



Ulrich Hackenberg

Speech

Annual Press Conference

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Speech at the Annual Press Conference

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**Member of the Board of Management of AUDI AG, Technical
Development**

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-Check against delivery-

Ladies and Gentlemen,

2014 was the year of technical milestones, tests and records. Think of the sportiest piloted car in the world, the Audi RS 7 concept, which lapped the Hockenheimring racetrack extremely dynamically without a driver – at up to 240 km/h.

Another mega-success was our 13th victory in the world's most important endurance race. The Audi R18 e-tron quattro with diesel-hybrid drive triumphed in the 24 Hours of Le Mans.

2014 – that was also 25 years of TDI technology. As strong evidence of the future viability of combustion engines, we showed the Audi RS 5 TDI concept – the fastest diesel ever timed on the Hockenheimring. For the first time, a high-performance model was powered by a fuel-efficient diesel engine with 283 kilowatts (385 horsepower).

With regard to alternative drive systems, we presented our concept for fuel-cell technology – in our technology test vehicle, the Audi A7 h-tron quattro, it is ready for series development. Only four weeks ago, we acquired a number of strategically important patents from Ballard Power Systems, Inc., a global leader in fuel cell technology. This will further strengthen both our broad patent portfolio and our competitive advantage in terms of fuel cell technology development.

In terms of design, we laid down clear indications of a new direction last year. The Audi prologue is a signature car for our new design language. It combines esthetics with technology and is both progressive and highly emotive.

Those are some examples of how we are shaping the mobility of the future with superior solutions.

2015 and after are years of technologies, products and customer enthusiasm. We will significantly accelerate our model initiative in 2015. Here are some highlights:

The new Audi Q7* that we presented in Detroit in January is a benchmark for large premium SUVs – in terms of drivetrain, efficiency, weight, connectivity and space. Up to 325 kg lighter than its predecessor, CO₂ champion in its class with just 149 g/km – that's efficiency in the top segment. At present, there is no other car in the world that offers more connectivity, infotainment and driver assistance. And it is the first automobile based on the second generation of our modular longitudinal platform (MLB 2).

This applies to our second world premiere, too: The Audi Q7 e-tron quattro, that we presented in Geneva last week. It is the world's first plug-in hybrid with a diesel engine and quattro drive. It drives up to 56



kilometers purely on electric power and has best-in-class fuel consumption in the test cycle of just 1.7 liters per 100 km and it emits less than 50 grams of CO₂ per km. It is therefore a clear demonstration of how we are consistently electrifying the drivetrains in our entire portfolio – and strengthening our overall efficiency.

Also in Geneva, we presented three models of our new Audi R8 family – the Audi R8 V10*, the Audi R8 LMS for motorsport and the Audi R8 e-tron. That’s “Vorsprung durch Technik” with full emphasis on sporty driving.

The Audi R8, our sporty RS models, the sports-car icon Audi TT* and our traditionally excellent performance in motorsport all send the same message: Audi is about automotive sportiness, and quattro plays a substantial role. 35 years of quattro – that means: At present, we have more than 180 model versions with permanent all-wheel drive in all segments, from the Audi A1* small compact car to the Audi A8* large sedan. And more than six million quattro models sold since the first presentation in 1980.

Audi is the leading premium all-wheel-drive brand and has the widest range of all-wheel-drive vehicles of all its direct competitors. Audi quattro continues to be our core technology.

Our promise for the future: We will offer the unique sporty quattro driving experience also in the era of highly efficient and electric drive systems.

Our automobiles will always carry the genuine Audi genes – sportiness, progressiveness and exclusiveness – and a lot of driving pleasure. And so, we enhance our technical development activities in innovative areas such as

1. Design and lighting
2. Connectivity and piloted driving
3. Engines, efficiency and sustainability

Since February 2014, Marc Lichte has been the Head of Audi design. With his team, he is working on a new design language that emphasizes our technology even more. We most recently gave a glimpse of this in Geneva: As you know, stylish station wagons are called “Avant” at Audi.

