

# Audi 2013 Annual Report

How feels tomorrow?



A close-up, low-angle shot of a car's headlight, which is illuminated, casting a bright glow. The headlight is part of a dark-colored vehicle, and the background is dark and out of focus.

# inno

# vative

The technologies of the **future** are intelligent systems  
that adapt perfectly to different situations.  
Like our *Audi Matrix LED headlights*.





passi





# onate

For more than 33 years, it has stood for a **dynamic**  
**and safe driving sensation** – and is always reinventing itself.  
*Our quattro drive.*

# progr

**Smart, informative and focused on the driver.**

The Audi virtual cockpit allows  
you to experience Vorsprung durch Technik.



# essive



Zero local emissions and an impressive range.  
With *tron technologies* we are shaping the transition to  
**sustainable mobility**. Without any compromises.

# respo







nsible

We feel tomorrow.

# THINK ...

**Innovations** that make a statement for the next generation.  
Which **ideas** will we use to **shape the future**?



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... LIGHT

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# ACT...

Seven billion people.  
Each with different needs.  
**What moves our society?**



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# The **multimedia** Audi Annual Report

Accompany us on a journey through the world of Audi.  
Find out more about the fascination of the brand in **emotional stories, movies and pictures**. Feel what drives us to shape the future.



## Multimedia experience

More photos, more videos, more information:  
Discover the whole world of the Audi Annual Report on the website [www.audi.com/ar2013](http://www.audi.com/ar2013) or using the **apps** for iPad® and Windows 8.



## Motorsport special

Take another look back at the **highlights of the Audi motorsport season**, such as Mike Rockenfeller's victory in the DTM or the 12th win at the 24 Hours of Le Mans.



Look out for this symbol. Wherever you see it, it means that there are **movies, animations or picture galleries** available. Simply download the recognition app **layar**, hold your smartphone or tablet over the symbol and use augmented reality to dive into the multimedia world.

## Mexico plant

The most modern plant in the worldwide Audi manufacturing network is currently being constructed in San José Chiapa,

Mexico. At an

altitude of about 2,400 meters, it will also be the highest situated plant. The facility, covering an

area the size of around 560 soccer pitches, will manufacture the next-generation Audi Q5 from 2016.

11.2 million LED pixels

At the 65th International Motor Show (IAA), Audi again served up a real spectacle for visitors to its stand: Frankfurt was given a new skyline for ten days! The specially constructed building invited people to view the context of urban mobility from unusual vantage points. Inside, skyscrapers and entire districts sprouted from a ceiling brought to life by elaborately projected images and a total of 11.2 million LED pixels. The stand, which took seven weeks to build, incorporated some 2,300 square meters of mirrors and 150 kilometers of cables, and covered a total floor area of 3,400 square meters.

## Success story in China

In July 2013, the Chinese joint venture FAW-Volkswagen Automotive Company, Ltd., in which AUDI AG is a partner, celebrated its 25th anniversary. This milestone year also saw Audi deliver its two millionth car in China – a locally built Audi A6 L. The brand with the four rings is consequently the undisputed market leader in the premium segment in China.

25 years of partnership

1,575,480 deliveries

In 2013, the Audi brand achieved a new all-time best in delivering 1,575,480 cars, breaking its own record in more than 40 markets. This represented an increase of 8.3 percent worldwide. Audi's three main international markets were instrumental to this growth, each of them expanding at a double-digit rate: China was up 21.1 percent, the United States up 13.5 percent and the UK up 14.9 percent.

## Operating return on sales

Audi was again one of the most profitable manufacturers in the automotive industry worldwide in 2013. The Audi Group achieved an operating return on sales of 10.1 percent, slightly above its strategic target corridor of eight to ten percent – despite the high outlay needed for new models and tech-

10.1%

nologies as well as the costs of systematically expanding our international manufacturing structures.

5,000,000

## Audi models with quattro drive

Audi celebrated a very special anniversary in February 2013. The five millionth Audi with permanent all-wheel drive was built at the Neckarsulm plant. Last year, almost one in two customers opted for an Audi with quattro drive.



*Dear Readers,  
Dear Shareholders,*

Would you also like to know what the future of driving looks like? What energy sources and drive systems our mobility will be based on, for instance? Will the day come when we can tell a car what to do with only a gesture or a look? How does it feel to leave the steering up to a computer? Will traffic lights one day disappear from our roads because the traffic flow uses swarm intelligence to regulate itself?

Much of this may sound like dreams of the future. But consider this: When Jules Verne published his novel "From the Earth to the Moon" in 1865, who would have believed his notion of putting a man on the moon would become reality just 100 years later?

Every day, we at Audi work intensively on matters relating to the future – whether it be next year, the next decade or the world in 30 or 50 years' time. That is why we have devoted this Annual Report to the question of how the future feels.

We want to be more than mere passengers on this journey through time. We are the ones behind the wheel, the ones

shaping the future. We supplied ample evidence of that ambition in 2013, steering our Company along a clear course through a challenging market environment. For the first time ever, last year saw us deliver over 1.5 million cars with the four rings to customers – two years earlier than planned. And with new models such as the Audi A3 Sedan, innovative technology such as Audi e-tron and an expanded production network, we are paving the way for future success.

Read on to find out more about our ideas and innovations for the future. Discover how today's visions will gradually unfold to become tomorrow's reality.

Kind regards,

**Prof. Rupert Stadler**

/ Chairman of the Board of Management



Prof. Dr. Dr. h. c. mult. Martin Winterkorn  
Chairman of the Supervisory Board

*Ladies and Gentlemen,  
Dear Shareholders,*

The past fiscal year brought a slight increase in economic momentum worldwide. Latterly, the signs were predominantly positive in many industrialized nations, while most emerging economies achieved sustained robust economic growth. In 2013, the global automotive market benefited most of all from strong demand for cars in China and the United States.

Under the umbrella of its long-term product initiative, the brand with the four rings again brought a large number of new models onto markets in 2013. The new Sportback and the Sedan were added to the A3 premium compact family, for example. The Audi brand also widened its range of extra-sporty S and RS models with the introduction of numerous new products, such as the SQ5, RS Q3, RS 5 Cabriolet, RS 6 Avant and RS 7 Sportback. Another major development in the past fiscal year was the expansion of international production structures. The Hungarian site Győr completed its transformation into an automotive plant that now covers every stage of the process chain. In addition, construction work on the new car plant in San José Chiapa (Mexico) is making good progress; the successor to the Audi Q5 will be built there from 2016. Audi will also resume production activities in Brazil from 2015, and a second plant in China has just been opened in Foshan.

With 1,575,480 Audi vehicles sold over the course of the past fiscal year, the volume target of 1.5 million deliveries originally envisaged for 2015 was easily exceeded, two years ahead of schedule. In addition, the Audi Group achieved an operating return on sales of 10.1 percent, at the upper end of its strategic target corridor of eight to ten percent – despite the higher expenses for new products and technologies as well as the expansion of manufacturing structures and highly intensive competition in many markets. On behalf of the Supervisory Board, I would like to thank the management, the employee representatives and the workforce, without whose efforts this outstanding achievement would not have been possible.

The Supervisory Board was newly constituted last year following its election. The term of office of all Supervisory Board members ended with the close of the Annual General Meeting on May 16, 2013. Heinz Eyer, Dr. phil. Christine Hawighorst and Wolfgang Müller ceased to be Board members. The Supervisory Board greatly appreciated their constructive advice and expresses its gratitude and indebtedness to the former members for their work. All other Supervisory Board members were re-elected. Rolf Klotz, Ursula Piëch and Sibylle Wankel were elected as new members. The term of office of all Supervisory Board members ends with the close of the Annual General Meeting, which is to give discharge for the 2017 fiscal year.

At its constituent meeting on May 16, 2013, the Supervisory Board re-elected me as its Chairman and Berthold Huber as Vice Chairman. The Supervisory Board also elected the members of the Presiding Committee, the Negotiating Committee and the Audit Committee. It confirmed all members in their previous functions.

The Board of Management provided the Supervisory Board with regular, up-to-date and comprehensive information. Decisions of fundamental importance were discussed in depth by the Board of Management and Supervisory Board. The Supervisory Board considered the economic framework and the Company's business progress and business policy as well as its risk management and risk situation at ordinary quarterly meetings and on the basis of regular oral and written reports from the Board of Management, and consulted the Board of Management closely on these matters. The Chairman of the Supervisory Board also held consultations with the Chairman of the Board of Management in between the regular meetings, on such topics as the Company's strategy, business policy, business development and risk management.



At its four ordinary meetings in 2013, the Supervisory Board discussed at length Audi's growth prospects in key markets such as the United States, China, Russia and India. The Supervisory Board also conferred with the Board of Management on the challenges the Company will face in the area of human resources in the next few years. Other subject areas discussed were the progress of construction work on the Mexico plant and the focus of Technical Development work, especially with regard to the lightweight construction, connectivity and electric mobility areas of innovation. The members of the Supervisory Board had the opportunity to view and gather detailed information on future models and technologies at vehicle presentations.

One ordinary Supervisory Board meeting was held at AUDI HUNGARIA MOTOR Kft. in Győr (Hungary). The Supervisory Board took this opportunity to witness first-hand how the new automotive plant is developing into a mainstay of the worldwide Audi production network, and as such is providing a further boost to Audi's international competitiveness.

In approving the plans for human resources, financial and investment measures, the Supervisory Board reconfirmed the Board of Management's strategic decisions and thus gave its continued backing to Audi's goal of becoming the world's leading premium brand.

The Supervisory Board considered the Declaration of Compliance pursuant to Section 161 of the German Stock Corporation Act (AktG) on two occasions in 2013. The first of these, a joint meeting with the Board of Management on May 15, 2013, led to the declaration that elections to the Supervisory Board would, from that point on, take the form of the election of individuals. The new approach was necessitated by changes in application. At its fourth ordinary meeting during the past fiscal year, the Supervisory Board together with the Board of Management routinely determined the content of the Declaration of Compliance pursuant to Section 161 of the German Stock Corporation Act.

All Supervisory Board members were present at more than half of the meetings. The average attendance rate in the past fiscal year was 97 percent. The members of the Presiding Committee held full consultations before each meeting. The Negotiating Committee did not need to be convened in 2013.

The Audit Committee met once per quarter in the past fiscal year. At its meetings, the committee considered the Annual and Consolidated Financial Statements for 2012 as well as other topics such as risk management, and compliance and auditing work. In addition, the Audit Committee scrutinized the 2013 Interim Financial Report prior to its publication and discussed its contents with the Board of Management and representatives of the auditing firm. The Audit Committee also advised on the independence of the auditor, the findings of additional audits commissioned and the situation at the end of 2013.

Upon the proposal of the Supervisory Board, the Annual General Meeting of AUDI AG appointed PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft as auditor of the accounts for the 2013 fiscal year. The Supervisory Board awarded the audit assignment to the auditing firm after its election. The auditor of the accounts confirmed the Annual Financial Statements of AUDI AG, the Consolidated Financial Statements as well as the Combined Management Report of the Audi Group and AUDI AG for the 2013 fiscal year, and in each case issued its unqualified certification.

The members of the Audit Committee and Supervisory Board received the documentation for the Annual and Consolidated Financial Statements, together with the corresponding audit reports by the auditor, in advance of their meeting on February 20, 2014. The auditing firm's representatives explained the key findings of their audit in detail at the meetings of the Audit Committee and Supervisory Board, and then answered queries from members of both bodies. According to information supplied by the auditing firm, there were no circumstances that might give cause for concern about the auditor's partiality.

Following examination of the audit documents received and in-depth discussions with the auditing firm's representatives, and based on its own conclusions, the Audit Committee recommended to the Supervisory Board at the meeting on February 20, 2014 that the Annual and Consolidated Financial Statements each be signed off. After appropriate discussions, the Supervisory Board accepted this recommendation and signed off the Annual and Consolidated Financial Statements prepared by the Board of Management. The Annual Financial Statements are thus established.

There was the following change in the composition of the Company's Board of Management during the past fiscal year: Prof. Dr.-Ing. Ulrich Hackenberg was appointed Member of the Board of Management of AUDI AG with responsibility for the Technical Development division with effect from July 1, 2013. His predecessor, Wolfgang Dürheimer, moved to another senior function within the Volkswagen Group. The Supervisory Board would like to thank him for his contribution.

The Board of Management took account of economic conditions when laying its plans and focused its corporate strategy on future challenges. It will continue to work intensively at building on the strong competitive position already achieved by each of the Audi, Lamborghini and Ducati brands, in order to consistently maintain the established course of growth. The Supervisory Board will continue to support the Board of Management throughout this process in an advisory role.

Ingolstadt, February 20, 2014



**Prof. Dr. Dr. h. c. mult. Martin Winterkorn**  
/ Chairman of the Supervisory Board

# The Board of Management

The Board of Management of AUDI AG in Die Neue Sammlung, the design museum in Munich's Pinakothek der Moderne. This is where the Audi design wall was unveiled during a ceremony in September 2013. 1,763 miniature models of the Urquattro, the original Audi quattro, surround the wall installation, from which the design sculpture of the Audi Sport quattro concept rises. The exhibit symbolizes the bridge from the brand's past to its future.



**Prof. h. c. Thomas Sigi**  
/ Human Resources

**Axel Strotbek**  
/ Finance and Organization

**Prof. Dr.-Ing. Ulrich Hackenberg**  
/ Technical Development





**Prof. Rupert Stadler**  
/ Chairman of the Board  
of Management

**Luca de Meo**  
/ Marketing and Sales

**Dr. Bernd Martens**  
/ Procurement

**Dr.-Ing. Frank Dreves**  
/ Production





The background features a grid of circles. The leftmost column consists of dark purple circles with bright, out-of-focus light spots. A vertical red line with a fine white diagonal pattern runs through the middle of the page. The remaining columns are composed of light gray circles. Five dark gray circles are placed at specific intersections, containing the numbers 01, 02, 03, 04, and 05.

01

02

03

**Innovations** that make a statement for the next generation. Which **ideas** will we use to **shape the future?**

**THINK ...**

04

05

$$K_{Element} = \sum_{i=1}^m \left[ \left( \frac{\text{Max}[\sigma_{1,i}, \sigma_{2,i}]}{\sigma_{1,i} + \sigma_{2,i}} - 0.5 \right) \cdot 2 \cdot \left| \frac{90^\circ - |\varphi_{1,i} - \varphi_{REF,j}|}{90^\circ} \right| \cdot \frac{(\sigma_{1,i} + \sigma_{2,i})}{\sum_{i=1}^m (\sigma_{1,i} + \sigma_{2,i})} \right]$$

On their search for the right amount of the right material to use in the right place, Audi engineers use, among other things, a formula to compute the component suitability for various materials per element:

$$\sigma_x = \frac{1}{2} \cdot \left( \sigma_1 + \sigma_2 + \frac{\sigma_1 - \sigma_2}{\sqrt{1 + \tan^2(2 \cdot \varphi_1)}} \cdot \text{sgn}(\varphi_1) \right)$$

$$\sigma_y = \frac{1}{2} \cdot \left( \sigma_1 + \sigma_2 - \frac{\sigma_1 - \sigma_2}{\sqrt{1 + \tan^2(2 \cdot \varphi_1)}} \cdot \text{sgn}(\varphi_1) \right)$$

$$\tau_{xy} = \frac{1}{2} \cdot \left( \frac{\sigma_1 - \sigma_2}{\sqrt{1 + \tan^2(2 \cdot \varphi_1)}} \right) \cdot \tan(2 \cdot \varphi_1) \cdot \text{sgn}(\varphi_1)$$

The computation of direction-dependent stresses is crucial for the design of ever-lighter components.

Formula for calculating drag force  $F_d$ :


$$F_d = \underbrace{pl \cdot A \cdot C_d \cdot \frac{v^2}{2}}_{\text{Drag}} + \underbrace{m_g \cdot a \cdot f_R}_{\text{Rolling friction}} + \underbrace{m_g \cdot b}_{\text{Inertia}} + \underbrace{m_g \cdot \sin(\alpha)}_{\text{Downgrade force}}$$



# Making light work of it

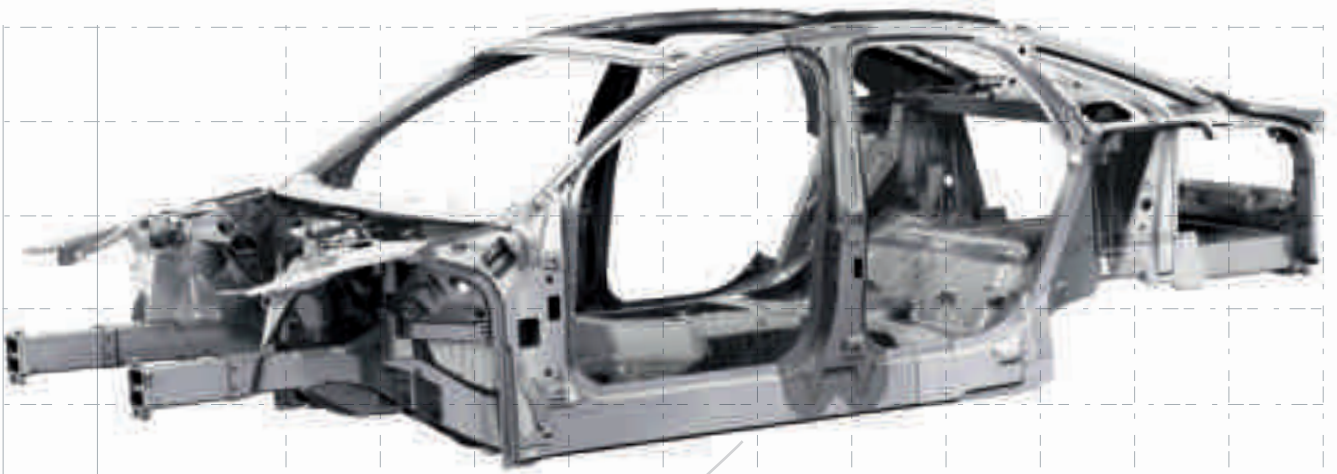
It is no longer enough to just weigh less. Efficient lightweight construction is based on the use of innovative materials and sustainable production processes. That is Audi. That is the idea behind the lightweight construction principle. Lightness isn't just good, it's also beneficial: for a cleaner environment and a clearer conscience thanks to lower CO<sub>2</sub> emissions.

TEXT: Dirk Vincken



*According to studies by the Heidelberg Institute for Energy and Environmental Research, a weight reduction of 100 kilograms results in an average saving of 0.35 liters of gasoline per 100 kilometers. This corresponds to a reduction in CO<sub>2</sub> emissions of around ten grams per kilometer.*





→ AUDI LAID THE FOUNDATION FOR REVERSING THE WEIGHT SPIRAL BACK IN 1993 WITH THE AUDI SPACE FRAME ASF

*Some structures are so sophisticated or ingeniously simple that they become timeless and virtually impossible to top. The igloo and the Eiffel Tower, for example. Or a spider web and the honeycomb structure of a bee hive. The architects of the Audi Space Frame ASF, which celebrated its 20th birthday in 2013, were also guided by simplicity and strength. Weighing in at 231 kilograms, the aluminum ASF of the current Audi A8 is up to 40 percent lighter, but nevertheless stiffer than a comparable steel body.*



**“Lightweight construction is a mindset at Audi,”** says Heinz Hollerweger, Head of Total Vehicle Development. And not just since drivers began thinking about such things as resource conservation, environmental compatibility and sustainability. Audi revolutionized the concept of automotive lightweight construction when it presented the Audi Space Frame ASF at the International Motor Show (IAA) 20 years ago. Since then, more than 830,000 vehicles have been built using an ASF design. Then as now, lightweight construction was associated primarily with one idea at Audi: **driving pleasure**. Every kilogram trimmed from a car’s weight is another kilogram that does not have to be accelerated and then slowed again. The driving experience is consequently more dynamic. In the words of Claus Haverkamp, Head of Body Concepts and Lightweight Technology at the Audi Lightweight Design Center, “Light is fun!”



# Reduction simply means creating more room for the essential.

Another element to enjoying driving, however, is being able to do so with a clear conscience. Power and the number of cylinders are no longer the only topics of discussion for today's car enthusiasts. With the automobile on the brink of the greatest upheaval in its more than 100-year history, enthusiasts are at least as concerned with such topics as reducing emissions, environmentally compatible technologies and with whether a manufacturer's sense of ecological responsibility also extends to raw materials extraction and the production process.

The goal is modern, sustainable mobility. The formula for achieving this: **intelligence rather than sacrifice.** Lightweight construction is one such intelligent step. Each kilogram of weight saved not only makes driving more fun, it also reduces fuel consumption and thus emissions. A modern car should be light, but without sacrificing comfort or safety. That sounds so simple, yet it is a Herculean task.

## → LEAN ATHLETES



*Audi also reduced the weight of the Audi R18 ultra Le Mans race car in 2012. Even the transmission case and accelerator pedal were made of carbon fiber. But why go to all that trouble when the rules mandate that a Le Mans race car has to weigh at least 900 kilograms? Because the much lighter R18 ultra enabled the engineers to use extra weights to fine-tune the sports car's balance perfectly for the track. Lightness thus outweighed other considerations.*





Lightweight construction is one of Audi's core competences. "But **lightweight construction requires heavy thought**," says Dr.-Ing. Karl Durst philosophically. He is one of the experts who make Audi lighter. "Unfortunately, it isn't enough to simply use the lightest material, since some lightweight materials hardly deform at all under load. And that goes against the concept of safety in body design, since little crash energy would be absorbed." The passionate marathon runner, who ensures that even his running shoes don't weigh a single gram more than is necessary, argues in favor of the smart use of composite materials. "Each material has characteristic properties, advantages and disadvantages. The art lies in combining lightweight materials in a way that enhances the advantages of the individual materials while compensating for their respective disadvantages. We are always anxious to use the right amount of the right material in the right place," says Durst.

Audi is therefore increasingly using combinations of steel, aluminum, magnesium and **fiber-reinforced composites** of carbon and glass fibers in lightweight construction. Carbon-fiber-reinforced polymer is up to 60 percent lighter than high-strength steel, for example. "Elasticity, high strength and low density result in above-average mechanical properties combined with great design freedom," says Dr. Oliver Schauerte, Head of Technology and Properties Development for Fiber-Composite Plastics. These materials initially only exhibit their tremendous properties in the longitudinal direction of their fibers, not in the lateral direction. Their use would be limited in

this configuration. The desired material properties can be only be achieved when multiple plies of this material are cross-laminated – similar to the steel belts of a car tire. Schauerte adds, however: "Additional requirements with respect to such things as fracture pattern, temperature resistance, surface quality, contact corrosion behavior, acoustics or reparability can quickly reduce a material's initial high potential for lightweight construction." For example, if a very lightweight fiber-composite component in the finished vehicle has such significant acoustic disadvantages that a large amount of acoustic insulation is required, this could offset the weight advantage. And nothing would be gained.

As is so often the case, the solution is in the details. And in industrialized, cost-effective manufacturing processes that keep both weight and price down. Highly engineered, efficient, with the focus on reduced energy consumption and nearly total avoidance of waste, as the example of tailored fiber placement shows. This involves stitching or embroidering carbon or glass fibers to a substrate. Hardly any waste is produced, and the fibers are perfectly oriented for the force curves and loads to which the component will later be subjected.

There are a lot of things that need to be considered when implementing the **lightweight construction philosophy**. But as a pioneer of lightweight construction, Audi will accept nothing less than an outstanding result. It isn't the easiest way to go. But we do our best to make light work of things.



→ **WEIGHT IS THE GREATEST  
ENEMY OF ACCELERATION**

*How can the tremendous load on a marathon runner best be illustrated?*

*The route is 42.195 kilometers long. The main thing that separates good marathon runners from bad ones is the length of their stride, which is between one and two meters. Assume 25,000 strides, during which the runner accelerates each of their shoes upward 12,500 times in a half-rotation and then decelerates them again when landing. A high-performance marathon shoe that can be as light as just 180 grams is obviously a huge advantage over a conventional 370-gram running shoe. For two shoes, this means a combined weight saving of 380 grams. This enables our runner to save up to 218 kilojoules of energy compared with a conventional running shoe. Too theoretical? Here it is again in more concrete terms: Audi lightweight construction expert Karl Durst weighs around 68 kilograms. These 218 kilojoules are the precise amount of energy the well-trained marathon runner would need to climb the 324-meter Eiffel Tower.*

## → **AUDI ULTRA – SYSTEMATICALLY SUSTAINABLE**

*ultra no longer means just being “light,” but also setting new standards for efficiency. Audi is developing increasingly efficient engines and using ever-lighter materials. Along the entire value-added chain and at the individual Audi dealerships, less and less CO<sub>2</sub> is being produced. It is only logical then that models corresponding to the new ecological principle of sustainability bear the word ultra in their name.*

*With its low fuel consumption  
and a range of up to 1,650  
kilometers, its name is only  
fitting: the Audi A6 2.0 TDI ultra.*







02

THINK  
FORWARD

# Time for a one-two

Both are successful. Both are regarded as outstanding strategists and playmakers. The two met for an interview in the magnificent setting of Munich's Allianz Arena. Prof. Rupert Stadler, Chairman of the Board of Management of AUDI AG, and Pep Guardiola, star coach of FC Bayern Munich. An opportunity to go the full 90 minutes with the experts.

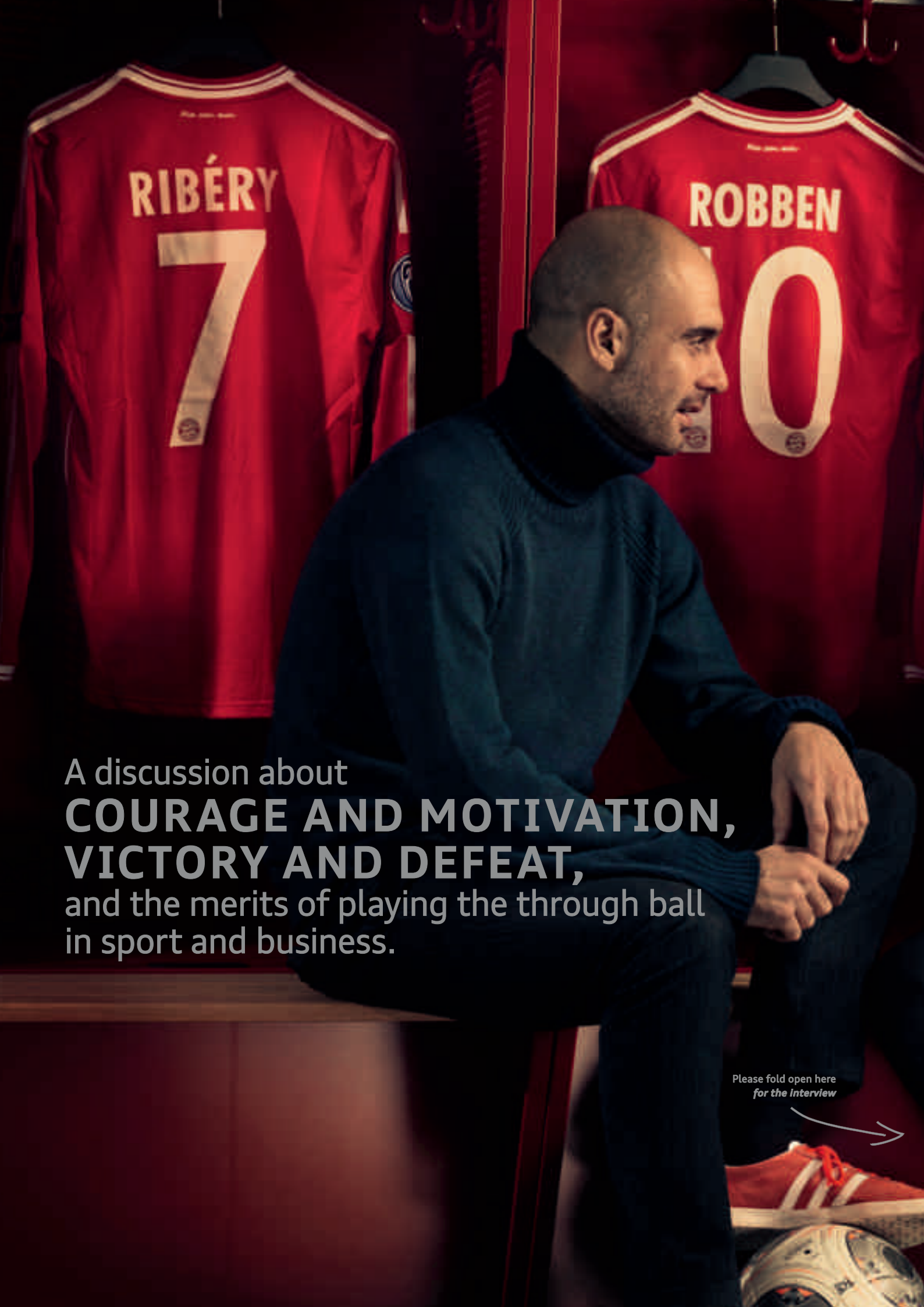
TEXT: Johannes Hofsommer and Marlon Matthäus

PHOTO: Anke Luckmann









A discussion about  
**COURAGE AND MOTIVATION,  
VICTORY AND DEFEAT,**  
and the merits of playing the through ball  
in sport and business.

