

**THE ELEKTROBIT STRATEGY:  
A FASTER AND MORE TARGETED PATH FROM DEVELOPMENT TO SALES**

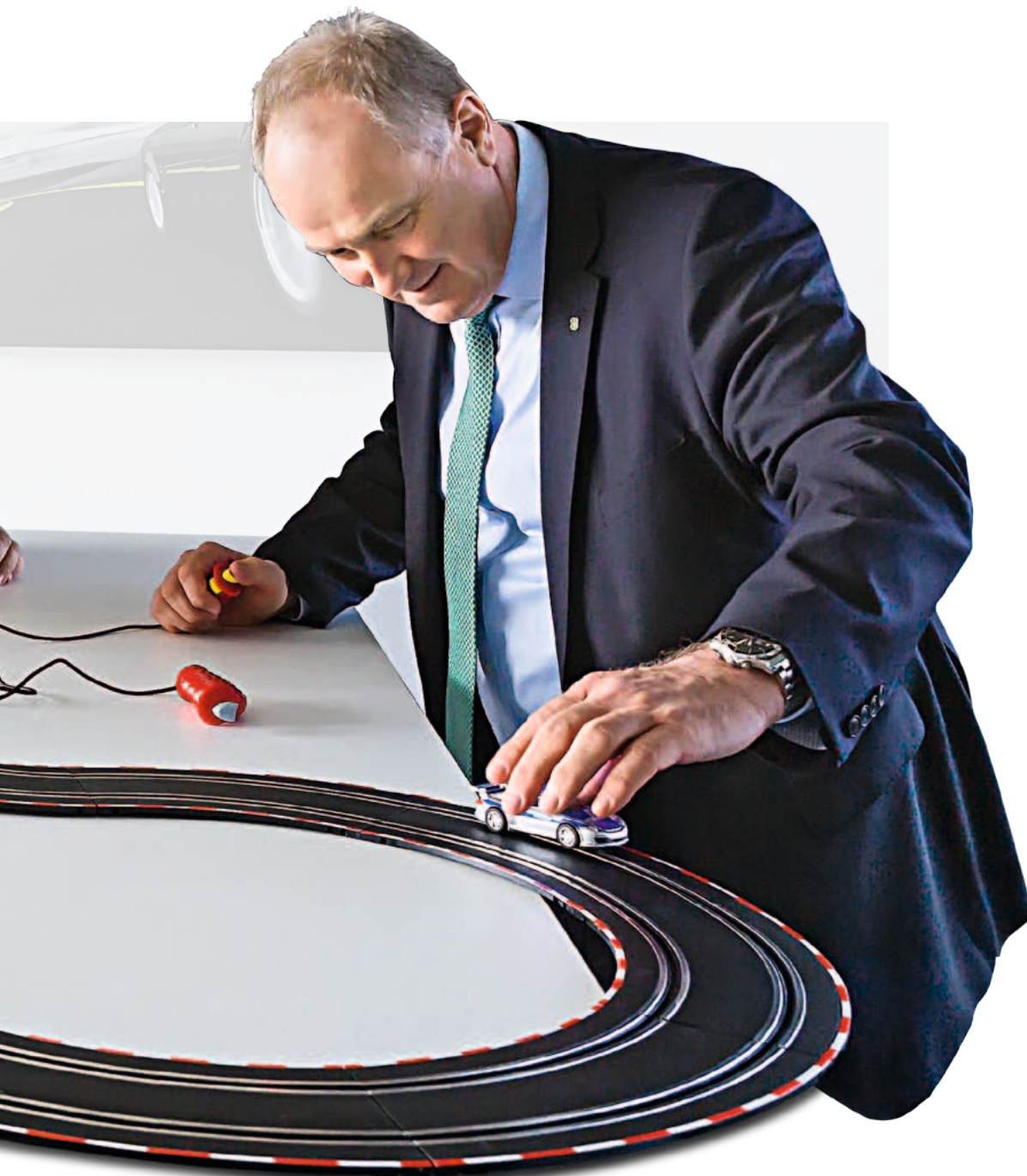
# LOOPING INSTEAD OF CASCADING



**At the controls of Elektrobit Automotive: Markus Schupfner (Head of Operations), Eric Luttermann (Head of Sales), and CEO Alexander Kocher (from left).**

Three men, one mission: Elektrobit Automotive wants to offer automotive software solutions on a wider basis. This supplier company is using lean development to give new functions to cars in short takt times. Its synchronized sales team is constantly listening to customers—and thereby completing the circle.

📄 ULF J. FROITZHEIM    🗨️ MARCO PROSCH







**Elektrobit Automotive has moved into the fast lane. Working together with the consultants from Porsche, the company has launched a strategy that focuses on broad market coverage and complete automotive solutions.**

**E**lektrobit Automotive is one of those medium-sized specialized companies that most car drivers have never heard of—unjustifiably so. Where would today's modern cars be without embedded software systems like those from Elektrobit Automotive? Not only do these systems energize the vehicle infrastructure and bus systems. They also make navigation and infotainment possible, connect to the Internet, and turn the car itself into a sensor that analyzes its environment and responds appropriately. In short, it is the software that lays the foundation for future-oriented concepts such as autonomous driving. Elektrobit Automotive's customer list reads like a Who's Who of the industry. Founded in 1988 as 3Soft, the company is located in the Tennenlohe district of Erlangen in Bavaria. The number of employees has increased sevenfold in twelve years to more than 1,200—most of them software engineers. Elektrobit Automotive GmbH operates in seven countries, including Japan, China, and the USA.