The Audi prologue Avant continues this tradition with its dynamically stretched form. It is muscular and athletic and at the same time flowing and elegant. Already with the new Audi A4 and the Audi Q1, we will lay down new markers for emotive and precise design. The first products in Marc Lichte’s design language will then be the new Audi A8, Audi A7 and Audi A6 models.

From Marc Lichte now to lighting technology. In addition to its purely functional properties, light is a key feature of automobile esthetics. Exterior lighting is a car’s signature. Interior lighting enhances the premium ambience. Our lighting innovations are leading. For the future of automobile lights we can say: They will get more dynamic and interactive, they will become a carrier of information.

Information, communication and connectivity are dominant features of our lives already today.

Our future is connected mobility. Connectivity in the car ensures that drivers and passengers experience more information, more safety and more comfort. Some examples:

The Audi virtual cockpit, our fully digital combination instrument, premiered in 2014 in the new Audi TT. It’s now going into the new Audi Q7 and Audi R8. Smartphones are now integrated through Apple CarPlay and Android Auto. They are charged inductively – very conveniently and wirelessly in the Audi phone box.



Also to be found in the new Audi Q7: the Audi tablet for the passengers' infotainment. It is a proprietary development by Audi and is the first tablet with full automotive compatibility. That means it fulfills all temperature and crash requirements.

In the Audi prologue, we are presenting a revolutionary operating concept: The entire front of the dashboard is a large touch display. Architecture, display and operating concept form a harmonic whole. At CES 2015, we demonstrated the Audi mobile key. You can lock and unlock the car with your smartphone or smartwatch and you can let it drive out of or into the garage. Near-field communication and the latest encryption technology make sure this convenience function will meet all security standards.

Audi is the pioneer of piloted driving. Since 2010, we have set one technical milestone after the other. The latest highlight: In January, we drove in piloted mode with journalists on public roads through two states of the US and generated great interest.

Our technology is ready for series production. The new Audi A8, which we plan to launch in 2017, will be the first model to make the transition from assisted to piloted driving. It has a traffic-jam pilot on board and offers piloted parking. The new Audi A8 therefore represents a paradigm shift.

The prerequisites for piloted driving are radar, laser and ultrasound sensors as well as cameras in and at the outside of the car. This is how we generate a precise picture of the traffic situation. We therefore create a stable, redundant system that masters all situations in road traffic.

With the Audi prologue piloted driving, we are today letting you have a look at artificial intelligence in the future car. The Audi prologue continues to learn with every kilometer it drives and saves its knowledge in a data cloud. In the future, our cars will continually compare their data with that in the cloud.

We are already testing piloted driving in Germany, the United States and Asia. In this way, we are learning a lot about the behavior of our cars, our drivers and other road users in real road traffic. Our objective is for Audi drivers and other road users to experience the increase in safety and comfort that connected mobility offers.

Connected cars are not only safer, but also more efficient, as they adjust their driving style to the current traffic conditions. In this way, they support our vision of CO₂-neutral mobility. We achieve the biggest reduction in CO₂ emissions by fully utilizing the potential of our combustion engines.

Here are two latest examples of how our engines will become more efficient:

Number 1: We will equip TDI engines as standard with an electrically driven compressor (EAV). The Audi RS 5 TDI concept car was the first high-performance car in which we showed this development in 2014. With the electrically driven compressor, we were able to reduce CO₂ emissions by up to seven grams of CO₂ per kilometer while significantly increasing performance.

Example number 2: The predictive efficiency assistant (PEA) is in use in the new Audi Q7 for the first time. It combines data from the navigation system and sensors to let the car drive in an anticipatory manner. In test drives, this reduced fuel consumption by about ten percent.

We are working to meet worldwide market-specific CO₂ limits also by optimizing the total vehicle, for example with system-integrative lightweight construction as in the new Audi Q7. Plug-in hybrids, natural gas and battery-electric drive systems have a key role to play in achieving CO₂ targets. The Audi A3 e-tron*



as a plug-in hybrid and the Audi A3 g-tron* powered by natural gas were successfully launched on the market in 2014. Both of them already have successors: the electrified Audi Q7 and the future Audi A4 g-tron based on the second generation of the modular longitudinal platform (MLB 2). We plan to have a plug-in hybrid in every model series in the coming years.

