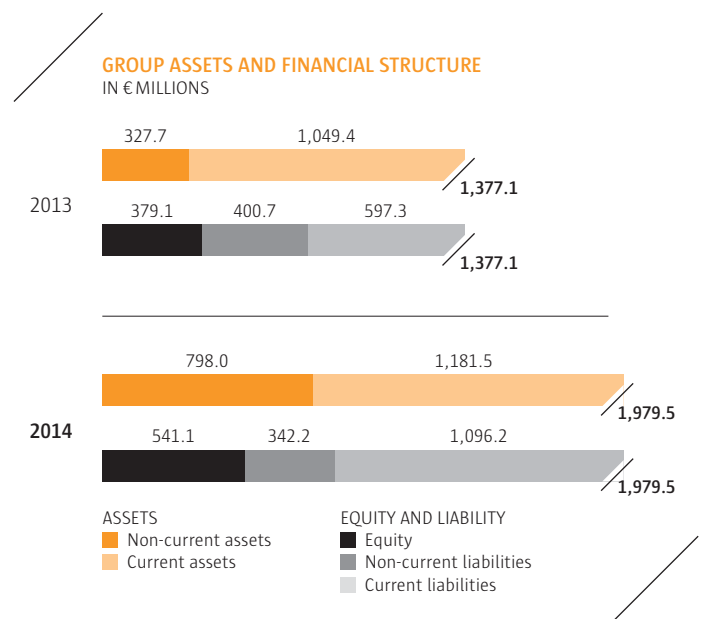
With business volume at a sustained high level, working capital was reduced by €25.8 million in the year under review thanks to active management and optimization of the supplier-side payment terms and amounted to a negative value of €-69.4 million on the reporting date. The efficiencies described are particularly apparent in the Systems division, where projects are to some extent significantly prefinanced by suppliers. A similar effect is evident with Swisslog Group, which will be included with negative working capital as of December 31, 2014.

An important key figure of KUKA Group is the return on capital employed (ROCE). The capital employed is calculated as the average of capital employed at the beginning and end of the financial year. On average, KUKA Group's capital employed in 2014 and 2013 amounted to €492.0 million and €326.2 million respectively. The increase is mainly the result of the addition of Swisslog Group. Swisslog Group has still not made a contribution to earnings on account of the initial consolidation at the end of the financial year. At 28.9 percent, the return on capital employed was therefore considerably below the previous year's level (2013: 36.9 percent). Excluding the capital employed by Swisslog Group results in a value of 43.6 percent, which represents an increase compared to 2013.

With average capital employed of €167.3 million (2013: €155.6 million), the Robotics division generated a ROCE of 53.5 percent, thus improving on the previous year's figure of 49.6 percent. Despite the adverse effects of the company acquisitions, the Systems division was able to report a significant improvement in return on capital employed of 67.9 percent (2013: 43.0 percent) with average capital employed of €118.1 million (2013: €141.5 million).

#### GROUP ASSETS AND FINANCIAL STRUCTURE

in € millions	2013	2014
Current assets	1,049.4	1,181.5
Non-current assets	327.7	798.0
<b>Assets</b>	<b>1,377.1</b>	<b>1,979.5</b>
Current liabilities	597.3	1,096.2
Non-current liabilities	400.7	342.2
Equity	379.1	541.1
<b>Equity and liabilities</b>	<b>1,377.1</b>	<b>1,979.5</b>



#### 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 the management companies of the Robotics division (KUKA Roboter GmbH), Systems division (KUKA Systems GmbH) and in future Swisslog (Swisslog Holding AG).

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

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

#### INCOME STATEMENT OF KUKA AKTIENGESELLSCHAFT (HGB)

in € millions	2013	2014
Other company-produced and capitalized assets	0.3	0.1
Other operating income	41.5	55.1
Personnel expense	-23.6	-32.7
Depreciation and amortization of tangible and intangible assets	-3.1	-3.3
Other operating expenses	-38.4	-44.2
Income from participations	81.0	137.0
Income from other securities	0.2	0.9
Other interest and similar income	16.4	8.3
Depreciation and amortization of financial assets and short-term securities	0.0	-15.8
Interest and similar expenses	-30.0	-24.7
<b>Income from ordinary activities</b>	<b>44.3</b>	<b>80.7</b>
Taxes on income	21.9	-15.0
<b>Net profit</b>	<b>66.2</b>	<b>65.7</b>
Profit carry-forward from the previous year	1.5	24.4
Transfer to retained earnings	-33.1	-32.8
<b>Balance sheet profit</b>	<b>34.6</b>	<b>57.3</b>

#### KUKA AKTIENGESELLSCHAFT BALANCE SHEET (HGB)

ASSETS in € millions	2013	2014
<b>Non-current assets</b>		
Intangible assets	2.7	2.2
Property, plant and equipment	40.4	72.9
Financial investments	173.6	435.0
	<b>216.7</b>	<b>510.1</b>
<b>Current assets</b>		
Inventories	0.1	0.0
Receivables from affiliated companies	184.7	225.4
Other receivables and assets	8.1	5.8
Securities	35.0	10.0
	<b>227.9</b>	<b>241.2</b>
<b>Cash and cash equivalents</b>	<b>346.1</b>	<b>71.6</b>
	<b>574.0</b>	<b>312.8</b>
<b>Prepaid expenses</b>	<b>0.9</b>	<b>0.5</b>
	<b>791.6</b>	<b>823.4</b>

#### KUKA AKTIENGESELLSCHAFT BALANCE SHEET (HGB)

EQUITY AND LIABILITIES in € millions	2013	2014
<b>Equity</b>		
Subscribed capital	88.2	92.8
Capital reserve	83.5	166.7
Other retained earnings	57.5	90.3
Balance sheet profit	34.6	57.3
	<b>263.8</b>	<b>407.1</b>
<b>Provisions</b>		
Pension provisions	11.6	11.6
Provision for taxes	1.9	12.6
Other provisions	21.5	29.9
	<b>35.0</b>	<b>54.1</b>
<b>Liabilities</b>		
Bonds	309.4	150.0
Liabilities due to banks	3.0	1.1
Trade payables	3.2	7.7
Accounts payable to affiliated companies	172.0	199.8
Liabilities to provident funds	2.5	2.6
Other liabilities	2.7	1.0
	<b>492.8</b>	<b>362.2</b>
	<b>791.6</b>	<b>823.4</b>

#### Results of operations of KUKA Aktiengesellschaft

The earnings of KUKA Aktiengesellschaft are determined primarily by the earnings of its subsidiaries, its financing activities and the expenses and income relating to the company's holding function. Income from ordinary business activities amounted to €80.7 million and was therefore considerably above the previous year's result (2013: €44.3 million).

Other operating income mainly related to cost allocations (2014: €28.9 million; 2013: €22.7 million), direct costs passed on, for example from facility management (2014: €12.8 million; 2013: €11.4 million) and income from the rental of buildings to KUKA Group companies (2014: €4.6 million; 2013: €4.7 million). Currency translation gains, primarily from USD and BRL, amounting to €7.1 million (previous year: €2.3 million) were accounted for. The rise in other operating expenses was driven by various factors including higher consulting expenses, especially in relation to the acquisition of Swisslog Group, and from expenses not eligible for capitalization in relation to the construction of the new Development and Technology Center in Augsburg. The other operating expenses include currency exchange losses of €6.3 million (2013: €5.2 million).

The increase in personnel expenditure from €23.6 million to €32.7 million is mainly attributable to the transfer of the Group's cross-departmental functions, such as the personnel division, to KUKA Aktiengesellschaft and higher expenses for variable remuneration components. The company had 279 employees on the balance sheet date (previous year: 212 employees).



Income from participations amounted to €137.0 million (2013: €81.0 million) and was again significantly above the previous year's value. 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 €112.6 million (2013: €61.4 million). As in the previous year, a dividend payment by the American subsidiary was also included in the year under review (2014: €24.4 million; 2013: over €19.6 million).

The net interest result was €-16.4 million, which was below the previous year's level (€-13.6 million). Interest from the convertible bond issued in 2013 and non-recurring items related to the repurchase of the corporate bond impacted the net interest result. Due to the decrease in market interest rates, finance charges credited or charged by KUKA Aktiengesellschaft to subsidiaries were significantly lower compared to the previous year. Last year KUKA Aktiengesellschaft earned net interest income of €14.4 million together with associated companies – the value this financial year was €7.1 million.

The depreciation of financial assets primarily relate to the valuation of Swisslog shares with the stock exchange price on the last trading day of 2014 amounting to CHF 1.31.

KUKA Aktiengesellschaft as the controlling company of the German consolidated tax group transferred the pro rata income tax amounting to €25.1 million to the consolidated tax group companies in the previous year, resulting in tax income of €21.9 million. This transfer has no longer been made as of the 2014 financial year; the entire tax expense of the German consolidated tax group is therefore carried by KUKA Aktiengesellschaft. This resulted in a tax expense of €15.1 million being incurred in the year under review. The reduced burden from tax allocations from consolidated tax group companies led to higher income from participations based on the profit and loss transfer agreements.

Overall, net income of KUKA Aktiengesellschaft amounted to €65.7 million (2013: €66.2 million). Deducting the transfer to revenue reserves and offsetting against the profit carried forward resulted in a balance sheet profit of €57.3 million for the 2014 financial year.

### Financial position of KUKA Aktiengesellschaft

One of KUKA Aktiengesellschaft's most important tasks is to provide funds and guarantees for its subsidiaries' current operations. KUKA Aktiengesellschaft obtained external financing by placing a €150.0 million convertible bond on the capital market in February and July 2013 and carried out a capital increase from authorized capital in November 2014. KUKA Aktiengesellschaft received a total of €86.6 million from the capital increase. KUKA Aktiengesellschaft also has a Syndicated Senior Facilities Agreement with a consortium of banks that was updated in 2013. 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 division. (For more details, see "KUKA Group financial position" and the notes (26)).

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 €25.6 million (2013: €12.7 million). This slight increase in the subsidiaries' liquidity requirements was mainly the result of profit transfers during the financial year. This development was offset by the continually improving active working capital management of subsidiaries involved in cash pooling.

The liquid assets available were used to redeem the corporate bond issued in November 2010 (original nominal amount €202.0 million) and to acquire Swisslog Group. After shares in the corporate bond totaling a nominal amount of €42.6 million were already bought back on the capital market in the previous year, the remaining amount of €159.4 million still had to be redeemed in the year under review.

Overall, the liquid assets of KUKA Aktiengesellschaft decreased from €346.1 million to €71.6 million and financial liabilities dropped from €312.4 million to €151.1 million as a result of the described measures.

### 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 amounting to €35.4 million (2013: €28.6 million) was offset by depreciation, amortization and write-downs amounting to €3.4 million (2013: €3.1 million). Major capital expenditure in the financial year included the Development and Technology Center in Augsburg, which is currently under construction and scheduled to open in 2015. KUKA Aktiengesellschaft's direct equity investments in its subsidiaries are reported under financial assets (please refer to the comments on KUKA Aktiengesellschaft's financial position with regard to the increase).

Short-term securities (2014: €10.0 million; 2013: €35.0 million) relate to freely available funds invested as part of corporate liquidity management with a term of four months (previous year: between three and eleven months).

Earnings for the financial year are reflected in the changes in equity as well as the capital increase in November 2014 described above. Dividend payments totaling €10.2 million for the 2013 financial year had the effect of reducing equity. The equity ratio of KUKA Aktiengesellschaft amounted to 49.4 percent as of December 31, 2014 (2013: 33.3 percent).

The net impact of these changes on the total assets of KUKA Aktiengesellschaft was an increase of €31.8 million to €823.4 million compared to the reporting date of the previous year.

## NON-FINANCIAL KEY PERFORMANCE INDICATORS

### Sustainability

#### Focus on sustainable development

KUKA focuses on sustainable development – not just from a commercial viewpoint, but also in terms of society and ecology. During the year under review the company pursued several projects on the principle of fulfilling its responsibilities to its employees, customers and investors, as well as society and the environment.

#### A healthy work environment

The growth in competitive pressure and high requirements for quality and speed lead to rising demands on staff. It is thus all the more important to create a work environment that encourages flexibility and promotes health. As a technology group which is experiencing growth on a global scale, KUKA is reliant on a qualified, committed and efficient workforce. They form the basis for the company's success. KUKA offers a human resources policy adapted to accommodate the stage of life reached by its employees and make it easier to combine work and private life. For instance, KUKA promotes flexibility with the introduction of flexitime work, the home office, teleworking, the daycare center at its Augsburg site, sponsored by the non-profit association Orange Care, and the benefits it offers such as a laundry service. The corporate health management scheme is designed to help employees follow a healthier life style. Each year is devoted to a particular topic concerning occupational healthcare. The main elements are chosen especially to counteract the main causes of various failings of modern society, such as physical inactivity, poor nutrition, excess weight and stress. The focus in 2014 was on physical activity. Various courses in physical activities and lectures were offered. Employees were also able to attend courses in relaxation during the year under review. Some 500 KUKA staff members took part in the Augsburg corporate challenge run in May. A further campaign offered by the corporate health management scheme in 2014 was colon cancer prevention. A KUKA health day was also organized at which employees could get information on numerous health issues and try out various sports and relaxation methods.

#### KEY SOCIAL FIGURES

	2013	2014
Number of employees (Dec. 31)	7,990	12,102
of which apprentices	236	372
Average length of service (years)	8.5	8.8
Sick leave ratio in %	2.8	3.0
Fluctuation in %	10.1	11.2
Accidents per 1,000 employees (Germany)	10.3	10.2

The Group-wide absenteeism rate due to sick leave remained low at 3.0 percent in 2014 compared to other companies in the same sector. The average length of employment in 2014 was 8.8 years. It remains relatively stable and is similar to that found in other companies.

At 11.2 percent, staff turnover (fluctuation) appears to be relatively high for industry standards. However, this figure includes not only those leaving the company for other employment but also all internal transfers among the companies of the KUKA Group.

Even though the workload at KUKA is high in comparison with other companies in the sector, the number of accidents reported is very low. In 2014, 10.2 accidents were recorded for every 1,000 employees. KUKA constantly endeavors to improve work safety so as to reduce the number of accidents further.

Details of the workforce and human resources policy can be found in the "Employees" section from page 43 on.

#### Orange Care e. V. – KUKA colleagues take on social responsibility

Taking social responsibility is important to KUKA employees. They have seized the initiative and for example have set up the Orange Care e. V. association to bundle support for people in need. This association has the particular aim of providing assistance to young people and families.

For instance, it promoted the "füreinanderda" (there for each other) project organized by the Prisma youth and family support scheme. In this project, unpaid female volunteers help single mothers to cope with their everyday lives. Shared activities are also organized such as short trips, for which Orange Care provided financial support during the year. In addition, Orange Care has been sponsoring the St. Gregor Kinder-, Jugend- und Familienhilfe non-profit organization, assisting it in its supervised youth community project offering curative education and therapy. The Phoenix residential group offers the 14 to 16-year olds intensive educational support, curative educational courses on addiction and violence prevention paired with outdoor educational activities. In 2014, Orange Care took over the costs of cycling and hiking equipment. The organization also helped refugees. It supported the hostel in Augsburg by donating articles and organized a collection of winter clothing for the refugees. It also bore part of the costs of bone marrow type-matching as part of the "Hilfe für Lisa" (Help Lisa) campaign of the German bone marrow donation organization. The campaign was centered on help for a 10-year old girl suffering from blood cancer. In addition, Orange Care is the sponsor of the daycare center at the KUKA site in Augsburg.

#### Running for a good purpose

KUKA employees took part in the AOK road race in Augsburg during 2014. As the second largest team from a company, they won a prize of money which they donated to the charitable association Orange Care e. V. KUKA colleagues also took part in the Munich women's run, which is a charity run to aid research into breast cancer. The revenue from the entry fees was donated to Bayerische Krebsgesellschaft e. V. to support women in financial distress as a result of having the disease.

#### Corporate responsibility action week

In September 2014, KUKA participated in the action week on corporate responsibility instigated by the German Engineering Federation VDMA. During the week devoted to this topic, the company provided information in the form of lectures on the energy and resource efficiency of machinery and systems as well as work/life balance. The apprentices also supported social facilities such as children's daycare centers and senior citizen homes.

### **Blood donor campaign with the Bavarian Red Cross**

A blood donor campaign took place as part of KUKA's health day in Augsburg. About 80 KUKA employees donated blood. Also some of them took the opportunity to have their suitability for bone marrow donation tested.

### **Ergonomic and modern**

The demographic shift and the changes in the working and living environment have an impact on employee performance; this calls for forward-looking and sustainable solutions that help maintain health. Work processes were further revised in 2014 in response to this. This included establishing age-appropriate workstations with the aim of reducing the physical demands placed on employees in production. One of the measures implemented was the introduction of ergonomic workstations with lifting tables that enable production staff to adjust their workstations to their individual needs with less effort and less strain on the back so that they can work in an upright position. The workstations also became more ergonomic through the conversion to a rail system by means of which the robots can be moved to the next workstation much more easily. Moreover, as a result of the conversions in the production shops the employees will in future work hand in hand with a robot that is intended to ease the strain of non-ergonomic tasks.

### **Sustainable construction concepts at Augsburg**

Investments were again made in construction projects at the KUKA site in Augsburg during 2014. After completing the construction of the Orange Care daycare center in 2013 and the parking garage at the start of year under review, the focus in 2014 was on the construction of the Development and Technology Center (DTC) as well as the conversion of the robot assembly line.

In all the construction work, KUKA aims to undercut the legal requirements of the current standards laid down in the EEG & EnEV (Renewable Energies Act and Energy Saving Ordinance) by up to 30 percent, as is already evident in the insulation of the facade, windows and doors. Moreover, the choice of materials will make it possible to dismantle and recycle these building components later in an ecologically compatible manner.

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 on site via culverts without affecting the groundwater and is not diverted into the sewer system. To enable the DTC to meet the latest energy supply standards, the climate in the offices is automatically regulated via heating and cooling sails on the ceiling. In addition, well water or a compression chiller mounted on the roof provide cooling. Ceiling sails in the production shops improve the indoor climate by distributing heat downwards in a conical pattern.

To reduce energy consumption and thus the CO<sub>2</sub> emissions harmful to the climate, KUKA uses the most eco-friendly energy supply solution available to it. The DTC is therefore connected to the plant's local heating supply. The entire site will be converted to district heating in 2015.

### **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 for KUKA to take social responsibility. KUKA concentrates on local projects at its own sites. For instance, KUKA has supported the Bundesliga soccer team FC Augsburg and the first-division hockey team Augsburg Panthers for years. The company has also sponsored the construction of cars for university teams near the KUKA sites in Augsburg and Zwickau for Formula Student – a worldwide racing series for electric racing cars.

### **The new MagnetAr 620A power source – sustainable and energy-efficient**

In the further development of the MagnetArc welding technique, which will also improve the process and quality, the components for automation are also being continuously enhanced. KUKA is paying special attention to the core component, the power source, in order to expand the technology and so improve efficiency. Compared with the conventional MagnetArc power source, the MagnetAr 620A uses up to 20 percent less energy. Also the new source is much smaller and 85 percent lighter, saving costs and production space.

### **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**

KUKA is a partner in the European combined research project "AREUS – Automation and Robotics for European Sustainable manufacturing". Together with research partners from industry and science, KUKA is advancing the development of energy-efficient robot-based solutions for the factories of the future. Optimized processes for robot movement are being developed, affecting both the individual robot and groups formed of several robots. The power supply for the robot-based test installations is being converted to direct current as a prototype development in order to collect initial experience for future regenerative power supplies and to allow the energy requirement in a system to be distributed better and to recover braking energy. The new concepts are being tested in a real production scenario.

#### **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 joint road map. The development of sustainable industrial production methods is one of the objectives. See the "Research and development" section starting on page 21 for more information.

#### **EFFRA**

KUKA is also involved in a partnership with 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 is to advance key topics in robot-based automation.

### **KUKA showcases multi-functional cell at Augsburg Innovation Park**

With reference to sustainability, lightweight construction is a key topic for the future of 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.

In collaboration with the German Aerospace Center (DLR), KUKA has been involved for years in researching and developing 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 multi-functional 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 KUKA robots of the QUANTEC generation in order to conduct industrial-scale research.

### **KUKA partners with MAI Carbon**

KUKA is active in the leading-edge cluster MAI Carbon. The cluster in the Munich-Augsburg-Ingolstadt triangle is directing its efforts toward developing carbon fiber-reinforced plastics (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.

### **Green Carbody Technologies**

In view of the Industry 4.0 project, one important focus of future systems lies in ensuring the efficient use of energy and resources in manufacturing.

Alongside other research topics the Green Carbody Technologies project (InnoCaT) has set the target of lowering energy consumption in car body manufacture. A total of 60 companies are involved in the project that is being promoted by the Federal Ministry of Education and Research. As a member, KUKA Systems has contributed necessary know-how and tools with which the energy consumption of a system can be virtually measured, analyzed and optimized already at the planning stage. KUKA is therefore assisting its customers to establish sustainable production at their own plants.

With coordination by VW and the Fraunhofer Institute, unused potential in car manufacture has been identified. As a specialist in automated joining technologies, the central interest of KUKA Systems lies on body-in-white production. This phase of the process consumes 24 percent of the energy, around half of which is used by robots and other components. KUKA is focusing at this point to bring about more energy-efficient production based on its experience and technical competence in systems engineering.

### **Energy consumption forecast simulation**

New simulation modules are helping to improve the energy efficiency of robot applications at the planning stage. The expected energy consumption is calculated and displayed while the robot executes the offline programmed path virtually. A change in the position of the robot or paths, for example, can be used to optimize power consumption with the same cycle time and so determine the desired, energy-efficient path for the customer. This results in additional energy saving potential of about 15 percent. The new KR QUANTEC generation, KUKA's "green" robot, is already about 35 percent lower in terms of energy cost than previous models. KUKA was able to achieve this by

reducing the robot's weight, implementing pioneering control technology, redefining standby modes and integrating an intelligent drive system. The additional savings potential afforded by energy path optimization during the simulation therefore makes it possible to cut energy costs by half.

Energy consumption improvements can also be made when planning entire production systems. A new tool enables estimates of the amount of energy required by production systems to be made at a very early stage in the planning process so as to quickly develop more energy-efficient alternatives. The software tool is based on reference measurements of systems that have already been implemented. It shows the anticipated power consumption of 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.

### **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 uses environmentally compatible methods to disassemble and dispose of robots that can no longer be refurbished. All of KUKA's recycling partners must undergo a strict confirmation process.

### **CO<sub>2</sub> emissions and heating energy reduced**

CO<sub>2</sub> emissions have fallen steeply since the previous year. The 17 percent reduction is largely the result of the increased use of electricity from renewable sources and the decrease in heating energy. The absolute consumption of electrical power has only risen slightly, at +1 percent, despite increased production and more employees. The consumption of heating energy has declined substantially by 24 percent. The initial steps for conversion to district heating, the demolition of a factory building and the mild winter have contributed. 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 the water consumed. The 28 percent rise in water consumption results from the provision of water for the construction of the DTC and the increased number of employees at the Augsburg site.

In 2015 the entire Augsburg site will be converted to district heating. In deciding to convert to district heating, the stage has been set for an energy-efficient, environmentally friendly and future-proof energy supply. In addition to the significant decline in CO<sub>2</sub> consumption, the primary energy factor will be decreased from 1.1 to 0.32.