Please fold open here  
for the interview



**Audi achieved a new sales record in 2013, and FC Bayern Munich is more successful than ever on the pitch.**

**Mr. Guardiola, Mr. Stadler, what is it like playing to win as part of a strong team?**

**GUARDIOLA:** When the season kicks off, no coach or player can guarantee success. And there isn't a magic formula for winning. If there were, soccer would be as straightforward as going shopping in a huge mall: You'd just go in and choose the item you like the most. Where would the challenge or excitement be in that? I didn't win the Champions League straight away. I started my career at Gimnàstic de Manresa, a club in provincial Catalonia. **STADLER:** That takes me back to my boyhood days at my boarding school in Rebberhof, Bavaria, having a kick-about on the sports ground. I tried my hand as a forward ... but let's be honest: Anyone who thinks they are a born champion is setting themselves up for a fall. That's as true at Audi as it is in the world of soccer. It's the team that counts. From development and production through to sales and communications, we all have to pull together and have a clear vision of our goal. That's how you win.

**People learn little from their victories, but a lot from their defeats. How do you deal with setbacks?**

**GUARDIOLA:** Those are moments of great sadness for me. As if the floodlights suddenly go out. Seeing Barcelona go out against Chelsea in the Champions League semi-final in 2012 was such a moment. We were much better than our opponents, but then conceded an unnecessary goal in the return leg, and before we knew it we were out of the competition. That was a really tough defeat for me. I felt like I could no longer reach my team.

**And was that what prompted you to leave Barcelona?**

**GUARDIOLA:** Yes. If you can no longer reach your players, as a coach, the time has come to move on.

**Mr. Stadler, have you ever had moments when you felt like throwing in the towel?**

**STADLER:** Specifically when things aren't running smoothly, I try to turn the tables and play that crucial pass that opens up the game again. As a top manager, I can't simply walk away from the game. It's precisely then that you are called upon to show determination and leadership. Never give up ... **GUARDIOLA:** ... but leading a team takes huge amounts of energy. In other words, there are times when you need to recharge your batteries. That's what I did in taking a sabbatical in New York. It was important for me, for my family and also for my former team.

**Might your huge achievements with Barcelona simply have interfered with your hunger for success?**

**GUARDIOLA:** We were incredibly successful. 14 titles within the space of just four years meant it was the best period in the club's entire history. But it can also be a curse. I found it increasingly difficult to motivate both myself and my team. I'm sure it's no different at a successful company such as Audi.

**Mr. Stadler, do you agree?**

**STADLER:** Success and responsibility are the biggest motivators there are for my team and me. We have doubled Audi sales over the past ten years. That's a worthy run of successes, almost comparable to Pep Guardiola's 14 titles with Barca. But every year your goal is to go one better than the previous year. It's as if the speedometer is reset to zero at the start of the year. The incentive is to push it back up as high as possible.

**GUARDIOLA:** But in your case, that also means every year you have the chance to set a new record. With Barcelona I'd already won everything there was to win as player and coach of a club side. And I noticed that the team was finding it increasingly difficult.

**So what motivated you to come to Munich, to a team that had just won the Treble?**

**GUARDIOLA:** I first got into conversation with FC Bayern Munich at the Audi Cup 2011. Over an espresso in the VIP Lounge, I got chatting to Karl-Heinz Rummenigge and Uli Hoenes about my career plans. Bayern's current success couldn't yet be foreseen at that point. But the challenge for me is specifically to coach a new team in FC Bayern Munich and build on the success of my predecessor Jupp Heynckes.

**Mr. Stadler, where are you planning to take your team?**

**STADLER:** To the top. We've already moved into the fast lane. We now need to step on the gas to make Audi the top premium brand worldwide.

**How do you intend to overtake in the traffic jam?**

**In Europe, progress has ground to a crawl. In southern countries, the sales figures are actually falling.**

**STADLER:** At Audi, we have demonstrated how you can keep moving forward. We are very well positioned worldwide. And such a difficult phase for the economy also represents an opportunity. If we manage to learn from past political and economic mistakes, we won't repeat them. That's why I firmly believe the worst is behind us in Europe.

**Isn't that just what your industry wants to believe?**

**STADLER:** No. I save my dreaming for night-time. We need a healthy dose of realism. People keep underestimating Europe's economic potential. Europe is and remains our top sales region. It's the backbone of our global success. And Europe has enormous cultural strength that stems from its very diversity. We just need to harness that potential.

**How do you propose to do that? Can you give us a concrete example?**

**STADLER:** We've been leading the way at Audi. We have brought young people over from Spain and given them the opportunity to learn with us here in Germany. At the moment we are doing the same with promising young Italians. During my time in Spain, I learned to appreciate the Spaniards as very creative people. Germans, for their part, are good organizers. When you bring such potential together, you get a winning combination. FC Bayern Munich is a glowing example of that.

**Do you agree, Mr. Guardiola?**

**GUARDIOLA:** From my perspective, I can obviously vouch for that. We are now able to recruit an unlimited number of European players to our team. Without the Bosman ruling at the European Court of Justice in 1995, that would never have happened.

**And what does that ruling mean for you as a coach?**

**GUARDIOLA:** It gives me the opportunity to field a very diverse team. In that respect, European integration is a guarantee of success in the world of soccer, too. FC Bayern Munich is evidence of that. The Dutchman Arjen Robben plays a brilliant pass to the Frenchman Franck Ribéry. He scores. And without the German Manuel Neuer in goal, the game wouldn't even be possible.

**Can different characters in a team or a company also become a curse?**

**STADLER:** Most definitely not. Diversity brings diverse ideas. The trick is melding them, and that takes a huge amount of tact in dealing with employees. But that's what it takes to steer a global enterprise successfully. **GUARDIOLA:** Yes, you definitely need that. But with so many stars in the line-up, as we currently have at FC Bayern Munich or my former club in Barcelona, you may also come across situations where diversity can be destructive. Everyone wants to play, but I can only put 11 players on the pitch at any one time. The ones left on the substitutes' bench are most likely to be the ones who aren't happy with my decision. And then there's the pressure from the press and the fans to select particular players. Whenever I left Lionel Messi on the bench, for example, the whole of Barcelona was in uproar.

**Are there any parallels between substitutes and the tough business of a successful carmaker?**

**STADLER:** Audi doesn't have anyone sitting on the substitutes' bench. Everyone is in action and knows their position in the formation. In that respect too, it is all about efficiency. Compared to our competitors, we have the fewest employees per car built. That also means that our human resources managers have to perform at the highest level, because we need to sign up the very best players.

**What is your most demanding task as Chairman of the Board of Management?**

**STADLER:** Setting the direction. In order to be successful, I am especially consistent about that. I say a clear "No" if I think concepts won't produce the results. On the other hand, I strongly advocate them if I am convinced that they point in the right direction. That is what employees expect from a boss. Ultimately my colleagues on the Board of Management and I bear responsibility for over 70,000 employees and their families. I can't afford to be a procrastinator.

**What exactly do you mean by that?**

**STADLER:** That I have to be assertive. Even if that means swimming against the tide. I've had to do so ever since I was



### **JOSEP "PEP" GUARDIOLA I SALA**

was born on January 18, 1971 in the Spanish village of Santpedor. He joined the La Masia youth academy of Barcelona in 1984 and played for its first team from 1990 to 2001 before going on to play for clubs in Italy, Qatar and Mexico. In 2008, Pep Guardiola was appointed first-team coach of Barcelona. He won 14 titles in just four years, entering the record books as the Catalan club's most successful coach ever. Pep Guardiola has been the FC Bayern Munich coach since 2013. He and his wife Cristina have three children.

a child. My time at boarding school was no bed of roses. I made many friends who I am still in touch with today, but I also had to learn to keep fighting my corner and to stand up for my convictions. But trying to do so as a lone wolf doesn't always work. Those were important lessons for me, and ones that stand me in good stead both in my job and in my private life.

**Does that mean you run the Stadler family like a business?**

**STADLER:** Others set the pace at home. Whether we're talking about the shopping list or my daughters' taste in music.

**What's the story in the Guardiola household? Who calls the shots there?**

**GUARDIOLA:** My kids and I have a similar taste in music, thank heavens. We can agree on Coldplay at least ... I certainly don't want to be the manager at home. My wife and I take decisions jointly. Harmony is important to me. I learned that at an early age. I also went to boarding school and struggled at first. I often felt alone and always phoned my parents in the evening.





**Is that the reason why you still discuss career decisions within the family?**

**GUARDIOLA:** Yes, when I was planning to move to FC Bayern Munich only the Bayern board and my brother Pere knew ...

**... until Silvio Berlusconi spilled the beans?**

**GUARDIOLA:** That's right. It seems Silvio Berlusconi, who was both Italian Prime Minister and President of AC Milan, might have started talking. Probably because I didn't sign for his club.

**Mr. Stadler, are there moles in your industry too?**

**STADLER:** Industrial espionage is no rarity. Competition is tough, and the global economy in particular has a battle on its hands making sure that strategies and new products aren't made public or divulged to competitors. The NSA affair made it clear that we need to improve our game in that regard. My personal take on it is that it has become even more important to be careful who you trust.

**And who can you trust?**

**STADLER:** My Audi team. I can always count on them. In the private sphere, my wife Angelika and my children. In terms of strategy and Group goals, I discuss matters at length with my closest colleagues and of course with Martin Winterkorn, the Chairman of the Board of Management of Volkswagen AG, and with Ferdinand Piëch, the VW Supervisory Board Chairman.

**GUARDIOLA:** Do you talk business with your wife? My wife Cristina sometimes complains about my game tactics. She tells me I should start with the same team that won last time. Trying to explain my principle of squad rotation to her is harder than telling Arjen Robben: "You'll be sitting on the bench today." **STADLER:** I can certainly empathize with that. I can talk about soccer with Angelika for hours and still not agree. That aside, I try to separate my job from my family life.

## "IF YOU AREN'T AUTHENTIC, YOU WON'T CONVINCE ANYBODY."

*Prof. Rupert Stadler,  
Chairman of the Board of Management of AUDI AG*



Right up close. Follow the discussion between Prof. Rupert Stadler and Pep Guardiola in the Allianz Arena. You can watch the video [here](#).

**So you draw a clear dividing line between family and career?**

**STADLER:** It isn't quite that simple. That would imply the idea of two hearts beating in my chest. That doesn't work. The very interaction of family and career is the recipe for success. Though I admit when I'm at home my wife will often say: "You're thinking about Audi again," and of course she is right – and yet she is my rock. I draw strength from my family, and that equips me to do my job. That calm environment often fosters the best ideas for the Company. **GUARDIOLA:** You can't keep work and family life strictly separate anyway. Anyone who tried to do that wouldn't be authentic ... **STADLER:** ... and if you aren't authentic, you won't convince anybody.









*After a match, players swap shirts. After this conversation, could you imagine swapping jobs with each other?*

**GUARDIOLA:** I certainly wouldn't be capable of maintaining Vorsprung durch Technik. I'd be the wrong person. I really like driving my Audi S8, but I simply couldn't do Mr. Stadler's job. No way. Though I think he could do mine. Everyone knows a bit about soccer. **STADLER:** Well, it's easy to say that.

**GUARDIOLA:** But it's true! Everyone has some understanding of the game! **STADLER:** There's a little bit of a soccer expert in everyone, but whether they could really do the job is a different matter. I'm a strong believer of "cobbler, stick to your trade." Everyone has their own skills and their own special qualities. The important thing is to use them in a way that brings you inner satisfaction. You have to celebrate your successes and give something back to society. That means Mr. Guardiola is in his element on the touchline, and I equally so at Audi.

**Free kick to Mr. Stadler.**

**STADLER:** (laughing) Let the players do their shirt-swapping. But I wouldn't want to swap my job at Audi for a different one. Not even for one day.



#### PROF. RUPERT STADLER

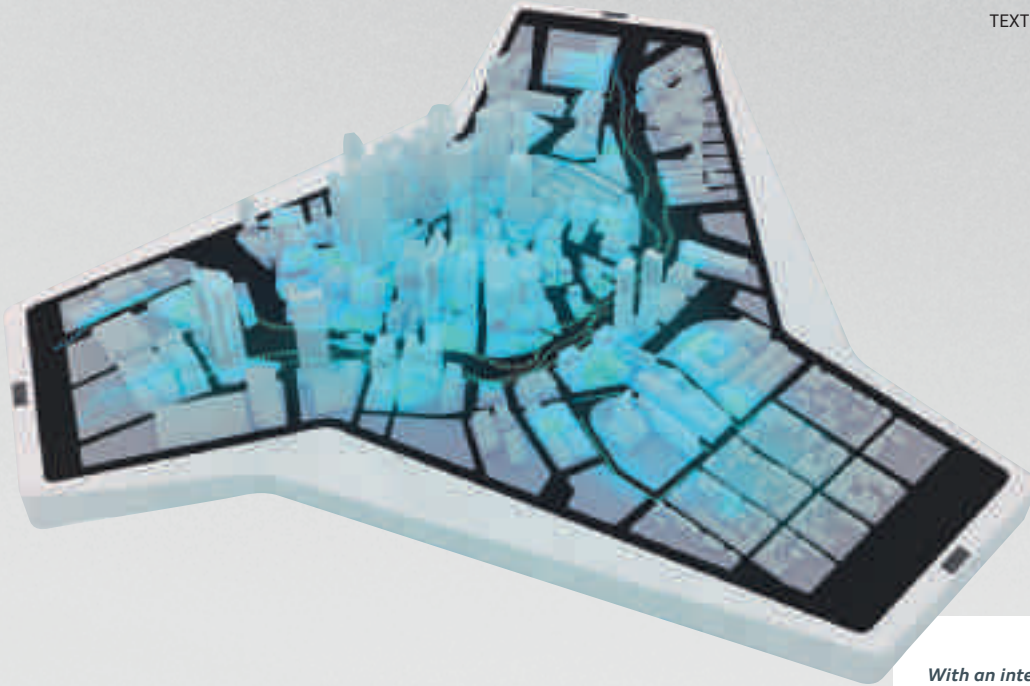
was born on March 17, 1963 in Titting (Bavaria). He studied Business Management in Augsburg. He started working at AUDI AG in 1990. From 1994 to 1997, Rupert Stadler was Managing Director of Volkswagen/Audi España S.A. in Barcelona, before being appointed Head of the Board of Management's Office at the VW Group's headquarters. Rupert Stadler has been Chairman of the Board of Management of AUDI AG since 2007. He was appointed to the Board of Management of Volkswagen AG in 2010. He and his wife Angelika have three children.



# A leap in time

With the Audi Urban Future Initiative, AUDI AG is looking for custom-tailored solutions for mobility in the megacities of tomorrow. To achieve this, the initiative argues, an intelligent relationship between the car and the city already needs to be developed today. Here's what urban mobility might look like if the vision becomes reality. A leap in time.

TEXT: Ann Harder



We are constantly asking ourselves questions about the mobility of the future: How will we get from one place to another? Will what seems utopian today soon become reality? The Audi Urban Future Initiative offers ways to approach these issues. It discusses today what might be tomorrow's reality. The initiative's argument for the urban future is as clever as it is simple: The car must have an intelligent relationship with the city. Connecting automotive technologies, urban data and services will combine the diversity and qualities of the car with those of the city, and as a result, will optimize them. Concepts need to be developed now to prepare for tomorrow's fusion: the transformation of the city and that of the car. The initiative is now cooperating with renowned architects, researchers, urban policy-makers, Audi experts and others.

*With an interactive, futuristic city model at the 2014 Consumer Electronics Show (CES) in Las Vegas, the Audi Urban Future Initiative provided a tangible preview of how technologies will change individual commuting in an urban context and make it easier: The exhibit showed traffic flows and data streams as well as changes to the infrastructure and the urban space, giving visitors an unconventional insight into current and visionary Audi technologies.*



**A look back.** The first Audi Urban Future Award was presented by AUDI AG in 2010. Honors went to Jürgen Mayer H. for his “A.Way” concept for tomorrow’s urban mobility, which stands for interactive communication between the modes of transport and their environment. The digital technologies of the car and its surroundings enable new forms of perception. With this, what we experience takes center stage, so that we can interact in a completely new way with the urban environment.

In 2012, the award moved to the next phase, with architecture firms from five megacities developing mobility concepts adapted to their home regions. Höweler+Yoon Architecture won with their inspiring “Shareway 2030” vision for the Boston/Washington metropolitan region, which is home to 49 million people. Working with Audi, they then took a closer look at the mobility system for the 4.6 million residents of Greater Boston – and developed the City Dossier Boston.

**Today.** The City Dossier Boston considers three general types of commuters and their needs. “We wanted to understand what Boston commuters experience, how they make decisions and what technologies they use to commute,” explains Eric Höweler. “Only those who know the weak points can react and fill in the gaps.”

The result: The **Road Warrior** lives in one of the suburbs and commutes to work each day by car. About 342,000 Bostonians correspond to this type of commuter. During rush hour, traffic in the downtown area is accordingly sluggish. The search for a parking space is a particular time-waster as the number of downtown parking spaces has not been increased since 1975.

The **Straphanger** also lives outside the center of the city. These commuters need almost an hour to travel a distance of about 20 kilometers to their workplace. They drive a car to a park-and-ride facility where they switch to a mode of public transport, and travel the last part of their journey to work by foot. About 72,000 Bostonians commute in this way to the downtown area each morning. The main problems for these commuters are the points where they have to switch modes of transport, where non-synchronized connections, delays and cancellations cost the Straphanger precious time.

The **Reverse Commuter** moves in a countercyclical direction: from downtown Boston to the suburbs. As many as 94,000 commuters travel in this direction, but high traffic periods are less of a problem for them. More of a challenge for these commuters is the evening search for a parking place near their downtown homes – an unpleasant after-work “pastime” for many as the number of resident parking permits issued in Boston has almost doubled since 1990.



## Messages



**Mr. Innovator** #Mr. InnovatorJunior #Michael\_Ryder

Just drove past the new soccer arena. Turned out really nice. I'll get tickets for the first game.

< Reply >> Share ★ More



**Michael\_Ryder** #Mr. Innovator

Thanks. Have to see it from the inside. Everything is completely carbonized!

< Reply >> Share ★ More



**Mr. InnovatorJunior** #Mr. Innovator #Michael\_Ryder

Wow, Dad. Count me in. But please get front row seats!

< Reply >> Share ★ More



**eTicket** #Mr. Innovator #Mr. InnovatorJunior #Michael\_Ryder

Three tickets for the New England Revolution vs. D.C. United game, row 1, seats 14 to 16 have been reserved for you. Have fun!

< Reply >> Share ★ More



**Mr. Innovator** #Michael\_Ryder #Mr. InnovatorJunior

Wow, that was fast. @Junior: Want to play a round of SOCCER30? We have to prepare ourselves, after all.

< Reply >> Share ★ More



**SOCCER30** #Mr. Innovator #Mr. InnovatorJunior

Your multiplayer game has been started. The hologram is being constructed. Enjoy!

< Reply >> Share ★ More



**AudiSystem** #Mr. Innovator

Piloted driving activated.

< Reply >> Share ★ More

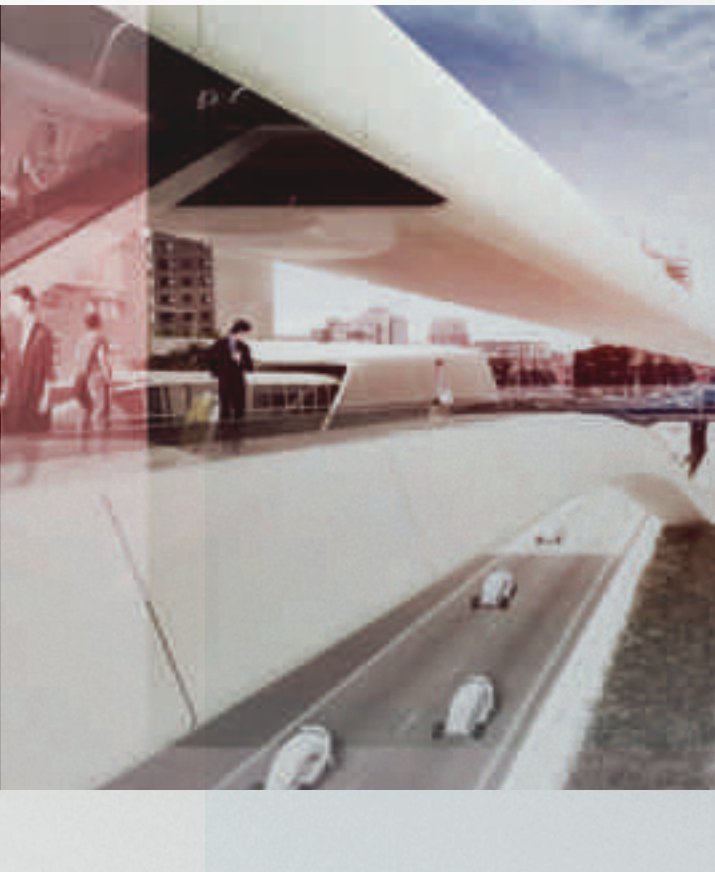


**AudiSmartAssist** #Mr. Innovator

Your e-bike will be waiting for you at the mobility hub in 5 min.

< Reply >> Share ★ More





“WE WANTED TO UNDERSTAND WHAT BOSTON COMMUTERS EXPERIENCE, HOW THEY MAKE DECISIONS AND WHAT TECHNOLOGIES THEY USE TO COMMUTE.”

Eric Höweler











## Messages

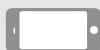
- MyAudi** #Ms. Fashionista  
 Good morning. I'm on my way. I'll be downstairs in front of the door in 3 min.  
[◀ Reply](#) [▶▶ Share](#) [★ More](#)
- Ms. Fashionista** #MyAudi  
 I'll be there 2 min. later.  
[◀ Reply](#) [▶▶ Share](#) [★ More](#)
- MyAudi** #Ms. Fashionista  
 Wait mode activated.  
[◀ Reply](#) [▶▶ Share](#) [★ More](#)
- Designergod** #Ms. Fashionista  
 If you have a minute, take a look at your e-mails. The new shoe collection has arrived. Really hot, honey!  
[◀ Reply](#) [▶▶ Share](#) [★ More](#)
- Ms. Fashionista** #Designergod  
 Oh, perfect. I'm just looking at the site. Please reserve the blue Amaz-inglys in size 8 for me. I'll come by tonight.  
[◀ Reply](#) [▶▶ Share](#) [★ More](#)
- Designergod** #Ms. Fashionista  
 Those are amazing! Real Plexur leather. Fit like a second skin.  
[◀ Reply](#) [▶▶ Share](#) [★ More](#)
- Ms. Fashionista** #Designergod #MyAudi  
 Looking forward to it. 6 p.m.?  
[◀ Reply](#) [▶▶ Share](#) [★ More](#)
- MyAudi** #Ms. Fashionista  
 Schedule conflict in the datebook is indicated. Dinner with Steve @6 p.m.  
[◀ Reply](#) [▶▶ Share](#) [★ More](#)
- Ms. Fashionista** #MyAudi #Steve  
 Sorry, Steve. I'll have to postpone dinner until 6:30 p.m. I've got an important appointment.  
[◀ Reply](#) [▶▶ Share](#) [★ More](#)
- Steve** #Ms. Fashionista  
 No problem. Let me guess. Shoes?  
[◀ Reply](#) [▶▶ Share](#) [★ More](#)
- Ms. Fashionista** #Steve  
 :-)  
[◀ Reply](#) [▶▶ Share](#) [★ More](#)

## INTERNATIONAL CONSUMER ELECTRONICS SHOW

The Consumer Electronics Show (CES) shows who leads the way when it comes to high-end electronics and connectivity. Each January, the latest products and innovations in the field of consumer electronics can be seen here. Audi made its first appearance at the CES in 2011 – the first carmaker to do so. The primary focus of the appearance at the exhibition in 2014 was connecting the car with its surroundings: With communication technologies and piloted driving, Audi is shaping the mobility of the future and connecting the world.

## Messages


- Audi\_e-tron** #Mr. Suxxess  
 Solar modules switched on. You have a battery status of 100%.  
 < Reply >> Share ★ More
- BostonTraffic** #Mr. Suxxess #Audi\_e-tron  
 A construction site is blocking the corner of Bourbon Street. We have diverted you via 9th Avenue. Estimated additional time: 1 min.  
 < Reply >> Share ★ More
- Mr. Suxxess** #Office\_GordonStreet  
 Good morning, Fiona. Could we make the first appointment with Mr. Fox 30 min. earlier? I'm running early.  
 < Reply >> Share ★ More
- Office\_GordonStreet** #Mr. Suxxess  
 Good morning, David. No problem; it's already arranged.  
 < Reply >> Share ★ More
- Audi\_e-tron** #Mr. Suxxess  
 We'll be docking in 1 min. on the Boston hovertrain. Enjoy the rest of your journey!  
 < Reply >> Share ★ More
- Ms. Suxxess** #Mr. Suxxess  
 Hi, honey. Can I have the car at noon today? I still need to buy presents.  
 < Reply >> Share ★ More
- Mr. Suxxess** #Ms. Suxxess  
 No problem. I'm sitting on the hovertrain now. I'll send the e-tron home to you after my lunch break. It will be in front of your door.  
 < Reply >> Share ★ More
- Ms. Suxxess** #Mr. Suxxess  
 Thanks a lot. And have a good day!  
 < Reply >> Share ★ More
- Ms. Suxxess** #Mr. Suxxess  
 Everything worked out fine. The e-tron is connected to the grid again.  
 < Reply >> Share ★ More
- BostonEnergy** #Mr. Suxxess #Ms. Suxxess #Audi\_e-tron  
 The city of Boston thanks you for the surplus energy. 31 Responsibility Points have been credited to your energy account.  
 < Reply >> Share ★ More



## AUDI URBAN FUTURE AWARD 2014

While the Audi Urban Future Award 2010 focused on the mobility of the future in general, participants in 2012 developed specific mobility concepts for their home regions. This year, the award is going another step further: Worldwide, interdisciplinary innovation teams made up of creative city planners, start-ups, IT specialists and researchers have been called upon to develop new premium mobility solutions based on specific urban planning projects. As in 2010 and 2012, the award carries a prize of 100,000 euros. More information about the cities, topics and teams in this year's awards can be found at: [www.audi-urban-future.com](http://www.audi-urban-future.com)





## “ONLY THOSE WHO KNOW THE WEAK POINTS OF A MOBILITY SYSTEM CAN REACT AND FILL IN THE GAPS.”

Eric Höweler

The Audi Urban Future Initiative asserts that this daily waste of time for individual commuters could be optimized through an intelligent relationship between the city, car and technological innovations. For this reason, Audi is placing existing technologies within the context of the city and imagining them further into the future. One scenario gives an impression of just how commuting might look in the future.

