



Lean by Conviction

Michael Macht was a part of Porsche Consulting right from the start. Today, the 49-year-old is the Chairman of the Managing Board at Porsche AG and probably owes his career in no small part to his love and enthusiasm for lean production processes. Even during the turnaround of the sports car manufacturer at the beginning of the nineties, he was so successful with Japanese kaizen management methods that he was invited to become the Managing Director of the newly founded Porsche Consulting GmbH. “We were convinced that the management methods we had applied at Porsche could also be implemented in all industries and sectors,” says Macht.



15
YEARS
of Porsche Consulting

The hallway in front of Michael Macht's former office at the Porsche plant in Zuffenhausen is a vivid monument to history. Huge black and white photographs offer a glimpse of the type of vehicle production that took place just one floor below in the fifties. "Even in those days, lean thinking was implemented in some areas," says today's Chairman of the Managing Board of Porsche AG, formerly responsible for production and logistics, as he points with a smile to the proximity of the engine production to the bodyshells of the 356 model standing by. Here, in front of this photo with Michael Macht, you can almost feel his urge to reach in and lend a hand in optimizing a few things in the production line back then. This man lives and breathes lean management.

"If you don't want to fall behind, you have to constantly work at getting better," says the engineering graduate, who already played a major role in the turnaround of Porsche AG in the early nineties. In 1994, he became the first managing director of the newly founded Porsche Consulting GmbH, which quickly grew into a highly profitable consulting company. "We were convinced that the management methods we had applied at Porsche could also be implemented in all industries and sectors," says Macht.

He still remains an expert on optimizing work processes. He is constantly searching for improvement potential—and always together with his staff. It has been like this since his time as the board member for Production and Logistics from 1998, and now as Chairman of the Managing Board at Porsche AG. His guiding principle has remained the same. "You have to be prepared to take a few risks when you change processes. After

all, it is a risk to leave the well-known path and to conquer new ground."

It was this assuredness that led to an eye-opening experience at the outset of the Porsche restructuring. The sports car manufacturer had brought in help from Japan—and after a brief tour of the plant in Zuffenhausen, the kaizen instructors invited all those working in plants 2 and 3 to come to a workshop in the saddlery. The task was to consolidate two plants into one. "Relocating during production? Impossible!" came the unanimous response from all the shocked Porsche employees. "But after one week, the saddlery was able to do without the space in plant 3 and was concentrated in plant 2," recalls Michael Macht. They were off to the races: Porsche was restructured and a new basis for cooperating with suppliers was set up.

Ever since, Michael Macht has been a true believer in lean management. "That goes for my private life too," confesses the passionate motorcycle rider and skier and lets slip that even his small workshop, where his far too seldom-used Harley Davidson V-Rod awaits him, is arranged according to lean principles. All the tools are in the right order and ready to use.

So Porsche's new Chairman of the Board will always remain a Porsche consultant at heart. Now and again, a "we" slips out when he is describing the particular work processes in the subsidiary. "We make those affected by change get involved," he then says in reference to the consulting principle of integrating people into the change process at an early stage. Michael Macht is a living example of this. One of his first official dealings as the Porsche board member for Production and Logistics involved working on a vehicle from start to finish on the

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MICHAEL MACHT

shop floor in work overalls. “I talked to the employees and asked them where the problems were.” And he got them to embrace his winning formula: “Work, work, work—always think about what you could do better and how you could do it better.”

Today Porsche Consulting still follows similar “Macht principles”—and it is clear for Michael Macht what constitutes a good consultant. You have to have the right work experience, he answers spontaneously. “And as an employee in a company, you need to have experienced a change process first-hand. Then you know all the arguments against change, you understand the background and you can deal with it.” Having this credibility is a key part of Macht’s success. “Porsche

Consulting only provides the knowledge that has already been successfully applied in-house. So Porsche is a kind of laboratory for Consulting.” This created a thriving relationship between the parent company and its subsidiary, with the Chairman, Michael Macht, as a very personal component. ←

Michael Macht – Resume

Born: 28 August 1960

in Stuttgart, Germany.

Education: 1981 to 1986 Mechanical Engineering at Stuttgart University of Technology.

Professional experience: 1986 Research assistant at the Fraunhofer Institute for Industrial Engineering and Organization in Stuttgart; 1990 Expert advisor for engine planning at Porsche AG; 1991 Head of the work organization department; 1992 Advisor to the board for production and material management, design and setup of Porsche improvement processes (PVP); 1993 Assistant to the Chairman of the Board (development and implementation of process optimization by integrating suppliers, P.O.L.E.); 1994 Managing Director of Porsche Consulting GmbH in Bietigheim-Bissingen; 1998 Board Member for Production and Logistics of Porsche AG; 2009 Chairman of the Managing Board of Porsche AG.

The Perfect Line

A revolutionary production and logistics system has made the Porsche plant in Leipzig the most advanced car production plant in the world. “We have made a giant leap in innovation,” says Michael Macht, the Chairman of the Managing Board, about the new poster child for lean processes. Now we can assemble the Panamera and the Cayenne in one model mix. Porsche Consulting was also involved in implementing these ideas.

