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## “The body cannot become a commodity”

Both electric mobility and autonomous driving are having a major impact on body design. The challenge faced by development service providers such as Pininfarina Deutschland, which is part of the engineering division of the Pininfarina Group, is to find the right balance between the different requirements and to combine lightweight design with strength and stiffness. In the ATZ interview, David Gagliardi, Managing Director and CEO, considers whether body design will be less important in the future, explains how the car is becoming a living space, and discusses the significance of strategic partnerships.

**ATZ** \_ David Gagliardi, you joined Pininfarina Deutschland eight months ago. On your first day in Munich, what was your biggest surprise after the move from your previous employer?

**GAGLIARDI** \_ Although Oerlikon is a transmission specialist and I'm now involved with vehicle bodies, ultimately all of this is automotive development, which is a world I'm very familiar with. I wanted

to take on a new challenge, and the responsibility of managing 240 people in Munich and in Leonberg near Stuttgart appealed to me. Since the middle of last year we have been part of Pininfarina

**David Gagliardi** (born in 1973) has been CEO of Pininfarina Deutschland GmbH in Munich since July 2018. He is responsible for the 240 people working at the company's two German sites in Munich and Stuttgart. After completing a degree in automotive engineering (Dottore in Ingegneria) at the University of Pisa (Italy), he began his career in early 2003 in the innovation department of the scooter manufacturer Piaggio. At the end of 2005, he moved to Ricardo Deutschland in Schwäbisch Gmünd (Germany), where he spent nine years in a variety of different positions, most recently as Head of Sales, Business Development and Marketing. In 2014 he took over global responsibility for powertrain products at the Johnson Electric Group which is based in Hong Kong (China). At the start of 2016, he joined Oerlikon Graziano in Schorndorf, where he was responsible for the German market and for the global electric powertrain business.



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Engineering in Italy and one of my tasks is to improve our integration with our parent company.

**Which areas interest you most?**

I think electric mobility is an important trend which is growing in significance on the international market. It has an impact not only on the powertrain, but also on the body and the vehicle as a whole. Over recent years I have been involved in the development of many electrified powertrains and I had global responsibility for the electric drive business. But it is clear that the powertrain in electric cars means less and less to end customers. When I was young and a new car was launched, I always wanted to look under the hood and find out how many cylinders and valves the engine had, what its capacity was, and whether it was turbocharged. All of those things have become less significant for both car manufacturers and buyers, including the question of whether the car has a diesel or a gasoline engine. The engine or motor is now a secondary consideration, while greater emphasis is being placed on the body and the level of comfort.

**But a distinction needs to be made between mass market models and super sports cars.** Absolutely. It's important to distinguish between them. In the future eight or twelve cylinder engines in sports cars will essentially be like Swiss watches.

Why do you need a mechanical movement when you have a more accurate digital display of the time on your smartphone? Customers are happy to pay a lot of money for expensive mechanical systems, but this is not the mass market.

**Is it possible to stand out from the competition on the basis of an electric motor?**

No. In my experience that's not possible. Even if an electric motor has a different winding or is combined with a more efficient inverter, the electric powertrain is not a distinguishing feature. The motors need to be made more efficient and to be quiet. They must not make whistling

**“The electric powertrain is not a distinguishing feature”**

noises or cause irritation in other ways. The marketing brochures for cars with combustion engines often mention, for example, a brake caliper painted in a special color that can be ordered as an expensive optional extra, but they never talk about who supplied the gearbox. It is interesting that the carmakers increasingly want to find out about the user experience and understand how their customers tick, what they like, and what they don't like. The interior, special sound systems, ambient lighting, and

connectivity with smartphones are all growing in importance. The car is becoming a living space, and the automated driving systems have the task of making it comfortable. Tesla's success depends more on the company making the customer experience its top priority and on understanding it correctly than on the fact that it is selling electric cars.

**What does your strategy for electric mobility involve?**

At Pininfarina we are already in the position to develop a complete electric car. We have identified a number of potential development partners, in particular for the electric powertrain. This will mean that less of the added value of electric cars will be wasted. However, the situation will soon become political. Car manufacturers can continue to produce their electric powertrains in Europe and buy them in at the same time from Asia in order to keep their costs down. This is by way of saying that a powertrain is no longer a car's USP. That's a fact. The new manufacturers and start-ups do not see themselves as carmakers as we currently understand them. They are making smartphones on wheels and therefore they need an electric chassis. From the buyers' perspective, this is a new business model. At Pininfarina we're ready to put an attractive body on the chassis.