In conclusion, the environmental impact of the increased use of the site is being steadily reduced and the requirements of the latest version of the Energy Saving Ordinance (EnEV) for energy efficiency in the case of new and existing structures have been fulfilled. In connection with converting the entire site to district heating in October 2015, the entire heating control center will be replaced by a modern heat transfer station during the period April to August 2015. As district heat with the same performance as gas only generates half the CO<sub>2</sub> emissions, KUKA makes a considerable contribution to reducing CO<sub>2</sub> emissions. Through the modernization and rise in efficiency of the entire heating system, savings in consumption are also achieved and thus the operating costs and CO<sub>2</sub> emissions are reduced further.

#### KEY ECOLOGY FIGURES

	2013	2014
<b>Number of locations worldwide</b>	<b>37</b>	<b>53</b>
with ISO 9011 certification	20	24
of which ISO 14011 certified	10	11
<b>Consumption (Augsburg only)</b>		
Electric power (MWh)	12,984	13,095
Heat (MWh)	14,885	11,274
Water (m <sup>3</sup> )	20,619	26,368
CO <sub>2</sub> (t)	11,690.20	9,736

#### 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](http://www.cdproject.net)). In 2014, KUKA showed a trend to improvement in the overall result. KUKA also participated in various ratings on the subject of sustainability, one of them conducted by the Vigeo agency. Interested parties can request a copy of the results by sending an email to [contact@vigeo-belgium.com](mailto:contact@vigeo-belgium.com). Information is available on corporate governance, human resources and the environment.

#### Employees

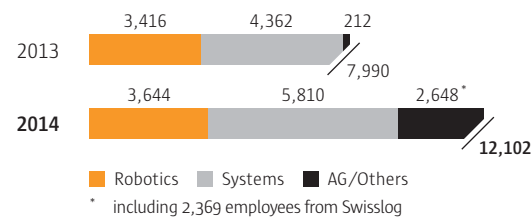
##### Internationalization within KUKA Group

KUKA has developed into a global group and is continuing to grow. The number of employees has risen significantly in the year under review primarily due to the acquisitions. However, there was also an organic increase in personnel, especially in the strategically important growth market of China and in North America. Employees were also hired in the field of research and development in order to maintain and continue to enhance our leading position in the technology sector among the dynamic competition. Given the rapid growth and the Group's increased focus on internationalization, Group-wide leadership principles were developed in the year under review. The aim is to introduce a uniform leadership culture with a common understanding of values and principles within KUKA Group. The Group is also taking a global approach in Germany. Employees of 45 different nationalities were employed at the end of the year under review. KUKA is also working on enhancing its appeal as an employer. The large-scale employer branding campaign introduced in 2013 was continued in the year under review and focused on offering high-quality training to junior employees and developing cooperative alliances with renowned universities. Work/life balance initiatives and the corporate health management scheme are also being enhanced.

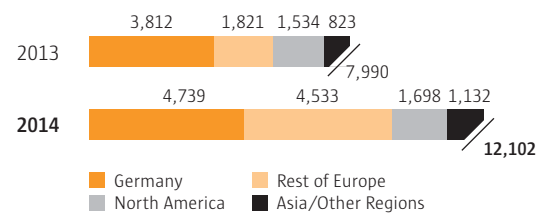
#### Significant increase in personnel due to acquisitions

KUKA has also continued to work hard at diversifying in terms of sectors and regions during the year under review. The acquisitions that were made have played a major part in being able to achieve this. The workforce of KUKA Group has increased significantly with the acquisition of Reis, Alema and Swisslog. The number of employees has also risen due to the new personnel recruited primarily in China, North America and Germany. The Group's workforce has risen from a total of 7,990 at the end of 2013 to 12,102 at the end of 2014. This represents an increase of 51.5 percent or 4,112 employees. Around 85 percent of this increase is attributable to the acquired companies of Swisslog (2,369 employees), Reis (1,032 employees) and Alema (87 employees). The workforce in the Robotics division has increased by 6.7 percent from 3,416 to 3,644 employees. The expansion has been carried out in the areas of general industry, service and research and development; in terms of regions it has involved Germany and China. The number of employees in the Systems division, which includes the workforce of Reis and Alema, increased by 33.2 percent from 4,362 to 5,810. Systems primarily hired new employees due to the growing business in North America.

#### EMPLOYEES BY DIVISION (DEC. 31)



#### EMPLOYEES BY REGION (DEC. 31)



#### Stable age structure

The average employee age throughout the Group was around the level of the previous year (2013: 41 years) and was recorded at 40.8 years. The number of employees celebrating company anniversaries at the Augsburg site has risen. 89 employees were honored for 25 years of service during the year under review, nine employees celebrated their 40th anniversary and one employee celebrated her fiftieth.

### Vocational training at a high level

KUKA Group was employing a total of 372 apprentices (FTE) at its German sites in Augsburg, Bremen and Schwarzenberg/Erzgebirge and at Reis GmbH & Co. KG Maschinenfabrik at the end of December 2014 (2013: 236). This increase is attributable to the incorporation of Reis into the Group. The process of centralizing training at KUKA Aktiengesellschaft, which was carried out in 2013, has proven to be a success. This ensures that apprentices are given more opportunities for their own development and teaches them to think and act globally on a Group-wide scale. KUKA attaches great importance to familiarizing apprentices with the internationalization strategy of the Group at an early stage. Apprentices gain experience abroad at other KUKA locations each year such as, for example, company sites in China and the USA. KUKA continues to maintain a high standard in the quality of training and the level of performance. This is repeatedly confirmed by the awards KUKA graduates receive for being the best in their year. During the year under review, the Federal Minister of Economics Sigmar Gabriel awarded the apprentice Alexander Kurdas a prize for being the best at his profession as an electronics technician for automation technology in Germany.

### Wide range of training and further education options

KUKA Group offers a variety of training programs covering both technical and commercial professions:

- ▲ Industrial mechanic and lathe/milling machine operator
- ▲ Mechatronics technician
- ▲ Electronics technician for automation technology
- ▲ Industrial clerk
- ▲ IT specialist
- ▲ Technical product designer
- ▲ Warehouse logistics specialist
- ▲ Specialist for forwarding and logistics services

The share of female apprentices in technical professions has remained constant over the last few years at around 20 percent. This percentage is expected to increase, in particular thanks to the company's participation in the annual Girls' Day program, the offer of introductory apprenticeships for girls and cooperative partnerships with girls' schools. KUKA is also involved in UniMentoSchule, a project of the University of Augsburg focused on employment and study opportunities; it is geared towards female school students in grades 10 to 12 and gives insights into the MINT professions.

During the year under review, the company also intensified its contacts with schools in the region. Students at all forms of secondary schools can now learn more about work life at KUKA in a week-long work experience placement. Around 140 students took advantage of this opportunity at the company's site in Augsburg in 2014. Students were also given the chance to learn more about the company's training center on tours of the plant and during many other regional activity days.

In addition to the traditional apprenticeships, KUKA offers a dual, training-integrated degree course at the University of Munich and the University of Augsburg with the aim of gaining a Bachelor's degree. In addition to the dual integrated study course for mechanical engineering, mechatronics and electrical engineering, the disciplines of business administration, information technology and business information systems are also available to choose from.

KUKA attaches great importance to offering internal continuous professional development to its employees. A major element of this is the KUKA Academy

at the company's site in Augsburg, which offers courses that are becoming increasingly popular with employees year after year. The broad offering includes computer and language courses, specific professional courses from the fields of sales, purchasing, business administration and project management as well as seminars for soft skills. In 2014, 1,503 employees took part in a total of 125 seminars at the Augsburg location.

### Cooperative partnerships with universities around the world

KUKA has partnerships with universities from around the world, including Tongji University in Shanghai and TU Munich, and works together with renowned universities on a number of international research and development projects. The company also has close contacts in the region with the universities in Augsburg and Kempten. During the year under review, KUKA attended numerous university contact fairs and was the principal sponsor of the "Pyramid" fair in Augsburg. "Pyramid" is designed to establish contacts between companies and young professionals. KUKA also took part in Academia's "Career Day" in Augsburg.

### New leadership principles

In light of KUKA Group's international focus and strong growth, the company launched a project during the year under review to help develop a Group-wide leadership model. Around 250 employees from different regions and companies have developed leadership principles together in workshops. Special care was taken to ensure that the principles allow sufficient leeway for culture-specific interpretations and can therefore be used as a basis for creating a unified leadership culture internationally. The company has already started to implement the leadership model in certain countries.

### Promoting diversity

KUKA employees introduced a diversity initiative during the year under review. Targets and measures were developed in workshops under the patronage of Jurate Keblyte, CFO at KUKA Roboter GmbH, to promote diversity within the Group. These are to be specified in greater detail and implemented in 2015.

### Strong employer brand

The large-scale employer branding campaign introduced in 2013 for different target groups will continue to be pursued in order to enhance the public perception of KUKA as an attractive employer. The Group is now working on implementing this campaign for the company sites in China and the USA in order to successfully strengthen the employer brand in these countries too. The appeal of the work environment at KUKA is reflected in external reviews. In the 2014 trendence Graduate Barometer, which is based on a survey conducted among pupils, students and young professionals about their preferred employer, KUKA was ranked 43rd in the Engineering Edition and 78th in the IT Edition. KUKA was updated in the category of European Engineering/IT, taking 169th place in the top 500. In addition, KUKA supported the "Fair Company" initiative in the year under review, which promotes fair internships and real opportunities for university graduates. This means, for example, that KUKA primarily offers internships geared towards 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 and show great interest in the employee share program. 314 employees participated in the program during the year under review. 68,805 shares were transferred to employees.

## EVENTS AFTER THE BALANCE SHEET DATE

There were no 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

#### 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.

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 annual financial statements in accordance with applicable accounting principles. The unsecured residual risks, i. e. risks according to risk mitigation measures, are therefore depicted as risks.

The risk management system is subject to a monthly reporting process (risk inventory) which involves identifying new risks and carrying out a follow-up assessment of existing risks. The information that has been collected in this way is summarized in a risk report that is also prepared each month and addressed to the Executive Board of KUKA Group. This report contains a top 10 risk assessment and a risk exposure assessment (overall risk situation) for the divisions, KUKA Aktiengesellschaft as the holding company and KUKA Group. The top 10 risks are also a fixed part of internal monthly management reporting and are discussed at monthly results discussions between the Executive Board of KUKA Group and the management of the divisions. The identified risks are additionally 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 risk report is also reviewed during Executive and Supervisory Board meetings, especially by the Audit Committee.

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 system. He compiles, communicates and monitors the individual risks identified and determines the aforementioned top 10 risk overviews or risk exposure overviews. 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 KUKA Group's overall planning, control and reporting process.

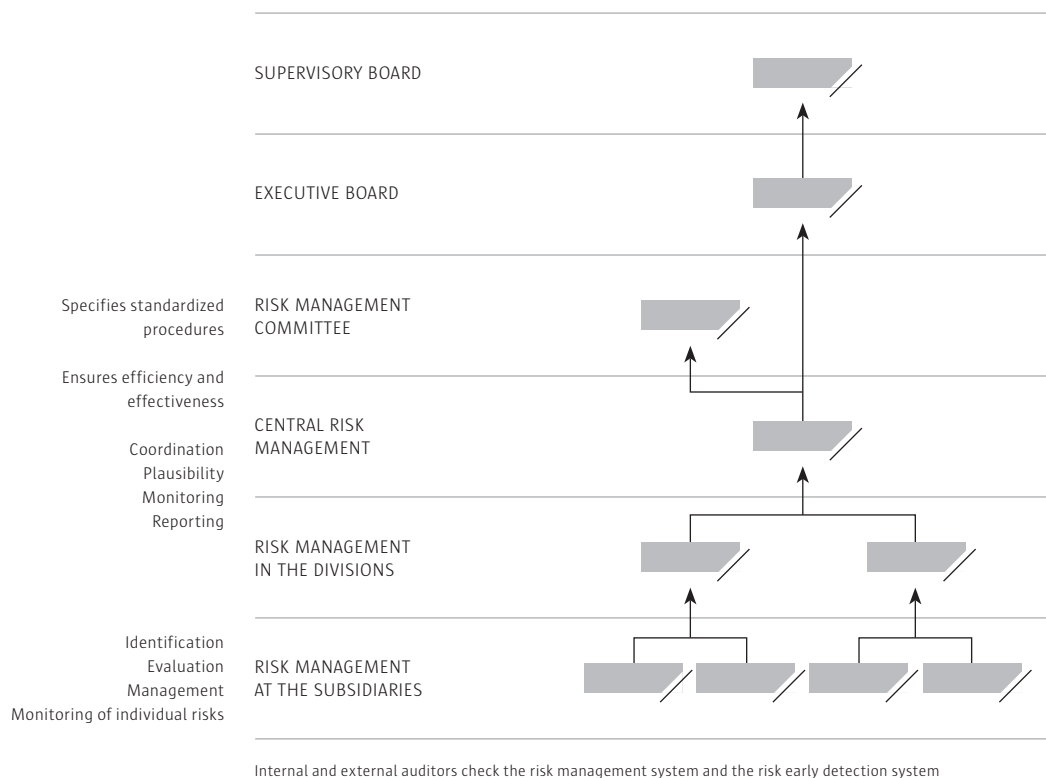
The Group's risk management system enabled the Executive Board to identify material risks at an early stage, initiate appropriate steps to counter these risks and monitor implementation of the steps. The internal audit department regularly monitors compliance with the risk management guideline of KUKA Group and therefore 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.

In addition to the risk management system, KUKA Group has an internal control system (see management report, internal control and risk management system section, page 53 et seq.) 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 system 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.

## RISK MANAGEMENT ORGANIZATION



### Operational risks and opportunities

#### KUKA Group

The Group's risk exposure, based upon evaluating operating risks according to the procedure described in the Principles section, is described below. The report includes the total aggregated maximum risk (worst case) and expected risk value, which are 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.

#### GROUP RISK EXPOSURE

in € millions	Worst case	Expected risk value
Legal risks	15.2	2.9
Economic risks	16.8	1.7
<b>Total for the Group</b>	<b>32.0</b>	<b>4.6</b>

Legal and economic risks occur primarily as a result of the activities of the Robotics and Systems divisions. 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:

	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 %

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 in the following sections. The opportunities and risks managed at the divisional level are primarily operational and performance-related. Cross-division opportunities and risks such as financing, personnel and IT are analyzed and managed at Group level, not by the individual divisions, which is why said risks are only addressed from the Group perspective in the opportunity and risk report.



### 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 Group notes, page 99 et seq.

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 subsidiaries. Existing insurance policies are reviewed annually in order to weigh the relationship between the insurance protection and deductible amount versus the risk premium.

### Economic risks

The economic risks are described in the following sections.

### Operational 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 significant investment activities in both the automotive industry and the aircraft industry and general machinery and systems engineering sector throughout 2014. 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, innovative 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 a lack of alternative sources, is dependent on single suppliers that dominate their markets.

### KUKA Robotics

Demands for continuous product innovation from international customers and unrelenting cost awareness are the key challenges for this division's product portfolio; especially when it comes to the automotive industry and its subsuppliers. 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 in 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, Advanced Robotics, focuses on developing and implementing the technology for such innovative products and applications. 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	7.0	2.7
Economic risks	6.2	1.7
<b>Total for Robotics</b>	<b>13.2</b>	<b>4.4</b>

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 in 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 therefore uses appropriate risk checklists for individual orders in order to assess the associated legal, economic and technological risks prior to preparing a quotation or accepting a contract. One of the components of project execution is to monitor and track solvency 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 together 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 system providers 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 Production Operations) offer additional opportunities, but also risks. The Jeep Wrangler brand continues to promise above-average growth prospects compared to other American car models. KUKA participated in this growth again in 2014. Here risks involve greater dependence on the volumes produced for the American car market.

Thorough market analyses have shown that KUKA Systems also has long-term business opportunities outside the automotive industry; namely, in general industry. Current examples are the aerospace industry and additional markets resulting from the acquisition of REIS Group, from which new orders were again received in 2014. Although this represents 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 therefore an especially important tool for mitigating risks.

## SYSTEMS RISK EXPOSURE

in Mio. €	Worst case	Expected risk value
Legal risks	8.2	0.2
Economic risks	10.6	0.0
<b>Total for Systems</b>	<b>18.8</b>	<b>0.2</b>

The assessed potential damage associated with all individual risks is low to medium (to €10.0 million) and the likelihood of occurrence is medium to extremely high (over 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 Aktiengesellschaft'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 2014, this included the early repayment of the bond issued in November 2010 with an interest coupon of 8.75 percent in May and the increase in equity in December; please refer to the explanations to the annual financial statements, Financing, page 96, for further details.

The syndicated senior facilities agreement, which runs until 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 financial 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 2014. As of December 31, 2014, all ratios regulated by covenants were well within the contractually defined limits. Please refer to the explanations to the annual financial statements, Financing, page 96, 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 2014 is the increasing fluctuation in currency exchange rates, especially in the case of the Japanese yen, the US dollar, the Chinese yuan, the Hungarian forint and the Swiss franc; 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. Details on the central currency management process are provided under "Financial instruments" on page 74 in the Group notes. 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). Internal guidelines govern the use of derivatives, which are subject to continuous internal risk monitoring.

### 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 risks arise 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 processes concerned, 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 2014 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 clean-up operations to be undertaken, will occur in the future.

Please refer to page 57 for information about material agreements subject to conditions related to a change of control. The shareholder structure is periodically analyzed to assess the possibility of a 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

In recent years, development among the major global economies has been moderate, and in some cases has even declined. According to the International Monetary Fund (IMF) the world economy grew 3.3 percent in 2014. Compared with growth in 2013 this represents a stable trend (2013: 3.3 percent). As in previous years, it was in the main the emerging and developing economies which were the drivers of growth. Although many had clearly recovered from the financial and debt crisis, growth in the industrialized nations was well below average compared with the emerging countries. The IMF expects the world economy to expand more rapidly in 2015 and has forecast economic growth of 3.5 percent. Compared with earlier forecasts, this figure has been cut slightly by 0.3 percentage points.

The overall economy of Europe should stabilize further at a low level as a result of the measures taken by various member states, the low price of oil and support provided by the European Central Bank's expansionary monetary policy. For Germany, the most important single market for the KUKA Group, the IMF is predicting a growth rate of 1.3 percent in 2015. VDMA, the German Engineering Association, published a figure of 2.0 percent growth in new orders year-on-year in the engineering sector for 2014. The IMF raised its growth forecasts slightly for the United States for 2015. Demand from private households in particular, the low oil price and the expansionary monetary policy of the Federal Reserve are likely to more than compensate for the possibility of increased interest rates. In actual figures, the IMF is forecasting US growth of 3.6 percent for 2015. The North American market is the second largest sales market for the KUKA Group. Among the larger economic markets, the IMF still regards China as likely to exhibit the highest rate of growth during 2015. However, in comparison to the year before, the pace of growth is anticipated to diminish. The reasons behind this are the lower exports, weaker internal demand and the cooling of the real estate market. In real terms, the IMF is calculating 6.8 percent growth in China during 2015. China is KUKA's third largest single market worldwide. IMF expectations for the most significant global markets:

### ECONOMIC GROWTH

in %	2013	2014	2015
World	3.3	3.3	3.5
Eurozone	-0.5	0.8	1.2
USA	2.2	2.4	3.6
China	7.8	7.4	6.8
Germany	0.2	1.5	1.3
Developing/emerging countries	4.7	4.4	4.3

Source: IMF, January 2015

### Global drivers of growth in robot-based automation

Investment in automation continues at a high level. In its most recent study, the International Federation of Robotics (IFR) forecast corresponding expansion of the global robot market. Manufacturing companies, in particular, are profiting from the introduction of automation in their production operations, with raised efficiency, improved product quality, increased unit quantities and product diversity as well as increased flexibility being prominent benefits.

## General conditions and KUKA's main markets

### 1) General industry

Compared with the automotive industry, the robot density (number of robots per 10,000 employees) in general industry is still relatively low (see graphic on page 51). On average, the automotive industry's robot density is roughly eight times that found in general industry. It is in particular high cost pressure, rapidly changing markets and customers' requirements as well as growing demands for quality which necessitate production that is flexible and efficient for companies to remain competitive. This is why the potential for the automation sector is generally very substantial. For the electrical (3C), consumer goods, metal, machine tool, logistics and aircraft construction industries in particular we are expecting a significant increase in investment in automation solutions in the coming years.

KUKA is pursuing the strategy of expanding its market share in general industry overall and pushing expansion specifically in the sectors referred to above. With this in mind, the following customer segments are being specifically targeted for investment: 1) in new products that satisfy specific customer needs, 2) in building up manpower with specific expertise in the general industrial markets targeted, 3) in developing a sales structure supporting expansion in general industry, and 4) in partnerships and cooperation agreements to strengthen our market position in general industry. KUKA has, for instance, bought Alema, a French company, with whose assistance drilling and riveting can be automated in aircraft construction. In addition, the KR AGILUS family of robots is steadily being expanded in terms of reach, weight classes and capabilities so that these products can now be offered to new customers from general industry and to existing customers in order to expand their range of applications. At the end of 2014 KUKA acquired a majority holding in Swisslog. In future KUKA is planning to develop new automation solutions through the combination of robots and mobile vehicles and to intensify its growth in the logistics customer segment.

### 2) Automotive industry

The international automotive industry has a decisive impact on robot sales development, as it buys around 40.0 percent of the robots sold annually. In the mature manufacturing regions such as Europe, the United States and Japan, growth potential is driven mainly by the need to modernize or upgrade existing production systems. Increasingly, however, production operations are being examined for the potential to use robots where at present there are relatively low numbers of robots being employed.

Car manufacturing and sales volumes 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 some 84.0 million vehicles in 2013 to about 103.0 million vehicles in 2019. KUKA is not directly dependent on the number of vehicles built, yet the range of models of the manufacturers is increasing at the same rate as the sales of cars. The manufacturers must accordingly invest in new production systems and in the flexibility of existing facilities in order to allow this growth to be generated in the most efficient way possible. KUKA is therefore expecting, as predicted by the IFR, that the investments of the carmakers in automation will rise further, but accompanied by lower growth rates than in general industry. In addition to the continuing increase in model diversity, the drivers of this trend are the decrease in product life cycles of existing vehicle types and an increase in model platforms without the risk of forfeiting efficiency. Moreover, local carmakers from emerging and developing countries are increasingly investing in automation in order to raise the quality of their vehicles and so further their exports to the industrialized nations.

### 3) Technology and service robotics

In recent years software components and application technologies for robot-based automation solutions have risen in importance. In parallel, the speed of development and the requirements in these areas have significantly increased. New technologies in the fields of human-machine collaboration, safety, flexibility and user-friendliness form the basis for new markets. 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. This includes 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, the first service robots are being used for agricultural, 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 2013 rose by 4.0 percent to 21,000. The IFR expects a significant increase in sales in the professional segment, and is predicting that an average of more than 33,000 service robots will be sold annually between 2014 and 2017.

KUKA geared its activities early on to new technologies and new markets and correspondingly invests highly in research and development. One particular focus of this is the investment in KUKA Sunrise, its new software platform, which provides the basis for new applications.