**Outlook.** Each morning of the year 2030, **Mr. Innovator's** Audi becomes a recreational area. As soon as he gets into the family car, the Audi scans his face to detect the current driver's identity – and immediately adjusts to his individual preferences. The Ambilight turns on, his seat moves into cruise position and the driving mode sets itself to Comfort Drive. With his fingerprint, he starts the car moving toward downtown, and the drive proceeds smoothly. Thanks to car-to-car and car-to-city technologies, the Audi receives real-time data and compares it with the automatically generated route. The car receives information about its surroundings in seconds – including unplanned construction sites, road damage or heavier-than-usual traffic. The customized route adjusts itself automatically. **Mr. Innovator** uses the head-up display's gesture controls to flick through the entertainment program. He stops when he gets to the SOCCER 30 video game. With a voice command, he invites his son for a quick soccer match; the son promptly projects himself as a hologram into the passenger seat. The Audi automatically switches to “Piloted Driving.” Just as the game ends, it arrives at the mobility hub, where the commuter can easily change to another mode of transport. For the last mile of his route, Smart Assist has reserved an e-bike for him.

Within the Boston metropolitan area, **Mr. Suxxess** commutes with a hovertrain system. The high-speed suspension railway saves him valuable time. He reaches the suspension railway line in his Audi e-tron. The paint on his electric car contains nano solar modules that convert sunlight into electricity and consequently supply the car with additional energy. Upon arriving at

the hovertrain system, the car docks onto one of the compartments of the high-speed train. In the process, the smartphone connects with the operating system of the suspension railway and provides information about which district the commuter needs to reach. At the optimal moment, the individual cars disconnect themselves and take the commuters to their respective destinations. During the trip **Mr. Suxxess** settles comfortably into a compartment, his tablet connects itself with the screen integrated into the seat in front of him and the hovertrain becomes a workstation. Once the destination is reached, the car searches for available parking spaces, while being guided by information made available by the city's infrastructure.

**Mr. Suxxess** gets out of the Audi directly in front of his office, and the car manages the short distance to the parking space on its own. As soon as his e-tron comes to a stop, it feeds excess energy into Boston's electricity supply grid.

For **Ms. Fashionista**, every morning means a trip from Boston's downtown area to Cambridge. By comparing with her personal datebook, her Audi knows when it's time to start in order for her to arrive on time for the first meeting at the office. In the morning, the electric car drives almost silently to the front door of her house and sends a start signal to the commuter's smartphone. Because the system remembers the individual preferences of its driver, the car knows that **Ms. Fashionista** relies on “Piloted Driving” mode in the morning – and that she prefers to shop online during the drive: Personalized projections on the facades of the surrounding buildings showing the latest collection from her favorite designer provide her with a very personalized driving experience – made possible by communication between the car and the city. She opens up the corresponding online store with a voice command to the head-up display. Shortly before arriving at the office, she activates her Audi's read-back function and it reads aloud the latest cover story from her favorite e-magazine – the headline: “What seemed utopian in 2014 but is reality today.”

# DRIVING BY HEART

04

## THINK FUTURE

TEXT: *Philipp Meier*

Nicole Zdebel usually flies a Boeing 777. And the autopilot system often takes control for much of the flight. So when she's on the road, she enjoys taking the wheel into her own hands all the more. For us she tries out piloted driving in an Audi A6 Avant test vehicle. A totally new experience...



PHOTOS: *Matthias Just*







Munich Airport, 8:00 a.m. Outside temperature: minus two degrees Celsius. Today, technology enthusiast and pilot Nicole Zdebel is behind the wheel of an Audi A6 Avant test vehicle. Also on board: a piloted driving system that will soon guide her automatically through heavy traffic. Even remote-controlled parking maneuvers are possible. Nicole Zdebel takes the freeway toward the city center. She has just completed a seven-hour flight directly from Abu Dhabi and is now looking forward to trying out this new technology. On the road this is a new experience, even for a pilot who has been flying a Boeing 777 for years: “I am familiar with this in airplanes, but I’m sure it’s quite different in a car. I’m excited to find out!”

In 2005, Nicole Zdebel (30) was Germany’s youngest female pilot employed in

scheduled air services. In the meantime she has completed thousands of flight hours and is an experienced hand in the cockpit. As a pilot at Etihad Airways, the national airline of the United Arab Emirates, she is accustomed to assistance from the autopilot system. Zdebel: “In airplanes, humans and the system have long been a well-coordinated team. Of course I am always able to intervene, even if the computer is currently piloting the plane.”

A few minutes after Zdebel has driven off, morning traffic is already starting to build up on the freeway. She has to apply the brakes, the speedometer needle drops below 60 kilometers per hour. A symbol lights up on the display, and she activates the system by pushing a button. “Let’s see what this thing can do!” She takes her foot off the brake



## PILOTED DRIVING

*How does piloted driving work in traffic jams? Accompany Nicole Zdebel on her drive to Munich.*



**Parking via smartphone app:**

An app guides the test vehicle out of the parking space. As the driver monitors the process from outside the car, the system measures clearances, steers the vehicle out of the space and positions it ready to pull away. All aboard!



**A W A R D S   F O R  
A U D I**

*The technologies developed by Audi for piloted driving have received wide recognition throughout the world. The Audi system for piloted driving in parking garages was chosen as **Product of the Future** by the U.S. magazine POPULAR SCIENCE ([www.popsci.com/gadgets/article/2013-01/best-ces-2013-popular-sciences-products-future](http://www.popsci.com/gadgets/article/2013-01/best-ces-2013-popular-sciences-products-future)) and was recognized as the **Best Auto Tech** at the 2013 International Consumer Electronics Show (CES) in Las Vegas by the trade press network THE VERGE ([www.theverge.com/2013/1/11/3865786/verge-awards-ces-2013/in/3608257](http://www.theverge.com/2013/1/11/3865786/verge-awards-ces-2013/in/3608257)). In addition, the world-renowned MIT Technology Review listed Audi among the **50 most innovative companies in the world** for its piloted driving solutions ([www.technologyreview.com/tr50/2013](http://www.technologyreview.com/tr50/2013)). "These awards honor our development work and show that we are on the right path," says Ricky Hudi, Head of Electrics/Electronics Development at AUDI AG.*





**Piloted driving in traffic:** progress through cutting-edge technology. Scanning distances, accelerating, braking and staying in lane. To enable piloted driving, Audi uses multiple redundancy to assess the driving situation. The exterior sensors consist of a dual radar system, a laser rangefinder and cameras.





**Everything under control:** In a traffic jam, the system takes on the role of the driver, allowing automatic driving from a crawl to speeds of up to 60 kilometers per hour. The system is so reliable that the driver can even let go of the steering wheel and relax a bit while in traffic jams.

pedal and lets go of the steering wheel, which suddenly responds, as if guided by an invisible hand. Nicole Zdebel is fascinated: “Wow! Perfect.” She leans back and relaxes.

As traffic thins out, the vehicle calls for attention with an audible signal. Nicole Zdebel takes control of the wheel, until the traffic becomes heavy again.

“It really is like in an airplane. There is a slight difference, though: In the plane, your hands remain on the controls until you feel a jolt. That sign lets you know that the autopilot is activated. Here in the car, I can simply take my hands off after pressing the button. Of course, I still have to keep my eyes on everything because just like a pilot in an airplane, the driver is ultimately responsible for

everything.” To ensure the Audi makes its way through the slow traffic adeptly and safely, sensors continually scan the distance to other road users using radar systems, laser rangefinders and cameras.

As the Audi chauffeurs the pilot along at a crawl, stopping occasionally and then accelerating again whenever the traffic clears up for a stretch, she dials the number of her hotel conveniently by voice command, in order to reserve a table for brunch with a friend.

So what does it feel like to drive this way? “Relaxed and really safe!” says Zdebel. “It’s actually much more useful in a car than in a plane. Because there’s much less traffic in the air than on the road. The A6 really is an attentive driver; I like that!”





PHOTOS: Matthias Just, AUDI AG





She thinks for a moment and comes up with even more parallels with the auto-pilot: "Take-off in an airplane is always done manually. At a specific altitude, after approximately 30 seconds, the auto-pilot can take over flying and I take over again for the landing, if not before."

The same is true for piloted driving: The system is only ready when conditions for a traffic jam or a stop-and-go situation are met. "At this point, I have to press a button to activate the system, but I can still intervene at any time." Just before Munich-Schwabing, traffic suddenly

clears completely. The Audi accelerates quickly to just under 50 kilometers per hour. Zdebel now places her hands back on the steering wheel and drives herself the last few kilometers to her destination.

She gets out in front of the hotel, takes her suitcase, enters through the revolving door and heads toward the reception to check in. After that she returns to the car and activates the smartphone app with the parking function. The gate opens, and she watches as the Audi A6 Avant test vehicle disappears by itself inside the parking garage.



## IN THE NETWORK OF POSSIBILITIES

**Audi connect\*** links the driver and passengers with the outside world. The digital one and the real one. The **myAudi** website allows you to personalize Audi connect, and thanks to the new **Long Term Evolution (LTE)** transmission standard, Audi uses transmission speeds ten times faster than the UMTS standard used up to now.

Not only does the **MMI Navigation plus** allow you to reach your destination flawlessly, it also displays all important, up-to-date **traffic information in real time**, the **least expensive gas station** on the route and the nearest rest stop, for instance – with the appropriate **Google Earth™** and **Google Street View™** display, if desired. Even virtual city tours are not a problem. And if you upload a photo with GPS data onto the **MMI Navigation plus**, **Picturebook navigation** can take you directly to the most beautiful places.

Thanks to Audi connect, everything is on board: **e-mails and text messages** can be read aloud by the system. A dictation function enables you to reply to short incoming messages. Even **current weather** and **travel information** as well as **news**, which can be individually tailored to your preferences, are available. There are also **flight and train information** and **Facebook and Twitter** services specially adapted for use in the vehicle. And with the **point-of-interest search** and **parking information**, you will find your way around even unfamiliar cities.

With the integrated **Wi-Fi hotspot**, you can connect up to eight mobile devices such as tablets, laptops or games consoles to the Internet. This allows **web radio stations** and even HD videos to be streamed directly to the vehicle.

\*Audi connect is available in various forms and with country-specific differences depending on the model series.



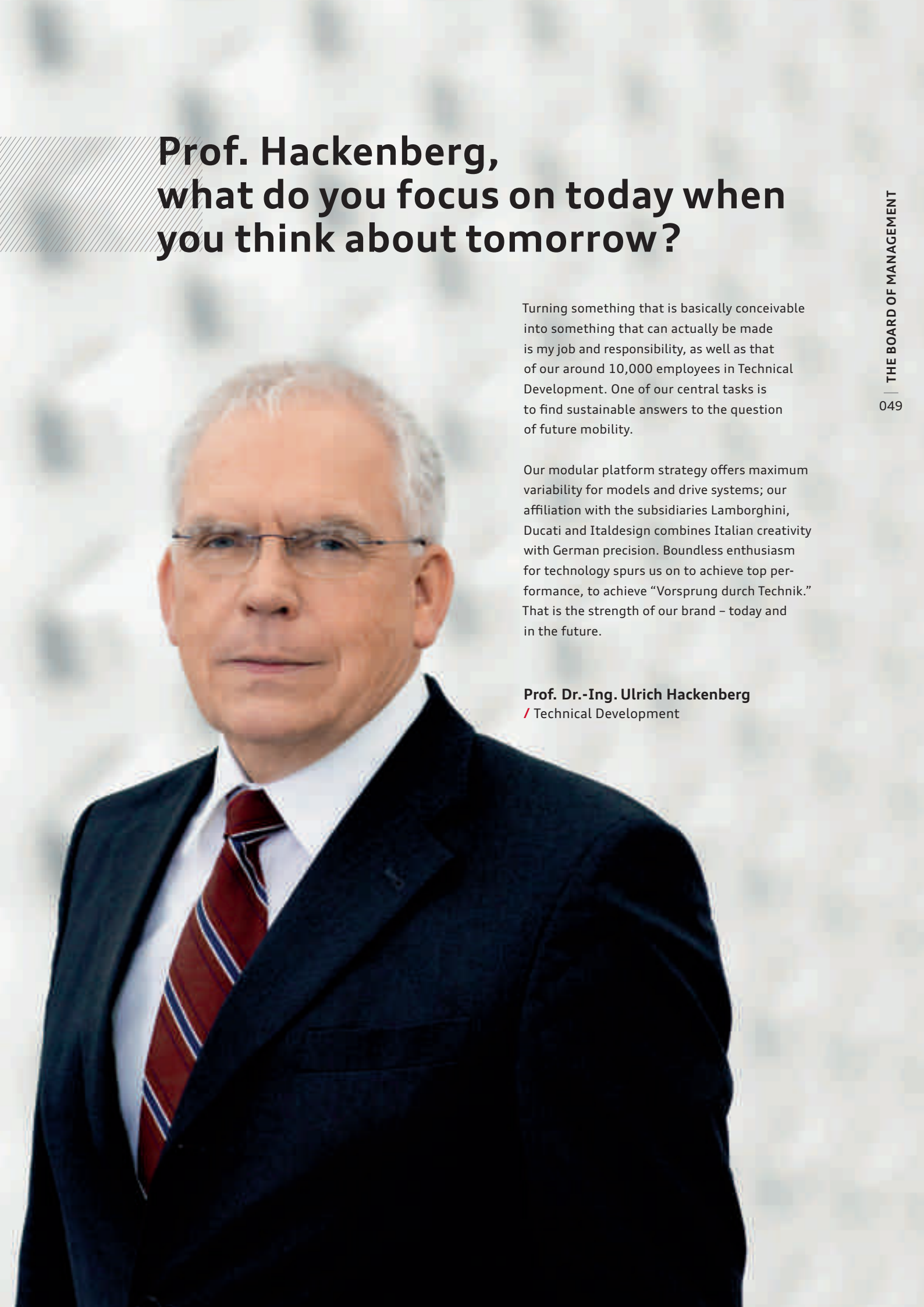
“I  
FELT  
COM-  
PLETELY  
AT  
EASE  
AND  
SAFE!”



*Nicole Zdebel in the cockpit of her Boeing 777.* The German pilot flies the world's largest twin-jet aircraft for Etihad Airways, the national airline of the United Arab Emirates. While in the cockpit, she is assisted by the autopilot system.

The pilot enters the restaurant and meets her friend there. At the same time, the Audi is assigned an available parking space via Wi-Fi by the parking garage, and the new technology automatically guides her car into the parking space.

At this point, Nicole Zdebel has been at brunch for quite a while already. Her impression of her first piloted drive: “I’ve honestly never been so relaxed in heavy traffic.”

A portrait of Prof. Dr.-Ing. Ulrich Hackenberg, an older man with white hair and glasses, wearing a dark suit, white shirt, and a red and blue striped tie. He is looking directly at the camera with a slight smile. The background is a blurred, light-colored architectural structure.

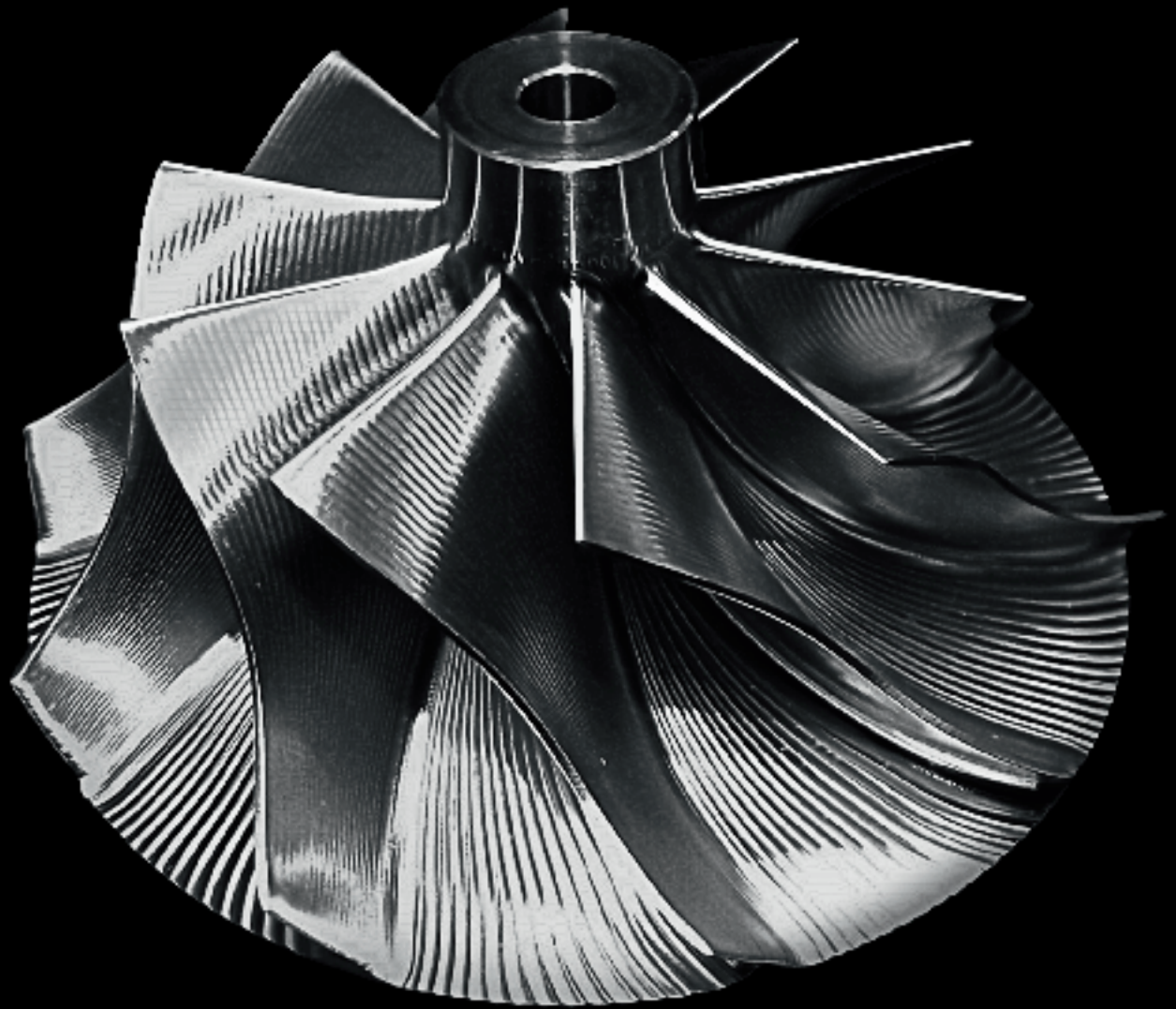
# Prof. Hackenberg, what do you focus on today when you think about tomorrow?

Turning something that is basically conceivable into something that can actually be made is my job and responsibility, as well as that of our around 10,000 employees in Technical Development. One of our central tasks is to find sustainable answers to the question of future mobility.

Our modular platform strategy offers maximum variability for models and drive systems; our affiliation with the subsidiaries Lamborghini, Ducati and Italdesign combines Italian creativity with German precision. Boundless enthusiasm for technology spurs us on to achieve top performance, to achieve "Vorsprung durch Technik." That is the strength of our brand – today and in the future.

**Prof. Dr.-Ing. Ulrich Hackenberg**  
/ Technical Development





# Quality down to the last detail

TEXT: *Marcus Schuster*

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Audi is synonymous with high quality, precision, and exclusivity. But who ensures these exacting requirements are consistently met? Procurement certainly plays its part. After all, perfection begins early on in the value chain with the selection of suppliers.

Many people, one vision: the drive for perfection. The constant pursuit of above-average standards requires a perfect base from the outset, upon which everyone can contribute to overall success. Procurement's task is to provide that base by finding those suppliers that offer precisely the materials and provide exactly the technology that make an Audi so special. "To this end, we forge partnerships that offer mutual benefits," explains Dr. Bernd Martens, Member of the Board of Management of AUDI AG for Procurement. Audi is not just constantly on the lookout for committed, reliable suppliers, but also taps into innovative sources of supply worldwide, for new materials for example. Regional Sourcing Offices play a particular role in this respect. Sourcing scouts track down the most interesting partners in even the most far-flung corners of the globe. Regular concept competitions give rise to specific tasks for suppliers. As part of this process, Audi not only assesses the solutions, but also the logistical and technical expertise of a supplier – and helps, where necessary, with the industrialization of an idea. "Innovation is not a question of size. We support new suppliers, who are sometimes even new to the industry, throughout implementation based on partnership," is how Martens explains his philosophy. Audi accompanies young innovation drivers from the outset as a partner on an equal footing, for example with checking locations or tools, and throughout the optimization of production processes. Potential suppliers also have the opportunity to showcase their capabilities at innovation forums, congresses and trade fairs.

It is a long way from the drawing board to the road. Audi installs up to 12,000 parts in each of its cars – and, as the following examples show, each one tells its own manufacturing story.



#### High-quality and responsible

It is not only the quality of suppliers, but also the sustainability of the materials used that is important to Audi. In January 2013, AUDI AG joined the Aluminium Stewardship Initiative.

The initiative aims to develop a sustainability standard for aluminum by the end of 2014 by stipulating governance, environmental and social standards that apply from raw material extraction and processing to the end product.

As the pioneer of the self-supporting aluminum body, Audi is utilizing this process to influence the entire value chain for one of its key materials. As such, the life cycle assessment of Audi can be improved further in future thanks to certified aluminum.

[www.aluminium-stewardship.org](http://www.aluminium-stewardship.org)





An unexpected combination of metal and wood – a technical and visual masterpiece.



Audi is a signature brand where every car bears the personal hallmark of its designers, engineers, production workers – and procurement personnel. Inlays made out of an unexpected combination of the materials aluminum and wood, such as black Beaufort, are available as an option to give the interior a highly exclusive feel. The production process for this is a perfect example of how Audi and its suppliers are constantly coming up with new solutions: The bonding system used for inlays has to withstand enormous mechanical forces. Thin sheets of veneer are formed from a solid block of wood; these sheets are then joined layer by layer with the aluminum – with no cracks or joints. Another challenge is to achieve an overall homogeneous look for an inlay such as Beaufort oak, producing quality comparable with the deck of a ship, while using a natural product like oak with its variations in color and structure. “Collaboration with the supplier over several years means we can offer high-quality, exclusive surface materials like these,” reports Martens.

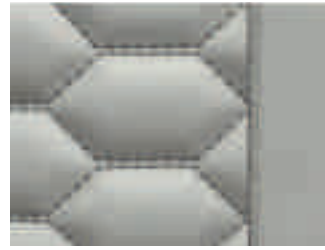
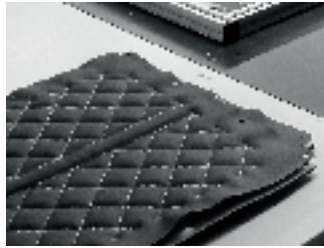


Beaufort oak inlays: as individual as the wood from which they are made.





A finish that is as sporty as it is exclusive: The quilting on the seats of the Audi RS 6 Avant takes its cue from the design of the radiator grille.




Audi also sets the benchmark for precision with the seat upholstery in the RS 6 Avant. Manufactured from an Alcantara/ leather combination or entirely from leather, the upholstery is embellished with special diamond or honeycomb quilting. Positioning the seams of this unusual pattern perfectly at the intersection points requires a huge amount of development expertise and experience in using leather due to the material's sensitive natural properties. The cleverly designed sewing machines must be programmed exactly in order to prevent the sensitive material from distorting on account of the tiniest imperfection.

The compressor wheel is further testimony to Audi's unerring principle of top quality down to the last detail. This relatively small component is installed in the turbocharger of a TDI engine and has to fit with micrometer accuracy if it is to meet the exacting demands placed on resilience and durability. The manufacturing process used is point milling, which entails milling off surplus material from the blank, point by point. While it is a slow production technique, it is the only option given the complex shape of the workpiece and the required precision.

Audi and its partners rise to these challenges as part of their passionate attention to detail. There are often only a few qualified suppliers worldwide for even the most unassuming of components. These suppliers, like thousands of others, have made it onto Audi's exclusive list of suppliers – a list that stands for uncompromising quality and represents a strong team.



Each compressor wheel is only installed once it has undergone four final inspections using high-precision 3D measuring equipment.

A portrait of Dr. Bernd Martens, a middle-aged man with short brown hair, wearing a dark blue pinstripe suit, a white shirt, and a light blue tie. He is looking slightly to the right with a calm expression. The background is a blurred cityscape.

## Dr. Martens, what do you focus on today when you think about tomorrow?

"I prefer to remember the future," said Salvador Dalí. We think about the future every day. We qualify new partners for Audi. We examine alternative materials. We drive innovation, both alone and in cooperation with our partners. Audi is on a steep growth path.

Our goal is to be producing more than 60 models in 15 plants by 2020. We are becoming more global and complex, we will have more international development partners and our suppliers will increasingly be based outside of Europe. Having a dynamic organization, fewer interfaces and new competences will be the key to our success.

**Dr. Bernd Martens**  
/ Procurement









06

07

08

Seven billion people.  
Each with different needs.  
**What moves our society?**

# ACT...

09

10

11

06

**ACT**

RESPONSIBLY







# The world movers

Driving into the future with Audi tron technologies. The goal is carbon-neutral mobility, without having to make any compromises. Sound good? It is. A drive in the Audi A3 e-tron in California and in the Audi A3 g-tron in Denmark.

PHOTOS: Jeff Ludes, Benjamin Pichelmann

TEXT: Anne Philippi and Katrin Saul



The challenges of future mobility are as complex as our world, which is changing more rapidly than ever. To start with, it is necessary to reduce the burden on the environment. But people are traveling by car more than ever before. Is it still possible to do so with a clear conscience? **Audi tron technologies offer a holistic solution to these issues.** A solution that unifies the benefits of new technologies in cars with mobility requirements – including driving range and driving fun – in two pioneering concepts: Audi e-tron and Audi g-tron technology. For Audi, society journalist Anne Philippi, a longtime expert on the Californian lifestyle and the mobility needs of the region, test drives the A3 e-tron in Los Angeles. In Denmark, renowned Danish architect and sustainability specialist Kristian Lars Ahlmark of schmidt hammer lassen (SHL) architects lines up in the A3 g-tron.

We visit **Los Angeles** with the Audi A3 e-tron; at the wheel is **Anne Philippi**. Here, there is a dense infrastructure of charging stations for electric cars. This is a place where sustainable enjoyment is a way of life and a calling card; a very

emotional philosophy of life. A plug-in hybrid combines the benefits of electric drive with those of a highly efficient combustion engine. It has two power sources for greater range, better performance and fewer emissions. Two worlds superbly united.

In **Scandinavia**, which has long been a frontrunner in the production and use of alternative energies, people take the issue of sustainability equally seriously, albeit from a much more rational perspective. Yet the drive in the 81 kW (110 hp) Audi A3 g-tron elicits enthusiasm from our test driver, **renowned architect Kristian Lars Ahlmark**, in light of the parallels to the requirements of sustainable construction that he discovers. That is because the Audi A3 g-tron is another production vehicle from Audi on the path towards carbon-neutral long-distance mobility. Less CO<sub>2</sub> is generated thanks to its use of compressed natural gas, or CNG. Of the possible 1,300 kilometers of driving range, up to 400 kilometers can be covered in all-natural-gas mode. **Well then, have a good drive!**







## ***/ ROCK 'N' ROLL WITH THE AUDI E-TRON IN LOS ANGELES***

6 a.m. That great, unbelievable, glorious Los Angeles light is already there. The best time to hit the road in the new A3 Sportback e-tron. I'm still tired, but the e-tron makes things very comfortable for me. I lean back, the adjustable steering wheel in position. The monitor of the MMI Navigation plus rises up and indicates when I am running on gasoline and when on electricity. The vehicle is running solely on electric power, very quietly, very dynamically.

The e-tron feels like a spaceship in which you could even meditate. That's how quiet it is inside. That fits Los Angeles. A combination of futuristic and ecologically aware. A perfect **oasis of tranquility in the traffic of Los Angeles**. Because traffic rules and dominates the city. It determines whom you see when, and where you go. Living and driving in L.A. are inevitably intertwined.