**What was the biggest surprise when you arrived in Munich?**



Alongside the required thickness, other important factors in the case of CFRP include the weight and the design features, explains David Gagliardi (left) in conversation with Michael Reichenbach, Deputy Editor in Chief of ATZ

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Development service providers need to enter into partnerships with other firms if they want to survive, says Gagliardi

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I was amazed at how expensive it is to live here. You might say that this has nothing to do with the business, but it does. We have to pay our employees an adequate salary for the location. They spend a lot of money on day-to-day living. In Stuttgart you pay seven euros for a pizza, but in Munich it's more like twelve euros. I and, more importantly, our employees have to be able to afford

to live here. As a result our development costs and those of our local customers are higher.

**How can you survive in such a high-wage location?**

We resolve that problem with a combination of local employees and specialists from best-cost countries such as Poland. But because Tech Mahindra in India

acquired a majority of the shares in Pininfarina in 2016, we also have access to a pool of Asian employees who are less expensive. We need to make sure that the right connections are in place to ensure that not too many problems are caused by the transfer of the work and by the language barriers. The key to success is to find the right mix.

**What were you able to bring to Pininfarina from Oerlikon Graziano?**

Partnerships are a key consideration for me and they were also a high priority at Oerlikon. Nowadays everything is so specialized, varied, and complex. It's difficult even for large engineering companies to cover all the domains and all the disciplines on the market internally. This is why Oerlikon, for example, entered into a cooperation with Continental to develop electric powertrains. Each company contributed its own expertise, neither needed to make major investments, and both remained agile and flexible. One of the companies on its own would not have been able to offer such complex products. The market expects excellence from Pininfarina too. I would like to be involved in more partnerships.

**What sort of partnerships and projects will they be?**

We already have a center of competence for lightweight design and CFRP and we have strong bodywork and structural design skills for the interior and exterior of vehicles. If one of our competitors approaches us, for example on behalf of a customer, and asks for support in this area, we will help them out. The same is true in reverse. It's not unusual for us to work on large projects with our competitors. The competition is very tough and there is a lot of pressure on prices, but strategic partnerships are one important means of overcoming these challenges.

**Everyone is talking about autonomous and electric cars. Will the bodywork and the design of the vehicle become completely irrelevant?**

It's important to make a distinction here. In the case of autonomous vehicles that simply transport people from A to B, the design and the style are not as important. But when it comes to premium sedans that appeal to car buyers' emotions, an attractive design becomes even more imperative, because it helps manu-

facturers to stand out from the competition. Nowadays we need to pay more attention to the design of the interior than the exterior because it is all about the user experience.

## “Finding the right mix of materials for the body is the key factor”

**To what extent does the fact that autonomous driving will allow for different seating arrangements have an influence on your day-to-day work?**

The mountings for the safety belts and seats in particular have become more important, because it will be possible to turn and incline the seats. We need to identify the new positions of the anchor points in the body structure to increase the stiffness of the belt guide points. The whole system has to comply with the new and increasingly stringent NCAP crash

tests. The result is that the body cannot become a commodity and so we are not worried about the future. These are exciting times for body designers like us. However, many of the new features, such as the sensors for the new assistance systems, will increase the weight of cars.

**What options are available for keeping the weight down?**

With our expertise in lightweight design, we can generally compensate for the weight increases. We focus on the functional integration of components, including the battery and its frame. The housing becomes a load-bearing part. It is also important for it to be sealed, because gases from the battery must not be allowed to make their way into the interior in the event of a collision. Typical solutions include bonding and welding.

**How much knowledge of materials and lightweight structures do today's exterior designers need?**

Both design engineers and designers have to understand the shapes, production processes, and radiuses that are possible with each material. Alongside the required thickness, other important factors include the weight and the design features. One example is this special carbon fiber component, a trim panel for the rear bumper of the Ferrari F60 America. We manufactured it in small numbers for Ferrari in Maranello. Knowledge of steel and aluminum is also needed to meet today's lightweight design requirements. Attempts have been made in the past to make a car entirely from aluminum, but nothing came of them. The focus is now on finding the right mix of materials for the body.

**David Gagliardi, we wish you every success. Thank you for this interesting conversation.**

*You can read more of the interview in German on the ATZ online portal at [www.springerprofessional.de](http://www.springerprofessional.de).*

**INTERVIEW:** Michael Reichenbach



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