The clouds lie low over the Black Forest. Gray and heavy, they drift ponderously over mountains and dark pine forests, over calm lakes and lush meadows down in the valley.

The German holiday region between Karlruhe and Basel really is something special. Nearly 10 million holidaymakers and day-trippers from all over the world come here year after year. Most of them have a very specific image in their mind – country girls wearing the region’s traditional Bollenhut hat topped with red pompoms, cafés serving the legendary and delicious Black Forest gateau, and, of course, one of the world-famous cuckoo clocks to take home as a souvenir.

The typical Black Forest clichés, you might think resignedly. But as soon as you get out of the car in any of the numerous valleys, you immediately find yourself in the heart of picture-postcard Germany at its best – between small villages with romantic half-timbered houses nestling beside towering church steeples, between babbling brooks and homely farms, between sweet-tempered cows and curious deer, or even in fairytale forests where you just might, if you listen very carefully, hear a soft call of “cuckoo.”

Right in the heart of this idyll lies the community of Biberach, home to around 3,400 people and to Karl Knauer KG. The company’s namesake founded a packaging company here in 1938. Twenty years later, the company moved to Zeller Strasse, which is still the site of its headquarters. Knauer – who was made a honorary citizen of the town of Biberach – continued to visit his office daily to check on things until shortly before he died at the age of 88. During those 57 years, Knauer sowed all the seeds needed to open up various growth options for the packaging plant. These included introducing offset printing in 1961 for manufacturing packaging with quality surface finishing, and the production of advertising note blocks from 1972. Three years later, he added gift packaging to the portfolio. In 1982, he oversaw the delivery of the first packaging system manufactured by the company’s in-house special mechanical engineering section.

Successfully down to earth
Even so, the founder would no doubt be astonished if he could see just how far and how consistently the company – now the largest in the small community of Biberach – has managed to progress with this growth. Karl Knauer KG now employs around 410 people at its 26,000-square-meter premises in Biberach and a further 160 at its branch in Pniewy in Poland, and achieves sales of approximately EUR 70 million per year.

In the packaging sector alone, the company works for well over 100 international customers – a partnership that has lasted for 50 years in some cases – to produce folding...
cartons for pharmaceutical, agricultural, food and cosmetics products and blister packs for toothbrushes and razors. It ranks as one of the top ten packaging printers in Germany. With a market share of around 50 percent, it is the country’s top company for standard gift packaging in the wine and spirits industry. Karl Knauer is also the European market leader for advertising note blocks, including the very popular sticky notes.

The company sought ways to make existing knowledge available to those that need it and thus reduce the error rate and optimize interaction. “We wanted to become leaner and faster and achieve continuous improvements. And, of course, we wanted to cut costs and identify potential for savings in purchasing and, above all, processes,” says Kammerer, outlining the reasons behind the comprehensive lean project in which the company has invested a lot of time, money and effort.

Among other things, Karl Knauer has introduced shopfloor management across the entire company with communication corners that employees can use on a daily basis for short meetings. If a member of the sales staff has been out visiting a customer, he reports back to the assembled team about how the visit went and if there were any criticisms. In the production sector, too, senior staff come together for half an hour each day to discuss current performance or establish who needs to initiate which measures to ensure certain problems do not reoccur. “Instead of poring over lengthy reports, employees discuss matters directly at the site and agree what action needs to be taken,” continues Kammerer.

“We wanted to become leaner and faster and achieve continuous improvements. And of course we wanted to cut any costs that could be saved alongside the purchase itself, especially in processes.”

RICHARD KAMMERER
MANAGING PARTNER, KARL KNAUER KG

Some 410 employees follow lean principles at the 279,900 sq. ft. (26,000 m²) Biberach site. “We are efficient processes in production, this involves daily meetings when the employees involved discuss current performance and decide any corrective measures. These are then stored in the system to avoid any recurrences of the same problems.

Efficiently lean

The prospects for that are good. With the support of various consulting companies, including experts from Heidelberg, over the last eight years, Karl Knauer KG has left no stone unturned in identifying potential for improvement in all its departments. In addition, the software to achieve seamless integration of suppliers and customers,” explains Managing Director Joachim Würz, who is responsible for IT, manufacturing and materials management at Karl Knauer. Alongside standard applications for human resources, finances and accounting, Karl Knauer mainly uses the software to consistently boost efficiency within all manufacturing processes. Experience from production flows directly into the system via technical actual costing, thus
maximizing the efficiency of repeat jobs. The software also makes planning easier, as larger customers can post up-to-date order volumes or upcoming jobs in the company’s system. “In an ideal scenario, that means we can accurately plan our production a month in advance and balance out peaks and troughs,” says Wühr.