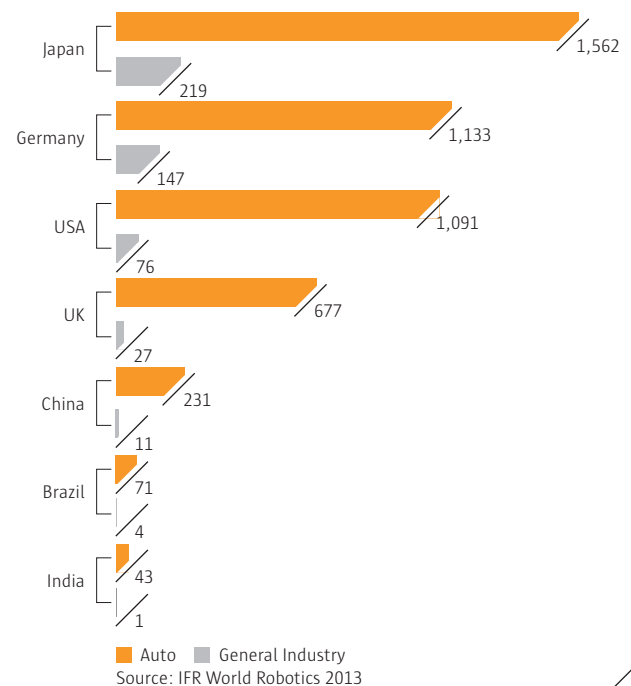
### 4) Developing and emerging countries

Robot density, and thus the degree of automation, is much higher in industrial countries than in the developing and emerging economies. The growth potentials in the developing and emerging countries affect the automotive sector as well as general industry. The international automotive industry is investing predominantly in these countries in order to profit from the lower wage costs, but also in order to be able to react flexibly to local customer requirements. Robot-based automation is an important element in this context because for decades it has been the standard for some production stages, e. g. in body-in-white manufacture. Local car manufacturers in the developing and emerging countries are also investing in automation in order to match up to the rising quality requirements and to enable them to export more of their vehicles in the medium-term future. At the same time, wages and salaries are rising at two-digit rates each year in some instances, which poses great challenges to companies that manufacture locally. Automation solutions can assist in cushioning against this rise in costs. The growth of automation in general industry benefits from the same issues as in the automotive industry: increasing cost pressure with simultaneously rising quality requirements.

In recent years the Chinese robot market grew disproportionately and is now already the world's largest sales market. According to the current study by the IFR, the number of robots sold has risen from just under 8,000 in 2008 to approximately 50,000 in 2014. The robots installed in China are made almost exclusively by non-Chinese manufacturers. But according to the IFR, Chinese robot suppliers will become increasingly important and will increase their production in the coming years. The new market players are also supported by government programs.

KUKA sees the Chinese robot and automation market as a core element of its future growth strategy and has therefore expanded its market presence. At the end of 2013, the new robot assembly plant was opened in the Greater Shanghai area where a large proportion of local requirements were already being produced in 2014. In addition, the workforce in China rose substantially from 395 employees (December 31, 2013) to a total of 696 (December 31, 2014). This has afforded KUKA greater local flexibility and customer proximity for sales and service. The customers profit from much shorter delivery times and faster response times. KUKA will also focus on investments in China in the coming years through the expansion and equipment of its local sites with the appropriate resources.

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



## Company-specific factors

### Summary

Given the current economic forecasts and the general conditions, KUKA expects good demand in the 2015 financial year, especially from North America and Asia, particularly China. Demand in Europe should develop relatively stable to slightly rising overall. From a sector perspective, general industry growth is expected to be positive. 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 have already significantly increased investments over the past few years. Demand in 2015 should therefore develop relatively stable altogether, with positive influences from China and the United States. Please refer to the notes starting on page 66 for comments on currency effects. In the case of Systems, a higher USD/euro exchange rate has a positive impact on the business figures because the North American sales market is the largest for this business segment. For Robotics, the development of the yen/euro exchange rate is particularly important. A weaker yen/euro exchange rate has a negative effect for Robotics because the main competitors come, above all, from Japan. For Swisslog, the appreciation of the Swiss franc will have a slightly adverse effect overall, because the cost share of the division in Switzerland is slightly higher than the revenue share. However, here too, KUKA Group profits from a stronger USD/euro exchange rate because the Swisslog division generates a substantial portion of its sales revenues and earnings in the United States.

### EXPECTED GROWTH FOR KUKA GROUP

Summary	Earnings 2014 (excl. Swisslog)	Outlook 2015 (incl. Swisslog)
Sales revenues	€ 2,095.7 million	~€ 2.8 billion
EBITDA margin	8.8%	~7.0%
EBIT margin*	6.8%	~5.5%
Net income for the fiscal year*	€ 68.1 million	rising
Investments**	€ 94.3 million	constant to rising
Free cash flow	€ -198.5 million	mid-double-digit million range
Dividend per share	€ 0.40	constant to rising

\* before PPA (purchase price allocation) for Swisslog

\*\* excl. financial investments

#### Definitions:

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

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

### Sales and EBIT margin

On the basis of the current general conditions and exchange rates, KUKA is expecting sales revenues of approximately € 2.8 billion. The sales development will profit from the first-time consolidation of Swisslog. In addition, both customer segments – general industry and automotive – and from a regional viewpoint, China and North America, will make a positive contribution to sales development. Based on the current economic general conditions and the development of sales, KUKA Group expects to achieve an EBIT margin of approximately 5.5 percent before PPA (purchase price allocation) for Swisslog. Investments in growth in general industry and China as well

as the integration and restructuring costs for Swisslog are having an impact on the EBIT margin. In addition, the introduction of project lifecycle management software at Systems and ERP software to be used throughout the Group will result in higher costs during 2015, but in subsequent years these will help make a considerable improvement in efficiency. Taking account of the expenditure for PPA, KUKA Group expects a lower EBIT margin. In the coming years after restructuring and an increase in efficiency at Swisslog, a positive contribution to value added is anticipated for KUKA Group.

### Net income

In the 2014 financial year KUKA Group generated net income for the year of € 68.1 million. In 2015, the organic rise in sales and lower net interest expenditure following the redemption of the high-yield bond will have a positive effect on net income. In contrast, the expenditure for PPA and restructuring of Swisslog will negatively impact the net income for the year. KUKA is therefore expecting a significant decline in the development of net income in 2015. Adjusted for the PPA effect, however, KUKA anticipates a rise in net income. In the following years, Swisslog is expected to have a distinctly positive impact on net income, with significant potential sales growth and cost synergies resulting from the acquisition.

### Research and development/investments

The total expense for research and development can chiefly be attributed to the Robotics division, since Systems conducts its R&D activities primarily in conjunction with customer projects. The high demand for KUKA robots and solutions is primarily based on their advantage in terms of innovation and quality. To safeguard and expand these competitive advantages sustainably, the spending on research and development will rise in 2015. Spending by the Robotics division will mainly focus on expanding the product portfolio, developing applications, new software solutions and measures to boost the efficiency of existing products. Overall, KUKA Group is budgeting for around € 80 million to be spent on research and development in 2015. Around 20–25 percent is to be capitalized and written down to schedule over three to five years. The capitalization ratio depends on the content of the R&D projects and may vary accordingly. While research projects are not permitted to be capitalized, projects with the main focus on development – if certain conditions arise – are to be capitalized in accordance with the applicable accounting rules.

KUKA Group is planning to increase overall investment in 2015. This largely consists of investments for the preservation of existing assets, the building of new facilities for expanding in general industry and the construction of the new Development and Technology Center in Augsburg. The new building is expected to be completed in the second half of 2015 and is intended to improve cooperation especially between research and development and other product-related departments 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, Systems and Swisslog 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 2015.

### Dividend

The Executive and Supervisory Boards will recommend to shareholders at the Annual General Meeting in Augsburg on June 10, 2015 that a dividend of €0.40 per share be paid for 2014. 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 2015, KUKA plans to maintain its dividend and possibly increase it slightly, allowing for the general conditions at the time.

## INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM

### PRINCIPLES

Pursuant to section 289 para. 5 and section 315 para. 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 with regard to the accounting process. The description must include the accounting processes of the companies included in the consolidated financial statements.

The risk management system comprises all organizational rules and measures related to identifying risk and dealing with entrepreneurial risk. The internal control system is an integral part of the risk management system.

The internal control system (ICS) comprises 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 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 to the company.

The objective of the ICS is to obtain sufficient certainty using the implemented controls and to be able to monitor and manage risks to ensure that the company's goals can be achieved. 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.

Regardless of its specific form, an ICS is unable to provide absolute certainty as to whether it will achieve its objectives. Taking this into account, the accounting-related ICS can only provide relative certainty rather than absolute certainty that material misstatements in accounting will be avoided or detected.

### 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 scope and design of the ICS.

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, we regard 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 45 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 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;
- ▲ Process-integrated monitoring measures such as the principle of dual control. Each business transaction must be signed or otherwise authorized by at least two authorized persons.

- ▲ 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 are recorded in the reporting and consolidation system;
- ▲ Measures to ensure the accounting-related internal control system conducted by the relevant departments. Internal controls must be documented and are usually examined using independent audits to determine their effectiveness. If control deficiencies are detected, an analysis and evaluation will be carried out. Major control deficiencies and action plans to rectify them will be reported to the Executive Board and additionally to the Supervisory Board. The internal audit department also monitors compliance with the internal control system.

In addition, the CFOs of all subsidiaries must provide an internal responsibility statement in the context of external reporting every quarter. Only then do the members of the Executive Board of KUKA Aktiengesellschaft issue and sign a responsibility statement at mid-year and year-end (see page 114), 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.

The elements of the ICS relevant for financial reporting are evaluated by an auditor to determine their effectiveness as part of a risk-oriented audit approach.

In its meetings, the Audit Committee of the Supervisory Board regularly reviews the effectiveness of the accounting-related internal control system. The Supervisory Board therefore 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 that have been depicted 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, 2014, the total share capital of KUKA Aktiengesellschaft amounted to €92,841,619.00 and consisted of €35,708,315 no-par-value bearer shares with a pro rata amount of the share capital of €2.60 per share. 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 the 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 predetermined 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 the phantom share program also count towards the holding target. The holding obligation does not end until the participant leaves KUKA Group.

Again in 2014, KUKA Aktiengesellschaft set up an employee share program (MAP 2014). Under the terms of MAP 2014, employees were entitled to buy KUKA shares and, in addition to the shares purchased, received bonus shares at a predetermined ratio as defined by MAP 2014. Employees are subject to a restriction on selling KUKA shares purchased or bonus shares allocated until December 31, 2015.

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 investor 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 this to the company and the German Federal Financial Supervisory Authority (BaFin),

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

### **A) SWOCTEM GMBH – NOTIFICATIONS DATED AUGUST 5, 2014**

1.	Swoctem GmbH, Haiger, Germany	10.018%	held directly
2.	Friedhelm Loh, Germany	10.018%	allocated pursuant to section 22 para. 1 sentence 1 no. 1 of the WpHG

### **B) J.M. VOITH GMBH & CO. BETEILIGUNGEN KG – NOTIFICATIONS DATED DECEMBER 3, 2014 AND DECEMBER 12, 2014\***

1.	J.M. Voith GmbH & Co. Beteiligungen KG, Heidenheim an der Brenz, Germany	25.10%	held directly
2.	J.M. Voith Verwaltungs GmbH, Heidenheim an der Brenz, Germany	25.10%	allocated pursuant to section 22 para. 1 sentence 1 no. 1 of the WpHG
3.	Voith GmbH, Heidenheim an der Brenz, Germany	25.10%	allocated pursuant to section 22 para. 1 sentence 1 no. 1 of the WpHG
4.	JMV GmbH & Co. KG Heidenheim an der Brenz, Germany	25.10%	allocated pursuant to section 22 para. 1 sentence 1 no. 1 of the WpHG
5.	JMV Verwaltungs GmbH, Heidenheim an der Brenz, Germany	25.10%	allocated pursuant to section 22 para. 1 sentence 1 no. 1 of the WpHG
6.	Voith Familien Verwaltung GmbH, Mannheim, Germany	25.10%	allocated pursuant to section 22 para. 1 sentence 1 no. 1 of the WpHG
7.	Familiengesellschaft J.M. Voith GbR, Mannheim, Germany	25.10%	allocated pursuant to section 22 para. 1 sentence 1 no. 1 of the WpHG

\* Pursuant to the notifications, the entire voting rights of J.M. Voith GmbH & Co. Beteiligungen KG consist of voting rights in accordance with sections 21, 22 WpHG (24.91 percent) and section 25a WpHG (0.19 percent).

Other than this, KUKA Aktiengesellschaft has no knowledge of any persons and/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 and 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 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 Meeting 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 this resolution, the Executive Board, subject to approval from 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). The shareholders shall be granted subscription rights. However, subject to approval from the Supervisory Board, the Executive Board is authorized to exclude fractional amounts from the shareholder's 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 from 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 this authorization, or if lower, the share capital existing on the date this 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 that the instruments were issued on the basis of an authorization resolved at the Annual General Meeting on April 29, 2010 pursuant to the corresponding application of section 186, para. 3 sentence 4 of the AktG during the term of said authorization. The Executive Board, subject to approval from the Supervisory Board, may only use the aforementioned authorization to exclude shareholder subscription rights to the extent that the prorated sum of shares issued under exclusion of subscription rights does not exceed 30 percent of the share capital existing either on the date this authorization takes effect or on the date the authorization is exercised, should that amount be less. The Executive Board is authorized, subject to approval from 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.

Making partial use of this authorization and with approval by the Supervisory Board, the Executive Board agreed on a capital increase on September 19/25, 2014 and on November 5, 2014, under the exclusion of subscription rights, with the execution of said increase being entered into the commercial register on November 6, 2014. In the context of the capital increase, a total of 1,792,884 new no-par-value bearer shares with a pro rata amount of share capital equal to € 2.60 per share were issued against cash contributions; the share capital was increased by a nominal value of € 4,661,498.40. As a result of the implemented capital increase, the Approved Capital 2011 currently amounts to € 39,428,560.60. The authorization for excluding the subscription rights for a capital increase against cash contributions outlined here and the issue of new shares at an issue price which is not significantly below the stock exchange price of the company's shares already listed on the stock exchange has been completely exercised.

### 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 no-par-value 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 nominal amount of € 58,800,000.

The new shares will be issued at the conversion price applicable under 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 profits for these years have been distributed as of yet. The Executive Board is authorized, subject to approval from 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 no-par-value shares (Conditional Capital 2013).

The conditional capital increase will only be carried out to the extent that holders or creditors 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 up to June 4, 2018 on the basis of the authorization granted to the Executive Board by the Annual General Meeting resolution of June 5, 2013, or, if the holders are obligated to exercise their conversion or option rights, 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 from 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 nominal amount of € 91,200,000 via a private placement.

The convertible bond issued on July 26, 2013 thus constitutes an increase in 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 share capital equal to € 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 will be increased by € 10,595,897 through the issue of currently 4,075,345 new shares with a pro rata amount of share capital equal to € 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 May 28, 2014, the company is authorized, up until May 27, 2019, 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 detail in the authorization.

The company may exercise this authorization in whole or partial amounts, once or several times; however, it may also be executed by dependent companies or companies in a majority holding, or through a third party on behalf of the company or its dependants.

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

- (1) To sell the treasury shares acquired to third parties in connection with company mergers or the acquisition of companies, or parts of companies, or participations in companies, or for the purpose of acquiring other assets (including claims of third parties against the company);
- (2) To sell the treasury 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 treasury shares at the time of sale.

However, this 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.

- (a) 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 this Annual General Meeting pursuant to the corresponding application of section 186 para. 3 sentence 4 of the German Stock Corporation Act (AktG);
- (b) that are issued by exercising an authorization – in effect on the date on which the above authorization took effect or that was resolved by this Annual General Meeting, from authorized capital pursuant to section 186 para. 3 sentence 4 of the German Stock Corporation Act (AktG);

- (3) To use the treasury shares acquired to introduce the treasury stock on foreign stock exchanges on which they have not previously been admitted for trading.

- (a) Treasury shares acquired on the basis of this authorization and authorizations granted at an earlier time may be cancelled without requiring a further resolution at the Annual General Meeting for the cancellation. Cancellation leads to the reduction of share capital. However, the cancellation can also be made by means of a simplified process without the reduction of share capital by adjusting the pro-portionate amount of share capital of the remaining shares according to section 8 para. 3 of the German Stock Corporation Act (AktG). The Executive Board is in this case authorized to change the disclosure of the number of shares in the Articles of Association accordingly.
- (b) This authorization for the acquisition of treasury shares, as well as the resale or cancellation of such shares, may be used once or several times, in whole or in part.

Moreover, subject to approval from the Supervisory Board, the Executive Board is authorized to withdraw or resell the treasury shares acquired. Both the purchase and disposal authorization may be exercised in part on one or more occasions.

### SIGNIFICANT COMPANY AGREEMENTS THAT ARE CONDITIONAL UPON A CHANGE OF CONTROL, AND THE RESULTING IMPACT

#### Employment contracts of Executive Board members

The employment contracts of the Executive Board members contain “change-of-control” clauses. In the event of a change in control within the company (sections 29 para. 2 and 30 WpÜG), the Executive Board members are entitled to terminate the employment contract within three months of the change in control occurring with a notice period of three months. In the event of a termination, the Executive Board members will be entitled to a severance payment, which is measured against the compensation due for the remainder of their contract, but is restricted to twice the annual compensation at most.

#### 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 Deutschland-geschäft, 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 contains 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.

### 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 the bondholder from the bondholder by sale or by 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, 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. The change-of-control clauses in the employment contracts of the Executive Board members do not constitute compensation clauses as defined in sections 289 para. 4 sentence 1 no. 9 and 315 para. 4 sentence 1 no. 9 of the German Commercial Code (HGB).

### **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

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# FINANCIAL STATEMENTS

## GROUP INCOME STATEMENT

of KUKA Aktiengesellschaft for the period January 1 – December 31, 2014

in € millions	Notes	2013	2014
<b>Sales revenues</b>	(1)	1,774.5	2,095.7
Cost of sales	(2)	-1,336.0	-1,570.2
<b>Gross income</b>		<b>438.5</b>	<b>525.5</b>
Selling expenses	(2)	-130.2	-161.0
Research and development costs	(2)	-59.7	-78.2
General and administrative expenses	(2)	-110.0	-133.5
Other operating income	(3)	31.5	51.8
Other operating expenses	(3)	-56.4	-63.8
Loss from companies consolidated at equity	(10)	-	-2.6
<b>Earnings from operating activities</b>		<b>113.7</b>	<b>138.2</b>
<b>Reconciliation to earnings before interest and taxes (EBIT)</b>			
Financing costs included in operating results		6.7	3.8
<b>Earnings before interest and taxes (EBIT)</b>		<b>120.4</b>	<b>142.0</b>
Depreciation and amortization		38.0	42.9
<b>Earnings before interest, tax and amortization (EBITDA)</b>		<b>158.4</b>	<b>184.9</b>
Interest income	(4)	8.8	8.7
Interest expense	(4)	-28.8	-33.6
<b>Financial results</b>		<b>-20.0</b>	<b>-24.9</b>
<b>Earnings before tax</b>		<b>93.7</b>	<b>113.3</b>
Taxes on income	(5)	-35.4	-45.2
<b>Earnings after taxes</b>		<b>58.3</b>	<b>68.1</b>
of which: attributable to minority interests		0.0	0.0
of which: attributable to shareholders of KUKA AG		58.3	68.1
<b>Earnings per share (undiluted) in €</b>	(6)	<b>1.72</b>	<b>1.99</b>
<b>Earnings per share (diluted) in €</b>	(6)	<b>n/a</b>	<b>1.90</b>

## STATEMENT OF COMPREHENSIVE INCOME

of KUKA Aktiengesellschaft for the period January 1 – December 31, 2014

in € millions	Notes	2013	2014
<b>Earnings after taxes</b>		<b>58.3</b>	<b>68.1</b>
<b>Items that may potentially be reclassified to profit or loss</b>			
Translation adjustments		-2.1	11.9
<b>Items that are not reclassified to profit or loss</b>			
Changes of actuarial gains and losses	(22)	6.3	-16.1
Deferred taxes on changes of actuarial gains and losses		-1.6	3.8
<b>Changes recognized directly in equity</b>		<b>2.6</b>	<b>-0.4</b>
<b>Comprehensive income</b>		<b>60.9</b>	<b>67.7</b>
of which: attributable to minority interests		0.0	0.0
of which: attributable to shareholders of KUKA AG		60.9	67.7

## CASH FLOW STATEMENT\*

of KUKA Aktiengesellschaft for the financial year 2014

in € millions	2013	2014
<b>Net income after taxes</b>	<b>58.3</b>	<b>68.1</b>
Depreciation of intangible assets	20.3	18.4
Depreciation of tangible assets	17.9	25.1
Other non-payment related income	-2.3	-16.2
Other non-payment related expenses	21.1	31.9
<b>Cash earnings</b>	<b>115.3</b>	<b>127.3</b>
Result on the disposal of assets	0.3	0.4
Changes in provisions	10.4	34.8
Changes in current assets and liabilities		
Changes in inventories	27.9	-27.7
Changes in receivables and deferred charges	-0.1	-35.4
Changes in liabilities and deferred income (excl. financial debt)	67.2	67.6
<b>Cash flow from operating activities</b>	<b>221.0</b>	<b>167.0</b>
Payments from disposals of fixed assets	0.7	0.7
Payments for capital expenditures on intangible assets	-17.7	-15.9
Payments for capital expenditures on tangible assets	-57.0	-78.4
Payments for the acquisition of consolidated companies and other business units	-16.6	-284.6
Payments due to investment funds as part of short-term financial management	-35.0	12.7
<b>Cash flow from investing activities</b>	<b>-125.6</b>	<b>-365.5</b>
<b>Free cash flow</b>	<b>95.4</b>	<b>-198.5</b>
Payments from capital increase	0.0	86.6
Dividend payments	-6.8	-10.2
Proceeds/payments from the issuance/repayment of bonds and liabilities similar to bonds	111.0	-173.0
Proceeds from/payments for the acceptance/repayment of bank loans	-0.4	-17.4
<b>Cash flow from financing activities</b>	<b>103.8</b>	<b>-114.0</b>
<b>Payment-related changes in cash and cash equivalents</b>	<b>199.2</b>	<b>-312.5</b>
Changes due to acquisitions of companies	-	56.8
Exchange rate-related and other changes in cash and cash equivalents	-2.4	6.7
<b>Changes in cash and cash equivalents</b>	<b>196.8</b>	<b>-249.0</b>
(of which net increase/decrease in restricted cash)	(6.1)	(3.7)
Cash and cash equivalents at the beginning of the period	244.3	441.1
<b>Cash and cash equivalents at the end of the period</b>	<b>441.1</b>	<b>192.1</b>
(Restricted cash)	(6.1)	(2.4)

\* See note 29 for further information on the cash flow statement

## GROUP BALANCE SHEET

of KUKA Aktiengesellschaft as of December 31, 2014

ASSETS in € millions	Notes	2013	2014
<b>Non-current assets</b>			
Intangible assets	(7)	92.5	430.4
Property, plant and equipment	(8)	133.6	233.8
Financial investments	(9)	0.2	0.6
Investments accounted for at equity	(10)	-	5.6
		<b>226.3</b>	<b>670.4</b>
Finance lease receivables	(11)	61.9	66.1
Income tax receivables		4.8	3.4
Other long-term receivables and other assets	(14)	9.1	9.9
Deferred taxes	(5)	25.6	48.2
		<b>327.7</b>	<b>798.0</b>
<b>Current assets</b>			
Inventories	(12)	186.2	272.4
Receivables and other assets			
Trade receivables	(13)	167.5	273.8
Receivables from construction contracts	(13)	181.1	339.1
Finance lease receivables	(11)	5.3	6.9
Income tax receivables		7.1	9.7
Other assets, prepaid expenses and deferred charges	(14)	61.1	71.0
		<b>422.1</b>	<b>700.5</b>
Cash and cash equivalents	(15)	441.1	192.1
Assets held for disposal	(27)	-	16.5
		<b>1,049.4</b>	<b>1,181.5</b>
		<b>1,377.1</b>	<b>1,979.5</b>