## RIISING SALES, BUT STAGNATING PROFITS

Along with its expansion, however, the company's problems also increased. Even its rapidly growing team of employees was not able to keep up with customer wishes. According to CEO Alexander Kocher, the top line, i.e. sales, showed solid growth in the wake of the economic crisis. "But the bottom line simply showed a zero." In 2012 the company launched a strategic restructuring project—and commissioned Porsche Consulting. Due to the nature of the dynamic software sector, forecasts are very uncertain. Working together with the Porsche consultants, the company therefore selected a manageable time period of five years. By 2017 the specialists from Erlangen want to establish a broader base and move from being an extension of car makers' workshops to a supplier of solutions themselves in an age of connected cars. To accomplish this mission, two key conditions were identified: rapid development of complete software solutions, and sales work oriented consistently to customers and their needs.

The most pressing need for action lay in the methods by which Elektrobit develops its software for cars. The textbook approach that had become established as best practice—known as the V model—was far too ponderous given the shorter takt times for innovations that had taken over the IT sector and subsequently also the automotive industry. "Development cycles were becoming ever shorter," explains Markus Schupfner. A mathematician who headed the infotainment section and is now Head of Operations, he experienced the escalating time pressure at close hand. "We used to spend up to three years developing a system. Then we only had one year and today we often have to do it even faster."

By a happy coincidence, Porsche Consulting had just helped the Walldorf-based software giant SAP to accelerate its projects by means of a lean development model (LDM). LDM combines lean management with agile development methods. The V model previously practiced at SAP was based on a waterfall approach: software projects are split into cascades of development stages that have to be handled in strict sequences, from superficial to in-depth matters. In visual terms these stages form the left side of the V-shaped process model. On the right side, the developers start at the bottom and move upwards by testing the software on a step-by-step basis to make sure it meets the specifications.

Aside from the fact that this procedure takes up too much time in general, its real problem is its inflexibility. "Once the project gets underway it is no longer possible to make retroactive changes," says Markus Schupfner. Today, however, the change requests (CR) that people were supposed to avoid at all costs because they sent the whole project back to square one are now a matter of course. During the period it takes to develop a new car, information technology advances so quickly that the software originally envisioned would be obsolete by the time the car

is ready for production. Furthermore, work on the code no longer ends when the car is delivered. Software update services will soon become as commonplace as oil changes are today.

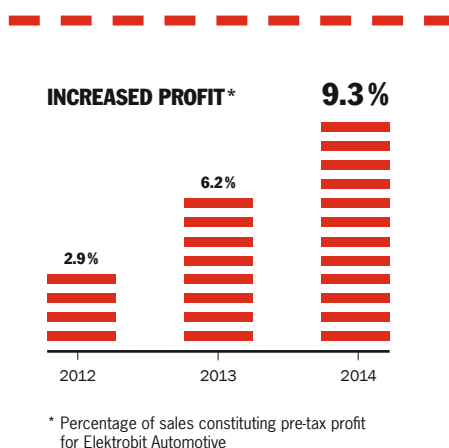
## MORE FREEDOM FOR SOFTWARE ENGINEERS

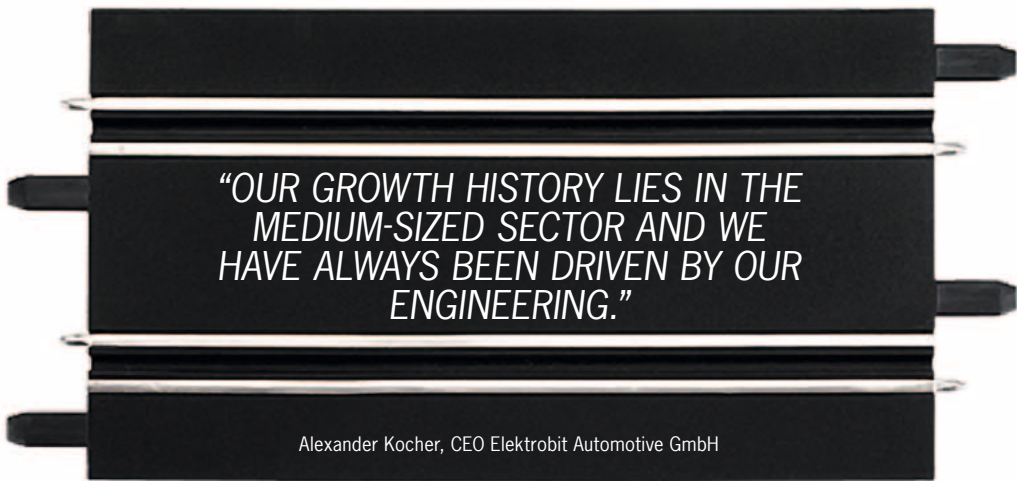
In early 2013 Elektrobit Automotive launched a pilot project with Porsche Consulting and introduced agile development with LDM for the first time. This approach will no longer compel the software engineers to follow a strict procedural sequence. Instead, it will provide them with a system of rules to accelerate their project man-

