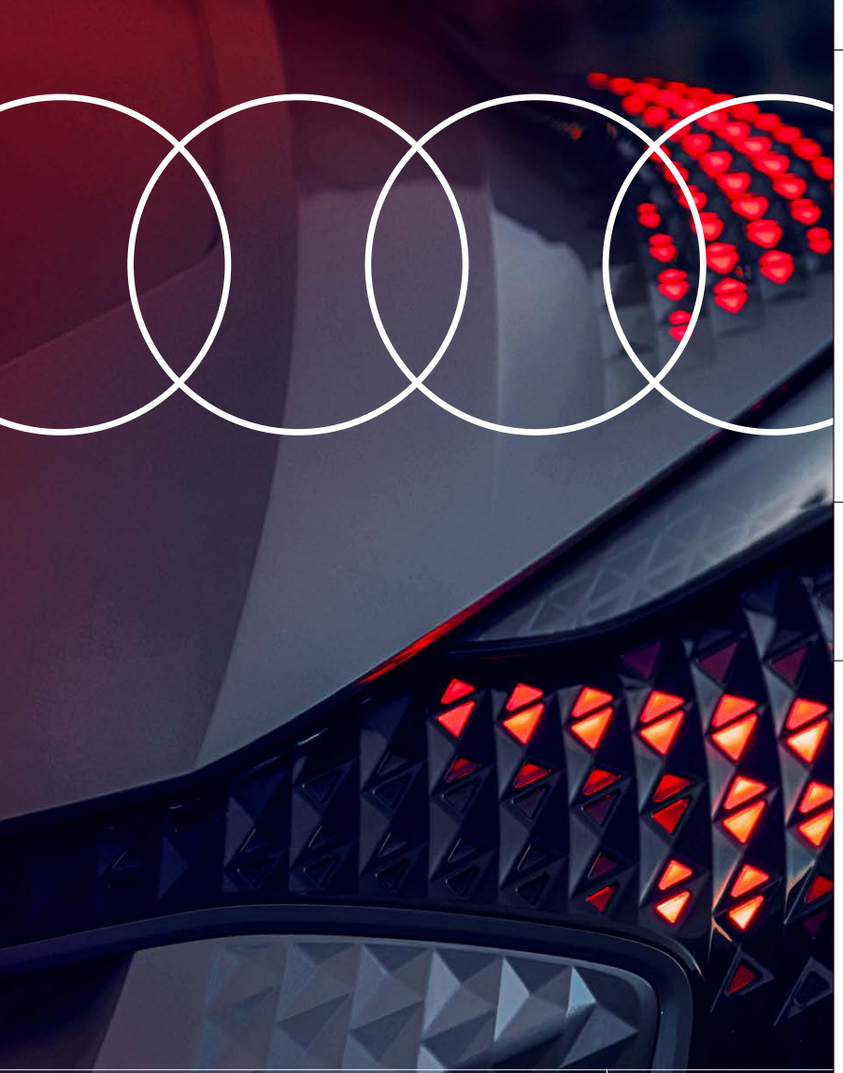


Audi

2020

REPORT

combined annual and sustainability report

Photo: AUDI AG

Dear Readers,

Markus Duesmann
Chairman of the Board of Management and Member of the Board of Management for Product Lines of AUDI AG

Stand together, but keep your distance – an idea that became last year's watchword. The coronavirus pandemic significantly impacted day-to-day business in markets throughout the world, presenting great economic as well as emotional challenges.

Thanks to our strong crisis management team, we have managed to navigate stably through the pandemic thus far. Ensuring the protection of everyone at Audi has always been our top priority. At the same time, we have examined our costs and secured our liquidity – without compromising on product substance or sustainability.

Audi has the potential and is committed to taking a leading role in shaping the transformation of the automotive industry. "Vorsprung" is in our DNA. For us, "Vorsprung" means combining unique technological innovations with a clear mindset: We want to set an example as a modern, transparent and value-based company. We want to sustainably shape individual mobility, while protecting the environment and conserving resources.

The Audi e-tron GT quattro[1] is one example of this. As the brand's progressive new spearhead, it is our first all-electric model manufactured in Germany. The e-tron GT[1] stands for emotional electric mobility and sustainability.

Now more than ever, our future success requires that we have a holistic understanding of sustainability, comprising the economy, environment and society. That is why we are also integrating the financial perspectives and issues related to ESG – Environment, Social and Governance – into our reporting and are publishing a combined annual and sustainability report this year for the first time. Even following last year's acquisition of all Audi shares by Volkswagen AG, this approach will allow us to uphold transparency as well as explain and classify correlations.

As a year, 2020 was defined by uncertainty and radical change. Our employees' great flexibility and willingness to adapt during these challenging times made a lasting impression on all of us as the Board of Management team. We are therefore convinced that despite – or perhaps due to – the current challenges, we will still be able to make a substantial difference. This conviction gives us the energy we need to continue to work strongly on the future of Audi in 2021.

Sincerely,

Markus Duesmann

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

CONTENT

The topics of the combined Report 2020 are based on the materiality analysis (→ page 10). The content is divided into five chapters, each of which answers a strategic key question.


Rendering: Hannes Weikert / Photo: Audi AG

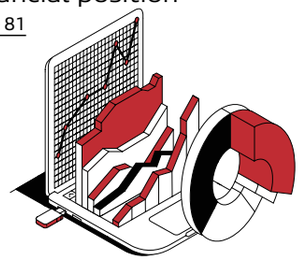



Photo: Robert Fischer


Photo: graupause


Photo: graupause

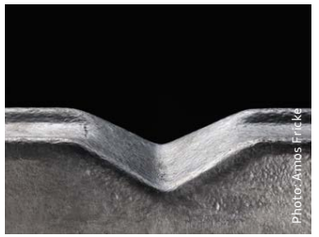


Photo: Amos Frinke

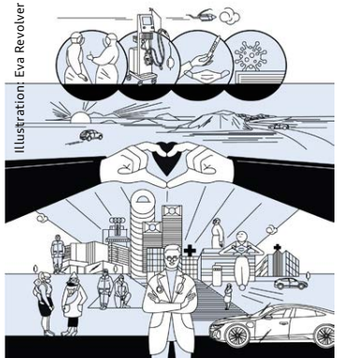


Illustration: Eva Revolver

Welcome to the Audi Report 2020, the first combined annual and sustainability report from Audi.

This report combines financial perspectives as well as Environment, Social and Governance (ESG) issues in a unique and transparent manner and provides comprehensive information about the company. In the process, it addresses aspects generated on the one hand by stakeholders'[1] demands and on the other, by the company's strategic focal points. In terms of time, the report reviews 2020, takes a look at the Audi situation today and considers what to expect in the near future from Audi.

Stakeholder management

How does Audi know what people expect from the Four Rings? The company actively involves its stakeholders in its core issues and wants to know their interests and expectations so that it can consider them in its business decisions. To this end, Audi uses different digital formats and individual one-on-one discussions, is involved in various initiatives and is a member of numerous committees (→ see page 331).

The materiality analysis represents one of the most central elements of stakeholder management. The company has been conducting it about every two years since 2012. In 2019, Audi used an online survey to ask 3,206 internal and external stakeholders for their assessment of relevant sustainability issues of the company

1 Audi regards material stakeholder groups as internal and external groups of individuals that are affected directly or indirectly by the company's business activities. The identification of the respective stakeholders is fundamentally based on their expertise and their ability to influence Audi. Audi differentiates the stakeholders according to different groups: Customers, analysts and investors, press and media, business partners of AUDI AG, employees, neighbors and local residents, politics and associations as well as employees' organizations, science and sustainability experts as well as non-governmental organizations (NGO) and other groups. The basis for determining and selecting stakeholders is the Stakeholder Engagement Standard AccountAbility 1000 (AA1000SES) and its associated principles of inclusivity, materiality and responsiveness.

GRI 102-40, 102-42, 102-43, 102-44, 102-45, 102-46, 102-47, 102-48, 102–49

(stakeholder relevance). This enabled the company to identify all the topics that are highly relevant for Audi and its stakeholders and that have a substantial impact on the environment and society.[2] The findings of this materiality analysis provide a structure for this report.

Topic matrix

The topic matrix featured in the Sustainability Report 2019 serves as the basis for the combined annual and sustainability report and was further developed by incorporating content from corporate and financial reporting. This process resulted in an extension, what is known as the Content Wheel → see page 315, which highlights the material topics in five chapters – "Strategy," "Operations & Integrity," "Products & Services," "Value Creation & Production" and "Employees & Society." In addition, as was the case with the Sustainability Report 2019, the Content Wheel ensures that all those involved constantly have their sights set on corporate strategies, reporting standards of the Global Reporting Initiative (GRI) and the United Nations Sustainable Development Goals (SDGs) when it comes to the topic of sustainability.

Standards and auditing

The report was prepared in accordance with the "core" option of the GRI standards and confirmed by the organization with the GRI Materiality Disclosures Service. An independent auditing firm performed a limited assurance engagement on selected sustainability key figures for 2020 in the overview "Audi Sustainability Key Figures" → see page 323.

The Audi Report is only available to readers online. In this way the Four Rings are making an important contribution to the conservation of resources, ecologically as well as economically.

2 More detailed information about the methodology behind the materiality analysis performed in 2019 can be found in the Audi Sustainability Report 2019.

GRI 102-44, 102-46, 102-47

Furthermore, PDF is a modern format that has been optimized for use on mobile devices and that allows quick keyword searches.

The Audi Report is part of comprehensive, regular financial and sustainability communication. Find more information online about these topics at → www.audi.com

We hope you enjoy reading it.

Markus Duesmann
Chairman of the Board of Management and Member of the Board of Management for Product Lines of AUDI AG

Dr. Arno Antlitz
Member of the Board of Management of AUDI AG Finance and Legal Affairs

Dirk Grosse-Loheide
Member of the Board of Management of AUDI AG Procurement and IT

Peter Kössler
Member of the Board of Management of AUDI AG Production and Logistics

Dr. Sabine Maassen
Member of the Board of Management of AUDI AG Human Resources and Organization

Hildegard Wortmann
Member of the Board of Management of AUDI AG Marketing and Sales

Reporting period Fiscal year 2020 January 1 to December 31, 2020	Reporting cycle so far Annual Report yearly; Sustainability Report biyearly
Editorial deadline February 24, 2021	Reporting cycle beginning March 18, 2021 Combined annual and sustainability report yearly
Publication March 18, 2021	

The information in the report refers to the Audi Group. If the report refers to individual companies, sites or brands only, this is noted accordingly. Unless indicated otherwise, key figures for employees are as of the end of the respective year. All EUR figures are rounded off, which may lead to minor deviations when added up.

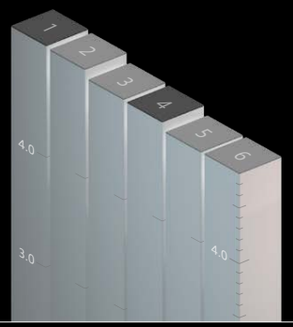
GRI 102–49

Materiality matrix

Stakeholder relevance: Bar height **Impact:** high medium low

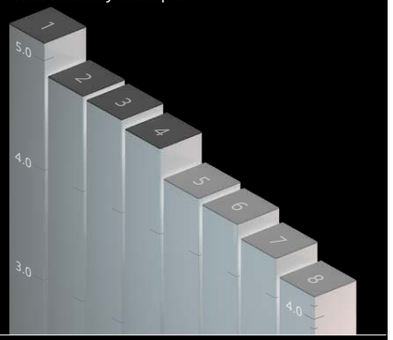
Operations & Integrity

1 Ethical operations
2 Long-term customer relationships
3 Data protection and data security
4 Economic stability
5 Corporate governance and compliance
6 Corporate culture and participation



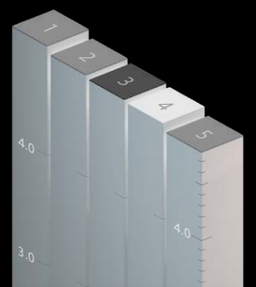
Products & Services

1 Vehicle safety
2 Alternative drive technologies
3 Transparency of resource conservation and life cycle assessment of various types of drive systems
4 Sustainable combustion engines
5 Sustainable system offer
6 Digital connectivity and services
7 Autonomous driving
8 New mobility concepts



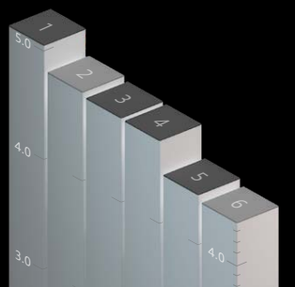
Value Creation & Production

1 Circular economy
2 Emissions and energy management at the plant
3 Sustainability standards in the supply chain
4 Nature conservation and biodiversity
5 Innovative capacity and management



Employees & Society

1 Fair working conditions and modern working forms
2 Occupational health and safety
3 Equal opportunities, integration and diversity
4 Training and development of employees
5 Promotion of education and science
6 Corporate citizenship at Audi locations



GRI 102-44, 102-46, 102-47

Milestones for the

Audi e-tron S: combined electric power consumption in kWh/100 km: 28.8–27.1 (NEDC); combined CO_2 emissions in g/km: 0

↘

FUTURE

Audi Report 2020 Milestones 12

↘

2020 was an extraordinary year

For society and the global economy. It was dominated by the coronavirus pandemic. At the same time, the new Audi Board of Management team led by CEO Markus Duesmann focused intensively on the strategic orientation of the Four Rings and the product portfolio. This is because Audi wants to play a leading role in the transformation of the automotive industry, offer customers highly attractive vehicles and, in the process, protect the environment and conserve resources to the greatest possible extent.

An overview of key milestones in 2020:

Audi Report 2020 Milestones 13

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Mobility goes smart and individual: Audi at the 2020 CES

Audi demonstrates the path to a digital future at the Consumer Electronics Show (CES) 2020. The exhibits range from production-ready technologies to futuristic visionary vehicles. With the Audi Intelligence Experience project, Audi is providing an outlook on how its customers will be able to experience and interact with the automobile in the future. One of the technology project's applications, self-learning navigation, is already being integrated into the MMI systems of current Audi models.

Audi provides a glimpse into future mobility at the Consumer Electronics Show (CES) 2020.

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Audi e-tron Charging Service: more convenient charging for Audi customers

Audi is making charging even more convenient and increasing price transparency. The Audi e-tron Charging Service has been operating for a year. In February, it already provides access to a public charging infrastructure for electric vehicles in 24 European countries.[1] Customers can currently use more than 135,000 charging points[1] from over 400 different international providers with just one card. In the future, they will be able to charge vehicles at the high-power charging terminals of the IONITY network at new rates using the City or Transit tariff. Here, e-tron customers benefit from heavily discounted Transit rates of 31 euro cents per kilowatt hour used. At the same time, the energy comes from renewable sources, which is a key component of sustainable mobility.

For more details about the Audi e-tron Charging Service and rates click → here.

Audi e-tron Charging Service

1 Data as of February 1, 2020: At the editorial deadline, the figure had increased to 26 European countries and over 203,600 charging points.

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Audi and the coronavirus

The coronavirus pandemic has a substantial impact on the global automotive industry. To protect employees and for reasons associated with demand and the supply chain, Audi partially suspends production worldwide. Short-time work is also put into effect at the German sites. In view of the negative financial impact, Audi reacts early on with measures aimed at securing liquidity and, at the same time, ensures the stability of core processes.

Operations are also reduced to a minimum at the Audi headquarters in Ingolstadt.

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Audi e-tron Sportback[2] takes the virtual world by storm

Audi launches the second model of its e-tron product line in a first-ever purely virtual format. The Audi e-tron Sportback[2] is a dynamic SUV coupé offering up to 300 kW (407 PS) of power and a range of up to 452 kilometers (WLTP) from a single battery charge. With the two body variants – SUV and Sportback – and two different performance levels, Audi is appealing to a broad range of customers with the e-tron family and continuing to promote its electrification initiative. Next milestone in September: the Audi e-tron S[3] and its Sportback version.[4]

As the first car manufacturer, Audi uses "Virtual Market 4," one of the biggest virtual reality events in the world, as the presentation and experience platform for the new Audi e-tron Sportback.[2]

2 Audi e-tron Sportback: combined electric power consumption in kWh/100 km: 28.3–20.9 (NEDC); combined CO_2 emissions in g/km: 0
3 Audi e-tron S: combined electric power consumption in kWh/100 km: 28.8–27.1 (NEDC); combined CO_2 emissions in g/km: 0
4 Audi e-tron S Sportback: combined electric power consumption in kWh/100 km: 28.3–26.4 (NEDC); combined CO_2 emissions in g/km: 0

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Audi production gradually starts up again in Europe

Audi gradually ramps up production again at its European sites. In close consultation with suppliers and service providers, Audi puts together the necessary measures to comply with health and safety rules aimed at protecting all employees, and arranges a gradual return to daily production at the plants.

Health comes first: plexiglass dividers protect employees working close together in assembly.

Photo: AUDI AG

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Launching of Artemis – fast and agile

The Audi Group launches the Artemis project, which is tasked with designing competition-beating technologies for the mobility of the future. The team consisting of automotive and technology experts now has, among other things, four years to achieve its goal of putting a pioneering electric car capable of driving long distances onto the road. Artemis is intended to serve as a blueprint for the future agile development of cars throughout the entire Volkswagen Group.

Audi expands e-commerce offer worldwide

Audi focuses even more on digital offers for its customers. For instance, the company and its dealerships are integrating e-commerce solutions for purchasing new and used cars in more and more markets. The online sale of new cars in stock at dealerships has started in Germany; however, virtual consulting and service offers are also gaining in importance.

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Markus Duesmann assumes responsibility for more divisions

In addition to his role as CEO, Markus Duesmann takes over the position of Board Member for Technical Development[5] and Product Lines as well as responsibility for business in China, which is the most important single market for the Four Rings. The company already currently delivers every third car to a Chinese customer.

Photo: AUDI AG

Markus Duesmann will now be responsible for business in China, Technical Development and the Audi product lines.[5]

5 CEO Markus Duesmann was responsible for Technical Development from June 2020 to February 2021. Since March 1, 2021, Oliver Hoffmann has been Board Member for Technical Development at Audi.

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#AudiTogether: 100 years of Occupational Health at Audi

The coronavirus pandemic once again highlights the importance of health for society overall – and the topic is a top priority at Audi, too. For 100 years, Audi Occupational Health has offered employees help and advice. Never before has demand been so high for these services: In addition to acute and emergency medical care for employees, the Occupational Health team has been implementing preventive measures to combat the coronavirus and providing testing options. In collaboration with Occupational Safety and other departments, new measures were also implemented at all workstations. Examples include social distancing, installation of partition walls and mandatory mask-wearing to ensure conformity with coronavirus regulations.

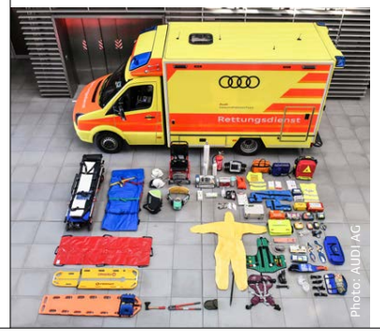

Photo: AUDI AG

Protecting the health of its employees is a top priority at Audi.

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Car.Software organization launches as independent unit within the Volkswagen Group

To achieve efficient and competitive cost structures, the Volkswagen Group is successively consolidating all software development activities pertaining to the vehicle in the newly created Group unit Car.Software organization. As a strong partner, Audi is incorporating its digital expertise and enlisting top-level support: In addition to his Group-wide responsibility for Research and Development, Audi Group CEO Markus Duesmann takes over as Chairman of the Supervisory Board of the Car.Software organization. The main goals of the Car.Software organization are achieving an operating system for all Volkswagen Group models, a new electronic architecture and an automotive data cloud.

131st Annual General Meeting of Audi votes on squeeze-out

On July 31, the Audi Annual General Meeting votes on the squeeze-out according to stock corporation law. This resolution results in the transfer of all the Audi shares of the remaining shareholders to Volkswagen AG, which already holds 99.64 percent of the share capital of AUDI AG.

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Markets see recovery: historically strongest August for Audi in China

In global terms, the automotive industry was particularly hard hit by the coronavirus pandemic. China, a key market for Audi, is already reporting a marked recovery: With 70,616[6] vehicles delivered to customers, Audi enjoyed the best-ever August in its over 30-year history in China.

Photo: AUDI AG

By 2025, Audi wants to achieve around one-third of sales in China[6] with electrified cars. Together with his team, Giorgio Delucchi, Head of the China and Hong Kong sales region, wants to make Audi the "most progressive premium brand" in this market.

6 China including Hong Kong

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Successful conclusion of Monitorship

Audi successfully concludes the Monitorship in September following a more than three-year collaboration with the US Monitor Larry D. Thompson. A lawyer, Mr. Thompson and his team helped the Group fulfill the conditions of the settlement agreement reached with the U.S. Department of Justice at the start of 2017 as a result of the diesel issue. Over the course of the Monitorship, Audi revised its structures, processes and systems in many areas, while committing to continuously improving the company and its culture.

Audi welcomes young apprentices

In September, 650 apprentices and 38 students pursuing a dual course of study embark on their professional careers at Audi at the German sites in Ingolstadt and Neckarsulm. With these programs, the company offers practice-oriented qualification in future-oriented fields and is already training today's talented young people to face tomorrow's challenges. After successful completion, the automotive company guarantees students and apprentices a permanent position.

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Audi Hungaria is the second net carbon-neutral[7] Audi site

Following Audi Brussels, whose production has been carbon-neutral[7] since 2018, the second Audi site has now achieved the goal of net carbon neutrality.[7] Since the beginning of the year, the site in Győr, Hungary, has used only green power, and Europe's largest photovoltaic roof installation went into operation here in October. The Hungarian Audi plant has been using a geothermal system since 2012 to cover the majority of its heating requirements. Biogas certificates compensate for the remainder. All the production and logistics measures aimed at reducing the environmental footprint at the sites are part of the Mission:Zero environmental program.

Audi Hungaria: photovoltaic system on the roofs of the two logistics halls.

7 Audi regards net carbon neutrality as a state in which, following the exhaustion of other possible measures aimed at reducing the still remaining CO_2 emissions caused by the products or activities of Audi and/or currently unavoidable CO_2 emissions within the scope of the supply chain, manufacturing and recycling of Audi vehicles, at least quantitative compensation is provided through voluntary and globally conducted compensation projects. Throughout the utilization phase of a vehicle, meaning from when a vehicle is delivered to a customer, CO_2 emissions produced are not taken into account.

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40 years of quattro drive

The quattro drive system is Audi's technical core competence and has developed into one of the company's main pillars over the last 40 years. Since 1980, Audi has produced nearly 11 million cars with quattro drive, while continually advancing all-wheel-drive technology throughout the entire process. The most recent development is the electric quattro with electric torque vectoring. This allows quattro drive to continue its history of success – including in the era of electric vehicles.

In 2019, circuit and rallycross champion Mattias Ekström climbed the "Mousetrap" on the legendary "Streif" downhill ski slope in Kitzbühel in an Audi e-tron quattro.[8]

8 Audi e-tron: combined electric power consumption in kWh/100 km: 28.8–21.4 (NEDC); combined CO_2 emissions in g/km: 0

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Audi starts new brand campaign

Audi will now bring together its global marketing measures under the slogan “Future is an attitude.” “Vorsprung durch Technik” will remain the brand claim, but Audi is redefining the term “Vorsprung” or progress. The company is now placing the focus on people with their values and needs. Sustainability, digitalization and design continue to be the central issues. Audi pursues the goal of shaping the future of premium mobility and creating fascinating experiences for customers.

A new direction for the brand for a new automotive era and Audi customers.

Photo: AUDI AG

Audi e-tron Sportback: combined electric power consumption in kWh/100 km: 23.8–20.9 (NEDC); combined CO_2 emissions in g/km: 0

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Rollout of functions on demand in Europe

Audi is now offering customers functions on demand, the option of booking selected functions to meet their specific requirements. This opens up completely new possibilities for customizing their own car. This digital service is currently available for the all-electric e-tron family and for the current A4, A5, A6, A7, Q5, Q7 and Q8 models. The functions vary depending on vehicle model and market: In the case of the Audi e-tron[9] and e-tron Sportback,[2] for example, customers can upgrade the LED headlights to matrix LED headlights with automatic high beam in the matrix LED package. Booking takes place online via myAudi. With functions on demand, Audi is taking another consistent step toward a seamless digital customer journey.

Photo: AUDI AG

Together with her team, Christiane Zorn, Head of Product Marketing, makes functions on demand available in numerous other markets besides Germany and Norway.

2 Audi e-tron Sportback: combined electric power consumption in kWh/100 km: 23.8–20.9 (NEDC); combined CO_2 emissions in g/km: 0
9 Audi e-tron: combined electric power consumption in kWh/100 km: 28.8–21.4 (NEDC); combined CO_2 emissions in g/km: 0

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MQ! Innovation Summit

Audi hosts the first digital MQ! Innovation Summit. At the conference, international thought leaders discuss the mobility of the future. The focal points: sustainability, electric mobility, smart cities and the ethics of technology. This format provides Audi with impetus for future mobility and prepares it for challenges posed by the transformation.

First digital MQ! Innovation Summit 2020: digital exchange with experts on the mobility of the future.

Photo: AUDI AG

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Motorsport is and will remain an established part of the Audi strategy

Audi resolves to enter the Dakar Rally for the first time ever in 2022 with a prototype. The vehicle's drive concept combines an electric drivetrain with a high-voltage battery, which can be charged as needed via an energy converter in the form of a highly efficient TFSI engine. In the future, marathon rally races will spearhead our Audi works team's motorsport activities.

Audi is taking on one of the biggest challenges there is in motorsport: Dakar Rally 2022.

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Audi increases budget for electric mobility through 2025

With its investment planning for the next five years, the company is accelerating the transformation to becoming a provider of connected and sustainable premium mobility: A total amount of around EUR 35 billion will ensure that despite the difficult economic environment, upfront expenditures will remain at a high level particularly with respect to future vehicle projects. Around EUR 17 billion of the investments are allocated to electric mobility, hybridization and digitalization.

Audi is pursuing a product initiative with the clear focus on electric mobility.

Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

How is Audi shaping the

↘

FUTURE

?

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Brief portrait

At a quick glance: Group performance in 2020.

The Audi Group, with its brands Audi, Lamborghini and Ducati, is one of the most successful manufacturers of automobiles and motorcycles in the premium and supercar segment.

Audi has been a fully owned subsidiary of the Volkswagen Group since November 16, 2020. Until this time, the latter held around 99.64 percent of the share capital of AUDI AG.

In 2020, the Audi Group delivered 1,692,773 (1,845,573)[1,2] cars of the Audi brand, 7,430 (8,205) sports cars of the Lamborghini brand and 48,042 (53,183) motorcycles of the Ducati brand to customers.

86,860 (90,640) people were working for the company all over the world as of December 31, 2020, 59,817 (62,377) of them in Germany.

Audi (headquarters: Ingolstadt) is present in more than 100 markets worldwide and produced at 18 sites[3] in 12 countries in 2020.

The current overview of sites for 2021 can be found → here.

1 The figures in brackets represent the respective prior-year figures.
2 The figures for fuel/electric power consumption and CO_2 emissions → see page 312 ff. The allroad, PHEV and CNG (g-tron) models are not declared specifically.
3 Sites as of December 31, 2020.

GRI 102-45

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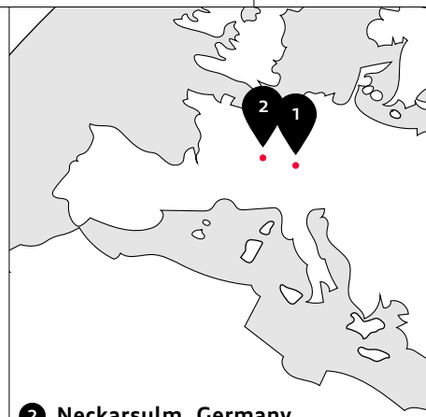
Sites in Europe



1 Ingolstadt, Germany
AUDI AG

With 338,095 (441,608) cars built in 2020, the headquarters in Ingolstadt is the second largest production site in the Audi Group. This plant in the heart of Bavaria is not only a production facility, but is also home to the Audi Group head office and Technical Development. Audi has 43,142 (44,458) employees here, making it the region's largest employer. Measures have already been implemented at the Ingolstadt site to prevent 70 percent of the CO_2 emissions that would otherwise have been produced.

Audi models produced at the site:
> Q2,
SQ2, A3 Sedan,
A3 Sportback, S3 Sedan,
S3 Sportback,
RS 3 Sportback,
RS 3 Sedan, A4 Avant,
A4 Sedan, S4 Sedan,
S4 Avant, RS 4 Avant,
A5 Coupé, A5 Sportback,
S5 Coupé, S5 Sportback,
RS 5 Coupé, RS 5 Sportback

2 Neckarsulm, Germany
AUDI AG, Audi Sport GmbH

The Audi Neckarsulm site is the site with the most extensive range of products. In 2020, 157,230 (177,209) cars rolled off the production lines here. Audi Sport GmbH (formerly quattro GmbH) has had its headquarters here since 1983. Various measures in place at the site currently prevent around 70 percent of all CO_2 emissions otherwise produced here. The company produces the fully electric-powered Audi e-tron GT quattro, the R8 and Audi Sport models at Böllinger Höfe at the Neckarsulm site.

Audi models produced at the site:
> A4 Sedan,
A5 Cabriolet, S5 Cabriolet,
A6 Avant, A6 Sedan,
S6 Avant, S6 Sedan,
RS 6 Avant, A7 Sportback,
S7 Sportback, RS7 Sportback,
A8, A8 L, S8, S8 L,
R8 Coupé, R8 Spyder,
e-tron GT, RS e-tron GT

3 Martorell, Spain
SEAT, S.A.
SEAT S.A. has been producing for Audi in Martorell (Catalonia) since spring 2011. 62,108 (81,309) Audi models came off the production line there in 2020.

Audi models produced at the site:
> A1 citycarver, A1 Sportback, RS 3 Sedan

4 Sant'Agata Bolognese, Italy
Automobili Lamborghini S.p.A.
This Italian brand is a fully owned subsidiary of AUDI AG. Sant'Agata Bolognese is home to its headquarters and main plant. A total of 1,779 (1,787) employees work here. In 2020, the company produced 7,250 (8,664) cars.

Models produced at the site:
> Aventador Coupé, Aventador Roadster, Huracán Coupé, Huracán Spyder, Urus

5 Győr, Hungary
Audi Hungaria Zrt.
Audi Hungaria is the world's largest plant for the production of powertrains. The company has also been producing electric motors for the Audi e-tron since 2018. In Győr, 155,157 (164,817) vehicles came off the production line and 1,661,599 (1,968,742) engines and electric powertrains were manufactured in 2020. Furthermore, Audi Hungaria joins Brussels as the second net carbon-neutral Audi site.[4]
Read more → see page 233

Audi models produced at the site:
> A3 Cabriolet, S3 Cabriolet, TT Coupé, TT Roadster, TTS Coupé, TTS Roadster, TT RS Coupé, TT RS Roadster, Q3, Q3 Sportback, RS Q3, RS Q3 Sportback

4 Audi regards net carbon neutrality as a state in which, following the exhaustion of other possible measures aimed at reducing the still remaining CO_2 emissions caused by the products or activities of Audi and/or currently unavoidable CO_2 emissions within the scope of the supply chain, manufacturing and recycling of Audi vehicles, at least quantitative compensation is provided through voluntary and globally conducted compensation projects. Throughout the utilization phase of a vehicle, meaning from when a vehicle is delivered to a customer, CO_2 emissions produced are not taken into account.

6 Brussels, Belgium
AUDI BRUSSELS S.A./N.V.
The Belgian site is a key plant for electric mobility within the Audi Group. Audi has been producing the brand's first electric car, the Audi e-tron, here since 2018. 42,188 (43,376) vehicles were manufactured there in 2020. The plant in Brussels is one of the brand's two sites that already have net carbon-neutral[4] operations.

Audi models produced at the site:
> e-tron, e-tron Sportback, e-tron S, e-tron S Sportback

7 Bologna, Italy
Ducati Motor Holding S.p.A.
Ducati produces motorcycles inspired by racing. The company headquarters and its largest plant are located in Bologna. 36,185 (42,759) units left the plant, which is located in the Borgo Panigale district.

Models produced at the site:
> Diavel, Monster, Hypermotard, Multistrada, Panigale, Scrambler, Streetfighter, SuperSport

4 Audi regards net carbon neutrality as a state in which, following the exhaustion of other possible measures aimed at reducing the still remaining CO_2 emissions caused by the products or activities of Audi and/or currently unavoidable CO_2 emissions within the scope of the supply chain, manufacturing and recycling of Audi vehicles, at least quantitative compensation is provided through voluntary and globally conducted compensation projects. Throughout the utilization phase of a vehicle, meaning from when a vehicle is delivered to a customer, CO_2 emissions produced are not taken into account.

8 Bratislava, Slovakia
VOLKSWAGEN SLOVAKIA, a.s.
This plant, which is located in Slovakia's capital, has manufactured the Audi Q7 since the end of 2005 and built the Audi Q8 since 2018 as well. In 2020, 103,932 (108,198) vehicles left the plant.

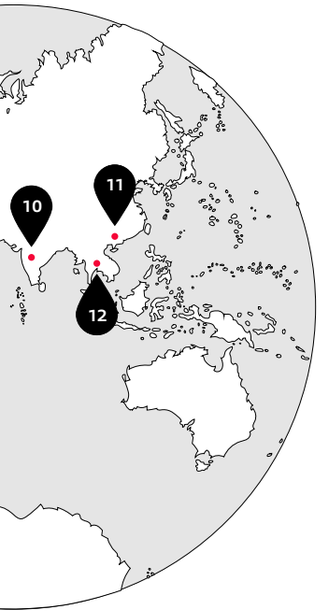
Audi models produced at the site:
> Q7, SQ7, Q8, SQ8, RS Q8

↘
Site in Russia

9 Kaluga, Russia
Volkswagen Group RUS
Audi manufactured a total of 2,477 (2,556) vehicles using the semi-knocked-down procedure[5] in Kaluga in 2020. Kits of the preassembled models are transported in a container by rail to Kaluga. Assembly is carried out by the Volkswagen Group RUS.

Audi models produced at the site:
> Q7, SQ7, Q8, SQ8

5 In the SKD procedure (semi knocked down), cars are completely assembled to start with and then partially dismantled and transported as kits. Assembly is carried out in accordance with the technical and quality specifications of AUDI AG.



Sites in Asia

10 Aurangabad, India
ŠKODA AUTO Volkswagen India Private Limited
Since September 2007, the company has been producing cars for AUDI AG at the Aurangabad site in the Indian state of Maharashtra. 676 (2,715) Audi models left the plant in 2020.

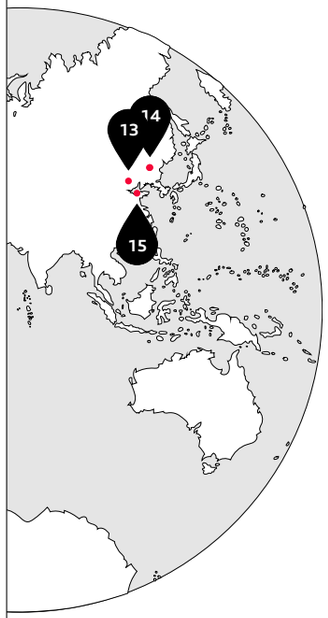
Audi models produced at the site:
> A4 Sedan, A6 Sedan

11 Foshan, China
FAW-Volkswagen Automotive Company, Ltd.
Since late 2013, Audi has operated this production site in China as part of a collaboration with Volkswagen and First Automotive Works (FAW). In 2020, 121,321 (126,818) models were manufactured here for the local market.

Audi models produced at the site:
> Q2 L, Q2 L e-tron,
A3 Sedan,
A3 Sportback

12 Amphur Pluakdaeng, Thailand Ducati Motor (Thailand) Co., Ltd.
In 2020, Ducati manufactured a total of 7,534 (8,038) motorcycles at its assembly plant in Rayong Province, Thailand. Ducati has been present in the Kingdom of Thailand since 2011.

Models produced at the site:
> Diavel,
Hypermotard, Monster, Multistrada, Panigale, Scrambler, Streetfighter, SuperSport



13 Tianjin, China
FAW-Volkswagen Automotive Company, Ltd.
Audi has produced the Audi Q3 in Tianjin since 2019, and the Audi Q3 Sportback was added in 2020. A total of 77,774 (44,113) models rolled off the production lines here in 2020.

Audi models produced at the site:
> Q3, Q3 Sportback

14 Changchun, China
FAW-Volkswagen Automotive Company, Ltd.
Founded in 1988, the site in Changchun has a long-standing tradition. In 2020, 469,070 (443,905) cars were manufactured here for the Chinese market, making Changchun the largest production site.

Furthermore, Changchun will be the future headquarters of Audi FAW NEV Company Ltd., which will be newly established. Local production of the first model to be built jointly with FAW on the Premium Platform Electric (PPE) is scheduled to start by 2024.

Audi models produced at the site:
> A4 L Sedan,
A6 L Sedan, Q5 L, e-tron

15 Qingdao, China
FAW-Volkswagen Automotive Company, Ltd.
Audi models have been rolling off the production line in the port city of Qingdao since 2020. The first models produced at the manufacturing site in 2020 were the A3 Sportback and the A3 Sedan, of which 3,805 vehicles were produced.

Audi models produced at the site:
> A3 Sportback,
A3 L Sedan

Sites in the Americas

16 San José Chiapa, Mexico
Audi México S.A. de C.V.
Audi opened a plant at San José Chiapa (Mexico) in 2016. 5,241 (5,299) employees work here. In 2020, this Audi production site manufactured a total of 124,298 (156,995) vehicles.

Audi models produced at the site:
> Q5, SQ5

17 Manaus, Brazil
DUCATI DAFRA da Amazônia Indústria e Comércio de Motocicletas Ltda.
Ducati has operated a CKD[6] plant in Manaus, Brazil, since 2012. 1,108 (926) motorcycles were manufactured here in 2020.

Models produced at the site:
> Diavel,
Monster, Multistrada, Panigale, Scrambler

18 Curitiba/São José dos Pinhais, Brazil
Audi do Brasil Indústria e Comércio de Veículos Ltda.
In 2020, 1,361 (2,346) vehicles left the production lines here. The plant in Brazil is the only one at which an ethanol version of Audi models was manufactured.

Audi models produced at the site:
> A3 Sedan

6 CKD manufacturing (completely knocked down): This means that parts sets of a vehicle are packaged, shipped and then assembled on site, in part by adding locally manufactured parts.

High-level meeting – how Audi is shaping the FUTURE

An interview with the Board of Management about the transformation of the Four Rings and important strategic cornerstones for the sustained success of the company.

Rendering: Hannes Weikert / Photo: AUDI AG

Markus Duesmann
Chairman of the Board of Management and Member of the Board of Management for Product Lines of AUDI AG

Rendering: Hannes Weikert / Photo: AUDI AG

We launched a number of key projects at full throttle over the past year.

↘ Now we need to turn them into results!

A look back at the first almost 365 days: What conclusions would you draw after a year on the Board of Management?

Markus Duesmann The past year has shown me one thing above all: Audi has enormous potential. The flexibility and adaptability of people at Audi over the course of the pandemic has genuinely impressed me. The coronavirus has not kept us from getting things done. We have continued to drive the key topics of the future so that we can deliver innovations faster to our customers. This spirit is the best tool for overcoming the challenges that lie ahead of us.

What do you see as the major challenges for the sector and how can Audi respond?

M. D. Digitalization, electric mobility and regulation – all the established car manufacturers are currently facing the same challenges. There are no major differences here. Rather, what is crucial is that the sector will not master the transformation by clinging to old structures. The focus on software, for example, is a paradigm shift and must also change the way we develop our models in the future. Audi is adopting some smart approaches in this respect: We are no longer categorizing our model lines based on appearance, but instead based on the degree of digitalization, in other words the vehicle electrical system. That alone is a revolution.

At the same time, the synergies that we are now leveraging even more intensively within the Group offer a decisive competitive edge – for example, in terms of collaboration on the development of electric platforms.

How do you intend to bridge the gap with new competitors in relation to the software?

M. D. We definitely need to step up the pace. Digital features and automated driving functions are increasingly becoming a crucial factor in competition. I see enormous potential here. We have absolutely taken the right path by pooling the software competences of all brands in the Volkswagen Group. The Car.Software organization combines the best experts under one roof so that it can bring digitalization and the future operating system, among other topics, into vehicles across the Volkswagen Group. This is an ambitious plan, but it's also unique in the industry. The Car.Software organization thus enables enormous economies of scale and, at the same time, gives us as a brand the opportunity to focus on what makes the difference for our customers: intuitive interaction with the car.

China is the largest single market for Audi. Where do you see its focal points?

M. D. China is key for us, not just as a sales market, but also as a technological pacesetter. This market drives many innovations and is evolving rapidly. We want to use this momentum. We are therefore repositioning our business in China and developing more resources, expertise and decision-making power locally.

Starting in

2024

↘

Audi together with FAW will begin local production of electric vehicles on the Premium Platform Electric (PPE) in Changchun.

Especially when it comes to digitalization and electrification, China's pace is tremendous. We want to achieve one-third of our sales locally with electrified models as early as 2025. The new cooperation company is making an important contribution to this. Starting in 2024, Audi together with FAW will

begin local production of electric vehicles on the Premium Platform Electric (PPE) in Changchun. China is a central pillar for the sustained success of Audi in general and a top priority for me. The strong sales figures there despite the coronavirus pandemic bolster our result in 2020. At the same time, we are concentrating not just on one market, but on three pillars: Europe, USA and China.

What are you planning for the next 12 months?

M. D. We launched a number of key projects at full throttle last year and have set ourselves ambitious goals. I want to maintain this drive. Now we just need to turn them into results! It is important that all the cogs fit together and that we exploit the synergies fully – both at Audi and in the Volkswagen Group. I am absolutely convinced that we will be even more efficient and faster next year, bring more character and innovations to our cars and actively drive the transformation of the automotive industry forward.

Photo: AUDI AG

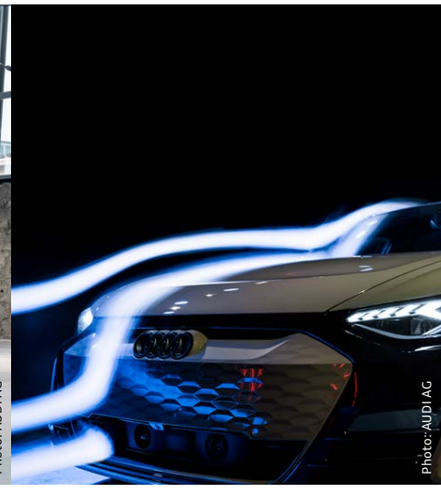
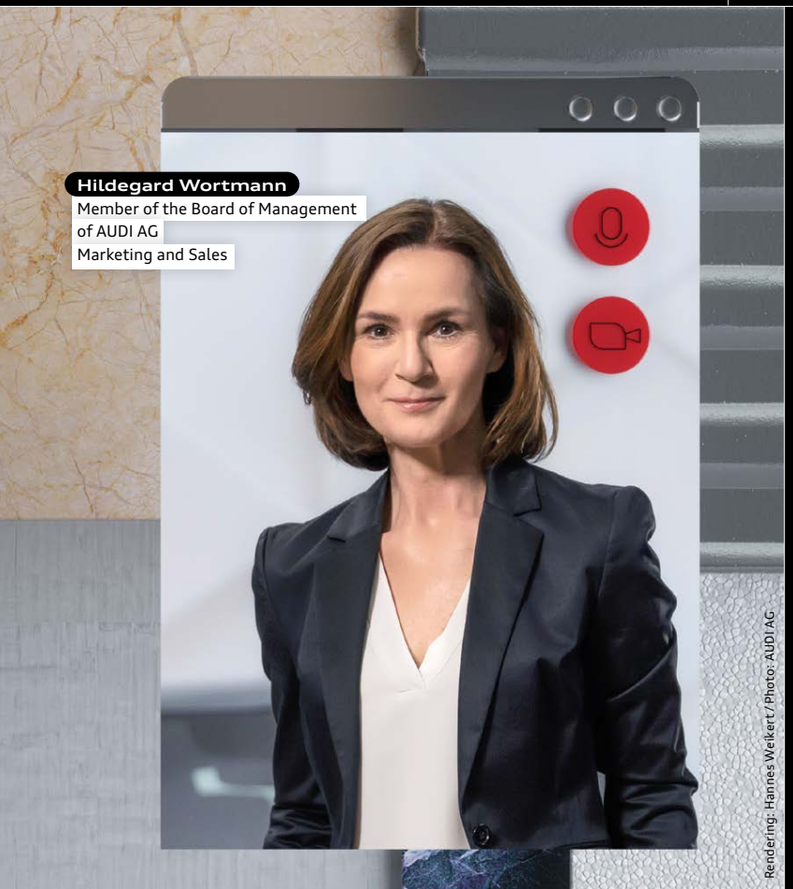


Photo: AUDI AG

Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

We will generate enthusiasm for electric mobility

↘ with emotional experiences for our customers



Hildegard Wortmann
Member of the Board of Management of AUDI AG
Marketing and Sales

Rendering: Hannes Weikert / Photo: AUDI AG

Ms. Wortmann, what was the greatest challenge for Marketing and Sales in 2020?

Hildegard Wortmann The coronavirus pandemic was certainly our greatest challenge. However, we used the crisis as an opportunity to blaze new trails: We successfully expanded the digital business in a short period of time. We stayed in contact with our partners, customers and fans worldwide the entire time with great flexibility and new ideas. Despite social distancing rules, we have moved closer together in the process.

Together we responded quickly to the restrictions and developments in the markets. Thanks to our strong crisis management, we delivered more than 1.69 million cars to our customers, shored up liquidity in the retail trade and reduced inventories. The fourth quarter of 2020 was even the most successful quarter in our history, with more than 500,000 deliveries. These challenging times have shown: We at Audi are a strong team – across the world!