I'm on my way to Venice for my first cup of coffee of the morning. It's still quiet on the Abbot Kinney at this time of day. People in Venice sleep longer, but the early-risers all stop to have a look at my Audi. Interest. Wide eyes. **The brand new e-tron**. Which goes on sale in Germany in 2014. Because Angelinos are always interested in new things. Like the recent enthusiasm for almond milk rather than soy milk because it is "even more vegan."

I go into TOMS. They have excellent coffee. And fresh-squeezed juices, of course. There's nothing healthier. Casual sunglasses and shoes, too. All a little bit hippie, yet chic. The TOMS concept is very Los Angeles: When you buy a pair of shoes, you also buy a pair for a child in need. One for one. The shop is a good example of the Los Angeles attitude to life. **One of sustainability, of eco-consciousness.**





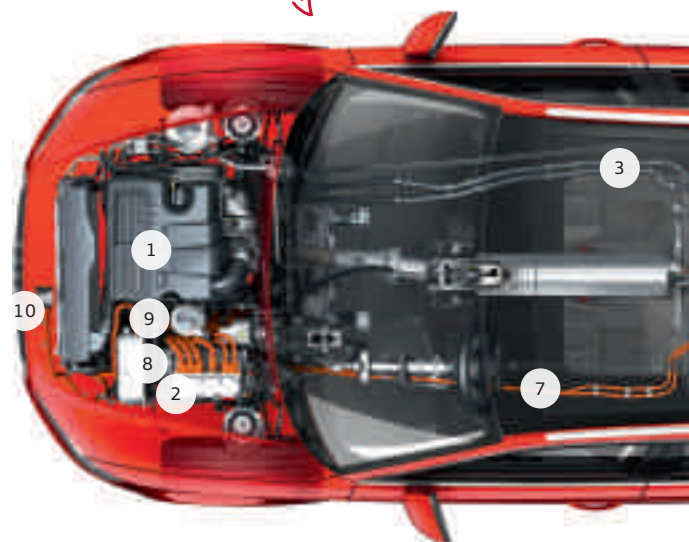
That applies to everything. Food, cars, living, sleeping, thinking. In Germany, the term “green” is a very narrowly defined term referring to a particular scene. Here in Los Angeles, it is something that the individual aspires to, like fame or fortune. Think of it like this: **The people living the most successful lives here are also living the most sustainable ones**, the most organic, the greenest. It’s the typical scene at TOMS this morning: perfectly bleached blondes with haute couture bags drinking their fresh-squeezed juice with abandon before dashing off to yoga. Everyone has to take part. That’s the way people think here. The same applies to Hollywood stars.

I head east on Santa Monica Boulevard. The morning traffic hasn’t completely dissipated yet. It feels as if you spend half your life here in the car. A lot of things happen behind the wheel. In the mornings, women use the vanity mirror to apply their mascara; men have put on their business face and gesticulate wildly as they talk on the phone. That is typical for driving in L.A. Things that you do at home in Europe are done in the car here: crying, kissing, laughing, screaming. **It is your second home.**

Music on. Good, natural sound from the Bang & Olufsen Sound System. The sound embraces me. I listen to a little rock radio, old California hits. I open the panoramic sunroof, light morning breeze.

#### ***The most important components of the Audi A3 Sportback e-tron***

- 1 // 1.4 TFSI engine
- 2 // Power electronics
- 3 // Battery cooling
- 4 // High-voltage battery module
- 5 // Fuel tank
- 6 // 12V battery
- 7 // High-voltage cable
- 8 // 6-speed e-S tronic
- 9 // Electric motor
- 10 // Charging connection





Now on to yoga hour on Robertson Boulevard. All kinds of people you would never expect show up here. Rock stars, show business giants. I park in a side street. My Audi garners more looks. “Is that new?” asks a thirty-something man. **Wow!**

An hour later I head off, refreshed, toward Silver Lake, Elysian Park. Onto the freeway. I accelerate. The e-tron shows its temperament as I push down harder on the accelerator. **Sports car feeling, pure Audi.** The e-tron has a range of up to 50 kilometers in all-electric mode. Perfect for trips within the city. Up to an additional 890 kilometers are possible with the combustion engine. I could drive to Las Vegas and back – without stopping for gasoline or to recharge the battery. And that with an average fuel consumption of 1.5 liters per 100 kilometers and emissions of 35 grams of CO<sub>2</sub> per kilometer. The very thought feels good!

I drive up into the hills to the spot offering the best view of the city. Los Angeles is spread out in front of us like a giant selection of candy. Confusing, shimmering, tempting. From here you can see East L.A., the ocean, the skyscrapers downtown and the adjacent desert. It’s easy to forget that Los Angeles is surrounded by desert, by nothingness.

Back to Zuma Beach. The Audi e-tron has been my companion for the day. **It’s a good companion for Los Angeles.** The sun sets, slowly. It takes its time. It is relaxed. Like everything here.

#### The drivetrain of the Audi A3 Sportback e-tron

- 1 // 1.4 TFSI engine
- 2 // Dual-mass flywheel
- 3 // Electric motor
- 4 // Dual clutch
- 5 // High-voltage connections
- 6 // 6-speed e-S tronic
- 7 // Coolant inlet
- 8 // Coolant outlet



#### Audi A3 Sportback e-tron in figures

The A3 e-tron is the first premium compact car from Audi with standard plug-in hybrid drive. It combines sporty power with impressive efficiency. **It can drive up to 50 kilometers solely on electric power and thus with zero local emissions.**

Audi uses a combination of a **110 kW (150 hp) 1.4 TFSI engine** and a **75 kW electric motor** for the drive system. It consumes on average just **1.5 liters of gasoline** per 100 kilometers, giving it a total action radius of up to 940 kilometers. The battery has a capacity of 8.8 kilowatt-hours and can be recharged in **just under 2.5 hours** on a 16-ampere outlet.



## **/ A DRIVE IN THE AUDI G-TRON IN COPENHAGEN. THE PRINCIPLES OF FREEDOM AND MOVEMENT IMPLEMENTED SUSTAINABLY**

The mountains of clouds build up in Copenhagen's autumn sky like thick, fluffed-up feather quilts. The midday sun takes the bite out of the stiff breeze and makes the reflective particles in the paint of the Audi A3 g-tron glisten. A perfect day for a quick spin into the future. We slowly exit the courtyard of the architectural offices of schmidt hammer lassen architects.

"This car drives superbly, it's so quiet," says architect and partner Kristian Lars Ahlmark as the g-tron takes us quietly and with low emissions to our first destination: "I like how Audi takes on something that is firmly embedded in everyday life – driving a

car, the principles of freedom and movement – and combines it with sustainability."

The g-tron has a bivalent power unit, which can be powered by fossil natural gas, environmentally friendly Audi e-gas or gasoline. In addition to the gasoline tank, it has two pressure tanks under the floor of the trunk, each of which holds seven kilograms of gas. Audi e-gas is synthetic methane which Audi has already begun to produce in its first power-to-gas plant from CO<sub>2</sub> and water using green electricity.

The Audi e-gas principle. You can find the film here.



PHOTOS: Benjamin Pichelmann





**In gas mode, CO<sub>2</sub> emissions are no higher than the amount of CO<sub>2</sub> that was used to produce the synthetic natural gas. “This is a great step in the right direction,” says Ahlmark. He also tries to implement this sustainability philosophy in architecture.**

“The Crystal” is an office building belonging to a financial institution designed by SHL architects that has won awards for its energy-saving design: a glass building, suffused with light, which rests on the ground on a single visible lower edge, and therefore appears to hover over the city square. At the time of construction, its energy consumption of 70 kilowatt-hours per square meter was 25 percent lower than the guidelines established by the Danish government. “We wanted to bring as much daylight as possible into the building to save valuable energy,” explains Ahlmark. The facade consists of three layers of glass with natural ventilation. Ventilation windows let air into the building at night, and this air is then used to cool the

building during the day. Additional cooling is provided by water from the harbor. The toilets are flushed with rainwater, and the photovoltaic system generates the electricity to operate the complex facade system. “The construction industry is a big environmental polluter,” explains the architect. “We as architects have a responsibility to think outside of the box, but we also have the opportunity to achieve great things through innovation.” He says this as he steers the g-tron through the downtown area. “A beautiful design is no longer enough in itself; it must also be ingenious.” Ahlmark’s office has its own research department. “There, we are working on new types of solar cells, and on a new acoustic ceiling, which we are installing in the Concert Hall in Malmö. We invent our own building materials.”

We turn onto the harbor waterfront. “The highlight of the g-tron is that it looks like a normal A3 Sportback, but it is packed full of the latest technology,” says Ahlmark, as we drive towards the



Royal Library with its contemporary extension made from granite and glass – an architectural landmark of the city. **“This understatement is a clear trend. Just as sustainability is another smart aspect of the design.”**

The concept behind the Royal Library revolves around spaciousness and democratic design. The goal was to achieve a synergy between an intellectual institution and a cultural building that brings together exhibition spaces, a concert hall, a bookstore and a restaurant. “In the field of architecture, you should always give back more than you have taken,” says Ahlmark.

We drive out of the city and past villa suburbs. **An occasional fuel station – but we don’t have to stop for fuel, since we have a range of up to 400 kilometers with gas and up to an additional 900 kilometers with gasoline.**

Now we are out in the countryside. To our left is the Nordic coastal landscape and to the right the magnificent expanse of the sea. Along with environmental awareness, says Ahlmark, costs are another important factor in implementing new ideas and ensuring their success: “In a retrofitting project, the investment pays for itself in ten to 15 years because there are savings on heating costs, for example. With the g-tron, the low price of gas will be a key factor for consumers.” In Germany, natural gas currently costs around half as much as gasoline.

We stop at a small marina to admire the clouds that are colored a delicate pink in the evening sun. “I think it is fantastic that a carmaker is assuming responsibility for the entire life cycle of its product and is simultaneously producing an alternative to fossil fuels.”

Ahlmark gazes at the boats as they rock in the wind. “What I especially like about this car is that Audi really thought out the storage of green electricity and the production of synthetic natural gas as a complete picture; this is exactly the type of approach we take in architecture. **This holistic approach, that is the future.**”

#### *Audi A3 g-tron in figures*

The Audi A3 g-tron is another Audi production vehicle on the path towards carbon-neutral long-distance mobility. It brings together a number of different technological competences such as **lightweight technology, highly developed infotainment systems, technically mature driver assistance systems and the latest CNG technology.**

Two pressure tanks under the floor of the trunk each hold around **seven kilograms of gas**. The Audi A3 g-tron is bivalent, very efficient and has an **81 kW (110 hp) 1.4 TFSI engine**. In **all-gas mode** it can be driven up to **400 kilometers**. In combination with gasoline, it manages up to a further **900 kilometers**.

It handles the sprint from **0 to 100 km/h in under 11 seconds**. CO<sub>2</sub> emissions in the NEDC cycle are less than 95 grams per kilometer. The combined consumption of the Audi A3 g-tron is **less than 3.5 kilograms of natural gas or Audi e-gas**, which is made from CO<sub>2</sub> and water using green electricity.

PHOTOS: Jeff Ludes, Benjamin Pichelmann







Driving around Copenhagen: Architect Kristian Lars Ahlmark discovers the common vision of sustainability in the Audi g-tron. You can find the video here.



*... AND MR. AHLMARK,  
WHAT FUTURE IS THE G-TRON DRIVING INTO?*

**Only those who invest in innovation and sustainability now will be able to be successful in the future,** predicts Ahlmark: "Retrofitting is a major issue in architecture; 80 to 90 percent of existing building space is absolutely not environmentally friendly. We have just won a tender to retrofit the tallest office building in Oslo, which will be fully self-sustaining in terms of energy. Inside, there is a vertical garden. This green chimney absorbs all of the CO<sub>2</sub> and converts it to oxygen, which is then pumped back into the building." While Audi is actively committed to achieving a sustainable value chain for aluminum in the field of lightweight construction, SHL architects is recycling 90 percent of the building materials for the skyscraper, including its aluminum facade.

**"Sustainability should never mean making compromises, rather it should be about preserving the good life without limitations.** Sustainability in its optimal form would be to take another step forward – such as building a car that produces more energy than it uses."

*... AND MS. PHILIPPI,  
WHAT FUTURE IS THE E-TRON DRIVING INTO?*

Life in Los Angeles teaches people this: Fame and fortune must not overshadow the big picture, the Earth, the environment, the community, your own health. Everyone comes to this conclusion. Eventually. Even celebrities, including the biggest stars. **The Audi e-tron is the mobile consequence of this lived-out holistic approach to life.**

Chic, fast, yet rational. People in Los Angeles would be glad to drive an e-tron like this.

**By the way, I didn't have to charge the e-tron all day.** A pleasant thought, that the car's battery can simply be charged at night in the garage, just as its owner recharges their batteries while asleep. Human and machine in harmony. It will certainly not be long before every garage has such a charging station. At least not here, in the city where the future is so close.



Hollywood and the good feeling of being on the right path. Here you can see how much fun Anne Philippi had in the A3 e-tron in L.A.





# Delighting to delight others

TEXT: Tobias Moorstedt

Because a premium brand also offers premium service. And because good salespeople are excited by their products. Each year, Audi trains over 20,000 employees of the worldwide dealer organization in its **Central Launch Training** at Munich Airport. A training report.

**1 – INTRO** An airport is the perfect place to teach people about the future of mobility. Airplanes embarking for the far reaches of the world take off with a loud thunder. Trucks, buses and cars circulate on the labyrinth of lanes marked out on the tarmac. Conveyor belts, escalators, sensors; a wild dance of machines and, in their midst: people.

“Central Launch Training at Audi is the central market introduction training program for new products and technologies for the worldwide dealer organization,” explains Christian Bauer, Head of Sales Qualification at AUDI AG, shortly before his team receives a new group of participants for Central Launch Training (CLT) at Munich Airport’s Audi Training Center. The Russian group arrives punctually at the auditorium. The air is full of excitement. No sign of jet lag.

Alexander Pyrskiy, an Audi sales adviser from Moscow, is participating in CLT for the first time in 2013 – but has already heard a lot about the event from his experienced colleagues. He is well prepared and hopes to learn even more about new systems and technologies. Casually, he completes what is known as the pre-test on an iPad®; this test checks participants’ existing knowledge and motivates them to learn more. Click. Swipe. Know. The journey begins.

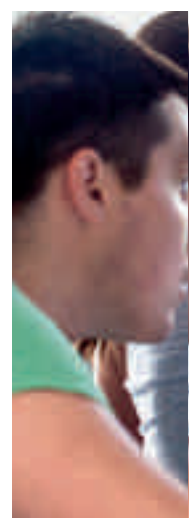






IT  
IS  
EXCITING  
EVERY  
TIME;  
“ I ALWAYS  
EXPERIENCE  
NEW  
PLACES,  
NEW  
IDEAS,  
NEW  
PEOPLE. ”

Lisa Trubitsina





**2 – INTERACTIVE THEORY** The CLT program begins with the presentation of alternative drive technologies such as the new g-tron and the new e-tron. Alexander firmly believes that this is our future. The group listens intently and is impressed when the trainer shows the driving range of the e-tron on an interactive map: It can drive from Moscow to Riga or Kazan. A whisper runs through the room. Alexander is enthralled: “This map will also interest our customers.” At the CLT, information is not conveyed through dry presentations or endless charts, but with modern tools and interactive shows – a combination of visualization and fun.

“The CLTs build on one another progressively,” is how Christian Bauer explains the concept. For example, tron technologies were first presented in early 2013, and the tron Campus followed in the autumn. In 2014, CLT participants can then check out the new products in the dynamic handling area and shift a few gears themselves.

**3 – NEW SCHOOL** Time to move on to the next training module. Maxim Chindyaskin suddenly stops in the middle of conversation, runs towards the center of the room and takes one photo after another with his cell phone. The reason: The static product experience at the CLT is the first opportunity these participants have to experience the new A8 live – a definite highlight. Maxim and his colleagues stand in a tight circle around the sedan and discuss selling points for the new A8. Styling! Innovation! Sports appeal!

Maxim has been working in the Fleet Department at Audi Russia in Moscow for six years now and knows the product and the market well. “I like the fact that we are not restricted in our discussions, that we can talk openly about things,” he says. All participants have an iPad® in their hand on which innovations are communicated interactively and which they can use to analyze and evaluate the A8. This is not a lecture, but a joint discussion, a real-time survey of opinion among Audi experts.

Every topic comes to life this way. The “Audi Lighting Technology” teaching segment, for example, offers facts, facts, facts – as well as high entertainment value. To illustrate the advantages of the new Matrix LED headlights, the CLT team installed various lighting systems in a large room. This lets participants see at a

glance how LED lights produce a brighter light that is more pleasing to the eye. A special feature: A camera detects oncoming cars and motorcycles and dims individual high-beam segments so that the best possible visibility is guaranteed, but without dazzling other road users. The CLT trainer follows his words with actions, takes out a flashlight and shines it into the light cone of the Matrix LED headlights. The camera immediately detects this and the headlights no longer shine on him. However, an array of LEDs continues to shine all around him. With every movement the trainer makes within the cone of light, the Matrix LED headlights react directly and dim their light there accordingly. When the trainer steps out of the cone of light, all LEDs light up again with full power. “It’s engineered so that the driver can concentrate on the road,” explains the trainer, “and not on the light switch.” The demonstration is received with applause.

The tasks and tests are no less fun for participants. Now and then quiet jubilation can be heard when a work group has just solved another task on the iPad®. Incidentally, in the post-tests, which measure the learning curve of CLT participants, over 90 percent of the answers are correct.

**4 – SOFT SKILLS** 8 p.m. At the end of the first day of CLT, the focus is not on high tech or design, but on soft skills and networking effects. A wooden Alpine chalet was built near the airport for the Audi Oktoberfest to celebrate the legend of Bavaria – with lederhosen and high-tech sedans, traditional dirndl dress and cutting-edge design, accompanied by beer, Bavarian delicacies and a brass band.

Lisa Trubitsina is already participating in CLT for the eighth time in autumn 2013. And she has never been bored. “It is exciting every time,” says the 33-year-old. “I always experience new places, new ideas, new people.” In the background, a colleague from Spain taps into the wooden keg. CLT participants from Russia, Poland, Germany, Spain and the Netherlands exchange phone numbers, e-mail addresses and talk about their experiences. “The encounter between colleagues is important for successful training,” emphasizes Lisa, who is already looking forward to sharing impressions, videos and photos from CLT with her colleagues in Moscow. She is convinced that people are the best information carriers.

PHOTOS: Benjamin Tafel



Find out what genuine delight looks like.  
View a video of **Central Launch Training** here.



# THE CUSTOMER NOTICES WHETHER A SALES ADVISER IS PASSIONATE » ABOUT THE PRODUCT.

Alexander Pyrskiy

## Systematic learning

7,000 employees of the Audi dealer organization from over 40 countries participated in CLT in early 2013. They flew to Germany – and landed in the “Land of quattro.” That was the motto of “Central Launch Training Spring 2013.” A land with its own rules and many attractions. The focus of the latest CLTs was on quattro technologies in theory and practice, as well as high-performance vehicles of the RS model series.

While participants at CLT Spring 2013 learned about technology on the quattro Campus, CLT Summer 2013 gave them the opportunity to see for themselves what benefits the technology really offers when they took an A3 with quattro drive out onto the dynamic handling area. In autumn 2013, everything then revolved around the tron technologies. So the CLTs are not isolated events, but a continuous program of modules that complement each other. One gauge of the success of this systematic approach to learning is that participants in 2013 reached the highest qualification levels ever in tests. Another indicator of success is that 98 percent of participants were satisfied with the experience and their results. For 76 percent of participants, the program far exceeded their expectations.

Fuel consumption and emission figures at the end of the Annual Report



**5 – ACTION** The dynamic handling area is an apt, but almost too modest a name for the Audi racetrack right next to the airport runway. It is located just a few hundred meters from where passenger flights take off and land from destinations all over the world. The thundering of jet turbines gives you goose pimples. The air is filled with adrenaline.

In the quattro exercises, the trainer explains, the goal is to put CLT participants in deliberately orchestrated, controlled limit situations so that they can physically experience the effects of the sport differential and quattro technology for themselves. Former police employee Alexander Pyrskiy's eyes light up. In the oval race, two participants drive against each other – one in an A3 with quattro technology, the other in an A3 with front-wheel drive – on a partially wet surface. In the first round, Alexander climbs into the A3 with front-wheel drive; he drives well, but he doesn't have a chance. The trainer's voice crackles from the walkie-talkie: "You can't catch him now, don't even try." Then Alexander is allowed to race around the oval in the quattro. It goes without saying that he wins the return match. He laughs, claps his hands, celebrates – an unforgettable moment. He is certain that "the customer notices whether a sales adviser is passionate about the product."

And then the CLT participants get to test the latest Audi models on a discovery drive as well – a short road trip takes them to lunch at nearby Schloss Hohenkammer. Alexander smiles as he steers the new A3 Sedan down the autobahn and along Bavarian country roads: "Driving an Audi is always better than reading about it."

**6 – GRAND FINALE** The atmosphere at the Audi Training Center is reminiscent of a summit meeting: There is a long line in front of the auditorium entrance. The air is filled with excited voices. Men with serious faces and radio earpieces guard the venue. Since CLT participants will also be shown new products at the final show which no one outside of the Audi family has ever seen, plant security has cordoned off the site and raised excitement levels to fever pitch. Then finally the curtain is lifted, well actually the projection screen is lowered, and the wild drive begins.

"We don't simply want to pull a white sheet off the car," is how Christian Bauer explains the concept, "rather we want to portray the brand's claim of 'Vorsprung durch Technik' in our presentation as well." A goal that is met. The audience sees the new Audi models in motion on an enormous 3D screen. Fast clips which make modern music videos look like meditation films. The new Audi TT races through wild virtual worlds and stops in front of a waterfall. Water jets spray the audience with a fine mist – that's 4D cinema, a new dimension. Then the new TT drives onto the stage through a hidden door, and the real vehicle and the animated sci-fi images meld together.

After 20 minutes, Maxim Chindyaskin leaves this drive-in movie theater of a special kind, squints at the light and rubs his eyes. He could rave about the design of the new TT, or he could report on what he might tell his customers in Moscow about the future of Audi. But all he says is:

“wow! wow! wow!”





08

ACT  
AHEAD

# Feeling the market

Axel Strotbek, Member of the Board of Management of AUDI AG for Finance and Organization, and the renowned economist Prof. Markus Brunnermeier discuss courage, opportunities and trends. An encounter in Princeton.

TEXT: *Jan Rentzow*

PHOTO: *Ofer Wolberger*







**Mr. Strotbek, Audi delivered well over 1.5 million cars in 2013. That achievement meant it broke through a key strategic barrier – much sooner than planned, in fact. Is a feel for the market something you can learn? Or is it just something you have?**

**STROTBEEK:** At Audi, we've been feeling the market for over 100 years, and that has been down to hard work. In essence it involves understanding the markets and above all the needs of our customers, then developing the right products to suit them. We are currently experiencing one of the most exciting phases in the history of the automotive industry, and we aim to further raise our profile when tackling core challenges such as drive technologies, connectivity and sustainability. We aim to consistently offer a technological edge to our customers.

**Prof. Brunnermeier, do you share the view that feeling the market is all about hard work?**

**BRUNNERMEIER:** Yes, I certainly do. You have to learn to listen to what the trends could be and mustn't overlook general developments. That would be fatal. But it's also important to set trends yourself. Trends that aren't so radical that you lose touch with the market, but that go far enough that the market is prepared to follow. It's hard work, but it is fun.

**At Audi, how do you go about choosing the cars of the future?**

**STROTBEEK:** First, it involves listening to the market. Second, it involves having the courage to take a step forward and set yourself apart from the mainstream and from what is currently in vogue. And having a feeling for what will be in demand in the medium term – because we're normally talking about a development horizon of three or four years for a new product. Our main tasks these days center on increased environmental awareness and the desire for sustainable mobility, but also on products that offer increasing digitization and connectivity. We define our own priorities in order to take up a clear position.

**Audi acts globally. Global markets bring opportunities, but also risks. How much of a risk does an enterprise need to take today in order to be successful?**

**BRUNNERMEIER:** Not taking any risks is very risky indeed, because your competitors will then overtake you. The investment that the automotive industry has to make to develop progress is very high. It needs to sell high volumes and act globally, while at the same time responding to regional differences. Acting globally therefore means reducing your dependence on developments in one country or region – and also being present in growth markets. I think Audi has done vital groundwork in that respect. Companies must be positioned flexibly worldwide to be able to respond to future developments.



**Mr. Strotbek, how much of a risk do you take?**

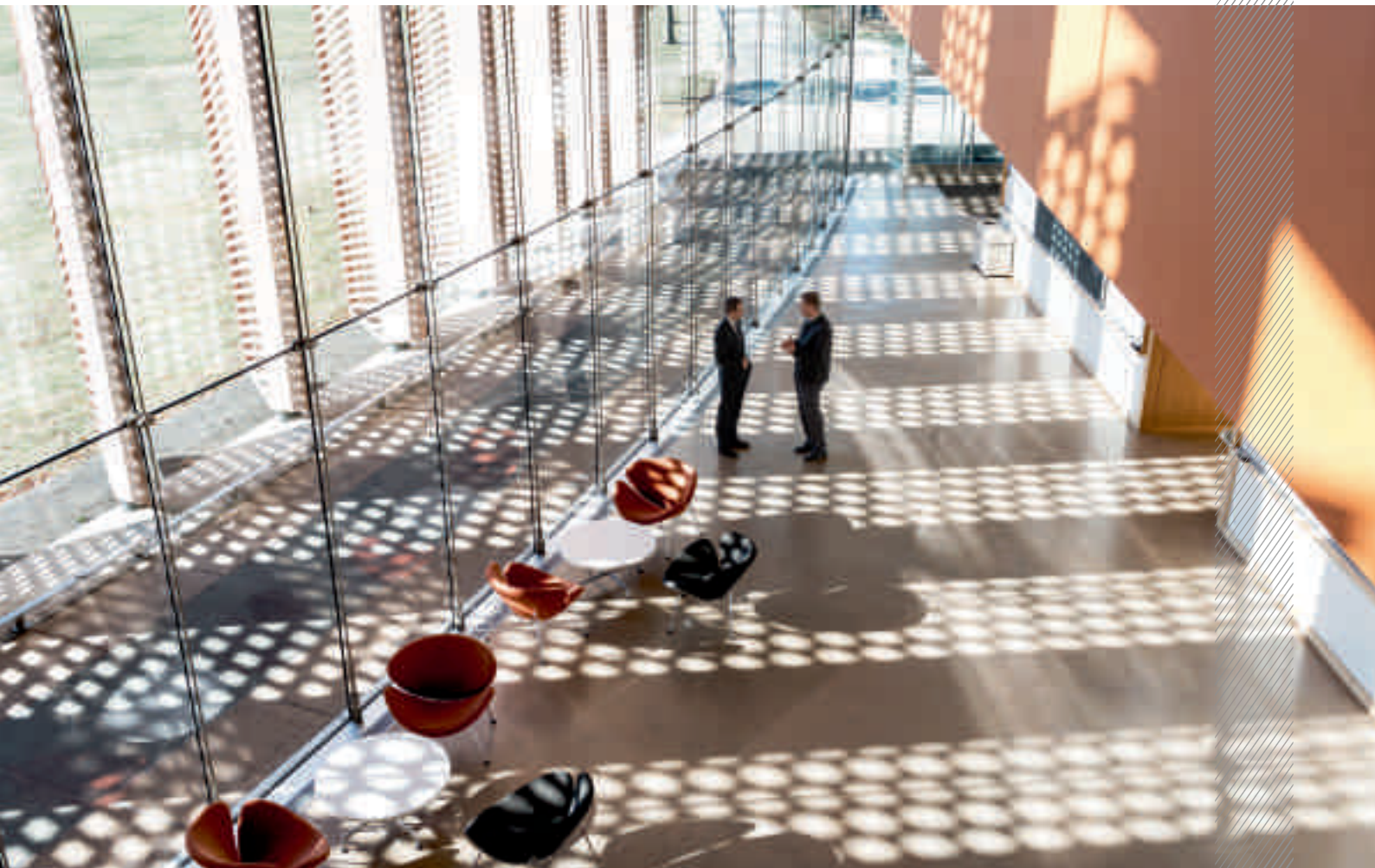
**STROTBEEK:** Our strategy is to establish a business resting on three pillars – Europe, Asia and America. We are already the premium-segment market leader in Europe and are also very successful in Asia. The next step is to exploit our strengths and build on our good position in North and South America. The new plant in Mexico will be an important milestone for us. Today, Mexico offers considerable expertise in automotive production coupled with competitive cost structures. Setting up a base there will also enable us to reduce our exchange rate risks and capitalize on existing free-trade agreements with the United States, Latin America and Europe. Audi's appeal as an employer in Mexico too is reflected in the fact that we have already received over 30,000 job applications for the plant.

