



DR. PETER SCHÄFER

THE BEST OF TWO WORLDS

INTERVIEW: Daniel Völpel

Engineers from Porsche Engineering Group GmbH in Weissach are working on how vehicles could drive electrically, and in a networked and autonomous manner. Dr. Peter Schäfer, CEO and alumnus of the University of Stuttgart, talks about the high expectations for future mobility.

Mr. Schäfer, may we take a look around your development laboratories: what does the Porsche of the future look like?

PETER SCHÄFER For the customer, the essential features of Porsche quality are incomparable design, driving feel, ergonomics, and performance. We want to carry these genes, as we call them, into the future, whilst taking account of the new ecological and social conditions, which means consistent electrification, as featured in the Taycan, our first electric vehicle. Connectivity with many new functions based on big-data technologies and artificial intelligence is also another consideration.

How is the work divided between you and your clients?

PS As a traditional engineering services provider with a focus on development, we work both on behalf of Porsche, our parent company, but also for other companies. Vehicle manufacturers outsource certain components or even entire projects to service providers. We work on these up to an approval recommendation: final approval and type testing are then done by the manufacturer. We at Porsche Engineering place particular emphasis on new software-based functions in addition to the development of complete vehicles and systems. New functions could be implemented with the aid of AI and cloud-based data for example. For instance, the control system can be adapted to the current road conditions by recording them within the vehicle. Predictive driver information would even be conceivable if this were to be combined with data from other vehicles and, for example, with weather information from the Cloud. . →

→ “Porsche” is included in your company’s name: given current trends, such as driver assistance, networking, and e-mobility, where will sports cars and their petrol-head drivers fit in in the future?

PS Of course, our target customer, who influences the development of our vehicles is the kind of driver, whose main focus is on the experience and driving pleasure. You can get all that on special tracks. A lot of fans do that. But perhaps you also want to benefit from the vehicle’s dynamics on a twisty mountain road in the Black Forest. Moments like that are very precious to the owners. We know that customers will only be able to drive their cars that way for short periods in the future, which is precisely why such experiences have to be even more intense. And that’s exactly why we develop the vehicle in such a way that it masters these characteristics, knowing very well that, in their everyday lives, our customers will often be stuck in traffic jams just like everyone else. In those situations, we need the assistance and support functions that make these traffic conditions as pleasant as possible for drivers and passengers. So it’s the best of both worlds: the ultimate driving experience, wherever and whenever possible, and the maximum level of comfort in everyday driving situations.

So, a car should fulfill as many different roles as possible?

PS Yes! We refer to this as the spread between driving dynamics and comfort, between the driving experience and everyday road capability. Our aim is to maximize the spread of our cars.

Speaking of spreading: the public is clamoring for quieter, smaller, and – ideally – zero-emission cars. Your customers want big cars with plenty of room, rapid acceleration, speed and range. Can you reconcile those things?

PS If our customers like sporty SUVs, we want to include these in our range. The best way to achieve compatibility with environmental considerations is with hybrid or fully electric vehicles, which can produce zero emissions using a combination of electric drives and green electricity. That’s why we’re incorporating a pronounced electromobility aspect in our products. Batteries have a lower energy density than fossil fuels, which is why the question of efficiency is even more relevant for electric vehicles. It’s a balancing act, but we’re taking on this very exciting challenge.

As an external service provider, do you have more freedom in terms of concept and design or are the manufacturers’ specifications really strict?

PS Both. Manufacturers generally award contracts based on a clear specification of the product to be delivered. However, there are certain developments for which we need to take greater liberties and can contribute many ideas and suggestions. That’s why – not only in relation to our customer projects but also to our own technological developments →

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Peter Schäfer (right) believes in new software-based functions.



→ we put a lot of thought into the question: what will our customers care most about in the future? Our response is to acquire skills, for example in high-voltage or charging technology or in data analysis and artificial intelligence, at an early stage.

So you also develop new vehicle technologies even in the absence of a customer order?

PS Yes, we allow ourselves that freedom to a limited extent, but we choose which technologies to focus on very carefully. And I'd like to point out that we've made the right choices in the past by focusing on electromobility, networking and autonomous driving functions at an early stage.

As an alumnus of the University of Stuttgart, which of your findings from your time as a student and doctoral candidate do you still find particularly helpful?

PS For my PhD, I was very fortunate to be able to work on a topic relating to the use of mechatronics even all those years ago. In those days, mechatronic systems consisting of actuators and sensors as well as electronic control units that enable a range of novel functions, were being integrated into traditional vehicle technology based on mechanics, hydraulics and electrics. My PhD supervisor, Professor Werner Schiehlen, stressed the fact that we need to explore the combination of mechanics and software and that we need to find ways of integrating and testing mechatronic systems. That has had a major impact on my professional career.

The University of Stuttgart collaborates closely with industry.

What do you regard as the University's role in this?

PS Without a doubt, their primary task is to train, promote and prepare talented youngsters for their early careers, which would include familiarizing them with future-oriented technologies, sustainability and climate protection. These are the topics that really move us. In my view, tackling the challenges of tomorrow requires a close dialog with industry – on the industrial side we're concerned with applied science and engineering, whereas the University's concern is basic research, always one step ahead. To this end, we always need to find a balance between making the right contribution towards the further development of our technologies and of Germany as a center of industry, and meeting our social obligations with regard to the environment, climate and social issues. →

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After studying mechanical engineering and completing a subsequent doctorate at the University of Stuttgart, Peter Schäfer worked in the field of chassis engineering for both Ford and Volkswagen AG. He joined the Porsche Group in 2003, where, among other things, he was Managing Director of Porsche Engineering from 2004 to 2009. After that he was in charge of the Chassis and later the Complete Vehicle/Quality Sections within Porsche AG's Development Department. He took over as Chairman of the Board at Porsche Engineering in July 2019.

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