How will you bring electric mobility closer to your customers?

H. W. Despite the pandemic, we are sticking resolutely to our Roadmap E: We plan to introduce more than 30 electrified models onto the market by 2025, of which around 20 will be all-electric. We are thus taking the lead in the transition to electric mobility. It's clear to us: The future of mobility is electric!

Roadmap E

By 2025 more than

30

electrified models including

20

fully electric models

Even at this stage, customer demand shows that we have the right offer. We were able to practically double sales of our electric models in 2020 compared with the previous year. Audi was by far the strongest-selling manufacturer of battery electric vehicles among the three German premium brands. Further highly attractive electric models will be introduced onto the market this year with the Audi e-tron GT quattro,[1] the Audi Q4 e-tron and the Audi Q4 Sportback e-tron. In addition to the product, however, we are continuing to focus on the ecosystem surrounding the car, for instance with the Audi e-tron Charging Service.

We intend to go on generating enthusiasm for electric mobility by creating unique moments and emotional experiences for our customers.

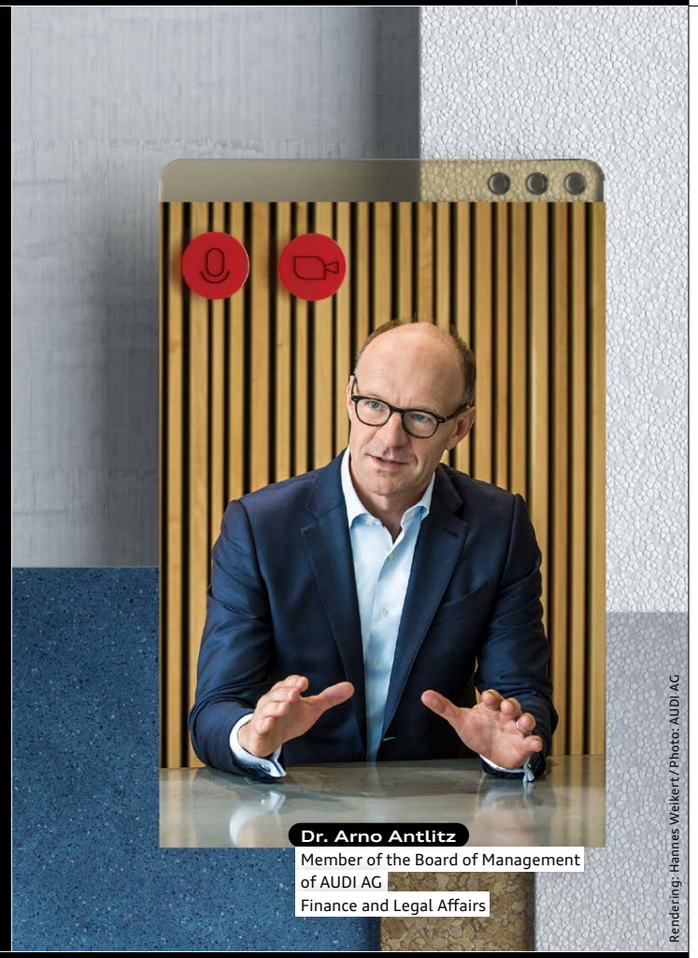
What goals are you setting for the next 12 months?

H. W. We are setting ourselves ambitious goals for 2021 and want to keep on growing. As a strong marketing and sales team, we'll be successful at this next stage, too. We will focus our actions even more closely on our customers.

We'll also continue to consistently drive the transformation of our products and our mobility services forward – with an emphasis on electrification, sustainability and digitalization. In terms of sales, online and offline offers will merge increasingly to create an integrated experience.

With the realignment of the brand and sales strategy, we have made the Four Rings fit for the future. Not only will we "be" progress, we will also reinterpret it. It is also important to me that we approach things with courage, passion, perfection and fascination. This is how we will go on shaping the premium mobility of the future together.

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0



Dr. Arno Antlitz
Member of the Board of Management of AUDI AG
Finance and Legal Affairs

Rendering: Hannes Welkert / Photo: AUDI AG

2020 shows:

↘ Audi is robustly positioned and economically weatherproof

What impact did the coronavirus pandemic have on the company's situation?

Dr. Arno Antlitz The coronavirus is an unprecedented stress test: During the first half of the year, Audi delivered 22 percent fewer vehicles to customers. That had a massive impact. However, we responded quickly to the coronavirus pandemic and optimized our short-term expenditure, without compromising our long-term product plans or the future viability of Audi.

After what can only be described as challenging months, we were able to offset the pandemic-related losses of the first six months and return to profitability again cumulatively in the third quarter. In the fourth quarter, we were even able to surpass the previous year's level significantly. The result for 2020 as a whole is therefore clearly positive – even if it is significantly below the previous year. One thing is certain: The crisis will continue to require great efforts on the part of the entire team. But it also signals to us that Audi is robustly positioned and economically weatherproof.

How do you intend to finance "Vorsprung durch Technik"? Which role will profitable electric mobility play in this?

A.A. Reducing carbon emissions and protecting the climate are the most urgent tasks for our society in the long term. We want to play our part in this. At Audi, we will spend around EUR 17 billion of our EUR 35 billion investment budget up to 2025 on future technologies. Almost EUR 15 billion will be allocated to electric mobility and hybridization alone. This leaves us well positioned financially for the key challenges ahead. Electric mobility is by far the most efficient way to achieve decarbonization and to meet our CO_2 fleet targets. It is thus a key element of the strategy at Audi.

€35 billion

of which around €17 billion

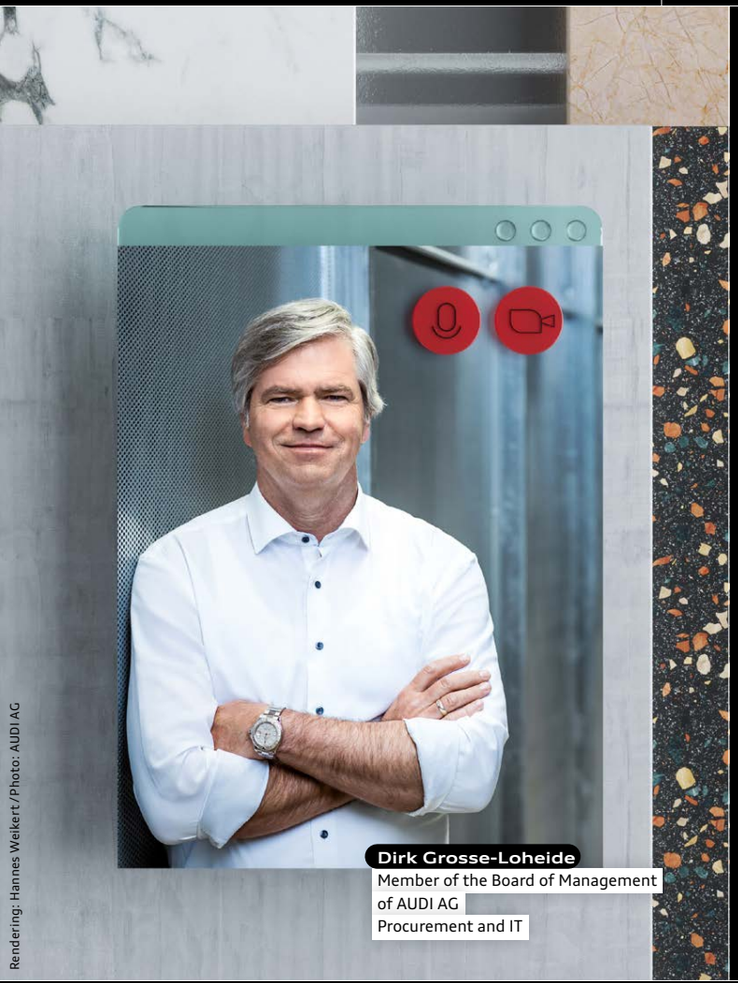
of the Audi investment budget up to 2025 for future technologies

We are strengthening our brand to promote growth in the high-margin segments and improve our price position. In addition, the profitability of electric models will improve significantly with new model generations: Battery costs are falling and, at the same time, we are benefiting from rising economies of scale in hardware and software. Volume plays a key role in our industry. As part of the Volkswagen Group, we are the only premium manufacturer to be able to benefit to this extent from economies of scale.

Which financial goals has Audi set for itself in the medium term?

A.A. Audi has set itself the ambitious target return of nine to eleven percent over the next few years. We are continuing to stick to this strategic target corridor despite an economically challenging environment and the transformation of our industry. The systematic implementation of the Audi.Zukunft programs and the Audi Transformation Plan enables us to invest in future technologies such as electrification and digitalization.

An important key to our success is an emotional product portfolio. Positive signals are coming from the market, as well, and that gives me confidence. The automotive industry is expected to start growing again as of 2021, especially the premium segment. We want to benefit from this and at the same time further increase our market share. This will also be reflected in our financial figures. We want to return to pre-coronavirus levels again in 2022.



Rendering: Hannes Weikert / Photo: AUDI AG

Dirk Grosse-Loheide
Member of the Board of Management of AUDI AG
Procurement and IT

Software will be a central topic

↘ both in the car and in our collaboration

You started working at Audi in April 2020. Your first months were no doubt completely different from what you expected …

Dirk Grosse-Loheide I certainly didn't expect things to start as they did. Overnight a majority of the team had to work remotely owing to the pandemic. Expanding the IT infrastructure on this scale was a challenge for our Audi IT. Yet we extended our digital collaboration culture massively within the shortest imaginable time. We digitalized further important workflows, thus safeguarding core processes. This important step helps us make processes efficient and sustainable – and not just within the Audi family, but also in our everyday work with our business partners.

Procurement is a good example of the importance of this transition: In the first lockdown phase in spring, in particular, procurement, production and logistics collaborated closely to maintain the supply chains. And we succeeded in doing that. Until the lockdown in production, we didn't lose a single car owing to a lack of parts. Achieving this became increasingly more difficult owing to the closure of logistics routes in Europe as well as stricter national regulations. However, we were able to successfully counter the crisis, primarily thanks to our highly motivated and flexible teams at Audi. And we're going to keep this team spirit; it will help us to set course correctly for the future.

Digital meetings at Audi

2019
1,259,713

2020
4,976,801

Audi wants to manufacture incrasingly more electric cars. What does the procurement strategy for raw materials and components look like for Roadmap E?

D. G.-L. Two things are becoming more important with the increasing share of electrified vehicles in the portfolio. First, in the case of many parts, we have to reassess which competences we will develop in-house and which we will buy in. This will allow us to benefit from synergies across the Group, especially in relation to components for electric mobility. Second, a large proportion of emissions generated by a car throughout its life cycle is shifting to upstream production processes. As a manufacturer, this gives us decisive leverage.

Sustainability requirements are an established part of our product specifications – if suppliers fail to observe these requirements, they will get no orders from Audi. This means we can ensure that we only work with partners who share our values. Because the manufacture of electric cars is more energy-intensive than with comparable combustion models, we consistently demand that green electricity be used in cell production, for instance. As early as 2019, we established the Sustainability Rating (S-Rating) as a binding criterion for awarding contracts. In addition to environmental aspects, it also considers social criteria.

Together for greater sustainability
We interact with more than

60
countries

14,000
suppliers

We bear large responsibility, not just for our employees, but also for our suppliers as well as everyone involved in our supply chain, and we take this responsibility seriously. It's not just a case of looking at what our direct suppliers are doing; instead, we focus on cross-industry and cross-sector standards. Because at the end of the day, all the stakeholders benefit from greater transparency in the supply chain.

A look into the future: On which items will you spend the most money in the coming year? And why?

D. G.-L. We want to help shape the transformation of the sector and are investing in two principal future-oriented fields. Software will be a key topic – both in the car and also for us within the company and in our collaboration. We have discovered just how important this is in recent months.

In addition, a majority of our funds is being invested in electrifying our powertrains. Our first all-electric models in the compact class will be rolled out in 2021 with the Audi Q4 e-tron and the Audi Q4 Sportback e-tron, and they will secure volumes. In addition, we're starting with preparations for the first models based on the PPE. We are continuing to invest in future technologies for our electric vehicles. We have the core competence in the Volkswagen Group to produce complete battery systems in-house. I also see the trend that we'll become involved with battery modules too in the future, once quantities justify this.

Our collective task is

↘ to get sites ready for electric mobility

Peter Kössler
Member of the Board of Management of AUDI AG
Production and Logistics

Rendering: Hannes Weikert / Photo: AUDI AG

You are in charge of the Audi crisis team. What characterizes the Audi strategy during the coronavirus pandemic?

Peter Kössler The virus pays no attention to borders or plant boundaries. This is why it is important to us that our actions as a company do not additionally endanger either employees or other partners, service providers and ultimately everyone at the Audi sites. Health comes first.

We responded very quickly and developed what is now a well-established framework for collaboration in the crisis team. That enabled us to make all the relevant decisions quickly and on a Group-wide basis. We deployed expert teams for every site and for each new coronavirus-related issue. These teams acted in close consultation with the departments and Works Council. Together we shut down production in March 2020 under controlled conditions and started it up again a short while later. That was a collective effort across the Audi production network globally, and I am especially proud of that. As a result, we managed to hit the ground running again with the usual quality standards and planned quantities. We quickly reached pre-coronavirus levels again in terms of production figures.

As the coronavirus continues to persist, the task of supplying semiconductor components poses a serious challenge in the first quarter of 2021. However, our experienced crisis teams across the Group constantly review appropriate countermeasures to limit the effects of such a delivery bottleneck for our production and for our customers globally.

What is your strategy for achieving sustainable and competitive production?

P. K. There is a clear message in our portfolio planning: We want to introduce around 30 electrified models onto the market by 2025 and produce them predominantly in German plants. It is therefore clear that Ingolstadt and Neckarsulm will remain the backbone of our worldwide production network.

Nonetheless, the electric initiative requires a readjustment in production. We are focusing on flexible production operations, which will reduce complexity in the production line as well as factory costs in the long term. Adopting a platform-driven approach in the plants gives us major cost advantages in the Volkswagen Group. One example is the multi-brand site in Zwickau, where the Audi Q4 e-tron and its coupé-style Sportback version are manufactured on the same production line as the Volkswagen ID.4.[2] Seat models will follow in the future. This reduces the required investment and helps ensure the capacity utilization of the plants.

Our German plants will remain pure Audi sites in the future, however, according to current planning. We will focus primarily on plug-in hybrids in Neckarsulm based on the → MLB platform. In addition to the Audi e-tron GT,[1] our first all-electric vehicle at a German site, we will produce other electric vehicles there. The Ingolstadt site will focus on producing all-electric vehicles (→ PPE) and the MQB platform.

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0
2 Volkswagen ID.4: combined electric power consumption in kWh/100 km: 16.9–16.2 (NEDC); combined CO_2 emissions in g/km: 0

By
2025
↘
the goal is for all Audi production sites to be net carbon-neutral[3]

2
plants – Brussels and Győr – already operate successfully with net carbon-neutral emissions[3]

In addition to efficient structures and intelligent processes, sustainable production assumes in particular the responsible use of resources. This is a very important topic, and one that is close to my heart personally. We want all of our production facilities to be net carbon-neutral[3] by 2025. Brussels and Győr have already made a start.

What are the challenges and difficulties that you and your team will have to overcome in the next year or two?

P. K. It is our collective duty to make sure that the plants are ready for electric mobility. We are already preparing intensively for the production of electric models at the Ingolstadt site: We already have the first PPE-based vehicles in pre-series production, and in-house battery assembly will also take place at a German Audi site for the first time. We want to add additional capacities in Ingolstadt for this future technology because that will create space for the supply of high-voltage battery systems in preparation for starting PPE production. At the same time, we are working relentlessly on making all sites future-proof in the medium to long term.

3 Audi regards net carbon neutrality as a state in which, following the exhaustion of other possible measures aimed at reducing the still remaining CO_2 emissions caused by the products or activities of Audi and/or currently unavoidable CO_2 emissions within the scope of the supply chain, manufacturing and recycling of Audi vehicles, at least quantitative compensation is provided through voluntary and globally conducted compensation projects. Throughout the utilization phase of a vehicle, meaning from when a vehicle is delivered to a customer, CO_2 emissions produced are not taken into account.

Dr. Sabine Maassen
Member of the Board of Management of AUDI AG
Human Resources and Organization

Rendering: Hannes Weikert/Photo: AUDI AG

Culture and mindset are

↘ not just “nice to have”

You came to Audi in April 2020. What are the major projects and topics you are working on?

Dr. Sabine Maassen The transformation of Audi to a digital car company is a top priority. We have to position ourselves well for this and develop the required expertise. The framework for this is provided by the general agreement Audi.Zukunft, which was concluded by the Board of Management and the employees’ representative body of AUDI AG back in fall 2019. This is a long-term roadmap enabling us to achieve efficient, future-proof corporate governance – and it focuses firmly on one thing: secure jobs for all Audi employees up to 2029.

We have also been working intensively over the past nine months on strategic HR planning. The question we ask ourselves at Audi is: What professional skills do we need in the future? To answer this, we compare current and future job clusters in every area, develop specific development programs and ensure that the employees acquire these qualifications in the appropriate timeframe.

How do you succeed in promoting topics such as integrity or culture change at Audi under today’s high economic pressure?

S.M. Culture and mindset are not trivial matters that are merely “nice to have.” The culture has to be right if business is to be both sustainable and successful. This is the only way that our teams can fully contribute their knowledge and potential, and ultimately make progress tangible. Every day at Audi, I experience a team that works relentlessly to shape the future of the company and that pulls together in challenging times – because we share common values with openness, responsibility, appreciation and integrity.

Job guarantee

until

2029

for employees of AUDI AG

We have taken concrete measures to enhance this culture even further, for instance through the mandatory Role Model Program. Board members and managers with leadership responsibility carry out measures each year in order to act as role models in the face of cultural change. We want to rethink leadership and channel our focus more strongly in the future in the direction of work organization. With the work@Audi initiative, we are moving away from traditional structures and rigid hierarchies. We need openness, honesty and respect in our exchanges and discussions. Not only is this the basis for a good feedback culture, but also for a new and agile form of collaboration at Audi. Our transformation needs openness if it is to succeed.

What are you planning for the next 12 months?

S.M. What we have ahead of us is not a sprint, but a marathon! The plan for the future is in place. We will focus primarily on restructuring and all the other challenges posed by the transformation.

I see it as my task to provide guidance and to steer the transformation in a targeted and purposeful way. We want to show that Audi offers perspectives. Ultimately, it is our ambition to be the employer of choice, both internally and externally.

Selected contribution by Audi to the SDGs of the United Nations

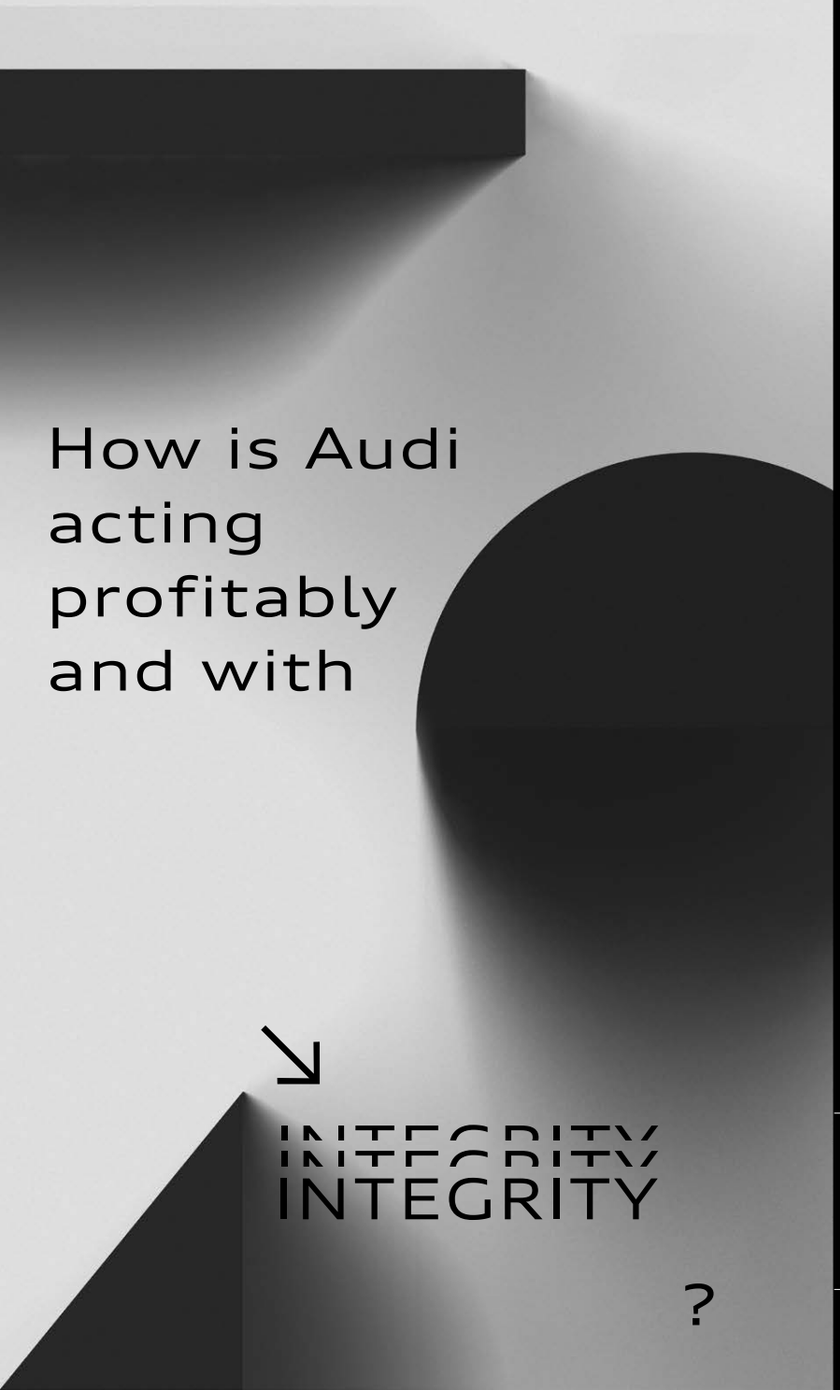
8 DECENT WORK AND ECONOMIC GROWTH

Audi is working relentlessly as a team to shape the future and pulls together in challenging times.

3 GOOD HEALTH AND WELL-BEING

Audi is committed to protecting the health of its stakeholders, especially during the coronavirus pandemic.

→ see page 289 for an overview of the SDGs



S B T

Talking Sustainable Business – Key Facts

- ↗ Making business decisions based on economic, ecological and societal aspects
- ↗ Monitorship both as an important element in working through the diesel issue and as a forerunner to the transformation
- ↗ Government restrictions and interruptions in the supply chain led to production stops and short-time work at Audi sites, especially in the first six months, which resulted in a global drop in sales volume
- ↗ Market recovery starting with China and solid operating performance in the second half of the year as well as record figures in the fourth quarter
- ↗ Full-year key performance indicators mostly significantly lower than the prior-year ones despite positive trend at the end of the year
- ↗ Audi is cautiously optimistic about 2021, but forecasting is hampered by the ongoing coronavirus pandemic

Page 65
A win-win-win situation – for humankind, society and the environment

Page 81
Financial position

A win-win-win situation – for humankind, society and the environment

Illustration: Aleksandar Savić

Text: Janina Weigel

For Audi, responsible and value-oriented corporate governance means approaching every decision holistically, transparently and with integrity. After all, companies that operate sustainably will have a competitive advantage in the long term. Audi believes that operating with integrity means taking its responsibility to society seriously. What follows is value-oriented action geared to sustainability, focusing on humankind, society and the environment. The aim is to achieve a win-win-win situation for all participants. After all, business and integrity are not contradictions in terms – they are two sides of the same coin.

Actively shaping the transformation

Photo: AUDI AG

Silja Pieh,
Head of Corporate Strategy

“In our view, sustainability requires us to take radical and far-reaching action to conserve natural resources so that they can still be used by future generations,” explains Silja Pieh, Head of Corporate Strategy. “There are various examples of this at Audi. These include the billions we’ve invested in the electrification of our fleet, the use of state-of-the-art processes for carbon-reduced aluminum production or particularly energy-efficient welding and joining technology, the construction of solar systems to meet the energy requirements of our plants and the use of recycled materials in our product development. In the long run, Audi will only be successful if the company succeeds in bringing integrity and results, conscience and profit, the environment and sales into sustainable alignment. We consider ecological, economic and social aspects in all our decisions to ensure our long-term competitiveness and thus fulfill our responsibility as a forward-looking employer. Economic efficiency and job protection are equal-ranking goals for us.” Achieving these goals requires compliance, integrity and an open corporate culture. “We take the issue of climate protection seriously and are therefore in the midst of a transformation that spans the entire industry. We want to play an active role in shaping this transformation – together with our employees and for our customers – so that we can continue to offer highly attractive products and services in the future, while protecting the environment and conserving resources,” says Silja Pieh.

Systems and processes strengthened

Audi reached an important milestone in terms of compliance, integrity and corporate values in 2020: the successful conclusion of the Monitorship. Volkswagen AG committed itself to the Monitorship under a settlement reached with the U.S. Department of Justice in connection with the diesel issue. AUDI AG was also included within the scope of the Monitorship. Over a period of three years, the company worked together with Independent Compliance Monitor Larry D. Thompson on strengthening its compliance and integrity. “The diesel affair was a watershed for the entire Volkswagen Group on the one hand, but also triggered a transformation that will strengthen the company and make it fit for the future,” emphasizes Holger Schmid, Head of Integrity, Compliance and Risk Management as well as Chief Compliance Officer (CCO) of AUDI AG.

Over the course of the Monitorship, Volkswagen AG and its subsidiaries and affiliates modernized and enhanced structures, processes and systems in many divisions, including Technical Development, HR, Risk Management, Compliance and various legal functions. The Volkswagen Group implemented and expanded its whistleblower system,[1] strengthened processes to prevent corruption and antitrust violations and created a due diligence process[2] for business partners. Moreover, the company flattened hierarchies, decentralized decision-making and introduced → new leadership and collaboration models.

1 Within the context of a fair and transparent procedure, the whistleblower system protects the company, the persons affected and the whistleblowers. Uniform and rapid processes coupled with the confidential and professional processing of hints by internal experts form the foundation. Further information can be found → here.
2 Audi carries out integrity checks of its business partners (Business Partner Due Diligence, BPDD) to ensure they apply the same standard of integrity in business practices. These checks are conducted in accordance with a risk-based, transparent and properly documented process.

US Monitorship successfully completed

Independent Compliance Monitor Larry D. Thompson has confirmed that AUDI AG, as part of the Volkswagen Group, has met its obligations under the diesel issue settlement with the U.S. Department of Justice to extensively revise and further develop its compliance program. The program is designed to prevent and detect violations of anti-fraud and environmental laws. The successful completion of the Monitorship was certified by Larry D. Thompson in September 2020 and applies to Volkswagen AG and its subsidiaries and affiliates – with the exception of Porsche AG and Porsche Cars North America, which were not part of the Monitorship.

The cooperation with Larry D. Thompson, who was appointed Independent Compliance Monitor by the US authorities in June 2017, was coordinated by the Audi Monitor Project Management Office. Larry D. Thompson and his team assessed and oversaw the fulfillment of the conditions from the agreements with the US agencies on the diesel issue.

The Monitor regularly made recommendations for action, which were adopted and implemented in a timely manner. Some requirements and suggestions, such as Together4Integrity or the Board of Management’s declarations of commitment, extend far beyond the end of the Monitorship.

Forerunner to the transformation

“Mr. Thompson and his team have helped us make Volkswagen a stronger company, thus contributing significantly to the Group’s transformation,” said Dr. Herbert Diess, Volkswagen CEO and Chairman of the Supervisory Board of AUDI AG, after the Monitorship was completed.

But the journey is not over yet: The Audi Board of Management has placed the topics of integrity and corporate culture on its agenda as a central task. The six board members have made plans to this end, which were then submitted to the Audi Supervisory Board and the US Monitor in the form of personal declarations of commitment that they will pursue on a long-term basis.

But what are the distinguishing features of this “new Audi”? What factors does the transformation entail? Four Audi employees share their insights.

↘

Holger Schmid,
Head of Integrity, Compliance and Risk Management as well as Chief Compliance Officer (CCO) of AUDI AG

“An active speak-up culture and an active network of integrity ambassadors characterize the ‘new Audi,’ as do our sustainable risk management and genuine commitment to compliance and integrity.”

Illustration: Aleksandar Savić

Holger Schmid “We want to set an example in the future – as a modern, transparent and value-based company. Especially now that we’ve successfully completed the Monitorship, we’ll make sure that we don’t lose momentum in rolling out the → Group-wide Together4Integrity (T4I) measures and achieving a change of culture in our company. An active speak-up culture and an active network of integrity ambassadors characterize the ‘new Audi,’ as do our sustainable risk management and genuine commitment to compliance and integrity. None of these things are projects that will someday be completed and superseded by others. For me personally, they’re constant themes in my work and permanent fixtures in the company. And we use effective tools and targeted measures to ensure that they’re implemented.

Specifically, my team and I are concentrating on four priorities:

1. We’ll continue to implement the Group-wide compliance and integrity program Together4Integrity until 2025.
2. We’ll advise and support the members of our Board of Management in fulfilling their personal declarations of commitment.
3. We’ll continue to comply with our obligations under the → EPA Administrative Agreement.
4. Our Corporate Risk Management along with the Risk Management System (RMS), our corporate policies, the Internal Control System (ICS) and the Compliance Management System (CMS) will continue to be supporting pillars of our work in the future. All of this is designed to sustainably safeguard the company’s goals, create transparency and reinforce awareness of risks, compliance and integrity.”

Together4Integrity (T4I)

“Together4Integrity” (→ T4I) is the integrity and compliance program of the Volkswagen Group and was introduced at AUDI AG back in 2018. The program is based on the principles of the Ethics & Compliance Initiative (ECI), a globally recognized standard for ethical corporate principles.

T4I will be rolled out across the entire Volkswagen Group by 2025. The ECI principles feed into the “T4I Toolbox” together with the recommendations of the US Monitor[3] and other measures. This toolbox contains around 130 division-specific and general initiatives that reinforce integrity and compliance and promote cultural change. These include the Code of Conduct (→ CoC) and the associated training measures, as well as the → whistleblower system. The Code of Conduct gives employees a firm handle on how to operate with integrity, thus also further implementing the change of culture at Audi.

A large number of the T4I measures have already been implemented at the German sites of AUDI AG. At the same time, AUDI AG is responsible for rolling out the T4I program at its subsidiaries and participations.

3 The US Independent Compliance Monitor Larry D. Thompson was referred to as the Monitor. He was appointed in this capacity by the U.S. Department of Justice in spring 2017. Mr. Thompson and his team ensured for approximately three years that Volkswagen and Audi fulfilled the conditions associated with the criminal plea agreement and consent decrees in the USA.

↘
JASMIN LOTZE,
Compliance Specialist for the topic of Business and Human Rights

“We must consistently ensure that we take respect for human rights into account in all corporate processes.

Ultimately, it’s always a matter of putting the focus on the human being and on respecting their rights.”

Illustration: Aleksandar Savić

Jasmin Lotze “Audi has more than 40 entities worldwide with almost 87,000 employees and tens of thousands of business partners – this means the company has an extremely high level of responsibility.

Consistent respect for → human rights is essential for Audi. That is why they are firmly enshrined in the → Audi Code of Conduct.[4] The term ‘human rights’ covers a wide range of issues, including the right to health and safety at work, the right not to be discriminated against and, naturally, the prohibition of child and forced labor as well.

4 Ensuring that all decisions are in harmony with legislation as well as with internal rules and values represents a key factor in the success of Audi. The Code of Conduct, which is valid throughout the Group, serves as the basis here. It defines the essential principles that apply to daily work routines in the company. We therefore express how Audi perceives itself and the fundamental rules that govern its actions. Above all we provide guidance, advice and support on ethical behavior at the workplace, as a business partner and as a member of society. The Code of Conduct is aligned with that of the Volkswagen Group and applies Group-wide to Audi, as well as being mandatory for all employees, regardless of their position in the hierarchy. More information can be found → here.

We must consistently ensure that we take respect for human rights into account in all corporate processes. Our Compliance Management System (CMS) helps us do this, since we use it to record, assess and manage compliance risks, among other things. We're fulfilling our duty of care by continually adapting processes, training our employees and partners and having set up a → whistleblower system for instance.

The globally operating automotive industry with its distributed supply networks is considered a high-risk industry with respect to human rights. That's why Audi is also actively involved in the 'Automotive Industry Dialogue' as part of the German government's National Action Plan (NAP) for Business and Human Rights – together with representatives from academia, politics and civil society.

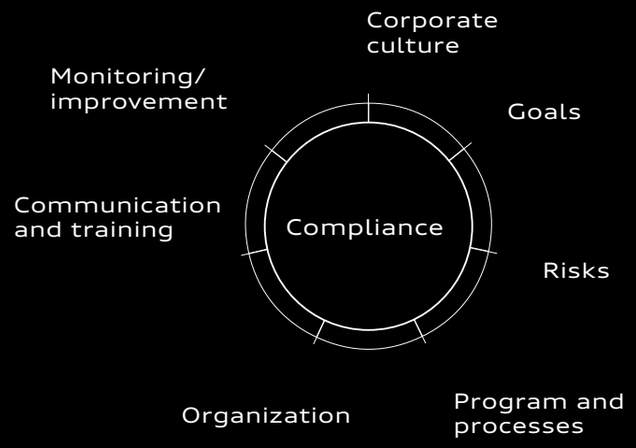
The 'new Audi' therefore not only sets high standards internally, but also endeavors to uphold our values and principles along the entire value chain as well, for example within the scope of its → supplier management. Ultimately, it's always a matter of putting the focus on the human being and on respecting their rights."

The Compliance Management System in the Audi Group

As part of its organizational duty, the Audi Board of Management has established a Compliance Management System and a Compliance Organization.

A Compliance Management System (CMS) refers to the principles, measures, processes and structures of an enterprise to assure permanent compliance with the laws and internal regulations by corporate bodies, employees and third parties acting on behalf of an enterprise. In addition to AUDI AG, the CMS also covered 44 subsidiaries and participations worldwide in the year under review, with predominantly local compliance officers acting as multipliers. The AUDI AG CMS consists of the following seven core elements:

Audi Compliance Management System (CMS)



↘
CARSTEN VORTANZ,
Business Process Management,
Quality Management/Risk Management and
Head of the Product Integrity Committee

"The key to success here lies not only in the innovative strength of our products and services, but also in their reliability during everyday use."

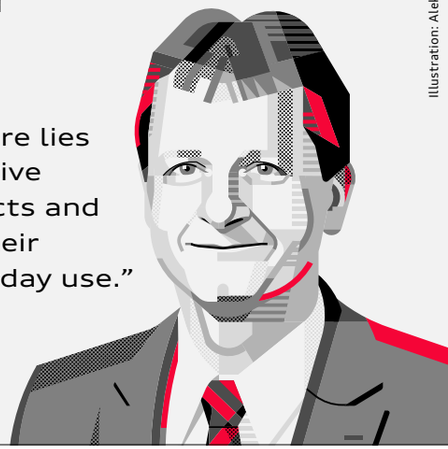


Illustration: Aleksandar Savić

Carsten Vortanz "We find ourselves in times of rapidly increasing complexity, both regarding regulations in the global markets as well as our products and their technical interdependencies. Added to this is our customers' increased need for mobility. The key to success here lies not only in the innovative strength of our products and services, but also in their reliability during everyday use.

Against this background, the integrity of our products is a top priority.

Product integrity is a legal obligation, and we are committed to complying with the applicable legal and official provisions of the respective countries of export and import. The same applies to specifications resulting from internal and external standards. Our products and product-related services meet the customer requirements that have been contractually agreed – taking into account the voluntary commitments[5] by Audi.

5 Commitments made by a company to third parties, the content of which does not arise from legal provisions or official actions. An example of this at Audi is "Vision Zero": worldwide implementation of UNECE R 14, 16, 95 (independent of geographical scope) within the context of the "UN Decade of Action for Road Safety 2011-2020."

For the implementation of the ‘new Audi,’ product integrity compels every employee to comply with two major issues in their daily work: product safety and product conformity.

Product safety dictates that a product that is already available on the market must not endanger the safety or health of individuals under proper or foreseeable conditions of use.

Product conformity means that the Four Rings adhere to all legal and official regulations of the respective countries of export and import and meet all specifications resulting from internal and external standards. These include work and process instructions or general standards relating to rules of technology[6] as well as contractually agreed customer requirements.”

6 One practical example of this is DIN ISO26262: Road vehicles – Functional safety.

Selected contribution by Audi to the SDGs of the United Nations

8 DECENT WORK AND ECONOMIC GROWTH

Audi promotes long-term, inclusive and sustainable economic growth.

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

The Audi Group places a high priority on preventing corruption.

→ see page 289 for an overview of the SDGs

↘
RALF TURANLI,
Head of Quality Management, Product Integrity Requirements and Chief Executive of the Product Integrity Committee

“It’s important to note that achieving product integrity is an overall corporate responsibility.”

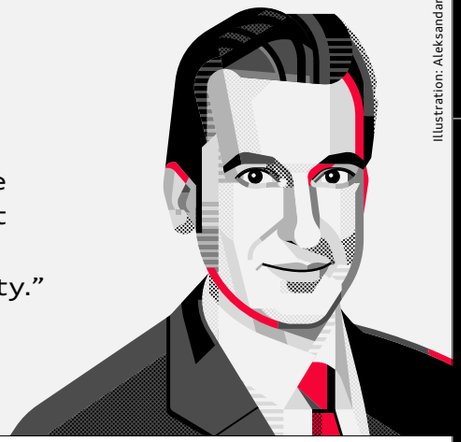


Illustration: Aleksandar Savić

Ralf Turanli “First and foremost, it’s important to note that achieving product integrity is an overall corporate responsibility. It concerns all divisions of the company. Only then can AUDI AG be effectively protected against legal and financial risks.

To this end, we’ve created a regulatory framework that describes the processes, principles and measures for ensuring product integrity: the Product Compliance Management System (PCMS). The PCMS is integrated into the organization as a dual function shared by Technical Development and Corporate Quality. In terms of setup, it’s based on a compliance management system in accordance with the requirements of the auditing standard IDW PS 980. The introduction and sustainable integration of the PCMS at Audi was a requirement within the scope of the US Monitorship.

Like the → whistleblower system and the → Audi Code of Conduct, the PCMS is a key pillar of our ‘new Audi’ corporate culture. It will help us bring products with integrity to markets around the world.”

Effective anti-corruption

The Audi Group places a high priority on preventing corruption, with the Integrity, Compliance and Risk Management department contributing to sustainable anti-corruption efforts.

In the year under review, the compliance organization of AUDI AG supported 44 national and international participations in the compliance focal area of anti-corruption in the course of consultancy inquiries, the implementation of policies and the execution of training programs.

Fundamentally, all those entities where AUDI AG holds a majority interest or management responsibility or that are of particular importance are included in the process.

To ensure sustainable prevention of corruption and effective and efficient risk management, Audi offers its employees Web-based training (WBT) courses on “Anti-Corruption” and “Dealing with Public Officials,” in addition to the “Policy on Gratuities for the Avoidance of Conflicts of Interest and Corruption.” These training measures serve to protect all employees as well as the company.

EPA auditorship

On August 13, 2019, the U.S. Environmental Protection Agency (EPA) entered into an administrative agreement with VW AG, AUDI AG, VW Group of America and VW Group of America Chattanooga Operations. This also extends to MAN Energy solutions, which is among the subjects of the auditorship due to its business dealings with the US government. The term of the agreement is set to end on August 15, 2022.

This agreement recognizes the extensive measures Volkswagen and Audi have taken since the end of 2015 to strengthen the compliance and risk management system and allows all Group companies to continue pursuing business relations with the US government.

Above all, the agreement requires further compliance with existing diesel settlements and to keep the → whistleblower system and the → Audi Code of Conduct in place. John Hanson has been appointed as an independent auditor to verify compliance with this agreement and submit an annual audit report to the EPA.

All employees are required to comply with the administrative agreement along with all other legal provisions, directives, corporate policies and work instructions.

Financial

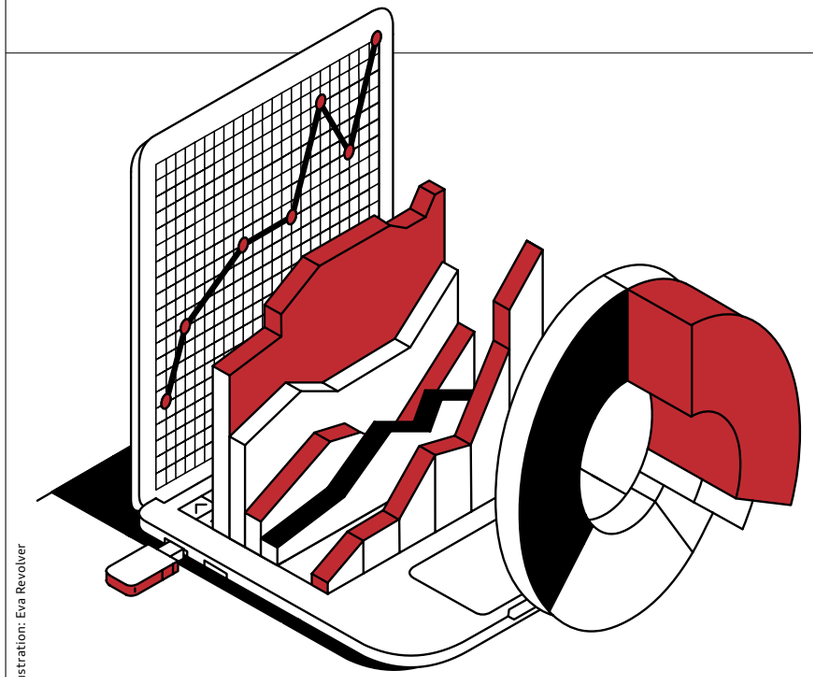


Illustration: Eva Revolver

POSITION

POSITION

GRI 102-45

Financial highlights

The coronavirus pandemic has a significant impact in the fiscal year – strong second half

↗ Government restrictions and interruptions in the supply chain led to production stops and short-time work at Audi sites, especially in the first six months, which resulted in a global drop in sales volume

↗ Market recovery starting with China and solid operating performance in the second half of the year as well as record figures in the fourth quarter

↗ Full-year key performance indicators mostly significantly lower than the prior-year ones despite positive trend at the end of the year

↗ Audi is cautiously optimistic about 2021, but forecasting is hampered by the ongoing coronavirus pandemic

Details on the financial situation of Audi and the quarters can be found during the year → here.

The figures in brackets refer to the previous year. The changes to the IFRS in the 2020 year under review had no material impact on the Audi Group's net worth. financial position and financial performance. Internet sources refer to the status as of February 24, 2021. The following section on the financial position contains statements on expected developments. These statements are based upon current assessments and are by their very nature subject to risks and uncertainties. Actual outcomes may differ from those predicted in these statements. AUDI AG has made use of the option under Section 289b. Para. 2 and Section 315b. Para. 2 of the German Commercial Code (HGB) exempting it from submission of a non-financial declaration and non-financial Group declaration and refers readers to the combined separate non-financial report of Volkswagen AG for the 2020 fiscal year, which will be available on the Internet → www.volkswagen.com in German and English by no later than April 30, 2021. Additional information on our production, delivery and financial figures can be found in an Excel sheet available for download on our website → www.audi.com/investor-relations.

Deliveries of cars of the Audi brand to customers

1.7 m veh.

Audi: –8 percent
1,692,773 (1,845,573)
Car market worldwide:
as much as –15 percent

Recovery in the 2nd half-year

Deliveries even above prior year thanks to active crisis management and stronger demand in all markets

China

Market recovery from March
Full year 2020: +5 percent for Audi, although overall market declined

Record quarter

> 0.5 million deliveries in the 4th quarter due to catch-up effects, among other things

Revenue

50.0 EUR bn

Full year below prior year (EUR 55.7 billion) with strong 4th quarter totaling EUR 16.7 (14.3) billion

Operating return on sales

5.1 %

before special items:
5.5 %
(8.1 %)

Operating result

2.6 EUR bn

before special items:
2.7 EUR bn
(EUR 4.5 billion)

Special items of –0.2 (–) billion in connection with the diesel issue

2nd half-year: coronavirus-induced losses more than offset

4th quarter: particularly strong at EUR 2.5 (1.3) billion, although also one-time effects

Net cash flow

4.6 EUR bn

High net cash flow due to:
→ cost discipline
→ prioritization of investments
→ Volkswagen intra-Group sales of participations totaling EUR 1.5 billion

still high net liquidity:
EUR 22.4 (21.8) billion

Outlook: 2021 fiscal year

DEL REV

Significant year-on-year growth expected for deliveries and revenue

ROS

7–9 %

expected operating return on sales

ROI

12–15 %

anticipated return on investment (ROI)

R&D

6–7 %

expected research and development ratio

capex

4–5 %

anticipated ratio of capex

NCF

3.5–4.5 EUR bn

forecast net cash flow

Economic environment

The world economy recorded negative growth in the 2020 fiscal year as a result of the global impacts of the coronavirus pandemic. Total global demand for vehicles was markedly lower than in the previous year.

Development of the global economy in 2020

The world economy recorded negative growth in gross domestic product (GDP) of –4.0 (2.6) percent in 2020 as a result of the global spread of the coronavirus and the associated restrictions, which hit both the demand and supply side. Broken down by country, the picture was very uneven depending on the respective infection rates. Governments and central banks in numerous countries responded with monetary and fiscal policy measures, sometimes on a vast scale, such as dramatic cuts in interest rates, the suspension of social security contributions, short-time work and direct financial support payments.