**Prof. Brunnermeier, you are regarded as an expert when it comes to forecasting. Forecasting is a very important part of decision-making amid uncertainty. How do you go about it?**

**BRUNNERMEIER:** The important thing is to give not just a simple forecast, but a whole spread of possible events. You can say that one scenario is the most likely, but that others are also possible. Predicting many events, but also remaining flexible enough to accommodate unforeseeable ones, is key to minimizing risks. Nothing is worse than being unable to respond to a future, unknown event.

**Key word: speculative bubbles. Some people are increasingly warning that the next major slump in the stock markets could be just around the corner. There is the view that many of the good business figures we are now seeing are underpinned not by corporate success, but by the low-interest environment. Are we heading for another crash, the next major crisis?**

**BRUNNERMEIER:** I am more optimistic as far as America is concerned. As a general principle, you have to remember that when interest rates are low, people are less inclined to leave their money sitting in a savings account. Shares are more attractive. That's normal, and not necessarily a speculative bubble.





**PROF. MARKUS BRUNNERMEIER**

was born on March 22, 1969 in Landshut (Bavaria). After leaving school with an intermediate certificate, he trained at the Tax Office in Landshut before completing his high school diploma, then went on to study Economics in Regensburg, Nashville, Bonn and at the London School of Economics. In 1999, US Federal Reserve Chairman Ben Bernanke recruited him for his international team of researchers at Princeton University. He is Edwards S. Sanford Professor of Economics and belongs to the Bendheim Center for Finance and the International Economics Section in Princeton.



**AXEL STROTBEEK**

was born on March 2, 1964 in Hameln (Lower Saxony) and studied Industrial Engineering in Karlsruhe and Linköping (Sweden). Following his MBA at the University of Illinois in Chicago, he joined the Volkswagen Group as Board of Management Assistant for Controlling and Accounting. After holding various posts within the Volkswagen Group, he worked as Executive Vice President of Finance at Volkswagen Group China in Beijing from 2004 to 2007. Strotbek has been Member of the Board of Management of AUDI AG with responsibility for Finance and Organization since 2007.



*Experts are observing high competitive and price pressure especially in Europe and China. Mr. Strotbek, you have said that Audi is not prepared to buy market shares by discounting its prices.*

**STROTBEEK:** That's right. We have increased our market share in China, North America and Europe through attractive products and a strong brand image. Customers also expect a high degree of price stability from us as a premium carmaker. We are fundamentally pursuing a strategy of qualitative growth. In other words, the priority for us is to see sustained corporate success rather than simply focus on the next quarter's results. That is the only way we can afford high investment spending on new products, technologies and the infrastructure in the long term as the basis for realizing our ambitious strategic goals.

*The European market is growing more slowly than others.*

*What role does Europe play for Audi?*

**STROTBEEK:** With over 730,000 vehicle deliveries, Europe is still our most important sales market despite our considerable success internationally. Furthermore, a large share of our technologies and products are developed in Europe. It is where not only our own engineers, but also many suppliers and development partners are based. That's a huge asset. **BRUNNERMEIER:** Europe's sensitivity to environmental issues is undoubtedly also important. It's very pronounced. You can tell innovations from Europe by the sustainability ethos behind them.

*Mr. Strotbek, what is your product strategy for the future?*

**STROTBEEK:** We have been very successful at broadening our product portfolio in recent years. We have focused on four main directions: We have expanded the full-size category through our R8 supercar, for instance. Then we have introduced a number of highly sporty RS models such as the RS Q3, RS 5, RS 6 and RS 7. We have also brought new models onto the market in the shape of the A1 series and the new A3 Sedan to attract primarily young customers to our brand. In extending our SUV range, we are responding to high demand for such vehicles. We are currently working intensively on ventures such as the electrification of our cars. As an initial step, we will be going into production with the A3 Sportback e-tron, a plug-in hybrid, this year.

*There will be huge advances in the operating range of electric motors. And also in connectivity between the car and its surroundings. Where do you see the biggest challenges to remaining successful over the coming years?*

**BRUNNERMEIER:** I think that a car company has to find the right strategic partners across all industries in order to integrate the technologies of the future. People want more than just a car, they want a complete communications product. Audi has already taken the first important steps. **STROTBEEK:** Major technological leaps lie ahead of us. We now have the opportunity to develop technologies that we believe will bring us success. Managing this complexity is on the one hand an incredible challenge, but on the other hand it is a huge opportunity.

*You both work very hard. How do you motivate yourselves?*

**BRUNNERMEIER:** I love my job and find it exciting to work on ideas that help people to understand things. Ideas inspire and help to inspire others. That is my driving force. My family – I have two daughters – and my work combined make life very fulfilling. **STROTBEEK:** Audi is a very emotional company with a highly motivated team. The success of our technologies has certainly helped significantly to keep the flame burning. One of the key tasks for the future will be to keep developing what makes the brand special. I personally try to keep myself fit to face these challenges through a combination of physical exercise and mental training. Only if your mind is agile can you achieve at the highest level, day in, day out. And that's precisely what we seek.



# We are family

TEXT: *Gabriele Meini*

Anyone coming to work at a German location of AUDI AG as an international Group employee will not be on their own. The integration program for impatriates does more than simply help them settle in: It welcomes them into the Audi family.

**Kenneth McHattie**

Scotland

Infotainment developer

**Luis Ortiz Müller**

Mexico

Production system/  
Training Center consultant



Find out more  
about some of the  
Audi impatriates.  
Here are their  
detailed profiles.

**Bert van den Eede**

Belgium

Accounting consultant

**Petr Havelka**

Czech Republic

Passenger airbag developer

**Csaba Ternyak**

Hungary

User management IT consultant



**Paloma Santos Rodriguez-Vigil**

Spain

Supplier development Mexico

**Wendi Sun**

China

Interior development engineer

A worldwide presence  
An overview of the Audi production  
locations can be found in the  
Management Report on page 145.



A traditional pub with typical local atmosphere, a round of miniature glasses of its own brewed beer served as an aperitif: A convivial setting for this evening's function – the monthly Audi impatriates networking meeting. The mood is relaxed and intimate; everyone knows everyone else. It does not take long before everyone is involved in lively conversations. The impatriates come mainly from Mexico and China, from Audi companies elsewhere in Europe and from other Group companies. They are here for periods ranging between six and 15 months – or perhaps even longer. So it is important for them to develop a social life. That was precisely the reason for launching the special integration program: It provides opportunities to explore the area together, attend cultural and sporting events and get to know the German mentality in the company of others.

"At first, everything is different all of a sudden – the work situation, the apartment, the surroundings," as Bert van den Eede from the AUDI BRUSSELS S.A./N.V. Accounting department explains. "That's why it is so important to develop a sense of belonging right from the start." Partners and families are of course also included in the integration program. Csaba TERNYAK, IT specialist at AUDI HUNGARIA MOTOR Kft., is here with his wife and children. "The fresh start worked very well for us. My boys had already learned some German in Hungary and are doing well at school. And my wife now wants to learn German, too." On an evening like this, many enjoy having the opportunity to talk to others who are in a similar situation – while of course establishing interesting international contacts.

Luis Ortiz Müller loves coming to the networking meetings. He also appreciates the fact that his wife and daughter can meet other Spanish speakers here from time to time. He enthuses about his trips to Königssee, Neuschwanstein and Regensburg.

## "IT'S IMPORTANT TO DEVELOP AN UNDER- STANDING OF HOW OTHERS THINK AND OPERATE – WITH MUTUAL RESPECT."

Luis Ortiz Müller

The Mexican is working alongside German colleagues on the development of a train-the-trainer program for the new plant in San José Chiapa. It will cover every process, from production to

sales. "The way people communicate here in Germany is very positive, very direct and clear." However, he still keeps encountering differences in the ways Germans and Mexicans think. Ortiz Müller can convey this appropriately in the training program he is creating, and help with the qualification measures for the employees back home in Mexico. Through such activities, Audi is making sure expertise is built up at its international locations. As a result, employees from the regions are already capable of taking up key positions. And that in turn makes the Company an attractive employer worldwide.

Because Audi is growing primarily outside Europe, where customer requirements may be completely different, and the working culture may present a huge contrast, too.





“PEOPLE IN GERMANY THINK  
IN A LINEAR WAY – YES OR NO.  
THE CHINESE USE NEUTRAL  
EXPRESSIONS, SO COMMUNICATION  
IS MORE LIKE A CURVE  
OR A CIRCLE.”

Wendi Sun

Internationalization at all levels is therefore part of the strategy: Audi is recruiting new employees directly in each country in order to draw upon their specialist and social expertise. One example of this approach is the Audi China Expert & Management program ACEMpro. This exchange has proved hugely motivating for interior development engineer Wendi Sun to reflect on how she communicates: “Most people in Germany are very direct. In China people tend to use more neutral expressions, so communication is more like a curve or a circle. Depending on who I am talking to, I have to think: How can I say that best?”

“I was surprised how important work-life balance and reconciling your job with family life are here in Germany, too,” comments Paloma Santos Rodriguez-Vigil. The young Spanish engineer, who previously studied at the Technical University of Munich, is now taking charge of a quality assurance project for Mexico under the StartUp Europe trainee program. Santos Rodriguez-Vigil loves the international nature of her project: “I gain an insight into the various Audi production plants and can benefit from comparing how people work in Germany, China, Hungary or Mexico.”

#### Global involvement

The growth market China offers exceptional opportunities, but also requires special knowledge. The Audi China Expert & Management program, ACEMpro, provides training for Chinese employees, and those with an interest in China, for up to 15 months in China and Germany by deploying them on projects in their specific area of activity. But for Audi, it is also important to offer opportunities to people who are currently living in an economically difficult environment. StartUp Europe, for example, enables Spanish and Italian engineers to gain further career experience in Germany, thus equipping them to take on challenges in the labor market. The initiative also sends out a message to the domestic labor markets and forms part of the Audi Group’s corporate responsibility activities.




#### An award-winning family

"Attractive employer worldwide" is a strategic corporate objective for Audi. Who better to substantiate that goal than the people who are employed by the Company? For the HR marketing campaign "Working at Audi," employees personally present their 15 top reasons for working at Audi. Those 15 reasons are the result of more than 100 personal accounts prepared in cooperation with employees from various divisions. The top reasons have an external impact too, as is evident in the 2013 placings in the German trendence and Universum graduate barometers, as well as the Universum survey of young professionals. The Company secured top spot among engineers and economists. Audi is a more popular employer than ever throughout Europe too: In Belgium, AUDI BRUSSELS S.A./N.V. received the "Employer of the Year 2013" award, and in Hungary Audi was voted "Most Attractive Company" for the fifth year in a row.

Listening to the impatriates talk, it is striking to note that any cultural differences pinpointed are interpreted positively – as opportunities for personal development. "Here in Germany it is considered important to do a task perfectly, right down to the last detail, to produce precise answers to every question and to rule out any ambiguity – even if that means repeating the process yet again," says Petr Havelka, airbag specialist at ŠKODA AUTO a.s. Kenneth McHattie, electronics engineer at Bentley Motors Ltd., has also discovered what a difference the way you communicate makes. At Audi he is coordinating the development of an infotainment system for joint use. At first all the departments were discussing unilaterally with each other, but since early 2013 McHattie has been the central point of contact in Ingolstadt. "That makes it easier for both sides." He is impressed by the seamless coordination between the specialist teams at the German end: "No questions are left unanswered, every responsibility is precisely defined. Even though there are more departments here, the exchange is very efficient!"

After the roast dinner with dumplings, the colleagues start taking souvenir photos of each other over dessert. Will they now be sent straight to the folks back home? "Yes, sure, I'm always sending photos, to my parents, for example," says Wendi Sun. Calling home over the Internet and instant messaging help to alleviate homesickness – which obviously occurs from time to time. "There are good days and less good days," admits Paloma Santos Rodriguez-Vigil with a smile. That's when it helps to know the other impatriates, who are a bit like a substitute family. "And then you are able to look ahead again." Because whatever each individual's area of work is, as an impatriate they have a unique opportunity to experience and learn something quite out of the ordinary. That special inner motivation is palpable – and infectious!

A portrait of Prof. h. c. Thomas Sigi, a middle-aged man with short brown hair and glasses, wearing a dark blue suit, white shirt, and a striped tie. He is smiling and looking towards the camera. The background is a blurred outdoor scene with trees.

## Prof. Sigi, what do you focus on today when you think about tomorrow?

For me, thinking about tomorrow means constructing a new work environment. I want a strong Audi family that continues to grow and that is at home on various continents. We have a culture of trust in which people feel comfortable and can develop their creativity – since innovation requires freedom.

Our employees use interactive channels of communication and help decide how, where and how much they work – all according to their personal circumstances. We support their development in a personalized way and show them appreciation and respect. This is what good leadership means to me.

**Prof. h. c. Thomas Sigi**  
/ Human Resources



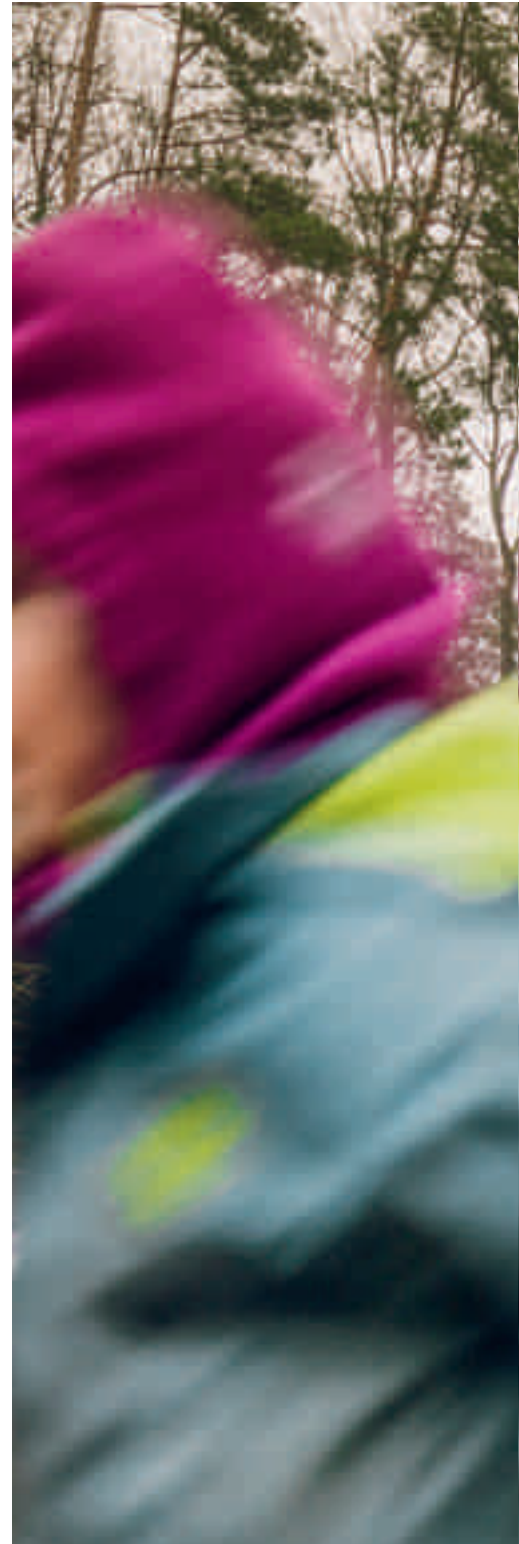
# Learning, naturally!

The Audi Environmental Foundation has supported the **“Outdoor Classroom”** project in the Franconian town of Breitengüßbach since 2011. Visitors young and old can learn about rare plant and animal species in the interactive environmental center.

TEXT: Anne Lehwald

Every Thursday afternoon – even when it is stormy or snowing outside – the Breitengüßbach Environmental Center near Bamberg becomes a vibrant and fun place to be. That’s when the kindergarten kids known as the “Little Rascals” have their Forest Day. On cold, foggy autumn days like today, the little naturalists are equipped with brightly colored hats, rainproof jackets and warm gloves. Marching in rows of two and with eyes aglow, they pass red oak, elm, chestnut and fir trees. Their destination: the **“Outdoor Classroom.”**

The 125-hectare area in northern Bavaria was used for decades by the military. This turned out to be a lucky break for Mother Nature, since the long period of isolation produced an abundance of rare plant and animal species here. The Wildlife Conservation in Franconia initiative and the community of Breitengüßbach worked together with the Audi Environmental Foundation to develop the area into an environmental center.







**Audi Environmental Foundation**

The Audi Environmental Foundation is a nonprofit organization launched by AUDI AG, primarily to support natural and environmental conservation, but also to promote its own scientific and research projects, pilot schemes and concept development. More information can be found in German at: [www.audi-umweltstiftung.de](http://www.audi-umweltstiftung.de)





*“My favorite animals are bats.*

*I love how they fly. I’d like to be able to do that myself. The one I like most is the grey long-eared bat!”*

Luca, aged 5

**Corporate Responsibility**  
Please see the Management Report on page 180 for more about sustainability.

The foundation has supported the project since 2011 and has been involved primarily in wildlife conservation and environmental education. “We not only support the project financially, but also work together to design content and define focal areas,” emphasizes Dr. Dagobert Achatz, Managing Director of the foundation. Heike Raab-Held is thrilled with the teamwork. “The Audi Foundation has magically created all of this here,” enthuses the director of the kindergarten. In the forest house, the centerpiece of the “Outdoor Classroom,” there are workbenches, wooden furniture and lots of materials the kids can use to make things.

The environmental project, which has been honored by the office of the **UN Decade on Biodiversity**, is structured into various modules. “This allows us to measure success in stages,” explains Achatz. There have already been a few

of those. Since the installation of 124 nesting boxes for bats, the number of species has increased from nine to 13. “As the variety of species in Germany is declining, it’s all the more encouraging to see that they are increasing again here,” says Achatz. The kids learn how to treat nature responsibly through fun activities. They sing songs about the forest, collect leaves and look for tracks left by animals.

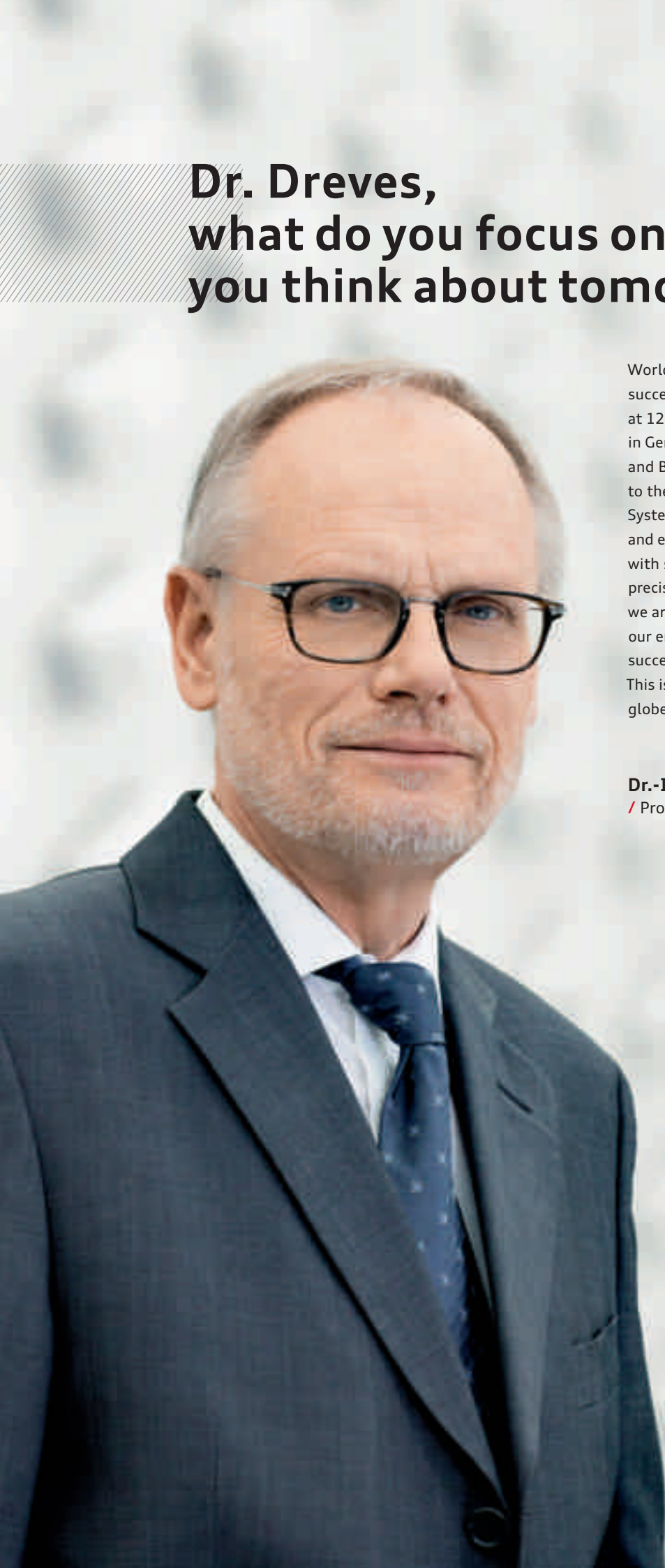
“But the project is not just exciting for the little ones,” emphasizes Achatz. Hiking enthusiasts are also welcome to explore the wide variety of nature trails. They can use a smartphone to access more information through the links shown on different display panels. “We want to make nature an experience,” explains Achatz.



#### Worthwhile reading

The Audi Environmental Foundation published the book “Abenteuer – Leben Natur Technik” (“Adventure – Life, Nature and Technology”) especially for young researchers aged between nine and 12. The book is “impressively illustrated with easy-to-understand text, and is aimed at motivating young researchers to think and be inquisitive,” according to Dr. Dagobert Achatz, Managing Director of the Audi Environmental Foundation. The book can be ordered at no cost at: [bestellung@audi-stiftung-fuer-umwelt.de](mailto:bestellung@audi-stiftung-fuer-umwelt.de)



A portrait of Dr.-Ing. Frank Dreves, a middle-aged man with a grey beard and glasses, wearing a dark suit, white shirt, and blue patterned tie. He is looking slightly to the right of the camera with a calm expression. The background is a blurred outdoor scene with trees.

## Dr. Dreves, what do you focus on today when you think about tomorrow?

Worldwide presence is our philosophy for success tomorrow. We are already producing at 12 locations in ten countries. Whether it's in Germany, in China or, in the future, in Mexico and Brazil – we produce our cars everywhere to the same top standard: the Audi Production System. Consistent plant structures, stable and efficient processes, high productivity paired with superior quality and perfection, with precision in the details, with a passion for what we are doing and with great appreciation for our employees. These are the cornerstones for a successful worldwide production network. This is what “made by Audi” means. Around the globe. Today as well as tomorrow.

**Dr.-Ing. Frank Dreves**

/ Production

# Science fiction becomes reality

TEXT: Johannes Köbler

The International Consumer Electronics Show in Las Vegas is the world's most important electronics trade show. Audi once again had a strong presence there this year, with topics that redefine the mobility of the future.

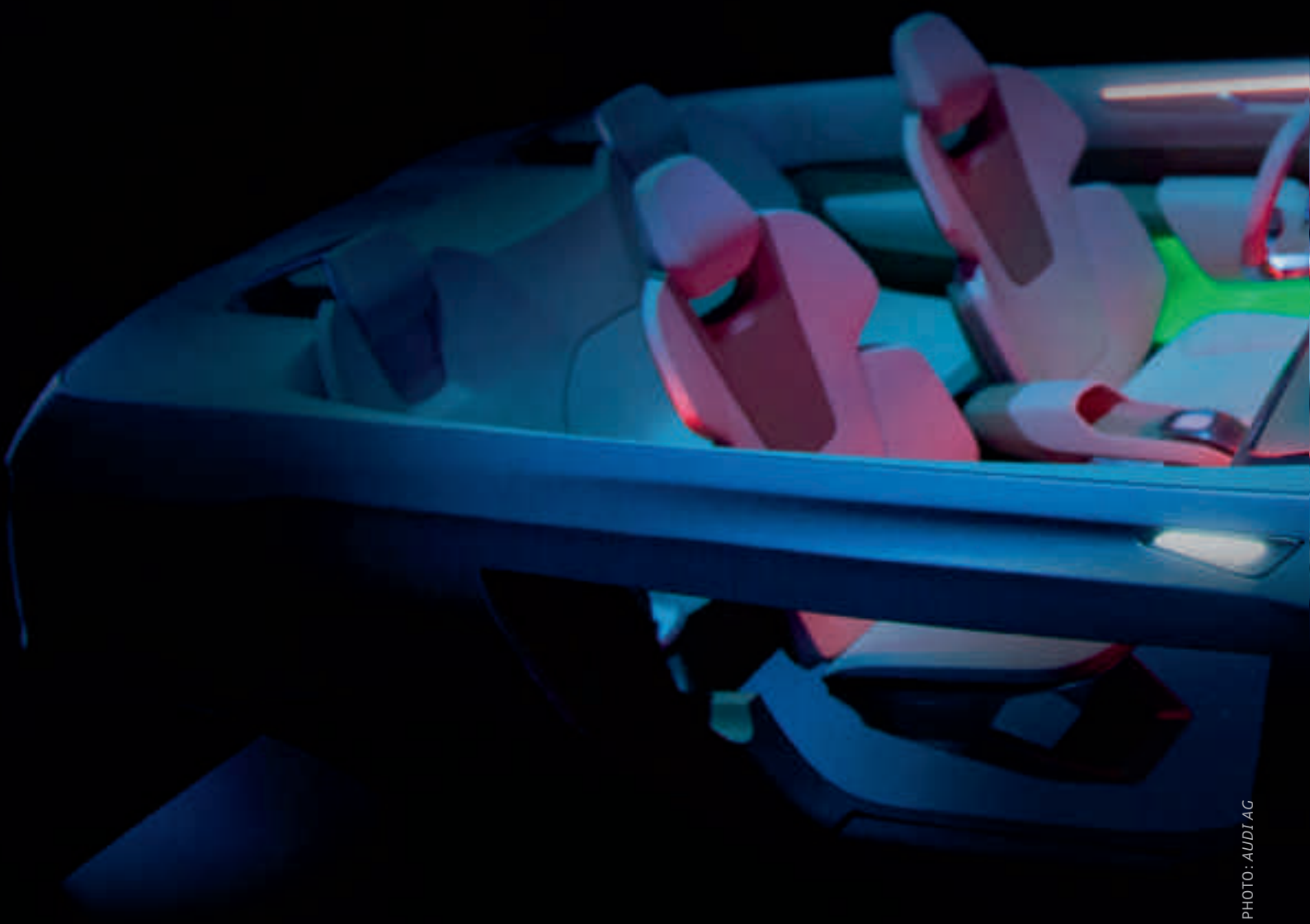
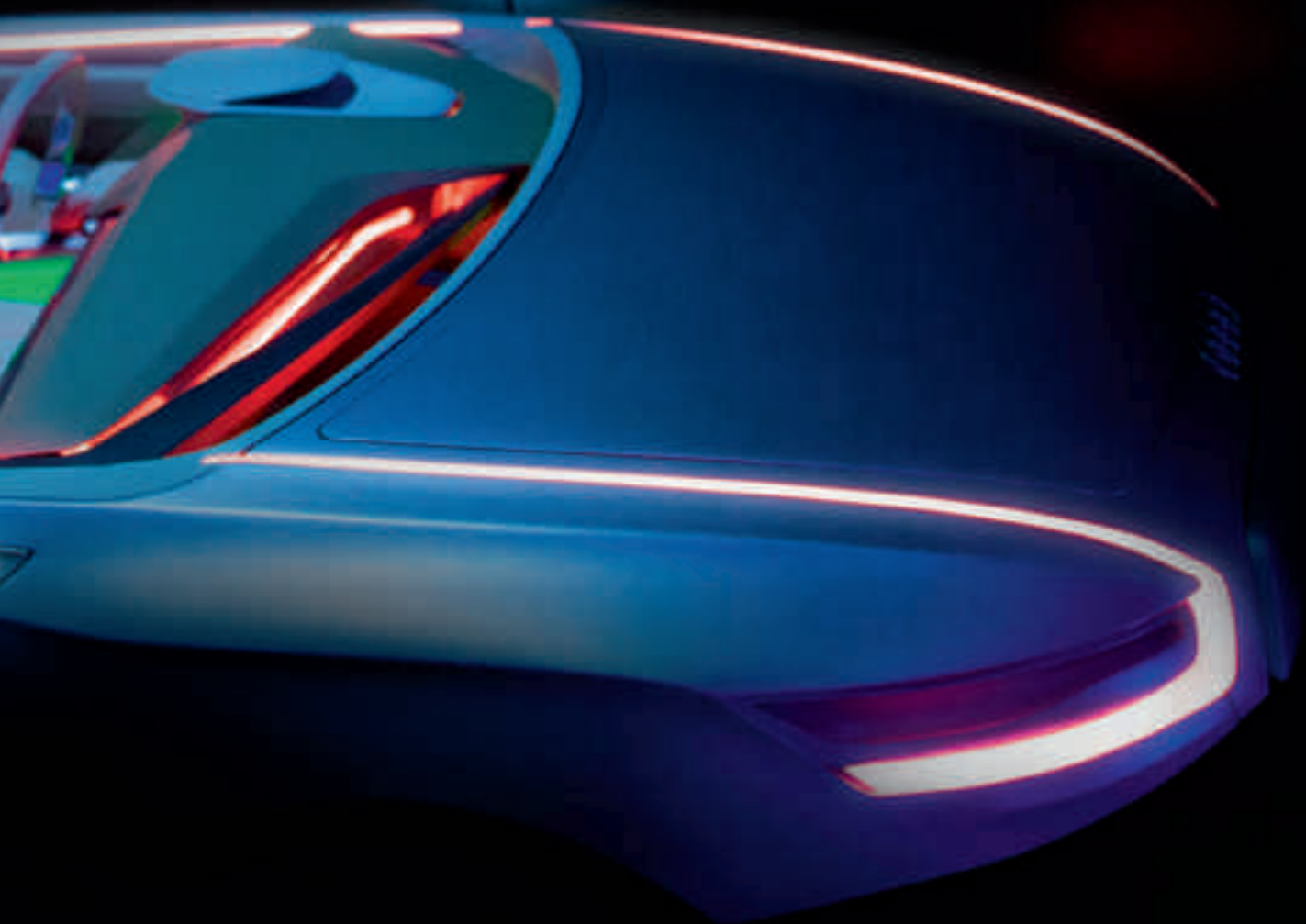


PHOTO: AUDI AG

*Light that communicates with the driver: the Solunar study from Audi.*







*"We are working in a tight network with the electronics industry," said Prof. Rupert Stadler, Chairman of the Board of Management of AUDI AG at the CES.*

A car that moves through traffic without anyone steering it? A car that uses pulses of light throughout the interior to send signals to its driver? Just a few years ago, such ideas were still just abstract visions; today, Audi is developing them for series production. **"We are closing the gap between science fiction and reality on the road,"** said Prof. Rupert Stadler, Chairman of the Board of Management of AUDI AG, during the brand's pre-show keynote at the International Consumer Electronics Show (CES).