EQUITY AND LIABILITIES in € millions	Notes	2013	2014
<b>Equity</b>	<b>(16)</b>		
Subscribed capital	(17)	88.2	92.8
Capital reserve	(18)	94.5	176.5
Revenue reserves	(19)	195.1	255.0
Minority interests	(20)	1.3	16.8
		<b>379.1</b>	<b>541.1</b>
<b>Non-current liabilities, provisions and accruals</b>			
Financial liabilities	(24+25)	288.1	137.0
Other liabilities	(24)	14.7	18.2
Pensions and similar obligations	(22)	73.4	121.7
Deferred taxes	(5)	24.5	65.3
		<b>400.7</b>	<b>342.2</b>
<b>Current liabilities</b>	<b>(24)</b>		
Financial liabilities	(24+25)	6.5	22.5
Trade payables	(24)	171.7	274.6
Advances received	(24)	52.3	78.3
Liabilities from construction contracts	(24)	132.7	247.6
Accounts payable to affiliated companies	(24)	0.1	0.1
Income tax liabilities	(24)	7.1	24.9
Other liabilities and deferred income	(26)	132.2	290.8
Other provisions	(23)	94.7	150.1
		<b>597.3</b>	<b>1,088.9</b>
Liabilities from assets held for disposal	(27)	-	7.3
		<b>597.3</b>	<b>1,096.2</b>
		<b>1,377.1</b>	<b>1,979.5</b>

## DEVELOPMENT OF GROUP EQUITY

of KUKA Aktiengesellschaft for the financial year 2014

Notes		(17)	(18)
	Number of shares outstanding	Subscribed capital in € millions	Capital reserve in € millions
<b>Jan. 1, 2013</b>	<b>33,915,431</b>	<b>88.2</b>	<b>67.5</b>
Comprehensive income	-	-	-
Dividend of KUKA AG	-	-	-
Other changes	-	-	27.0
<b>Jan. 1, 2014</b>	<b>33,915,431</b>	<b>88.2</b>	<b>94.5</b>
Comprehensive income	-	-	-
Capital increase	1,792,884	4.6	82.0
Dividend of KUKA AG	-	-	-
Other changes	-	-	-
<b>Dec. 31, 2014</b>	<b>35,708,315</b>	<b>92.8</b>	<b>176.5</b>

	(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
	-0.1	-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
	-	0.6	-	27.6	-0.1		27.5
	-2.2	-4.9	202.2	377.8	1.3		379.1
	11.9	-12.3	68.1	67.7	-		67.7
	-	-	-	86.6	-		86.6
	-	-	-10.2	-10.2	-		-10.2
	-	-	2.4	2.4	15.5		17.9
	<b>9.7</b>	<b>-17.2</b>	<b>262.5</b>	<b>524.3</b>	<b>16.8</b>		<b>541.1</b>

# GROUP NOTES

## GROUP SEGMENT REPORTING\*

of KUKA Aktiengesellschaft for the financial year 2014

in € millions	Robotics		Systems	
	2013	2014	2013	2014
Order income	793.5	805.5	1,111.6	1,456.0
Order backlog	280.7	241.5	714.4	955.4
Group external sales revenues	732.2	814.0	1,042.3	1,281.7
as a % of Group sales revenues	41.3 %	38.8 %	58.7 %	61.2 %
Intra-Group sales	21.9	20.6	3.6	3.9
<b>Sales revenues by division</b>	<b>754.1</b>	<b>834.6</b>	<b>1,045.9</b>	<b>1,285.6</b>
<b>Operating profit/loss</b>	<b>271.4</b>	<b>309.3</b>	<b>150.0</b>	<b>213.6</b>
as a % of sales revenues of the division	36.0 %	37.1 %	14.3 %	16.6 %
<b>EBIT</b>	<b>77.1</b>	<b>89.5</b>	<b>60.8</b>	<b>80.2</b>
as a % of sales revenues of the division	10.2 %	10.7 %	5.8 %	6.2 %
as a % of average capital employed (ROCE)	49.6 %	53.5 %	43.0 %	67.9 %
<b>EBITDA</b>	<b>101.9</b>	<b>112.0</b>	<b>71.0</b>	<b>97.4</b>
as a % of sales revenues of the division	13.5 %	13.4 %	6.8 %	7.6 %
Capital employed (annual average)	155.6	167.3	141.5	118.1
Capital employed (end of financial year)	158.4	176.3	99.6	136.6
Assets	350.6	394.9	494.5	725.5
Liabilities	201.4	227.8	395.3	611.0
Investments accounted for at equity	-	3.2	-	2.4
Earnings of investments accounted for at equity	-	-2.6	-	0.0
Capital expenditure	30.8	30.4	15.2	28.7
Depreciation/amortization of intangible and tangible assets	19.9	22.5	10.2	17.1
Impairment losses on intangible and tangible assets	4.9	-	-	-
Depreciation/amortization of interest capitalized under intangible assets	0.2	0.6	-	-
Employees (Dec. 31)	3,416	3,644	4,362	5,810

\* See note 29 for more information on Group segment reporting

\*\* For acquisitions during the year, the annual average is taken into account with half the capital employed as of the end of the year.

	Swisslog	KUKA AG and other companies		Reconciliation and consolidation		Group	
	2014	2013	2014	2013	2014	2013	2014
	-	-	-	-23.2	-32.5	1,881.9	2,229.0
	517.2	-	-	-3.5	-11.6	991.6	1,702.5
	-	-	-	0.0	0.0	1,774.5	2,095.7
	-	-	-	-	-	100.0%	100.0%
	-	-	-	-25.5	-24.5	-	-
	-	-	-	-25.5	-24.5	1,774.5	2,095.7
	-	-	-	17.1	2.6	438.5	525.5
	-	-	-	-	-	24.7%	25.1%
	-	-19.3	-27.8	1.8	0.1	120.4	142.0
	-	-	-	-	-	6.8%	6.8%
	-	-	-	-	-	36.9%	28.9%
	-	-16.1	-24.5	1.6	0.0	158.4	184.9
	-	-	-	-	-	8.9%	8.8%
	154.6	29.6	52.4	-0.5	-0.4	326.2	492.0
	309.3	56.1	48.7	-0.3	-0.8	313.8	670.1
	537.6	232.6	494.6	-172.1	-416.8	905.6	1,735.8
	261.2	74.1	90.9	-5.8	-9.6	665.0	1,181.3
	-	-	-	-	-	-	5.6
	-	-	-	-	-	-	-2.6
	-	28.7	35.2	0.0	0.0	74.7	94.3
	-	2.8	3.3	-0.2	-	32.7	42.9
	-	0.4	-	-	-	5.3	0.0
	-	0.0	-	-	-	0.2	0.6
	2,369	212	279	-	-	7,990	12,102

## GENERAL COMMENTS

### ACCOUNTING PRINCIPLES

KUKA Aktiengesellschaft, headquartered in Augsburg, has prepared its consolidated financial statements for the period ending December 31, 2014 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 para. 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 2014 financial year (see “Changes in accounting policies”). The consolidated financial statements comply with German law. The currency reported in the consolidated financial statements is the euro. Unless otherwise noted, all amounts in the notes to the accounts 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. In this case, 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 identically worded declarations of conformity with the German Corporate Governance Code pursuant to section 161 of the German Stock Corporation Act (AktG) made by the Executive Board on January 20, 2015 and the Supervisory Board on February 6, 2015 can be accessed on the Internet through the Company’s website ([www.kuka-ag.de](http://www.kuka-ag.de)). The Executive Board prepared the consolidated financial statements on March 4, 2015.

### SCOPE OF CONSOLIDATION

A total of 103 companies (2013: 51) are included in the Group’s consolidated financial statements. In addition to KUKA Aktiengesellschaft, 19 companies registered inside Germany and 83 companies domiciled outside Germany are included that KUKA Aktiengesellschaft either directly or indirectly controls.

### NUMBER OF FULLY CONSOLIDATED COMPANIES

Number	Robotics	Systems	Swisslog	Other	Total
<b>As of January 1, 2014</b>	<b>23</b>	<b>25</b>	<b>0</b>	<b>3</b>	<b>51</b>
First-time consolidations	0	27	30	0	57
Mergers	0	-5	0	0	-5
Internal Group restructurings	1	-1	0	0	0
<b>As of December 31, 2014</b>	<b>24</b>	<b>46</b>	<b>30</b>	<b>3</b>	<b>103</b>
of that, Germany	2	11	4	3	20
of that, abroad	22	35	26	0	83

### NUMBER OF ASSOCIATES

Number	Robotics	Systems	Swisslog	Other	Total
<b>As of December 31, 2014</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>

The group of fully consolidated companies was expanded by the acquisition of Reis Group (a total of 25 companies), Obernburg, Germany and ALEMA Automation SAS, Bordeaux, France. These companies are part of the Systems segment, as too is Faude Automatisierungstechnik GmbH, Gärtringen, Germany, acquired in December 2014. In addition, Swisslog Group, Buchs (AG), Switzerland with a total of 30 companies was acquired in December 2014. The company C.M.A-Technology SRL, Sibiu, Romania merged with KUKA Systems SRL, Sibiu, Romania and the company HLS Autotechnik (India) Pvt. Ltd., Pune, India merged with KUKA Systems (India) Pvt. Ltd., Pune, India. In addition, the companies Reis Mechatronic Tools GmbH, Obernburg, Germany, Reis Extrusion GmbH, Merzenich-Golzheim, Germany and Reis Lasertec GmbH, Würselen, Germany were amalgamated with Reis GmbH & Co. KG Maschinenfabrik, Obernburg, Germany. Furthermore, the two associates KBee AG, Munich, Germany and Yawei Reis Robot Manufacturing (Jiangsu) Co., Ltd., Yangzhou, China were included in the consolidated financial statements by the equity method (for further information please refer below to “Investments in associates”). The former has been allocated to the Robotics segment and the latter to Systems. Because of the change in the business model, the Thai subsidiary of the Systems segment was reclassified into the Robotics segment.

### COMPANY ACQUISITIONS

#### Reis Group

Reis Group of Obernburg, Germany was purchased at the start of the year. The parent company of Reis Group is Reis Group Holding GmbH & Co. KG, Obernburg, Germany. It is managed by Reis Holding GmbH, Obernburg, Germany. Reis is primarily a systems integrator which also develops and manufactures industrial robots and robot controllers. The robots and systems are used in numerous industrial applications such as welding, cutting, laser processing as well as in the production of castings and plastic components. The company supplies a wide variety of sectors ranging from the automotive, chemical and electronics industries to the white goods industry. KUKA expects this acquisition to lead to the opening up of further markets in general industry and further strengthening of its presence in China. Future synergies in product development are also expected.

The purchase contract to acquire all the shares in Reis Holding GmbH and a limited partner's equity contribution in Reis Group Holding GmbH & Co. KG, as a result of which KUKA became the majority limited partner with a 51.0 percent stake, was signed subject to suspensive conditions on December 21, 2013. These conditions were satisfied in January 2014. Using the anticipatory purchase method pursuant to IAS 32, Reis Group was wholly included in KUKA Group as of January 1, 2014.

The purchase price for the shares in Reis Holding GmbH was € 1. A limited partner's equity contribution of € 2.1 million was made in Reis Group Holding GmbH & Co. KG in January 2014. Future liabilities include as the major component the right to repossess the business premises in Obernburg, fixed and performance-based components at the time of the possible acquisition of the limited partner's shares remaining under civil law and annual guaranteed distributions to pre-existing shareholders. In preparation for these obligations a sum of € 41.9 million is carried as a liability.

Cash and cash equivalents of € 4.9 million were transferred. No shares in previously fully consolidated companies of KUKA Group were acquired. Sales revenues of € 118.7 million and a net loss of € 13.0 million were attributable to the acquisition in the 2014 financial year.

in € millions	Carrying amounts assumed	Opening balance sheet in fair values
Intangible assets	1.6	16.0
Property, plant and equipment	29.7	31.1
Inventories	39.5	39.5
Receivables and other assets	22.5	22.5
Liabilities and provisions	81.5	81.5

The acquired intangible assets consist to a large extent of software licenses, as well as patents, customer lists and orders on hand. Receivables and inventories primarily concern orders in house at the time of the acquisition. Contingent liabilities were not transferred. The acquisition resulted in deferred tax liabilities of € 4.1 million. The transaction thus led to goodwill of € 13.5 million. The goodwill particularly reflects the future synergies for development of the market in China and in general industry.

### ALEMA Automation

The purchase of all the shares in ALEMA Automation SAS, Bordeaux, France took place on February 26, 2014. Alema supplies automation solutions for the aerospace industry and has particular application know-how in the field of automated drilling and riveting of aircraft components. With this acquisition, KUKA is expecting, above all, to gain future synergies affecting the implementation of its growth strategy in the general industry sector, and the aerospace industry in particular.

The purchase price of € 11.4 million was immediately settled in cash. Cash and cash equivalents of € 0.6 million were transferred. No shares in previously fully consolidated companies of KUKA Group were acquired.

Sales revenues of € 17.1 million and net income of € 1.2 million were attributable to the acquisition in the financial year. If the business had already been taken over at the beginning of 2014, this would have contributed € 2.0 million more to revenues and € 0.3 million less to net income.

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	1.1	1.8
Property, plant and equipment	0.1	0.1
Inventories	1.3	1.4
Receivables and other assets	9.9	9.9
Liabilities and provisions	11.7	11.7

The acquired intangible assets consist to a large extent of software licenses, as well as patents, customer lists and orders on hand. Receivables and inventories primarily concern orders in house at the time of the acquisition. Contingent liabilities were not transferred. The acquisition resulted in deferred tax liabilities of € 0.3 million. The transaction thus led to goodwill of € 9.6 million. The goodwill particularly reflects the future synergies for development of the market in the aerospace industry.

### Swisslog Group

Swisslog Group, Buchs (AG), Switzerland was acquired at the end of the year. The parent of Swisslog Group is Swisslog Holding AG, Buchs (AG), Switzerland. Swisslog produces leading automation solutions for future-oriented hospitals, warehouse and distribution centers with the focus on the segments of trading, including e-commerce, pharmaceuticals and chilled and frozen foods. KUKA is expecting the acquisition to bring in new growth potential as a result of the optimized market position in general industry. The expected synergies involve in particular the shared use of technology, the bundling of know-how from the areas of purchasing and services and the shared use of international location structures.

This investment took place as a result of the purchase of 94.5 percent of the shares in Swisslog Holding AG. The total purchase price amounts to CHF 319.2 million, i. e. € 265.8 million. Cash and cash equivalents of € 51.1 million were taken over. No shares in previously fully consolidated companies of KUKA Group were acquired. Swisslog Group was consolidated on December 31, 2014, so that no revenues or net income were attributable to KUKA Group in the financial year. As a total, Swisslog Group achieved sales revenues of CHF 669.6 million in the 2014 financial year, i. e. € 556.9 million and net income of CHF 4.4 million or € 3.7 million.

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 (provisional):

in € millions	Carrying amounts assumed	Opening balance sheet in fair values
Intangible assets	92.8	155.7
Property, plant and equipment	13.1	13.1
Inventories	17.0	17.7
Receivables and other assets	216.2	216.2
Liabilities and provisions	277.9	277.9

The acquired intangible assets consist to a large extent of software licenses, as well as patents, customer lists and orders on hand. The “Swislog” trademark was capitalized for € 22.1 million. Receivables and inventories primarily concern orders in house at the time of the acquisition. Contingent liabilities were not transferred. The acquisition resulted in deferred tax liabilities of € 42.9 million. This resulted in goodwill of € 148.2 million arising through the transaction, based on the full-goodwill method. Specifically, the goodwill reflects the shared use of technology, the bundling of know-how from the areas of purchasing and services and the shared use of international location structures.

#### Faude Automatisierungstechnik

Faude Automatisierungstechnik GmbH, Gärtringen, Germany was also taken over at the end of the year. In conjunction with a capital increase, KUKA initially acquired 50.0 percent of the shares for € 0.1 million. On the basis of more extensive rights in the purchase contract and agreements concerning acquisition of the remaining shares, the company is already fully consolidated as of December 31, 2014. Further liabilities of € 2.3 million are entailed by performance-related elements and agreements on the continued financing of pension entitlements. An advance payment of € 0.2 million was made for the former. No sales revenues or net income were entailed by this acquisition during the year under review.

In the course of the preliminary allocation of the purchase price, total reserves of € 0.1 million were disclosed for intangible assets. The transaction led to goodwill of € 1.4 million. This reflects in particular the stronger positioning of KUKA Group in the field of human-robot collaboration, and here a sharply rising market volume is to be expected in the coming years.

#### INVESTMENTS IN ASSOCIATES

On February 27, 2014 KUKA Group invested in a 45.0 percent stake in KBee AG, Munich, Germany. This company develops and commercializes robot hardware, software and design. The planned new developments are intended to make a large number of new applications available for the first time for automation and robotics. The shareholders of KBee AG have invested in the form of know-how or, as in the case of KUKA, by contributing finance. The contractually agreed contribution of additional funds is made contingent upon achieving defined milestones.

The investment is accounted for by the equity method in accordance with IAS 28. The carrying amount of the investment is initially entered at the level of the pro rata equity capital. The initial difference between the cash contribution and pro rata equity capital (€ 3.2 million) is recognized directly in equity. The share of the company’s current gains or losses for KUKA is recognized directly in the income statement in the result before interest and taxes under the item “Earnings from companies valued at equity”. As of December 31, 2014 the investment amounts to 40.0 percent once shares were transferred to members of the senior management of KUKA Group under an investment program as per agreement. By this means and through partial cash contributions made as per agreement the sum recognized in equity altered by € 0.8 million to € 2.4 million. As of December 31, 2014 a loss of € 2.6 million was taken into account. The carrying amount is therefore € 3.2 million as of the reporting date.

In addition KUKA Group set up a joint venture with Jiangsu Yawei Machine-Tool Co., Ltd., China on June 24, 2014 with the name Yawei Reis Robot Manufacturing (Jiangsu) Co., Ltd, in which KUKA holds 49.0 percent and Yawei 51.0 percent. The business license was granted by the Chinese authorities at the end of September 2014. The contract was established for ten years. The registered address of the company is the Yawei site in the Chinese city of Yangzhou. The Chinese partner Yawei is one of the leading Chinese companies in the manufacture of machines for sheet metal working and has been listed on the stock exchange since 2011. For KUKA, the joint venture means a further point of access to the Asian market, where the Group plans to increase its growth. The collaboration of Reis and Yawei in the linear robot sector also assists in the sale of KUKA products to the metalworking industry, in which Yawei occupies a strong position. Both parties to the joint venture are thus able to make use of their market presence for sales. The investment is accounted for by the equity method in accordance with IAS 28 that also applies to joint ventures according to IFRS 11. By December 31, 2014 a pro rata net loss for the year of less than € 0.1 million was recorded. The carrying amount is therefore € 2.4 million as of the reporting date.

#### CONSOLIDATION PRINCIPLES

Subsidiaries directly or indirectly controlled by KUKA Aktiengesellschaft (“control concept” according to IFRS 10) are consolidated in the Group financial statements according to the rules of full consolidation. Control prevails if there is a right to the variable returns and the possibility for the company to use the control so that thereby the level of returns from the company can be influenced. To determine the point at which the company is included in consolidation or is finally consolidated, the date is crucial on which control is effectively gained or lost.

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 the carrying amounts of the investment against the pro rata newly measured equity capital of the subsidiaries at the time of acquisition. 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. At Swisslog Group unrealized price differences from the translation of loans to foreign subsidiaries in foreign currency are recognized directly in the aggregate income/loss and so recognized directly in equity. On loss of control these effects are released through profit or loss. This approach has no effect within KUKA Group as of December 31, 2014 because the equity capital of Swisslog Group was newly translated as of December 31, 2014.

Assets and liabilities are translated at the rate effective on the balance sheet date. Derivative goodwill and equity recognized prior to January 1, 2015 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, 2013	Dec. 31, 2014	2013	2014
Australia	AUD	1.5423	1.4829	1.3770	1.4724
Brazil	BRL	3.2576	3.2207	2.8669	3.1228
Canada	CAD	1.4671	1.4063	1.3685	1.4669
China	CNY	8.3491	7.5358	8.1655	8.1883
India	INR	85.3660	76.7190	77.8753	81.0689
Japan	JPY	144.7200	145.2300	129.6592	140.3783
Korea	KRW	1,450.9300	1,324.8000	1,453.8550	1,399.0300
Malaysia	MYR	4.5221	4.2473	4.1855	4.3472
Mexico	MXN	18.0731	17.8679	16.9644	17.6621
Norway	NOK	8.3630	9.0420	7.8051	8.3551
Poland	PLN	4.1543	4.2732	4.1971	4.1845
Romania	RON	4.4710	4.4821	4.4193	4.4443
Russia	RUB	45.3246	72.3370	42.3248	51.0113
Sweden	SEK	8.8591	9.3930	8.6505	9.0969
Switzerland	CHF	1.2276	1.2024	1.2309	1.2146
Singapore	SGD	1.7414	1.6058	1.6618	1.6830
Taiwan	TWD	40.9807	38.2507	39.3423	40.1498
Thailand	THB	45.1780	39.9100	40.8233	43.1628
Czech Republic	CZK	27.4270	27.7350	25.9872	27.5358
Hungary	HUF	297.0400	315.5400	296.9408	308.7067
USA	USD	1.3791	1.2141	1.3282	1.3288
United Kingdom	GBP	0.8337	0.7789	0.8493	0.8064
Vietnam	VND	28,967.5900	25,851.2900	27,881.5958	28,038.6629

## ACCOUNTING AND VALUATION

### Orders received

An order is recognized as an incoming order on receipt of a binding purchase order. Framework agreements are not reported here. However, legally binding order releases for volumes from framework agreements are recognized as orders received.

### Order backlog

If a binding customer order has not yet been invoiced or not yet realized as a sale in the case of long-term contract production, an order is recorded as an order backlog.

### 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 pre-existing 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.

### Investments in associates and joint ventures

Investments in associates are reported at cost in the first instance. A difference between the cash contribution and pro rata equity capital is recognized directly in equity. Subsequent measurement takes place using the equity method as described in IAS 28. The result of associates is recognized in a separate item of the income statement.

### Goodwill

Goodwill is tested for impairment at least annually. To this end, 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 were 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 7.

### 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.

Depreciation commences when the asset is put into use and is recognized over an expected useful life of, as a rule, three to four years, using the straight-line 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, patents and trademarks, are recognized at their acquisition cost and are amortized over their expected useful life of usually 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 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. By means of these indicators KUKA regularly observes whether a triggering event is present that would necessitate an impairment test in accordance with IAS 36. 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.

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).