Economic development in core markets: Europe – USA – China

The economy in Europe recorded a sharp contraction of –6.7 (1.5) percent overall in 2020. This was due, among other things, to national measures to contain the pandemic. The severe restrictions on public life had a serious impact on the service sector, for example, which was the bedrock of the economy before the pandemic. Governments in many European countries

eased the restrictions for a time, which led to a gradual economic recovery. Later in the year, with cases increasing again, some of these measures were tightened up again or at least kept in place. The uncertain outcome of the negotiations concerning the exit of the United Kingdom from the European Union (EU) also continued to generate uncertainty in the 2020 fiscal year, as did the related question of what form the economic relationship would take in the future.

At –5.3 (0.6) percent, Germany's economic growth in the year under review was well into negative territory. US economic output fell by –3.6 (2.2) percent in the year under review due to high infection rates. The US government agreed extensive support packages to bolster the economy. Meanwhile, in addition to further action to support the economy, the Federal Reserve cut interest rates twice.

The Chinese economy was hit by the negative effects of the coronavirus pandemic earlier than others. China's central government responded immediately with tough restrictions on public life, including banning entry to the country and widespread mass testing. This quickly brought the infection rate under control. In addition, it supported the economy, for example, by tax relief and interest rate cuts. That paved the way for the Chinese economy to recover relatively quickly and record positive growth of 2.1 (6.1) percent overall.

Development of global car and motorcycle markets in 2020

At 67.7 million units, the global market volume for passenger cars in the 2020 fiscal year fell significantly short of the prior-year level (–15.2 percent) due to the coronavirus pandemic. This was the third year-on-year decline in a row. All regions were affected by this downturn.
The international motorcycle market in the displacement segment above 500 cc also declined.

Sector-specific environment

The sector-specific environment was influenced significantly by fiscal policy measures, which contributed considerably to the mixed trends in sales volumes in the markets last year. This included tax policies, subsidy programs, buyer incentives and import duties. In addition, non-tariff trade barriers to protect the respective domestic automotive industry made the movement of vehicles, parts and components more difficult.

Development of the global car markets in the core markets: Europe – USA – China

In Europe, the number of new passenger car registrations in the year under review fell well short of the prior-year level (–22.9 percent) at 13.7 million. The negative impacts of the spread of the coronavirus were already being felt by around the end of the first quarter in all countries in the region. After a dramatic decline at the beginning of the second quarter, a recovery occurred in the subsequent months. By the end of the third quarter, the market reached the previous year's figure. The fourth quarter of 2020 saw the market move sideways.

At 2.9 million units, the total number of new passenger car registrations in Germany in the 2020 fiscal year fell significantly short of the high prior-year level (–19.1 percent). The coronavirus pandemic meant that overall demand for passenger cars was at its lowest level since German reunification, despite a temporary reduction in value-added tax and increased buyer incentives for electric vehicles.

At 14.6 million vehicles, sales of passenger cars and light commercial vehicles (including SUVs) in the USA in the 2020 fiscal year were also down markedly on the prior-year figure (–14.5 percent).

At 19.9 million units, the Chinese car market was noticeably down on the previous year's level in 2020 (–6.5 percent). After dramatic losses in the first quarter of 2020, the Chinese car market rebounded rapidly starting in the second quarter of 2020, contributing to the global stabilization of the economy, especially in export-oriented Europe.

Growth in the gross domestic product (GDP), car markets and deliveries to customers of the Audi brand in selected countries/regions

	Growth in the gross domestic product in %		**Car markets** in vehicles			**Deliveries to customers of the Audi brand**[1] in vehicles		
	2020	**2019**	**2020**	**2019**	**Δ in %**	**2020**	**2019**	**Δ in %**
Europe	–6.7	1.5	13,723,284	17,793,924	–22.9	619,723	769,585	–19.5
of which Germany	–5.3	0.6	2,917,907	3,607,258	–19.1	214,427	271,613	–21.1
USA	–3.6	2.2	14,574,868	17,047,497	–14.5	186,620	224,111	–16.7
China[2]	2.1	6.1	19,928,449	21,305,450	–6.5	727,358	690,083	5.4
Worldwide	**–4.0**	**2.6**	**67,729,526**	**79,852,032**	**–15.2**	**1,692,773**	**1,845,573**	**–8.3**

For further information on how macroeconomic conditions affected Audi sales figures → see page 95.

1 The prior-year figures may have changed as a result of updated data; provisional figures for 2020.
2 Chinese car market including Hong Kong.

Production and deliveries

Production

The Audi Group produced a total of 1,664,265 (1,802,073) vehicles in the year under review. The premium Audi brand accounted for 1,657,015 (1,793,409) of the cars produced in 2020. This figure includes 671,970 (614,836) Audi vehicles built locally by the associate FAW-Volkswagen in China. The Lamborghini brand manufactured 7,250 (8,664) vehicles in the reporting period. In addition, 44,827 (51,723) motorcycles of the Ducati brand were produced.

The –7.6 percent reduction in the Audi brand compared with the previous year is principally due to the worldwide drop in demand for cars in the context of the coronavirus. During the first quarter of 2020, Audi → adjusted production, not simply because of the significant reduction in demand, but also in response to supply chain difficulties and factory shutdowns ordered by the authorities in some countries.

Stepwise production restart and stabilization during the year

The production stops at the Chinese facilities mainly had an impact in February 2020. The production volume in China stabilized gratifyingly as early as March, and by the end of 2020 there was actually a cumulative year-on-year rise of 9.3 percent.

From mid-March 2020, there was a controlled production shutdown at the European sites owing to the coronavirus pandemic. Production was restarted stepwise from the end of April 2020.

Car production by model[3,4]

	2020	2019	Δ in %
Audi A1 Sportback	62,099	81,287	–23.6
Audi Q2[5]	124,403	130,207	–4.5
Audi A3 Sportback	118,981	128,788	–7.6
Audi A3 Sedan	83,276	104,719	–20.5
Audi A3 Cabriolet	4,620	7,302	–36.7
Audi Q3	161,151	180,247	–10.6
Audi Q3 Sportback	58,514	15,392	X
Audi TT Coupé	6,793	11,791	–42.4
Audi TT Roadster	1,853	3,208	–42.2
Audi A4 Sedan	184,791	228,113	–19.0
Audi A4 Avant	52,092	85,790	–39.3
Audi A4 allroad quattro	6,695	9,484	–29.4
Audi A5 Sportback	43,996	71,128	–38.1
Audi A5 Coupé	6,475	12,093	–46.5
Audi A5 Cabriolet	6,315	9,856	–35.9
Audi Q5	276,015	286,365	–3.6
Audi A6 Sedan	221,950	176,362	25.8
Audi A6 Avant	41,452	50,677	–18.2
Audi A6 allroad quattro	8,276	5,566	48.7
Audi A7 Sportback	18,083	17,068	5.9
Audi e-tron	28,301	43,185	–34.5
Audi e-tron Sportback	14,600	191	X
Audi Q7	65,806	63,753	3.2
Audi Q8	38,126	44,890	–15.1
Audi e-tron GT quattro	244	–	–
Audi A8	20,591	23,826	–13.6
Audi R8 Coupé	956	1,439	–33.6
Audi R8 Spyder	561	682	–17.7
Audi brand	**1,657,015**	**1,793,409**	**–7.6**
Lamborghini Urus	4,364	5,233	–16.6
Lamborghini Huracán	2,010	2,426	–17.1
Lamborghini Aventador	876	1,005	–12.8
Lamborghini brand	**7,250**	**8,664**	**–16.3**
Automotive segment	**1,664,265**	**1,802,073**	**–7.6**

3 The table includes 671,970 (614,836) Audi models manufactured by the associate FAW-Volkswagen Automotive Company, Ltd., Changchun (China).
4 Figures for fuel/electric power consumption and CO_2 emissions → see page 312 ff.
5 This includes 3,768 (2,867) fully electric Audi Q2 L e-tron models produced by the associate FAW-Volkswagen Automotive Company, Ltd., Changchun (China), for the Chinese market.

Production of electrified vehicles, Audi brand[4]

	2020	2019	Δ in %
Audi e-tron	28,301	43,185	–34.5
Audi e-tron Sportback	14,600	191	X
Audi e-tron GT quattro	244	–	–
Audi Q2 L e-tron	3,768	2,867	31.4
Total fully electric vehicles (BEV)	**46,913**	**46,243**	**1.4**
Plug-in hybrid models (PHEV)	65,106	16,054	X
Total electrified vehicles (BEV + PHEV)	**112,019**	**62,297**	**79.8**

The Mexican plant in San José Chiapa was only able to restart production in June 2020 as the pandemic spread later in Mexico.

The situation in the Audi production network continued to stabilize in the second half of 2020, and output increased by 12.2 percent year-on-year between July and December 2020. The New Energy Vehicle (NEV) share – in other words, fully electric and plug-in hybrid vehicles as a proportion of total production of Audi brand vehicles – increased by 6.8 (3.5) percent in 2020.

Start of production of new Audi models

Production of the Audi A3 Sportback started in Ingolstadt in the first quarter of 2020, ushering in the new generation of the A3 family. Following the start of production of the Audi e-tron GT quattro[6] in Neckarsulm, the Four Rings have been producing the first fully electric Audi in Germany since December 2020.

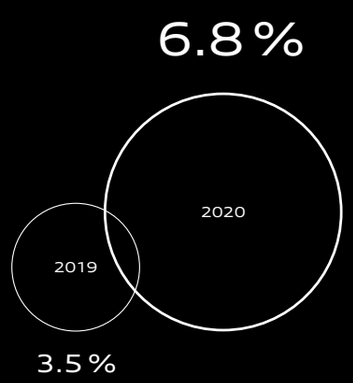
In the reporting period, FAW-Volkswagen produced the Audi Q3 Sportback locally in Tianjin (China) for the first time. In addition, local production of the Audi e-tron[7] started in Changchun

4 Figures for fuel/electric power consumption and CO_2 emissions → see page 312 ff.
6 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 20.2–18.8 (NEDC); combined CO_2 emissions in g/km: 0
7 Audi e-tron: combined electric power consumption in kWh/100 km: 28.8–21.4 (NEDC); combined CO_2 emissions in g/km: 0

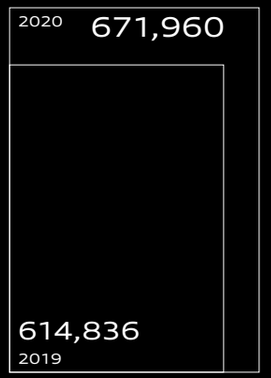
(China) in the third quarter of 2020. This is the second fully electric vehicle to be produced locally, the first being the Audi Q2 L e-tron[8] (production start 2019). Following expansion of the factory in Qingdao (China), production of the Audi A3 Sportback and the Audi A3 Sedan in the fourth generation of the Audi A3 family commenced there as well.

For information on the Italian subsidiaries Ducati and Lamborghini → see page 131 f.

NEV share
New Energy Vehicle Share



Production in China
Vehicles produced locally in China

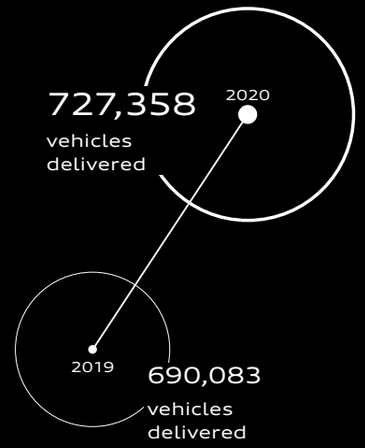


8 Audi Q2 L e-tron: combined electric power consumption in kWh/100 km: 13.9 (NEDC); combined CO_2 emissions in g/km: 0

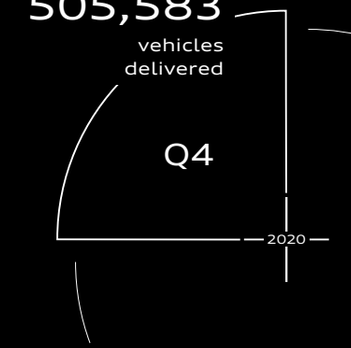
Deliveries[9]

The Audi Group delivered a total of 1,700,258 (1,853,833) vehicles in the 2020 fiscal year. A total of 1,692,773 (1,845,573) cars of the Audi brand were delivered to customers. The pandemic-induced decline of –8.3 percent was significantly less pronounced than the drop of –15.2 percent in overall market demand. While the Lamborghini brand delivered 7,430 (8,205) vehicles, the Ducati brand handed 48,042 (53,183) motorcycles over to customers.

China: deliveries to customers at new record level



For the first time, over 500,000 vehicles delivered in the 4th quarter 2020



9 Detailed information on the delivery figures in the core regions can be found in the section "Economic environment" → see page 89.

Car deliveries to customers by model[4, 10]

	2020	2019	Δ in %
Audi A1 Sportback	63,468	80,942	–21.6
Audi Q2[11]	124,392	132,844	–6.4
Audi A3 Sportback	119,122	144,388	–17.5
Audi A3 Sedan	93,516	109,251	–14.4
Audi A3 Cabriolet	5,388	8,107	–33.5
Audi Q3	162,528	177,666	–8.5
Audi Q3 Sportback	54,488	6,157	X
Audi TT Coupé	7,515	11,283	–33.4
Audi TT Roadster	2,317	3,662	–36.7
Audi A4 Sedan	183,632	234,387	–21.7
Audi A4 Avant	59,053	84,579	–30.2
Audi A4 allroad quattro	7,477	8,502	–12.1
Audi A5 Sportback	50,663	72,002	–29.6
Audi A5 Coupé	7,755	13,072	–40.7
Audi A5 Cabriolet	7,442	10,602	–29.8
Audi Q5	278,161	305,235	–8.9
Audi A6 Sedan	225,424	182,005	23.9
Audi A6 Avant	39,588	58,579	–32.4
Audi A6 allroad quattro	8,738	4,216	107.3
Audi A7 Sportback	17,546	17,387	0.9
Audi e-tron	37,366	26,155	42.9
Audi e-tron Sportback	9,958	212	X
Audi Q7	64,038	86,028	–25.6
Audi Q8	38,699	44,054	–12.2
Audi A8	22,290	22,314	–0.1
Audi R8 Coupé	1,007	1,350	–25.4
Audi R8 Spyder	644	594	8.4
Internal vehicles before market introduction	558	–	–
Audi brand	**1,692,773**	**1,845,573**	**–8.3**
Lamborghini Urus	4,391	4,962	–11.5
Lamborghini Huracán	2,193	2,139	2.5
Lamborghini Aventador	846	1,104	–23.4
Lamborghini brand	**7,430**	**8,205**	**–9.4**
Other Volkswagen Group brands	55	55	0.0
Automotive segment	**1,700,258**	**1,853,833**	**–8.3**

4 Figures for fuel/electric power consumption and CO_2 emissions → see page 312 ff.
10 The table includes deliveries of 674,700 (630,800) vehicles produced locally by the associate FAW-Volkswagen Automotive Company, Ltd., Changchun (China).
11 This includes 4,240 (201) fully electric Audi Q2 L e-tron models for the Chinese market.

Deliveries in China higher than in the previous year

While the Chinese market was most negatively affected by the impact of the coronavirus in February 2020, the pandemic spread to other major markets in March. In particular, statutory measures such as the closure of dealerships and lockdowns led to a significant drop in deliveries worldwide. In China, however, there was a clear recovery from March 2020, and from April 2020, monthly deliveries were above the prior-year level. Cumulatively, deliveries in China increased by 5.4 percent year-on-year to a new record. The Chinese market as a whole contracted by –6.5 percent in this period.

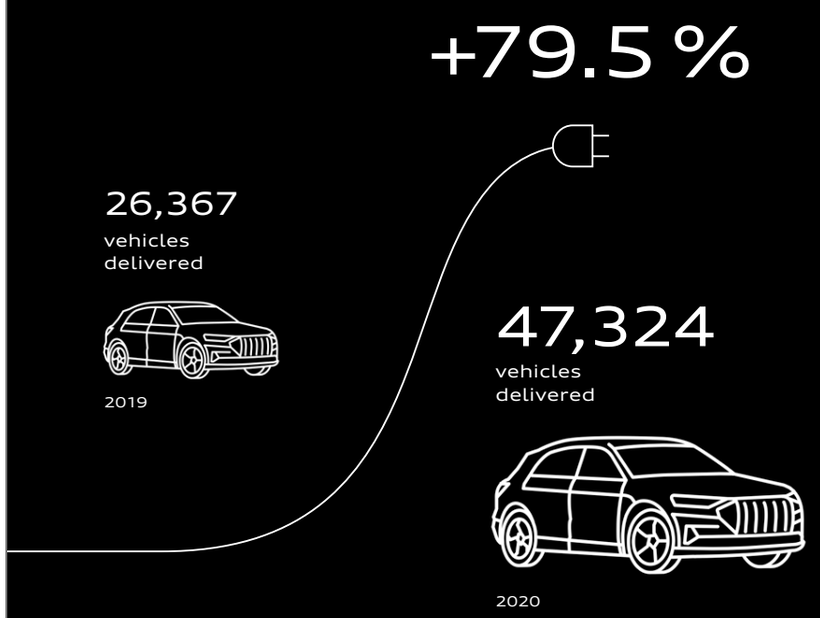
Strong final sprint in the fourth quarter

In Europe, dealerships gradually reopened from April 2020 as the coronavirus restrictions were eased in stages. Dealerships also opened up again in the USA from April 2020, depending on the regulations in force in the various states. From then onward, there was an upturn in demand and thus in order intake in Europe and North America, although with considerable regional differences. Despite further lockdowns and the associated closure of dealerships in parts of Europe and the USA in the fourth quarter, the Four Rings experienced a strong final sprint at the end of the year. Audi recorded 505,583 (488,471) deliveries in the fourth quarter, making it the most successful quarter in the company's history. By extending digital sales and service offers, such as the Audi live advice service, and using alternative distribution methods such as "home delivery" and "click and collect," the Four Rings responded flexibly and successfully to the challenges of the coronavirus pandemic.

Brief look at the product lines

One particularly successful aspect in 2020 was the year-on-year increase in deliveries to customers in certain product lines, with rises of 79.5 percent for the Audi e-tron[7, 12] product line, 18.1 percent for the Audi Q3 product line and 11.8 percent for the Audi A6 product line. In addition, Audi Sport posted a new record with more than 29,300 deliveries – that is 16.1 percent more than in the previous year.

Significant rise in deliveries of the Audi e-tron[7, 12] family



7 Audi e-tron: combined electric power consumption in kWh/100 km: 28.8–21.4 (NEDC); combined CO_2 emissions in g/km: 0
12 Audi e-tron Sportback: combined electric power consumption in kWh/100 km: 28.3–20.9 (NEDC); combined CO_2 emissions in g/km: 0

Financial performance indicators

Financial performance

The Audi Group generated revenue of EUR 49,973 (55,680) million in the 2020 fiscal year. The year-on-year decline of –10.2 percent was mainly due to a reduction in the number of vehicles sold as a consequence of the coronavirus pandemic.

Revenue from the sale of cars of the Audi brand fell to EUR 33,382 (39,467) million. This was also due to the market situation. Higher revenue than in the previous year was reported, among others, by the fully electric Audi e-tron[7, 12] family and the Audi Q3 product line. The Lamborghini brand generated revenue from automotive business of EUR 1,569 (1,743) million in the reporting period, while the Ducati brand reported revenue of EUR 676 (716) million.

7 Audi e-tron: combined electric power consumption in kWh/100 km: 28.8–21.4 (NEDC); combined CO_2 emissions in g/km: 0
12 Audi e-tron Sportback: combined electric power consumption in kWh/100 km: 28.3–20.9 (NEDC); combined CO_2 emissions in g/km: 0

Condensed income statement, Audi Group

EUR million	2020	2019	Δ in %
Revenue	49,973	55,680	–10.2
Cost of goods sold	–44,178	–47,597	–7.2
Gross profit from sales	**5,795**	**8,082**	–28.3
Distribution expenses	–3,158	–3,418	–7.6
Administrative expenses	–598	–687	–13.0
Other operating result	530	533	–0.5
Operating result	**2,569**	**4,509**	**–43.0**
Financial result	1,618	713	126.8
Profit before tax	**4,187**	**5,223**	–19.8
Income tax expense	–413	–1,279	–67.7
Profit after tax	**3,774**	**3,943**	**–4.3**

Revenue from engines, powertrains and parts deliveries was EUR 9,136 (8,102) million and thus above the previous year's level. The main positive effect here came from revenue from parts deliveries for local production in China. Due to strong market demand for Audi vehicles, revenue here rose by almost 30 percent, contrary to the general market trend in China.

The cost of goods sold decreased, mainly due to lower expenses for production materials and freights as a result of the pandemic-induced reduction in sales. The decline was less than the drop in revenue, as some costs continued to be incurred during production stops lasting several weeks, but also partly because of the higher proportion of electric vehicles, where material costs are higher.

Key figures for research and development

EUR million	2020	2019	Δ in %
Research and development activities	**3,662**	**4,426**	**–17.3**
(–) Capitalized development costs	1,365	1,146	19.1
(+) Amortization of and impairment losses (reversals) on capitalized development costs	1,257	1,087	15.6
(=) **Research and development expenditure**	**3,553**	**4,368**	**–18.6**

A look at research and development in the Audi Group

The research and development ratio[13] was 7.3 (7.9) percent in the year under review. The reduction in research and development activities was attributable to improved efficiency and to pooling software development in the Car.Software organization within the Volkswagen Group. The capitalization ratio[14] was 37.3 (25.9) percent. The increase is attributable partly to the change in the cash-generating unit[15] in the fourth quarter of 2019 and partly to greater focusing of project funds, coupled with the considerable reduction in the research and development activities.

Other factors affecting the results

Distribution expenses were lower than in the previous year, mainly as a consequence of the pandemic which led to a drop in sales of vehicles and lower expenditures for events, trade shows and sponsorship activities.

13 This ratio shows research and development activities relative to revenue.
14 This ratio expresses capitalized development costs in relation to total research and development activities.
15 In the case of self-generated intangible assets and the associated property, plant and equipment, previously the individual product or individual product family normally constituted the cash-generating unit. In the 2019 fiscal year, this unit had to be redefined for the Automotive segment because it is no longer the case that cash inflows generated by individual products are largely independent of those generated by other products. In particular, tighter emissions regulations worldwide mean that cash inflows from individual products increasingly influence each other. As a consequence of the altered framework conditions, since October 1, 2019, the brands have generally constituted the cash-generating units in the Automotive segment.

Year-on-year, positive factors affecting other operating result included income of EUR 495 million from the sale of Autonomous Intelligent Driving GmbH, Munich, within the Volkswagen Group. Higher residual value risks and one-time reversals of impairment losses of EUR 243 million in the previous year in connection with the change in the cash-generating unit, had a negative effect on the other operating result.

Lower personnel costs

Increased Group-wide cost discipline also had a positive impact on the operating result of the Audi Group. Indirect (non-production) personnel costs, as a component of fixed costs, fell by around 4 percent, for example. In the context of the Audi.Zukunft fundamental agreement, which was concluded in 2019, more than 1,300 direct (production) and indirect (non-production) employees took up the early-retirement offer and left

Key earning figures, Audi Group

EUR million	2020	2019	Δ in %
Operating result before special items	**2,739**	**4,509**	**–39.3**
Special items[16]	–170	–	–
Operating result	**2,569**	**4,509**	**–43.0**
of which Automotive segment	2,558	4,481	–42.9
of which Motorcycles segment	12	29	–59.8
adjusted for effects of PPA[17]	24	52	–53.2
Profit before tax	**4,187**	**5,223**	**–19.8**

in %	2020	2019	Δ in ppt
Operating return on sales before special items	**5.5**	**8.1**	**–2.6**
Operating return on sales	**5.1**	**8.1**	**–3.0**
of which Automotive segment	5.2	8.2	–3.0
of which Motorcycles segment	1.7	4.0	–2.3
adjusted for effects of PPA[17]	3.6	7.2	–3.6
Return on sales before tax	**8.4**	**9.4**	**–1.0**

16 Special items in connection with the diesel issue; in the previous year, the special items were negligible.
17 Adjusted for effects of subsequent measurement in connection with the purchase price allocation (PPA) amounting to EUR 12 (23) million.

the company on July 1, 2020. As of December 31, 2020, the Audi Group's workforce decreased by –3,780 to 86,860 (90,640) → employees, partly due to the sale of participations.

Audi Transformation Plan sees continued success

The implementation of the Audi Transformation Plan (ATP) also made a positive contribution to financial performance. For example, measures totaling EUR 2.6 (2.5) billion were realized, with a significant portion benefiting the operating result as well as contributing sustainably to subsequent years. Since its introduction in 2018, the impact of the ATP has already been EUR 7 billion and is therefore making good progress. The aim is to leverage EUR 15 billion through the ATP by 2022 with the help of measures affecting costs and revenue. The pandemic-induced drop in volumes may, however, result in a slight delay.

Currency and raw material effects reduced the operating result by EUR –333 million compared with the previous year.

The operating activities of the Audi Group are reflected in the operating result of EUR 2,569 (4,509) million. This represents an operating return on sales of 5.1 (8.1) percent.

Before special items of EUR –170 (–) million in connection with the diesel issue, the operating result was EUR 2,739 (4,509) million and the operating return on sales was 5.5 (8.1) percent.

Financial result, Audi Group

EUR million	2020	2019	Δ in %
Result from investments accounted for using the equity method	496	274	80.7
of which FAW-Volkswagen Automotive Company, Ltd.	107	180	–40.5
of which Volkswagen Automatic Transmission (Tianjin) Company Ltd.	244	185	31.5
of which SAIC Volkswagen Automotive Company Ltd.	17	27	–36.6
of which There Holding B.V.	61	–117	X
of which other	67	–1	X
Net interest result	52	2	X
Other financial result	1,070	436	145.2
of which brand settlement, China business[18]	641	295	117.0
Financial result	**1,618**	**713**	**126.8**
of which China business[19]	1,009	688	46.7

Financial result of the Audi Group

The financial result of the Audi Group increased to EUR 1,618 (713) million in the past fiscal year. This included an increase in the result from investments accounted for using the equity method, partly due to an increased profit from the participation in THERE Holding B.V., Rijswijk (Netherlands), which in turn has a participation in HERE International B.V., Eindhoven (Netherlands). The net interest result improved due to lower expenses for the compounding of interest on liabilities. The increase in the other financial result is mainly due to the selling profit of EUR 589 million resulting from the deconsolidation of Audi Electronics Venture GmbH, Gaimersheim.

18 Financial brand settlement agreed between AUDI AG and Volkswagen AG, Wolfsburg, and performance-related income for China business in connection with associates.

19 Includes the result from investments accounted for using the equity method: FAW-Volkswagen Automotive Company, Ltd., Volkswagen Automatic Transmission (Tianjin) Company Ltd., SAIC Volkswagen Automotive Company Ltd. and brand settlement/performance-related income for China business.

In addition, the year-on-year increase in the brand settlement from Volkswagen AG, Wolfsburg, for the China business due to the Audi brand's good performance in China had a positive impact on the development of the other financial result. Overall, the Audi Group's China business contributed EUR 1,009 (688) million to the financial result.

Profit after tax at prior-year level

In the 2020 fiscal year, the Audi Group posted a profit before tax of EUR 4,187 (5,223) million. The return on sales before tax was 8.4 (9.4) percent. Income tax expense was EUR 866 million lower than in the previous year. Alongside the lower operating result, this was mainly due to tax-free divestment of the participations in Autonomous Intelligent Driving GmbH, Munich, and Audi Electronics Venture GmbH, Gaimersheim. This resulted in a profit after tax of EUR 3,774 (3,943) million.

Development of return on investment in the Audi Group

The Audi Group's return on investment (ROI)[20] was 7.4 (12.7) percent in the 2020 fiscal year and thus below our minimum required rate of return of 9 percent. Year-on-year, the negative development of the return on investment is largely attributable to the pandemic-related reduction in the operating result after tax.[21] The average capital invested in the year under review was EUR 24,312 (24,930) million.

Development of return on investment in the Audi Group

EUR million	2020	2019	Δ in %
Operating result after tax	1,799	3,157	–43.0
Invested assets (average)	24,312	24,930	–2.5
Return on investment (ROI) in %	**7.4**	**12.7**	**–5.3 ppt**

20 The return on investment (ROI) expresses the return achieved on the capital employed. We obtain this indicator by determining the ratio of operating result after tax to average invested assets. Average invested assets are calculated from the asset items on the balance sheet that serve the core business purpose (intangible assets, property, plant and equipment, leasing and rental assets, investment property, inventories and receivables) less non-interest-bearing liabilities (trade payables and advance payments). The average of the value of invested assets at the start and the value of the invested assets at the end of the fiscal year is then calculated.

On the asset side, property, plant and equipment in particular fell to EUR 13,037 (14,618) million due to our prioritization of investment. Inventories declined to EUR 7,095 (7,819) million due to destocking, while trade receivables – particularly within the Volkswagen Group – increased to EUR 5,998 (5,011) million. On the non-interest-bearing liabilities side, trade payables increased to EUR 7,533 (7,106) million at year-end, driven by increased production in December.

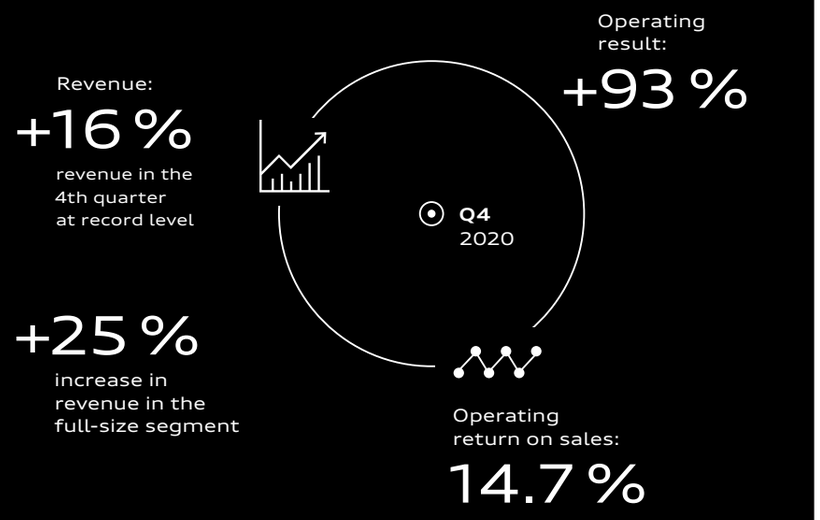
Strong performance and one-off effects in the fourth quarter

While the coronavirus pandemic had a very negative impact on the business performance of the Audi Group in the first half of 2020 in particular, the operating result picked up considerably due to a pleasing performance in the second half of the year and, above all, the best fourth quarter in the company's history.

The Audi Group posted revenue of EUR 16,710 (14,348) million in the fourth quarter of 2020. The operating result was EUR 2,456 (1,271) million in this period, while the operating return on sales was 14.7 (8.9) percent. The principal factors here, apart from a substantial rise in the number of vehicles sold due to pent-up market demand – especially a higher proportion of full-size cars – were increased parts deliveries for the strong China business and a reduction in fixed costs as a result of improved cost discipline. In addition, other positive effects compared with the prior-year period included effects from the measurement of commodity hedges.

21 A standardized average tax rate for the Volkswagen Group of 30 percent is assumed for operating result after tax.

4th quarter in figures



The financial result of the Audi Group was above the prior-year level at EUR 529 (284) million in the fourth quarter of 2020. As a result, the Audi Group reported a profit before tax of EUR 2,985 (1,555) million and the operating return on sales before tax was 17.9 (10.8) percent. Profit after tax came to EUR 2,608 (1,101) million.

Net worth

Total assets of the Audi Group as of December 31, 2020, rose to EUR 67,229 (66,878) million.

The Audi Group's non-current assets declined, mainly due to the reduction in property, plant and equipment resulting from greater prioritization of investments to enhance active liquidity management, including as a result of the coronavirus pandemic.

As of December 31, 2020, the equity of the Audi Group decreased to EUR 24,253 (28,395) million, giving an equity ratio of 36.1 (42.5) percent. The decline in equity was primarily due to lower reserves, together with a year-on-year increase in the profit transfer to Volkswagen AG, Wolfsburg. This was based on higher profit after tax in the AUDI AG single-entity financial statements – prepared in accordance with the German Commercial Code (HGB) – due to a higher dividend distribution to AUDI AG from an Audi subsidiary.

Non-current liabilities were higher as of December 31, 2020, partly owing to a rise in provisions for pensions as a result of a reduction in the interest rate applied for discounting. The rise in the current liabilities of the Audi Group was mainly caused by higher financial liabilities in connection with the higher profit transfer to Volkswagen AG, Wolfsburg.

Condensed balance sheet, Audi Group

EUR million	Dec. 31, 2020	Dec. 31, 2019	Δ in %
Non-current assets	32,443	34,211	–5.2
Current assets	34,785	32,422	7.3
Assets classified as held for sale	–	246	–100.0
Total assets	**67,229**	**66,878**	**0.5**
Equity	24,253	28,395	–14.6
Liabilities	42,975	38,431	11.8
of which non-current liabilities	17,638	16,212	8.8
of which current liabilities	25,337	22,219	14.0
Liabilities classified as held for sale	–	52	–100.0
Total equity and liabilities	**67,229**	**66,878**	**0.5**

Focus on the Audi Group's capital investment

Total capital investments declined to EUR 3,654 (4,223) million in the 2020 fiscal year as a result of the Audi Group's investment discipline, including in areas that are not product-relevant.

The reduction was particularly attributable to a year-on-year fall in capex, while capitalized development costs increased slightly due to the focus on product-related investments.

Financial position

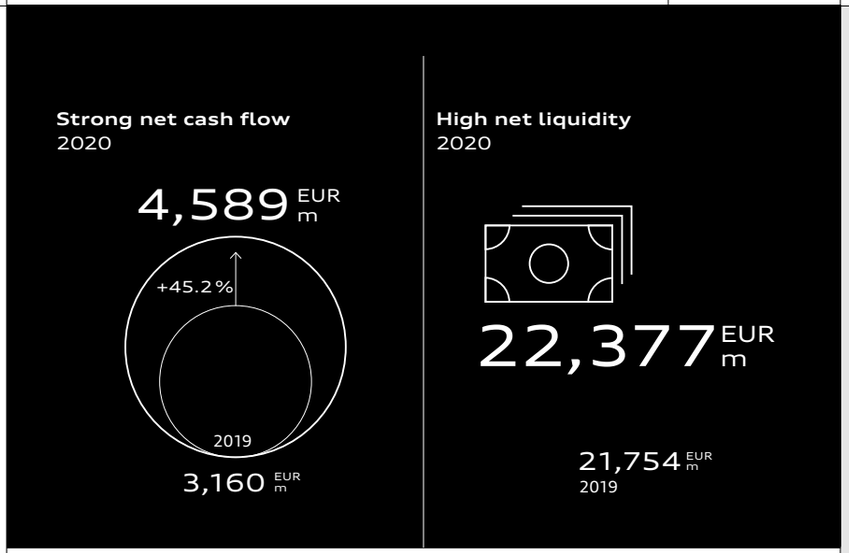
In the 2020 fiscal year, the Audi Group generated cash flow from operating activities of EUR 6,308 (7,479) million. The decline was principally due to lower earnings as a result of the pandemic.

Significant reduction in capex

The cash flow from investing activities attributable to operating activities came to EUR –2,752 (–3,118) million in 2020.

This reflected the Audi Group's increased investment discipline. For instance, we significantly reduced capex[22] to EUR –1,888 (–2,731) million. The ratio of capex was 3.8 (4.9) percent in the 2020 fiscal year. Intragroup sales of subsidiaries and the transfer of shares in associates amounting to approximately EUR 1.5 billion had a positive effect on cash flow from investing activities. This was countered by cash deposits and loans extended due to a change in the investment horizon.

22 Capex includes investments in property, plant and equipment, investment property and other intangible assets according to the cash flow statement.



Net cash flow and net liquidity above prior year

The net cash flow of the Audi Group totaled EUR 4,589 (3,160) million in the 2020 fiscal year.

Cash flow from financing activities amounted to EUR –3,952 (–1,200) million. It mainly comprised the profit transfer to Volkswagen AG, Wolfsburg, of EUR –3,752 million for 2019.

As of the balance sheet date, our cash funds declined to EUR 11,152 (11,747) million.

The net liquidity of the Audi Group as of December 31, 2020, amounted to a total of EUR 22,377 (21,754) million.

Condensed cash flow statement, Audi Group

EUR million	2020	2019	Δ in %
Cash and cash equivalents at beginning of period	11,747	8,550	37.4
Cash flow from operating activities	**6,308**	**7,479**	**–15.7**
Investing activities attributable to operating activities	–1,720	–4,319	–60.2
of which capital expenditure[23]	–1,888	–2,731	–30.8
of which capitalized development costs	–1,365	–1,146	19.1
of which acquisition and sale of participations	1,460	–497	X
Net cash flow	4,589	3,160	45.2
Change in cash deposits and loans extended	–1,032	1,201	X
Profit transfer to the Volkswagen Group	–3,752	–1,096	X
Lease payments, change in miscellaneous financial liabilities	–200	–104	91.9
Change in cash and cash equivalents due to changes in exchange rates	–199	36	X
Change in cash and cash equivalents	**–595**	**3,196**	**X**
Cash and cash equivalents at end of period	**11,152**	**11,747**	**–5.1**
Net liquidity	**22,377**	**21,754**	**2.9**
Cash flow from investing activities	**–2,752**	**–3,118**	**–11.8**
Cash flow from financing activities	**–3,952**	**–1,200**	X

23 This includes investments in property, plant and equipment, investment property and other intangible assets according to the cash flow statement.

Employees

In the 2020 fiscal year, the average level of the Audi Group workforce was 87,996 (90,783) employees. As of year-end 2020, there were 86,860 (90,640) employees. This reduction was largely based on the Audi.Zukunft fundamental agreement concluded in 2019. More than 1,300 direct and indirect employees of AUDI AG took up the early-retirement offer and left the company on July 1, 2020. There was also a reduction in the number of employees at Audi Hungaria Zrt. as a result of employee turnover and adjustment of the production program. The deconsolidation of Autonomous Intelligent Driving GmbH, Munich, and Audi Japan Sales K.K., Tokyo, also brought a reduction in the workforce.

Audi.Zukunft

In order to transform the company, Audi reached a fundamental agreement with employee representatives in November 2019 on structural matters within the framework of Audi.Zukunft. The decisions relate especially to the optimization of the strategic production capacity at the two German sites and socially responsible adjustment of jobs along the demographic curve. At the same time, job guarantees were extended to the end of 2029, and agreement was reached on the creation of new jobs in future-oriented fields.

Workforce Audi Group

Average for the year	2020	2019	Δ in %
Domestic companies[24]	**58,432**	**60,083**	**–2.7**
of which AUDI AG	57,437	58,940	–2.6
Ingolstadt plant	42,131	42,904	–1.8
Neckarsulm plant	15,306	16,036	–4.6
Foreign companies	**26,612**	**27,669**	**–3.8**
of which Audi Brussels S.A./N.V.	3,052	2,922	4.4
of which Audi Hungaria Zrt.	12,391	13,079	–5.3
of which Audi México S.A. de C.V.	5,233	5,268	–0.7
of which Automobili Lamborghini S.p.A.	1,769	1,788	–1.1
of which Ducati Motor Holding S.p.A.	1,337	1,290	3.6
Employees	**85,044**	**87,752**	**–3.1**
Apprentices	2,493	2,585	–3.6
Employees of Audi Group companies	**87,537**	**90,337**	**–3.1**
Staff employed from other Volkswagen Group companies not belonging to the Audi Group	459	446	2.9
Workforce Audi Group	**87,996**	**90,783**	**–3.1**
Workforce Audi Group as of Dec. 31	86,860	90,640	–4.2

The funds freed up in this way will secure the strategic target corridor for the operating return of 9 to 11 percent and finance the implementation of future projects such as in the areas of electrification and digitalization.

For more information about Audi.Zukunft and strategic HR planning → see page 266.

24 Of these employees, 2,104 (1,945) were in the passive stage of their partial retirement.

Report on expected developments

The Board of Management of AUDI AG anticipates – based in part on the estimates by leading economic institutes – that the global economy will stabilize in 2021 and grow by a good 4 percent. This is based, in particular, on the expected containment of the coronavirus pandemic as a result of strict lockdowns at the start of the year and the increasing number of vaccinations administered as the year progresses. The Board of Management believes that risks will arise from protectionist tendencies, turbulence in the financial and commodity markets and structural deficits in individual countries. Moreover, growth prospects will be negatively affected by continuing geopolitical tension and conflicts. Furthermore, the Board of Management assumes a clearly positive economic trend in both the developed economies and the emerging markets.

For 2021, the Audi Board of Management expects the passenger car markets to develop at different rates in the various regions. Overall, worldwide demand for new vehicles is expected to be perceptibly higher than in the year under review, assuming successful containment of the coronavirus pandemic over a sustained period.

In Europe, the brand with the Four Rings expects that in 2021 new car registrations will be much higher than in the previous year. Audi also expects new registrations on the US market for

passenger cars and light commercial vehicles to be considerably higher than in 2020.

The market for passenger cars in China, too, is expected to develop favorably, with considerably higher volumes than in 2020.

Significant year-on-year growth is also expected for the international motorcycle markets.

The Audi Board of Management is cautiously optimistic about 2021, although forecasting is currently hampered by the continued impact of the coronavirus pandemic, which also affects global economic recovery, and by the bottlenecks in the supply of semiconductors experienced at the beginning of the year. Subject to this situation, the Board of Management currently expects the Audi key performance indicators to develop as follows in the 2021 fiscal year:

Anticipated development in the key performance indicators of the Audi Group

	Actual 2020	Forecast 2021	Strategic target corridor
Deliveries of cars of the Audi brand to customers[25]	1,692,773	significantly above prior-year level	–
Revenue in EUR million	49,973	significantly above prior-year level	–
Operating result/operating return on sales in %	5.1	between 7 and 9 percent	between 9 and 11 percent
Return on investment (ROI) in %	7.4	between 12 and 15 percent	> 21 percent
Net cash flow in EUR million	4,589	between EUR 3.5 and 4.5 billion	–
Research and development ratio in %	7.3	within the strategic target corridor of 6 to 7 percent	between 6 and 7 percent
Ratio of capex in %	3.8	within the strategic target corridor of 4 to 5 percent	between 4 and 5 percent

25 This includes delivered Audi models produced locally by the associate FAW-Volkswagen Automotive Company, Ltd., Changchun (China).

Cost and investment discipline

Ensuring future viability

Audi is clearly committed to a strategic target corridor of 9 to 11 percent for the operating return on sales, as only lasting profitability can create the necessary scope for investing in the future.

To achieve this target, the company is relying on strict investment and cost discipline so as not to compromise on product substance and future viability. In the 2020 fiscal year, Audi therefore reduced capex considerably to EUR 1,888 (2,731) million. The ratio of capex fell to 3.8 (4.9) percent. Audi is also continuing to implement the Audi Transformation Plan (ATP) and the Audi.Zukunft agreement consistently.

At EUR 3,662 (4,426) million, research and development activities also declined; the research and development ratio reached 7.3 (7.9) percent. Efficiency gains in Technical Development and the pooling of software development in the Car.Software organization within the Volkswagen Group had a positive impact here. However, there was no reduction in project funds for new models and technologies – a clear entrepreneurial statement amid the pandemic.

This path is set to continue in the coming years. A total amount of EUR 35 billion in the period to 2025 will ensure that, despite the challenging economic environment, upfront expenditure will remain at a high level, particularly with respect to future vehicle projects. The company is prioritizing product-related investments and reducing its strategic target corridor for capex by one percentage point to between 4 and 5 percent of revenue. Meanwhile, Audi is increasing upfront expenditure for products and future technologies. Instead of investing 5 to 6 percent of revenue in research and development, the company plans to increase this to 6 to 7 percent in the future – Audi is thereby underscoring its commitment to innovation and accelerating its transformation into a provider of connected and sustainable premium mobility.

R&D

6–7 %

expected research and development ratio

capex

4–5 %

anticipated ratio of capex

Report on risks and opportu-nities

Report on risks and opportunities

Risk management system in the Audi Group

Integrity and compliance with statutory and regulatory requirements are the basis of entrepreneurial actions in the Audi Group and are treated as a top priority. Addressing opportunities and risks constructively and openly is vital for Audi in order to ensure the lasting success of its entrepreneurial activities. The particular purpose of an effective Risk Management System (RMS) – besides fulfilling statutory requirements – is to validate entrepreneurial goals, protect stakeholders against negative corporate developments, fulfill the company's far-reaching duty of care in respect of how it handles risks as well as protect long-term viability and competitiveness.

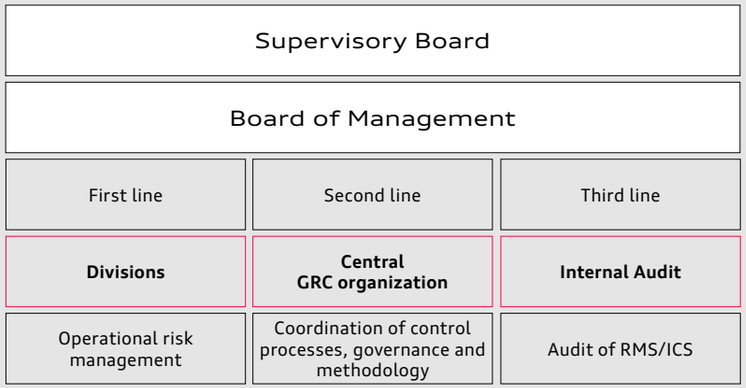
The Audi Group's responsible and transparent approach to risks is reflected, among other things, in the formulation of ambitious corporate goals that are based comprehensively on risk/return considerations. These are synchronized both within the Audi Group and with the Volkswagen Group. The RMS is supplemented by the Internal Control System (ICS) that ensures that processes at Audi are compliant and stable. In the past fiscal year, an extensive revision and extension of the ICS was successfully completed.

In this way, control activities were assigned to all major risk-carrying business processes across division boundaries as safeguards.