The annual CES in Las Vegas has almost turned into a home game for Audi. The Company made its first appearance at the world's most important electronics trade show in 2011, and already recognized back then that this trade show is equal parts shining stage and marketplace of possibilities. Its audience is unconventional and young, and what exhibitors present there are occasionally market-ready technology, frequently projects and often ideas, impetus. **"We are the carmaker with the most innovations based on electrics and electronics," explained Stadler.** "This is due in part to close collaboration with the electronics industry, which we continue to intensify. We are continuously improving our cars with new hardware and fresh ideas, with new brainware." One example of this in Las Vegas, the City of Light, was the **Solunar study** – a model in which colored light in every part of the interior communicates with the driver and flows outward to the exterior. Another is the Audi Sport quattro laserlight concept show car. Prof. Dr.-Ing. Ulrich Hackenberg, Member of the Board of Management for Development, described the coupe as follows: "An eye-catcher with a power output of 515 kW (700 hp), a brawny muscle car and a highly efficient plug-in hybrid in one. And the laser light is three times more

powerful than LED headlights. It is the light of the future." The world is getting smarter and smarter. Completely new solutions are possible and seeming contradictions can be reconciled on the Internet of tomorrow, as was evident at the CES, thanks to intelligent, highly connected microelectronics. Audi is driving this progress forward together with strong partners such as Google, NVIDIA and Qualcomm. **With Audi connect, the internally networked car of today is developing into a car that communicates seamlessly with its driver, the Internet and other road users.** The development engineers are continuously assembling new mosaic tiles into a big picture. "In the electronics industry, innovation cycles are extremely short and the competition is particularly intense," explained Hackenberg. "We feel obligated to become even faster and even more progressive." One of the innovations that Audi showed at the CES is the so-called zFAS board, which integrates the control units of all driver assistance systems in a tight space. It is the future brain of the car for piloted driving that makes the driver's job easier. Another solution is the Audi virtual cockpit – a display that replaces the analog instruments in the new Audi TT combined with an updated operating concept for the Audi Multimedia Interface MMI. At its core is a super-fast Tegra 30 (T30) processor from NVIDIA.

Audi garnered plenty of attention and multiple awards from the trade press for its innovations at the CES. And development continues. The Company has announced a collaboration with Google and will soon seamlessly integrate Android mobile devices into the car. "Connectivity and mobility are deeply intertwined," said Stadler at the CES. **"We are in an era in which we are no longer continuously improving just the car. We are in the process of redefining the mobility of the future."**

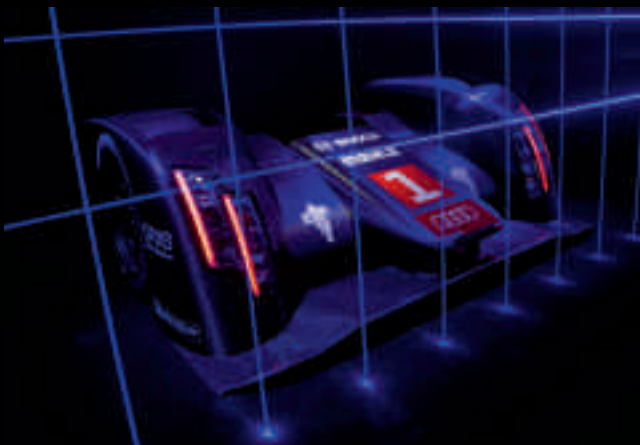
Top left: Smart, attractive and informative – the Audi virtual cockpit goes into series production with the new TT.

Center left: Powerful performance – the Audi race car for the 24 Hours of Le Mans will have the new laser light on board.

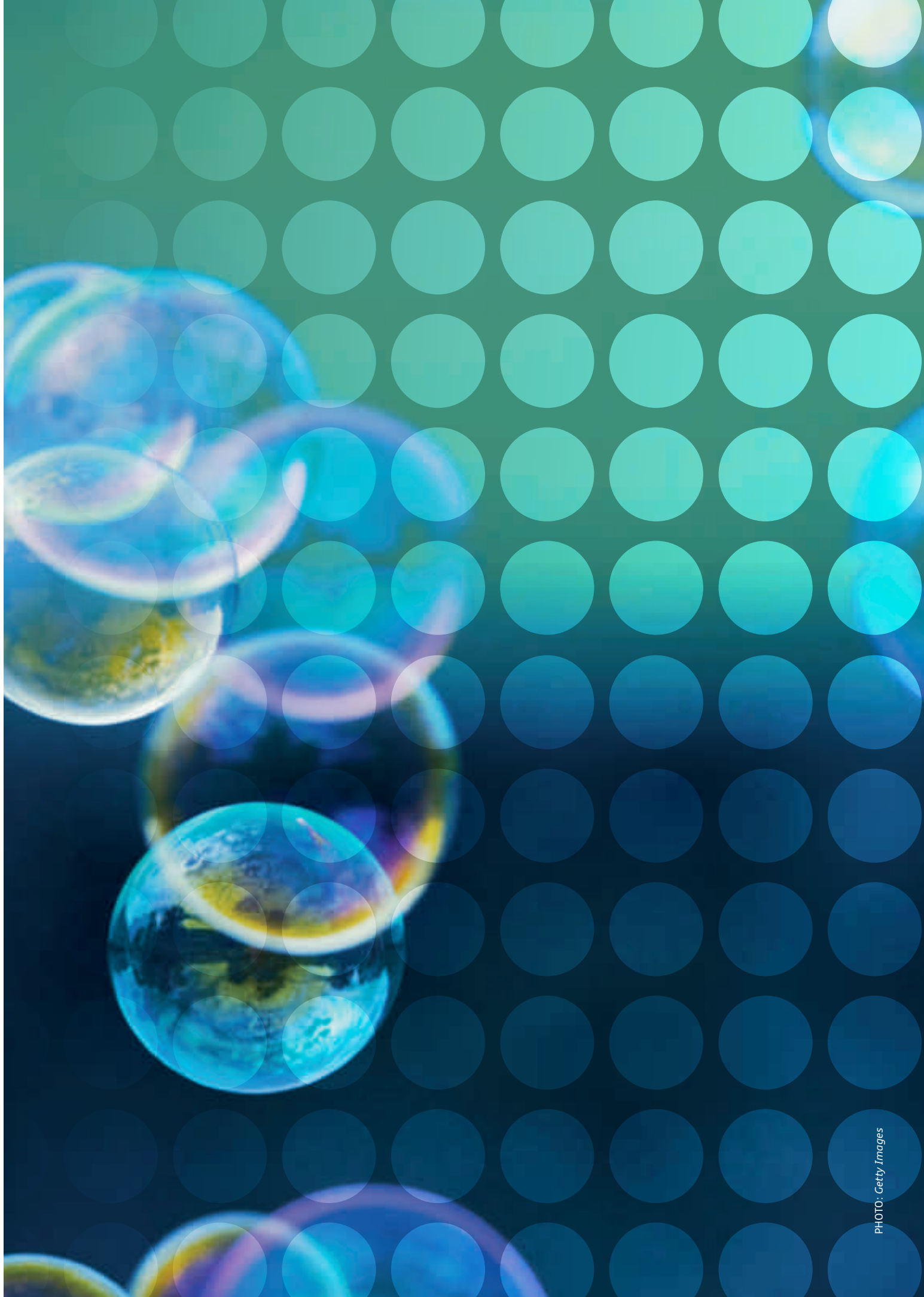
Bottom: One of the stars at the CES – the Audi Sport quattro laserlight concept show car.

Top right: Like an airplane wing – the instrument panel of the new Audi TT compact sports car.

Center right: Long range – the laser's tightly bundled beam of light extends approximately 500 meters.



Experience the highlights from the CES here.





12

13

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15

**Experiences that delight.**  
And that get under the skin.  
What really makes our  
**heart beat faster?**

# PLAY...

16

17

18

19



12

PLAY  
QUATTRO

# Curves. No discussion.

A rush of curves in the RS 7 Sportback. Alpenglöck in the Urquattro, the original Audi quattro. The “**Land of quattro**” offers highlights over 12 stages. On the road with 24 RS models including standard quattro all-wheel drive and four classic cars in the **Audi Land of quattro Alpine Tour 2013.**

TEXT: Berthold Dörrich





**Just where is this “Land of quattro”?** This question was answered very precisely in September and October of last year: It stretches between 7° 25' 38" and 14° 20' 16" east longitude, in other words from Monaco in the west to Klagenfurt in the east, at an altitude from zero to 2,715 meters. Its northern boundary is where the first fall showers get caught on the northern flanks of the Alps. And at the southern border, the still-mild Mediterranean sun greets you as you come down out of the mountains.

Its road system comprises **4,440 kilometers** of small and tiny mountain roads and **44 passes**, interrupted only by a few fast stretches of freeway. In other words: curves, curves and more curves, which have been given melodious names such as Col de Turini, Col de la Bonette, Gotthard, Susten, Julier, Falzàrego or Grossglockner to tell them apart better.

Its residents, masters of curves and long-distance jaunts alike, also have names that are equally distinctive and exclusive: **RS 6 Avant, RS 7 Sportback, RS 5 Cabriolet and, most recently, RS Q3.** Their ancestors – Urquattro and Sport quattro – proudly testify to their legendary history. And even the younger member of the family, the Sport quattro concept, flaunts its genes in its name.

Just like any other country, “Land of quattro” also has its own national anthem, Beethoven’s “Ode to Joy.” Trumpeted down from the mountains each morning from raspy mufflers, the melody crashes against the rock walls of the valleys with the roar of the engine revving in unmistakably clear testimony to the nature of this land.

To make sure that the world gets to hear about this extraordinary country, Audi invited 250 journalists from all over the world to get to know **“Land of quattro,”** its roads and its residents over a total of 12 stages. Klagenfurt to Monaco and back. The fleet: 24 RS models, all equipped with quattro drive as standard, and four classic cars. Over a period of two weeks, they will cover a distance more than three times the circumference of the Earth.



10:00 a.m. A feast for the eyes.  
And not just the scenery...



2:00 p.m. What a car!  
But you have to be able to go "off-road"  
if you want to get a picture.



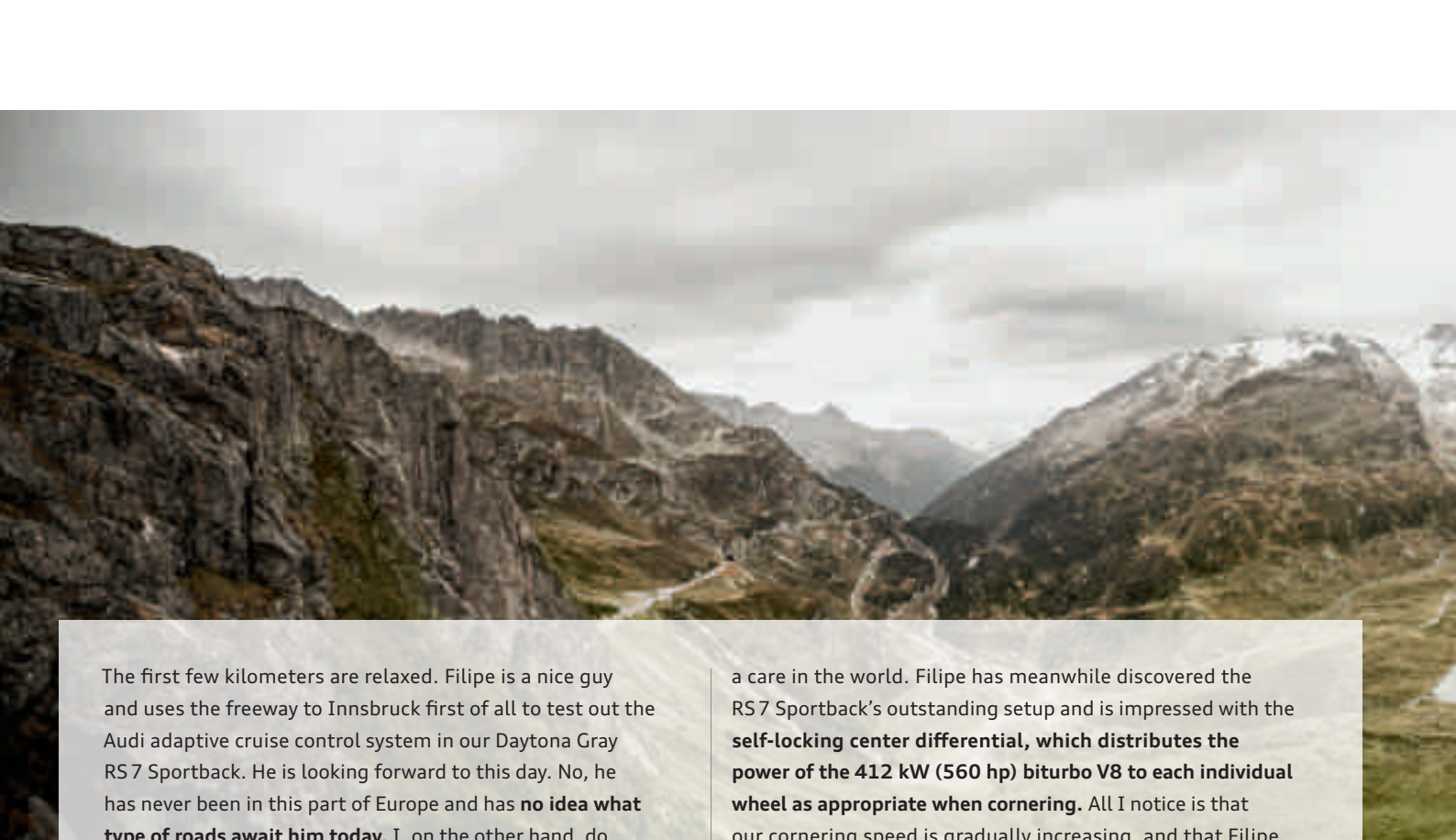
PHOTOS: Daniel Wollstein, Berthold Dörlich

WHAT DO YOU EAT FOR BREAKFAST WHEN FACING A DAY AS A FORMER AUDI DTM DRIVER'S PASSENGER AND SIX ALPINE PASSES? SOMETHING LIGHT, WHICH WON'T SIT HEAVILY IN YOUR STOMACH? OR WOULD SOMETHING HEAVY THAT OFFERS MORE RESISTANCE TO THE CENTRIFUGAL FORCES BE BETTER? SHOULD I EAT ANYTHING AT ALL? I AM SITTING IN THE BREAKFAST ROOM OF OUR HOTEL NEAR INNSBRUCK AND DECIDE TO GO WITH LIGHT. AHEAD OF ME ARE TWO ALPINE STAGES IN THE RS 7 SPORTBACK AND URQUATTRO AS THE PASSENGER OF FILIPE ALBUQUERQUE, AUDI FACTORY DRIVER AND 2013 WINNER OF THE 24 HOURS OF DAYTONA IN AN AUDI R8 GRAND-AM.

14° 20' 16"







The first few kilometers are relaxed. Filipe is a nice guy and uses the freeway to Innsbruck first of all to test out the Audi adaptive cruise control system in our Daytona Gray RS7 Sportback. He is looking forward to this day. No, he has never been in this part of Europe and has **no idea what type of roads await him today**. I, on the other hand, do, and therefore am not sure whether his youthful carefree nature is contagious or just making me nervous. I go with option one here too, which gives me the opportunity to talk with him at length **about his races as an Audi DTM driver and his victory in the 24 Hours of Daytona**. Or about how he remembers watching motorsport reports as a child and admiring Michèle Mouton's successes in the Urquattro in the Rally de Portugal.

We easily leave the occasional truck behind on the Brenner highway and therefore have enough of a time cushion to allow ourselves a cappuccino in the first Dolomite valley. Immediately thereafter, the road narrows and the mountain slopes creep closer. Increasingly, all that is to our right is a steep drop to a raging torrent, and the curves ahead of us disappear behind the walls of rock on the left. **Filipe switches the navigation system to the highest zoom level** to ensure that he can recognize any hairpin curves in plenty of time. As the passenger, the realistic Google Earth™ graphics give you the impression of watching your own journey from a bird's eye perspective. All that's missing is the real-time display of oncoming traffic, which would allow you to enjoy the winding curves without

a care in the world. Filipe has meanwhile discovered the RS7 Sportback's outstanding setup and is impressed with the **self-locking center differential, which distributes the power of the 412 kW (560 hp) biturbo V8 to each individual wheel as appropriate when cornering**. All I notice is that our cornering speed is gradually increasing, and that Filipe wishes he had something like this in his race car.

By the time the first crags of the Dolomites rise up out of the morning fog, my driver is completely ecstatic and my stomach periodically gets the opportunity to recover during photo stops for Filipe's travel log.

No sooner had I gotten used to the luxury and, despite all the sportiness, comfortable setup of the RS7 Sportback than it was time for the next challenge: **The Urquattro awaits us for the afternoon stage**. I become more bold and eat a hearty lunch. After all, I'll need my strength for the two particularly spectacular passes – the Passo Falzàrego and the Grossglockner – and the 250-kilometer leg to Kitzbühel that lie ahead of us.

This marks the start of the challenging part of the day for Filipe, and he is looking forward to drifting sideways through the upcoming switchbacks. He says that the view is better that way. I decide to look at it like this: **He knows the car; I know the passes in front of us**. That should make us an unbeatable team. **Here we go!**





## → AUDI SPORT QUATTRO CONCEPT

The Audi Land of quattro Alpine Tour 2013 marked the eagerly awaited first public appearance of the **Audi Sport quattro concept** following the International Motor Show (IAA) in Frankfurt in 2013. Exactly 30 years after the presentation of the legendary Sport quattro, Audi is demonstrating how the grand quattro tradition can be continued. With a breathtaking coupe design and plug-in hybrid drive boasting a system output of 515 kW (700 hp), this study impresses more than just fans of the classic car.





Other than the optimal seating position, there is no need to configure anything. There are no driver assistance systems anyway, and the only signs of nascent modernity in the Urquattro are the digital instruments.

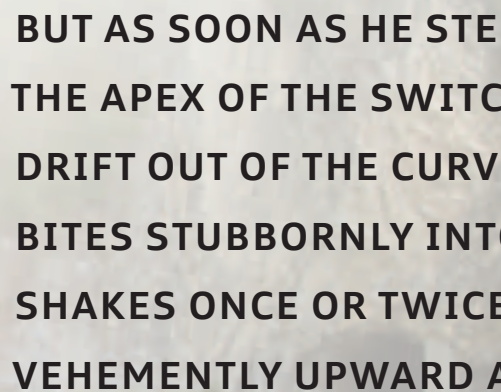
Thank goodness there have been no changes to the classic handbrake, which was to become our most important tool over the kilometers ahead. Because it goes without saying that the Urquattro doesn't drift by itself when driven within the speed limits on public roads.

Even though a torrential downpour dominates the first few kilometers on our way up the Grossglockner, the **forefather of all modern quattro models stays firmly on track**. Filipe is working the handbrake hard in order to give me the promised view of the spectacular mountain landscape as we drift through the corners.

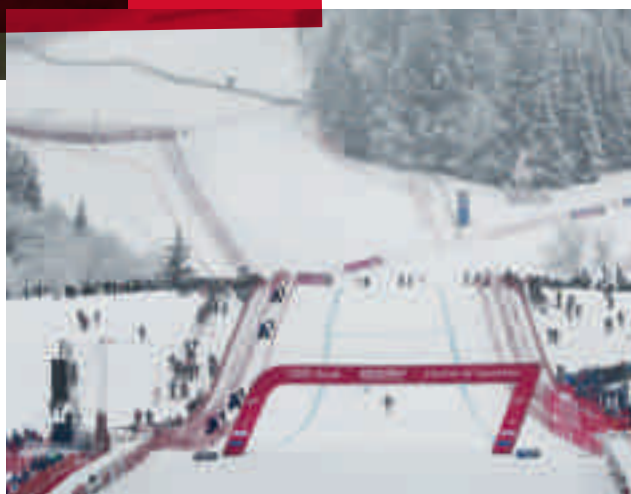
2,7/15 m

PHOTOS: Daniel Wollstein, AUDI AG





**BUT AS SOON AS HE STEPS ON THE GAS AT THE APEX OF THE SWITCHBACK TO KEEP THE DRIFT OUT OF THE CURVE, THE URQUATTRO BITES STUBBORNLY INTO THE WET ASPHALT, SHAKES ONCE OR TWICE AND THEN STORMS VEHEMENTLY UPWARD AS IF ON RAILS.**



### → RAMBLING THROUGH THE MOUNTAINS

Like all of the other sites for the Audi FIS Ski World Cup, Kitzbühel has been proclaimed the “Home of quattro” again in 2014. The race on the Streif course was one of the highlights of the international skiing circuit. The national ski teams of 15 countries have Audi as a partner. Audi has been the main sponsor of the German Ski Federation (DSV) for almost 30 years now and extended this partnership until the 2017/2018 season. The broad-based involvement in winter sports is the ideal stage for Audi to present sportiness and dynamics to an international audience. The focus here is on the quattro permanent all-wheel drive system, which demonstrates its qualities particularly clearly on snow and ice.



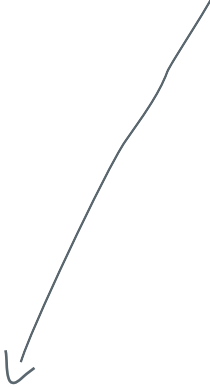
*6:00 p.m. Exhausted, but happy.  
This was a new experience  
even for Filipe Albuquerque.*



Filipe must have noticed my disappointment and thus decides halfway up the mountain: No more

fooling around – **from now on we are driving fast.** When we get to the top, we also make one last spectacular climb to the Edelweiss Spitze, give the Urquattro a bit of a break and welcome the modern representatives of the quattro clan who arrive after us.


I am relieved that I have so far managed to keep down both breakfast and lunch. From here it is almost all downhill. And then, as the evening sun fights its way through the clouds, I enjoy the rest of the stage in an open RS 5 Cabriolet. But that's another story ...



A video with the highlights of the Audi Land of quattro Alpine Tour 2013 can be viewed here.

PHOTOS: Daniel Wollstein, Berthold Dörrich, Jim Rakete



A portrait of Luca de Meo, a man with dark hair, wearing a dark blue suit, white shirt, and dark tie. He is looking directly at the camera with a slight smile. The background is a blurred cityscape.

# Mr. de Meo, what do you focus on today when you think about tomorrow?

The future should be fast, exhilarating and definitely not boring: I knew from the age of seven, when I rode along as a passenger in a race car, how my tomorrow would feel. I sensed that a car is more than a useful object: It makes life easier, but above all, much more beautiful.

We can reinforce this idea further today and tomorrow. With the Audi e-tron plug-in hybrid, which is more car rather than less. With digital technologies that turn fans in Kuala Lumpur, Ingolstadt and Honolulu into neighbors. With Audi City cyberstores, where I compose my Audi from hundreds of millions of possibilities. And with high performance from Audi Sport, which lets me start up the race car again.

**Luca de Meo**

/ Marketing and Sales

# Countdown to the race...

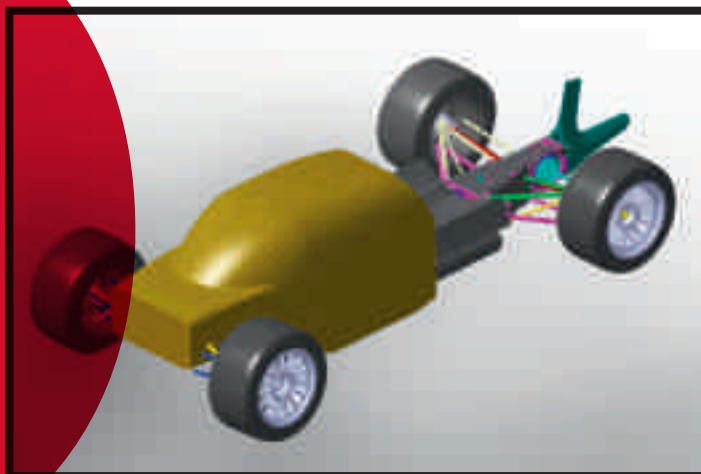
What a racing season that was! In 2013, the Audi teams were facing one of the greatest challenges in the history of motorsport: leading the current R18 e-tron quattro to victory while at the same time developing the most complex Audi endurance race car of all time to conform with the new rules for the 2014 season. A race against time in **eight** key steps. This is how it all began.

TEXT: Alexander von Wegner

JULY 2012

## /// STARTING SHOT FOR CONCEPT DEVELOPMENT

In July 2012, Audi chose a V6 TDI engine in combination with hybrid drive.