### Borrowing costs and qualifying assets

Under the provisions of IAS 23, finance costs must be accrued for qualifying assets. Provided they are material, borrowing costs are capitalized for these qualifying assets. Those assets are defined as qualifying assets within KUKA Group for which a period longer than 12 months is required to make 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.

### 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 29.

### 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.

Under IAS 39 the following categories of financial instrument are relevant to KUKA Group (see note 28):

- ▲ Loans and receivables
- ▲ Financial instruments held to maturity
- ▲ Financial assets and financial liabilities held for trading with measurement at fair value through profit or loss
- ▲ Available-for-sale financial assets
- ▲ Other financial liabilities  
(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 (see also note 28).

- ▲ 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.

Derivatives with a positive fair value are recognized under other assets. If the fair value of derivatives is negative, this results in recognition under other liabilities.

### Investments in non-consolidated companies and financial investments

In 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.

### 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. Securities with an original remaining term of more than three months are not recognized in this item but under other assets.

## 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. Future conditional liabilities arising from business combinations are disclosed as other current liabilities.

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 has 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.

## 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 and losses are recognized in other comprehensive income in the period during which they arise. 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.

Provisions are classified as current when it is expected they will be used within the normal business cycle. This may extend for longer than a year in individual cases. 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.

### Assets and liabilities held for sale

A non-current asset (or disposal group) is classified as held for sale if the associated carrying amount is mainly realized by a sales transaction or a distribution to shareholders and not by continued use. For this to be the case, the asset (or disposal group) in its current state under conditions that are established practice and common for the sale/distribution of such assets (or disposal groups) must be immediately available for sale/distribution and such sale/distribution must be highly probable. Non-current assets and disposal groups held for sale are measured at the lower of carrying amount and fair value, less disposal costs, unless the items presented in the disposal group do not fall within the measurement rules of IFRS 5.

### Share-based compensation

Also in the 2014 financial 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 in the form of extra shares 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 45,870 shares; 22,935 incentive shares were credited. The KUKA share price at the time of the guarantee was €43.80 (2013: €34.41). This results in an expense of €1.4 million (2013: €0.6 million) for the 2014 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 €15.6 million (2013: €4.6 million) was set aside at December 31, 2014 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 in some cases 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:

- ▲ Definition of the scope of consolidation
- ▲ Calculation of fair value
- ▲ Development costs
- ▲ Goodwill impairments
- ▲ Deferred tax assets
- ▲ Trade receivables
- ▲ Receivables and liabilities from construction contracts
- ▲ Pensions and other post-employment benefits
- ▲ Provisions

### Definition of the scope of consolidation

Subsidiaries are those companies over which KUKA Aktiengesellschaft has existing rights enabling it currently to direct their significant operations. Significant operations are business operations which have a material impact on the profitability of a company. Control is therefore only present if KUKA Aktiengesellschaft is exposed to variable returns as a result of its relationship with a company and has the possibility to influence these returns through its power to control the significant operations. As a rule, the possibility of exercising control is based on KUKA Aktiengesellschaft having direct or indirect majority voting rights. However, since further parameters are required for the assumption of control over a subsidiary (such as, for example, additional contractual agreements), a judgment must always be made on the overall construct and on this basis an assessment concerning the type of consolidation to be applied. Joint ventures have their basis in joint agreements. A joint agreement is present if KUKA Group shares the management of activities conducted with a third party on the basis of a contractual agreement. Joint management is only present if decisions on significant activities require unanimous agreement from the parties involved. In the case of joint ventures the parties exercising the joint management hold rights to the net assets of the agreement. Joint ventures are accounted for according to the equity method. Associates are also measured by the equity method for which as a rule KUKA Aktiengesellschaft exercises significant influence based on a shareholding of between 20 and 50 percent. In both cases all the parameters of the particular relationship are examined for the type of consolidation and the assessment made concerning the type of consolidation.

### Calculation of fair value

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.

### 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

Assets recognized as goodwill are tested at least once a year for impairment in 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 attributed. 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. By means of these indicators KUKA regularly observes

whether a triggering event is present that would necessitate an impairment test in accordance with IAS 36 for goodwill, but also for other non-current assets. 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 7.

#### Deferred tax assets on loss carryforwards

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 2014 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 consolidated financial statements in the 2014 financial year:

- ▲ IFRS 10, Consolidated Financial Statements
- ▲ IFRS 11, Joint Arrangements
- ▲ IFRS 12, Disclosure of Interests in Other Entities
- ▲ Revision of IAS 27, Separate Financial Statements
- ▲ Revision of IAS 28, Investments in Associates and Joint Ventures
- ▲ Amendments to IAS 32, Adjustment for Offsetting Financial Assets and Financial Liabilities
- ▲ Investment entities: transitional provisions relating to IFRS 10, IFRS 12 and IAS 27
- ▲ Transitional provisions relating to IFRS 10, IFRS 11 and IFRS 12
- ▲ Amendments to IAS 36, Recoverable Amount Disclosures for Non-Financial Assets
- ▲ Amendments to IAS 39, Novation of Derivatives



The most important amendments to the IFRS and related arrangements are explained once again in more detail below:

### 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.

### 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.

### 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.

The first-time application of these standards and interpretations did not lead, if at all, to more than slight effects on the consolidated financial statements.

### 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 15 – Revenue from Contracts with Customers

On May 28, 2014 the International Accounting Standards Board (IASB) published a new standard (IFRS 15) concerning the recognition of revenues. This will replace IAS 18 Revenue and IAS 11 Construction Contracts. The standard is expected to apply in the 2017 financial year for the first time. Important changes include scrutiny applied by the customer instead of using the transfer of risks and rewards as the central criterion for realizing sales revenue and explicit arrangements on multi-component business transactions. The new standard already requires the identification of separate performance

obligations (e. g. sales + maintenance); the distribution of the transaction price by reference to the individual selling prices has an impact on the timing and amount of revenue to be recognized. In addition, a new provision and specification of the recognition of sales revenue over a period is to be introduced. Furthermore, particularly in the case of long-term contracts, numerous new disclosures are required, in particular the requirement to break down the sales revenues by nature and origins, and numerous reconciliations from opening to closing balances for the assets/liabilities resulting from contracts. The effects on the KUKA consolidated financial statements are expected to be moderate. More accurate and in-depth analyses are currently being made, so that at the present time it is not possible to make a more specific statement.

In addition to the aforementioned standard, 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
IFRIC 21: Levies	June 17, 2014	Financial 2015**
Annual Improvements 2010 – 2012	July 1, 2014	Financial 2015
Annual Improvements 2011 – 2013	July 1, 2014	Financial 2015
Amendments to IAS 19: Employee Contributions	July 1, 2014	Financial 2015
Amendments to IAS 27: Equity Method in Separate Financial Statements	January 1, 2016	Financial 2016*
Annual Improvements 2012 – 2014	January 1, 2016	Financial 2016*
Amendments to IFRS 11: Acquisition of Interests in Joint Operations	January 1, 2016	Financial 2016*
IFRS 14: Regulatory Deferral Accounts	January 1, 2016	Financial 2016*
Amendments to IAS 16, IAS 38: Clarification of Acceptable Methods of Depreciation and Amortization	January 1, 2016	Financial 2016*
Amendments to IAS 16 and IAS 41: Fruit-bearing plants	January 1, 2016	Financial 2016*
IFRS 15: Revenue from Contracts with Customers	January 1, 2017	Financial 2017*
IFRS 9: Financial Instruments	January 1, 2018	Financial 2018*
Amendments to IFRS 9 and IFRS 7: Information on effective date of transfer	January 1, 2018	Financial 2018*

\* Pending adoption (endorsement) by the European Union

\*\* Initial application postponed by EU

## 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 €155.2 million (18.6 percent) in sales revenues in the Robotics division as compared to €145.0 million (19.2 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 €1,043.1 million were recognized in the reporting year (compared to €902.7 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	
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Cost of materials	931.0	1,043.8	2.3	1.2	7.3	13.5	0.1	0.2	940.7	1,058.7
Personnel expense	320.9	404.2	69.0	83.0	31.7	41.5	61.7	91.6	483.3	620.3
Amortization	14.4	19.8	1.8	2.1	16.4	11.0	5.6	10.0	38.2	42.9
Other expenses and income	69.7	102.4	57.1	74.7	4.3	12.2	42.6	31.7	173.7	221.0
<b>Total</b>	<b>1,336.0</b>	<b>1,570.2</b>	<b>130.2</b>	<b>161.0</b>	<b>59.7</b>	<b>78.2</b>	<b>110.0</b>	<b>133.5</b>	<b>1,635.9</b>	<b>1,942.9</b>

Generally the individual functional costs can be observed to include a rise in expenditure through the organic and acquisition-related growth of KUKA Group.

The cost of sales comprised under other expenses includes finance costs for receivables from construction contracts totaling €3.2 million compared to €6.5 million the previous year. This was calculated on the basis of the Group capitalization rate of 5.5 percent (2013: 6.1 percent). The research and development expenses include €0.6 million amortization of borrowing costs capitalized in prior years compared to €0.2 million in 2013.

Personnel costs are directly allocated to the functional areas. The following figures result:

in € millions	2013	2014
Wages and salaries	406.1	520.8
Social security payments and contributions for retirement benefits and provident funds	77.2	99.5
(of that for retirement benefits)	(6.0)	(6.8)
<b>Personnel costs</b>	<b>483.3</b>	<b>620.3</b>

Annual average employees and employees at the balance sheet date in KUKA Group:

Employees by functional areas	Annual average		Balance sheet date			
	2013	2014	Total 2013	Total 2014	of that, Germany	of that, abroad
Manufacturing	5,735	8,627	5,934	8,748	3,066	5,682
Sales	706	1,184	744	1,226	432	794
Administration	655	1,144	685	1,171	457	714
Research and development	341	503	360	545	458	87
Trainees	40	46	31	40	26	14
	<b>7,477</b>	<b>11,504</b>	<b>7,754</b>	<b>11,730</b>	<b>4,439</b>	<b>7,291</b>
Apprentices	207	343	236	372	300	72
<b>Total</b>	<b>7,684</b>	<b>11,847</b>	<b>7,990</b>	<b>12,102</b>	<b>4,739</b>	<b>7,363</b>

### 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 & development expenses, general and administrative expenses or otherwise reported separately.

in € millions	2013	2014
Income from foreign currency transactions	23.4	42.0
Reimbursements from damages claims	0.1	0.1
Other income	8.0	9.7
<b>Other operating income</b>	<b>31.5</b>	<b>51.8</b>
Expenses for foreign currency transactions	39.0	47.7
Donations	0.2	0.3
Other taxes	8.5	4.8
Other expenses	8.7	11.0
<b>Other operating expenses</b>	<b>56.4</b>	<b>63.8</b>
<b>Other operating income and expenses</b>	<b>-24.9</b>	<b>-12.0</b>

The other expenses include consultancy costs of €5.2 million during the preparation of the purchase offer for Swisslog Group.

### 4 Financial result

Based on the scope of transaction-related non-recurring items, the financial result in the following table is broken down into the current result and the result from non-recurring items.

in € millions	2013	2014
Interest income from finance lease	6.5	6.2
Remaining interest and similar income	2.3	2.5
<b>Other interest and similar income</b>	<b>8.8</b>	<b>8.7</b>
Guarantee commissions	1.5	0.7
Interest expense for the convertible bond	4.1	6.8
Current interest expense for the corporate bond	17.5	5.6
Expense for Syndicated Senior Facilities Agreement	1.3	0.4
Financing costs reclassified to operating results and capitalized	-6.9	-3.5
Net interest expense from pension obligations	2.4	2.7
Remaining interest and similar expenses	2.0	3.2
<b>Other interest and similar expenses</b>	<b>21.9</b>	<b>15.9</b>
<b>Current financial result</b>	<b>-13.1</b>	<b>-7.2</b>
Expenses from termination of the syndicated loan agreement (2010)	0.4	-
Interest expense from the redemption of corporate bond shares	6.5	17.7
<b>Financial result</b>	<b>-20.0</b>	<b>-24.9</b>

Remaining interest and similar income comes from short-term deposits of cash at banks and investments in commercial papers. 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 interest from allocation to pension provisions. This item also includes ongoing expenses for accessing the cash line from the syndicated loan and the ABS program.

The outstanding nominal volume of €140.4 million of the KUKA Aktiengesellschaft bond issued in November 2010 (original nominal amount: €202.0 million) was repaid at a rate of 108.33 percent in line with the

market on May 15, 2014, as announced). This resulted in a non-recurrent interest expense of €17.7 million. In the prior year shares re-acquired on the market resulted in non-recurrent expenses of €6.5 million.

## 5 Taxes on income/deferred taxes

### Tax expense

Income tax expense breaks down by origin as follows:

in € millions	2013	2014
Current taxes	27.8	51.8
(of that relating to other periods)	(-0.9)	(0.2)
Deferred taxes	7.6	-6.6
(of that from temporary differences)	(-1.1)	(-14.0)
(of that from loss carryforwards)	(8.7)	(7.4)
<b>Tax expense</b>	<b>35.4</b>	<b>45.2</b>

Of the current expenses for tax on earnings, €16.3 million is attributable to domestic expenditure compared to €4.8 million in the previous year, whereas €35.5 million is attributable to foreign expenditure compared to €23.0 million last year.

Deferred tax expenses of €1.9 million are attributable to domestic operations and €-8.5 million to foreign. This compares with the figures from the previous year of €7.5 million and €0.1 million, respectively.

In the current year material provisions were made for deferred tax assets for loss carryforwards that are no longer likely to be used in mitigation of taxes because of the acquisition of a minority interest in KUKA Aktiengesellschaft by J.M. Voith GmbH & Co. Beteiligungs KG.

The expected tax expense based on earnings before taxes and the applicable tax rate for the KUKA companies in Germany of 30.0 percent (2013: 30.0 percent) leads to the following actual tax expense:

in € millions	2013	2014
<b>Earnings before tax expense</b>	<b>93.7</b>	<b>113.3</b>
<b>Expected tax expense</b>	<b>28.1</b>	<b>34.0</b>
Tax rate-related differences	3.8	5.9
Tax reductions due to tax-exempt income	-4.4	-4.5
Tax increases due to non-deductible expenses	3.1	3.4
Tax arrears (+)/tax credits (-) for prior years	-2.7	1.0
Changes to allowance on deferred taxes	10.2	3.8
First-time recognition of previously unrecognized deferred tax assets on tax loss carryforward	-1.7	-0.6
Change in deferred taxes on permanent differences	-0.2	1.2
Tax impact of investments accounted for by the equity method	-	0.8
Other differences	-0.8	0.2
<b>Taxes on income (actual tax expense)</b>	<b>35.4</b>	<b>45.2</b>

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 €3.2 million (2013: €4.8 million) results after discounting as a non-current tax receivable effective December 31, 2014 (2013: €4.8 million), and an amount of €1.8 million (2013: €1.8 million) as a current tax receivable.

There are no tax credits for which deferred taxes would need to be accounted.

Current tax expense in other accounting periods totaling €0.2 million (2013: €-0.9 million) resulted in the German and foreign operations.

There are currently still no material conclusions for the current 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	
	Total		Total	
	Dec. 31, 2013	Dec. 31, 2014	Dec. 31, 2013	Dec. 31, 2014
Non-current assets	7.6	10.9	29.3	100.1
Current assets	48.3	93.9	54.4	73.0
Provisions	20.0	38.1	16.5	3.3
Liabilities	30.7	50.7	17.4	34.4
<b>Subtotal</b>	<b>106.6</b>	<b>193.6</b>	<b>117.6</b>	<b>210.8</b>
Balancing item	-93.1	-145.5	-93.1	-145.5
Valuation allowance	-2.6	-11.0	-	-
<b>Deferred taxes on temporary differences</b>	<b>10.9</b>	<b>37.1</b>	<b>24.5</b>	<b>65.3</b>
Deferred taxes on tax loss carryforwards	14.7	11.1	-	-
<b>Total</b>	<b>25.6</b>	<b>48.2</b>	<b>24.5</b>	<b>65.3</b>
of that, from items recognized in equity	2.5	8.1	-	-

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.

In the loss carryforwards of € 279.6 million (2013: € 223.9 million), amounts totaling € 227.0 million (2013: € 174.0 million) are not considered in the accounting of deferred taxes.

Loss carryforwards amounting to € 46.2 million (2013: € 25.3 million) are available with a time limit and the remaining € 233.4 million (2013: € 198.6 million) is not subject to a time limit.

The loss carryforwards for which deferred taxes were capitalized relate to the total loss carryforwards as follows:

	Loss carryforwards for which deferred taxes were capitalized	Total existing loss carryforwards
in € millions	2014	2014
Swisslog	6.0	6.0
Reis GmbH & Co. KG Maschinenfabrik	10.1	34.3
KUKA AG	15.4	69.3
Other	21.1	170.0
<b>Total</b>	<b>52.6</b>	<b>279.6</b>

Deferred tax income in the amount of € 0.6 million (2013: € 1.7 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 but not recognized in the current year in the amount of € 3.8 million (2013: € 10.2 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 are 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 € 42.1 million (2013: € 3.2 million).

Overall, the change to deferred tax assets and liabilities of € 18.2 million (2013: € 9.0 million) came from amounts affecting net income totaling € -6.6 million (2013: € 7.6 million) as well as amounts not affecting net income due to acquisitions, changes in pension obligations and currency effects.

Where loss carryforwards have not been written off, it is expected in the five-year 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:

	2013	2014
Net income/loss for the year after minority interests (in € millions)	58.3	68.1
Weighted average number of shares outstanding (No. of shares)	33,915,431	34,169,423
<b>Undiluted earnings per share (in €)</b>	<b>1.72</b>	<b>1.99</b>
<b>Diluted earnings per share (in €)</b>	<b>n/a</b>	<b>1.90</b>

Undiluted earnings per share due to shareholders of KUKA Aktiengesellschaft were calculated as per IAS 33 and the weighted average number of shares outstanding for the year. There were 33,915,431 shares outstanding at the beginning of 2014. The capital increase effected in November 2014 increased the number of shares by 1,792,884. The resulting weighted average for shares outstanding as per IAS 33.20 is 34,169,423.

Some stock dilution could arise in the future if bondholders convert their convertible bonds issued in 2013 to shares, because capital was conditionally increased. In the 2014 financial year the average price on the stock market due to excellent share price performance on the overwhelming majority of trading days was higher than the conversion price of € 36.8067. As of the reporting date, the closing share price in Xetra trading on the Frankfurt Stock Exchange was € 58.94, which was higher than the conversion price. A conversion on the closing date would thus potentially have been possible. However, so far there has been no actual conversion in any case. To calculate the diluted earnings per share, in accordance with IAS 33.32 all the potentially convertible shares were included as well.

## NOTES TO THE GROUP BALANCE SHEET: ASSETS

### 7 Intangible assets

#### Schedule of changes in intangible fixed assets in 2014

The breakdown of the intangible fixed asset items and their development through the reporting period and the previous year are shown in the following table.

in € millions	Acquisition/manufacturing costs					Status as of Dec. 31, 2014
	Status as of Jan. 1, 2014	Exchange rate differences	Change due to business combinations/others	Additions	Disposals	
Rights and similar assets	61.1	1.6	152.6	9.1	0.3	224.1
Self-developed software and other development costs	31.5	0.0	15.0	6.8	4.1	49.2
Goodwill	66.4	1.0	165.5	-	-	232.9
Advances paid	0.8	-	4.3	0.0	0.6	4.5
	<b>159.8</b>	<b>2.6</b>	<b>337.4</b>	<b>15.9</b>	<b>5.0</b>	<b>510.7</b>

The column showing business combinations/others includes values from a disposal group pursuant to IFRS 5 (see note 27).

#### Schedule of changes in intangible fixed assets in 2013

in € millions	Acquisition/manufacturing costs					Status as of Dec. 31, 2013
	Status as of Jan. 1, 2013	Exchange rate differences	Change due to business combinations/others	Additions	Disposals	
Rights and similar assets	52.4	-0.7	2.6	8.5	1.7	61.1
Self-developed software and other development costs	34.1	-0.1	-	9.1	11.6	31.5
Goodwill	56.6	-0.4	10.2	-	-	66.4
Advances paid	1.1	-	-	0.1	0.4	0.8
	<b>144.2</b>	<b>-1.2</b>	<b>12.8</b>	<b>17.7</b>	<b>13.7</b>	<b>159.8</b>

#### Goodwill

Recognized goodwill amounts to €225.9 million (2013: €59.4 million). It is distributed across the profit centers listed below. The table also shows the discount rates applied before taxes (weighted average cost of capital (WACC)).

#### PROFIT CENTER

in € millions	Dec. 31, 2013		Dec. 31, 2014	
	Goodwill	WACC (%)	Goodwill	WACC (%)
Aerospace	-	-	9.6	12.0
Assembly & Test	4.7	12.8	4.7	11.9
Body Structure and Engineering	50.5	12.9	44.3	12.4
Reis Group	-	-	13.5	13.2
Robotics Automotive	3.8	14.4	3.8	13.1
Swisslog	-	-	148.2	-
Others	0.4	14.4	1.8	12.9
<b>Total</b>	<b>59.4</b>		<b>225.9</b>	

These 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 change in goodwill of the Body Structure and Engineering CGU largely results from foreign exchange effects and the goodwill proportionately allocated and classified as part of the planned sale of a disposal group under IFRS 5.

From the acquisitions of Swisslog Group and Faude Automatisierungstechnik at year-end, goodwill was provisionally created of €148.2 million and €1.4 million respectively (cf. p. 68 "Company acquisitions"). No impairment test has yet been performed based on the first-time inclusion in KUKA Group as at December 31, 2014.

The impairment test is based on a three-year 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

	Accumulated depreciation and impairment losses						Net carrying amount
	Status as of Jan. 1, 2014	Exchange rate differences	Change due to business combinations/others	Additions	Disposals	Status as of Dec. 31, 2014	Status as of Dec. 31, 2014
	46.9	1.0	-2.0	8.8	0.3	54.4	169.7
	13.4	-	-	9.6	4.1	18.9	30.3
	7.0	-	-	-	-	7.0	225.9
	-	-	-	0.0	0.0	-	4.5
	<b>67.3</b>	<b>1.0</b>	<b>-2.0</b>	<b>18.4</b>	<b>4.4</b>	<b>80.3</b>	<b>430.4</b>

	Accumulated depreciation and impairment losses						Net carrying amount
	Status as of Jan. 1, 2013	Exchange rate differences	Change due to business combinations/others	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
	<b>61.3</b>	<b>-0.6</b>	<b>-</b>	<b>20.3</b>	<b>13.7</b>	<b>67.3</b>	<b>92.5</b>

year, a moderate perpetual growth rate of 0.5 percent is applied. The discount rates applied in the financial year before taxes (weighted average cost of capital (WACC)) can be seen in the above table.

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 (2013: 6.25 percent) and the risk-free interest rate of 2.00 percent (2013: 2.75 percent). The beta factor was determined as a three-year average of the respective peer group; for the Systems segment it was 1.062 (2013: 1.052) and for the Robotics segment it was 1.165 (2013: 1.186).

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 (2013: 30.0 percent).

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 €78.2 million compared to €59.7 million in 2013.

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 5.5 percent (2013: 6.1 percent).

At KUKA Group, development costs are recognized as assets at KUKA Roboter GmbH, KUKA Laboratories GmbH and KUKA Systems GmbH. The companies are working on several projects involving mechanical systems and power and control software for robots as well as new applications in the area of medical technology and friction welding. Borrowing costs of €0.3 million (2013: €0.5 million) were accounted for.