Operating principle of the Risk Management System

The Risk Management System of the Audi Group is based on the internationally recognized standard of the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Risks are to be identified, evaluated and appropriately managed by those responsible. The higher-level internal business units and Group functionalities responsible must communicate in a transparent, accurate and timely manner. All divisions and material companies of the Audi Group are integrated into the Risk Management System in order to satisfy both business and statutory requirements. Changes in the legal framework with respect to risk management are also continually monitored and accordingly implemented promptly for the company.

The RMS/ICS is closely interlocked with the compliance functionality (Central Governance, Risk & Compliance (GRC) organization) as part of an integrated and inclusive management approach. The Board of Management and the Supervisory Board, especially the Audit Committee, are kept regularly informed about the RMS/ICS as well as the Compliance Management System (CMS) in a combined report.



Central tasks of risk management

The central tasks of risk management are to identify and analyze risks, ensure transparent reporting of these risks and improve their controllability using suitable risk management tools. Risks are generally reported quarterly through the Risk Quarterly Process, which maps the current risk situation in the Audi Group. In accordance with the COSO framework, risk-appropriate internal controls are also defined along the entire value chain and their implementation is monitored (ICS).

The Audi Group promotes the further development of the RMS/ICS through cross-divisional and cross-company projects. The priority here is to interlink the system closely with corporate financial planning and management, as well as with accounting. In view of its high strategic relevance, the regulatory framework for the RMS/ICS is firmly established both in an internal Corporate Policy of AUDI AG and in the policies of the material participations.

To systematically structure its risk management architecture, the Audi Group follows the “Three Lines Model” – a recommendation

of the European Confederation of Institutes of Internal Auditing (ECIIA). On this basis, the RMS/ICS of the Audi Group features three lines that are intended to protect the company against the occurrence of material risks.

The individual divisions of AUDI AG and the participations form the first line. They are responsible for the operational management of risks, taking countermeasures, controlling the risks and reporting on them.

In the second line, the central GRC organization takes charge of the fundamental functionality of the RMS/ICS as well as the CMS. Core activities involve monitoring system performance and submitting an aggregated report on the risk situation to the Board of Management and the Audit Committee of the Supervisory Board. This ensures that the statutory requirements for the early identification of risks and the effectiveness of the RMS/ICS are met. Ad hoc projects on risk management and regular training courses are also held to reinforce awareness of risk management and compliance as well as to promote a positive risk culture in the Audi Group. Mandatory training and function-specific training programs are aimed at various specific target groups. AUDI AG also has business division GRC coordinators who liaise between the first and second lines. At the participations, this function is handled by clearly designated risk and compliance officers.

In the third line, Internal Audit as an impartial body examines the security, regularity and economic effectiveness of the RMS/ICS activities. The RMS/ICS for accounting is additionally subject to scrutiny by the independent auditor of the consolidated financial statements.

Each line furthermore submits reports regularly and independently to the full Board of Management and the Audit Committee of the Supervisory Board of AUDI AG.

The independent auditor assesses annually the suitability of the measures taken by the Board of Management pursuant to Section 91, Para. 2 of the German Stock Corporation Act (AktG).

Operating principle of opportunities management

To secure the sustained success of the Audi Group, it is necessary in all long-term corporate decisions to identify and use entrepreneurial opportunities, as well as managing risks effectively. Opportunities management – which includes such aspects as optimizing revenue, costs and products – is integrated into the operational and organizational structure of the Audi Group and is closely aligned with our strategic objectives. To that end we continuously analyze the international context for potential impacts on the business model in order to identify trends and industry-specific key factors early on. Relevant developments are studied in detail with the help of scenario analyses. The possible impact on Audi is identified jointly with Strategic Corporate Planning, the divisions affected and the Controlling area. The purpose of this cooperation is to identify and utilize opportunities. Medium and short-term potential opportunities are identified and operationalized by the divisions. The aim is to secure the long-term competitiveness and future viability of Audi through its strategy, efficiency and opportunities initiatives such as Audi.Zukunft and the Audi Transformation Plan (ATP), and ad hoc through benchmarking. Over and above pursuing specific targets, further opportunities may come to light when implementing these initiatives.

Risks and opportunities of the Audi Group

The main risks and opportunities for the Audi Group are described below. Based on current assessments, these have been categorized as materially relevant to future development and may lead to negative or positive deviations from the key performance indicators forecast.

AUDI AG sees risks to the positive growth of global economic output, and therefore to the Audi key performance indicators, as lying predominantly in a failure to achieve lasting containment of the coronavirus pandemic. There is a further risk regarding the sufficient supply of semiconductors for the entire automotive industry. Audi is striving to keep the operating impacts of the current undersupply of semiconductors as low as possible and to compensate them as far as possible during the remainder of the year.

The most significant operational risks are also associated with the timely implementation of future mandatory legal requirements in connection with cyber security and vehicle software updates. In connection with the strategic realignment of Audi business in China, risks remain in relation to collaboration with local partners. These risks could have an adverse impact, particularly on the planned volume development as well as on important financial key figures, and could adversely affect our reputation.

Progress with diesel issue

AUDI AG has made material progress since 2015 on the many legal and official proceedings in a large number of countries in connection with the diesel issue. Individual and class action lawsuits brought by customers and/or environmental and consumer organizations are currently still pending against Volkswagen AG and other Volkswagen Group companies, including AUDI AG, in a number of countries. Among other things, these are asserting alleged rights to damages or rescission of the purchase contract. Further settlements were achieved in the year under review, the financial impact of which is reflected in the special items described in the explanation of the Audi Group's →financial performance. The consultations with government agencies on technical measures relating to the diesel issue have largely been concluded. Audi remains in technical discussions with the responsible authorities in only a few cases. There are also criminal proceedings and investigations still pending against individuals. The main trial proceedings that began at the Munich II Regional Court in September 2020, where a former Chairman of the Board of Management of AUDI AG is defending himself against allegations in connection with the diesel issue, are particularly noteworthy.

In-depth information about the diesel issue can be found in the Volkswagen Group's Annual Report for the 2020 fiscal year.

Sustainability as the basis for the Audi Group's future viability

The topic of sustainability is becoming increasingly important throughout the entire value chain and in the management of the company as a whole. For example, in 2021 and beyond, differing and constantly changing global regulations and legislation on vehicle emissions have to be complied with. Continued systematic development of alternative drive concepts – especially fully electric and electrified models – is a cornerstone of the Audi strategy. This results, among other things, in a risk that we will fail to meet the more stringent average target for CO_2 fleet emissions in the EU introduced in September 2020. Moreover, there are risks in connection with the speed of the general transition to electric mobility and the associated market acceptance of our electric vehicles, partly because of the delayed development of the infrastructure. Furthermore, sustainable operations are the basis at Audi for future-proofing the company. Audi therefore takes the return on investment (ROI) after CO_2 effects into consideration in its product decisions. The decarbonization index[26] and NEV share[27] are firmly established in the Audi Group as strategic key figures and are used to manage the company from a sustainability perspective.

To achieve its sustainability targets, the Audi Group has earmarked EUR 15 billion of the EUR 35 billion capital investment planned for the period up to 2025 for electric mobility. In 2021, Audi will maintain its consistent efforts across the entire value chain to preserve resources and help the topic of sustainability become even more deeply rooted. That is the only way the brand with the Four Rings can offer customers sustainable premium mobility and remain economically successful.

26 The decarbonization index (DCI) measures the average emissions of CO_2 and CO_2 equivalents (together CO_2e) over the entire life cycle of our portfolio of passenger cars and is stated in metric tons per vehicle. The DCI encompasses both direct and indirect CO_2e emissions at the individual production sites (Scope 1 and 2) as well as all further upstream and downstream CO_2e emissions over the life cycle of the vehicles sold – from the extraction of raw materials to the use of the vehicle and final disposal of old vehicles (Scope 3).

27 The NEV (new energy vehicle) share expresses the percentage of all-electric (BEV) as well as electrified (PHEV) vehicles in relation to the Audi brand's total amount of vehicles produced.

Alongside a rapid global economic recovery, the main opportunities involve synergies in new vehicle architectures in the Volkswagen Group, especially in the areas of development, procurement and production. In addition, the global trade disputes could be defused and the company could increase its market share thanks to its young and attractive product portfolio. A further increase in the strength of the brand could also prove beneficial.

Overall risk situation of the Audi Group

The current risk situation has already been built into the forecast for the 2021 fiscal year. The overall risk situation in the Audi Group has increased slightly compared with the previous year. This is reflected in the number of reportable risks. On the basis of the information available at present, there continue to be no risks that could pose a threat to the Audi Group and material Group companies as going concerns.

Ducati and Lamborghini brands

In spite of the difficult global situation owing to the coronavirus pandemic, Ducati Motor Holding ended 2020 with a record in the second half of the year.

Production

Motorcycles

44,827 (51,723)

–13.3 %

Production was down by –13.3 percent compared with 2019 as a result of the coronavirus pandemic and the associated production stop of several weeks.

Revenue

EUR million

676 (716)

–5.6 %

Yet in spite of the difficult market environment, revenue only decreased by –5.6 percent to EUR 676 million due to a vigorous second half of the year and a stable genuine parts business.

Deliveries to customers

Motorcycles

48,042 (53,183)

–9.7 %

Thanks to strong sales performance during the second half of the year, Ducati delivered a total of 48,042 motorcycles in 2020, thus limiting the year-on-year drop in sales to –9.7 percent.

Operating result

EUR million

12 (29)

–59.8 %

before PPA[17]

EUR million

24 (52)

–53.2 %

The effects of the pandemic were also clearly visible in the operating result, which declined by –59.8 percent to EUR 12 million.

Ducati model families

Ducati Superleggera V4

- Diavel
- XDiavel
- Hypermotard
- Monster
- Multistrada
- Panigale
- Scrambler
- Streetfighter
- Superleggera
- Supersport

17 Adjusted for effects of subsequent measurement in connection with the purchase price allocation (PPA) amounting to EUR 12 (23) million.

Photo: AUDI AG

The supercar brand Lamborghini was also severely affected by the coronavirus pandemic. Even so, in 2020 Lamborghini recorded the best second half of the year in the company's history.

Production

Cars

7,250 (8,664)

–16.3 %

The number of vehicles produced declined from the previous year by –16.3 percent to 7,250 vehicles owing to a production stop in Italy that lasted for several weeks.

Revenue from automotive business

EUR million

1,569 (1,743)

–10.0 %

Yet in spite of the difficult market environment, revenue from automotive business only dropped by –10.0 percent to EUR 1,569 million due to a strong second half of the year.

Deliveries to customers

Cars

7,430 (8,205)

–9.4 %

As a result of the coronavirus pandemic, the Lamborghini brand delivered 7,430 vehicles, –9.4 percent fewer than the year before despite a stable order situation.

Lamborghini model families

Aventador
- Aventador S
- Aventador S Roadster
- Aventador SVJ
- Aventador SVJ Roadster

Huracán
- Huracán EVO
- Huracán EVO RWD
- Huracán EVO RWD Spyder
- Huracán EVO Spyder
- Huracán STO

Urus

Limited edititon
- Sián FKP 37
- Sián Roadster
- Essenza SCV12
- SC20

Lamborghini Sián Roadster:
combined fuel consumption in l/100 km: 18.5;
combined CO_2 emissions in g/km: 447 (WLTP)

Photo: AUDI AG

How will Audi continue

DELIGHTING

↘

its customers in the future?

S B T

Talking Sustainable Business – Key Facts

- ↗ Design: new Audi e-tron GT quattro[1] as the spearhead of the Audi electric model initiative showcases the future of electric design
- ↗ Electric mobility: substantial progress achieved in profitability; investments amounting to around EUR 15 billion in electric mobility by 2025
- ↗ Comfort: Audi offers customers innovative lighting and sound technologies
- ↗ Software: expansion of Group synergies – the Car.Software organization has operated as the central unit for software development within the Volkswagen Group since July 2020; Artemis project as a blueprint for future agile development throughout the entire Volkswagen Group
- ↗ High-performance segment: high contribution to profitability; despite the coronavirus with record sales; electrification is leading the segment into the future

Page 136
The masterpiece

Page 152
A winning quartet – Audi's path to the electric age

Page 168
Bright & audible – for more comfort

Page 183
Speed date – the future of the high-performance segment

Page 203
Synergies in software development. Creating hard facts for software

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

↘

The MASTERPIECE

Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

Photo: Robert Fischer

Photo: Robert Fischer

The new Audi e-tron GT quattro[1] and Audi RS e-tron GT.[2] Fully electric and produced at Böllinger Höfe, these vehicles combine forward-looking technologies with Audi's commitment to premium quality, and therefore symbolize the electrical performance of the future.

↘ The future lies in ideas

Text: Bernd Zerelles

The fully electric Audi e-tron GT quattro[1] is a masterpiece of engineering art – in terms of its technology, aerodynamics and design. This electric car signposts where the future of Audi lies. Which details make this vehicle a masterpiece?

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0
2 Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

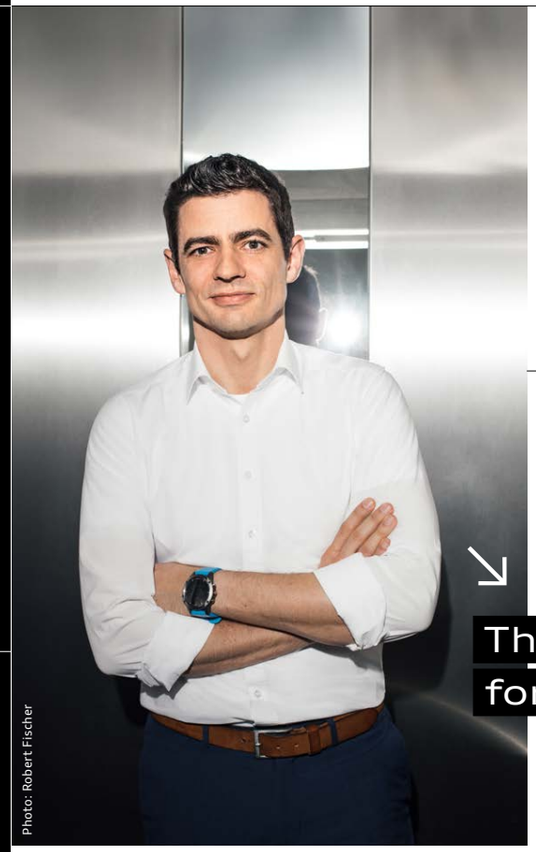


Photo: Robert Fischer

Photo: Robert Fischer

Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

↘ The formula for progress

Dr. Karl Durst,
Head of Requirements Management/Architecture Whole Vehicle

During our video call, Dr. Karl Durst waves his cup of coffee around with a wry smile: "Basically I could illustrate our work very well with this cup. The cup needs to satisfy various requirements: It needs to hold 0.3 liters of liquid, you need to be able to hold it with one hand and it needs to keep the liquid hot for a while. It's the same with a vehicle: Every Audi needs to satisfy various different requirements. If it's an Avant, it needs to be family-friendly with ample space for three kids on the rear seat. A sports car needs to have excellent driving dynamics. The concept for a vehicle is defined by requirements. And the requirements come from our customers."

A Gran Turismo is a sporty touring car with excellent dynamic handling, a confident glider. The Audi e-tron GT[1] shares this character.

Photo: AUDI AG

Focus on the customer

Thus the concept starts with the customer's wishes. And in the case of the Audi e-tron GT quattro,[1] they are as clear-cut as they are incompatible. Or at least, they have been until now. Plenty of customers want a vehicle that is beautiful, very sporty, fit for everyday use and sustainable. The challenge is that very sporty vehicles do not usually score highly on everyday usability. And if the focus shifts too much towards everyday usability, developers are inclined to create a purely functional vehicle that will then be less aerodynamic or sporty.

But the future often makes things possible that were difficult to imagine in the past. That is where electric mobility steps into the role of enabler. Durst, who is effectively the project owner in defining the performance specifications for new vehicles, puts it like this: "With the electric platform as our basis, we can now bring together aspects of the vehicle architecture of the Audi e-tron GT[1] that were previously incompatible."

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

Optional, aerodynamically optimized wheels round out the efficient, high-performance vehicle concept.

Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

Photo: Robert Fischer

The electric vehicle concept

There is no ten-cylinder engine restricting the cabin. Instead, small electric motors on the axles permit an interior with abundant space for four passengers. The agility and surprising acceleration of the electric drive is combined with a high range, which also benefits from excellent aerodynamics. The absence of a combustion engine enables proportions that produce an exciting design.

The result is a fully electric, four-door, driver-focused Gran Turismo with high-performance handling characteristics. “The Audi e-tron GT[1] is the best example of how utterly contradictory requirements drive us further forward than we had ever imagined in our wildest dreams,” adds Durst. “The vehicle is a breathtaking combination: dynamic, practical, efficient and a design icon.”

The Audi RS e-tron GT[2] also performs while charging: Thanks to its 800-volt technology, the high-voltage battery can be recharged quickly.

Photo: AUDI AG

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0
2 Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

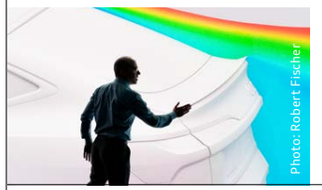


Photo: Robert Fischer

Dr. Moni Islam,
Head of Aerodynamics/
Aeroacoustics
Development

Photo: Robert Fischer

Active aerodynamics improve range

Dr. Moni Islam is standing in front of an oversized LED wall that displays an aerodynamics simulation of the Audi e-tron GT.[1] He throws his arms wide open and follows the simulated airflow along the vehicle’s silhouette. Brimming with pride, he declares: “With the Audi e tron GT[1] we’ve succeeded in blending fantastic design with very good aerodynamics.”

The Canadian makes no secret of the huge challenge his specific discipline has faced: “For system reasons, electric vehicles can carry less energy on board in their battery than conventional vehicles have in their fuel tank. So we need to take special care

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

In combination, the vehicle details create a sculpture that looks like it was shaped by the wind. This is further underscored by styling with a high degree of aerodynamic quality. The drag coefficient amounts to only 0.24.

Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

Photo: AUDI AG

when using that electrical energy. For us engineers, there's a huge incentive to develop the best possible aerodynamics for all our electric models." Every one-thousandth degree of improvement in the aerodynamics can extend the range. That is because aerodynamic drag is often the dominant component of road resistance for an electric vehicle when driven by the customer. At speeds beyond about 100 km/h, it already accounts for roughly half of total road resistance. At a steady 140 km/h, aerodynamic drag approximately doubles. That inflates energy consumption by around 50 percent.

Levers for optimizing aerodynamics

But the electric vehicle concept is conducive to efficient aerodynamics. For example, the Audi e-tron GT[1] has a completely enclosed underbody that is smooth from tip to tail. Such a design is only possible because the battery drive means there is no exhaust system. That already improves the airflow enormously. Also, the electric motors of the Audi e-tron GT[1] operate much more efficiently than a combustion engine. They transmit less heat to the surroundings and cooling is needed much more rarely and to a lesser extent. That allows the aerodynamics engineers to employ intelligent cooling air management on the Audi e-tron GT.[1]

The closable side cooling air inlets

"We've realized a raft of measures to manage the aerodynamics optimally on the Audi e-tron GT.[1] First, the closable side cooling air inlets are a very important aerodynamic feature of the forward structure," emphasizes Islam. "The louver system on these air inlets is controlled electronically and regulates automatically how much cooling air the vehicle needs. Depending on the driving profile, the louvers remain closed for much of the journey – that keeps the drag coefficient as low as possible."

The extending rear spoiler

Another innovation is the extending rear spoiler, which for the first time on an Audi has several positions to optimize the various driving modes. This means that in any driving mode the rear spoiler can adjust the direction of the airflow to produce the most appropriate aerodynamics. In eco mode, the slipstream is brought together as close to parallel and to the vehicle's tail end as possible. The reason? The smaller this low-pressure zone at

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

the rear, the lower the entire vehicle's resistance. In the dynamic mode, the rear spoiler is angled much more steeply to reduce lift at the rear wheels to the minimum level required.

Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

Photo: AUDI AG

Fascinating effects thanks to technological innovation: active adjustment of aerodynamics by the rear spoiler adjustable in two stages.

The adaptive air suspension

The controllable features also include the adaptive air suspension. "Height adjustment is important for aerodynamic reasons. The lowest position, the setting for fast freeway driving, is ideal for the drag coefficient," explains Islam. He then adds: "From an aerodynamics perspective, I don't mind if the suspension setting is higher for everyday use in city driving. At those speeds, aerodynamics are barely relevant."

He concludes: "The Audi e-tron GT[1] has an outstanding drag coefficient of 0.24. That's the best drag coefficient to date of any of our electric models. Good aerodynamics are especially important for maximizing the electric range. But if performance is what you want, with very low lift for precision driving dynamics, the Audi e-tron GT[1] can of course also deliver. The technology makes incredible aerodynamic breadth possible."

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

The exterior of the Audi RS e-tron GT[2] is a dynamic work of art. Each surface and each line is harmonious – from the headlights to the large diffuser at the rear.

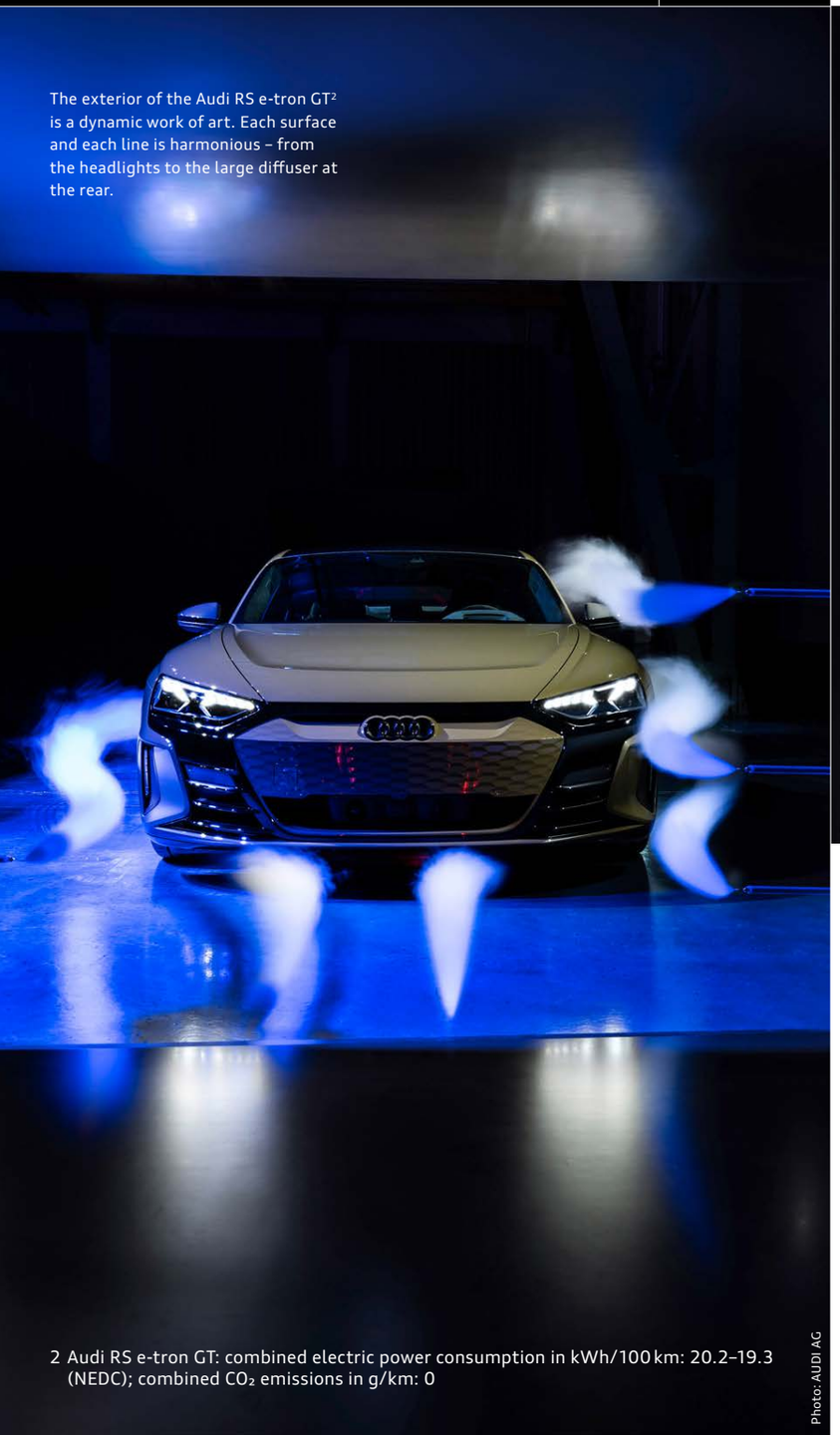


Photo: AUDI AG

2 Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

Photo: Robert Fischer

Marc Lichte,
Head of Audi Design

Perfectly proportioned

Photo: Robert Fischer

The Audi e-tron GT quattro[1] and the Audi RS e-tron GT[2] are the first fully electric series-production vehicles to display all the traits that define the Audi e-design of the future. The ambition of reinterpreting a car is also reflected in the puristic design that is inspired by aerodynamic performance.

Marc Lichte strides swiftly into the studio hall in which the Audi e-tron GT[1] is waiting for the cameras to start rolling, and calls first: “So, is the suspension in the lowest position? That will show off its proportions much better!” Then Lichte simply can’t resist exclaiming: “Doesn’t that thing look just great? A vehicle with a battery in the underbody, a four-seater with plenty of rear headroom, even for tall people like me – but the Audi e-tron GT[1] is still seven centimeters lower than the Audi A7. I always say: Proportions are the basis for good design. Always. And the package of the Audi e-tron GT[1] creates those proportions – they are quite simply perfect.”

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0
2 Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

The quattro muscle is a special detail. It presented designers with major challenges, since this section is tautened with absolute precision.

Photo: Robert Fischer

Photo: Robert Fischer

Audi e-design of the future

The Audi e-tron GT[1] is the first series-production vehicle to display all the traits that Marc Lichte and his team define as the Audi e-design of the future. Such as the optically inverted Singleframe, which is finished in the body color with a dark surround. It declares from far off: This is an Audi. And – it is electric. Or take the expressive sill design, which very clearly indicates that this vehicle’s nerve center is no longer the engine under the hood, it is the battery beneath the floor. And above all the deep shoulder line, which instead of following the time-honored principle of continuing at one level is now interrupted in the middle, and uses soft lines to accentuate the muscles that define the vehicle silhouette at the front and rear – the so-called quattro muscles. Marc Lichte continues: “These wheel arches. These two muscles. That, for me, is Audi.”

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

The light signature featuring the blue X element makes an unmistakable statement.

Photo: Robert Fischer

Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

Aerodynamics as a design feature

On the Audi e-tron GT[1] the aerodynamics are also visibly expressed as an exterior design feature: by means of air inlets (air curtains) in the front, separating edges integrated into the rear lights, the diffuser at the tail end. But these features do not blatantly demand attention. According to Marc Lichte: “There are all kinds of ways you can express e-mobility in the design. Some electric cars seek to grab your attention. We take a different approach. You can clearly tell the Audi e-tron GT[1] is an electric vehicle. We use the design to illustrate the drive system’s evolution. We believe electric mobility enables us to create the most beautiful cars in the world. That’s our ambition.”

Photo: Robert Fischer

A good design always offers high aesthetic value with perfect function. The Audi RS e-tron GT[2] is one such example.

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0
2 Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

Every designer’s dream: huge wheelbase, huge wheels, short overhangs

The technical platform for electric cars now gives Audi designers the scope to craft the vehicle proportions they have always dreamed of. The motors on the axles and the battery between them, in the floor, mean the cabin that is at the heart of the structure can increase in size, pushing the larger wheels further out. Huge wheelbase, huge wheels, short overhangs. That is what defines the unique character of Audi electric vehicles.

Marc Lichte cannot suppress his enthusiasm: “The Audi e-tron GT[1] is easily the best car I’ve so far had the privilege to design. The car is like a sketch. It’s ultra-flat, has giant wheels and fabulously short overhangs. Ever since I started sketching cars as a small boy, I’ve been dreaming of creating a vehicle like this.”

The fact that Lichte’s dream has become a reality specifically with the Audi e-tron GT,[1] one of the most aerodynamic – and therefore efficient – Audi models of all time, highlights his expectations of every Audi: “A good design combines high aesthetic value with perfect function.” And as if he can barely believe it himself, Marc Lichte takes another walk around the Audi e-tron GT[1] in the studio hall, stops, smiles and says quietly to himself: “The masterpiece.”

1 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

A winning QUARTET – Audi's path to the electric age

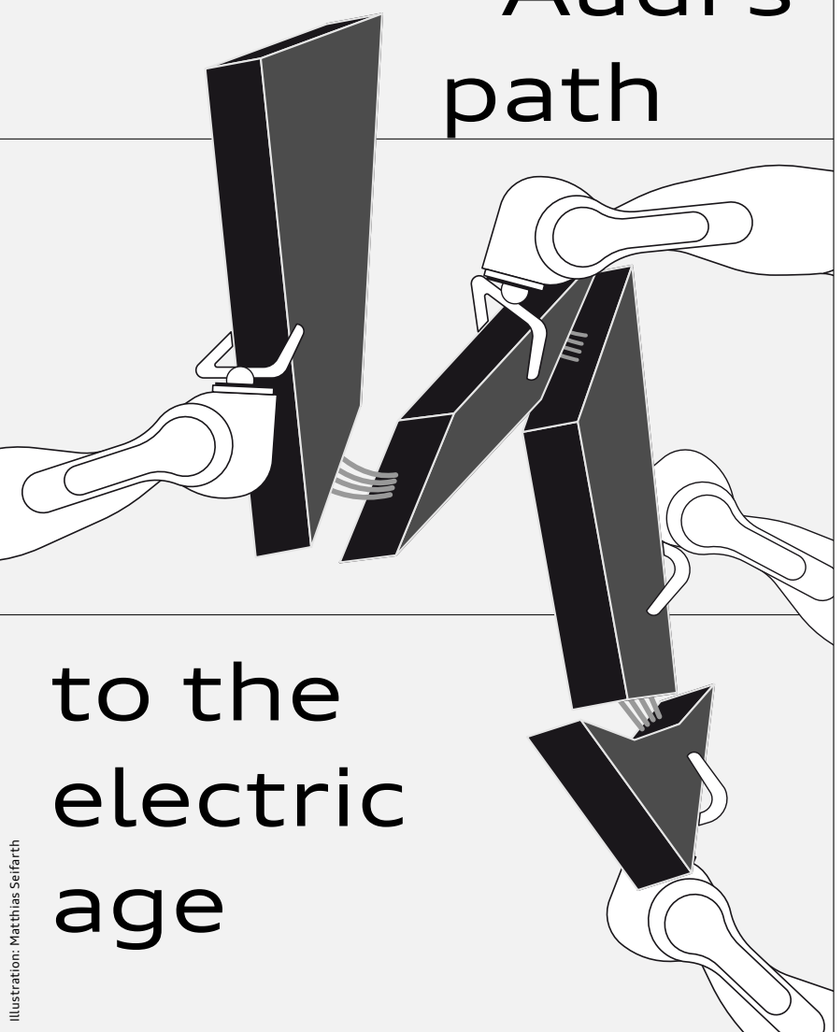


Illustration: Matthias Seifarth

Audi is fully backing electric mobility: Over the past two years or so, the car manufacturer has presented five all-electric models. At the same time, Audi is electrifying its combustion engines and equipping them with new technologies to make them fit for the future. The switch from purely internal combustion drive to electric mobility is under way. The challenge now is to scale up electric cars profitably. Audi's strategy revolves around four vehicle platforms, to create Group-wide synergies in development, procurement and production.

Text: Dorothea Kauf

By the end of 2021, Audi wants to expand its electric portfolio to eight models, by which point it will have electric cars in the compact, full-size and luxury classes. It also plans to add more than ten all-electric cars by 2025. By then, the volume of all-electric and plug-in hybrid models should increase from currently about seven percent (2020) to around one-third. The company is investing some EUR 15 billion in this venture between now and 2025. In an effort to scale up electric mobility profitably, Audi is drawing on synergies across the Group and adopting multi-brand platforms – from the compact to the luxury class.

Photo: AUDI AG

Modular longitudinal matrix

↘ MLB evo

The brand with the Four Rings opened a new chapter of sustainable mobility at the end of 2018 with the fully electric Audi e-tron.[1] This is the manufacturer's first all-electric series-production model, and a commercial success: In 2020, the Audi e-tron[1] was the world's top-selling electric car in its segment. To bring it to market rapidly, Audi based it on the modular longitudinal matrix, or MLB evo for short. This platform, conceived for combustion models, was extensively adapted to the requirements of an electric car.

1 Audi e-tron models: combined electric power consumption in kWh/100 km: 28.8–21.4 (NEDC); combined CO_2 emissions in g/km: 0
2 Audi e-tron Sportback models: combined electric power consumption in kWh/100 km: 28.3–20.9 (NEDC); combined CO_2 emissions in g/km: 0

Performance platform

→

J1

Photo: AUDI AG

The Audi e-tron GT quattro[3] unveiled in February 2021 has the Porsche-developed J1 platform as its basis. The four-door Gran Turismo is the new Audi signature car, a pointer to the technologies of the future and the brand's design. To read more on the subject → see page 136. Its sporty silhouette and fascinating technology demonstrate just how emotionally charged electric mobility can be. Collaboration across the Volkswagen Group enables Audi to invest more strongly in such brand-differentiating features.

The Audi e-tron GT[3] has a very high proportion of carry-over parts approaching 70 percent for its main components such as platform, interior and exterior. It shares most of these components with the Porsche Taycan.[4] This is illustrative of the huge synergy potential within the Group. At the same time the brand with the Four Rings is pursuing its own distinctive course when it comes to design, technology and vehicle character – examples being chassis and steering tuning. "Comfortable where possible – dynamic where necessary" was the developers' guiding principle. The Audi e-tron GT,[3] as its name clearly indicates, is a Gran Turismo

3 Audi e-tron GT models: combined electric power consumption in kWh/100 km: 20.2–18.8 (NEDC); combined CO_2 emissions in g/km: 0
4 Porsche Taycan: combined electric power consumption in kWh/100 km: 28.7–28.0 (NEDC); combined CO_2 emissions in g/km: 0

Modular electric drive matrix

→

MEB

Photo: AUDI AG

through and through: a deluxe touring sports car. Its long-distance capability rests not merely on its comfort standards; it can also cover more than 480 kilometers (WLTP) on a single charge.

Audi will be introducing two new electric SUVs – the Audi Q4 e-tron and the Audi Q4 Sportback e-tron – before the end of 2021. These first fully electric Audi models in the compact segment will appeal to a broad group of customers and therefore be a key source of volume within the company's electrification strategy. They will act as gateways into the electric world of Audi.

Offering the spaciousness of a full-size model, ranges in excess of 500 kilometers (WLTP) and the option of quattro drive, the Audi Q4 e-tron model line has all the credentials of a first car as well as being suitable for everyday use.

Both models are based on the modular electric drive matrix (MEB). The platform provides the technical basis for future compact and midsize models from Audi. The MEB is a very versatile concept and highly scalable. The range of possible derivative versions includes SUV, crossover models and sedans. Thanks to its concept as a purely electric platform, the MEB helps customers enjoy all the benefits of electric drive. To read more on the subject → see page 158 ff.

Profitability on a par with combustion models possible

The Volkswagen Group as a whole plans to build around 19 million vehicles using its MEB platform by 2030. The synergy effects are correspondingly great. This means Audi will be able to offer its customers electric models that are both economically and technically sophisticated. Exploiting the platform synergies to the full and building the vehicles at multi-brand plants now makes electric mobility an attractive proposition for a large number of compact-segment customers.

As the only manufacturer operating in the premium market, Audi stands to benefit from such extensive Group synergies. What this means in practice is that the company plans to make the Audi Q4 e-tron family as profitable as an equivalent combustion-engine model within the space of two to three years – despite the higher manufacturing costs of electric automobiles. Over the coming years, the company anticipates further reductions in material costs and additional volume effects that will improve profitability per vehicle.

Photo: Robert Fischer

Christian Becker
Design Interior Studio 1

Photo: Robert Fischer

Philipp Römers
Head of Audi Exterior Design

↘ DESIGN

is the top reason for buying

A profitable electric car using a Group platform, but still unmistakably an Audi: Its Audi-specific design in particular will make the new Q4 e-tron family stand out. Designers Philipp Römers and Christian Becker discuss the Audi Q4 Sportback e-tron concept as an example of how to express Audi DNA in the age of electric platforms. The showcar already gives a highly realistic foretaste of the series-production model that will be going on sale later in 2021.

What makes the Q4 Sportback e-tron concept a genuine Audi?

Philipp Römers Among our customers, design is still the top reason for buying. The Q4 e-tron family shares the typical Audi design traits that we have taken forward into the electric age. The prominently modeled fenders of all four wheels are a classic Audi design feature that emphasizes versions with quattro drive. The flaring is very fluid in design, giving the side view such a distinctive character. Also, the ratio of one-third window to two-thirds body has a very sporty impact. That is another Audi-specific attribute within the Group. Obviously there is never any mistaking an Audi in the rearview mirror of the vehicle in front. The Singleframe marks out the Q4 Sportback e-tron concept as an Audi at first glance. To identify the electric drive from afar, we've sealed the radiator grille, painted it in the body color and embedded it within a black mask.

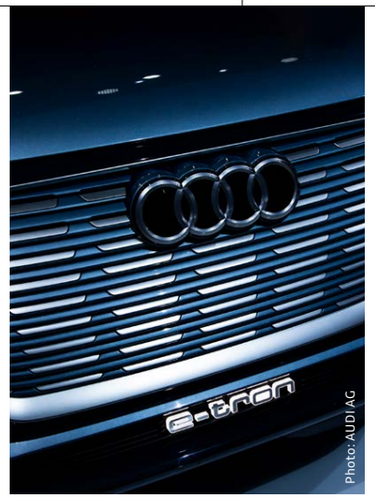


Photo: AUDI AG

The vehicle shown is a concept vehicle that is not available as a series-production vehicle.

Christian Becker Inside, sportiness and the focus on the driver are important Audi design features, including in our e-tron models. These models benefit especially from the wide range of high-quality materials to choose from and the typically Audi premium quality and feel of the controls. In a first for Audi, the showcars of the Q4 e-tron family feature a steering wheel with touch surfaces.

What are the design advantages of having a dedicated electric platform?

P.R. Long wheelbase, short overhangs, large wheels – those are the optimum basic proportions of the platform, ones that benefit the design of a sporty, confident SUV.

C.B. That also gives the interior more depth and maximizes the sense of spaciousness. Its exterior dimensions place the Q4 Sportback e-tron concept in the A+ segment – but its luggage capacity is worthy of the B segment and the interior is of a size that belongs in the C segment. That means it is uniquely spacious for this class. In an all-electric model, we also no longer need a center tunnel. In its place, we've been able to include an airy center console with ample storage space. This makes the electric models useful companions for everyday life.

The vehicle shown is a concept vehicle that is not available as a series-production vehicle.

Photo: AUDI AG

Premium Platform Electric

PPE

Photo: AUDI AG

From now on, Audi intends to focus on the Premium Platform Electric (PPE) developed in close partnership with Porsche for its electric full-size and luxury models. Both flat-floor and high-floor vehicles can be realized with the extensively scalable high-tech architecture.

Because the platform has been created for the world market and can be scaled up to around seven million units across the Volkswagen Group by 2030, it will bring corresponding synergy effects. Merely the joint development approach will reduce one-time expenses by 20 to 30 percent.

Premium performance for charging times and electric driving

Audi is planning various PPE-based model series that – as SUV, Sportback, Avant and crossover models – will cover the segments from the upper midsize class to the luxury class with various different vehicle types.

Key development goals for PPE are high electric ranges, fast charging times based on an 800-volt system as well as excellent connectivity and digitalization technologies.

Intelligent ecosystem: The Audi route planner allows routes to be planned in advance on a mobile phone and then sent to the car. The planner computes the fastest route, takes traffic and route data as well as the driver's style into account, calculates the duration of the charging stops, and includes them in the total driving time.

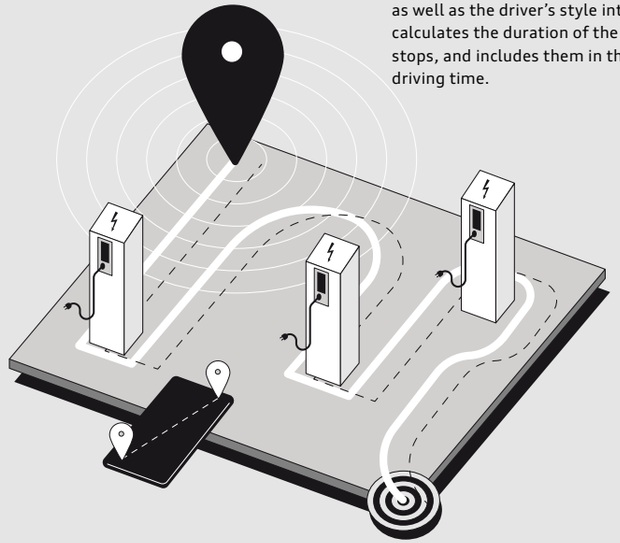


Illustration: Matthias Seifarth

System approach to electric mobility

Key factors that determine the everyday usability of electric cars are range and charging time. Drivers of a fully electric Audi model benefit from high charging speeds because the charging capacity currently of up to 150 kW is achieved across an extensive part of the charging process, depending on model. The Audi e-tron GT[3] even manages a charging capacity as high as 270 kW. It demonstrates how high performance also extends to the matter of charging at Audi. This performance is made possible by intelligent thermal management of the battery.

3 Audi e-tron GT models: combined electric power consumption in kWh/100 km: 20.2–18.8 (NEDC); combined CO_2 emissions in g/km: 0

e-tron Charging Service: just one card and one contract for over 203,600 charging points in 26 European countries.

All the electric cars currently available from Audi are also embedded in an intelligent ecosystem: The Audi route planner allows routes to be planned in advance on a mobile phone and then sent to the car. The planner computes the fastest route, takes traffic and route data as well as the driver's style into account, calculates the duration of the charging stops and includes them in the total driving time. In combination with the Audi e-tron Charging Service, Audi customers in Europe have the benefit of over 203,600 charging points in 26 countries that they can use with just one card and one contract. Further details about the Audi e-tron Charging Service and its terms and conditions can be found → here.

There should be a further boost to the range in years to come from innovations to the battery and drive. The power density of the cells will increase, boosting the storage capacity that is possible with a unit occupying the same space or paving the way for smaller, lighter batteries. Both measures can extend the range while cutting material costs.

An improved drive is also a factor in increasing the range. For example, Audi aims to reduce the weight of future electric motors by around 20 percent and extend the range by some 10 percent. Whereas some competitors buy in electric drive technology, Audi develops and builds much of it itself. This enables the brand to be sure of its premium quality. In 2020, Audi collected an AutomotiveINNOVATIONS Award sponsored by the renowned Center of Automotive Management (CAM), in the Alternative Drives category.

↘ Plug-in hybrids as part of the electric initiative

Zero local emissions coupled with long-distance capability – plug-in hybrids are an important element of Audi's electric initiative. They are especially important for customers in urban areas and for commuters as the key to driving with zero local emissions.

Audi is consistently expanding its part-electric model range all the way from the compact to the luxury segment. The brand already offers plug-in hybrids in nine model series. They are proving a real hit with customers: Last year, the brand with the Four Rings sold roughly eight times more plug-in hybrid models worldwide than in 2019. Despite the constraints of the coronavirus crisis, Audi has increased production capacity for plug-in hybrids more than four-fold since 2019.

Plug-in hybrids in demand: production capacities at Audi increased more than four-fold in 2020.

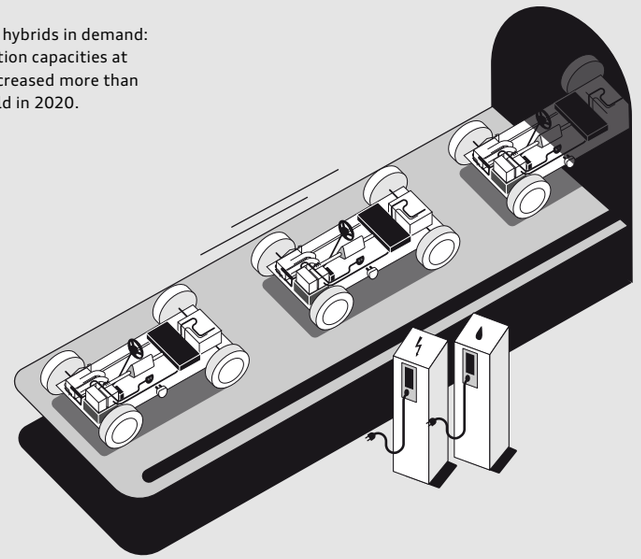


Illustration: Matthias Seifarth

↘ Combustion models for the future

One of many Audi models with efficient combustion engine and mild hybrid system on board: the new Audi Q5 Sportback.

The future of the automobile is electric. Nevertheless, combustion engines will be relevant for mobility into the medium term. That is why Audi still plans to be selling around 60 to 70 percent of its vehicles with a combustion engine in 2025. This projection by the company is based on demand in the various markets and the prevailing statutory requirements. With technologies such as broad-based electrification through mild hybrid drivetrains, highly efficient particulate filters and new innovations such as twin dosing[5] for TDI engines, the brand with the Four Rings is demonstrating how combustion engines can be made even more efficient. The introduction of plug-in hybrid vehicles in almost all car lines equally cuts fuel consumption and CO_2 emissions. Audi will continue to work on steadily improving its combustion engines in the future.

Read more on the subject → here.

5 Twin dosing technology involves injecting the additive AdBlue into the exhaust system via separate modules at two points where the temperatures differ.