In 2014, we announced that we will produce our sportiest ambassador for electric mobility, the Audi R8 e-tron, to customer order in a tailor-made manufacturing process. The time has come. Its range is a good 450 kilometers in the fuel-consumption cycle. With its efficient drivetrain, the Audi R8 e-tron offers competitive and customer-focused long-range electric mobility. We have redesigned the battery's technology from its ground and achieved a new level of performance and energy density. Its fluid-cooled lithium-ion battery has a capacity of more than 90 kWh and is integrated into the Aluminum Space Frame structure of the car. We manufacture this battery at the Audi center of excellence for battery technology in the Ingolstadt area. This is a great proof for the engineering power of Audi. In addition, the Audi R8 e-tron continues to be our technology carrier for future electric cars.

In early 2018, we will launch a battery-powered sports activity vehicle in the large premium segment with a range of more than 500 kilometers. It will have a new, very attractive design, which we are developing especially for the e-tron range and for battery-electric vehicles. This sports activity vehicle will be built on the second generation of the modular longitudinal platform (MLB 2) – our concept for optimal drivetrain diversity implementation. You will hear and see more of this before the end of the year.

I would like to close with some personal remarks. When I came back to Audi in July 2013, I committed myself to change. Jointly with the technical Development team, I focused on pushing “Vorsprung durch Technik” with innovations in a more consistent manner. Also, I put a lot of emphasis on a new impetus for the design of our products. Today, we may say: We are doing the right things and we are doing them with enthusiasm.

We fuse technology and design in a fundamentally new design language. We are leading with pioneering technologies for high-tech combustion engines and alternative drive systems, lightweight construction, lighting, driver assistance, connectivity and data management, as well as for piloted driving.

In this way, we are shaping the future of the automobile with convincing products, and we are offering our customers a sporty, connected, comfortable and efficient premium driving experience. We invest extensively in our global development network, strengthening our team with additional experts, and systematically applying the module strategy. Furthermore, development synergies across the brands in the Group offer great benefits.

All of that contributes to an overall positive balance sheet of the Technical Development division. “Vorsprung durch Technik” – that applies more than ever. You may expect a lot from us – now and in the future. Thank you for your kind attention.

– End –



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Fuel consumption figures of the models named above

The fuel consumption and the CO₂ emissions of a vehicle vary due to the choice of wheels and tires. They not only depend on the efficient utilization of the fuel by the vehicle, but are also influenced by driving behavior and other non-technical factors.

Audi A1:

Combined fuel consumption in l/100 km: 5.8 – 3.4

Combined CO₂ emissions in g/km: 134 – 89

Audi A3 e-tron:

Combined fuel consumption in l/100 km: 1.7 – 1.5

Combined electric power consumption in Wh/km: 124 – 114

Combined CO₂ emissions in g/km: 39 – 35

Audi A3 g-tron:

Combined fuel consumption in l/100 km: 5.2 – 3.2

Combined CO₂ emissions in g/km: 120 – 88

Audi TT:

Combined fuel consumption in l/100 km: 7.5 – 4.2

Combined CO₂ emissions in g/km: 174 – 110

Audi A6:

Combined fuel consumption in l/100 km: 7.6 – 4.2

Combined CO₂ emissions in g/km: 177 – 104

Audi A7 Sportback:

Combined fuel consumption in l/100 km: 7.6 – 4.7

Combined CO₂ emissions in g/km: 176 – 122

Audi A8:

Combined fuel consumption in l/100 km: 9.1 – 5.9

Combined CO₂ emissions in g/km: 213 – 144

Audi Q7:

Combined fuel consumption in l/100 km: 8.3 – 5.7

Combined CO₂ emissions in g/km: 193 – 149

Audi R8:

Combined fuel consumption in l/100 km: 12.4 – 11.8

Combined CO₂ emissions in g/km: 12.4 – 11.8