In line with IAS 38, development costs with a carrying amount of €30.3 million (2013: €18.1 million) are capitalized. Additions for 2014 totaled €6.8 million compared to €9.1 million in the previous year. The further increase is the result of acquisitions. The item mainly concerns self-produced control software for robots, efficiency solutions for automation systems, ERP implementation expenses and self-generated automation expenses.

The amortization of intangible fixed assets results from the schedule of changes in intangible fixed assets. Impairment losses from the previous year were applied in connection with a software project currently being developed and a project related to the electronic generation of documents. No impairment losses were recorded for the current financial year.

The share of depreciation related to capitalized borrowing costs in previous years is initially recognized in the income statement under research and development expenses and eliminated in the reconciliation of the operating results to EBIT. An amount of €0.6 million (2013: €0.2 million) was reclassified in this area in the financial year under review.

## 8 Tangible assets

### Schedule of changes in KUKA Group's tangible assets 2014

The breakdown of the tangible asset items and their development through the reporting period are shown in the following table. The investment focuses of the financial year are described in the management report.

### Schedule of changes in KUKA Group's tangible assets 2014

in € millions	Acquisition/manufacturing costs			
	Status as of Jan. 1, 2014	Exchange rate differences	Change due to business combinations /others	Additions
Land, similar rights and buildings including buildings on land owned by third parties	120.9	2.6	28.6	11.5
Technical plant and equipment	122.0	1.9	13.6	12.2
Other equipment, factory and office equipment	83.0	1.4	0.5	13.4
Advances paid and construction in progress	25.7	0.2	1.5	41.3
	<b>351.6</b>	<b>6.1</b>	<b>44.2</b>	<b>78.4</b>
The following amounts have been capitalized under "Tangible assets" due to finance leases in which KUKA Group acts as the lessee:	4.7	-0.2	0.0	0.0

The column showing business combinations /others includes values from a disposal group pursuant to IFRS 5 (see note 27).

The column "Reclassifications" includes the transfer of a friction welding machine to current assets. In connection with a long-term customer order, this machine is being refurbished and modernized and will then be sold.

### Schedule of changes in KUKA Group's tangible assets 2013

in € millions	Acquisition/manufacturing costs			
	Status as of Jan. 1, 2013	Exchange rate differences	Change due to business combinations /others	Additions
Land, similar rights and buildings including buildings on land owned by third parties	117.1	-0.9	0.2	4.7
Technical plant and equipment	105.4	-0.6	1.7	14.6
Other equipment, factory and office equipment	78.5	-1.1	0.1	10.1
Advances paid and construction in progress	4.9	-	0.0	27.6
	<b>305.9</b>	<b>-2.6</b>	<b>2.0</b>	<b>57.0</b>
The following amounts have been capitalized under "Tangible assets" due to finance leases in which KUKA Group acts as the lessee:	4.5	-	-	0.4

The depreciation figures result from the schedule of changes shown above. There are no impairment losses in the year under review or 2013.



Acquisition/manufacturing costs			Accumulated depreciation and impairment losses							Net carrying amount
Disposals	Reclassifications	Status as of Dec. 31, 2014	Status as of Jan. 1, 2014	Exchange rate differences	Change due to business combinations/ others	Additions	Disposals	Reclassifications	Status as of Dec. 31, 2014	Status as of Dec. 31, 2014
0.1	2.0	165.5	73.0	0.8	-0.1	5.4	0.1	-	79.0	86.5
2.8	-2.1	144.8	83.6	1.2	0.0	9.3	2.5	-1.5	90.1	54.7
3.8	1.8	96.3	61.4	1.0	-1.9	10.4	3.6	-	67.3	29.0
-	-5.1	63.6	-	-	-	-	-	-	0.0	63.6
<b>6.7</b>	<b>-3.4</b>	<b>470.2</b>	<b>218.0</b>	<b>3.0</b>	<b>-2.0</b>	<b>25.1</b>	<b>6.2</b>	<b>-1.5</b>	<b>236.4</b>	<b>233.8</b>
0.1	0.0	4.4	3.9	0.1	0.0	0.1	0.0	0.0	4.1	0.3

Acquisition/manufacturing costs			Accumulated depreciation and impairment losses							Net carrying amount
Disposals	Reclassifications	Status as of Dec. 31, 2013	Status as of Jan. 1, 2013	Exchange rate differences	Change due to business combinations/ others	Additions	Disposals	Reclassifications	Status as of Dec. 31, 2013	Status as of Dec. 31, 2013
1.9	1.7	120.9	71.8	-0.2	-	3.1	1.7	-	73.0	47.9
2.9	3.8	122.0	79.5	-0.3	-	7.0	2.6	-	83.6	38.4
5.9	1.3	83.0	59.7	-0.7	-	7.8	5.4	-	61.4	21.6
-	-6.8	25.7	-	-	-	-	-	-	-	25.7
<b>10.7</b>	<b>0.0</b>	<b>351.6</b>	<b>211.0</b>	<b>-1.2</b>	<b>-</b>	<b>17.9</b>	<b>9.7</b>	<b>-</b>	<b>218.0</b>	<b>133.6</b>
0.2	-	4.7	3.8	-	-	0.3	0.2	-	3.9	0.8

## Government grants

Grants and allowances of €0.2 million (2013: €0.8 million) were deducted from the acquisition or production costs of the tangible assets.

Government grants totaling €4.1 million (2013: €4.1 million) were received and recognized as directly income-relevant. There were no contingently repayable grants as of the balance sheet date.

## 9 Financial investments

Financial investments relate to other investments with less than ten percent ownership. This item also includes discounted outstanding payments from the sale of an associate of Swisslog Group.

## 10 Investments accounted for at equity

Both investments accounted for at equity are immaterial associates per se (2013: no at-equity investments). The aggregate amount of the shares in the loss of the investments is €2.6 million (2013: none) (for further information on the development of carrying amounts, see "Investments in associates").

## 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 contract is set up as a finance lease with KUKA Group acting as lessor.

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 €66.1 million (2013: €61.9 million) and a current lease receivable of €6.9 million (2013: €5.3 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 payment 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	2013	2014
<b>Future minimum lease payments/ Finance lease gross investments</b>	<b>95.0</b>	<b>98.9</b>
of that not later than one year	11.1	13.3
of that later than one year and not later than five years	44.4	53.0
of that later than five years	39.5	32.6
Unrealized financial income	-27.8	-25.9
<b>Present value of outstanding minimum lease payments</b>	<b>67.2</b>	<b>73.0</b>
of that not later than one year	5.3	7.1
of that later than one year and not later than five years	26.5	34.9
of that later than five years	35.4	31.0

### KUKA as a lessee

The finance leases for technical plant and equipment have interest rates between 2.25 and 9.0 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 €0.2 million. In the previous year, both the minimum lease payments and the present values were €0.3 million.

For information on operating lease agreements please see note 29 "Contingent liabilities and other financial commitments".

## 12 Inventories

in € millions	Dec. 31, 2013	Dec. 31, 2014
Raw materials and supplies	71.3	107.0
Work in process	85.4	104.5
Finished goods	23.2	41.4
Advances paid	6.3	19.5
<b>Inventories</b>	<b>186.2</b>	<b>272.4</b>

The carrying amount of inventories with adjusted valuation in the amount of €155.3 million compares with €112.1 million in 2013 and has been recognized at net realizable value. Write-downs, relative to gross value, amounted to €51.4 million versus €32.1 million in 2013.

## 13 Receivables

Trade receivables and receivables from construction contracts have a term of less than one year.

in € millions	Dec. 31, 2013	Dec. 31, 2014
Trade receivables	167.5	273.8
Receivables from construction contracts	181.1	339.1
<b>Receivables</b>	<b>348.6</b>	<b>612.9</b>

The increase is primarily the result of the company acquisitions.

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 receivables before recording of impairment losses	Impairment loss	Carrying amount of impaired 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, 2013	26.0	7.2	5.0	4.9	2.6	45.7	6.2	-5.9	0.3	121.5	167.5
<b>As of Dec. 31, 2014</b>	<b>53.5</b>	<b>21.9</b>	<b>8.6</b>	<b>11.6</b>	<b>5.3</b>	<b>100.9</b>	<b>10.6</b>	<b>-10.3</b>	<b>0.3</b>	<b>172.6</b>	<b>273.8</b>

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	2013	2014
<b>Impairment losses/status as of Jan. 1</b>	<b>6.0</b>	<b>5.9</b>
Change in scope of consolidation	0.0	4.4
Additions	1.8	2.2
Use	-1.1	-1.0
Reversals	-0.8	-1.2
<b>Impairment losses/status as of Dec. 31</b>	<b>5.9</b>	<b>10.3</b>

#### 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. This results in the following values as of the balance sheet date:

in € millions	Dec. 31, 2013	Dec. 31, 2014
Contract costs and recognized profits	1,231.1	2,160.9
Advances received	1,042.0	1,818.0
Receivables from construction contracts	181.1	339.1
Liabilities from construction contracts	132.7	247.6

#### 14 Other assets, prepaid expenses and deferred charges

in € millions	Dec. 31, 2013	Dec. 31, 2014
<b>Non-current other assets</b>		
Non-current other receivables	5.6	7.3
Other	3.5	2.6
<b>Total</b>	<b>9.1</b>	<b>9.9</b>
<b>Current other assets</b>		
Securities 3 to 12 months	35.0	22.3
Claims on revenue authorities	12.1	12.8
Other	14.0	35.9
<b>Total</b>	<b>61.1</b>	<b>71.0</b>
<b>Other assets, prepaid expenses and deferred charges</b>	<b>70.2</b>	<b>80.9</b>

Securities in the amount of € 22.3 million (2013: € 35.0 million) held at the balance sheet date are commercial papers with a remaining term of between three and twelve months. Non-current interest-bearing receivables of Swisslog Group of € 0.3 million are reported in non-current other assets.

The following table shows the financial instruments recognized under other assets as outlined in IFRS 7:

in € millions	Impaired receivables before recording of impairment losses	Impairment loss	Carrying amount of impaired receivables	Neither impaired nor past due as of the balance sheet date	Net carrying amount
Dec. 31, 2013	2.5	-2.3	0.2	44.9	45.1
<b>Dec. 31, 2014</b>	<b>2.3</b>	<b>-2.1</b>	<b>0.2</b>	<b>38.0</b>	<b>38.2</b>

There are no other assets that are past due but not yet impaired as of December 31, 2014 or December 31, 2013.

Impairment losses on other assets developed as follows:

in € millions	Dec. 31, 2013	Dec. 31, 2014
<b>Impairment losses/status as of Jan. 1</b>	<b>2.5</b>	<b>2.3</b>
Additions	0.2	0.0
Use	0.0	0.0
Reversals	-0.4	-0.2
<b>Impairment losses/status as of Dec. 31</b>	<b>2.3</b>	<b>2.1</b>

### 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 with a remaining term of three months or less.

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 and cash equivalents of €2.4 million (2013: €6.1 million) are subject to restrictions. These exist mainly in connection with the company acquisitions made during the current financial year.

in € millions	Dec. 31, 2013	Dec. 31, 2014
Cash on hand	0.1	0.4
Cash and bank balances	434.9	189.3
Cash with limited availability	6.1	2.4
<b>Total</b>	<b>441.1</b>	<b>192.1</b>

## NOTES TO THE GROUP BALANCE SHEET: EQUITY AND LIABILITIES

### 16 Equity

Changes in equity including changes with no 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 "Disclosures in accordance with section 315 para. 4 of the German Commercial Code (HGB) including accompanying explanations".

### 17 Subscribed capital

#### Capital increase as of November 2014

In November 2014 a capital increase was made excluding subscription rights through partial utilization of the authorized capital. By means of a fast book-building process as part of a private placement to institutional investors, 1,792,884 new shares were issued. The placement price for the no-par-value bearer shares was €49.00 signifying a theoretical portion of the share capital of €2.60 per no-par-value share (issue price). The placement was made against a cash contribution. The difference between the placement price and the issue price is recognized in the capital reserve, taking account of commission and taxes. The company received the amount of €86.6 million after subtraction of the direct transaction costs.

Following the capital increase, the share capital of KUKA Aktiengesellschaft is €92,841,619.00 (2013: €88,180,120.60). This is subdivided into 35,708,315 (2013: 33,915,431) of 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, 2013 resulted from the difference between the issue price less costs and nominal value resulting from the capital increase referred to above.

## 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 €8.1 million (2013: €-2.5 million) from transactions not recognized in profit or loss are included in equity. These are primarily attributable to actuarial gains and losses from pensions.

Based on the resolution of the Annual General Meeting held in 2013, a dividend of €0.30 per share was distributed in the 2014 financial year.

## 20 Balancing items for minority interests

This item mainly concerns minority interests in Swisslog Holding AG, Buchs (AG) (€15.5 million), Switzerland. It also includes items for Faude Automatisierungstechnik GmbH, Gärtringen, Germany, KUKA Enco Werkzeugbau spol. s.r.o., Dubnica, Slovakia and HLS Vietnam Co. Ltd., Ho Chi Minh City, Vietnam.

## 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.

		2013	2014
Equity	€ million	379.1	541.1
/ Total equity	€ million	1,377.1	1,979.5
<b>Equity ratio</b>	%	<b>27.5</b>	<b>27.3</b>
EBIT	€ million	120.4	142.0
/ Capital employed	€ million	326.2	492.0
<b>ROCE</b>	%	<b>36.9</b>	<b>28.9</b>
Cash and cash equivalents	€ million	441.1	192.1
Non-current financial liabilities	€ million	-288.1	-137.0
Current financial liabilities	€ million	-6.5	-22.5
<b>Net liquidity/net debt</b>	€ million	<b>146.5</b>	<b>32.6</b>

## 22 Pension provisions and similar obligations

Provisions for pensions developed as follows in the 2014 financial year:

in € millions	Status as of Jan. 1	Change in scope of consolidation and other changes	Exchange rate differences	Consumption	Reversals	Additions	Actuarial gains (+) and losses (-) (directly in equity)	Status as of Dec. 31
2013	82.0	0.1	-	5.4	-	3.0	-6.3	73.4
<b>2014</b>	<b>73.4</b>	<b>0.2</b>	<b>34.1</b>	<b>6.4</b>	<b>0.1</b>	<b>4.4</b>	<b>16.1</b>	<b>121.7</b>

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. The other changes also include assets reclassified under IFRS 5 (see also note 27).

Company retirement benefit coverage in the Group is provided through both defined contribution and defined benefit plans.

### Defined benefit plans

Defined benefit plans in KUKA Group primarily concern plans in Germany and the United States. With the acquisition of Swisslog Group, material plans were added in Switzerland, Great Britain, Sweden and the United States as of December 31, 2014. The country-specific characteristics and legal regulations relating to defined benefit plans 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 USA makes pension payments to its employees after they retire. Employees who entered the worker's union before September 14, 2004 are eligible to participate in the pension plan. The benefits are calculated on the basis of the rate applicable on the date they retire. This rate is composed of the years of service credited to the employee. Eligible employees are also provided with medical care. Owing to their benefit character, the obligations for post-employment medical benefits are also disclosed in this item according to IAS 19. These post-employment benefit provisions represent €0.8 million (2013: €0.6 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.

With Swisslog Group the following plans have been included:

- ▲ The defined benefit plan in the United States that was added through Swisslog Group exists for the salaried workforce as well as the factory workers. Both plans are managed by an insurance company and are legally independent. Both are closed to new participants and are financed entirely by the employer. Swisslog Group is able to determine the distribution of the assets. The plans are designed to avoid the necessity to provision for the expenses of additional benefits. However, each individual savings basket bears a fixed percentage of interest (guaranteed minimum return).
- ▲ The Swiss plan is affiliated to a larger collective pension fund which is legally independent and exceeds the statutory minimum requirements in Switzerland (Occupational Old Age, Survivors' and Invalidity Pension Provision, BVG). All employees in this are insured for the financial consequences of age, invalidity and death. Contributions to the collective pension fund are made by the employer and employees. Responsibility for investing the assets is borne by the board of the collective pension fund, whilst Swisslog Group is only able to define the investment

style. In addition Swisslog Group sets the interest rate on the individual age tranches – subject to the statutory rules. In the event of a deficit for the Swisslog pension tranche within the collective pension fund, various measures can be taken such as a reduced interest rate or additional pension contributions. The level of cover pursuant to BVG exceeds 100 percent as of December 31, 2014. The Swiss pension plan is based on the BVG 2010 generation tables.

- ▲ The British defined benefit plan is also independent and has been closed to new participants since 2001. The assets are invested in an insurance fund. The plan is financed by the employer with the employees. Based on the statutory requirements a valuation is undertaken by an actuary every three years. In the event a deficit is calculated, it is necessary to establish a restructuring plan which also sets the future amortization payments to make good the deficit.
- ▲ The Swedish defined benefit plan is legally mandatory and is based on a collective agreement (agreement between the trade union and the Swedish employers). The plan cannot be altered by Swisslog Group. The plan is available to all employees born before 1979. It covers the financial consequences of age, invalidity and illness. There is a defined contribution plan for those employees born after 1979. The defined benefit plan is financed by the employer. The liability is covered by plan assets in a pension institution administered by an external insurance company.

#### Defined contribution 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 €34.0 million compared to €26.7 million in 2013 are disclosed as expenses for the particular year. Under defined benefit plans, the company incurs an obligation to provide the benefits promised by the plan to current and former employees.

#### 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:

	Germany		Switzerland	UK	Sweden	USA		Other	
	2013	2014	2014	2014	2014	2013	2014	2013	2014
Demographic assumptions	RT 2005 G	RT 2005 G	BVG-2010	AMC 00/ AFC 00 PCMA00/ PCFA00	FFFS 2007 31	RP 2000	RP 2014	diverse	diverse
Discount factor	3.55%	1.90%	1.00%	3.70%	2.50%	4.80%	3.80–3.95%	3.40%	1.75–4.00%
Expected rate of return on assets	n/a	n/a	1.00%	3.70%	2.50%	4.80%	3.80–3.90%	N/A	1.75–4.00%
Wage dynamics	0.00–2.50%	0.00–2.50%	1.25%	4.20%	2.10%	N/A	N/A	0.00–2.00%	0.00–3.30%
Pension dynamics	1.75–2.50%	1.75–2.50%	0.10%	3.20%	1.60%	N/A	N/A	0.00–2.00%	0.00–3.25%
Changes in cost of medical services	N/A	N/A	N/A	N/A	N/A	5.00–7.00%	5.00–7.00%	N/A	N/A

The discount 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. 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, 2014:

Nature and degree of change in actuarial assumptions		Present value of the defined benefit obligation after change	Change*
in € millions			
Increase in the discount rate	by 0.25 %	267.1	-8.4
Decrease in the discount rate	by 0.25 %	284.5	9.1
Pension increase	by 0.25 %	281.0	5.6
Pension reduction	by 0.25 %	271.5	-4.0

\* The changes in the actuarial assumptions have no linear impact on the present value of the defined benefit obligation. 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.

For the obligations of KUKA Group so far (without Swisslog Group) the influence of a change of life expectancy is relevant. Were life expectancy to rise (decrease) by one year, this would result in a benefit obligation which is € 4.5 million higher (€ 4.4 million lower). No sensitivity analyses were calculated for the parameters "wage dynamics" and "retirement age" owing to the small number of candidates who are still active.

By contrast, for the obligations of Swisslog Group it is not life expectancy but the expected rise in the wage or salary that is the relevant parameter. An increase (reduction) in wages and salaries by 0.25 percent would result in an increase of CHF 1.4 million or € 1.2 million (reduction by CHF 1.4 million or € 1.2 million).

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

#### FUNDING STATUS OF DEFINED BENEFIT PENSION OBLIGATIONS

in € millions	Germany		Switzerland	UK	Sweden	USA		Other		Total	
	2013	2014	2014	2014	2014	2013	2014	2013	2014	2013	2014
Present value of pension benefits covered by provisions	70.8	83.8	-	-	-	0.6	0.8	1.0	2.0	72.4	86.6
Present value of pension benefits based on plan assets			118.9	17.8	16.4	5.9	26.1		9.7	5.9	188.9
<b>Defined benefit obligation</b>	<b>70.8</b>	<b>83.8</b>	<b>118.9</b>	<b>17.8</b>	<b>16.4</b>	<b>6.5</b>	<b>26.9</b>	<b>1.0</b>	<b>11.7</b>	<b>78.3</b>	<b>275.5</b>
Fair value of plan assets			106.1	10.6	13.5	4.9	20.3	-	3.3	4.9	153.8
<b>Net obligation as of Dec. 31</b>	<b>70.8</b>	<b>83.8</b>	<b>12.8</b>	<b>7.2</b>	<b>2.9</b>	<b>1.6</b>	<b>6.6</b>	<b>1.0</b>	<b>8.4</b>	<b>73.4</b>	<b>121.7</b>

### Reconciliation/Changes in the defined benefit obligation

The reconciliation of the obligation for key items from January 1, 2014 to the end of the financial year breaks down as follows:

in € millions	Germany		Switzer-land	UK	Sweden	USA		Other		Total	
	2013	2014	2014	2014	2014	2013	2014	2013	2014	2013	2014
<b>Jan. 1</b>	<b>78.0</b>	<b>70.8</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>7.5</b>	<b>6.5</b>	<b>0.9</b>	<b>1.0</b>	<b>86.4</b>	<b>78.3</b>
Change in scope of consolidation and other changes	-	0.2	118.9	17.8	16.4	-	18.8	-	10.3	-	182.5
Current service costs	0.4	0.5	-	-	-	0.2	0.0	0.1	0.2	0.7	0.7
Interest expense (+)/interest income (-)	2.3	2.5	-	-	-	0.3	0.2	0.0	0.0	2.6	2.7
Actuarial gains (+)/losses (-)	-4.9	14.7	-	-	-	-0.8	1.4	0.0	0.0	-5.7	16.1
Past service cost	0.0	0	-	-	-	-0.1	0.0	0.0	0.0	-0.1	0.0
Payments made	-5.0	-4.9	-	-	-	-0.3	-0.8	0.0	0.0	-5.3	-5.7
Currency translation	-	-	-	-	-	-0.3	0.8	0.0	0.1	-0.3	0.9
<b>Dec. 31</b>	<b>70.8</b>	<b>83.8</b>	<b>118.9</b>	<b>17.8</b>	<b>16.4</b>	<b>6.5</b>	<b>26.9</b>	<b>1.0</b>	<b>11.6</b>	<b>78.3</b>	<b>275.5</b>
of that, funded by provisions	(70.8)	(83.8)	-	-	-	(0.6)	(0.8)	(1.0)	(2.0)	(72.4)	(86.6)
of that, based on plan assets	-	-	(118.9)	(17.8)	(16.4)	(5.9)	(26.1)	-	(9.6)	(5.9)	(188.9)

Current service costs and interest expenses totaling €3.4 million (2013: €3.3 million) compare to benefit payments of €5.7 million during the financial year (2013: €5.3 million). The increase in the defined benefit obligation results mainly from actuarial losses of €16.1 million (2013: actuarial gains of €5.7 million) during the financial year and changes in the scope of consolidation.