Selected contribution by Audi to the SDGs of the United Nations

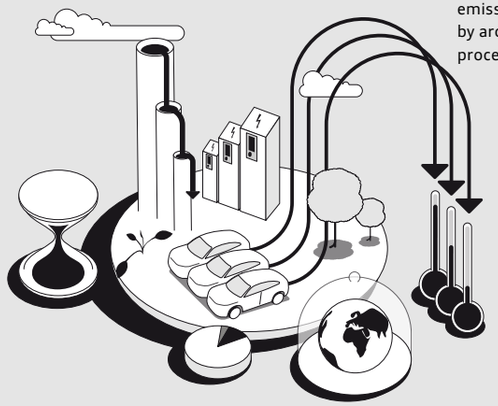
12 RESPONSIBLE CONSUMPTION AND PRODUCTION

In an effort to scale up electric mobility profitably, Audi is drawing on Group-wide synergies.

13 CLIMATE ACTION

The switch from a drive portfolio based entirely on combustion engines to electric mobility is now under way.

→ see page 289 for an overview of the SDGs



In 2020, Audi surpassed the CO_2 fleet targets for Europe within the Volkswagen emissions pool, improving by around 20 percent in the process.

Illustration: Matthias Seifarth

↘ Fleet emissions and consumption

The Volkswagen Group is explicitly committed to the goals of the Paris Climate Agreement, which aims to cap the global temperature rise to significantly less than two degrees Celsius. As its contribution to this “two-degree goal,” Audi is concentrating, among other things, on reducing the CO_2 emissions of its vehicle fleet. Based on provisional figures, the company surpassed its CO_2 fleet targets for Europe within the Volkswagen emissions pool in 2020. With a calculated 102.9 g/km,[6] the company improved by around 20 percent compared with the average for the previous year (provisional figure for 2019: 131 g/km). Fleet consumption in China (FBU) in 2020 was 7.9 l/100 km[7] (2019: 5.9 l/100 km).

6 Subject to the official data of the European Commission in the annual CO_2 fleet monitoring report of the Volkswagen emissions pool.
7 Subject to official publication by the Minstry for Industry and Information Technology (MIIT) in the annual CO_2 fleet monitoring report.

Photo: AUDI AG / Graphic: Colorpong

For more comfort

Text: Manfred Dittenhofer

Seeing and being seen is not everything. Making the right sound is also important in today's cars. With its latest lighting and sound technologies, Audi is making its mark when it comes to design and safety. In particular, the latest innovations mean Audi has taken a huge leap towards achieving its goal of making mobility in general and cars in specific a whole lot more comfortable.

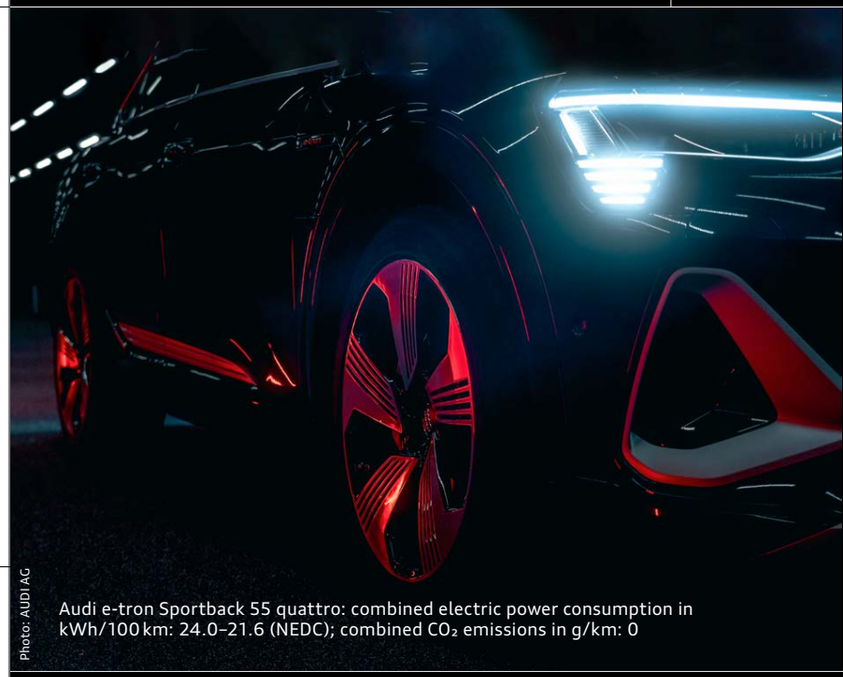


Photo: AUDI AG

Audi e-tron Sportback 55 quattro: combined electric power consumption in kWh/100 km: 24.0–21.6 (NEDC); combined CO_2 emissions in g/km: 0

AUDI LIGHTING – digitally breaking through the dark

Cesar Muntada, Stephan Berlitz and Dr. Werner Thomas have one thing in common: They all work in the field of lighting at Audi. Their key place of work is 120 meters long and completely dark – the drivable underground light testing tunnel in the Audi Lighting Assistance Center at Technical Development. This is where the latest headlight and rear light technologies are developed and tested. Audi and lighting – the benchmark in the automotive industry.


Photo: AUDI AG

Cesar Muntada,
Head of Lighting Design at Audi

The headlights and rear lights are among the most striking design features of a car. “Light becomes the visible expression of ‘Vorsprung durch Technik.’ We use it to give a car an unmistakable face and to sharpen the character of model and brand alike,” explains Cesar Muntada, Head of Lighting Design at Audi. Audi has brought a succession of trailblazing developments in lighting technology onto the market in recent years. One example is the digital matrix LED headlight that was first unveiled on the Audi e-tron Sportback[1] in 2019.

The right light at the right moment

Headlights fitted with this DMD (Digital Micromirror Device) technology have a small chip with about one million micromirrors that can be tilted up to 5,000 times per second with the help of electrostatic fields. This chip breaks down the light into tiny pixels as the basis for these innovative projections onto the wall or the ground. The way this technology works is similar to a video projector. The headlights illuminate the road in high resolution and support drivers with new functions such as the lane and orientation light, which help keep the vehicle in the road lane.

On the autobahn in Germany, the lane light generates a carpet of light in front of the vehicle, brightly illuminating its own lane and adjusting dynamically every time the vehicle changes lane. Also, the orientation light uses darker areas masked out from the light beam to show the vehicle’s position predictively. In narrow lanes, for example through roadworks, this enables the

1 Audi e-tron Sportback: combined electric power consumption in kWh/100 km: 28.3–20.9 (NEDC); combined CO_2 emissions in g/km: 0

driver to assess their vehicle’s position within its lane more accurately. The system can also detect pedestrians close to the roadway and picks them out outside built-up areas with a marking light.

The development of this technology illustrates Audi’s sense of responsibility for identifying all road users. Stephan Berlitz, Head of Lighting Development: “The importance of lighting technology is fundamentally changing; its horizons are shifting from purely driver-centered safety to comprehensive external communication based on car-to-X, in other words connecting the vehicle with other road users and its environment.” Data sharing should increase traffic safety and help traffic to flow more efficiently. Within what is legally permissible, Audi could soon be using light projections to alert drivers to hazards.


Photo: AUDI AG

Stephan Berlitz,
Head of Lighting Development

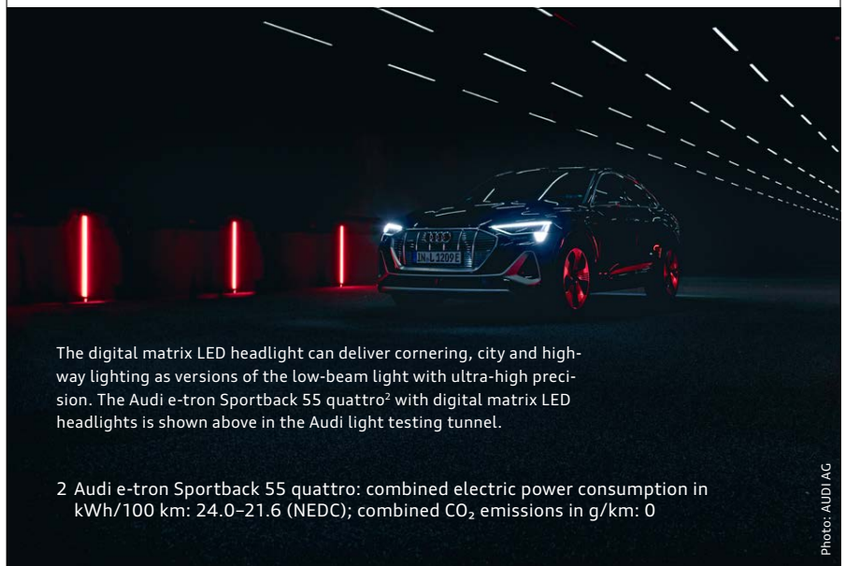


Photo: AUDI AG

The digital matrix LED headlight can deliver cornering, city and highway lighting as versions of the low-beam light with ultra-high precision. The Audi e-tron Sportback 55 quattro[2] with digital matrix LED headlights is shown above in the Audi light testing tunnel.

2 Audi e-tron Sportback 55 quattro: combined electric power consumption in kWh/100 km: 24.0–21.6 (NEDC); combined CO_2 emissions in g/km: 0

Personalization with organic light-emitting diodes

The new Audi Q5 and Audi Q5 Sportback can be supplied with the option of digital OLED rear lights. OLED stands for organic light-emitting diode. Audi has already been pioneering organic light-emitting diodes since 2016. Digitalization now heralds in a new age, because the technology has the potential to make road traffic even safer.


Photo: AUDI AG

Dr. Werner Thomas,
Project Manager for OLED technology

The higher segmentation of the digital OLEDs means different tail light designs are now possible. When buying their Audi Q5, customers have three tail light signatures to choose from.

The light from the digital OLEDs is extremely homogeneous. It can be dimmed continuously and achieves a very high contrast. Because the light unit does not need any reflectors, light guides or similar optical parts, it is very efficient, but low-weight and flat in design.

That also opens up a whole new realm of possibilities for Audi Design: In the future, digital OLED technology will turn the rear lights into veritable displays that will hugely increase the scope for design, customization, communication and safety.

Photos: AUDI AG

An Audi Q5 rear light has three panels, each incorporating six OLED segments. These can now be activated as needed, and their brightness adjusted infinitely. The optional proximity detection by activation of all OLED segments can be seen at the bottom.

The optional proximity detection in the new Audi Q5 ensures all OLED segments are activated as soon as another road user comes within two meters of the rear end. This increases the visible surface and boosts perceptibility.

Dr. Werner Thomas, Project Manager for OLED technology, explains: “Thanks to its shallow design and scope for flexible surface shapes, the potential of OLED technology goes beyond two rear lights: The entire rear end could become a display.” Subject to legal approval, it could be the basis for enhanced car-to-X communication.

As an example of how dedicatedly and effectively Audi works with the approval authorities, Audi was the first car manufacturer to develop and obtain approval of the turn indicator with dynamic display, which it brought to market in 2012 in the Audi R8. It improves identification especially in the road user’s peripheral vision, but is also an emotional light feature.

The milestones in the history of lighting at Audi

- ↗ 1994 – Second-generation xenon headlights on the Audi A8
- ↗ 2004 – LED daytime running lights on the Audi A8 W12; “string-of-pearls” daytime running lights as a light strip on the Audi A4
- ↗ 2008 – Full-LED headlights on the Audi R8; now offered across all model lines
- ↗ 2012 – Dynamic turn signals on the Audi R8
- ↗ 2013 – Full-LED headlights for the compact class on the Audi A3; Audi matrix LED headlights with adaptive high beams on the Audi A8; as the first manufacturer, Audi LED technology is validated by the EU as an eco-innovation
- ↗ 2014 – Laser additional high beams in the headlights of the Audi R8 LMX
- ↗ 2016 – First OLED rear lights on the Audi TT RS
- ↗ 2019 – Digital matrix LED headlights (DML) on the Audi e-tron[3] and Audi e-tron Sportback[1]
- ↗ 2020 – Digital daytime running light signatures on the Audi A3; digital OLED technology on the Audi Q5

1 Audi e-tron Sportback: combined electric power consumption in kWh/100 km: 28.3-20.9 (NEDC); combined CO_2 emissions in g/km: 0
3 Audi e-tron: combined electric power consumption in kWh/100 km: 28.8-21.4 (NEDC); combined CO_2 emissions in g/km: 0

Photo: AUDI AG

↗ THE SOUND – more than just noises

Visit Dr.-Ing. Stephan Gsell and Rudolf Halbmeir on their home territory and you could imagine yourself in a recording studio. Except the artist behind the microphone at Audi Technical Development is not a musician, but an Audi e-tron GT quattro.[4]

Gsell and Halbmeir are sound designers, and the Audi sound lab is their place of work. While its walls barely reflect any sound, the floor is made from typical sound-reflecting asphalt. The engineers use this environment to program the “voice” of the Audi e-tron GT.[4]

“When is the sound agreeable? Which timbre suits a car? What is the perfect sound for an electrically powered Audi? These are the kind of questions we ask ourselves at the sound lab,” explains Stephan Gsell.

4 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

Photo: AUDI AG

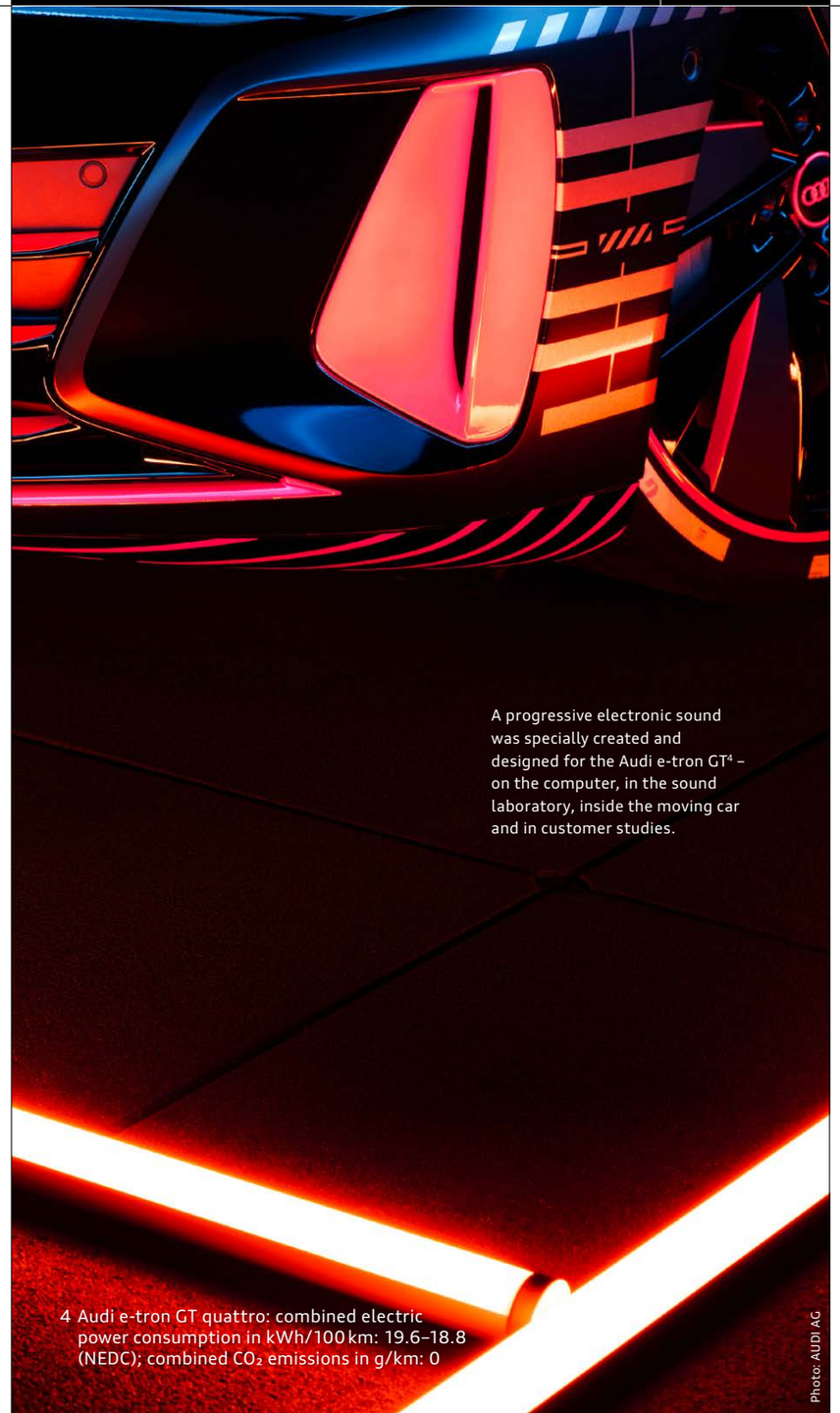
Dr.-Ing. Stephan Gsell (left) and Rudolf Halbmeir, Audi sound designers

Photo: AUDI AG

Progressive e-sounds for safety

Every electric vehicle must emit a sound to alert people to its presence – that is what EU Regulation R138 specifies. The reason? Pedestrians and cyclists might find it hard to hear an almost noiseless electric car, especially when it is traveling at low speeds. People have become used to interpreting the sound of a combustion engine as an acoustic warning signal. The regulation is also intended to protect the interests of the partially sighted.

The EU regulation applies to all electric and hybrid vehicles. An AVAS – or Acoustic Vehicle Alerting System – can help prevent accidents involving especially pedestrians and cyclists. It works by simulating the sounds emitted between setting off and reaching a speed of 20 km/h, and also when reversing. The rules include an overall sound level of at least 50 decibels at 10 km/h, and at least 56 decibels at 20 km/h. By way of comparison, a radio playing music quietly or birdsong registers at around



A progressive electronic sound was specially created and designed for the Audi e-tron GT[4] – on the computer, in the sound laboratory, inside the moving car and in customer studies.

4 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

Photo: AUDI AG

50 decibels and a radio at typical indoor volume is 55 decibels. A gasoline or diesel vehicle driving past will measure about 70 decibels.

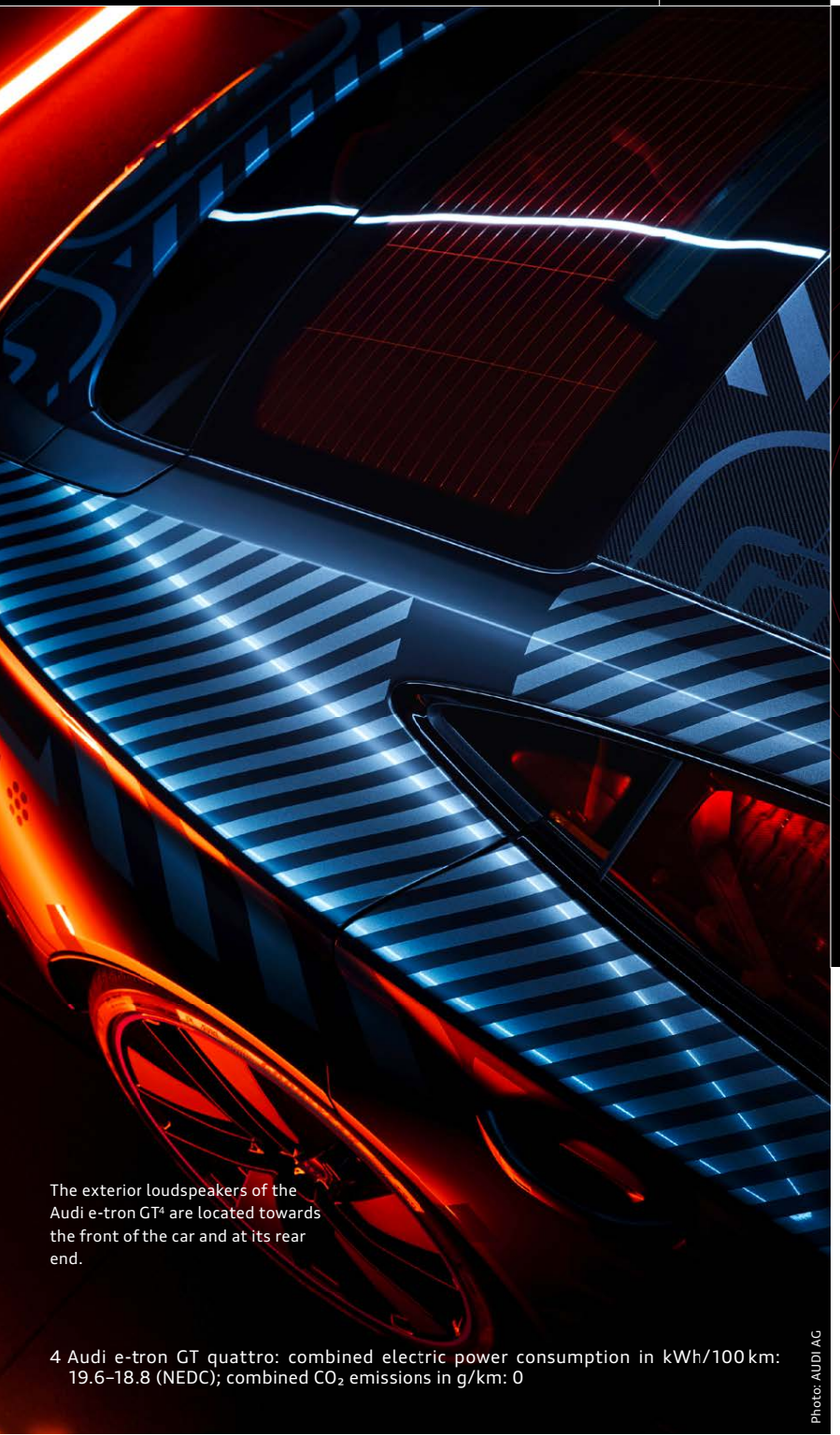
So at low speed, an electric vehicle is still much quieter than a vehicle with an internal combustion engine. At 20 km/h or more, the noise generated by the tires is easy to hear. The artificial sound for electric cars is therefore no longer required by law and is gradually faded out. From about 50 to 60 km/h, it ceases to be audible.

A sound says more than a thousand words

But what does an electric Audi sound like? Ultimately, it needs to be more than merely an acoustic signal for pedestrians that says: “Hey, I’m here.” The sound also needs to be modulated to indicate whether the vehicle is speeding up or slowing down.

Sound designer Rudolf Halbmeir explains: “We use a variety of volumes to achieve that, but we also modify the frequency. The sound emitted by the Audi e-tron GT[4] is made up of over 30 different sound tracks that can be superimposed on each other. Depending on the driving situation, a variety of tracks are played – on average 15 at any given time – at a range of volumes. That’s because the brain soon starts to recognize unvarying sounds as ‘normal’ background noise, which it increasingly filters out.”

4 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0



The exterior loudspeakers of the Audi e-tron GT[4] are located towards the front of the car and at its rear end.

Photo: AUDI AG

4 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

Audi e-tron GT[4]
Interior and exterior sound

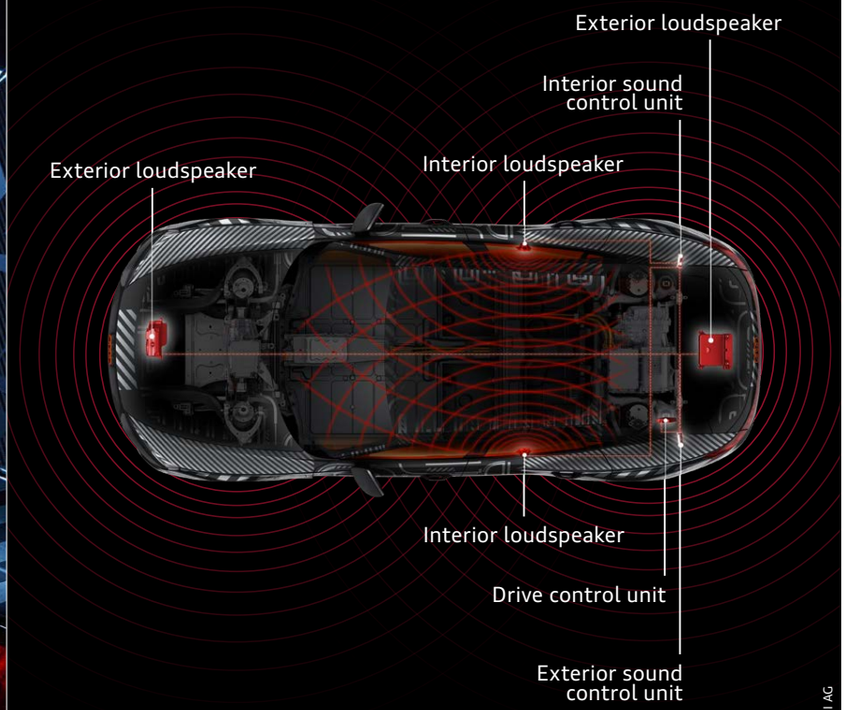


Photo: AUDI AG

In addition to the AVAS that is required by law for the protection of pedestrians, the Audi e-tron GT[4] is available optionally with a sound package with enhanced exterior sound and an emotional interior sound. This makes the Audi e-tron GT[4] the first electrically powered Audi model that enables customers to define their own acoustic experience.

4 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

Two control units and amplifiers installed in the luggage compartment generate the exterior and interior sounds. The front exterior loudspeaker has a counterpart in the rear end along with two loudspeakers in the rear doors for the interior sound.

In Audi drive select, the car's dynamic handling system, the driver can set how the e-sound is delivered. In the efficiency mode it is limited to the AVAS warning sound, which basically involves the front loudspeaker playing an appropriate sound for the vehicle up to about 50 to 60 km/h. With the comfort profile, the rear exterior loudspeaker increasingly comes into play. The exterior sound then remains active up to more than 200 km/h because it also serves to enrich the interior driving sound. In the dynamic mode both exterior loudspeakers are involved, and the interior sound now also enhances the dynamic driving experience right up to top speed.

That is because exterior sound is not all that matters: The sound inside the vehicle also needs to be right. On the Audi e-tron GT,[4] the acoustic effect perfectly reflects the vehicle's identity: quiet sounds when gliding smoothly along, and a vibrant sound to evoke electric power.

4 Audi e-tron GT quattro: combined electric power consumption in kWh/100 km: 19.6–18.8 (NEDC); combined CO_2 emissions in g/km: 0

Photo: graupeausse

Top: Lamborghini Sián Roadster: combined fuel consumption in l/100 km: 18.5 (WLTP); combined CO_2 emissions in g/km: 447 (WLTP)

Bottom: Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

Photo: graupeausse

The future of the high-performance segment

Text: Dorothea Kauf

Huge image value and an important contribution to profitability – the high-performance segment holds special significance for Audi. So how is it responding to the automotive megatrends of electrification and hybridization? These appear to be at odds with lightweight construction, performance and the emotional sound of combustion models. Maurizio Reggiani, Head of Development at Automobili Lamborghini S.p.A., and Julius Seebach, Managing Director of Audi Sport GmbH, explain how they tackle the issue. Two men, two cars, two solutions.

Electrification for supercars

Photo: graupeausse

Sant'Agata Bolognese

Whenever Maurizio Reggiani's timetable allows, the technology boss at Automobili Lamborghini gives himself a short break. He then walks a few steps from his office to the MUDETEC, the in-house museum of the brand with the bull logo. This museum is not simply about the legacy of previous development directors. Reggiani can also sense the future here.

Alongside legends of the past – such as the Miura, the first Lamborghini powered by a rear-mounted, transverse V12 engine – there are concept cars such as the Terzo Millennio. The study provides a glimpse of what a future Lamborghini might look like: fully electric, with wheel hub motors and nano energy stores incorporated into the bodywork.

A look back to the past: The Miura was the first car to be fitted with the Lamborghini rear-mounted, transverse V12 engine.

Photo: graupeausse

Photo: graupause

“The Terzo Millennio completely redefines the concept of the supercar,” remarks Reggiani. “At the start of its development I felt like a child skimming a stone over the water surface and eagerly waiting to see how far it bounces.” He describes the Terzo Millennio as the boldest concept of an electric Lamborghini that he can currently imagine. So when might it become a reality? “I see this concept car as a checkered flag in a rather distant future – hence its name Terzo Millennio, or third millennium,” explains Reggiani. “There are many more milestones to pass before we get there.”

Photo: graupause

Photo: graupause

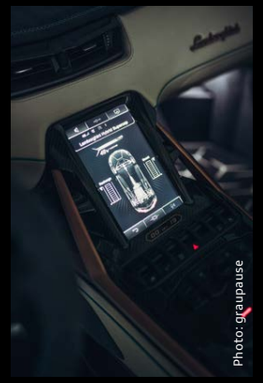


Photo: graupause

The Sián[1] is the most powerful series-production Lamborghini ever built and also the first electrified one. A display in the cockpit informs the driver of its battery charge status.

Sián, bull of superlatives

One such milestone stands on the forecourt of the museum in Sant’Agata Bolognese: the Lamborghini Sián Roadster.[1] A bull of superlatives. Starting with its visionary design – all the way to its sheer power. 819 PS of system output make the Sián[1] the most powerful series-production Lamborghini ever built. Thanks to intelligent materials, it achieves an exceptionally low power-to-weight ratio[2] and the best acceleration of any Lamborghini approved for road use.

1 Lamborghini Sián Roadster: combined fuel consumption in l/100 km: 18.5 (WLTP); combined CO_2 emissions in g/km: 447 (WLTP)
2 Power-to-weight ratio describes power (in PS or kW) relative to vehicle weight (in kilograms).

The Sián[1] is a statement in the shape of an automobile. Its design polarizes opinion. Its name – which is Bolognese dialect for “lightning flash” – is an initial pointer to the innovation beneath the hood. It is the first electrified Lamborghini, a mild hybrid. Not that you would really notice that from the outside. A V12 engine[1] shimmers through the glass engine cover. “You need to feel this car to understand it,” comments Reggiani, and swings himself into the sport seat for a test drive.

New technology: supercapacitors

A short half-hour drive north of the company headquarters and the development chief has reached his destination: the Autodromo di Modena, a nearby test track. This is where the Sián[1] shows what it is made of. One moment the Lamborghini is poised and waiting at the starting line, the next it has shot forward like a projectile out of a catapult. After 2.8 seconds it touches 100 km/h.[1] Its acceleration: quite surreal. The gearshifts? Imperceptible.

On the racetrack, technical boss Maurizio Reggiani shows just what the Lamborghini Sián Roadster[1] is capable of.


Photo: graupause


Photo: graupause

1 Lamborghini Sián Roadster: combined fuel consumption in l/100 km: 18.5 (WLTP); combined CO_2 emissions in g/km: 447 (WLTP)

Photo: graupause

The transmission houses a 34 PS, 48-volt electric motor that keeps the acceleration smooth and enhances traction. The energy for the electric motor is supplied by supercapacitors – a special form of storage battery. They achieve around three times the performance of lithium-ion batteries with the same weight and are more durable, even under high load.[1]

Redefining the rules

"For us, taking this technology into series production marks a big step towards electrification," adds Reggiani. "Acceleration and therefore also the power-to-weight ratio are important issues for our customers. Heavy batteries stand in the way of this." That is why Lamborghini is adopting a different tack. Supercapacitors weigh roughly a third of lithium-ion batteries with the same capacity. An ideal basis on which to transplant supercar DNA into the age of electric mobility. "Lamborghini has always been something of a provocateur. We don't conform to established ways of doing things. We redefine the rules – and electric mobility is no exception."

While the mild hybrid drive in the Sián[1] may initially be simply about improving acceleration, it shows there is no contradiction between driving pleasure and electrification, between low power-to-weight ratio and high electrical output. The next challenge? To move the supercars to plug–in hybrid architecture, without losing out on driving pleasure and performance. "We'll pair the emotional V12 engine with an electric drive," says Reggiani. The result will be reduced CO_2 emissions and the possibility of part-electric driving. Meanwhile, customers will not need to forgo the emotional, traditional sound of 12 cylinders.

1 Lamborghini Sián Roadster: combined fuel consumption in l/100 km: 18.5 (WLTP); combined CO_2 emissions in g/km: 447 (WLTP)

Research for the future

If they are to find use in supercars in the future, lithium-ion batteries will need to deliver more energy per kilogram. Only light batteries will avoid having a significant adverse impact on performance. "As part of Audi and Volkswagen, this is where we benefit from Group-wide research. We're able to evaluate various battery technologies centrally for all brands."

Photo: graupause

The characteristic Lamborghini hexagon forms can be found on the exterior design of the Sián.[1]

The area of supercapacitors is being pioneered by the manufacturer in collaboration with the Massachusetts Institute of Technology (MIT). In 2019, they jointly filed a patent application for innovative synthetic materials as the basis for a new generation of supercapacitors. In another partnership they are conducting research into new design principles. These are all about integrating the materials for high-performance batteries into the vehicle structure, as on the Terzo Millennio concept car.

Its plans for electrification will help Lamborghini lead the supercar segment into the future. Maurizio Reggiani promises: "We have our sights firmly set on the Terzo Millennio as our long-term goal."

1 Lamborghini Sián Roadster: combined fuel consumption in l/100 km: 18.5 (WLTP); combined CO_2 emissions in g/km: 447 (WLTP)

The linear design of the Lamborghini Sián Roadster[1] stands as a symbol for optimized aerodynamic efficiency and technological innovation.

Photo: graupause

1 Lamborghini Sián Roadster: combined fuel consumption in l/100 km: 18.5 (WLTP); combined CO_2 emissions in g/km: 447 (WLTP)

Maurizio Reggiani

Photo: graupause

Maurizio Reggiani
Chief Technical Officer at Lamborghini

Maurizio Reggiani (62) has been Chief Technical Officer at Lamborghini since 2006, where he is in charge of developing long-term strategies, including body and chassis technologies, powertrains, suspension and electronics. From January 2011, he also took over in charge of the Centro Stile Lamborghini and, since 2013, has been responsible for the Motorsport division of Lamborghini. Under the direction of Maurizio Reggiani, Lamborghini launched the Aventador and Huracán, and with the Urus ventured into the Super SUV segment.

Success amid the crisis

Automobili Lamborghini delivered 7,430 cars worldwide in 2020, a decrease of only nine percent compared with the previous year. The slight drop is attributable to the 70-day production shutdown in the spring as a result of the coronavirus pandemic. In contrast, the second six months saw record sales figures, resulting in the best second half-year for deliveries to customers in the company's history. For 2021, over half of its production capacity is already spoken for.

Ducati

The Lamborghini Sián[1] is not only inspiration for future electric cars of the brand with the bull in the logo. It was also the design model for the Ducati Diavel 1260 Lamborghini, a unique motorcycle born from the cooperation between the two Italian brands of Audi. In November 2020, the Ducati Diavel 1260 Lamborghini was created from the collaboration between these two prestigious brands that have their roots in the Motor Valley, the Emilia-Romagna region.

Photo: Ducati Motor Holding S.p.A.

Style, sophistication, performance and trust are the core values of the Ducati brand. Ducati motorcycles are the purest expression of refined engineering, unmistakable design and above all, a great passion. The essence of Italian style shows through the lines of each motorcycle, in which lightness, technology and high performance are at the service of all motorcyclists eager to live an incredible experience on two wheels.

The highest standards of quality, constant innovation and attention to rider safety are just some of the qualities that identify Ducati motorcycles and guide the development of each new product. Strengthened by its unique history and its roots, Ducati is looking straight towards its ambitious vision: to be the most desirable brand for powerful two-wheel products.

1 Lamborghini Sián Roadster: combined fuel consumption in l/100 km: 18.5 (WLTP); combined CO_2 emissions in g/km: 447 (WLTP)

The electric revolution

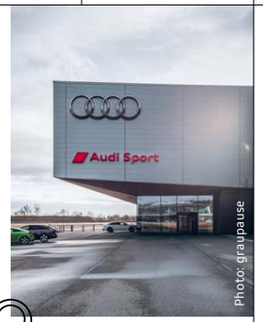


Photo: graupause

Neuburg
an der Donau

At the same time, about 600 kilometers further north, Julius Seebach is on his way to his next meeting. As the managing director of Audi Sport GmbH since 2019, he has to shuttle between the company's head office in Neckarsulm and the headquarters of Group parent Audi in Ingolstadt. His favorite traveling companion at the moment? A low Gran Turismo with four fiery red rings. The four-door model unfurls 646 PS (475 kW) in boost mode. It sprints from 0 to 100 km/h in 3.3 seconds. Never before has Audi Sport put a more powerful series-production model onto the market.[3]


Photo: graupause

But that is not the only thing that makes this car revolutionary. It is also the first fully electric RS model. Seebach visibly swells with pride: "Audi Sport is all about high performance. With the RS e-tron GT,[3] we are taking the RS DNA into the electric age. So in our competitive field, we are the first German premium manufacturer

3 Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

Performance and electrification: The Audi RS e-tron GT[3] shows that this does not have to be a contradiction in terms.


Photo: graupause

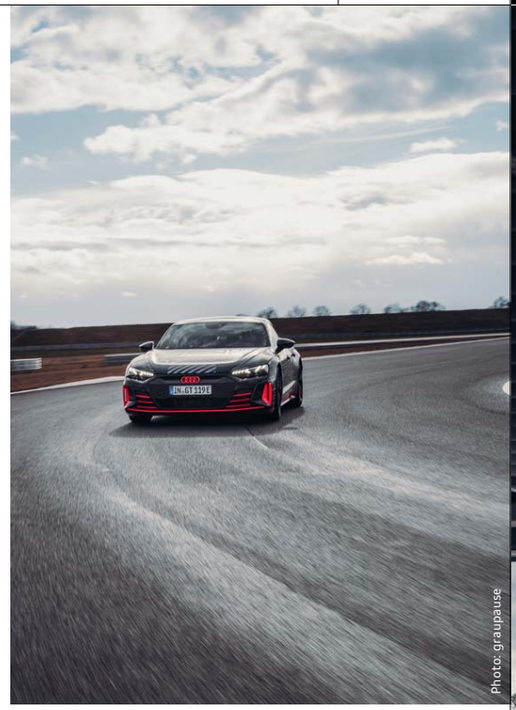


Photo: graupause

to go into series production with an all-electric high-performance model."

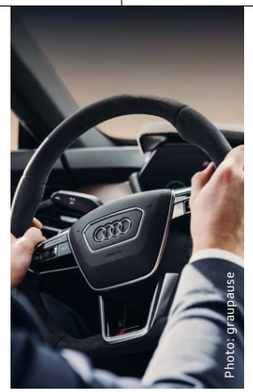
New dimension for RS

Seebach still remembers his first test drive with the new model well: "I was skeptical, excited and expectant all at the same time." The electric RS won him over after just one lap. "I climbed out and thought: Something momentous is happening. And it's going to be great!" Performance and electrification? Not a contradiction for Seebach. Quite the opposite, in fact: "They complement each other perfectly. Electrification makes our portfolio future-proof. And it will delight our customers because it creates an entirely new dimension of a sporty driving experience."

3 Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0


Photo: graupause

Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0



Seebach wants to delight Audi Sport customers in the future with the dynamic performance of electric cars.

He has been driving the RS e-tron GT[3] for several weeks and has now really got to know the qualities of an electric car: “I love the rich sound of the V8 biturbo in the RS 6.[4] But now – with the electric GT – I notice even more intensely how it drives.” He is also impressed with its everyday usability. Whether for business meetings, weekend shopping trips or a family excursion, the RS e-tron GT[3] is always the right choice. This electric model is a unique blend of elegance, dynamics and driving pleasure.

Electric – in motorsport, too

The managing director and his GT[3] have a special destination today: the Audi Motorsport headquarters in Neuburg an der Donau. Since March 2019, Audi Sport GmbH has consolidated not just the development of R and RS models, the Audi exclusive customization program and the Audi collection, but also all motorsport activities of the brand with the Four Rings. As managing director and the person in charge of Audi Motorsport, Seebach is pushing the strategic repositioning in motorsport.

3 Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0
4 Audi RS 6 Avant: combined fuel consumption in l/100 km: 11.6–11.5 (NEDC); combined CO_2 emissions in g/km: 265–263 (NEDC)

Understatement coupled with outstanding performance – the RS e-tron GT[3] is an important image carrier for the Four Rings.

Since 2014, the brand with the Four Rings has also been championing electric drive in motorsport through Formula E. This has helped the company gather important findings that will also benefit electric mobility in series development. Audi is now seeking to take on fresh challenges through its latest prototype: For the first time, its alternative drive concept combines an electric drivetrain with a high-voltage battery and a highly efficient energy converter. Audi plans to compete with this vehicle in the Dakar Rally through the desert. Yet again its aim is to be a pioneer in motorsport. What better platform to choose than one of the toughest rallies in the world? “That’s where we develop the technologies for series production in extreme conditions,” explains Seebach.

Image carrier for the brand

Already available in the series-production Audi RS e-tron GT:[3] intelligent thermal management for the electric motors. This makes the output highly reproducible so that sporty acceleration without power losses is available at any time and for repeated bursts. Air suspension, controlled damping and all-wheel steering provide the requisite quality of ride comfort. A range of more than 450 kilometers and high-performing charging at 270 kW that keeps stops for charging brief make the Gran Turismo suitable for long-distance driving.[3] “This is understatement coupled with superb performance,” declares Seebach. “The RS e-tron GT[3] is always ready to perform and is utterly electrifying.” This electric Audi has nothing to prove. But it can do if it has to.

3 Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

The proof comes on the first straight after leaving Ingolstadt city limits. The sports car accelerates continuously up to the 100 km/h speed limit. Time to make the most of its electric boost – for a short time at least, with the next bend right ahead. Even then, the GT[3] makes an impressive display of its on-road power. Because the battery under the vehicle floor gives it a low center of gravity. Thanks to optimum roadholding, the coupé takes the bend dynamically. Julius Seebach: “The dynamics of the RS e-tron GT,[3] its precision and high efficiency make it an image carrier and characterful pioneer that will shape the future of the Audi brand.”

Three stages of electrification

How will this future look? Electrified! Seebach is convinced of that. But it will come in different stages: “We already offer the Audi RS 6 Avant,[4] RS 7 Sportback and RS Q8 with mild-hybrid technology based on a 48-volt electrical system.” The result is increased comfort and efficiency. In the RS models, the electric belt-driven starter alternator lends this technology extra starting performance. Audi is the first manufacturer to have taken this technology into series production in the high-performance segment.

Plug-in hybrids represent another step. They offer scope for all-electric driving combined with an internal combustion engine. All-electric models will complete the portfolio.

This electrification strategy is the basis for the sustainability of the Audi Sport models. So will every RS soon come with a charging cable? “We’d like to offer our customers a suitable model in every segment,” says Seebach, who promises: “We will continue to put models with combustion engine onto the market in the future. Step by step we’ll enrich them with the emotional appeal and performance that electric drive makes possible. The RS e-tron GT[3] shows how passionate the mobility of the future can be.”

3 Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0
4 Audi RS 6 Avant: combined fuel consumption in l/100 km: 11.6–11.5 (NEDC); combined CO_2 emissions in g/km: 265–263 (NEDC)

High-performance charging with a capacity of up to 270 kW keeps charging stops brief.

Audi RS e-tron GT: combined electric power consumption in kWh/100 km: 20.2–19.3 (NEDC); combined CO_2 emissions in g/km: 0

Photo: graupause

Julius Seebach

Photo: graupause

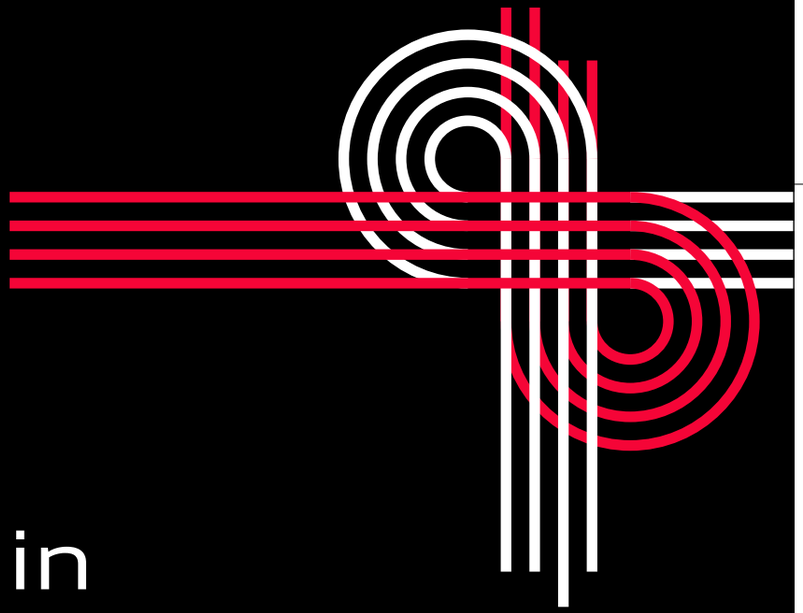
Julius Seebach
Managing Director of Audi Sport GmbH

Julius Seebach (37) began his career with AUDI AG in 2015. He has been with the company Audi Sport GmbH since 2017 and was appointed its managing director on May 1, 2019. Under his aegis the subsidiary of AUDI AG has realized the biggest international model initiative in its history, pushed ahead with its electrification strategy and consolidated all motorsport activities of the Audi brand under one roof. In addition, Seebach assumed responsibility for Audi Motorsport on December 1, 2020.

Record year

With over 29,300 R and RS models delivered, 2020 was a record year for Audi Sport GmbH despite the coronavirus pandemic. That is a clear gain of more than 16 percent on the previous year. Audi Sport GmbH recently completed the biggest model initiative in its history. With 13 R and RS models on offer, it now has its youngest and largest portfolio ever. With effect from March 1, 2021, Dr. Sebastian Grams is taking over in charge of the series-production range of Audi Sport GmbH. Julius Seebach is increasingly advancing the strategic realignment of motorsport activities.

SYNERGIES



in software development

Creating hard facts for software

Text: Pauline Böttcher

Software is becoming of central importance, including in the automotive industry. The cross-brand Car.Software organization consolidates all activities relating to in-car software development within the Volkswagen Group, thus facilitating Group synergies.

Software is becoming the differentiating competitive factor

When the term “mobile device” is used, most people think about smartphones and tablets. Yet there is a mobile device with four wheels that is more complex – and that is the car. The fully connected Audi models already offer customers digital experiences today. However, the majority of digitalization in the vehicle contributes “invisibly” in the background to enhanced comfort and efficiency. This trend is progressing rapidly.