**Push, support, establish boundaries**

The progress that has been achieved in the pressroom since 2010 is equally impressive. One of the people responsible for that is Production Manager Gerhard Kammerer (56), who is currently working with staff to resolve an issue with a laminating machine. “It’ll be back up and running in half an hour,” says Kammerer with a smile, as he brushes dust from his gray work overall.

Richard Kammerer’s younger brother is a proven expert in the field of lean production. Six years ago, he spent 46 weeks being trained as a Continuous Improvement Process (CIP) expert. That was a long time, but nothing compared to the time it takes to achieve maximum success in the CIP. “It takes 10 to 15 years to reach the ‘high level’ stage. That’s simply the length of time needed to implement all the workflows and technical aspects, and to ensure that the process has been fully embraced by every single employee. You constantly have to be setting priorities during this time—pushing, supporting, establishing boundaries.”

Gerhard Kammerer really pushed hard in 2009, for example, when he made the decision to install a Speedmaster XL 145 to replace the existing press made by a different manufacturer. “That was a real milestone, not least because the staff swore by the old presses and Heidelberg had only just moved into the large-format sector.” Together with three printers, Kammerer had test prints made on a different make of press and then, two weeks later, did the same on a Speedmaster XL 145 in Wiesloch-Walldorf. In Wiesloch, it was all over within a day. “On the car journey back, it was completely silent for an hour,” recalls Kammerer. “Then the first printer said: ‘That’s impossible’ and then the second said: ‘I don’t believe it.’ That was the decisive moment when they all completely changed their opinion.”

Since the beginning of 2010, Karl Knauer has been operating a six-color Speedmaster XL 145 measuring over 40 meters in length and equipped with two coating units, fully-integrated material logistics, Prinect Press Center and Prinect Impress Control. It also has two drying units and an extended delivery with DryStar Combination UV, which allows for different combined applications with water-soluble coatings and UV primer.

Besides this press stands the company’s latest acquisition—a Speedmaster XL 106-6+L/LH, also with two coating units and drying units equipped with the Prinect Impress Control inline color and register control system and non-stop logistics at feeder and delivery; it ensures production can be completed and monitored seamlessly. Both machines are integrated into the Prinect print shop workflow using Prinect Pressroom Manager and linked with the SAP system via a CIP4 interface. The print shop also uses the Remote Monitoring service to maximize availability. Heidelberg constantly monitors technical data from both presses, identifies any irregularities immediately, and can thus address any technical problems before they cause unscheduled failures.

**“In all, 28 of our top 30 customers use SAP. This made it obvious that we would need to use the same software if we wanted to seamlessly integrate suppliers and customers.”**

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**Joachim Wühr**

is the Managing Director of Karl Knauer KG and is responsible for IT, production and materials management. He also regularly lectures about packaging at Stuttgart Technological University.
For us, it was very definitely about significantly increasing cost-effectiveness and productivity when printing complex folding cartons, including in shorter runs,” says Gerhard Kammerer. Calculations made by Heidelberg ahead of the investment showed that Karl Knauer could greatly increase productivity with appropriate modifications in logistics, job planning and machine performance. “We worked very closely with Heidelberg and made enormous progress,” he adds. Make-ready times for the Speedmaster XL 106 were reduced considerably, for example. “Further improvements are definitely possible in the medium term,” assures Gerhard Kammerer. Another part of the plan right from the beginning was to produce large-format packaging jobs with fewer make-ready sheets. “Here, too, we have been able to achieve the ambitious shared objectives we set.”

Strong local commitment
Gerhard Kammerer estimates that investing in the two presses accounts for 50 percent of the increase in production. “The other 50 percent is down to processes, organization, materials management, prepress, sales and manufacturing management. A jigsaw needs a lot of tiny pieces to build a coherent, complete picture.” To get a full picture of the company, there’s one element to consider that has nothing to do with efficiency – the social responsibility of Karl Knauer and a special type of interaction that is supported to no small extent by the daily presence of the second and third generation of the founder’s family. Olaf Pohl (73), Karl Knauer’s son-in-law and himself a successful entrepreneur, visits the company every day to speak with the management team and staff. “I just show that the family is around,” says Pohl. “I also take every opportunity to emphasize that we are still a family company that is concerned with more than just money. Sure, you can buy everything with money, but you have to be able to work together with people.”

The people in the local area are also very important to Karl Knauer KG. To reflect that, the Karl Knauer Foundation was set up in 1995 to support the work done by youth groups, social groups, and associations in the region. In addition, Karl Knauer, another company, and the municipality have been running the “Fliegerkiste,” the children’s daycare center for nearly four years now. Olaf Pohl’s daughter Stefanie Wieckenberg plays a major role in this and is set to join the management team of Karl Knauer KG in the next few years. The daycare center offers flexible, family- and employee-friendly hours and is of course open to the children of company staff. Just one more piece of the jigsaw that shows why Karl Knauer is impressively different.