### 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	2013	2014
<b>Jan. 1</b>	<b>4.4</b>	<b>4.9</b>
Return on plan assets	0.2	0.2
Access to scope of consolidation	-	148.4
Actuarial gains (+)/losses (-)	0.6	0.1
Employer contributions	0.2	0.2
Payments	-0.3	-0.5
Currency translation	-0.2	0.5
<b>Fair value of plan assets as of Dec. 31</b>	<b>4.9</b>	<b>153.8</b>
Fixed-interest securities	0.8	1.6
Shares	4.1	38.8
Bonds	-	81.6
Real estate	-	16.2
Other	-	15.6
<b>Total</b>	<b>4.9</b>	<b>153.8</b>



### 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 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 company has identified the deterioration of the funded status due to the unfavorable development of plan assets and/or defined benefit obligations as a risk. KUKA monitors its financial assets and defined benefit obligations to identify this risk. In the case of the Swisslog Group pension plans the plan assets are managed by an independent entity as a rule. It provides a regular report so that by this means risk management is possible.

### Maturity profile of defined benefit obligations

The following table provides an overview of the expected benefit payments over the next ten years:

in € millions	2013	2014
Not later than one year	5.4	11.2
Later than one year and not later than five years	20.4	49.4
Later than five years and not later than ten years	23.3	57.9

### 24 Liabilities

2014 in € millions	Remaining maturity		
	up to one year	more than one year	Dec. 31, 2014 Total
Liabilities due to banks	21.4	0.1	21.5
Convertible bond	1.1	136.9	138.0
<b>Financial liabilities</b>	<b>22.5</b>	<b>137.0</b>	<b>159.5</b>
Trade payables	274.6	–	274.6
Advances received	78.3	–	78.3
Liabilities from construction contracts	247.6	–	247.6
Accounts payable to affiliated companies	0.1	–	0.1
Income tax liabilities	24.9	0.0	24.9
Other liabilities and deferred income	290.8	18.2	309.0
(of that for other taxes)	(29.1)	–	(29.1)
(of that for social security payments)	(10.3)	–	(10.3)
(of that liabilities relating to personnel)	(135.0)	(10.1)	(145.1)
(of that for leases)	(0.1)	(0.1)	(0.2)
(of that for forward exchange transactions for currency hedging)	(7.3)	–	(7.3)
<b>Total</b>	<b>938.8</b>	<b>155.2</b>	<b>1,094.0</b>

### 23 Other provisions

in € millions	Status as of Jan. 1, 2014	Exchange rate differences	Change in scope of consolidation and other changes	Consumption	Reversals	Additions	Status as of Dec. 31, 2014
Warranty commitments and risks from pending transactions	49.6	1.1	10.2	10.7	2.9	36.6	83.9
Other provisions	45.1	1.2	16.0	22.0	2.7	28.6	66.2
<b>Other provisions</b>	<b>94.7</b>	<b>2.3</b>	<b>26.2</b>	<b>32.7</b>	<b>5.6</b>	<b>65.2</b>	<b>150.1</b>

Other provisions for warranty commitments and risks from pending transactions include provisions for impending losses of €20.3 million (2013: €13.5 million) and warranty risk of €63.6 million (2013: €36.1 million).

Of the other provisions, €21.1 million (2013: €19.5 million) relates among other items to costs still to be incurred for orders already invoiced and litigation risk of €3.7 million (2013: €1.5 million).

The expected remaining term of the other provisions is up to one year.

2013 in € millions	Remaining maturity		
	up to one year	more than one year	Dec. 31, 2013 Total
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
<b>Financial liabilities</b>	<b>6.5</b>	<b>288.1</b>	<b>294.6</b>
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 liabilities	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 for forward exchange transactions for currency hedging)	(2.2)	–	(2.2)
<b>Total</b>	<b>502.6</b>	<b>302.8</b>	<b>805.4</b>

## 25 Financial liabilities/Financing

The existing financial liabilities are mainly the convertible bond issued in two tranches in 2013 and liabilities of Swisslog Group. The corporate bond recognized in the previous year was re-acquired in full in May 2014.

### Fixed interest rate agreements

in € millions	Net carrying amount		Fair value		Original maturity	Nominal interest rate
	2013	2014	2013	2014		
Bond	156.8	–	176.6	–	2010 – 2017	8.75 % p. a.
Convertible bond	134.2	138.0	172.8	246.5	2013 – 2018	2.00 % p. a.

The market value of the convertible bond was determined using the closing price of Frankfurt Stock Exchange on the last trading day of the respective year.

### Variable interest rate liabilities to banks:

Financial instrument in € millions	Net carrying amount	Avg. nomi- nal interest rate	Year of latest maturity
Liabilities due to banks as of Dec. 31, 2014	278.2 INR	3.6€	11.25 % p. a. 2015
Fixed advance from Swisslog syndicated loan agreement as of Dec. 31, 2014	20.0 CHF	16.6€	0.60 % p. a. 2015
Liabilities due to banks as of Dec. 31, 2013	287.9 INR	3.4€	11.30 % 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

The outstanding nominal volume of € 140.4 million of the KUKA Aktiengesellschaft bond issued in November 2010 (original nominal amount: € 202.0 million) was repaid at a rate of 108.36 percent in line with the market on May 15, 2014, as announced. This allowed KUKA to further optimize the funding portfolio. This resulted in a non-recurrent interest expense of € 17.7 million. The current interest expense during the reporting period was € 5.6 million.

### Convertible bond

In 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 € 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 on February 12 and August 12 every year.

The convertible bond is listed on the open market of the Frankfurt Stock Exchange (ISIN DE000A1R09V9/WKN A1R09V). The latest rate quoted for the convertible bond on the Frankfurt Stock Exchange in 2014 was 164.34 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 2014 was € 6.8 million (2013: € 4.1 million).

#### Syndicated loan of KUKA Aktiengesellschaft

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 SLA 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 reporting date totaled € 49.2 million (2013: € 53.9 million); the existing working capital line was utilized in the amount of € 15.1 million (thereof € 11.5 million from guarantees) (2013: € 3.4 million from cash advances).

Due to the changes in the consortium of banks from the old to the new Syndicated Senior Facilities Agreement concluded in December 2013, the guarantee volumes made available by the exiting banks had to be returned. This was achieved by 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. An amount of € 0.1 million is therefore reported as of December 31, 2014 as restricted cash. Other restricted cash was created through the company acquisitions, so that the total comes to € 2.4 million as of December 31, 2014.

#### Syndicated loan agreement of Swisslog

For Swisslog there is a syndicated loan agreement concluded until December 31, 2018 with a credit facility of CHF 130.0 million (€ 108.1 million) and an original term of six years. The entire credit line is available as a guarantee facility. Up to a volume of CHF 60 million (€ 49.9 million) the credit facility can also be used by cash (fixed) advances.

As of December 31, 2014 a cash advance (fixed advance) was utilized of CHF 20.0 million (€ 16.6 million).

The syndicated loan agreement is mainly tied to the following financial covenants.

- ▲ Equity capital of at least CHF 140.0 million (€ 116.4 million). Currency translation differences in the equity capital since December 31, 2011 and the effects of the conversion to the revised IAS 19 have to be neutralized.
- ▲ Minimum capital ratio of 28.0 percent
- ▲ Adjusted net indebtedness compared with operating result before depreciation and amortization (EBITDA) of a maximum 2.5. The adjusted net indebtedness from the financial liabilities (with percentage consideration of the guarantees issued by the banks) less cash and cash equivalents.

These covenants all relate to the consolidated financial statements published by Swisslog Holding AG, Buchs (AG), Switzerland. The covenants were adhered to without exception by Swisslog Group during the financial year.

In addition, the syndicated loan agreement contains a change-of-control clause that provides for the immediate repayment of all utilizations within the syndicated loan agreement in the event of the direct or indirect acquisition of more than 33 ⅓ percent of the voting rights in Swisslog Holding AG by a person or group. On request from Swisslog Holding AG, the syndicate banks irrevocably waived the exercise of their rights under the change-of-control clause in the event of a change of control through the acquisition of more than 33 ⅓ percent of the voting rights by KUKA Aktiengesellschaft.

### Guarantee facilities from banks and surety companies

The guarantee facilities promised by banks and surety companies outside the SLA total €89.0 million (2013: €72.8 million) as of December 31, 2014, and can be utilized in full. At the end of the reporting year, the company had utilized €41.2 million versus €50.4 million in 2013.

### Asset-backed securities program

KUKA Group launched an ABS (asset-backed securities) program in June 2011 with a volume of €25.0 million and a term until June 30, 2018. Under this program, trade receivables of KUKA Roboter GmbH can be sold in regular tranches to a special purpose vehicle (SPV) of Landesbank Baden-Württemberg. Trade receivables of €3.1 million (December 31, 2013: €4.1 million) were sold as of the balance sheet date. The SPV finances the purchase of the receivables by issuing securities on the capital market or through utilization of a corresponding credit line. Covenants analogous to those of the Syndicated Senior Facilities Agreement of KUKA Aktiengesellschaft are also in place for this financing program.

Default guarantees from credit insurers ensure adequate creditworthiness 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. The retention for this credit risk (continuing involvement) amounted to €0.2 million as at December 31, 2014 (2013: unchanged) and was fully written off. 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.

### Financial instruments measured at fair value

The following table shows the breakdown of the financial assets and liabilities measured at fair value:

2014 in € millions	Level 1	Level 2	Level 3	Total
Financial assets	0.3	0.8	0.2	1.3
Financial liabilities	-	7.3	-	7.3

2013 in € millions	Level 1	Level 2	Level 3	Total
Financial assets	-	3.6	-	3.6
Financial liabilities	-	2.2	-	2.2

The financial assets of level 1 mainly relate to mixed fund units. The assets in level 2 mainly relate to forward exchange transactions carried as assets or liabilities. 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 financial assets of level 3 were measured using the discounted future cash flows from the sale of a minority interest of Swisslog Group.

### 26 Other current/non-current liabilities and prepaid expenses/deferred charges

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 (€18.7 million; prior year: €6.7 million), flex-time credits (€17.4 million; prior year: €15.1 million), variable compensation elements (€82.4 million; prior year: €44.4 million) and pre-retirement (“Altersteilzeit”) (€8.3 million; prior year: €7.6 million). Pre-retirement obligations were reduced by the fair value of the corresponding fund assets (€7.1 million; prior year: €7.4 million). The present value of entitlements from pre-retirement obligations (DBO) before offsetting was €15.3 million (prior year: €15.0 million).

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 Assets and liabilities held for sale

As of the balance sheet date, KUKA Group is planning to dispose of part of the Systems segment. The outgoing sections constitute a disposal group as defined in IFRS 5. There is a concrete plan for the sale and it is very probable that the transaction will be effected within one year. All associated assets were therefore subjected to an impairment test. No impairment losses were applicable. Assets and liabilities have been reclassified in accordance with IFRS 5 as “assets held for sale” and “liabilities held for sale”.

The relevant carrying amounts are shown in the following table:

in € millions	Dec. 31, 2014
Intangible and tangible fixed assets and pro rata goodwill	8.5
Inventories and trade receivables	7.5
Other assets	0.4
Cash and cash equivalents	0.1
<b>Total assets</b>	<b>16.5</b>
Provisions	1.4
Other liabilities	5.9
<b>Total liabilities</b>	<b>7.3</b>
<b>Net assets</b>	<b>9.2</b>

Pro rata goodwill amounting to about €7 million was allocated to the disposal group on a provisional basis.

No indications concerning IFRS 5 were present in the previous year.

## 28 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. The CFO is also informed on a regular basis of the current risk positions and safeguards.

### 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.

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 (excluding Swisslog, see below):

A ten percent gain of the euro against the US dollar would have a positive effect on Group profits of plus €3.8 million (2013: plus €2.0 million). A ten percent decline of the euro against the US dollar would have a negative effect on Group profits of minus €4.6 million (2013: minus €3.0 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 (2013: minus €2.5 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 (2013: plus €2.5 million).

A ten percent gain of the euro against the Chinese renminbi would have a positive effect on Group profits of plus €0.4 million (2013: plus €0.3 million). A ten percent decline of the euro against the Chinese renminbi would have a negative effect on Group profits of minus €0.5 million (2013: minus €0.4 million).

A ten percent gain of the euro against the Hungarian forint would have a negative effect on Group profits of minus €0.5 million (2013: 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 €0.6 million (2013: 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 (2013: minus €0.1 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 (2013: plus €0.1 million).

Swisslog Group is not yet included in the income statement in 2014, but is included with its remeasured equity capital in the consolidated financial statements. Changes of five percent in the following currencies against the Swiss Franc would have had the following (in the event of a gain of the Swiss franc against the particular currency a negative and in the case of a decline a positive) effect on equity at Swisslog Group: CNY (CHF 0.8 million or €0.7 million), EUR (CHF 0.8 million or €0.7 million), Swedish krona (CHF 0.1 million or €0.1 million), Singapore dollar (CHF 0.6 million or €0.5 million) and USD (CHF 2.1 million or €1.7 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 euros as well as the current securities (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 convertible 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, 2014 would have a positive effect on results of plus €1.7 million (2013: plus €4.3 million). A decrease in market interest rates by 100 basis points would have a negative effect on results of minus €0.1 million (2013: minus €1.0 million). This hypothetical effect results solely from the financial investments (borrowings) with variable interest rates totaling €191.2 million (2013: €434.9 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 segment level as early as the order initiation process (submission of offers and 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 Aktiengesellschaft'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. New companies are included in consolidation concurrently. In addition, the Group's overall liquidity risk is reduced by closely monitoring Group companies and their control of payment flows. This entailed the successful introduction of a new Group-wide treasury management system in 2014.

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 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 providing guarantees from the banks and the Group itself. 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 SFA of the newly acquired Swisslog Group contributes to this (see above).

The following figures show the commitments for undiscounted interest and redemption repayments for the financial instruments subsumed under IFRS 7:

Dec. 31, 2014 in € millions	Cash flows 2015	Cash flows 2016	Cash flows 2017 – 2019
Non-current financial liabilities	3.0	3.7	154.6
Current financial liabilities	21.6	–	–
Trade payables	276.6	–	–
Liabilities from construction contracts	247.6	–	–
Accounts payable to affiliated companies	0.1	–	–
Other non-current liabilities and provisions	–	0.1	0.0
(of that for leases)	–	(0.1)	(0.0)
Other current liabilities and provisions	159.6	–	–
(of that for leases)	(0.1)	–	–
<b>Dec. 31, 2013 in € millions</b>	<b>Cash flows 2014</b>	<b>Cash flows 2015</b>	<b>Cash flows 2016 – 2018</b>
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
(of that for leases)	–	(0.2)	(0.1)
Other current liabilities and provisions	66.1	–	–
(of that for leases)	(0.1)	–	–

For the period from 2020 onwards, no outgoing cash flows are currently expected (2013: from 2019).

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, 2014. 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.

In the case of Swisslog Group the Group's companies are instructed to hedge significant local currency risks from future project payments with the Group Treasury. Group Treasury guarantees the Group companies exchange rates for the duration of the projects and for its part is safeguarded by forward exchange transactions with banks. As a rule, hedges are only entered into once the customer contract has been signed. In addition the exchange rate risk arising from commitments to purchase production components is hedged in the project currency.

## Other disclosures on financial instruments

The following shows the carrying amounts of the financial instruments by measurement category according to IAS 39:

in € millions	Ab- breviation	Dec. 31, 2013	Dec. 31, 2014
Available-for-Sale Financial Assets	(AFS)	0.2	0.5
Held-to-Maturity	(HTM)	35.0	22.3
Loans and Receivables	(LaR)	796.2	820.5
Financial Assets Held for Trading	(FAHFT)	3.6	0.8
<b>Total financial instruments (assets)</b>		<b>835.0</b>	<b>844.1</b>
Financial Liabilities Measured at Amortized Cost	(FLAC)	530.3	586.4
Financial Liabilities Held for Trading	(FLHFT)	2.2	7.3
<b>Total financial instruments (liabilities)</b>		<b>532.5</b>	<b>593.7</b>

**Carrying amounts and fair values by measurement categories for 2014**

The carrying amounts and the fair values are derived from the following table:

in € millions	IAS 39 measurement category	Net carrying amount/ Status as of Dec. 31, 2014	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 financial instruments/ Status as of Dec. 31, 2014	Fair value/ Status as of Dec. 31, 2014
<b>Assets</b>						
Financial investments		0.6	-	-	0.6	0.6
(of that loans)	LaR	(0.1)	(0.0)	-	(0.1)	(0.1)
(of that participations)	AfS	(0.5)	-	-	(0.5)	(0.5)
Investments accounted for by the equity method	n. a.	5.6	5.6	-	-	-
Long-term finance lease receivables	n. a.	66.1	-	66.1	-	66.1
Other long-term receivables and other assets		9.9	7.3	0.0	2.6	9.9
(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	(2.6)	-	-	(2.6)	(2.6)
(of that other)	n. a.	(7.3)	(7.3)	-	-	(7.3)
Trade receivables	LaR	273.8	-	-	273.8	273.8
Receivables from construction contracts	LaR	339.1	-	-	339.1	339.1
Current finance lease receivables	n. a.	6.9	-	6.9	-	6.9
Other assets, prepaid expenses and deferred charges		71.0	35.1	0.0	35.9	71.0
(of that derivatives without a hedging relationship)	FAHfT	(0.8)	-	-	(0.8)	(0.8)
(of that other from the category LaR)	LaR	(12.8)	-	-	(12.8)	(12.8)
(of that other from the category HtM)	HtM	(22.3)	-	-	(22.3)	(22.3)
(of that other)	n. a.	(35.1)	(35.1)	-	-	(35.1)
Cash and cash equivalents	LaR	192.1	-	-	192.1	192.1
<b>Total financial instruments (assets)</b>					<b>844.1</b>	<b>844.1</b>
<b>Liabilities</b>						
Non-current financial liabilities	FLAC	137.0	-	-	137.0	246.5
Other non-current liabilities and provisions		18.2	18.1	0.1	0.0	18.2
(of that for leases)	n. a.	(0.1)	-	(0.1)	-	(0.1)
(of that derivatives without a hedging relationship)	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.	(18.1)	(18.1)	-	-	(18.1)
Current financial liabilities	FLAC	22.5	-	-	22.5	22.5
Trade payables	FLAC	274.6	-	-	274.6	274.6
Liabilities from construction contracts	n. a.	247.6	247.6	-	-	247.6
Accounts payable to affiliated companies	FLAC	0.1	-	-	0.1	0.1
Other current liabilities, prepaid expenses and deferred charges		290.8	131.2	0.1	159.5	290.8
(of that for leases)	n. a.	(0.1)	-	(0.1)	-	(0.1)
(of that derivatives without a hedging relationship)	FLHfT	(7.3)	-	-	(7.3)	(7.3)
(of that other from the category FLAC)	FLAC	(152.2)	-	-	(152.2)	(152.2)
(of that other)	n. a.	(131.2)	(131.2)	-	-	(131.2)
<b>Total financial instruments (liabilities)</b>					<b>593.7</b>	<b>703.2</b>



**Carrying amounts and fair values by measurement categories for 2013**

in € millions	IAS 39 measurement category	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 finan- cial instruments/ Status as of Dec. 31, 2013	Fair value/ Status as of Dec. 31, 2013
<b>Assets</b>						
Financial investments		0.2	-	-	0.2	0.2
(of that loans)	LaR	0.0	0.0	-	0.0	0.0
(of that participations)	AfS	(0.2)	-	-	(0.2)	(0.2)
Investments accounted for by the equity method	n. a.	0.0	0.0	-	0.0	0.0
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
<b>Total financial instruments (assets)</b>					<b>835.0</b>	<b>835.0</b>
<b>Liabilities</b>						
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)	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)	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)
<b>Total financial instruments (liabilities)</b>					<b>532.5</b>	<b>593.8</b>

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, convertible bond and the short-term mixed fund units held substantially by Swisslog Group is based on the market prices quoted at 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 measurement categories are represented as follows:

#### Net profit/loss by IAS 39 measurement categories for 2014

in € millions	Net gains/ losses	Total interest income/ expenses	Commission income/ expenses
Loans and Receivables (LaR)	3.1	1.7	0.0
Available-for-Sale Financial Assets (AFS)	-0.2	-	-
Held-to-Maturity (HtM)	-	0.8	-
Financial Instruments Held for Trading (FAHFT and FLHFT)	-13.8	-	-
Financial Liabilities Measured at Amortized Cost (FLAC)	7.9	-33.8	-0.7
<b>Total</b>	<b>-3.0</b>	<b>-31.3</b>	<b>-0.7</b>

#### 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 and FLHFT)	-3.0	-	-
Financial Liabilities Measured at Amortized Cost (FLAC)	4.5	-31.5	-1.5
<b>Total</b>	<b>-12.3</b>	<b>-29.5</b>	<b>-1.5</b>

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 (non-recurrent) interest expenses from the bond, the current interest expenses from the convertible bond as well as from financial liabilities due to banks. In the previous year, this item also mainly included interest expenses from the convertible bond and the bond.

Commission expenses are recorded as the transaction costs for financial liabilities due to banks and fees for the provision of guarantees.

#### 29 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	2013	2014
Liabilities from guarantees	4.3	4.6
Liabilities from warranty agreements	0.2	0.6
<b>Total</b>	<b>4.5</b>	<b>5.2</b>

##### Other financial commitments

in € millions	2013	2014
Purchase commitments (discounted notes)	42.2	11.4
Rent/lease liabilities	68.3	98.6
Other financial commitments	9.4	8.6
<b>Total</b>	<b>119.9</b>	<b>118.6</b>

The reduction in purchase order commitments relates mainly to the Development and Technology Center. Progress on building during the year results in a corresponding reduction of the purchase order commitment. The rise in rental and leasing commitments is largely the result of the acquisitions which took place in 2014, particularly of Swisslog Group.

Commitments in connection with leases for passenger cars, office and factory buildings and production facilities primarily include liabilities from leases and rental agreements in connection with operating leases. The growth here is also largely the result of company acquisitions. The lease payments and due dates are broken down as follows:

in € millions	Dec. 31, 2013	Dec. 31, 2014
Due within one year	14.9	23.8
Due between one and five years	30.0	52.5
Due after more than five years	23.4	22.3
<b>Total</b>	<b>68.3</b>	<b>98.6</b>

Total rental expenses for the fiscal year were €23.4 million compared to €19.0 million in the prior year; rental income totaled €0.6 million compared to €0.3 million in 2013.

## 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 of €2.4 million (December 31, 2013: €6.1 million) are subject to restrictions. These exist mainly in connection with the company acquisitions made during the current financial year.

Cash flow from operating activities is derived indirectly from the earnings after taxes.

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	2013	2014
Interest paid	-32.7	-30.4
Interest received	8.5	8.6
Income taxes paid	-26.5	-34.0
Income taxes refunded	1.4	1.8

## 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 2013 in two major business segments: Swisslog Group was added at the end of the year and is reported as an independent segment subject to reporting requirements under IFRS 8.

### 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 with a payload capacity of 1,300 kg. The activities of Advanced Robotics 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 and production of castings and plastic components.

### Swisslog

This segment produces leading automation solutions for future-oriented hospitals, warehouse and distribution centers with the focus on the segments of trading, including e-commerce, pharmaceuticals and chilled and frozen foods.

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	
	2013	2014	2013	2014
Germany	582.5	647.2	119.0	195.7
Rest of Europe	412.2	459.6	27.5	366.0
North America	492.2	596.1	65.9	77.9
Other regions	287.6	392.8	13.7	24.6
<b>Total</b>	<b>1,774.5</b>	<b>2,095.7</b>	<b>226.1</b>	<b>664.2</b>

Since Swisslog Group was only included in KUKA Group as of December 31, 2014, the pro rata figures in the table above are only taken into account in the non-current assets according to the company's location.