agement (see page 28 for more on agile development). The most important change consists of no longer viewing the overall software product as a monolithic item. "Agile" means viewing the work in parts. The teams are small—typically fewer than ten members—and self-organizing. They develop functions that make up part of the whole in short periods of time known as "sprints." If roadblocks arise, they quickly become visible because paramount importance is attached to communication and transparency. No one is allowed to brood for weeks on an issue in isolation.

"Lean or agile for us means that we assign greater responsibility to the teams," says Schupfner. This shift takes place primarily in people's minds. The head of operations is aware that his employees have to discard the routines they have often followed for decades. "You can't put this type of process into place overnight," he says. To increase acceptance, the teams themselves are the ones who measure its efficiency. The results are not passed on to the management. Individual performance is not that crucial, because the method consistently gives the responsibility to the team as a whole.

Although this has required some getting used to for many of the employees, Schupfner feels that introducing LDM in a large part of the →



A graphic of a book with a dark cover and white text. The book is shown from a slightly angled perspective, with its spine on the left. The quote is centered on the front cover. The book has several white tabs or pages visible on the right side.

*"OUR GROWTH HISTORY LIES IN THE  
MEDIUM-SIZED SECTOR AND WE  
HAVE ALWAYS BEEN DRIVEN BY OUR  
ENGINEERING."*

Alexander Kocher, CEO Elektrobit Automotive GmbH

company has paid off. "Employee surveys have shown that precisely the biggest skeptics are now the project's champions," he observes.

#### **SALES REV UP TO HIGH PERFORMANCE**

Not least of all, the success of the method also fits in with the high-performance sales organization that the company is seeking to set up together with Porsche Consulting. "Our growth history lies in the medium-sized sector and we have always been driven by our engineering," says CEO Kocher in describing the company's culture in the past, in which the project directors not infrequently landed contracts themselves and were relieved when customers didn't upset the overall project planning with ad hoc requests for changes—with the associated renegotiation required for additional costs. With lean development, by contrast, a change request turns into a "user story" that is integrated into an ongoing development process. "We're no longer talking about a separate project, but just a sprint," says sales head Eric Lutterman. In other words, a disruptive cost-bound factor that always came from the customer side has now become a normal service that a software company can market proactively at reasonable rates.

In order to restructure the sales activities, the underlying conditions first had to be right. The Porsche consultants talk about synchronization, by which they mean aligning all activities with the company strategy. The sales strategy that Lutterman developed with support from Porsche now directly supports the overall aims of Elektrobit Automotive. Its approach relies on sales experts who identify the issues that will be dominating the market in the future. In the process, these experts consider the customer's point of view as well as the engineer's and carefully balance the requirements and technological options. This is no trivial task, given the shifting forecasts and framework conditions. The Elektrobit experts have to be very familiar with the needs of the OEMs. Lutterman therefore wants to restructure his organization in such a way that "the sales people

spend more time on location with the customers." An internal evaluation revealed that 83 percent of sales work in 2013 was predominantly taking place in staff members' own offices, and only one-sixth of it consisted of visits to customers. The new high-performance organization calls for a significant proportion of working time to be shifted from internal to external activities by 2017, without adding any new staff members. Time for customer dialogue would more than double.

The first step in this direction consisted of introducing a matrix organization. Instead of specializing in individual products, the sales employees now concentrate on their key accounts and on technology. In addition, completely new roles have been created, for example at the interface of development and sales. "We have identified seven fields of action and are making continuous progress," reports Lutterman. High-performance sales and lean development will ultimately form the two poles for ensuring rapid and targeted customer satisfaction. Possibilities and requirements—in development as well as in sales—are constantly reassessed, just as in a loop.

#### **ON THE ROAD TO AUTONOMOUS DRIVING**

The restructuring of this engineering firm into a company that can sell its abilities accordingly is still far from over, but Kocher is already optimistic. Not only the top line is growing, but also the bottom line again. "Our profit margin has increased markedly," he notes with satisfaction. The percentage of sales constituting pre-tax profit has risen continuously by around three percentage points a year since 2012: from 2.9 percent in 2012 to 6.2 percent in 2013 and 9.3 percent in 2014. The company also needs this greater earning power to fund its ambitious plans. Development teams from various departments at several sites are working together on software for self-driving cars. "Our mission is to provide solutions that will get us from A to B safely and comfortably," says Kocher—including autonomous driving in the future." ←



Further information at: Porsche Leipzig GmbH, tel. +49 341 999-13555, [events@porsche-leipzig.com](mailto:events@porsche-leipzig.com), [www.porsche-leipzig.com](http://www.porsche-leipzig.com)

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