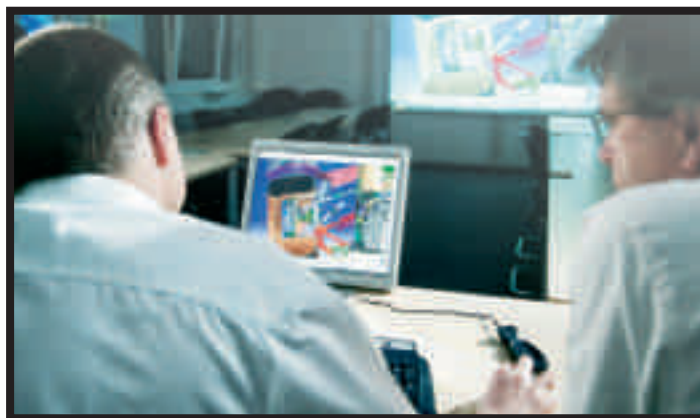


# 7

DECEMBER 2012

## /// DESIGN WORK BEGINS

In December 2012, the engineers at Audi Sport began designing and calculating several thousand individual parts.



## /// PRODUCTION OF THE FIRST COMPONENTS

Audi and its suppliers began manufacturing the first components for the race car in March 2013. Among the first parts were transverse links for the wheel suspension.

# 6

MARCH 2013

Our countdown begins in July 2012. With the concept phase for the new R18 e-tron quattro, which is to race in 2014. The development and testing teams have to react to the new rules issued by the Fédération Internationale de l'Automobile (FIA) and the Automobile Club de l'Ouest (ACO), which place the focus on the vehicles' efficiency. In plain text, the teams are only allowed to consume a certain amount of fuel per lap at Le Mans. The object is now to drive as fast as possible on this limited supply of fuel. This is only possible with the help of cutting-edge vehicle and drive technologies. The new rules allow a certain latitude when it comes to the drive units. A difficult task, even for the experienced Audi Sport engineers in Ingolstadt and Neckarsulm, who have been designing successful sport prototypes for 15 years. "There is barely a single screw that we carried over from our championship-winning car from the 2013 season," says Dr. Wolfgang Ullrich. "The rules aren't just new; they force you to reverse your way of thinking," says the mechanical engineer, who has headed Audi Motorsport for 20 years and is thus the father of countless successes. High performance yield for optimal lap times – that had been one of the priorities in motorsport for over a century. Engine output is no longer a priority for those responsible for the rules. There aren't even the usual restrictions on displacement or air volume to limit output. The only thing limited is the use of

energy. But let's get back to July 2012, when all the various possibilities were being considered and sketched out. Meticulously, since the new rules leave no margin for error – neither with the aerodynamics values nor with fuel consumption. The all-new V6 TDI engine for the 2014 race car is put on the test bench for the first time during the week before Audi's 12th Le Mans victory in June 2013. Its baptism of fire then comes at Le Castellet in October. Following the concept phase, design and parts production, this date marks the start of the countdown's decisive stage. At first, the new race car is perfectly camouflaged with a film featuring a pattern of black and white swirls. "The pressure from the competition is now so high that even the outer appearance needs to be kept secret," explains Matthias Huber, an Audi Sport test engineer. Every shape, every wing, all of the surfaces and contours reveal something about the best solutions that are the key to optimizing aerodynamic efficiency.

After testing in Europe, the test team then put the Le Mans prototype through its paces on the track at Sebring. With its ancient concrete slabs, the former airport in Florida is a real boneshaker. "A high mileage is important for reliability," says Huber. The engineer has worked for Audi Sport since 2010. "We are most concerned with the new operating strategy. The programs and their tuning are much more comprehensive

5

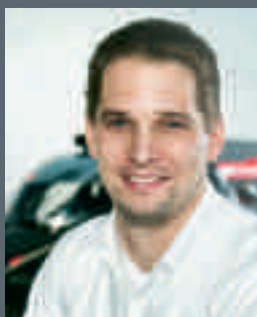
OCTOBER 2013

**/// THE ROLL-OUT RACE CAR IS FINISHED**

In October 2013, the first prototype of the new Audi R18 e-tron quattro completed a function test in which the general operational readiness of the vehicle was checked. At the wheel: Audi factory driver Lucas di Grassi.



PHOTOS: AUDI AG



(Left) Dr. Wolfgang Ullrich, Head of Audi Motorsport  
(Center) Matthias Huber, Audi Sport test engineer  
(Right) Lucas di Grassi, Audi factory driver

than before." The operating strategy involves the perfect interaction of the hybrid systems with the engine in order to take optimal advantage of every racing situation. Today, this detailed work increasingly involves programming software that uses algorithms to tightly mesh the engine and the hybrid systems. The operating strategy for the entire drive system including the TDI engine is uncharted territory. The corresponding software and function development is created at Audi itself.

Lucas di Grassi is the Audi factory driver who covers the first kilometers in the new R18 e-tron quattro. "The most important thing is reliability," confirms the Brazilian. "Then it comes down to the details. Among the qualities needed by a test driver is the ability to give the engineers very precise feedback. We have to understand exactly what things are not yet working perfectly. We methodically explain these phenomena to the engineers in such a way that they can work in a specific direction to make the car faster and better balanced while optimizing its reliability. The work with the new energy systems and their impact is exciting." The Audi engineers develop extremely complex operating strategies for a wide variety of curves, racing situations and acceleration scenarios.

A numerical example illustrates just how important reliability is. In 24 hours at Le Mans, an LMP race car covers a distance that corresponds to an entire Formula 1 season. Audi has held the record at Le Mans since 2010 with a distance of 5,410.713 kilometers. The R18 e-tron quattro must therefore satisfy exacting requirements. Matthias Huber knows what is expected of his team: "At the beginning, there were a good 30 engineers and ten mechanics focused on development during the tests. We have to hand over a finished car to the race team at the end of the process." Bit by bit the team works through the gigabytes of data that the race car generates about its road behavior.

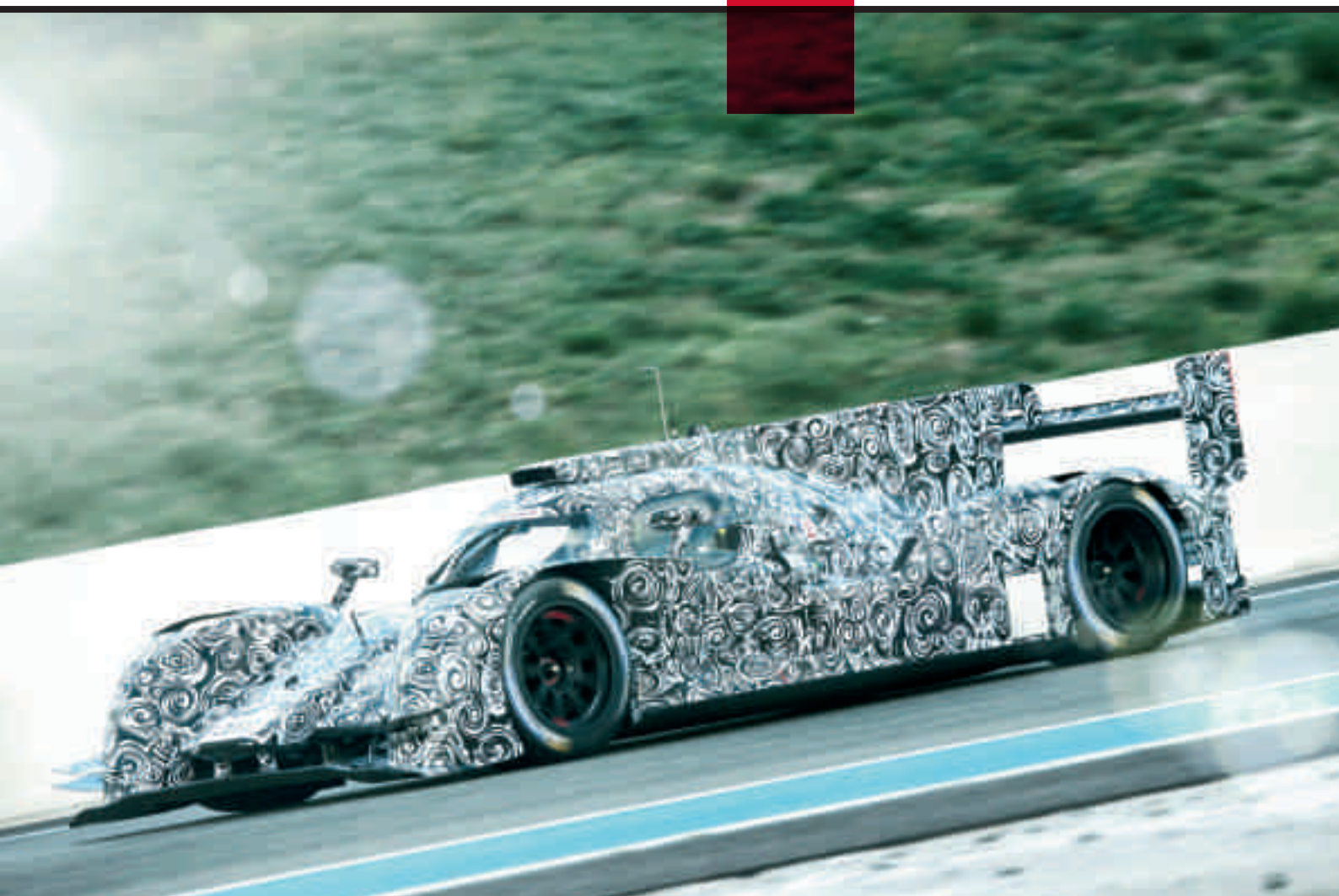
Time is racing in the first quarter, and with it our countdown. Until the starting light of the first race for the new Audi R18 e-tron quattro switches to green at the World Endurance Championship (WEC) opener at Silverstone in April.



OCTOBER 2013

### /// TESTS ON THE RACETRACK

After the first function test, a camouflaged prototype completed the first test laps on the track at Le Castellet. This was followed by further tests on other racetracks.





## 3

DECEMBER 2013

## /// IN THE PHOTO STUDIO

On December 8, 2013, Audi published the first studio photo of the race car. A few days later, the public saw additional shots of the new Audi R18 e-tron quattro and gained initial insights into the technical innovations.



## → AN EVEN DOZEN

Audi won the 24 Hours of Le Mans for the second time in a row with a hybrid race car and quattro drive in 2013, thus writing another chapter of its unparalleled success story in the world's most important endurance race. Loïc Duval (F), Tom Kristensen (DK) and Allan McNish (GB) took the checkered flag. "Our brand's 12th victory at Le Mans is the result of our engineers' unwavering spirit of innovation, the unconditional dedication of the entire team, and the skill and strong nerves of our drivers," emphasized Prof. Rupert Stadler, Chairman of the Board of Management of AUDI AG, who as usual was at Le Mans to watch the race.

## 2

DECEMBER 2013

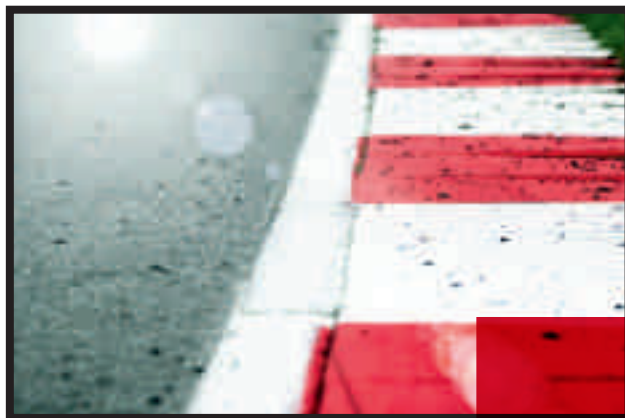
## /// THE WORLD PREMIERE

The Company presented the new race car to its guests and invited media representatives at the Audi Sport Finale in Ingolstadt on December 18, 2013.



## /// THE RACE DEBUT

On April 20, 2014, the hybrid sports car will celebrate its racing premiere at the 6 Hours of Silverstone, the first of eight WEC races.



APRIL 2014



# Style, charm and a violin

TEXT: Günther Fischer

13 notes per second: That makes David Garrett one of the fastest violinists of our time. As a musician, he is as comfortable performing classical music as he is rock and pop. We caught up with him in Berlin, where he gave us an acoustic interpretation of the Audi world.

# How it



... ultra?

light  
and  
breezy

Johann Sebastian Bach, "Air"  
from Orchestral Suite No. 3, BWV 1068,  
played in pizzicato

... connect?

PHOTOS: Rasmus Kaessmann



# feels...



fast,  
entertaining

Niccolò Paganini,  
Caprices No. 1 and  
No. 24

... e-tron?

subtle,  
the  
silent power

Johann Sebastian Bach,  
Violin Sonata No. 2 in A minor,  
BWV 1003, Andante

# ... Audi?

dynamic  
and  
precise

Johannes Brahms,  
Violin Concerto in D major, Op. 77



# ... tomorrow?

innovative

Ludwig van Beethoven,  
Violin Concerto in D major, Op. 61,  
3rd movement

PHOTOS: Rasmus Kaessmann

**Mr. Garrett, you once said your car is pretty much your home. Is that still true?**

More than ever. Without a car, I wouldn't be able to get to some of the places I play. After all, I always have a lot of luggage with me. But that's only one of the reasons. I like traveling by car – it offers the most comfort. I probably shouldn't say this, but I even preheat my car when it's cold outside. One advantage is that I am not exposed to such large temperature swings, and am

therefore less likely to catch a cold. But it's also comfortable. Extremely comfortable in fact. I also

always have a blanket with me.

**Have you ever tried taking the train or some other form of transportation?**

Train? No. Who would drag all my luggage around? The only exception was last summer. Since I was playing some outdoor concerts, we rented a caravan and parked it right next to the stage. That actually wasn't bad – I had all my things right there and could slip into the warmth every now and then.

**How was your driving test?**

No big deal. I only studied for four hours before taking the theory exam. And I passed my test first time! I was thrilled with myself. As I remember, my instructor's name was Mr. Saint – perhaps that had something to do with it? *(laughs)* But I was also under pressure because I had a girlfriend in Holland back then and really wanted to visit her.

**Your first car was ...?**

... a VW Golf III. It was a special edition called the Bon Jovi. Volkswagen was sponsoring their tour and the car actually got its name from the rock band. I gave it to my mother at some point and she still has it. It just goes and goes and goes.

**You use a driver for the most part – do you even own a car?** Two actually. I have an Audi S5 in Berlin and an Audi R8 in New York. Both are great cars and I really enjoy driving them. Unfortunately, I don't get to see them very often.

**Are cars still cool?** Definitely. Why would that change? They are still THE symbol of individual independence. But everyone has to decide for themselves which car is cool.

**Do you like to drive yourself?** Absolutely! But my job gets in the way. You need to have the time to really enjoy driving a car. At least, that's what I think.

**Is there anything that you dislike about driving?** Yes. Parking. Particularly in New York's narrow streets. The back-and-forth maneuvering isn't my thing. It is also embarrassing if it takes too long. Am I glad I have a garage at home that I can easily drive into. If there was one thing I would

like to have, it would be a technology that makes it possible for the car to park itself.

**That's already been around for a long time. Audi developed a park assist system with ambient display that takes over the steering when you park.**

Really? I didn't know that. Then I want to have that in my car right away ...

**How unusual was it for you to acoustically translate concepts from the world of Audi?**

It was certainly something new. Acoustic visualization is a real challenge because music has so many different facets. And since it's not possible to see sounds, I really had to think about which pieces would fit. It was fun.

**When asked about the future and how "tomorrow"**

**feels, you played a short excerpt from Beethoven's Violin Concerto. Is there a particular reason why?** Beethoven's Violin Concerto was ahead of its time. It wasn't until 1844 – 17 years after his death – that it had its breakthrough when it was performed with orchestra by 13-year-old Joseph Joachim under the direction of Felix Mendelssohn-Bartholdy.

Since then, it has become one of the most important compositions for violin.





# La passione rossa

Seven top managers, seven bikes, all red:  
The Ducati management team traveled to their first  
Audi Management Conference in Munich on two wheels.  
A statement. And a declaration of love to their brand.

TEXT: *Kerrin Nausch*



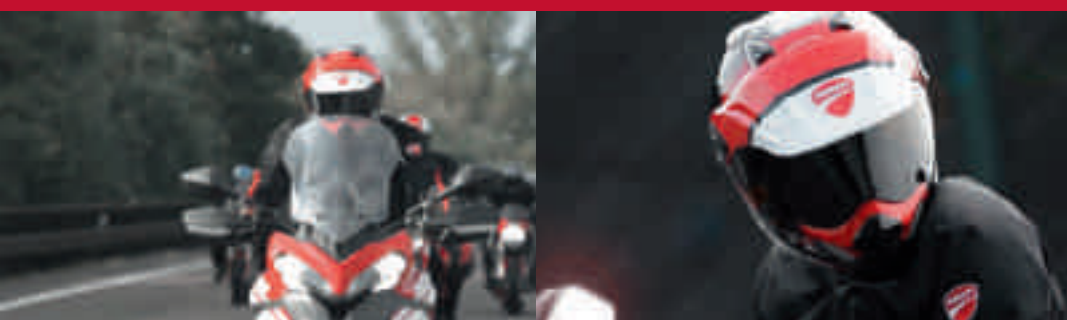
*The Ducati management team shortly before  
starting off (from right to left):  
Claudio Domenicali (CEO), Diego Sgorbati  
(Director Motorcycle Related Products),  
Andrea Forni (Director Product Development),  
Andrea Gesi (Quality Director),  
Cristiano Silei (Vice President Sales & Marketing)*



Since July 2012, Ducati Motor Holding S.p.A. has been a member of the Audi Group – a relationship that can only be described as perfect. Because what the Audi and Ducati brands have in common is not only a fascination for pioneering technology and emotionally charged products, but also the people behind them – according to Chairman of the Board of Management of AUDI AG Prof. Rupert Stadler. And what does Ducati's management have to say to that? At first nothing. They are on the road. In June 2013, seven of the 15 top managers at Ducati chose not to take an airplane to the first joint management conference; they rode their motorcycles there instead.

It was Claudio Domenicali's idea to use this first meeting with their new Group colleagues to demonstrate a passionate commitment to the brand. The CEO did not have to persuade his fellow managers. "We didn't hesitate at all; we immediately agreed. Because Claudio's idea shows how we think. We don't just come here to work. Even riding a motorcycle is part of our DNA," explains Cristiano Silei, Vice President of Sales & Marketing.

At 9 a.m. they depart in front of the Ducati corporate headquarters in Borgo Panigale, a city district of Bologna. The motorcycles are ready to start. Everyone is in a great mood. They are finally right up close to the product again and can give free rein to the horsepower within. They are all looking forward to this tour because it also bonds their management team together. As passionate motorcyclists, they naturally chose a route that also challenges their biking skills. They drive 200 of the total 600 kilometers off the freeways, riding on country roads through the Alps instead – preferably the tightest and most winding routes. Along the way, the squadra rossa attracts attention. The seven red beauties traveling in a line are drawing crowds. A group of Japanese immediately begins to take photos. This pleases Domenicali especially. Because Japan is the biggest motorcycle manufacturer worldwide. Even when they take a quick break to drink an espresso, the gentlemen attract attention – clothed from head to foot in their stylish but functional Ducati motorcycle gear.



*Escort or admirer?*





## → MONSTER STORIES

The mother of all naked bikes has countless fans. The new Monster 1200 was launched in 2013. On the global community page [monstertales.ducati.com](http://monstertales.ducati.com), proud Ducatisti share their best Monster stories, experiences, photos and videos.



“WE ARE NOT SIMPLY  
IN THE TRANSPORTATION  
BUSINESS. WE ARE  
BUILDING DREAMS ON  
WHEELS. DUCATI IS  
MORE THAN A BRAND.  
IT IS A WORLD THAT  
WELCOMES EVERY  
MOTORCYCLE ENTHUSIAST  
WITH OPEN ARMS.”

Claudio Domenicali,  
CEO Ducati Motor Holding S.p.A.



A brief check of the route:  
Which roads have the most curves?



Former Racing Director and now CEO Claudio Domenicali also leads his team on the road.



They reach their destination Munich at 4 p.m. The welcome they receive exceeds all expectations. Their German Group colleagues are so impressed that they spontaneously park the seven bikes in front of the evening event location. Without asking the Ducati managers. Every participant passes by the gleaming chrome

guard of honor. The next day, it is not just the Ducati management that takes the stage at the meeting. Their motorcycles are, of course, on stage too. As they present themselves, their vision and the video footage they shot during the trip and edited overnight, everyone is captivated. "Our colleagues celebrated us like rock stars," recalls Cristiano Silei.

This is precisely the sort of enthusiasm that defines the brand. Genuine enthusiasm. The kind that cannot be acted out or made up. Everyone in Borgo Panigale puts their heart and soul into their job – from the engineers to the marketing department and the assembly workers in production. Everyone lives Ducati here. Everyone is authentic here. And fans across the globe feel this too. The fans live the brand and its world just as passionately as the people who design and build it. That is why they are not referred to as customers, but as Ducatisti. They proudly personalize their bikes – no two motorcycles are the same; everyone wants a customized machine. This is something the top managers share with the brand's fans as well. Claudio Domenicali rode his own Hypermotard 821 on the trip to Munich, while Cristiano Silei took his own Multistrada Pikes Peak.



reddot design award  
best of the best 2013



## → EXCEPTIONAL DESIGN

*In July 2013, the 1199 Panigale S was named "Best of the Best" at the red dot design awards. The jury of this design competition – one of the world's largest and most prestigious – named the superbike winner of the Product Design category out of 4,662 entries.*

Not to be overlooked: The new colleagues from Bologna have arrived.



# “THE SUPERLEGGERA IS A GENUINE STATEMENT. WE HAVE ONCE AGAIN SHOWN THE WORLD: WE ARE DUCATI.”

Claudio Domenicali,  
CEO Ducati Motor Holding S.p.A.



## → THE LIGHTWEIGHT WONDER

Monocoque frame and forged magnesium Marchesini wheels. Shock absorbers with titanium springs. Akrapovic titanium exhaust. Pistons with just two piston rings. Carbon-fiber backframe and fairing. The new performance beauty, the 1199 Superleggera, lives up to its name. It is super-light at a dry weight of 155 kilograms. And a power output of more than 149 kW (200 hp) also makes it superfast and super desirable: All 500 bikes of the limited edition series have already been sold.

But it is not just the passion that makes Ducati and Audi such a good match. There are already numerous parallels today. They both play a leading role and exhibit high expertise in lightweight construction. Many years of know-how in engine development, cutting-edge design and uncompromising quality of workmanship. Chief engineer Andrea Forni sees great potential for knowledge transfer regarding technologies that are normally the domain of carmaking. Some examples are direct fuel injection, electronically controlled parts that are still implemented mechanically in motorcycles, such as the water pump – and above all the processing and use of carbon fiber. In return, Audi benefits from the wealth of experience that Ducati offers in high rev ranges of up to 18,000 rpm, which require extreme minimization of friction and very special material selection.

Quality Director Andrea Gesi draws a parallel between the weather conditions during the ride to Munich – with sun, rain, wind and even snow on the mountain peaks – and the company’s history, which has sometimes been just as challenging. Various owners stirred up a lot of turbulence in the last 20 years. He is therefore all the more pleased that the company’s affiliation with the Audi Group allows intensive knowledge transfer in the quality area. Such a relationship will also let the company continue to build motorcycles for racing, which represents the heart of Ducati’s DNA. The unbending will to constantly measure oneself and to be better than the competition is the driving force that makes such technical masterpieces as the 1199 Superleggera possible. Claudio Domenicali’s eyes light up as he talks about this lightweight wonder, whose dry weight is just 155 kilograms and which has a huge lead over the competition. And one thing becomes clear. There is more than just passion at play here. Love. True love.

JOIN THE DUCATI MANAGERS  
ON THEIR TOUR!



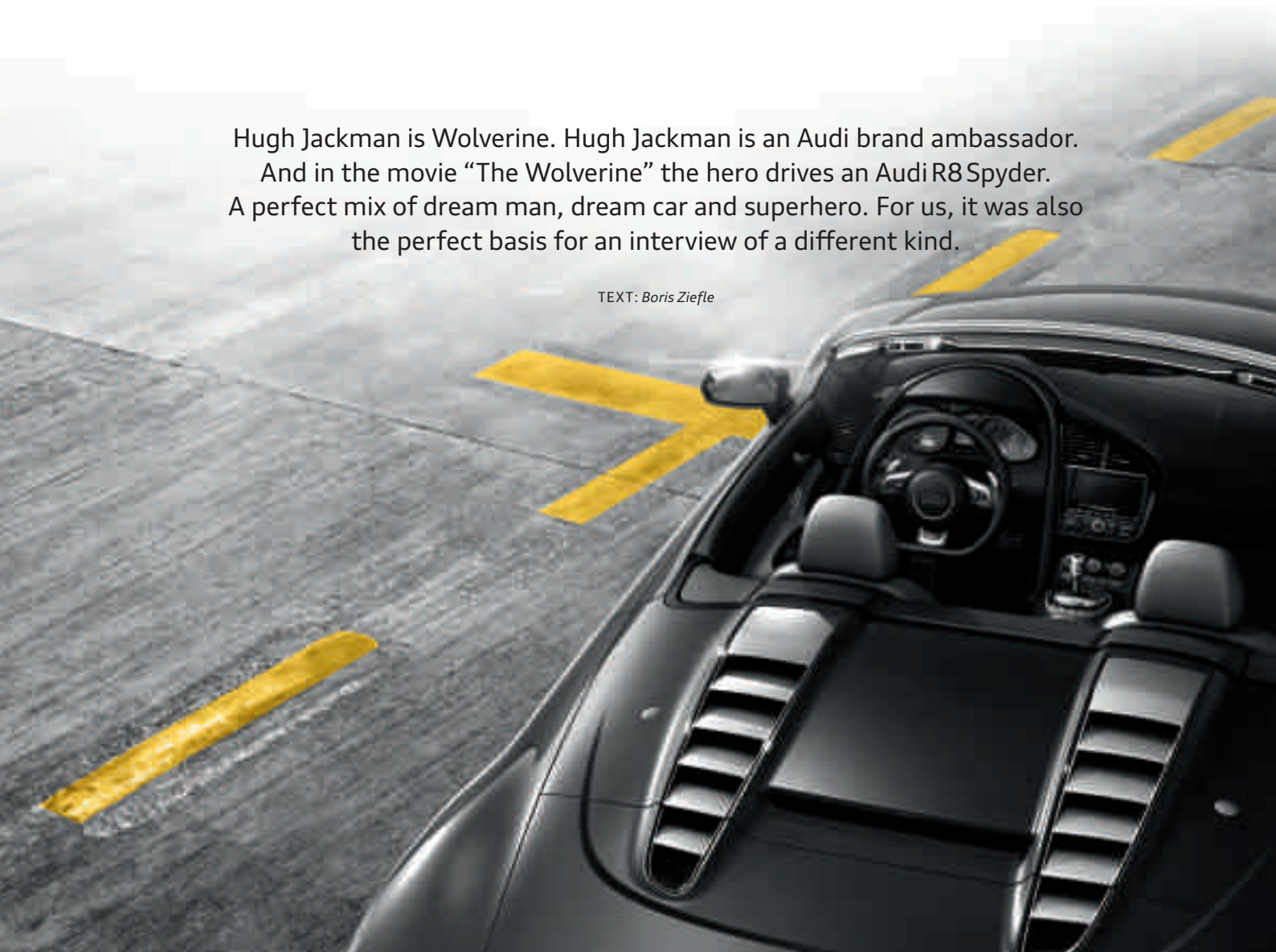
# Drives with wolves

16

PLAY  
—  
HARD

Hugh Jackman is Wolverine. Hugh Jackman is an Audi brand ambassador. And in the movie “The Wolverine” the hero drives an Audi R8 Spyder. A perfect mix of dream man, dream car and superhero. For us, it was also the perfect basis for an interview of a different kind.