In 2014, KUKA Group achieved more than ten percent of total sales revenues from two (2013: three) customers. These sales revenues are attributable to both the Robotics segment and the Systems segment.

	Total 2013		Total 2014	
	in € millions	in %	in € millions	in %
Customer A	274.5	15.5	304.3	14.5
Customer B	188.1	10.6	230.1	11.0
Other customers	1,311.9	73.9	1,561.3	74.5
<b>Sales revenues</b>	<b>1,774.5</b>	<b>100.0</b>	<b>2,095.7</b>	<b>100.0</b>

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 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 and taxes; EBIT is adjusted for borrowing costs to be capitalized.
- ▲ Elimination of scheduled and unscheduled depreciation on tangible and intangible assets from EBIT produces EBITDA.
- ▲ 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	2013	2014
<b>Capital employed</b>		
Intangible assets	92.5	430.4
+ Tangible assets	133.6	233.8
+ Non-current lease receivables	61.9	66.1
+ Assets held for sale	-	16.5
<b>+ Asset-side working capital</b>	<b>617.4</b>	<b>982.9</b>
Inventories	186.1	272.4
Receivables from construction contracts	181.1	339.1
Trade receivables	167.5	273.8
Other receivables and assets	82.6	97.6
<b>= Asset items of capital employed</b>	<b>905.4</b>	<b>1,729.7</b>
./. Other provisions	94.7	150.1
./. Liabilities from construction contracts	132.7	247.6
./. Advances received	52.3	78.3
./. Trade payables	171.7	274.6
./. Other liabilities except for liabilities similar to bonds (incl. deferred income)	140.2	301.7
<b>= Liability-side working capital</b>	<b>591.6</b>	<b>1,052.3</b>
Liabilities held for sale	-	7.3
<b>= Liability items of capital employed</b>	<b>591.6</b>	<b>1,059.6</b>
<b>= Capital employed</b>	<b>313.8</b>	<b>670.1</b>
Average capital employed	326.2	492.0
<b>Segment assets</b>		
Asset items of capital employed	905.4	1,729.7
+ Other participations	0.2	0.5
+ Investments accounted for at equity	-	5.6
<b>= Segment assets</b>	<b>905.6</b>	<b>1,735.8</b>
<b>Segment liabilities</b>		
Liability items of capital employed	591.6	1,059.6
+ Pension provisions and similar obligations	73.4	121.7
<b>= Segment liabilities</b>	<b>665.0</b>	<b>1,181.3</b>
<b>Working capital</b>		
Asset-side working capital	617.4	982.9
Liability-side working capital	591.6	1,052.3
<b>= Working capital</b>	<b>25.8</b>	<b>-69.4</b>

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 KUKA Group companies in which KUKA Aktiengesellschaft directly or indirectly holds a significant proportion of the voting rights or companies that hold a significant proportion of the voting rights in KUKA Aktiengesellschaft.

Compared to December 31, 2013 the number of related parties was expanded to include KBee AG, Munich and Yawei Reis Robot Manufacturing Co., Ltd., Jiangsu, China as associates in accordance with IAS 24.9 and the companies of Voith Group.

The contractually agreed, future capital contributions made to KBee AG are to take place by the end of 2016 as a factor of the achievement of certain milestones and will amount to €6.0 million.

According to notifications dated December 3, 2014 and December 12, 2014 and as per sections 21, 22 of the German Securities Trading Act (WpHG), J.M. Voith GmbH & Co. Beteiligungen KG, Heidenheim an der Brenz (Germany) holds 24.91 percent of KUKA Aktiengesellschaft. In addition, J.M. Voith GmbH & Co. Beteiligungen KG has disclosed that it holds financial instruments as per section 25a of the German Securities Trading Act (WpHG) representing 0.19 percent of the voting rights. Including option-bearing financial instruments, the total stake in KUKA Aktiengesellschaft comes to 25.10 percent. In the year under review, companies in the consolidation group delivered to or received from Voith Group only insignificant quantities of goods and services. Consequently there are no receivables or liabilities.

Grenzebach Maschinenbau GmbH, Asbach-Bäumenheim/Bavaria, which was still identified as a related party as at December 31, 2013, disclosed that since November 28, 2014 it no longer held shares in KUKA Aktiengesellschaft. It is therefore no longer disclosed as a related party (IAS 24.9 in conjunction with IAS 28.5). Companies in the consolidation group supplied Grenzebach Group with goods and services totaling €2.7 million (2013: €5.1 million) during the year under review and received goods and services from it to the value of €17.2 million (2013: €17.5 million).

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 recognized at €0.1 million.

Business with all related parties is 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

The Executive Board of KUKA Aktiengesellschaft received a total compensation of €3.7 million (2013: €2.9 million). In the 2014 financial year, the Executive Board received a fixed salary including payments in kind of €1.0 million (2013: €0.9 million). Target achievement and performance-based payments amounted to €2.7 million (2013: €2.0 million). €1.0 million (2013: €1.0 million) was paid out 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 2014 for current pensions and vested pension benefits totals €9.8 million (HGB) compared to €9.8 million in 2013. The expense recognized in this connection totaled €0.8 million.

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 takeover bid.

In the 2014 financial year the members of the Supervisory Board received a total of €0.9 million (2013: €0.9 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.

### Audit fees

The fee for the auditor, KPMG AG, Wirtschaftsprüfungsgesellschaft, Munich, recognized as an expense in 2014 totals €0.8 million. €0.4 million was recognized for financial statement auditing services. €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.

Augsburg, March 4, 2015

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
- ▲ Ventech Systems GmbH, Asbach-Bäumenheim

Board of Directors

- ▲ Grenzebach Machinery (Jiashan) Ltd., China (Chairman)\*\*
- ▲ Grenzebach Machinery (Shanghai) Ltd., China (Chairman)\*\*
- ▲ Grenzebach Corporation, Newnan (Georgia), USA\*\*
- ▲ Grenzebach-INOS Automation Software, Inc., Troy (Michigan), USA\*\*

#### Michael Leppke\*\*\*

Stadtbergen

Deputy Chairman of the Supervisory Board

- ▲ 1st Authorized Representative of IG Metall trade union, Augsburg branch
- ▲ MAN Diesel & Turbo SE\*
- ▲ SGL Carbon SE\*
- ▲ AIRBUS Helicopters Deutschland GmbH\*

#### 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
- ▲ Member of Board of Directors, Maillefer Group\*\*

#### Wilfried Eberhardt\*\*\*

Aichach

- ▲ Executive Vice President Marketing & Associations KUKA Roboter GmbH, Augsburg
- ▲ Authorized Signatory of KUKA Roboter GmbH, Augsburg

#### Siegfried Greulich\*\*\*

Augsburg

Deputy Chairman of the Works Council of the KUKA Plants at Augsburg

#### Thomas Knabel\*\*\*

Zwickau

- ▲ 2nd Authorized Representative of IG Metall trade union, Zwickau branch

#### Armin Kolb\*\*\*

Augsburg

- ▲ Chairman of the Works Council of the KUKA Plants at Augsburg

#### Carola Leitmeir\*\*\*

Großaitingen

- ▲ Member of the Works Council of the KUKA Plants at Augsburg

### Prof. Dr. Uwe Loos

Stuttgart

Industrial Consultant

- ▲ Dorma Holding GmbH +Co.KGaA , Ennepetal \*
- ▲ CDP Bharat Forge GmbH, Ennepetal \*\*
- ▲ Bharat Forge Aluminiumtechnik, Brand-Erbisdorf\*\*
- ▲ 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, India \*\*
- ▲ 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 \*\*

### 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 on Supervisory Board

### Executive Board

#### Dr. Till Reuter

Pfäffikon, Switzerland

Chief Executive Officer

- ▲ Dr. Steiner Holding AG \*
- ▲ Rinvest Alpha AG, Pfäffikon/Switzerland \*\*
- ▲ Swisslog Holding, Buchs/Switzerland \*\*

#### Peter Mohnen

Munich

Chief Financial Officer

\* Membership in other legally stipulated supervisory boards

\*\* Membership in comparable German and foreign controlling bodies of commercial enterprises

\*\*\* Employee Representative on Supervisory Board

## SCHEDULE OF SHAREHOLDINGS OF KUKA AKTIENGESELLSCHAFT

As at December 31, 2014

Name and registered office of the company	Currency	Share of equity in %	Method of consolidation
<b>Germany</b>			
1 Bopp & Reuther Anlagen-Verwaltungsgesellschaft mbH, Augsburg	EUR	100.00	k
2 Faude Automatisierungstechnik GmbH, Gärtringen	EUR	50.00	k
3 HLS Ingenieurbüro GmbH, Augsburg	EUR	100.00	k
4 KUKA Industries GmbH, Augsburg *	EUR	100.00	k
5 KUKA Laboratories GmbH, Augsburg *	EUR	100.00	k
6 KUKA Roboter GmbH, Augsburg *	EUR	100.00	k
7 KUKA Systems GmbH, Augsburg *	EUR	100.00	k
8 Reis Asia Pacific GmbH, Obernburg	EUR	100.00	k
9 Reis GmbH & Co. KG Maschinenfabrik, Obernburg *	EUR	100.00	k
10 Reis GmbH, Obernburg	EUR	100.00	k
11 Reis Group Holding GmbH & Co. KG, Obernburg *	EUR	51.00	k
12 Reis Holding GmbH, Obernburg	EUR	100.00	k
13 Swisslog (Deutschland) GmbH, Puchheim	EUR	100.00	k
14 Swisslog GmbH, Dortmund	EUR	100.00	k
15 Swisslog Healthcare GmbH, Westerstede	EUR	100.00	k
16 Swisslog Munich GmbH, Puchheim	EUR	100.00	k
17 Verwaltungsgesellschaft Walter Reis GmbH, Obernburg	EUR	100.00	k
18 Walter Reis GmbH & Co KG, Obernburg *	EUR	100.00	k
19 WR Vermögensverwaltungs GmbH, Obernburg	EUR	100.00	k
20 KBee AG, Munich	EUR	40.00	at
21 Freadix FryTec GmbH, Augsburg	EUR	100.00	nk
22 IWK Unterstützungseinrichtung GmbH, Karlsruhe	EUR	100.00	nk
23 KUKA Unterstützungskasse GmbH, Augsburg	EUR	100.00	nk
24 Schmidt Maschinenteknik GmbH i.L., Niederstotzingen	EUR	100.00	nk



Name and registered office of the company	Currency	Share of equity in %	Method of consolidation
<b>Other Europe</b>			
25 ALEMA Automation SAS, Bordeaux-Merignac/France	EUR	100.00	k
26 HLS Czech s.r.o., Mlada Boleslav/Czech Republic	CZK	100.00	k
27 IRT SA (Switzerland), Neuchatel/Switzerland	CHF	50.00	k
28 KUKA S-BASE s.r.o. (in liquidation), Roznov p.R./Czech Republic	CZK	100.00	k
29 KUKA Automatisering + Robots N.V., Houthalen/Belgium	EUR	100.00	k
30 KUKA Automatisme + Robotique S.A.S., Villebon-sur-Yvette/France	EUR	100.00	k
31 KUKA Automotive N.V., Houthalen/Belgium	EUR	100.00	k
32 KUKA Enco Werkzeugbau spol. s.r.o., Dubnica nad Váhom/Slovakia	EUR	65.00	k
33 KUKA Nordic AB, Västra Frölunda/Sweden	SEK	100.00	k
34 KUKA Roboter CEE GmbH, Linz/Austria	EUR	100.00	k
35 KUKA Roboter Italia S.p.A., Rivoli/Italy	EUR	100.00	k
36 KUKA Roboter Schweiz AG, Dietikon/Switzerland	CHF	100.00	k
37 KUKA Robotics Hungária Ipari Kft., Taksony/Hungary	EUR	100.00	k
38 KUKA Robotics OOO, Moscow/Russia	RUB	100.00	k
39 KUKA Robotics UK LTD, Wednesbury/Great Britain	GBP	100.00	k
40 KUKA Robots IBÉRICA, S.A., Vilanova i la Geltrú/Spain	EUR	100.00	k
41 KUKA Sistemy OOO, Togliatti/Russia	RUB	100.00	k
42 KUKA Systems France S.A., Montigny/France	EUR	100.00	k
43 KUKA Systems SRL, Sibiu/Romania	RON	100.00	k
44 KUKA Systems UK Ltd., Halesowen/Great Britain	GBP	100.00	k
45 Reis Espana S.L., Esplugues de Llobregat (Barcelona)/Spain	EUR	100.00	k
46 Reis France EURL, Pontault-Combeau /F/France	EUR	100.00	k
47 Reis France SCI, Pontault-Combeau /F/France	EUR	100.00	k
48 Reis Robotics CR. – strojirenstvi spol s.r.o, Chomutov/Czech Republic	CZK	100.00	k
49 Reis Robotics CR. spol s.r.o, Chomutov/Czech Republic	CZK	100.00	k
50 Reis Robotics Italia, Bellusco/Italy	EUR	100.00	k
51 Swisslog (UK) Ltd., Redditch/Great Britain	GBP	100.00	k
52 Swisslog AB, Partille/Switzerland	SEK	100.00	k
53 Swisslog AG, Buchs/Switzerland	CHF	100.00	k
54 Swisslog AS, Oslo/Norway	NOK	100.00	k
55 Swisslog B.V., Culemborg/Netherlands	EUR	100.00	k
56 Swisslog Ergotrans B.V., Apeldoorn/Netherlands	EUR	100.00	k
57 Swisslog Evomatic GmbH, Sipbachzell/Austria	EUR	100.00	k
58 Swisslog France SAS, Saint-Denis/France	EUR	100.00	k
59 Swisslog Holding AG, Buchs/Switzerland	CHF	94.49	k
60 Swisslog IP AG, Buchs/Switzerland	CHF	100.00	k
61 Swisslog Italia S.p.A., Milan/Italy	EUR	100.00	k
62 Swisslog Luxembourg S.A., Ell/Luxembourg	EUR	100.00	k
63 Swisslog N.V., Wilrijk/Belgium	EUR	100.00	k
64 Swisslog-Accalon AB, Boxholm/Sweden	SEK	100.00	k
65 Metaalwarenfabriek 's-Hertogenbosch B.V., 's-Hertogenbosch/Netherlands	EUR	100.00	nk
66 IRT Italia SRL, Cinisello Balsamo/Italy	EUR	50.00	b

## SCHEDULE OF SHAREHOLDINGS OF KUKA AKTIENGESELLSCHAFT (CONTINUED)

As at December 31, 2014

Name and registered office of the company	Currency	Share of equity in %	Method of consolidation
<b>North America</b>			
67 KUKA Assembly and Test Corp., Saginaw, Michigan/USA	USD	100.00	k
68 KUKA Robotics Canada Ltd., Saint John NB/Canada	CAD	100.00	k
69 KUKA Robotics Corp., Sterling Heights, Michigan/USA	USD	100.00	k
70 KUKA Systems de Mexico, S. de R.L. de C.V., Mexico City/Mexico	MXN	100.00	k
71 KUKA Systems North America LLC., Sterling Heights, Michigan/USA	USD	100.00	k
72 KUKA Toledo Production Operations, LLC., Toledo, Ohio/USA**	USD	100.00	k
73 KUKA U.S. Holdings Company LLC., Shelby Township, Michigan/USA	USD	100.00	k
74 KUKA de Mexico S.de R.L.de C.V., Mexico City/Mexico	MXN	100.00	k
75 KUKA Recursos, S. de R.L. de C.V., Mexico City/Mexico	MXN	100.00	k
76 Reis Holding Corp. USA, Elgin/Illinois/USA	USD	100.00	k
77 Reis Robotics USA Inc., Elgin/Illinois/USA	USD	100.00	k
78 Swisslog Logistics Inc., Newport News/USA	USD	100.00	k
79 Swisslog USA Inc., City of Dover/USA	USD	100.00	k
80 Translogic Corp., Denver/USA	USD	100.00	k
81 Translogic Electric Corp., New York/USA	USD	100.00	k
82 Translogic Ltd., Mississauga/Canada	CAD	100.00	k
<b>Latin America</b>			
83 KUKA Roboter do Brasil Ltda., Sao Paulo/Brazil	BRL	100.00	k
84 KUKA Systems do Brasil Ltda., Sao Bernardo do Campo SP/Brazil	BRL	100.00	k
85 Reis Robotics do Brasil Ltda., Sao Paulo/Brazil	BRL	100.00	k
86 Reis Servicos de Automacao Ltda., Sao Paulo/Brazil	BRL	100.00	k

Name and registered office of the company	Currency	Share of equity in %	Method of consolidation
<b>Asia and Australia</b>			
87 HLS VIETNAM CO., LTD., Ho Chi Minh City/Vietnam	VND	95.00	k
88 KUKA Automation Equipment (Shanghai) Co., Ltd., Shanghai/China	CNY	100.00	k
89 KUKA Flexible Manufacturing Systems (Shanghai) Co., Ltd., Shanghai/China	CNY	100.00	k
90 KUKA Robot Automation Malaysia Sdn Bhd, Kuala Lumpur/Malaysia	MYR	100.00	k
91 KUKA Robot Automation Taiwan Co. Ltd., Chung-Li City/Taiwan	TWD	99.90	k
92 KUKA Robotics Thailand Ltd., Bangkok/Thailand	THB	100.00	k
93 KUKA Robotics (China) Co. Ltd., Shanghai/China	CNY	100.00	k
94 KUKA Robotics (India) Pvt. Ltd, Haryana/India	INR	100.00	k
95 KUKA Robotics Australia Pty. Ltd., Victoria/Australia	AUD	100.00	k
96 KUKA Robotics Japan K.K., Tokyo/Japan	JPY	100.00	k
97 KUKA Robotics Korea Co., Ltd., Kyunggi-Do/South Korea	KRW	100.00	k
98 KUKA Robotics Manufacturing China Co., LTD, Shanghai City/China	CNY	100.00	k
99 KUKA Systems (India) Pvt.Ltd., Pune/India	INR	100.00	k
100 Reis Robotics China Co. Ltd. (Kunshan), Kunshan/China	CNY	100.00	k
101 Reis Robotics China Co. Ltd. (Shanghai), Shanghai/China	CNY	100.00	k
102 Reis Robotics Singapore PTE Ltd., Singapore/Singapore	SGD	100.00	k
103 Swisslog (Shanghai) Co. Ltd., Shanghai/China	CNY	100.00	k
104 Swisslog Asia Ltd., Hongkong/China	HKD	100.00	k
105 Swisslog Australia Pty. Ltd., Epping/Australia	AUD	100.00	k
106 Swisslog Malaysia Sdn Bhd, Selangor Darul Ehsan/Malaysia	MYR	100.00	k
107 Swisslog Pte. Ltd., Singapore/Singapore	SGD	100.00	k
108 Swisslog Singapore Pte. Ltd., Singapore/Singapore	SGD	100.00	k
109 Swisslog-Accalon (Kunshan) Co. Ltd., Kunshan/China	USD	100.00	k
110 Yawei Reis Robot Manufacturing (Jiangsu) Co. Ltd., Yangzhou City/China	CNY	49.00	at

\* Companies that have made use of the exemption pursuant to section 264 para. 3 or section 264 b of the German Commercial Code

\*\* Principal place of business

#### Method of consolidation as of December 31, 2014

k Fully consolidated companies

nk Non-consolidated companies

at Financial asset accounted for by the equity method

b Participating interest

## 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, March 4, 2015

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, 2014. The preparation of the consolidated financial statements and the Group management report in accordance with IFRS 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 IFRS 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, March 4, 2015

KPMG AG

Wirtschaftsprüfungsgesellschaft

Karl Braun

Rainer Rupprecht

## **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.

### **Employees**

All figures for employees in the annual report are based on full time equivalent.

### **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.

### 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 Group 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.

### Swisslog Group

Swisslog Group comprises Swisslog Holding AG and its subsidiaries.

### 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 2015

FIRST QUARTER INTERIM REPORT MAY 6, 2015

ANNUAL GENERAL MEETING, AUGSBURG JUNE 10, 2015

ANNUAL REPORT TO MID-YEAR AUGUST 5, 2015

INTERIM REPORT FOR THE FIRST NINE MONTHS NOVEMBER 11, 2015

This financial report was published on March 25, 2015 and is available in German and English from KUKA Aktiengesellschaft's public relations/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. 22–27

### Photographs

Marek Vogel, Munich  
p. 4, p. 6–17, p. 22–27, p. 50–55, p. 60–67

Armin Brosch, Munich

p. 3, p. 5

### Print

Eberl Print GmbH, Immenstadt

### Translation

euroscript Services GmbH, Augsburg

### Other photos

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# KEY FIGURES 5-YEARS-OVERVIEW

in € millions	2010	2011	2012	2013	2014
<b>Orders received</b>					
Robotics	486.2	654.4	803.1	793.5	805.5
Systems	716.8	916.6	1,115.1	1,111.6	1,456.0
Group	1,142.3	1,553.0	1,889.6	1,881.9	2,229.0
<b>Sales revenues</b>					
Robotics	435.7	616.3	742.6	754.1	834.6
Systems	695.3	850.7	1,025.3	1,045.9	1,285.6
Group	1,078.6	1,435.6	1,739.2	1,774.5	2,095.7
<b>Order backlog (Dec. 31)</b>	<b>630.5</b>	<b>724</b>	<b>909.4</b>	<b>991.6</b>	<b>1,702.5</b>
<b>EBIT</b>					
Robotics	20.8	51.0	80.2	77.1	89.5
Systems	20.0	33.7	47.7	60.8	80.2
Group	24.8	72.6	109.8	120.4	142.0
<b>EBIT in % of sales</b>					
Robotics	4.8	8.3	10.8	10.2	10.7
Systems	2.9	4.0	4.7	5.8	6.2
Group	2.3	5.1	6.3	6.8	6.8
<b>Earnings after taxes</b>	<b>-8.6</b>	<b>29.9</b>	<b>55.6</b>	<b>58.3</b>	<b>68.1</b>
<b>Financial situation</b>					
Free cash flow	-37.3	6.5	77.1	95.4	-198.5
Capital employed (annual average)	312.5	332.9	339.8	326.2	492.0
ROCE (EBIT in % of capital employed)	7.9	21.8	32.3	36.9	28.9
Capital expenditure	15.4	30.3	42.8	74.7	94.3
Employees (Dec. 31)	5,990	6,589	7,264	7,990	12,102
<b>Net worth</b>					
Balance sheet total	984.7	1,078.0	1,137.4	1,377.1	1,979.5
Equity	198.1	252.4	297.5	379.1	541.1
in % of balance sheet total	20.1	23.4	26.2	27.5	27.3
Net liquidity	-60.3	-32.6	42.8	146.5	32.6
<b>Share</b>					
Weighted average number of shares outstanding	30.3	33.4	33.9	33.9	34.2
(in millions of shares)	-0.28	0.89	1.64	1.72	1.99
Earnings per share (in €)	-	-	0.20	0.30	0.40*
Dividend per share (in €)	548.0	472.0	938.4	1,154.8	2,106.0
Market capitalization (Dec. 31)					

\* subject to approval by shareholders at the Annual General Meeting on June 10, 2015

[WWW.KUKA.COM](http://WWW.KUKA.COM)