What has long since become commonplace with smartphones and similar devices is being demanded increasingly in the car: continual updates and new features and functions – and ideally without having to visit the workshop. Over-the-air software updates are to provide the answer here, and offer certainty for Audi customers at all times that their personal data is secure. The quality standards and premium security requirements that are typical of Audi are just as valid as ever, particularly in the digital era. A car’s operating system and its connectivity with a highly secure data cloud are increasingly becoming factors that can offer a competitive edge. That is why software development is growing in both importance and scope.

Focus on software development

The fact that an Audi today autonomously stays in its lane and maintains a distance from other road users, among other features, is due to around 100 million lines of program source code. The infotainment, for instance, comprises more than 10 million lines of code, as much as was to be found only a few years ago in an entire vehicle. As vehicles become more digitalized, the complexity and costs of development also increase.

In order to actively shape this change, Audi is re-thinking Technical Development. Where the hardware of the vehicle, in particular, was once the focus of attention in the product emergence process, software development is now in the spotlight. To reflect this growing importance, Audi no longer organizes the management of vehicle projects in the product lines and Technical Development according to the length, size and width of the vehicle, but instead places the emphasis on the vehicle electrical system. This refocusing creates the basis for achieving synergies through the Car.Software organization.

The Volkswagen Group subsidiary has been operational since July 2020 and aims to bring together software expertise throughout the Group. The Car.Software organization already provides Audi with access to 4,000 software experts.

E³ 2.0 architecture

From end to end – the new electronic architectures

It may only be a small abbreviation, but for Audi and the Volkswagen Group it represents the basis for future digital innovations: E³. It stands for end-to-end electronic architecture, and extends from the vehicle to the backend through to the customer interfaces, such as the smartphone.

When operations commenced at the Car.Software organization, development responsibility for the current E³ architectures was transferred to the organization. At the same time, the new E³ 2.0 architecture is being developed, representing a scalable architecture that will allow synergies to be leveraged throughout the vehicle life cycle.

The Car.Software organization: development in five central areas

The subsidiary focuses on developing standardized software solutions for all of the Group's brands and markets. The vehicle operating system VW.OS and integration in the associated Volkswagen Automotive Cloud are key components of the development scope. Moreover, the organization will consolidate the technological platform solutions in the future to create data-led business models and innovations. Investments also underscore the great importance attached to digitalization in the Group: The Volkswagen Group is investing around EUR 27 billion in digitalization. Compared with the previous planning round, this figure has doubled, and also includes expenditure for the range of tasks undertaken by the Car.Software organization. Thanks to standardized software solutions, substantial economies of scale are generated and therefore the costs per vehicle reduced for all brands. Meanwhile, customers benefit from more comfortable and seamless mobility featuring the Audi look and feel.

Connected Car & Device Platform

Uniform vehicle operating system, connectivity and corresponding cloud platform for all brands

Intelligent Body & Cockpit

Platforms for all electronic architectures in the Group, uniform integration of HMI functionalities, software structure and hardware

Automated Driving

Software functions for automated driving in all brands, for NCAP up to level 3 and beyond, functions and the corresponding reference hardware

Vehicle Motion & Energy

Software functions for the drive system, chassis and energy/charging technology, combined with a high-performance computing platform

Digital Business & Mobility Services

Technologies aimed at implementing new mobility services and digital business models in all brands

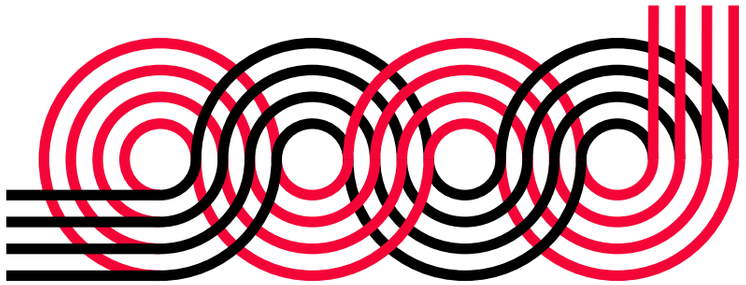
Make or buy?

Make!

With the Car.Software organization, the Volkswagen Group aims to increase its overall share of in-house software development in the car from 10 percent today to more than 60 percent by 2025. In this respect, the focus must be on maintaining and extending the necessary know-how in the Group as it ensures a competitive edge. The real potential of software becomes clear as the number of vehicles grows. This applies to what can be learned from the data and also to cost advantages. The Group can profit from this scale advantage, with more than 9 million vehicles having been sold in 2020 alone. Moreover, data sovereignty and digital value creation are retained in the company through in-house development.

In addition to expanding its own software expertise, targeted collaborations ensure that the Car.Software organization can gain momentum. In addition, the company took over the front camera software division from software specialist HELLA Aglaia Mobile Vision GmbH at the beginning of 2021, for example. This move signals the intention of the Car.Software organization to expand its competences in image processing and press ahead with the development of automated driving functions for all Group brands.

Collaboration model



So how exactly does the new software unit operate? Currently, the Car.Software organization is surveying the sales and development requirements across brands to ensure a scalable end-to-end system design. The close content-related collaboration with all brands is critical to the success of the Car.Software organization. As a premium brand, Audi sees this as its special responsibility. After all, premium for many customers is already defined today by digital technologies that are tailored to their needs. The Car.Software organization brings together these requirements and develops a comprehensive platform consisting of operating system, electrical/electronic architecture and cloud. The brands can adapt features and functions on this basis that will make them stand out from the competition. Audi can therefore offer its customers a premium experience – but at a lower cost.

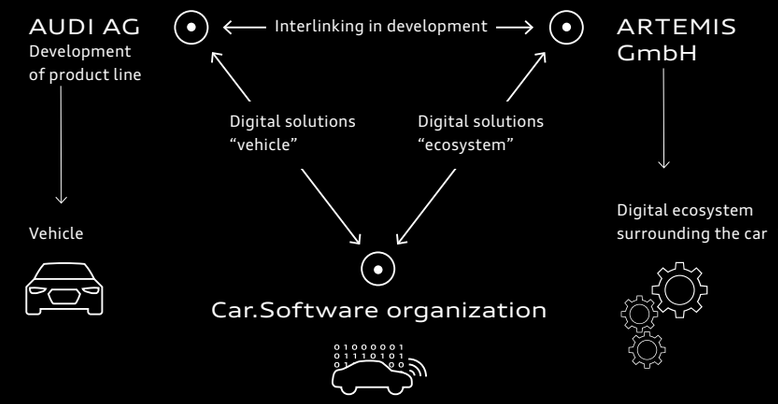
Artemis

Artemis is the Greek goddess of hunting – and a project in the Volkswagen Group that is aimed at using development products from the Car.Software organization.

ARTEMIS GmbH was created as an agile unit that advances innovative vehicle concepts and the digital ecosystem surrounding the car. An approach to vehicle development that focuses on software architecture and the integration of hardware and software facilitate the realization of new, software-based business models throughout the entire life cycle and the creation of a far-reaching ecosystem surrounding the car.

The first goal: a highly efficient, fully connected electric vehicle from the Audi brand that is scheduled to enter the market in 2024.

The Car.Software organization makes digital solutions available both for the vehicle and for the digital ecosystem surrounding the car.



S — B

T

Talking Sustainable Business – Key Facts

- ↗ At Audi, sustainability is strategically anchored along the value chain and in projects
- ↗ Audi is involved in international collaboration as an important partner for sustainability standards
- ↗ Audi endorses the goals of the Paris Climate Agreement and wants to be a net carbon-neutral[1] company by 2050
- ↗ Scoring with continuity: Audi continues to promote its own Mission:Zero environmental program worldwide and across departments

Page 214
ASI-certified aluminum: Audi leads the way

Page 222
Good chain reaction – greater sustainability together with suppliers

Page 230
The goal is zero – environmental management in production

1 Audi regards net carbon neutrality as a state in which, following the exhaustion of other possible measures aimed at reducing the still remaining CO_2 emissions caused by the products or activities of Audi and/or currently unavoidable CO_2 emissions within the scope of the supply chain, manufacturing and recycling of Audi vehicles, at least quantitative compensation is provided through voluntary and globally conducted compensation projects. Throughout the utilization phase of a vehicle, meaning from when a vehicle is delivered to a customer, CO_2 emissions produced are not taken into account.

ASI-certified aluminum: Audi leads the way

Photo: Arnos Fricke

AUDI AG is the first car manufacturer to be awarded the Chain of Custody certificate of the Aluminium Stewardship Initiative (ASI) – a milestone for the company.

Text: C3 Creative Code and Content GmbH

In 2020, AUDI AG became the first car manufacturer to receive the Chain of Custody certificate of the Aluminium Stewardship Initiative (ASI). The certificate confirms that Audi can comply with the materials flow chain for sustainably produced aluminum in accordance with the ASI standard and can also input the correspondingly certified material to the Aluminum Closed Loop with its suppliers. In this way, the level of sustainability attested by the ASI is completely maintained, not just for vehicle components but also for the process scrap from Audi press plants that is retained in the loop.

“The responsible use of resources is self-evident for us. At Audi we see it as our duty to treat our planet’s valuable resources with respect,” says Josef Schön from the area of Corporate Responsibility. “We are convinced that we can bring about change. And Audi’s use of aluminum is a really good example of how the company wants to play a role in achieving greater sustainability.”

Sustainability is a focus for Audi in all stages of the value creation process, with particular emphasis on aluminum – whose production is especially energy-intensive. Here the company has a variety of approaches to enable sustainable use of the material in all its different facets. The economical use of resources is a

Light and malleable: Aluminum has been a popular material for use in vehicle bodies since the early days of the automobile.

Photo: Arnos Fricke

priority. This also means using the required material in the right place and in the right quantity. Lightweight construction with aluminum has been one of Audi’s great strengths for decades. The company has particular expertise in the use of this material in vehicles and components.

Certified sustainability

Those involved with sustainability and aluminum will no doubt be familiar with the work of the Aluminium Stewardship Initiative. With 143 stakeholders, this organization has developed a global standard for handling aluminum that defines ecological, social and business ethics criteria along the entire aluminum value chain. Representatives of indigenous peoples are an established part of the organizational structure of the ASI, and dialogue with labor union representatives also plays an important role. As early as 2018, Audi became the first car manufacturer to receive the ASI Performance Standard certificate for its responsible use of aluminum for the battery housing of the Audi e-tron[1] – but that was just the start.

1 Audi e-tron: combined electric power consumption in kWh/100 km: 28.8–21.4 (NEDC); combined CO_2 emissions in g/km: 0

Recently, the → Chain of Custody (CoC) certificate of the Aluminium Stewardship Initiative was awarded for the Ingolstadt and Neckarsulm sites. Audi is therefore the first car manufacturer in the world with the right to bear this award to this extent. It certifies that the company can demonstrate its ability to input sustainably produced material into closed loops. “We heartily congratulate Audi on being awarded the ASI Chain of Custody certificate for its two press plants and for being the first OEM to introduce CoC into its own operations,” said Fiona Solomon, CEO of the Aluminium Stewardship Initiative. “Over the course of 2020, we have identified growing interest among downstream aluminum users in sourcing responsibly produced aluminum for their products and being able to demonstrate this to their customers. Together with the Aluminum Closed Loop at these sites, CoC certification allows Audi to fulfill the expectations of consumers and the demand for more sustainable products.” The next steps are already being planned, with further sites to be certified to the ASI standard in 2021.

“Certificates and standards help us ensure that our local suppliers comply with internationally recognized human rights and environmental standards,” says Josef Schön. The cross-sector and industry-wide mechanisms of the ASI provide assistance here: Its Chain of Custody ensures that only ASI-certified material reaches Audi.

ASI certification & Chain of Custody

The Chain of Custody (CoC) documents where a company sources what volume of aluminum and where it is sold. This ensures that the entire aluminum cycle of certified companies is traceable. The CoC is a recognized method of managing material based on its mass – because it is not outwardly obvious where aluminum comes from if, for example, it passed through a melting plant. Put simply: Before now, a roll of aluminum had no label to indicate origin and production, as is meanwhile typical with supermarket items like bananas. Now, traceability is achieved by awarding certificates, which are a central element of this method of accounting for materials.

Active involvement required

Even if the processing of aluminum is certified at various Audi sites over the coming months, the goal is still far from being reached. Josef Schön: “Certificates alone are not enough for us. A central pillar of Audi’s sustainability strategy is its desire to improve continually and be actively involved. And our work in initiatives like the ASI – which is also required by the UN in the Sustainable Development Goals – is an important part of our commitment.”

Yet, the sustainable use of aluminum is a complex endeavor, since it starts far from the AUDI AG factory gates. Work in the deeper tiers of the supply chain and beyond contractual relations requires intensive involvement. Audi has been a member of the Aluminium Stewardship Initiative since 2013 and Audi experts can be found around the (virtual) table when it comes to developing new standards and improving existing ones. As a member of the ASI, Audi is currently supporting the advancement of ASI certifications, some of which are to be adopted as early as 2021.

Longevity is another important component of Audi’s commitment to the Aluminium Stewardship Initiative. Trust and strong partnerships ultimately have to grow too. According to Mathias Kellner, who heads up Metal Procurement at Audi: “We can do a lot more when we work together with other manufacturers, suppliers or stakeholders from the industry. Responsible action means engaging in dialogue with all the stakeholders, taking the interests of others seriously – and ensuring that no one is left behind.” Industry-wide consensus must be reached, and binding standards and processes established that ideally apply to all.

QUICK FACTS

about aluminum

Properties

Aluminum has two main properties: It is lightweight and does not rust. It therefore has many different uses and is frequently used in vehicle construction and in aerospace applications. Aluminum has been a popular material for use in vehicle bodies since the early days of the automobile: The NSU 8/24 with all-aluminum body was manufactured as early as 1913.

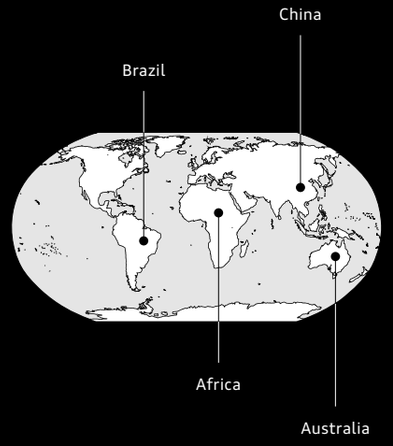
Extraction

A great deal of electrical energy is required to extract pure aluminum. Around 507,000 metric tons of primary aluminum was produced in Germany in 2019, requiring approximately 7.6 terawatt hours of energy – slightly less than a nuclear power plant generates per year. That is why it pays to collect and melt down used aluminum parts again.

Photo: Amos Fricke

Occurrence

Aluminum is not manufactured, but extracted from bauxite. Bauxite is a mineral whose aluminum content can, among other things, be electrolytically melted. The name has its origins in the French village of Les Baux-de-Provence, where the ore was first found. Today, bauxite is mined primarily in Australia, China, Africa and Brazil.



Basics

Aluminum (Al) is a metal. It belongs to the group of light metals and has a density of 2.7 g/cm³. This means: One liter weighs less than three kilograms. By comparison: A liter of steel weighs approximately 7.85 kilograms, and a liter of gold around 19.3 kilograms.

Closed loops

Audi uses the purchased aluminum efficiently, with the volume of offcuts kept to a minimum and reused. So that even less primary aluminum is required in manufacturing in the future, Audi launched the Aluminum Closed Loop in 2017. It ensures that high-grade aluminum production offcuts are not simply sold on the scrap metal market, but are fed back into the material loop. “In this way we protect valuable resources,” explains Alois Winkler, project manager in Procurement Strategy. “The Aluminum Closed Loop allows us to retain valuable raw material in the loop, with sustainable production guaranteed along the value chain based on the ASI Chain of Custody standard.”

So, how does this work? Aluminum offcuts from the press shop go directly back to the supplier. The supplier can recycle the scrap and use it to produce new material that Audi then uses again in the press shop. In addition to the plant in Neckarsulm, the Ingolstadt plant joined the Aluminum Closed Loop process in January 2020; the plant in Győr in Hungary is set to follow in 2021.

Selected contribution by Audi to the SDGs of the United Nations

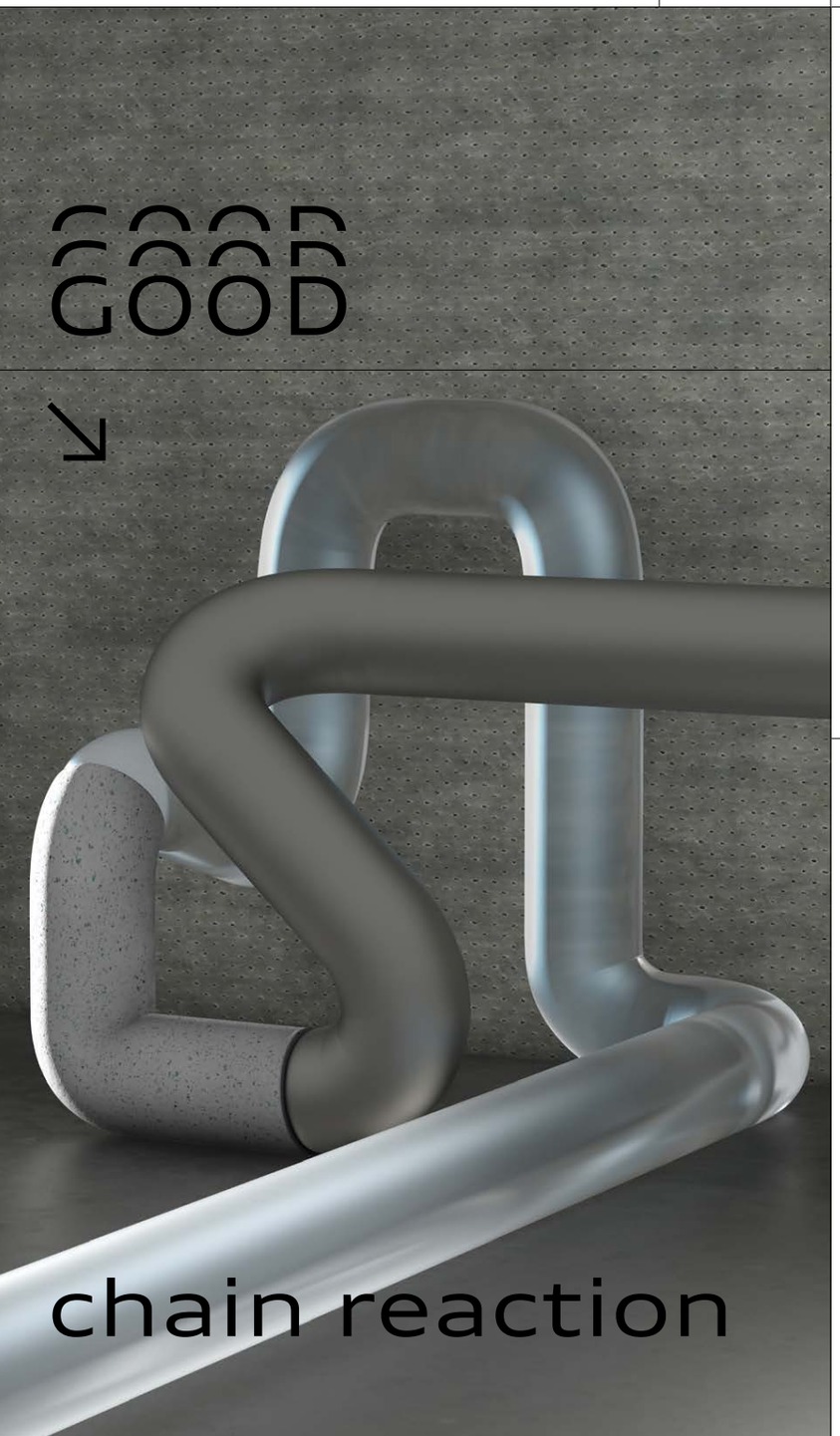
13 CLIMATE ACTION

Audi considers it a duty to treat the planet’s valuable resources carefully.

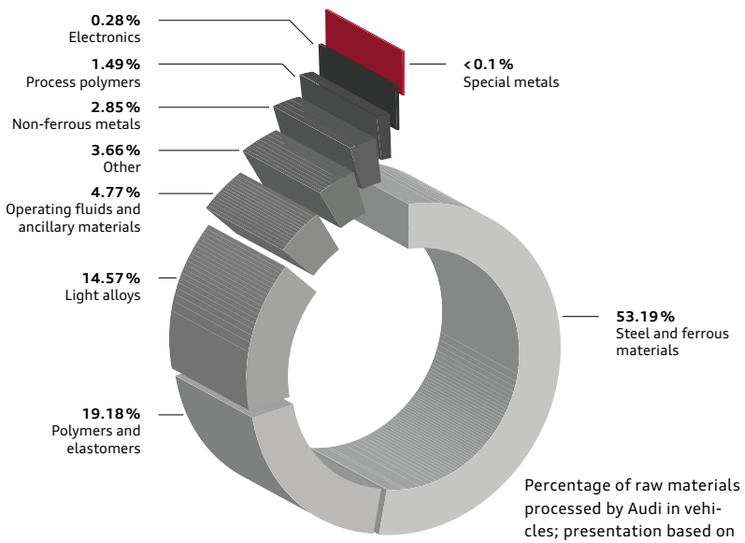
17 PARTNERSHIPS FOR THE GOALS

Audi is committed to sustainability standards in international collaboration.

→ see page 289 for an overview of the SDGs



Volume of raw materials processed by Audi
in 2020



Percentage of raw materials processed by Audi in vehicles; presentation based on own analyses.

Greater sustainability together with suppliers

Sustainability in the supply chain – this is both a challenge and an opportunity. Audi is present in more than 100 markets. The company's supply chain is therefore widely branched. It is also subject to constant change and is highly complex due to the wide array of process steps and materials. "We interact with more than 14,000 direct suppliers from more than 60 countries," says Marco Philippi, Head of Procurement Strategy. "That

adds up to a large responsibility, but at the same time it offers enormous potential. If we succeed in steering the network in the right direction, then this not only has a positive effect on Audi, but also on our entire sector."

In 2020, Audi delivered 1,692,773 vehicles despite the coronavirus pandemic – each consisting of around 12,000 parts. "As a major industrial enterprise, we are very conscious of our responsibility for the environment and society. For Audi, the concept of being consistently sustainable means focusing holistically on processes that are as environmentally friendly as possible and on social working conditions," says Marco Philippi. After all, even if Audi manufactures many parts itself, a large part of the value creation takes place on the supplier side. "Our globally distributed supply chain plays a key role." And sustainability requirements are clearly defined for any suppliers and partners who want to collaborate with Audi.

"We take this duty seriously and work exclusively with partners who share our values. This is because we firmly believe that our suppliers play a key role in the sustainability performance of Audi," says Johanna Klewitz, coordinator for sustainability in the supply chain in Procurement Strategy. The company's commitment to ensuring responsible supply chains follows a clear strategy that can be split into three focal areas: environment, people and innovation.

On-site inspections carried out Group-wide

822

Number of suppliers that have provided information (SAQ)

More than

13,000

↘

Sustainability rating for suppliers

A rating for more comparability and transparency: The sustainability performance of the Volkswagen Group's suppliers has been recorded since July 1, 2019, using the so-called S-Rating (Sustainability Rating). By filling in a self-assessment questionnaire (SAQ), suppliers report on how they act sustainably in terms of social and environmental aspects and corporate ethics. In addition to the answers provided in the questionnaire, documents and certificates confirming the information are required. If the results of the SAQ are not satisfactory, independent sustainability assessors visit the suppliers to carry out an inspection and judge whether the supplier "can be awarded a contract" or "cannot be awarded a contract." There are no gray areas. Suppliers have the opportunity of identifying potential for optimization and implementing improvements. Audi provides support here in the form of targeted training programs and workshops. In 2020, over 950 employees at supplier companies took part in online training. In addition, in 2020 the company established an information hub for suppliers on the topic (→ www.s-rating.audi). Why? Because solution approaches are varied.

Environment: more than just individual measures

"The switch to electric mobility creates entirely new challenges within the supply chain. But at the same time, it also creates opportunities, and we want to make use of these," explains Marco Philippi. "Through the systematic electrification of the model range, a large part of the CO_2 emissions arise right here." Up to 2025, the supply chain and upstream production processes will account for almost one quarter of all CO_2 emissions at Audi. To counteract this, the company launched an Audi CO_2 program in the supply chain back in 2018, in which measures are identified for reducing CO_2 emissions together with suppliers. These measures not only contribute significantly to reducing the environmental impact of the brand's electric cars; the Aluminum Closed Loop project also plays a major role in reducing CO_2 emissions. Valuable primary raw materials are conserved at the same time with the intelligent closed loop.

As regards 2021, careful use of water is another example of the work being undertaken at Audi to conserve resources. "For our Water Stewardship Program, we work together with our suppliers to analyze potential risks in our supply chain – from both ecological and social perspectives. In this context, we identify processes for which excessively large amounts of water are required," explains Roland Dieling, who is part of the sustainability in the supply chain team. Site-specific concepts are to be developed together with the suppliers so that we can ultimately meet the demands of the Water Stewardship Program. "There are opportunities in potentially closed cycles here as well. However, in contrast to CO_2 emissions, sustainable water management works only at the local level because the conditions on site are crucial for success."

The chemical recycling of mixed plastic waste also harbors great potential in terms of intelligent closed loops in the supply chain and the efficient use of resources. This is why the Karlsruhe Institute of Technology (KIT) and Audi launched a pilot project in 2020 as part of the THINKTANK Industrial Resource Strategies. The objective is to recycle mixed automotive plastic waste in a resource-conserving closed loop. Audi provides plastic parts that are no longer needed for this purpose, such as fuel tanks, decorative wheel trims or radiator protective grilles from Audi models. These are turned into pyrolysis oil by means of chemical recycling. The quality of this oil corresponds to that of petroleum products, with the materials made from it offering the same high quality as new goods. In the medium term, parts made of pyrolysis oil can be reused in automobiles. "If plastic parts can be manufactured from pyrolysis oil instead of petroleum without loss of quality, then it would be possible to significantly increase the share of sustainably produced parts in automobiles. From a long-term perspective, this procedure can also play a role in recycling end-of-life vehicles," says Marco Philippi.

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Net saving of metric tons of CO_2 as a result of the Aluminium Closed Loop in 2020:

More than

165,000

↘

Net saving of metric tons of CO_2 in the supply chain in 2020:

More than

335,000

Photo: AUDI AG

People: improving working conditions globally

Audi continuously strives to improve working conditions for people, for example when handling critical raw materials in the supply chain. Sarah Schwellinger, expert for human rights duty of care in the supply chain at Audi, says: “Aside from environmental protection, our supply chain strategy also places a strong focus on social challenges. There are some 1,600 kilograms of different raw materials in an Audi. This leaves not only an ecological footprint, but a social one as well.” The Volkswagen Group’s → Code of Conduct for Business Partners summarizes the requirements Audi places on all of its partners.

In this regard, the experts at Audi consider not just its direct suppliers: “We have to take responsibility and as a company, and as a relevant customer, take a firm stand as regards our standards,” says Sarah Schwellinger. “We usually have indirect influence – sometimes even direct influence – on all the people involved in the supply chain, their work, lives and families.” It is important to the company to take its responsibility seriously. There are numerous examples of this, such as the Sustainability Rating with its on-site inspections (→ see page 225), the activities of the company in the area of human rights (→ see page 73, Ethical operations), the formation of strong alliances and cooperation in initiatives (→ see page 214).

Innovation: promoting transparency and identifying sustainability risks

Apart from the direct suppliers, the upstream chain is also critical. “By collaborating closely with our partners, we want to make our supply chain increasingly transparent. This gives us a continuously better understanding of the measures we have to take to set the right course from the outset,” explains Susanne Lenz, a member of the sustainability in the supply chain team.

The figure of around 14,000 direct suppliers is already impressive, but the topic becomes even more complex when the upstream chain is considered. Here Audi uses the latest technologies, for example to identify sustainability risks early on and intervene appropriately. “Thanks to the closer integration of artificial intelligence (AI), for instance, we want to continually increase transparency in the global and complex supply chains,” says Susanne Lenz. “As an example, if AI detects critical new reports in media in relation to sustainability, we are informed and can act accordingly. Negative reports about suppliers or raw materials manufacturers are thus noticed at an early stage and we can process these systematically via our Supply Chain Grievance Mechanism where necessary,” says the expert. This kind of approach to innovation can arise only through a continuous exchange with all stakeholders. Many of the ideas come from joint workshops and hackathons, which Audi is consolidating with other new approaches in the Act4Impact program.

Selected contribution by Audi to the SDGs of the United Nations

Audi continuously strives to improve working conditions for people in the supply chain.

Audi defines clear sustainability requirements for suppliers and partners.

→ see page 289 for an overview of the SDGs

Photo: Getty Images

Environmental management in Audi production

Climate change, water shortage and dwindling resources as well as the loss of biological diversity are among the greatest challenges today. Audi has recognized this and is taking action. The company is making an important contribution to greater sustainability with its Mission:Zero environmental program – at its sites globally, in production and in logistics.

Text: AUDI AG

It is clear to Audi: Economic success and environmental protection are not mutually exclusive; instead, they are inextricably linked and build on each other. Ideally, the one accelerates the success of the other, and does so along the entire value chain of the car. In this context, the Mission:Zero environmental program is an element of the corporate strategy.

As the name already suggests, the goal is to consistently reduce our ecological footprint in the direction of zero. Four action areas play a central role in this respect: decarbonization, water usage, resource efficiency and biodiversity. The Sustainable Development Goals (SDGs) of the United Nations and the environmental mission statement of the Volkswagen Group act as guiding principles.

Mission:Zero

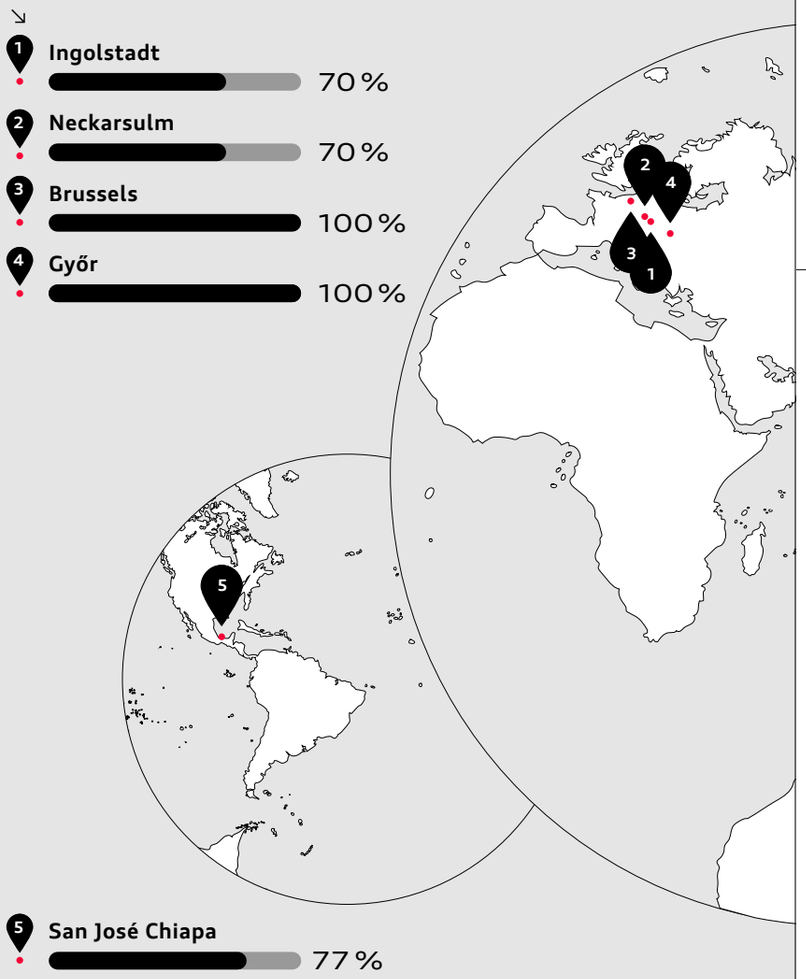
DECARBONIZATION

DECARBONIZATION

Photo: Getty Images

Carbon-neutral[1] Audi sites[2]

Status 2020



1 Audi regards net carbon neutrality as a state in which, following the exhaustion of other possible measures aimed at reducing the still remaining CO_2 emissions caused by the products or activities of Audi and/or currently unavoidable CO_2 emissions within the scope of the supply chain, manufacturing and recycling of Audi vehicles, at least quantitative compensation is provided through voluntary and globally conducted compensation projects. Throughout the utilization phase of a vehicle, meaning from when a vehicle is delivered to a customer, CO_2 emissions produced are not taken into account.

2 The reported figures establish the amount of CO_2 emissions already saved at the sites through the use of renewable and low CO_2 energy sources in relation to theoretical maximum CO_2 emissions based on an energy supply that relies solely on fossil energy sources.

Audi is aiming to achieve net carbon-neutral[1] production at all sites by 2025 as well as a gradual reduction in CO_2 emissions in logistics. This task is being enthusiastically undertaken by, among others, Markus Faigl, who heads up the “Decarbonization of sites” action area and Hans Rosicki, who heads up the “Decarbonization of logistics” action area.

Photo: Robert Fischer

↘

Hans Rosicki,
Head of the “Decarbonization of logistics” action area

Audi wants to achieve net carbon-neutral[1] operations at all its sites by 2025 as a means of contributing to meeting its target of offering carbon-neutral premium mobility. Four main approaches are being followed to achieve this goal. First: a continual increase in energy efficiency in the context of energy management. Second: an expansion of the supply of renewable energies at the sites. Third: the purchase of renewable energies. And fourth: the offsetting of currently unavoidable CO_2 emissions through compensation projects.

“When it comes to decarbonization of the sites and production, our major challenge in 2021 is to implement the master plan defined for this purpose with the measures we have now prioritized,” explains Markus Faigl, who heads up the “Decarbonization of sites” action area. Measures were preferred here that have the largest leverage in terms of reducing carbon emissions

1 Audi regards net carbon neutrality as a state in which, following the exhaustion of other possible measures aimed at reducing the still remaining CO_2 emissions caused by the products or activities of Audi and/or currently unavoidable CO_2 emissions within the scope of the supply chain, manufacturing and recycling of Audi vehicles, at least quantitative compensation is provided through voluntary and globally conducted compensation projects. Throughout the utilization phase of a vehicle, meaning from when a vehicle is delivered to a customer, CO_2 emissions produced are not taken into account.

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Markus Faigl,
Head of the “Decarbonization of sites” action area

so that the goal of “net carbon-neutral[1] production sites by 2025” is clearly addressed. A special technical challenge is the integration of renewable energies into the existing infrastructures at the sites, some of which have evolved over decades, while at the same time keeping production up and running. Faigl: “What I especially like about my work is that Mission:Zero allows us to contribute substantially to the energy transition at Audi and, at the same time, prepare the energy and media infrastructure of the plants for the future.” Good examples of this are not hard to find: In 2020, Audi Hungaria became the second Audi site after Audi Brussels in 2018 to achieve net carbon neutrality.[1]

“When I look back at the reduction in carbon emissions in transport logistics, I’m rather proud that we took a major step forward in 2020,” explains Hans Rosicki, who heads up the “Decarbonization of logistics” action area. “We’re utilizing the synergies

1 Audi regards net carbon neutrality as a state in which, following the exhaustion of other possible measures aimed at reducing the still remaining CO_2 emissions caused by the products or activities of Audi and/or currently unavoidable CO_2 emissions within the scope of the supply chain, manufacturing and recycling of Audi vehicles, at least quantitative compensation is provided through voluntary and globally conducted compensation projects. Throughout the utilization phase of a vehicle, meaning from when a vehicle is delivered to a customer, CO_2 emissions produced are not taken into account.

in the supply chain through close collaboration between the plants and headquarters, working together within the Volkswagen Group and cooperating with external partners. The employees in transport planning, for example, have succeeded in switching transport to rail and making more intensive use of trucks with alternative fuels. In addition, we established and executed extensive training programs to raise awareness among all our employees of the topic of climate and environmental protection in logistics.

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Energy intensity of the Audi Group – Automotive segment[3]
MWh/veh.

The energy intensity of the Group relating to automotive production including component manufacturing was 2.90 MWh per vehicle (MWh/veh.) for the year under review. The increase compared with 2019 arose primarily because Audi was unable to produce as many vehicles during the pandemic period, yet the base load in the plants remained the same. The base load refers to a constant level of energy consumption that is typically not undercut. One example of the base load is the electricity consumption of machines that had to be operated regardless of the number of vehicles produced.

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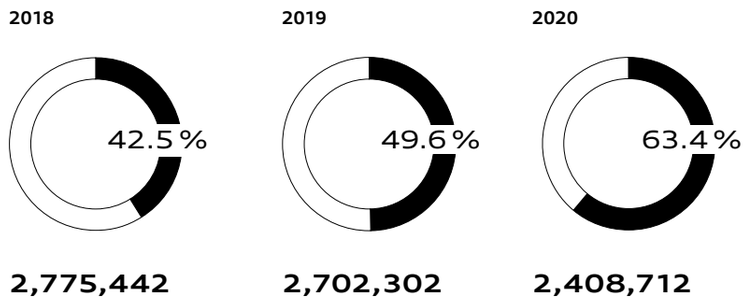
Energy consumption within the Group in total/by type[4]
in MWh



3 The energy intensity indicated refers to automotive production (incl. component manufacturing). This is calculated by dividing the overall energy consumption of car and component plants by the number of cars built at the sites.
4 Total energy consumption: This figure is made up of electricity and heat consumption as well as the use of fuel gases for production processes and externally supplied refrigeration at the plant.

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Total fuel use
in MWh

The decline in energy consumption (→ see page 237) in 2020 can be explained primarily by the coronavirus pandemic, which in turn had a significant impact on production. Vehicle production halted completely in numerous plants. The share of renewable energies across the entire Group was in turn increased substantially, which can be attributed to the increased sourcing of green electricity in Győr and Mexico. There was also a reduction in the use of fuels – Audi primarily uses natural gas – owing to the decrease in production.

↘

Direct (Scope 1) and indirect (Scope 2) greenhouse gas emissions by the Audi Group
in t

There are various reasons for the enormous reduction in CO_2 emissions. On the one hand, energy requirements in general declined, as did the use of fuels.

On the other hand, the purchase of energy from renewable sources at the sites progressed further with increased sourcing of green electricity in Neckarsulm and San José Chiapa and the purchase of biogas certificates in Győr.

	2018	2019	**2020**
Total CO_2 emissions	619,140	451,725	**231,334**
Direct CO_2 emissions (Scope 1)[5]	202,031	198,730	**172,387**
Indirect CO_2 emissions (Scope 2)[6]	417,110	252,995[7]	**58,946**

5 Direct CO_2 emissions: This figure is made up of CO_2 emissions generated by the use of fuel at the plant and CO_2 emissions produced by the operation of test rigs.
6 The process of selecting relevant emissions and the emission factors used are anchored in Volkswagen standard 98000 (→ see page 248), as is the entire key figure collection process. Generally, Audi uses the real emission factors of the energy suppliers. If this is not possible, calculations are conducted on the basis of the VDA's standard factors.
7 Correction in the recording of green electricity for 2019.

↘

Intensity of greenhouse gas emissions (Scope 1 and Scope 2)
in kg/veh.

The intensity quotient – that is, the intensity of greenhouse gas emissions in relation to automotive production, including component manufacturing – dropped significantly owing to the switch to green electricity and was 276.10 kg per vehicle for the year under review.

↘

Other air emissions
in t

As well as the CO_2 emissions at the production locations, Audi measures other emissions that are generated by painting work, by the operation of test rigs or by existing power generating facilities, for example. The reduction in emissions in the year under review can be explained by a coronavirus-related lower production figure since less vehicle surface was painted (VOC[9] and total dust). In addition, however, process optimizations were carried out in the paint shops in the year under review that will continue to have a positive impact over the long term, not just in 2020.

	2018	2019	**2020**
Direct NO_x emissions[8]	202	190	**177**
Sulfur dioxide (SO_2)	2.14	2.05	**2.03**
VOC emissions[9]	1,081	916	**815**
Total dust (PM)	58	41	**33**

8 Direct NO_x emissions: This figure is made up of NO_x emissions caused by the boiler houses at the plant, by paint shops and by the operation of test rigs.
9 VOC emissions (volatile organic compounds): This figure is made up of emissions from the paint shops, test rigs and other facilities.

Mission:Zero

WATER USAGE

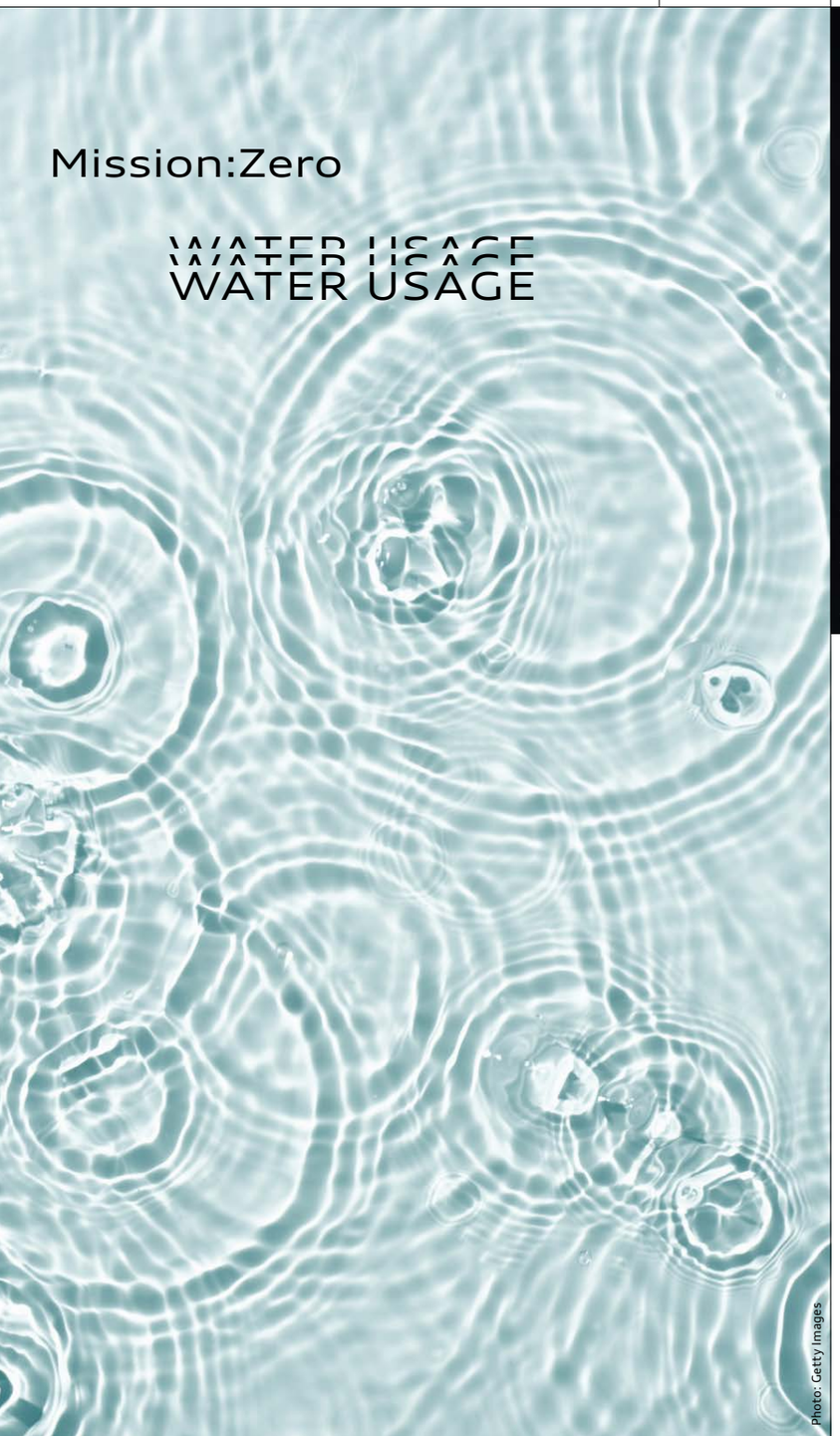


Photo: Getty Images

Photo: Robert Fischer

“What I like especially about my work is the variety of tasks,” says Daniel König, who heads up the “Water usage” action area. “The big challenge of reducing freshwater usage and increasing recycling is a result of the different conditions that exist at the various sites with regard to water. Not every measure makes sense at every site.”

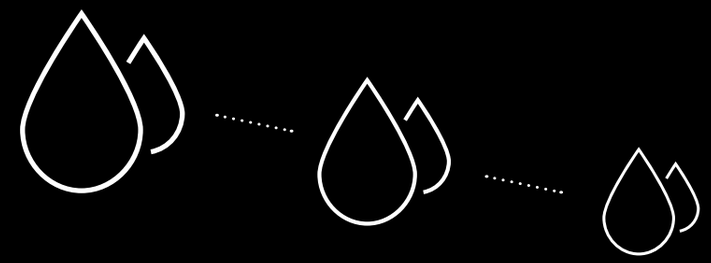
↘

Daniel König,
Head of the “Water usage” action area

Preventing water shortage, protecting drinking water quality: In terms of its water usage, Audi uses efficient processes and a water cycle at its production sites for the sustainable production of its cars. “The careful use of a resource such as water is a key priority in the Audi environmental policy,” says Daniel König. A good example of this is the sustainable water KPI introduced additionally throughout Audi in 2020 (KPI water[AUDI]). It evaluates water consumption in accordance with the different site conditions and relates this to the units produced. Daniel König: “The new indicator allows us to control measures in such a way that they are implemented strategically where they are most effective for Audi as a whole.”