TEXT: Boris Ziefle







We know **Hugh Jackman** as the tough guy in those Hollywood blockbusters, with bulging muscles and designer stubble. But how does 2008's "Sexiest Man Alive" see himself? And how does his love for his wife of 18 years, Deborra, influence his work? The star of *Wolverine* reveals all this and gives us a peek into his soul, which – hard as it is to believe – makes him seem like an even bigger superhero.



You can watch the trailer of the movie "The Wolverine" here.

# Jackman

PHOTOS: AUDI AG, picture alliance, Shutterstock

## What drives you?

*"My family. My wife and children are the most important people. Recently I have been working non-stop, so now I am about to take a few months off and be a husband and father."*

## What are your strengths?

*"I think my best personal strength is my focus. When I put my mind to something I will do my very best to achieve that goal."*

## How would you describe yourself?

*"Skinny! I know women, like my wife, always say 'we don't want to hear that,' but I have always been skinny. I have to work at bulking up."*

## What are your plans for the future?

*"My immediate plans are to make lunch. In 2014 I have a few scripts I am looking at, but I'm not ready to announce just yet."*

## What makes you feel safe?

*"My wife. Deb is my best friend, my confidante, my love, my life."*

## What type of sports do you enjoy?

*"I love all kinds of sports. Love soccer but also love the NFL. I love the Sundays when I can watch the games. I myself play soccer and tennis."*

# Audi R8 Spyder

When the **Audi R8 Spyder** appears on the screen in “The Wolverine,” every moviegoer will realize that this film has some extraordinary characters to offer. Powerful. Dynamic. Extrovert.



**Wolverine**, also known by his civilian name James Howlett, or as he calls himself: Logan. A mutant if ever there were one. With an indestructible skeleton, retractable claws and an incredible ability to recover from injuries. He's torn between his desire to be human, and a compulsion to seek revenge on his enemies.

# Wolverine

*“A 5.2-liter V10 FSI engine with an output of 386 kW (525 hp).”*

*“Revenge.”*

*“My individuality, my boundless power and my origin: the racetrack.”*

*“Infinite endurance, superhuman powers and reflexes.”*

*“Pure aesthetics: My external appearance is powerfully defined by clear lines which lend me extraordinary sportiness.”*

*“Rather hairy.”*

*“I want to win people over with my incredible dynamics. And become a classic for the ages.”*

*“Survive.”*

*“My ceramic brakes, my S tronic for lightning-fast shifting, my Audi magnetic ride adaptive damping system ...”*

*“My powers of self-healing come in quite handy.”*

*“I love everything that has to do with performance, dynamics and speed. With or without limits. But preferably without.”*

*“Mutant triathlons: claw-dueling, bullet-swallowing, revenge-taking.”*

# The sky is the limit

He's a perfectionist. He is pole vault world champion. And still just a regular 24-year-old: **Raphael Holzdeppe**. On one of the most complicated sports in the world, the high-tech tools of his trade and his big dream.

TEXT: Kerrin Nausch







Raphael Holzdeppe comes across as very relaxed when we meet him at the Olympic Training Center in Leverkusen. And extremely likeable. Although the 24-year-old from Kaiserslautern would be more inclined to describe himself as laid back or chilled. And he has every reason to do so. Not simply because he became **pole vault world champion on August 12, 2013 in Moscow**. But also because he has learned to deal with pressure and with the high expectations riding on him. In 2008, he set a junior world record of 5.80 meters at the age of 18. Things didn't go so smoothly in the wake of that achievement. Too much pressure, too much partying and too little focus on the sport. Holzdeppe recognized that. And turned things around.

His reward: Olympic bronze in London in 2012. And now the first ever world championship gold for the German pole vaulting team. He is the face of this unconventional extreme sport. And a star in Germany. "My whole life suddenly exploded," he remarks with a laugh. But this isn't just any flight of fancy. He has matured into a true professional.

#### **/ FLIGHT OF FANCY? NOT HOLZDEPPE**

Despite nursing an injury, Raphael Holzdeppe and his South African trainer, Chauncey Johnson, are off to attend NetAachen Domspringen, the final competition of the season. He has promised to be there. As so often, the pair take to the road in Holzdeppe's A7 Sportback. This season they have made their

way across Europe, driving from competition to competition. To Paris, Lausanne, Prague and Rome. Holzdeppe does the driving. He loves the sensation of speed. And music – the system is playing hip-hop. Today, they are transporting a precious cargo: On the roof rack of the black A7 Sportback, Holzdeppe and Johnson have fitted a long tube containing several carbon-fiber poles belonging to the junior team. Each of those poles costs anything up to 1,000 euros. They are one of the main success factors. Their composition is a closely guarded secret known only to the manufacturers.

#### **/ CARBON-FIBER CATAPULTS**

Chauncey Johnson explains to us why that is so. The pole vault is the only discipline where a piece of sports equipment absorbs the energy of the athlete and then releases it again so that the athlete can convert it into height. **The composition of the pole's material is crucial.** Raphael Holzdeppe catapults himself over the bar using 5.15-meter-long carbon-fiber poles with varying degrees of hardness. Or to be more precise, he jumps with the aid of carbon-fiber-reinforced polymer comprising around 60 percent carbon fiber and smaller proportions of glass fiber. "For a technically proficient jumper like myself, carbon fiber makes more sense than glass fiber because the poles are lighter, so the uncoiling is much more explosive," explains Holzdeppe.



A very similar activity to pole vaulting is river jumping. Before there were bridges, people used poles of three to five meters in length to cross rivers. In the Netherlands, “fierljeppen” is still a **popular national sport**. The 26th “Nationale Fierljep Manifestatie” will take place on July 26, 2014. Every year the river-jumping competition organized by the “Fierljepforiening It Heidenskip” attracts crowds of visitors to the venue in the province of Friesland. [www.fierljeppe.nl](http://www.fierljeppe.nl)



“FOR A TECHNICALLY  
PROFICIENT JUMPER LIKE  
MYSELF, CARBON FIBER  
MAKES MORE SENSE THAN  
GLASS FIBER...”

*Raphael Holzdeppe*



Dr.-Ing. Karl Durst, 34, developer at the Audi Lightweight Design Center, regards the poles as a prime example of what can be achieved with carbon fiber. “We exploit the same attributes as the pole vaulter when designing cars: **Poles and cars are lighter and the energy can be passed on much more effectively**, which is essential for survival in the event of a car accident. In poles, the more rigid carbon fibers act like a powerful spring and produce a much greater catapult effect. Audi even goes one step further in also using lightweight materials such as aluminum and magnesium because of the wide variety of complex requirements that a car has to meet.”





**“IN COMPETITION,  
IT’S 95 PERCENT IN  
THE MIND. YOU WON’T  
SUCCEED IF YOU  
DON’T HAVE A  
CLEAR HEAD.”**

*Raphael Holzdeppe*

*Holzdeppe loves driving to pole vaulting competitions in his A7 Sportback. The more relaxing his journey, the better he feels during the competition.*



***He lives for pole vaulting.***  
As a sign of his dedication to the sport, he has had the silhouette of a pole vaulter tattooed on his right upper arm.



## / LIGHTER MEANS FASTER MEANS HIGHER

Chauncey Johnson describes how **not just the material, but above all the athlete's dynamism and jumping technique are the key to those vital few centimeters**. Holzdeppe has been working with him in Munich for a little over a year. He talks of body weight, vectors and acceleration, C and I positions, and the importance of "using your momentum." What he means is:

**"If you can load plenty of energy onto your pole through a high approach speed, you'll jump higher."**

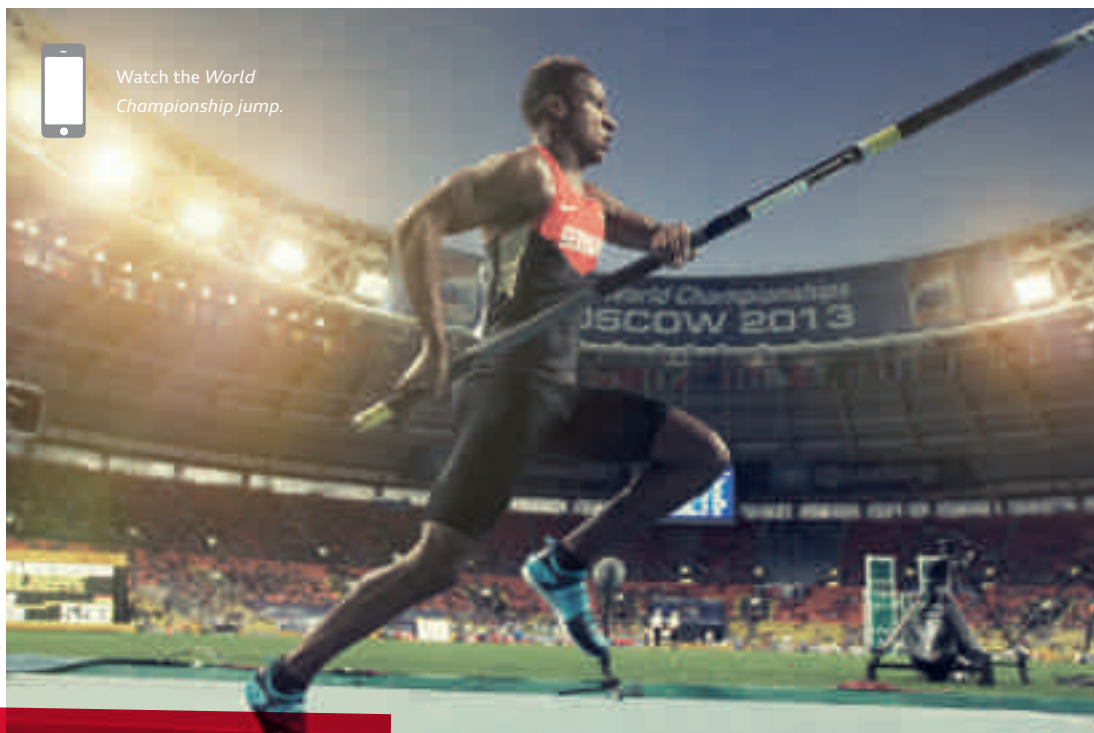
And Raphael Holzdeppe is fast. His average speed is 9.9 meters per second; that is equivalent to 36 kilometers per hour and **makes him the fastest athlete on the international pole vault scene**. Then there is Holzdeppe's streak of perfectionism – time and time again he works with Johnson to hone his jumping technique. For each jump, he performs up to 28 different individual movements within less than two seconds, meaning they all have to be executed instinctively. Johnson regards the pole vault as a test of courage where you can only succeed on "autopilot." Holzdeppe agrees: "In competition, it's 95 percent in the mind. You won't succeed if you don't have a clear head."

## / A HERO WITH NO AIRS AND GRACES

In Aachen, Holzdeppe is an accessible hero. He patiently signs autographs and poses with the mascot of the cult event where the participants jump to music blasted out by a DJ, right in the heart of the city between the Cathedral and the City Hall.

He relishes his new-found popularity. But remains approachable throughout and is careful not to steal the limelight. When we ask him about his goals for next year his eyes light up with ambition. His personal best is 5.91 meters. The dream height for all pole vaulters is 6.00 meters. Holzdeppe declares confidently: "I know I can jump 6.00 meters. That's right at the top of my targets for 2014."

At the end of our conversation, Holzdeppe falls silent when we ask a personal question. We are curious to know more about his tattoos. A tattoo on his right upper arm shows a pole vaulter in silhouette. Since his first Olympic appearance in 2008 in Beijing, an Olympic flag has adorned his left arm. What motif is he planning next to celebrate the biggest achievement of his career? He smiles to himself, looks briefly up to the sky – and gives nothing away. **Our suggestion: 6.00 meters.**



The pole vault final at the World Championships in Moscow was one of the most exciting ever. While Holzdeppe cleared the bar at 5.89 meters at his first attempt, his French challenger Renaud Lavillenie aimed for 5.96 meters but brought the bar down three times.

# RACING



PHOTO: Olaf Heuschulz



# BULLS

18

PLAY

FAST



Milestone anniversaries unite the past and present, and pave the way to the future. And so it makes sense that, to mark its 50th anniversary, Automobili Lamborghini S.p.A. is presenting a real highlight. Maurizio Reggiani, Head of Research and Development at Lamborghini, has invited us on a no-holds-barred anniversary excursion in the Gallardo Squadra Corse, the sportiest model ever in this highly successful line. Fasten your seat belts, please!

TEXT: Damiano Fedeli



A perfect November morning is dawning in Italy's Emilia Romagna: There's a cold crispness in the air and beauty all around. The fields agleam with frost are surrounded by the snow-covered peaks of the Apennine Mountains. This is where the fervent heart of the Lamborghini bulls beats. Unfailingly powerful and wild, for 50 legendary years. And to put it in terms of horsepower: wilder than ever!

The **Gallardo LP 570-4 Squadra Corse**, the fastest Lamborghini in the Gallardo family, is the car that awaits us for this exceptional anniversary excursion today. A spin on the roads surrounding the Lamborghini headquarters, on the secret test track where new models have always been able to show just what they're made of.

The headquarters is located in Sant'Agata Bolognese, halfway between Modena and Bologna, on the same spot where Ferruccio Lamborghini (1916–1993) founded his adventurous company a good 50 years ago. Starting out with a tractor factory, he ultimately realized his true dream: manufacturing sports cars. **The brand with the bull emblem has been part of the Audi Group since 1998. Taurus was Ferruccio Lamborghini's zodiac sign, which is why even today the models are still named after famous bulls.**



PHOTOS: Olof Hauschulz





Lamborghini chief developer Maurizio Reggiani has shaped the technology and design of these supercars since 1996.

We learn all of this from **Maurizio Reggiani** (55), Head of Research and Development at the company, who meets with us to talk about what makes the Lamborghini brand so typically Italian, so uncompromising and so exclusive. How experiences from the brand's 50-year history accompany Lamborghini on its journey to the future. How they ensure that Lamborghini is always among the frontrunners in the world of supercars. It began with a very sporty understanding of competition ...

Behind the wheel of the Squadra Corse, Reggiani demonstrates straight away what it feels like on the road. And we're off to Castelfranco Emilia. At first, traffic keeps coming to a halt, but the bull can also be quite well-mannered. "The Squadra Corse has a motorsport-inspired e-gear transmission with shift paddles on the steering wheel. There are three settings to choose from: 'Strada' provides pure driving pleasure under normal conditions; 'Sport' takes it up a notch in terms of aggressiveness; and 'Corsa' is the most extreme setting, capable of taking the vehicle to its limits."

**"You can clearly feel the Lamborghini DNA," explains Reggiani. "We manufacture the most extreme cars there are, and we never cease to amaze with our successful efforts to further develop the supercar concept."**

It all started with the 350 GT. "It was a company debut of sorts. Lamborghini created this model with a fantastic team: Gian Paolo Dallara, Paolo Stanzani and Giotto Bizzarrini." The Miura with its alluring design followed in 1966: "A stylistic masterpiece by Marcello Gandini," continues the chief developer.

"These cars have to be heard as well as seen," Reggiani stresses. And he's right. The sonorous roar of the V12 engines takes your breath away. **"With its mid-mounted engine and transmission stand up front, the Countach, manufactured between 1974 and 1990, was also an absolute novelty in terms of design and technology, with an all-round innovative layout.** A signature that finds its logical continuation in the Diablo and the Murciélago. Yet another milestone was the Gallardo in 2003. With its V10 engine and a chassis made completely of aluminum."

**"IN 1963,  
FERRUCCIO LAMBORGHINI  
DREAMED OF CREATING A  
ONE-OF-A-KIND CAR TO  
AMAZE THE WORLD."**



Near Riolo, we come upon a second Lamborghini in the lane next to ours, a brand-new Aventador LP 700-4 Roadster: aggressive styling and a V12 engine, the top model in the line. "The Aventador is an exquisite cross between luxury and power, but thanks to a body made almost entirely of carbon fiber, it actually skips a generation."

Continuous innovation has been a recurring theme over these 50 years: The V12 engine, for instance, has always been an icon. It is a constant frontrunner in terms of power and technology.

The heart of the Lamborghini Aventador is a new development in lightweight construction and the most powerful production V12 ever fitted in a Lamborghini. Or the materials research being conducted by Lamborghini at a lab in Seattle in collaboration with the University of Washington. Here, work is being done on the development of composite materials such as carbon fiber. And then of course there's the continuous exchange with Audi. This alliance is a complete success, as demonstrated by more than just the rising sales figures. "Audi and Lamborghini both share common values. This allowed us to maintain our DNA while converging with each other with respect to different technologies."

As we navigate the hairpin turns of the Apennines, the road takes a steep upward incline toward Zocca, near Modena. And as we climb, our thoughts are drawn to the challenges the future will bring. Lamborghini produces special limited-edition models such as the Veneno. "We make full use of our designers' creativity so that we have something to offer at every car show and can surprise the experts: The Veneno is a tribute to the 50th anniversary," says Reggiani. **Not forgetting the development of the Gallardo successor, the Huracán LP 610-4, of course.**

On the straightaway, the V10 engine in the Squadra Corse demonstrates its explosive power. The sun is setting and lights illuminate the details of the interior, the red and black of the sporty leather. "Every centimeter of every Lamborghini is made by experienced craftspeople. And at the same time, it is a concentrate of cutting-edge technology." A perfect combination that suits customers. This is also thanks to the "ad personam" customization program, which allows customers to configure every detail to match their personal taste.

And now this extraordinary bull must return to its shed. One last red light, and next to it a small boy who excitedly pulls on his mother's hand: "Mamma, Mamma, un Lamborghini!" That's how it's been for 50 years. And the way it will be for 50 years to come. Whenever these fervent-hearted bulls come into view ...

**"A GALLARDO SQUADRA CORSE  
IS LIGHTWEIGHT AND FAST,  
AGILE AND NIMBLE UNDER ALL  
CONDITIONS."**

*Driving pleasure that pushes the limits of what's possible ...*



... while remaining very safe on the road. That's Lamborghini. Here, you can see for yourself how exciting it feels. The video shows our anniversary spin with chief developer Maurizio Reggiani from the driver's perspective.



### GALLARDO IN FIGURES

Unveiled in Geneva in 2003. The Gallardo Spyder was added to the line in 2005 and the Gallardo Superleggera in 2007. In 2008, the second Gallardo generation was launched, with new front and rear styling and a new engine developing 412 kW (560 hp). 32 model versions of the Gallardo were built until production ceased in November 2013. With a total of 13,992 cars made, the Gallardo is one of the world's most successful supercars and an icon of Italian design.



# From Heaven to Green Hell

TEXT: Boris Ziefle

He is the boldest conqueror of new worlds. Felix Baumgartner, the man who jumped to Earth from space. His latest adventure is yet another extraordinary challenge. From space to race. Without a parachute. A 24-hour race at the Nürburgring. In an Audi R8 LMS ultra.







Bull

NE  
SWISS WATCH

## RESTLESS

Car mechanic. Soldier. Boxer. Stratospheric skydiver. The path taken by Felix Baumgartner is not a straightforward one, but instead has been marked by many changes in direction. This isn't because he can't finish things. On the contrary, it's because he is so irresistibly drawn to challenges. Because he is addicted to them. And then he will move heaven and earth to complete them. Once he has reached his goal, he concludes that chapter of his life and seeks out completely new terrain. That's not without risk, since he is continuously exposing himself to the possibility of failure. But he is persistent. And this is how Felix Baumgartner lives his life. If he decides to tackle something, he's all in. Then he plans it down to the smallest detail in order to reduce the risk of failure to a minimum. And now comes Audi. Baumgartner and Audi – a perfect match from the first moment. Meticulous planning, unbridled forethought. This is the world of Felix Baumgartner. His latest project takes him to the Nürburgring and into the cockpit of an Audi R8 LMS ultra. He swaps his space suit for a race suit so he can drive with the Audi race experience in the legendary 24-hour race on the “Nordschleife.”

## A PILOT PROJECT

When Felix Baumgartner heard about the offer from the Audi race experience, he agreed to it immediately. He sees becoming a race driver as the next logical step in his life. He has practically no experience with racing, and all he knows about the Nürburgring is what he has seen on television. Only the gutsiest drivers dare to take on the “Green Hell,” as the track is known.

Jackie Stewart, who coined the term, once called it “a many-armed monster.” In comparison, it makes a jungle expedition seem like a walk in the park. When Baumgartner first met with the engineers from Audi, there was a sense of harmony based on perfectionism. “I find the diligence with which Audi approaches projects fascinating. We're completely on the same wavelength here.” The string of successes proves it. In the last few years, the Audi R8 LMS ultra alone has won a spot on the winner's podium 550 times out of 800 starts. Now Baumgartner will be taking the wheel. He is certainly one of the most prominent drivers who has taken part in the Audi race experience, but every customer essentially has a chance to be part of the Audi customer racing team – as long as they have the required qualification and a racing license. Baumgartner is now a proud member of this team. “The professionalism of the Audi race experience is impressive. The people here simply know that, in this kind of sport, every detail counts.”

## PREPARATION IS EVERYTHING

For this reason, Baumgartner is training just as obsessively as he did for his stratospheric jump from space and his first professional boxing match. For him, nothing could be worse than feeling he did not get the most out of himself and his Audi when it is all over. He knows that he has a strong partner in this race car and a strong team behind him, and that the rest is up to him. It's a massive challenge. Just the way he loves them.



You can find further information on the project and follow Felix Baumgartner's preparations on the Audi motorsport website: [www.audi-motorsport.com](http://www.audi-motorsport.com)



**“THE R8 LMS ULTRA  
INSPIRES ME  
AGAIN AND AGAIN.  
SO MUCH POWER  
AND CONTROL  
IN ONE CAR – IT’S  
JUST INCREDIBLE.”**

*Felix Baumgartner*





# How does *your tomorrow* feel, ...



## ... Ms. Saul?

“My tomorrow already starts today, because we must shape our future now. This is the only way it can turn out the way we imagine. Exciting yet secure. Expansive yet familiar. Modern yet full of warmth. Bright and free of worry. A life with all of the advantages that bring progress, in harmony with our environment. My tomorrow is progressive, fun and, above all, clever.”

Katrin Saul is an author and lives on Ibiza and in London. For us, she took to the road in the Danish hub of design and sustainability, Copenhagen.

## ... Mr. Rakete?

“Worrisome. Nonetheless, to paraphrase Willy Brandt: You shouldn’t worry about the future; it’s far better to shape it.”

Jim Rakete lives in Berlin. For the Annual Report, the photographer took portraits of the Board of Management of AUDI AG.



## ... Mr. Dörrich?

“When I consider that in two days, our tomorrow will already have become yesterday, that helps put some of the hype about the future into perspective. I therefore prefer to take a relaxed approach, and I enthusiastically make use of the new possibilities that innovative technologies already offer me today. And apart from that, I enjoy recounting in retrospect what has, today, become of yesterday’s tomorrow.”

Author Berthold Dörrich lives in Stuttgart. For the Annual Report, the Presenting Editor of the classic and sports car magazine OCTANE participated in the “Audi Land of quattro Alpine Tour 2013.”

### ... Mr. Hauschulz?

"I live very much in the here and now. For my photography this means that I am delighted at every technical evolution. They help us to develop new possibilities for composition, to visualize new worlds and to show the unseen. The technology is, however, of secondary importance; it is just a tool. A good photograph is always a combination of ideas, talent, instinct, personal experience and passion. It is created in the mind and not in the computer. And that will never change."

Olaf Hauschulz lives in Hamburg. He specializes in the photography of cars and accompanied us to Lamborghini in Italy.



### ... Ms. Philippi?

"To me, tomorrow – the future – feels like this: I imagine an enormous city in which everything is very quiet, where the noise is turned off and the air is as clear as it is in the Alps. I find the idea extremely eerie and extremely natural at the same time. In the future, no one will want to have to deal with exhaust emissions or trash anymore. Both of these things will almost magically disappear."

Anne Philippi lives as an author in Los Angeles where she took to the road for us in an Audi A3 e-tron, in a place where sustainability is a part of the lifestyle.

### ... Mr. Kaessmann?

"Difficult question, and one I've actually been trying to get away from for years. Instead, I prefer to increasingly ask myself: How does today feel? After all, only 'Now' is it possible to influence 'Tomorrow.' But since 'Tomorrow' is really just a new 'Now,' and 'Now' feels extremely satisfied, happy, positive and optimistic, shouldn't it follow that 'Tomorrow' also feels this way?"

Photographer Rasmus Kaessmann lives in Munich. He captured David Garrett's virtuoso violin performance in Berlin with his camera.



### ... Ms. Luckmann?

"We'll only know that at the moment when 'Tomorrow' turns into 'Now' ..., since our 'Tomorrow' consists of an undefined mixture of seized opportunities, coincidence, luck and destiny that one can perhaps influence, but cannot possibly control."

Anke Luckmann has photographed many famous personalities. The photographer lives in Barcelona and was the perfect choice for the photo shoot with Prof. Rupert Stadler and Pep Guardiola in Munich's Allianz Arena.

## Audi Group Key Figures

		2013	2012 <sup>1)</sup>	Change in %
<b>Production</b>				
Automotive segment	Cars <sup>2)</sup>	1,608,048	1,469,205	9.5
	Engines	1,926,724	1,916,604	0.5
Motorcycles segment	Motorcycles	45,018	15,734 <sup>3)</sup>	X
<b>Deliveries to customers</b>				
Automotive segment	Cars	1,751,007	1,634,312	7.1
Audi brand	Cars	1,575,480	1,455,123	8.3
Germany	Cars	250,025	263,163	- 5.0
Outside Germany	Cars	1,325,455	1,191,960	11.2
Lamborghini brand	Cars	2,121	2,083	1.8
Other Volkswagen Group brands	Cars	173,406	177,106	- 2.1
Motorcycles segment	Motorcycles	44,287	16,786 <sup>3)</sup>	X
Ducati brand	Motorcycles	44,287	16,786 <sup>3)</sup>	X
<b>Workforce</b>				
	Average	71,781	67,231	6.8
<b>Revenue</b>				
Revenue	EUR million	49,880	48,771	2.3
EBITDA <sup>4)</sup>	EUR million	7,101	7,282	- 2.5
Operating profit	EUR million	5,030	5,365	- 6.2
Profit before tax	EUR million	5,323	5,951	- 10.5
Profit after tax	EUR million	4,014	4,349	- 7.7
<b>Operating return on sales</b>				
Operating return on sales	Percent	10.1	11.0	
Return on sales before tax	Percent	10.7	12.2	
Return on investment	Percent	26.4	30.8	
<b>Ratio of investments in property, plant and equipment <sup>5)</sup></b>				
Ratio of investments in property, plant and equipment <sup>5)</sup>	Percent	4.8	4.8	
<b>Cash flow from operating activities</b>				
Cash flow from operating activities	EUR million	6,778	6,144	10.3
Net cash flow <sup>6)</sup>	EUR million	3,225	2,907	11.0
<b>Balance sheet total (Dec. 31)</b>				
Balance sheet total (Dec. 31)	EUR million	45,156	40,401	11.8
<b>Equity ratio (Dec. 31)</b>				
Equity ratio (Dec. 31)	Percent	41.1	37.4	

<sup>1)</sup> Financial figures were adjusted to take account of the revised IAS 19

<sup>2)</sup> Including vehicles built in China by the joint venture FAW-Volkswagen Automotive Company, Ltd., Changchun

<sup>3)</sup> Since acquisition of the Ducati Group in July 2012

<sup>4)</sup> EBITDA = operating profit + balance from depreciation/amortization, impairment losses (reversals) on property, plant and equipment and intangible assets, capitalized development costs, financial assets, leasing and rental assets and investment property as per the Cash Flow Statement

<sup>5)</sup> Ratio of investments in property, plant and equipment/intangible assets (excluding capitalized development costs) to revenue

<sup>6)</sup> Net cash flow before changes in participations

## 2014 Financial Calendar

Quarterly Report, 1st quarter 2014 // May 5, 2014  
 Annual General Meeting // May 22, 2014, Audi Forum Ingolstadt  
 Interim Financial Report // August 1, 2014  
 Quarterly Report, 3rd quarter 2014 // November 3, 2014



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