□ JÜRGEN ZEYER

There is one place in the new Porsche plant in Leipzig where Michael Macht feels a very special kind of magic. “The marriage is still a source of fascination for me,” says the new Chairman, who was previously the board member for Production and Logistics. The marriage unites the engine with the chassis. The Leipzig plant even manages the feat of attaching all the different drivetrains of the Panamera and Cayenne models to the corresponding chassis at a single point—in a defined takt. Like clockwork. “It was an incredible challenge to achieve this for both models at one station,” says Macht. The sum of all these solutions is what makes Leipzig so exceptional—a vision has come true.

Michael Macht envisioned how the plant, where now the Cayenne and the luxury sports car Panamera are produced side by side, was going to look very early on. “I wanted to take a leap in innovation—and we did it. I don’t know of any other plant that has implemented the principles of lean production as consistently as in Leipzig,” he says.

Porsche invested 150 million euros in enhancements that have made it the most state-of-the-art car production plant in the world. The plant, which opened in Saxony in 2002, now has an additional 25,000 square-meter assembly hall, a logistics center, a pilot and analysis center, as well as a training workshop. During the reorganization, Porsche also adapted the Cayenne assembly process to the requirements for a model mix with the new Panamera.

This model mix was one of the basic conditions when the planning took place. It was a conviction with a history. Even during the Porsche AG turnaround in the early nineties when the company pulled itself out of its crisis by introducing process-oriented lean production based on the Toyota model, being able to manufacture multiple models on the same line was a factor in

its success. And just like then, the first thing Porsche did was send a team to Japan. They took clear instructions from Michael Macht with them: “Look at the factories there, so that you know what I’m talking about. And then we can implement our ideas here.” Porsche Consulting arranged the benchmark trip and the workshops, moderated the teams and developed the new logistics concept with the planners using their newly acquired knowledge. Macht: “You need external consultants, especially in the initial phases. Your own capacity is just not enough. And their unbiased view of things and different skill-sets also help get the process up and running.”

The heart of the new system is a time and procedure takt precisely calibrated with the incoming orders for vehicles in Leipzig. With a lead time of around 14 days, all suppliers receive a weekly plan. The plan defines which parts and how many of them need to be ready for truck collection at a certain time. To ensure that delivery is as efficient as possible, the truck does a “milk run.” This means it travels an optimized route to all the suppliers in the region before dropping off the load at a collection point. There the parts are allocated to the appropriate time slice and delivered on time (leeway one hour) and in the correct sequence to the logistics center in Leipzig according to the “just-in-sequence” principle. Here they are picked straight away and are fitted at the appropriate assembly station according to the “just-in-time” principle, all within the space of one hour.

This system means that expensive storage space is not required—and production can be quickly adapted to suit current market requirements. It only works if there is very close cooperation with the suppliers. This is why Porsche not only audits its suppliers, their systems and processes, but even checks all the sub-suppliers. The advantage is that the majority of suppliers come from the region, or at least from Germany. Michael



One after the other: The Panamera and Cayenne are assembled in a model mix at the Leipzig plant

Macht: “This makes the transport easy to plan and supply bottlenecks are avoided. Being ‘Made in Germany’ pays off here too.”

The new logistics concept is also in use at the engine plant in Zuffenhausen. From here, engines for both models go to Leipzig by truck. The bodies-in-white for the Panamera are made in the state-of-the-art VW plant in Hanover. They are then delivered to Leipzig by rail exactly in the order for which they are needed in the production line according to planning. The Cayenne bodies also come by rail from the VW plant in Bratislava. The precise arrival takt of the trains from both directions enables production to run smoothly.

It was even more difficult to coordinate the assembly of the Cayenne and Panamera models. Unlike the Panamera, the Cayenne bodies-in-white are already partly equipped upon delivery. So first of all the Panamera is fitted to the same degree (interior, underbody) on a specially developed single production line and then both models go onto the model mix assembly line. Two inspection lines are required at the end of production due to long processing times for quality assurance. Macht: “Leipzig is a phenomenal achievement by our planners and logistics experts.”

Porsche continues to build on its core skills in the lean plant in Leipzig and the main plant in Zuffenhausen. The major focus is on the assembly of all components and units, quality assurance, and managing the complex business network that connects all the suppliers.

As Porsche primarily deals with domestic suppliers for the fourth production series, the German added value for the new Gran Turismo amounts to 70 percent. After all, “Made in Germany” should remain the defining quality characteristic of a Porsche. “This production system enables us to keep producing exceptional cars such as the Panamera in Germany at a reasonable price,” says Michael Macht. For the new Chairman, this new efficiency and versatility demonstrates how companies can gear up for the future even in times of economic crisis.

Now the task is to keep the momentum going. Michael Macht warns against getting complacent. “New models and new variants make improving processes an ongoing challenge. We have to refine the system and keep optimizing.” And then, says the new Porsche boss, “We think about the next leap in innovation.” Ideas for new places with their own special magic will never run out.