↘

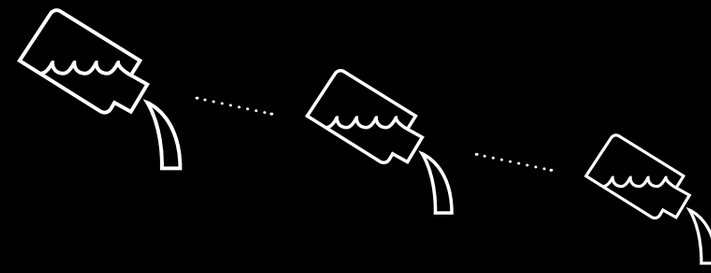
Fresh water consumption in the Audi Group
in m³



2018	2019	2020
4,159,236	3,428,689	3,132,780

↘

Total volume of water discharge
in m³



2018	2019	2020
2,382,498	1,872,285	1,847,735

The efficient use of natural resources, such as water, is a key priority in the Audi environmental policy. In 2020, the Audi Group reduced its water consumption in comparison with the previous year. This reduction can be explained primarily by the drop in production owing to the coronavirus.

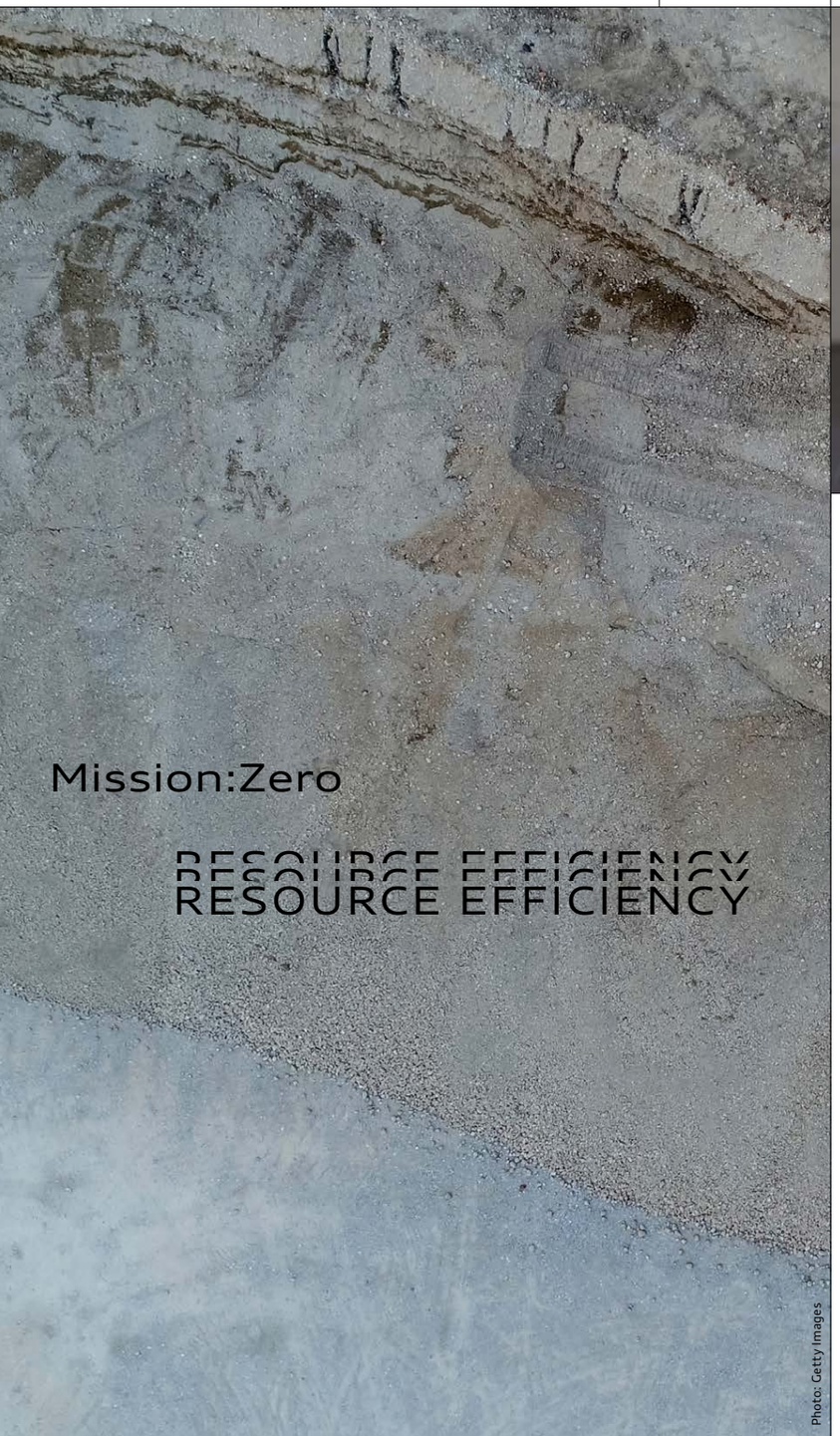


Photo: Getty Images

Photo: AUDI AG

“What I like especially about my work is that it is strategically important for the sustainable future of our company. The fact that I can contribute to a sustainable future through my work makes me passionate about what I do,” says László Horváth who heads up the “Resource efficiency” action area.

↘

László Horváth,
Head of the “Resource efficiency” action area

Natural resources are important production factors and a basis for industrial added value. Audi wants to use resources even more effectively and efficiently, and is also continuously developing its recycling expertise.

Resource efficiency is much more than just waste management. It starts with use of the right materials across the entire product emergence process and ends with reuse. “My vision is to establish a 100 percent cycle in our entire production chain,” explains László Horváth.

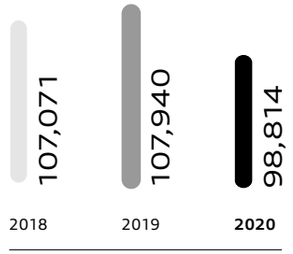
Environmental protection is the sum of many small things, as clearly demonstrated recently by a project in Neckarsulm. Numerous packaging materials accrue when assembling a vehicle since suppliers package most parts in plastic film or wrap for protection. Audi collects waste films on a large scale, delivers these to a recycling company based in the region, which uses them to manufacture new films, and these are then used in the plant again. “This example has a dual effect: first, less impact on the environment by recycling rather than incinerating materials. And fewer CO_2 emissions owing to the short transport routes,” explains László Horváth. The raw material thus remains for longer within the Audi closed loop. Horváth: “This is successful

thanks to cutting-edge technology and strong partnerships. We can only achieve our goals by working together with other companies – such as our suppliers and recycling companies – and with their specific know-how.”

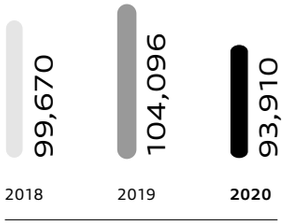
↘

Total weight of waste by disposal method
in t

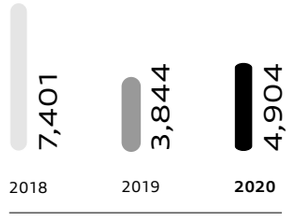
Total volume of waste (excluding scrap)



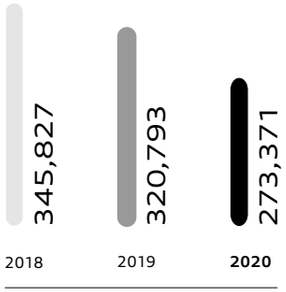
Recyclable waste



Disposable waste



Metallic waste (scrap)



Audi closes material loops where possible in order to reduce waste. Group-wide, a total of 98,814 metric tons of waste (excluding scrap) were generated in the year under review. This year-on-year reduction is primarily due to the coronavirus pandemic and the fall in the number of vehicles produced.

In relation to the recycling of hazardous waste – 42,074 metric tons in 2020 (2019: 40,782 metric tons – Audi is aware of the various framework conditions and local statutory requirements and complies with them. No major discharges of chemicals, oils or wastes to the environment occurred during the reporting period.

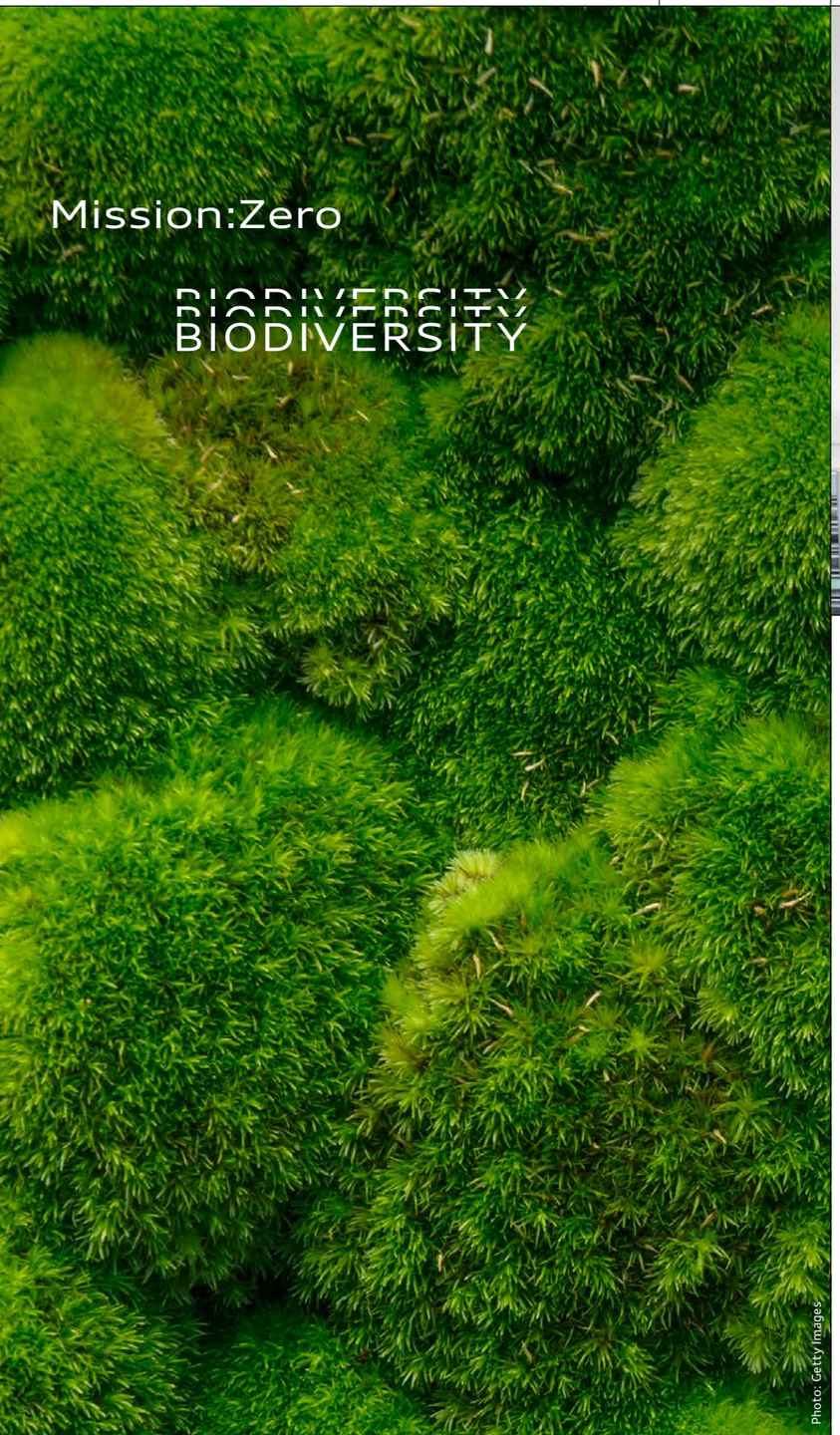


Photo: Getty Images

Photo: Robert Fischer

"What I like especially about my work is how the topic of biodiversity, which is relatively new in environmental protection at Audi, is being anchored in the company," says Antje Arnold, who heads up the "Biodiversity" action area. And she adds: "To me, biodiversity is synonymous with health and safety since unspoiled nature keeps germs at bay. This exciting topic area offers a sense of purpose, but also calls for innovative and creative action – paired with unceasing lobbying for the cause."

↘

Antje Arnold,
Head of the "Biodiversity" action area

Loss of biodiversity is one of the greatest ecological challenges alongside climate change. Audi is committed to preserving biodiversity and thus joined the "Biodiversity in Good Company" initiative several years ago. "Moreover, Audi is conducting biodiversity projects at all of its sites to play its part in helping preserve biological diversity," explains Antje Arnold. "What's wonderful about this is that the results of our work in this area are often visible – as we can see from one of our biodiverse flagship projects in the Audi production plant in Münchsmünster. The open spaces across the entire site have been turned over to nature. The number of species that are interesting and important for the region is growing constantly. It really is a lot of fun!"

Further biodiversity development projects are planned for 2021 on the site's grounds, such as facade greenery or the conversion of lawns to blooming meadows.

↘

Environmental management at Audi

Audi carefully analyzes environmental aspects in its worldwide manufacturing network – with the vision of building its cars in net carbon-neutral[1] plants by 2025. Along with emissions, Audi looks at all other site-based environmental aspects of operational value creation.

The basis of environmentally compatible production at Audi is the environmental and energy management systems that the company has gradually introduced since 1995. The environmental management system of the European Union, EMAS (Eco-Management and Audit Scheme), is installed at almost all European car plants of the Audi Group. Six Audi sites in Germany and seven internationally have management systems accredited according to DIN EN ISO 14001[10] or DIN EN ISO 50001.[11] The European sites, in particular, are validated additionally in accordance with the "EMAS premium standard" of the European Union. It requires that the sites in question demonstrate the sustained improvement of their environmental performance to specially accredited environmental experts, Compliance with legal requirements is the starting point for this.

1 Audi regards net carbon neutrality as a state in which, following the exhaustion of other possible measures aimed at reducing the still remaining CO_2 emissions caused by the products or activities of Audi and/or currently unavoidable CO_2 emissions within the scope of the supply chain, manufacturing and recycling of Audi vehicles, at least quantitative compensation is provided through voluntary and globally conducted compensation projects. Throughout the utilization phase of a vehicle, meaning from when a vehicle is delivered to a customer, CO_2 emissions produced are not taken into account.

10 ISO 14001: Ingolstadt, Neckarsulm, Győr, Brussels, San José Chiapa, Sant'Agata Bolognese and São José dos Pinhais sites.

11 ISO 50001: Ingolstadt, Neckarsulm, Győr, Brussels, San José Chiapa and Sant'Agata Bolognese sites.

The Board of Management defines the environmental policy, which is binding for AUDI AG sites. Its requirements are reviewed periodically and amended as necessary.

This policy applies to all products, services and activities, and is implemented at all levels of the company. The Environmental Protection organizational unit coordinates the Audi Group's activities in the area of ecology and is the main point of contact for the respective environmental protection bodies of the Volkswagen Group. It develops overarching and strategic regulations and implements these in practice. Environmental protection at the sites comes under the responsibility of the respective environmental protection officer.

Scope of the key figures

Unless otherwise indicated, the environmental key figures are determined on the basis of Volkswagen standard 98000. This standard defines how operational environmental data is to be determined within the Volkswagen Group and its subsidiaries.

The aim is to collect and document all environmentally relevant data from all the plants in a comparable manner. The environmental data is primarily based on measurements and calculations. The figures may contain estimates if, for example, they are based on statements from energy suppliers that were not available when data was collected. If, during the following year, material deviations from actual values are determined in the reported data, they will be updated accordingly. The individual key figures for 2019 were updated in this report using the actual values for 2019.

The scope of the environmental key figures relates to the production sites of the Audi Group. Unless otherwise indicated, these are the following plants: Ingolstadt, Münchsmünster, Neckarsulm, Brussels, Győr, San José Chiapa, Sant'Agata Bolognese (Lamborghini), Bologna (Ducati), Amphur Pluakdaeng (Ducati).

Only car-producing sites including component manufacturing are considered for the specific key figures.

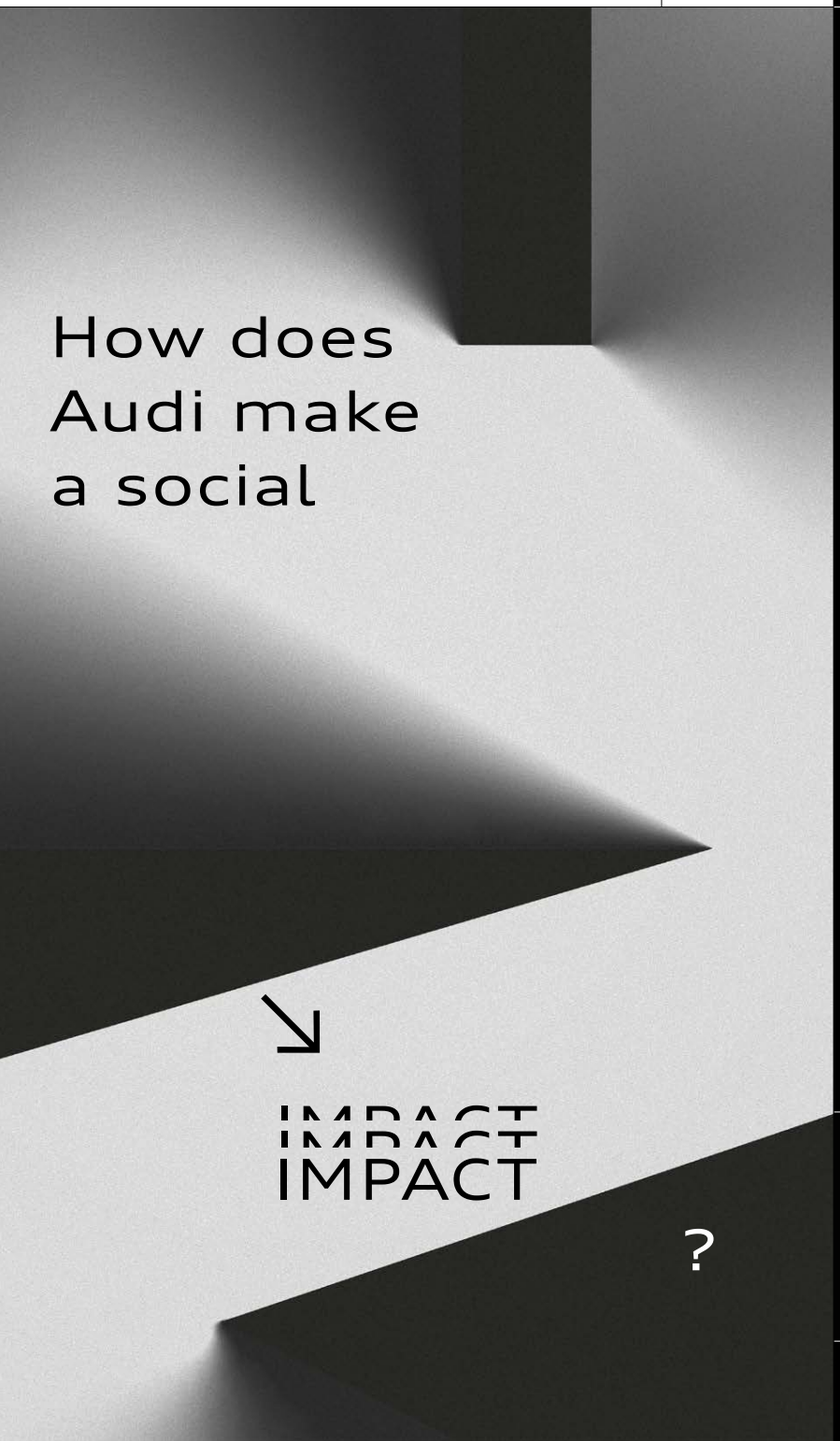
In addition to the environmental data of the Audi Group (including Ducati motorcycle production at Bologna and Amphur Pluakdaeng), the environmental data of the car production locations (Ingolstadt, Munchsmunster, Neckarsulm, Brussels, Győr, and Sant'Agata Bolognese sites; including San Jose Chiapa) is also shown separately for better comprehensibility).

Selected contribution by Audi to the SDGs of the United Nations

Audi is continuously working on all site-based environmental aspects of operational value creation.

Audi is working to consistently reduce its ecological footprint in the direction of zero.

→ see page 289 for an overview of the SDGs



S B T

Talking Sustainable Business – Key Facts

- ↗ Standing strong during the coronavirus: cultural change makes further progress
- ↗ Team for the future: Strategic personnel planning links corporate and HR strategies
- ↗ Strong social commitment at all production sites
- ↗ Safe workplaces thanks to accident and health protection – for the last 100 years
- ↗ The transformation calls for new key competences: Thanks to the Audi Akademie, the company is well prepared

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Standing strong during the corona-virus pandemic

Page 266
One goal – one team

Page 276
Responsibility worldwide: Engage, Educate, Empower

Standing STRONG STRONG STRONG

↘ during the coronavirus pandemic

Photo: Getty Images

↘

The significance of corporate culture

The coronavirus has put Audi to a tough test and resulted in many changes both for the company and for its employees. Six employees from the areas of production, training and development, health care, corporate culture and human resources report on their experiences over the past months – and why Audi will emerge stronger from the pandemic in the long term.

↘

Oliver Schadow
Leadership Programs/Training Ingolstadt

Oliver Schadow What eventful months we have had. They were challenging, but for this precise reason they were a time of discovery as well.

If anyone had asked a year ago whether and how managers can lead their teams from a distance – that is, without working together in one location most of the time – many people might still have been skeptical.

But now we know that “digital leadership” works – even as early as today. Why? Because the underlying bases for this are an openness for new things as well as trust. These are values we have been promoting at the Audi Akademie for many years through our interdisciplinary training and corporate culture initiatives. We extended our training program in the area of digital leadership to support specialists and leaders during the pandemic.

Looking back I can say that the coronavirus pandemic has accelerated both digitalization in the Group as well as the flexibility of our working world overall. What we experienced over the past months and have also driven forward ourselves would otherwise normally have taken years.

The coronavirus has changed our organization and will continue to do so. This includes a new mentality for dealing with challenges. Specifically: “Just do it” is sometimes a good approach! This boldness will make us faster as a company, and besides, some insights are only gained once the process has begun. This “Do it” approach has also proven successful with such a complex issue as the widespread introduction of mobile working. For me this is a reflection of “We are progress.”

↘
Peter Biersack
Learning process facilitator in Further Training Vehicle Technology Neckarsulm

Peter Biersack When the pandemic hit, we in the Further Training Vehicle Technology department were no different from anyone else at the company – we asked ourselves: “What do we do now?” But when it became clear that the coronavirus wasn’t going to disappear after a few days, it was time for solutions. In other words, we wanted to make our training services available to employees in digital form.

We benefited enormously in this regard from the wealth of experience available to us at the Audi Akademie. After all, the Akademie is the company’s internal point of contact when it comes to skills development and training. We had already gathered a lot of knowledge about digital learning formats. The Akademie has focused on blended learning for some time, including a mix of face-to-face measures and digital training programs such as live online or web-based training. This enabled us to quickly prepare and conduct face-to-face training events in digital form, with some extending over several weeks.

It’s important to note that not everything is possible virtually, and not everything makes sense digitally from a methodical and educational perspective. This is something that we as training experts always pay particular attention to. Our motto – “lifelong learning” – ultimately applies to us too. And I have to admit, as an experienced classroom trainer, I was initially unfamiliar with the virtual training format, but now I have become a real fan of live online training.

↘
Chris Metzger
Production
Ingolstadt

Chris Metzger I celebrated 25 years of service on March 4, 2021. Throughout all these years, I have experienced and seen a great deal. The company has changed enormously since my first day in 1996, but we have always come through both the good and difficult times together. The four linked rings in our logo are also a good symbol for the collaboration between us employees. Yet naturally nothing could really have prepared us for something like the coronavirus.

In production, we were hit hard by the negative impact of the pandemic. The assembly lines were down for five weeks in 2020 – something I had never witnessed before during my time at Audi. Normally there are around 44,000 people at the Ingolstadt site, and suddenly only about 2,000 Audi employees were keeping operations going at the plant. It was pretty eerie!

Since then, there have been a lot of changes in production. Numerous occupational health and safety measures have been introduced at the plants, with special safety precautions developed by Audi for group areas, plant entrances and exits, internal works transport and the staff canteens.

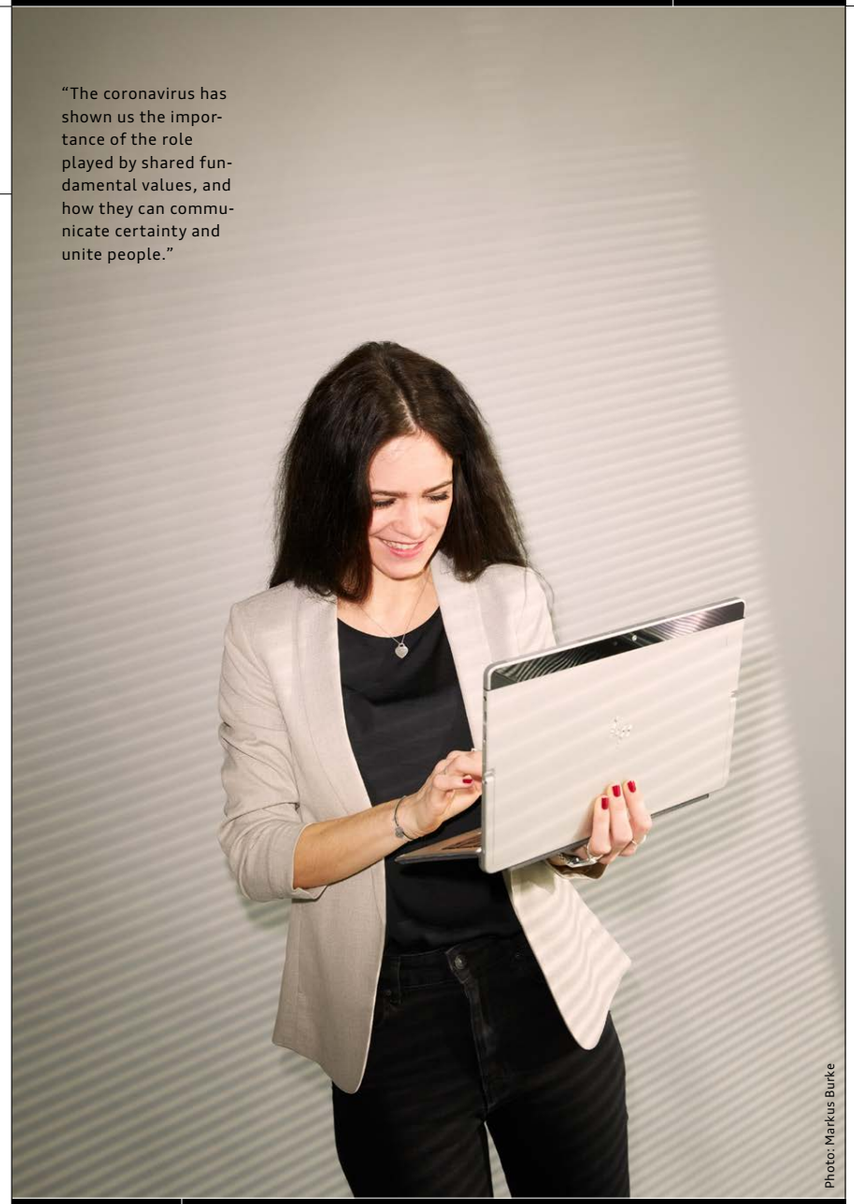
Much of what we regarded as self-evident in assembly is no longer so obvious. Work within the group the way some of us have experienced it for a very long time now is changing. There are new constellations because some employees with pre-existing medical conditions are deployed to other areas. Of course, we all know why, but it’s still tough. We will definitely be very pleased in assembly when the coronavirus is finally behind us and we can take off the masks again.

↘
Hanna Kuschel
HR Strategy
Ingolstadt

Hanna Kuschel The coronavirus is persisting stubbornly and changing the way we work at Audi. I personally already worked from home one day a week before the pandemic. My experience is that many tasks can even be completed more efficiently remotely. However, I was in the minority. Now many of us are familiar with the advantages of digital collaboration. I asked about this on our internal platform “Audi Team Community.” Many Audi employees appreciate the fact that digital collaboration allows them to work more productively, more creatively and also more efficiently.

So what will change in the long term as regards working from home? Many of my colleagues would like a hybrid model, where they work remotely or away from the office on certain days or during certain weeks. However, we should retain as much flexibility as possible rather than adopting a rigid approach. All the survey respondents said that they did not want to work solely from home, but would prefer to go back to the office on certain days at least. Another finding is also worth noting: Some people realized during this intensive period that working from home is simply not for them and they prefer to work in the office.

Even so, we should expect that, thanks to the coronavirus, mobile working will become an accepted practice in areas where it is possible. We’ve learned a lot about digital collaboration in recent months and will also benefit from it in the long term. I welcome the new flexibility.



↘
Daniela Huber
Corporate Culture
Ingolstadt

Daniela Huber The task of continually developing corporate culture at Audi is handled by our department. This is where we develop, test and evaluate special measures, formats and programs for this purpose. At the heart of this are the Audi leadership principles and the Audi corporate values of appreciation, openness, responsibility and integrity. We collaborate with employees from all the business divisions every day – very often through personal interaction. Events and workshops are part of our daily business: bringing people together, networking and leveraging synergies. And then came the coronavirus.

Suddenly everyone had to work from home where possible. Suddenly there were digital teams, leading from a distance and collaboration via Skype. But what does this mean for our corporate culture? Little or no personal contact within the team and lack of facial expressions and gestures in meetings mean that behaviors such as “reading between the lines” and asking more targeted follow-up questions are now playing a more important role. Openness and transparency are now more important than ever before in our predominantly digital communication. This takes courage – the courage to address things, and not just things relating to specific work topics, but also interpersonal matters. Together with appreciation and trust, this is the basis of a positive team culture. The lack of personal interaction during coffee breaks means that new and different ways have to be found to compensate for this.

The coronavirus has shown us the importance of the role played by shared fundamental values, and how they can communicate certainty and unite people. One thing has become clear: Culture is especially important when the pressure mounts in uncertain and complex environments, and a pandemic is naturally the ultimate example of this. At the same time, it was and is acting as the impetus for faster transformation. The cohesion between Audi employees has been noticeable everywhere and many exciting digital initiatives have emerged. I am convinced that with this Audi spirit, we will all emerge stronger from this challenging situation.

“Audi Occupational Health has been working in the crisis teams since January 2020 to ensure safe workplaces, to keep employees informed and to prevent or interrupt chains of infection.”

Photo: Markus Burke

↘

Anke Manthey
Specialist for Health Promotion
Ingolstadt

Anke Manthey We’ve never had a situation like this before. First of all there is the disease itself, and by now most of us Audi employees know someone among our colleagues or acquaintances who has had Covid. Second, everyone is impacted by the pandemic: everyone at the site, all the Audi employees – literally everybody. Audi Occupational Health has been working in the crisis teams since January 2020 to ensure safe workplaces, to keep employees informed and to prevent or interrupt chains of infection.

For these reasons, the pandemic has been and is an important issue in my work at Audi Occupational Health, where the primary focus is on mental health. Or to put it in simple terms: If employees do nothing but read about the coronavirus and think about the disease, how can they enjoy their work or be productive?

We all know that conditions also need to be right in order for people to work well, and these conditions have changed significantly as a result of the coronavirus. This starts with simple situations, such as eating lunch together in the staff canteen or having a quick chat in the corridor. None of this is possible at the moment – and that can be quite stressful. So it’s all the more important that we look after our mental health. Especially in a time when we have to forgo familiar daily routines and keep our social contacts to a minimum, psychological well-being can be thrown off-balance sometimes.

We began to offer individual consultations as early as April last year. I myself have held many conversations with colleagues, and sometimes just listened. I have shared some helpful tips and tricks for how to successfully get through a potential quarantine, and how people can make sure that the virus is not the only thing they think about. At the end of the day, we are all in this together – and the more we talk to each other, the faster the waves will subside.

↘ Occupational health and safety at Audi

Comprehensive health management and an integrated occupational safety system are two of the ways in which Audi seeks to minimize work-related accidents and improve the health resources of its employees, while also promoting their physical and mental performance.

Group-wide standards are helpful in this regard. For all day-to-day operations, the company and Works Council representatives have developed measures to prevent accidents and damage to health as well as to design safe processes, equipment and vehicle components. The Board of Management bears overall responsibility for compliance with the statutory regulations on occupational health and safety. Furthermore, each operations leader is responsible for occupational safety in their supervisory and functional area. This is also laid down in a works agreement on occupational safety that covers all employees of AUDI AG.

Health and safety during the pandemic

A comprehensive safety concept was developed during the first lockdown along the “worker journey” – in other words, along the daily work routine. This concept includes both behavioral measures at home, such as checking one’s own state of health, as well as on the way to work. Behavior at the workplace and during break times, as well as redesigning workplaces and work organization – distancing, segregation, working from home, provision of face masks, in other words – were also considered within the scope of the “worker journey.” This safety concept was adapted continually in line with the latest findings concerning the pandemic and implemented in accordance with the incidence rate.

Selected contribution by Audi to the SDGs of the United Nations

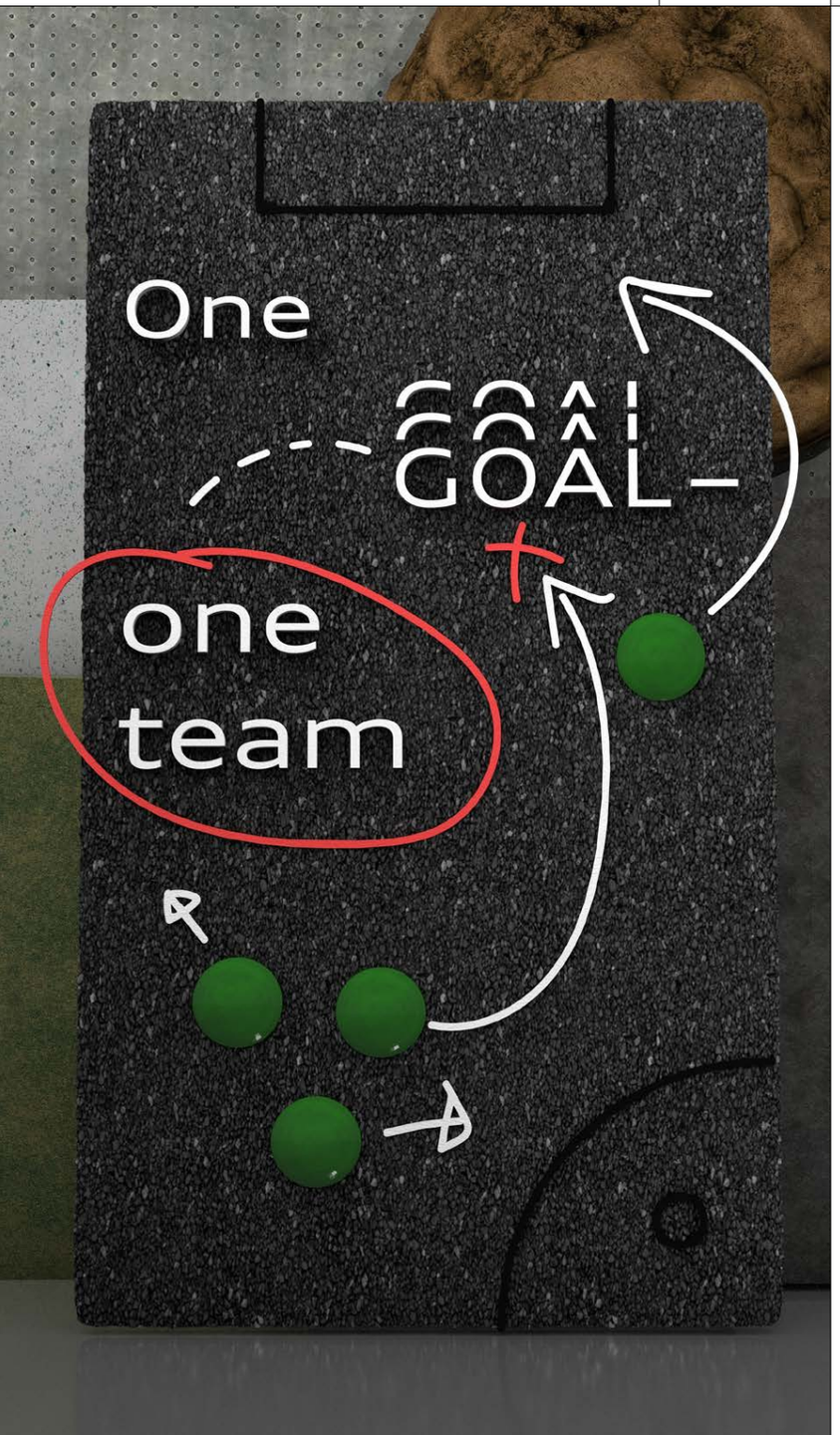
3 GOOD HEALTH AND WELL-BEING

Development of a comprehensive safety concept along the “worker journey” during the coronavirus pandemic.

10 REDUCED INEQUALITIES

Diverse backgrounds, abilities and skills: Audi promotes equal opportunity.

→ see page 289 for an overview of the SDGs



In sports, you need foresight and knowledge to assemble the right team for the game. But what if the team consists of just under 90,000 members? At Audi, the Strategic HR Planning department helps the company find the best lineup for the future.

Text: C3 Creative Code and Content GmbH

“We use a far-sighted approach when it comes to assembling the right team for the future of mobility,” says Sebastian Döring, who heads Strategic HR Planning, HR Reporting. At Audi, the focus is on driving and promoting the transformation of mobility. “And for that, Audi employees need the right skills, abilities and competences, or we will be surpassed by technological and social developments. But we don’t want to be the ones who are driven; we want to remain the ones who shape things.”

Transformation of the company

This is a major task and requires new ways of thinking. Why? Because for decades, the automotive industry’s growth trajectory was rather straightforward. Successful companies like Audi sold more vehicles and therefore needed more employees. These employees started out in already existing fields of competence. Audi knew exactly which professions were required to continue pursuing its successful path. A path lined with employees whose automotive manufacturing expertise is extremely high – after all, the people at the Four Rings are highly knowledgeable when it comes to developing, building and selling vehicles.

This path is based on the development rhythm of the automotive industry and must now adapt to the increasingly rapid pace of software development, for instance. On top of that, we are in the midst of a transformation in which cars are increasingly becoming much more than just mechanical objects. Never before have the level of digitalization of this product and the share of value added by software been so high or so important. At the same time, Audi is transitioning from a car manufacturer to a provider of connected and sustainable premium mobility – which is why the knowledge and skills of the teams must also transform.

Women in leadership positions

AUDI AG has set itself goals aimed at increasing or ensuring the proportion of women at all management levels and on the Supervisory Board. The share of women on the Supervisory Board amounted to approximately 30 percent as of December 31, 2020. To ensure this proportion, the Supervisory Board has established a target value of 30 percent, which went into effect on January 1, 2021, and will continue until 2025, and must be separately fulfilled by both shareholders and employees. The Supervisory Board resolved a formal target quota of 25 percent for the Board of Management, also starting January 1, 2021. There were two women on the Board of Management, also of AUDI AG at the end of 2020. AUDI AG is also striving to increase the proportion of women below the Board of Management. By the end of 2021, women should comprise 8 percent of the first management tier below the Board of Management and 16 percent in the second management tier. As part of efforts to support and facilitate the advancement of women pursuing leadership positions, AUDI AG promotes special programs such as “Sie und Audi,” in addition to flexible, innovative work models and diverse offers to enhance the compatibility of family life and work.

The workforce in figures

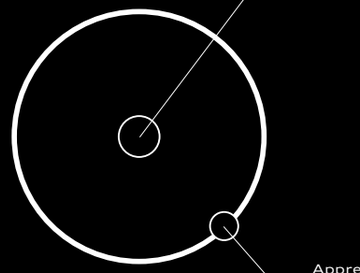
The workforce of the Audi Group decreased slightly in 2020 (2019: 90,783); the proportion of women, on the other hand, increased slightly (2019: 15.0 %).

1 Excluding apprentices
2 As of Dec. 31 of the year under review
3 Average figures for the year

Audi in figures

Workforce, Audi Group[3]
87,996

Proportion of women[1,2]
15.2 %



Apprentices[3]
2,493

↘
AUDI AG Ideas Program
Implementation & savings in 2020

53.4 %
of the ideas submitted in 2020 were implemented.
(2019: 54.4 %)

94.5 EUR m
savings were achieved as a result.
(2019: 101.3)

Audi benefits from the ingenuity of its employees. The Ideas Program of AUDI AG collects suggestions for optimizing existing processes.

Closely interlocked

"At Strategic HR Planning, we address the question of what the workforce of the future might look like and outline how our transformation can succeed in the long term," Sebastian Döring explains. "That's why we have interlocked the HR strategy and corporate strategy more closely and systematically. We look at corporate decisions such as site occupancy, sales planning or even the personnel adjustments agreed under Audi.Zukunft and analyze them together with the divisions. And we naturally also take a close look at which new technologies or business models we're investing in and which new jobs they will create in the future." This means the direction in which the company is heading also influences how and in which direction the workforce needs to develop.

Strategic HR planning is an annually recurring process that incorporates new impetus from the strategy and comprises two elements: First of all, to obtain transparency of the work done at Audi, thousands of job profiles across the Group were analyzed, condensed into just over 120 job clusters (groupings) and applied

to the current Audi workforce. Then the divisions drew up a target vision of their future personnel requirements based on the following three questions: Where should we invest, where should we no longer invest and what stays the same?

↘
Men and women on parental leave
Total

Women on parental leave
2020 1,598
2019 1,448

Men on parental leave
2020 2,190
2019 2,305

10 **Average time on parental leave in 2020 in months**

Family and career? No problem!
Audi is strengthening the work-life balance. Employees can for instance work part-time or take caregiver leave to support family members. Many employees take up the option of parental leave. The company then facilitates their reintegration and gives employees on parental leave additional job training that makes it easier for them to resume their careers.

Structural data
The average length of service (2019: 17.9) increased slightly, the turnover rate (2019: 0.7) was down.

1 Excluding apprentices
2 As of Dec. 31 of the year under review
3 Average figure for the year
4 Turnover takes into account terminations by the employer and/or employee without a reinstatement guarantee
5 With respect to indirect employees

↘
Structural data AUDI AG

Turnover rate in percent[1,3,4]	0.6
Average length of service in years[1,2]	18.3
Average training time per employee in hours[5]	9.0

↘
Age structure[2]
(AUDI AG, excluding apprentices)

< 30 years	12.9 %
30–50 years	56.6 %
> 50 years	30.5 %

↘
Average age[2]
(excluding apprentices, excluding fixed-term employees)

2018	2019	2020
41.2 years	41.5 years	41.8 years

Diversity
Equal opportunities – for everyone! Diverse backgrounds, abilities and skills are what make success possible in the first place. Audi ensures that people can unleash their maximum potential – at every level, regardless of cultural background or other characteristics. Audi's goal is to create a diverse and inclusive community where gender makes no difference. Promotion of equal opportunity helps ensure continued economic success and reinforces social cohesion.

Identifying risks at an early stage

Once the workforce and personnel requirements have been depicted as job clusters, Audi uses simulation software to perform gap analyses. Sebastian Döring: "These analyses compare the current job clusters with our future requirements so that we can identify surpluses and shortages at an early stage and make the situation transparent. We also keep an eye on demographic influences and identify where the current early-retirement program is taking effect, for example. In the action phase, the operational HR team takes over and plans staff changes and training based on our analyses." All of this is done in close cooperation with the Works Council → see page 273, which is an important partner throughout the entire process.

2 As of Dec. 31 of the year under review.

Developing and nurturing key competences

When putting together the right team, the focus is on providing transformational training for existing employees so that they can take on the identified jobs of the future (e.g. software developers or high-voltage technicians). In terms of recruiting, suitable candidates for positions are first sought internally at Audi and within the Volkswagen Group. The Audi Akademie (→ see page 275) plays a central role in this competence development – not just in Germany, but with regard to all Audi staff and Group employees worldwide. In the long term, the plan is to roll out the strategic human resource planning system to international AUDI AG sites as well. After all, the Four Rings team is a global player.

Photo: AUDI AG

"Close collaboration between corporate and HR strategies enables the successful implementation of the transformation and the future-proof positioning of the company."

↘

Andreas Zelzer,
Head of Human Resources, Transformation, Top Management

Self-determined work
Audi creates leeway for various different life phases to take account of employees' needs. This also includes modern working time models for employees.

↘

Audi employees with a part-time contract
2020

4,327

(2019: 4,448)

↘

Works Council and working world: opportunities and risks of future forms of work

One building block of the Audi corporate culture is the principle of employee participation, which is also legally based on the German Workers Co-determination and Works Constitution Acts. At Audi sites and subsidiaries worldwide, the employees are organized into independent, democratically legitimized trade unions and employee representative bodies. One advantage of co-determination from the employer's point of view is that it motivates people – and only a motivated team will be able to achieve the transformation and build up expertise with the necessary innovative strength.

Main issues during the year under review included the joint efforts to overcome the coronavirus crisis, while focusing on protecting the health and safety of employees, and the further transformation of the company. In addition to these main issues, there was a particular focus in 2020 on further implementing Audi.Zukunft. With this general agreement, Audi is making a lasting commitment to greater efficiency, flexibility and, above all, job security with an extended employment guarantee until the end of 2029.

The sustained transformation of the automotive industry – digitalization, globalization, electrification, disruptive business models – presents major challenges for co-determination and thus for corporate culture. Works Council and trade union members, as well as the management at Audi, are called upon to take action in this area. The project "Vision Ingolstadt 2030: Digitalized

GRI 102-41

work and the future of co-determination" led to the opportunity to take part in the EdA project – a joint initiative funded by the Federal Ministry of Education and Research entitled "Empowerment in the digital working world – developing sustainable concepts for digitalization." A key instrument that has emerged from this project are the corporate practice laboratories. These allow the company to set up learning and experimentation spaces and to shape the transition to the digital working world together with the workforce.

One of these laboratories was launched under the umbrella of the #womendigit research lab and was tasked with examining how employees can be deployed more flexibly in shift work in the future. A cross-functional lab team is working together on this and, among other things, conducting a pilot project with part-time employees in clocked production. The aim is to develop and test innovative and sustainable concepts that will enable new ways of making working hours on the shop floor more flexible. Peter Mosch, General Works Council Chairman: "If we want to achieve more gender equality in the working world, then we have to break up old structures – including in production. To do this, we need persuasive arguments, staying power, participation and solidarity between the social partners. And the effort is paying off, as demonstrated by the new flexible working time model for people working shifts at the AUDI AG paint shop in Ingolstadt."

Audi Akademie – developing and nurturing competences

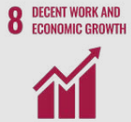
A transformation calls for new key competences, since skills and training needs change fundamentally. The Audi Akademie is responsible for the training of apprentices, employees, specialists and leaders. It bundles the comprehensive range of training courses offered by the Audi Group and thus helps cement the company's competence lead in collaboration with the divisions.

Audi invests up to EUR 80 million annually in training and developing its employees.

During the year under review, the Audi Group held 13,927 (20,694) training events worldwide with 1.1 million (1.7 million) participant hours. In the same period, over 25,000 (over 33,000) employees attended one or more of the 7,291 (10,866) training events in Germany.

Selected contribution by Audi to the SDGs of the United Nations

Audi invests up to EUR 80 million annually in training and developing its employees.



One building block of the Audi corporate culture is the principle of employee participation.

→ see page 289 for an overview of the SDGs

Responsibility worldwide: Engage, Educate, Empower

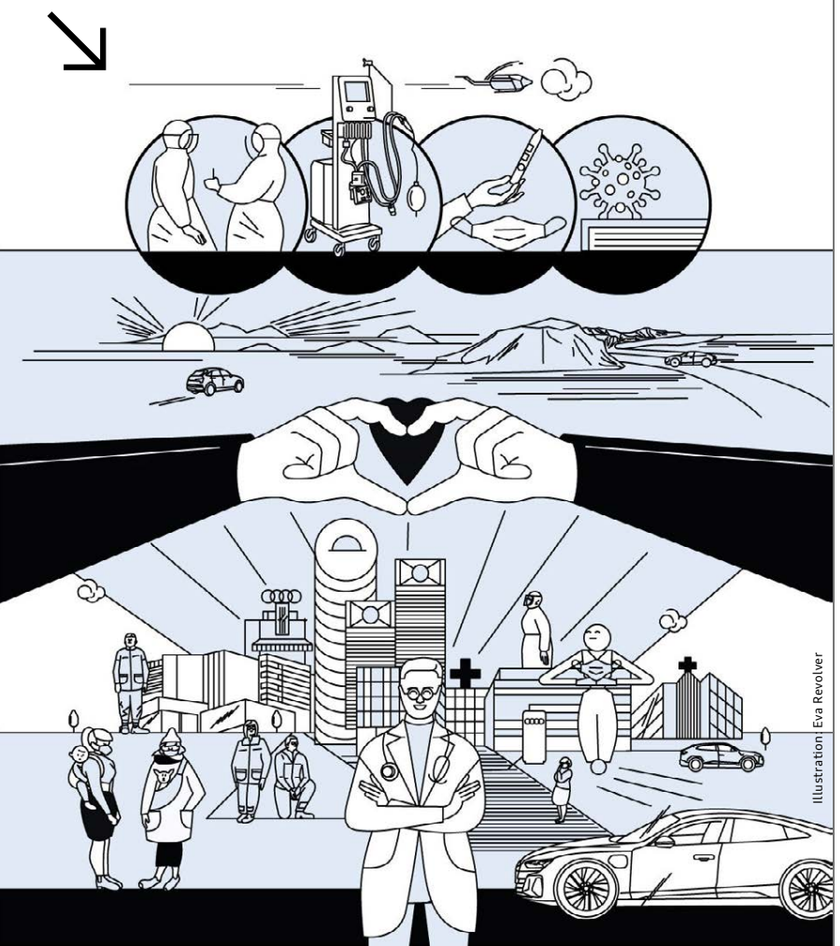


Illustration: Eva Revolver

Audi takes responsibility – and not just during working hours.

Text: C3 Creative Code and Content GmbH

The company is active with a large number of corporate citizenship projects at its sites around the world. Here is a small sample of the brand's projects in 2020.

In times of need, the world pulls together: Audi has supported medical and social facilities at its sites and provided humanitarian aid throughout the coronavirus crisis. To this end, the company donated EUR 5 million in international emergency aid in 2020.

Local assistance is tailored to the circumstances of the region and can therefore vary greatly. Audi has defined global principles for corporate citizenship as a guide (→ see page 285). Through its local activities at the sites, the company wants to promote the development of individual regions and support positive neighborly relations by acting as a good corporate citizen.

Audi is also committed to helping people who are disadvantaged in society, supporting mobility projects and promoting education and training for children, adolescents and adults. In addition, Audi backs projects that allow the company to put its technical know-how to good use.

Audi employees, too, frequently demonstrate solidarity in various campaigns and calls to raise funds.[1]

1 For example, in the year under review, the Christmas appeal and the "Last Cents" campaign at the sites in Ingolstadt and Neckarsulm raised around EUR 1.28 million (EUR 1.297 million).

↘
Neckarsulm
Germany

↘
Ingolstadt
Germany

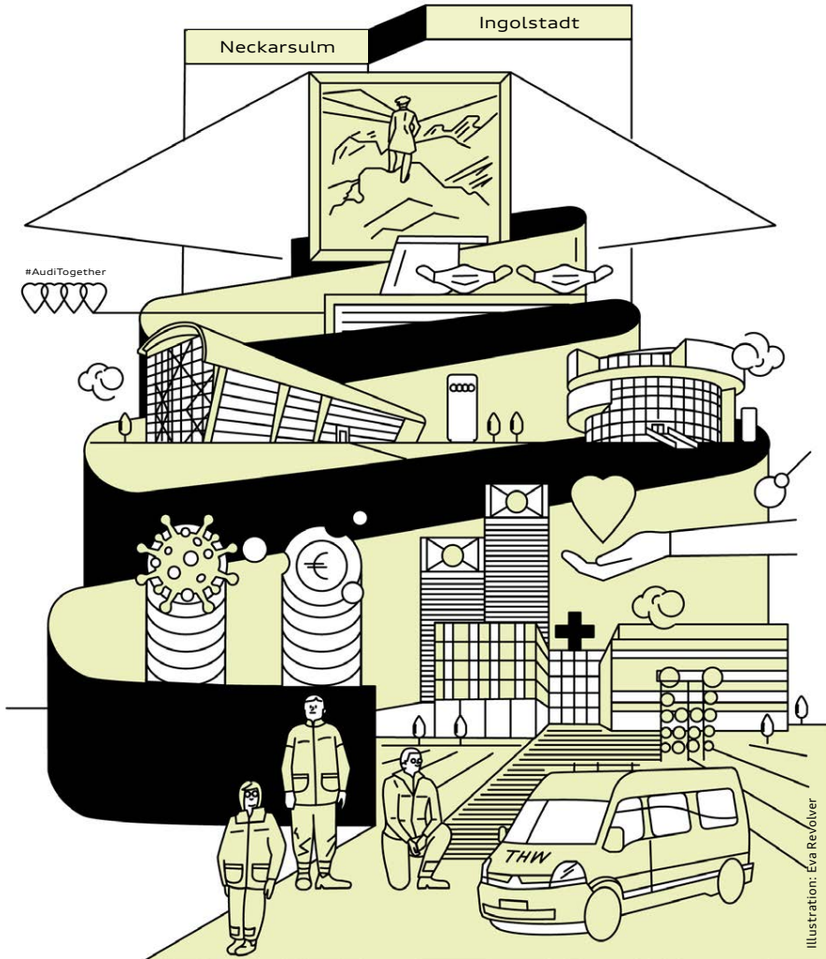


Illustration: Eva Revolver

↘ Support in all areas

As a good corporate citizen, Audi assumes social responsibility, for example by supporting regional social projects and nonprofit organizations with donations or through campaigns as part of the “Audi Volunteers” initiative. The main focus in 2020 was on in-kind and cash donations in connection with the continuing coronavirus pandemic.

Research for children

The “COVID Kids Bavaria” study, funded by the Bavarian Ministry of Science, has been underway since July 2020, focusing on the pandemic situation at childcare facilities in Bavaria. Audi made a donation of EUR 50,000 here to help combat the pandemic in Bavaria and beyond.

Individual and unbureaucratic

Donations totaling EUR 600,000 went to the German hospitals Klinikum Ingolstadt and SLK-Kliniken Heilbronn. Moreover, Audi produced 10,000 face shields for use in the healthcare sector. And when the major rescue organizations were faced with equipment shortages, Audi offered quick and targeted help in the form of protective materials, loan vehicles and cash donations.

↘
San José Chiapa
Mexico

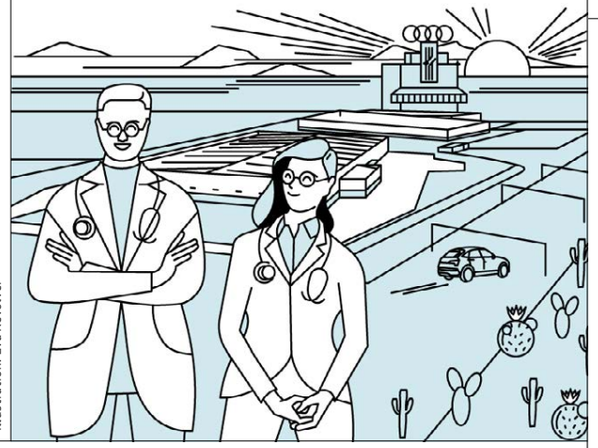


Illustration: Eva Revolver

↘ Safe transport in a vast country

Mexico has been part of the Audi family since 2016. In a country almost six times the size of Germany, mobility holds a special significance. The distance between home and work is often greater, and public transportation is widely used. So that their travel to work would not become a source of infection, Audi Mexico spontaneously agreed to provide vehicles for doctors and nursing staff, enabling them to commute between their homes and workplaces. Audi Mexico also donated protective equipment to various hospitals and the local Red Cross.

↘ Helping through know-how

The coronavirus pandemic had a devastating impact on the Emilia Romagna region in spring 2020. In March, Automobili Lamborghini converted some of the departments at its production facility in Sant’Agata Bolognese to allow surgical masks and medical protective visors to be manufactured. 1,400 masks left its upholstery workshop every day. In addition, 3D printers were used to produce 400 protective visors for medical staff daily.

Race against infectious disease

Ducati launched a fundraising campaign under the motto #RaceAgainstCovid. This called on the entire Ducati family to participate – from the employees to motorcycle enthusiasts around the world. The proceeds will be used to finance rehabilitation measures for patients with long-term effects of the coronavirus.

↘
Sant’Agata Bolognese
Italy

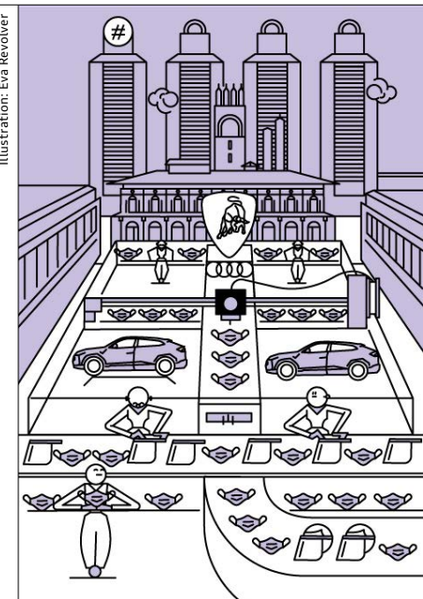


Illustration: Eva Revolver

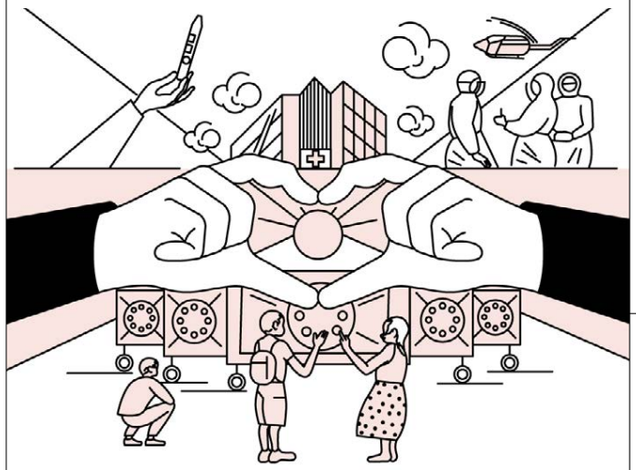


Illustration: Eva Revolver

↘
Brussels
Belgium

↘ Audi Brussels volunteers

Helping where help is desperately needed: In the fight against the coronavirus, Audi Brussels donated protective medical equipment to various hospitals and also made a cash donation to the Red Cross. In addition, the employees of the Belgian plant are supporting the StreetwiZE organization, which specializes in talent development and change management, investing primarily in educational projects for children in need.

↘ Help and commitment for the entire region

As one of the largest employers in Hungary, Audi Hungaria made a massive contribution to the fight against the coronavirus in 2020. The donation check that the company handed over in Győr as early as May last year was worth HUF 100 million (forints; around EUR 280,000). The money was used to purchase equipment that has further raised the standard of care and made the work of employees at medical and social facilities easier. Of course, the company and its employees remain true to their strong social commitment in other projects as well.

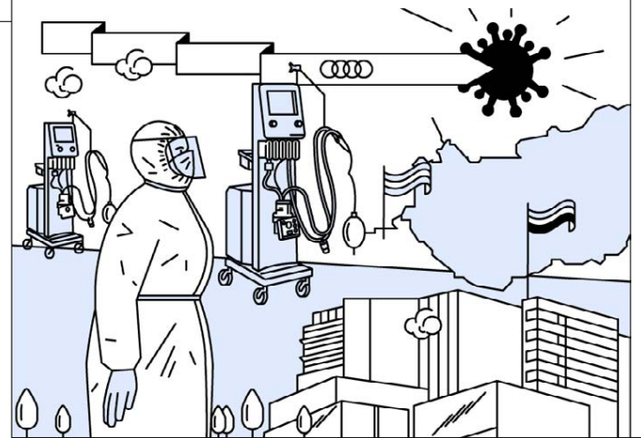


Illustration: Eva Revolver

↘
Győr
Hungary

↘
Audi of America
USA

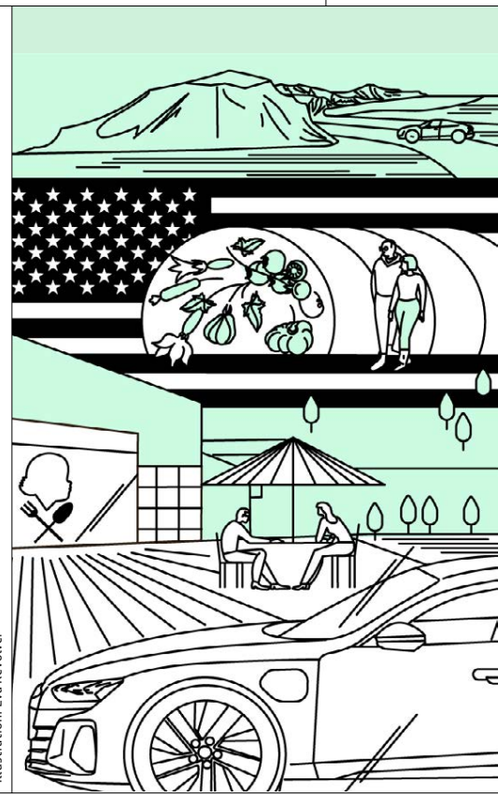


Illustration: Eva Revolver

↘ Enjoy your meal!

In the USA, Audi of America gave its support to two economic groups that were particularly badly affected by the coronavirus pandemic: restaurants and small farmers. As well as providing vehicles to support the “LEE Relief Kitchens,” the company donated USD 750,000 to the LEE Initiative. This initiative was co-founded by the award-winning chef Edward Lee and his business partner Lindsey Ofcacek, and aims to improve gender equality and increase diversity in the restaurant sector as well as promote a sustainable food chain. As part of the aid campaign, 19 pop-up kitchens were set up nationwide from which more than 400,000 meals have been distributed.

Social responsibility at Audi

Audi has a vision of sustainable mobility that everyone can use with a clear conscience. That is why the company goes beyond manufacturing premium vehicles and offering innovative mobility solutions: Audi also takes responsibility for the future of our planet – in other words, for how we must shape the environment, the economy and society so that future generations can also live well.

The company considers sustainability in all its facets. Besides ecological and economic aspects, social sustainability is also of great importance. To ensure that its commitment makes a significant contribution to society, Audi follows a threefold approach: Engage, Educate and Empower.

Engage covers volunteering and donations. It also encompasses social sponsorship, events, cooperations with nonprofit organizations and the promotion of projects with a positive social impact.

Educate unites all the training and education programs that Audi offers or supports. The company focuses not only on its employees, but also on customers, business partners and society as a whole – in the latter case, especially initiatives in the vicinity of Audi sites. Audi also cooperates with numerous national and international universities to help shape progress in research and teaching.

Empower is an instrument with a strong impact because Audi acts as a multiplier here. Through various innovation and cooperation projects, the company empowers other players to make the world as a whole more sustainable. These sustainability agents, as they are called, include employees, customers and other stakeholders. They are actively encouraged by Audi to advocate sustainable practices and lifestyles. Here, the company plays the role of a "change agent." The aim of this commitment is to bring about even more far-reaching and long-term changes – albeit without the direct involvement of the Four Rings, as is the case with the Engage and Educate programs.

Audi ENVIRONMENTAL FOUNDATION

Audi Environmental Foundation promotes green innovations for a livable future

For ten years now, the Audi Environmental Foundation has been making an active contribution to environmental protection, thus shaping new paths for sustainable activity. The foundation's commitment is multifaceted and of a long-term nature. AUDI AG established the foundation as a fully owned subsidiary on December 1, 2009, with a view to strengthening its social and environmental commitment.

In the projects it supports, the Audi Environmental Foundation focuses not only on nature and the environment, but also works toward a sustainable human-environment system.

Three fields of action can be derived from it:

GREENOVATION – combining traditional environmental protection with innovative technologies and using the knowledge gained to make a valuable open source contribution to society.

ENTHUSIASM – using a variety of projects and formats to get people excited about the environment, encourage them to join in and thus motivate them to make a contribution themselves.

RESPONSIBILITY – taking on social and ecological responsibility through targeted projects and thus giving back to society and the environment.

The 2020 reporting year saw a noteworthy technology project related to the recycling of electronic waste: the German-Indian startup Nunam, which is funded by the Audi Environmental Foundation. Nunam manufactures stationary energy storage systems from discarded batteries, thus exploring potential applications for second-life batteries. Its aim is to supply rural areas of India, in particular, with green electricity. This multifaceted electricity storage project can help people in addition to saving CO_2.

More information on this sponsorship project as well as other initiatives and publications by the Audi Environmental Foundation can be found → here.

Selected contribution by Audi to the SDGs of the United Nations

10 REDUCED INEQUALITIES

Audi is active with a large number of corporate citizenship projects at its sites around the world.

3 GOOD HEALTH AND WELL-BEING

Audi has supported medical and social facilities at its sites throughout the coronavirus crisis.

→ see page 289 for an overview of the SDGs

Appendix

Agenda 2030

17 goals for sustainable development

At the 2015 United Nations (UN) General Assembly, 193 states adopted Agenda 2030, which lays out 17 goals – the “Sustainable Development Goals” (SDGs).

SDGs combine the social, environmental and economic dimensions of sustainable development and thus link the battle against poverty with the protection of natural resources. After all, social progress is not possible in the long run if the limits of the planet are not respected.

Agenda 2030 stands for a global understanding of prosperity that extends beyond the constricting concept of per capita income. At issue is reshaping economies toward more sustainable development, for example through responsible consumption and production patterns and clean as well as affordable energy. It is becoming clear that climate policy, sustainable development and the eradication of poverty are inseparably connected.

Audi recognizes and observes the Sustainable Development Goals. Internal workshops were conducted to identify the SDGs to which Audi can make the greatest contribution with its core business. For this purpose, the topics and results of the materiality analysis were compared with the SDGs, making it possible to determine where the company can make the greatest impact. As a result, the following five SDGs have been pinpointed:

Of course, Audi endeavors to make a comprehensive contribution and can therefore also work toward SDGs other than the five listed above. The stories in each chapter of the Audi Report provide examples of SDG-relevant activities at Audi. At each of these points, reference is made to the relevant Sustainable Development Goals, with a brief explanation of how our activities relate to them.

Audi Sustainability Program

Operations and Integrity

(Table 1 of 2)

The Audi sustainability program combines strategic goals in the area of sustainability with specific measures. It is divided into the four core topics “Operations and Integrity,” “Products and Services,” “Value Creation and Production,” and “Employees and Society.”

Goal	Measure	Date	Comparison of SDGs
9 to 11 percent operating return on sales by no later than 2025	Implementation of the Audi Transformation Plan and the Audi Strategy	Continuous development	
21 percent return on investment (ROI) by no later than 2025	Implementation of the Audi Transformation Plan and the Audi Strategy	Continuous development	
6.0 to 7.0 percent research and development ratio by no later than 2025[1]	Implementation of the Audi Transformation Plan and the Audi Strategy	Continuous development	
4.0 to 5.0 percent ratio of capex by no later than 2025[2]	Implementation of the Audi Transformation Plan and the Audi Strategy	Continuous development	
Self-finance the transformation to provider of sustainable, individual premium mobility	Implementation of the Audi Transformation Plan and the Audi Strategy	Continuous development	
EUR 15 billion measure potential through the Audi Transformation Plan on the cost and revenue side 2018–2022	Programs already set up with Project Management Office (PMO) and work packages from the Board of Management. Flanked by ongoing monitoring and control.	2022[3]	
Reinforce Group-wide compliance and integrity	Implementation of the Group-wide compliance and integrity program Together4Integrity in all companies through 2025	2025	
	Accompanying communication campaign Together4Integrity	2025	

1 5.0 to 6.0 percent adjusted to 6.0 to 7.0 percent; in light of the sweeping transformation of the automotive industry, the Audi Group is stepping up its upfront expenditure for products and technologies of the future.
2 5.0 to 6.0 percent adjusted to 4.0 to 5.0 percent; this is based on continued investment discipline and a reduction in structural investments.
3 The pandemic-induced drop in volumes may result in a slight delay.

Audi Sustainability Program

Operations and Integrity

(Table 2 of 2)

Goal	Measure	Date	Comparison of SDGs
Global protection and responsible handling of personal data	Definition of data processing principles applicable worldwide	2020 (completed)	
	Establishment of a data protection organization within the Audi brand group	2020[4]	
	Binding measures in the Audi brand group, e.g. maintaining a procedure directory, internal reporting processes for data protection violations, ensuring the rights of parties concerned or establishing an appropriate risk management system	Continuous development	

4 A data protection organization has been set up at the European subsidiaries.

Audi Sustainability Program

Products and Services

(Table 1 of 3)

Goal	Measure	Date	Comparison of SDGs
Reduce CO_2 emissions from the Audi EU new car fleet by 27 percent (base year 2012)	Reduce consumption by using new technologies from the modular efficiency platform	2020[5]	
Reduce environmental impact across the entire life cycle compared with the predecessor model	Prepare product-based life cycle assessments for new vehicle models; validate and certify life cycle assessments; publish the data	Continuous development	
Significantly reduce fuel consumption for every new vehicle compared with the predecessor model	Switch 70 percent of new vehicles sold with combustion engines to mild hybridization or plug-in hybridization	2022	
Expand the range of electric drive concepts	Expand the range of plug-in hybrids to seven models	2020 (completed)[6]	
	Availability of at least one plug-in hybrid in every core segment from compact class or higher (Audi A3)	2023	
	40 percent of new Audi vehicles feature an electric drive (availability of at least one battery electric vehicle for each core segment)	2025	
	Extension of the product portfolio to a total of five electric cars	2020 (completed)[7]	

5 As things stand at present, this goal was narrowly missed in 2020 and is expected to be achieved in 2021. The successful launch of the e-tron and the plug-in hybrids in 2020 could not fully compensate for the opposing effects brought about by supply- and demand-driven shifts in the model portfolio. Nonetheless, the statutory targets have been exceeded.
6 Following the successful launch of the Q8 and A3 successor as plug-in hybrids, seven Audi models featuring this technology were available in 2020.
7 With the start of production of the e-tron GT, Audi had five electric models in its portfolio in 2020.

Audi Sustainability Program

Products and Services

(Table 2 of 3)

Goal	Measure	Date	Comparison of SDGs
Ensure availability of charging systems for domestic charging to coincide with the market introduction of the first fully electric series-production model from Audi	Provide competitive charging lineup for electrified Audi models for domestic charging, including: > Charging equipment – smart charging functions, e.g. photovoltaic-optimized charging > Joint projects on home energy management systems (HEMS) > Innovative technologies	2020[8]	
	Further development of the charging lineup for electrified Audi models in relation to the smart integration of electric vehicles into power grids to promote the compatibility between electric vehicles and the grid, including piloting of services to network the vehicle with the power grids	2020 (completed)[9]	
Ensure the availability of fast-charging infrastructure along the long-distance transport axes in Europe and the USA to promote long-distance capability of electric vehicles	Infrastructure expansion in cooperation with partners, e.g. IONITY joint venture in Europe and Electrify America in the USA, as an incentive for electric vehicles	2022	
Extend the charging infrastructure at the Audi sites	Set up and operate cross-site charging infrastructure at Audi sites for the start of production (SOP) of the Audi e-tron;[10] additional needs-based expansion for processes in the plant as well as providing 10 percent electrified parking lots for company cars and employee leasing vehicles by the middle of 2022	2022	
Global protection and responsible handling of personal data	Fine-tune the organizational processes to validate privacy by design, privacy by default	Continuous development	

8 The compact charging system is now available in the main target markets affected. Goal achieved. The connect charging system was launched in calendar week 48/2020 with a starting configuration of smart charging functions. Our cooperation partners' interoperable range of home energy management systems was launched at the same time. An extended range of functions is planned for the end of 2021.
9 A joint research project with external partners on grid-compatible charging with smart communication between the grid operator and the Audi e-tron was successfully completed in 2020.
10 Audi e-tron: combined electric power consumption in kWh/100 km, 28.8–21.4 (NEDC); combined CO_2 emissions in g/km: 0
11 Goal and measures with considerable change compared with the previous year. Small-series stop and realignment of strategy/initial implementation in the direction of commercial vehicles.

Audi Sustainability Program

Products and Services

(Table 3 of 3)

Goal	Measure	Date	Comparison of SDGs
Expand the range to include fuel cell drive concepts[11]	Continue to develop fuel cell technology	2022	
	Tiered implementation and roll out of fuel cell technology across the Group brands with the focus on commercial vehicles for initial market entry	2026	
Provide carbon-neutral energy sources from renewable energy to reduce greenhouse gas emissions[12]	Promote the development of synthetic liquid fuels together with suitable partners. Additional focus on the technology readiness of products within AUDI AG	Continuous development	
	Extend strategic partnerships and cooperation agreements regarding research and development of renewable energies	Continuous development	
	Integrate a CO_2 capturing plant (capturing CO_2 from the air) in a power-to-gas or power-to-liquid plant	2021[13]	
Responsibility for the safety of customers and other road users	Portfolio of predictive assistance and safety systems	Continuous development	
Enhance road safety	Further development of technologies toward assisted/automated driving	2025	
Develop an attractive mobility portfolio	Develop new business models	2022	

12 Strategic shift to carbon-neutral energy sources currently under review.
13 The plan is to evaluate potential technologies and possibly undertake basic engineering in 2021. Installation of the technology in 2022.

Audi Sustainability Program

Value Creation and Production

(Table 1 of 3)

Goal	Measure	Date	Comparison of SDGs
Integrate sustainability into supplier relationships	Training for all procurement employees to raise awareness of sustainability standards in supplier relationships	Continuous development	
	Training for suppliers to raise awareness of sustainability standards in the supply chain	Continuous development	
	Sustainability rating (S-Rating) as a mandatory criterion for awarding contracts	Continuous development	
	Involvement in industry standards and Group tools to ensure compliance with environment-related and social standards in the supply chain	Continuous development	
	Further development of our supply chain grievance mechanism	Continuous development	
Integrate sustainability into the supply of raw materials	Development of circular economy concepts for the supply chain	2020[14]	
	Adaptation of existing processes through successive implementation of human rights duty of care for critical raw materials in the supply chain	Continuous development	

14 The action "Development of circular economy concepts for the supply chain" with a focus on aluminum and HV batteries was successfully completed in the year under review. Since the Procurement Strategy is still working on innovative circular economy concepts, the action – minus the above focal topics – will remain in place.

Audi Sustainability Program

Value Creation and Production

(Table 2 of 3)

Goal	Measure	Date	Comparison of SDGs
Integrate environmental measures into the supply chain[15]	Performance of CO_2 workshops with selected hotspot suppliers to identify measures with potential to reduce CO_2 emissions	Continuous development	
	Rollout of the Aluminum Closed Loop in other plants	2025	
	Anchoring the use of green electricity in the supply chain	Continuous development	
	Development of a responsible water stewardship program for the supply chain	Continuous development	
Act4Impact	Development and establishment of an Audi Act4Impact program to make a positive impact together with our partners	Continuous development	
For the German sites Ingolstadt and Neckarsulm, we have set ourselves a reduction target of 40 percent for CO_2 per reference unit through 2020 as part of energy supply (base year 2010)	Detailed planning and implementation of site-specific packages of measures for achieving Group-wide reduction targets	2020 (completed)[16]	
Achievement of the target figure for the environmental impact reduction production per unit (UEP) of 35 percent. The environmental impact reduction production is a vehicle-specific variable. From 2010 through 2025, the development of the five key figures is analyzed, CO_2 emissions, overall energy consumption, disposable waste, fresh water consumption and VOC emissions.	Detailed planning and implementation of site-specific packages of measures for achieving Group-wide reduction targets	2025	

15 The action “Successive decarbonization of the supply chain together with suppliers” has been changed due to the expansion of its scope. Successive decarbonization of the supply chain remains one of the strategic focus areas of the Responsible Supply Chain Strategy.

16 100 percent green power sourced in Ingolstadt and Neckarsulm.

Audi Sustainability Program

Value Creation and Production

(Table 3 of 3)

Goal	Measure	Date	Comparison of SDGs
Systematic reduction in energy consumption	Reduction in overall energy consumption through targets derived from prior-year consumption and the corresponding concrete, implemented and documented individual measures in the operator and planning areas	Continuous development	
All plants net carbon-neutral[17]	Detailed planning and implementation of site-specific packages of measures for achieving targets	2025	
Implementation of the performance standard/chain of custody of the Aluminum Stewardship Initiative (ASI)	Verification of the ASI performance criteria and implementation of the necessary audit to renew the ASI certification of the aluminum components in the Audi e-tron[18] high-voltage storage device	2021	
	Extension of the ASI performance standard/chain of custody to include other aluminum components and production sites of AUDI AG	Continuous development	
Integration of sustainability in the supplier chain and own added value of high-voltage storage devices at Audi	Development of sustainability principles and support of the establishment of standards for high-voltage batteries in the working groups “Circular Economy” and “Innovation” of the Global Battery Alliance, hosted by the World Economic Forum	Continuous development	

17 Győr and Brussels already carbon-neutral; Audi regards net carbon neutrality as a state in which, following the exhaustion of other possible measures aimed at reducing the still remaining CO_2 emissions caused by the products or activities of Audi and/or currently unavoidable CO_2 emissions within the scope of the supply chain, manufacturing and recycling of Audi vehicles, at least quantitative compensation is provided through voluntary and globally conducted compensation projects. Throughout the utilization phase of a vehicle, meaning from when a vehicle is delivered to a customer, CO_2 emissions produced are not taken into account.

18 Audi e-tron: combined electric power consumption in kWh/100 km, 28.8–21.4 (NEDC); combined CO_2 emissions in g/km: 0

Audi Sustainability Program

Employees and Society

(Table 1 of 3)

Goal	Measure	Date	Comparison of SDGs
Make working hours and place of work more flexible	Establishment of mobile working	Continuous development	
Update methodology and content of vocational and advanced training	Extension of digital learning methods	2025	
	Modification of content of vocational and advanced training in relation to strategic future-oriented topics	2025	
	Maintaining vocational training figures and advanced training days at a high level (three-year forecast)	2020 (completed)	
Promote employee health	Further development of occupational health and safety at international sites	2020 (completed)	
	Setup of digital offerings as part of company health promotion	2022	
Promote equal opportunity	Increase in the proportion of women in the first management tier below the Board of Management to 8 percent and to 16 percent in the second management tier	2021	
Strengthen cultural diversity	Expansion of the proportion of international managers within AUDI AG, global employee rotation, international young talent programs, intercultural awareness and training	2025	

Audi Sustainability Program

Employees and Society

(Table 2 of 3)

Goal	Measure	Date	Comparison of SDGs
Promote work-life balance	Expansion of childcare	Continuous development	
	Focus on the issue of care as part of employee information events	Continuous development	
	Expansion and development of urban services, offerings and services for daily requirements at the interface between home and work at the Ingolstadt and Neckarsulm sites	Continuous development	
	Promotion of employee mobility by strengthening the provision of job tickets and promoting carpooling	Continuous development	
Further develop voluntary programs	Needs survey through annual events/ formats at the Audi sites	Continuous development	
Promote a corporate culture along the lines of the Volkswagen Group Essentials, the Audi corporate values and the Audi leadership principles	Group-wide execution of the role-model program for managers and supervisors	Continuous development	
	Establishment of the Essentials Indicator to sustainably anchor the VW Group Essentials and to measure the progress in terms of culture	Continuous development	
	Support of the change of culture through initiatives, formats and events under the “KulturZeit” umbrella	Continuous development	
Increase employer attractiveness	Initiation and promotion of future-oriented events with the focus on corporate citizenship/innovation (e.g. MQ! Innovation Summit)	Continuous development	
Provide access to education for the public	Public “Wissenschaft im Dialog” (Academia in Dialogue) events at the Ingolstadt & Neckarsulm sites	Continuous development	
Further develop research and teaching in future-oriented fields at universities	Support of universities through endowed professorships	Continuous development	

Audi Sustainability Program

Employees and Society

(Table 3 of 3)

Goal	Measure	Date	Comparison of SDGs
Promote mental health	Stages II & III, Expansion of support services and establishment of a physical and mental health network and holistic care structures	2023	
Promote flexible cooperation within the company	Creation and establishment of new cooperation formats, such as, agile process workshop, think tank in Berlin	Continuous development	
Digitalize HR processes	Launch and establishment of an HR app to make it even easier for employees to access personal data (e.g., working hours, calendar, wages, etc.)	2020 (completed)	
Extend attractive working conditions	Implementation of the extended wage agreement (T-ZUG) with a choice between having the additional wages paid out or converted to paid leave	2020 (completed)	

Audi Sustainability Key Figures

Audi uses key figures to make its sustainability activities measurable and present them in a transparent way. The key figures are valid for the relevant calendar year and refer to the Audi Group. If key figures refer to individual Audi Group companies only, this is specified accordingly. Key figures are rounded up or down, which may result in slight deviations from the totals stated. Auditing firm Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft performed a limited assurance engagement on selected sustainability key figures for 2020 in the overview for the period from January 1, 2020, to December 31, 2020. The key figures audited are identified by the “✓” symbol.

↘ The Independent Auditor’s Report can be found → see page 323.
✓= Key figures for 2020 were subjected to a limited assurance engagement.

Operations and Integrity

	Unit	2018	2019	2020
Revenue[18]	EUR million	59,248	55,680	49,973
Operating result	EUR million	3,529	4,509	2,569
Profit before tax	EUR million	4,361	5,223	4,187
Profit after tax	EUR million	3,463	3,943	3,774
Total capital investments	EUR million	5,552	4,223	3,654
Research and development activities	EUR million	4,178	4,426	3,662
Operating return on sales[18]	Percent	6.0	8.1	5.1
Return on investment[18]	Percent	10.0	12.7	7.4
Ratio of capex[18, 19]	Percent	5.9	4.9	3.8
Net cash flow[18]	EUR million	2,141	3,160	4,589
Equity ratio	Percent	45.3	42.5	36.1

18 2019 values influenced by the deconsolidation of multi-brand sales companies as at January 1, 2019. Further information on this is included in the → Financial Report 2019.
19 The ratio of capex includes investments in property, plant and equipment, investment property and other intangible assets according to the cash flow statement in relation to revenue.

Audi Sustainability Key Figures

Products and Services

Production	Unit	2018	2019	2020
Automotive segment	Cars[20]	1,871,386	1,802,073	1,664,265
	Engines and electric drives	1,955,532	1,969,731	1,662,481
Motorcycles segment	Motorcycles	53,320	51,723	44,827

Deliveries to customers	Unit	2018	2019	2020
Automotive segment[18,21]	Cars	2,081,418	1,853,833	1,700,258
Audi brand[21]	Cars	1,812,485	1,845,573	1,692,773
Germany	Cars	260,456	271,613	214,427
Outside Germany	Cars	1,552,029	1,573,964	1,478,346
Lamborghini brand	Cars	5,750	8,205	7,430
Other Volkswagen Group brands[18]	Cars	263,183	55	55
Motorcycles segment	Motorcycles	53,004	53,183	48,042

Product-related CO_2 emissions	Unit	2018	2019	2020
CO_2 emissions of the European (EU 27+3) fleet of new passenger cars for the Audi brand	g CO_2/km (NEDC)	129	131	102.9[22] ✓
Fleet consumption, China (FBU)[23]	l/100 km (NEDC)	7.5	5.9	7.9 ✓

18 2019 values influenced by the deconsolidation of multibrand sales companies as at January 1, 2019. Further information on this is included in the → Financial Report 2019.
20 This includes Audi models built locally by the associated company FAW-Volkswagen Automotive Company, Ltd., Changchun (China).
21 This includes delivered vehicles built locally by the associated company FAW-Volkswagen Automotive Company, Ltd., Changchun (China).
22 Subject to the official data of the European Commission in the annual CO_2 fleet monitoring report of the Volkswagen emissions pool.
23 Subject to official publication by the Minstry for Industry and Information Technology (MIIT) in the annual CO_2 fleet monitoring report.

Audi Sustainability Key Figures

Value Creation and Production[24]

Energy	Unit	2018	2019	2020
Total energy consumption[25]	MWh	2,775,442	2,702,302	2,408,712 ✓
Automotive segment	MWh	2,751,234	2,678,671	2,385,912 ✓
(incl. components)	MWh/Veh.	2.69	2.70	2.90 ✓
From renewable energy sources	MWh	1,179,503[26]	1,339,256	1,525,801 ✓
Automotive segment	MWh	1,177,199[26]	1,337,062	1,523,897 ✓
(incl. components)	MWh/Veh.	1.15[26]	1.35	1.85 ✓
Electricity	MWh	1,666,649	1,598,809	1,404,445 ✓
Automotive segment	MWh	1,650,932	1,583,286	1,389,730 ✓
(incl. components)	MWh/Veh.	1.61	1.59	1.69 ✓
Heating (incl. district heating)	MWh	779,967	788,416	736,905 ✓
Automotive segment	MWh	771,475	780,308	728,820 ✓
(incl. components)	MWh/Veh.	0.75	0.79	0.88 ✓
of which district heating	MWh	340,474	352,836	321,535 ✓
Automotive segment	MWh	340,158	352,364	321,140 ✓
(incl. components)	MWh/Veh.	0.33	0.35	0.39 ✓
Combustion gases for production processes	MWh	328,345	314,759	267,089 ✓
Automotive segment	MWh	328,345	314,759	267,089 ✓
(incl. components)	MWh/Veh.	0.32	0.32	0.32 ✓
Refrigeration (externally sourced)	MWh	482	318	273 ✓
Automotive segment	MWh	482	318	273 ✓
(incl. components)	MWh/Veh.	0.0005	0.0003	0.0003 ✓
Exported energy[27]	MWh			3,291 ✓
Automotive segment[27]	MWh			2,777 ✓
(incl. components)[27]	MWh/Veh.			0.0034 ✓

24 Figures refer to the Ingolstadt, Münchsmünster, Neckarsulm, Brussels, Győr, San José Chiapa, Sant'Agata Bolognese (Lamborghini), Bologna (Ducati), Amphur Pluakdaeng (Ducati) sites. Only car-producing sites including component manufacturing are considered for the specific key figures. The environmental key figures for the current year are data as of February 24, 2021. The figures may contain estimates if they are based on statements from energy suppliers that were not available when data was collected, for example. If significant deviations between the actual values and the reported data are identified in the following year, the data will be updated. The individual key figures for 2019 were updated in this report using the actual values for 2019.
25 Total energy consumption: This figure is made up of electricity and heat consumption as well as the use of fuel gases for production processes and externally supplied refrigeration at the plant.
26 Correction to the data collection process for 2018.
27 The key figure is being published for the first time in 2020, which is why no data exists for 2018 and 2019.

Audi Sustainability Key Figures

Fuels	Unit	2018	2019	2020
Total fuel use	MWh	1,092,974	1,066,997	981,256
Automotive segment	MWh	1,059,128	1,033,811	949,643
(incl. components)	MWh/Veh.	1.03	1.04	1.15
From renewable energy sources[27]	MWh			135,189
Automotive segment[27]	MWh			135,189
(incl. components)[27]	MWh/Veh.			0.16
Natural gas	MWh	961,486	946,821	864,833 ✓
Automotive segment	MWh	929,858	915,693	835,327 ✓
(incl. components)	MWh/Veh.	0.91	0.92	1.01 ✓
Heating oil	MWh	8,782	6,813	15,905 ✓
Automotive segment	MWh	8,782	6,813	15,905 ✓
(incl. components)	MWh/Veh.	0.009	0.007	0.019 ✓
Diesel (test rigs)	MWh	30,753	24,537	18,740
Automotive segment	MWh	30,753	24,537	18,740
(incl. components)	MWh/Veh.	0.03	0.02	0.02
Gasoline (test rigs)	MWh	91,953	88,825	81,778
Automotive segment	MWh	89,736	86,769	79,670
(incl. components)	MWh/Veh.	0.09	0.09	0.10

27 The key figure is being published for the first time in 2020, which is why no data exists for 2018 and 2019.

Audi Sustainability Key Figures

Emissions	Unit	2018	2019	2020
Total CO_2 emitted (Scope 1 and Scope 2)	t	619,140	451,725	231,334 ✓
Automotive segment	t	615,009	447,713	227,497 ✓
(incl. components)	kg/Veh.	600.57	451.02	276.10 ✓
Of which direct (Scope 1) CO_2 emissions[28]	t	202,031	198,730	172,387 ✓
Automotive segment	t	198,564	195,409	169,218 ✓
(incl. components)	kg/Veh.	193.90	196.85	205.37 ✓
Of which indirect (Scope 2) CO_2 emissions[29,30]	t	417,110	252,995[30]	58,946 ✓
	t	416,444	252,304	58,278 ✓
Automotive segment	kg/Veh.	406.66	254.17	70.73 ✓
(incl. components)				
VOC emissions[31]	t	1,081	916	815 ✓
Automotive segment	t	1,081	913	815 ✓
(incl. components)	kg/Veh.	1.06	0.92	0.99 ✓
Direct NO_x emissions[32]	t	202	190	177 ✓
Automotive segment	t	195	184	173 ✓
(incl. components)	kg/Veh.	0.19	0.19	0.21 ✓
Sulfur dioxide	t	2.14	2.05	2.03
Automotive segment	t	2.1376	2.05	2.03
(incl. components)	kg/Veh.	0.002	0.002	0.002
Total dust	t	58	41	33
Automotive segment	t	58	41	32
(incl. components)	kg/Veh.	0.06	0.04	0.04
CO_2 reductions in logistics[33,34]	t CO_2e	13,712	13,525	–
Intensity quotients for greenhouse gas emissions (Scope 1 and 2)	kg/Veh.	600.57	451.02	276.10

28 Direct CO_2 emissions: This figure is made up of CO_2 emissions generated by the use of fuel at the plant and CO_2 emissions produced by the operation of test rigs.
29 The process of selecting relevant emissions and the emission factors used are anchored in the Volkswagen 98000 standard (→ see page 248), as is the entire key figure collection process. Audi uses the real emission factors of the energy suppliers in principle, and the standard factors of the VDA in cases where this is not possible.
30 Correction in the recording of green electricity for 2019.
31 VOC emissions (volatile organic compounds): This figure is made up of emissions from the paint shops, test rigs and other facilities.
32 Direct NO_x emissions: This figure is made up of NOx emissions caused by the boiler houses at the plant, by paint shops and by the operation of test rigs.
33 Transportation of vehicles from Ingolstadt to Emden, the port of loading on the North Sea coast; since October 2012, also from Neckarsulm; since 2015, the figure is given in t CO_2e. Since July 2017, rail transport in Germany has been handled by DB Schenker entirely carbon-neutral. All shipments from and to the German production locations Ingolstadt and Neckarsulm operated by DB Schenker are CO_2-free.
34 In the future, the key figure "CO_2 reductions in logistics" will only be reported in the following year. The reason for this is the change in the reporting process, as a result of which the key figure cannot be evaluated on the publication date at present.

Audi Sustainability Key Figures

Water	Unit	2018	2019	2020
Total fresh water consumption	m³	4,159,236	3,428,689	3,132,780 ✓
Automotive segment	m³	4,091,377	3,360,040	3,059,403 ✓
(incl. components)	m³/Veh.	4.00	3.38	3.71 ✓
Fresh water consumption, internal catchment	m³	2,609,368	2,057,909	1,887,602 ✓
Automotive segment	m³	2,566,473	2,014,522	1,831,589 ✓
(incl. components)	m³/Veh.	2.51	2.03	2.22 ✓
Rainwater used	m³	394,041	165,207	172,926 ✓
Surface water from lakes, rivers, oceans	m³	722,499	611,311	572,606 ✓
Groundwater	m³	1,492,828	1,281,391	1,142,070 ✓
Fresh water consumption, externally sourced	m³	1,549,868	1,370,780	1,245,178 ✓
	m³	1,524,904	1,345,518	1,227,814 ✓
Automotive segment	m³/Veh.	1.49	1.36	1.49 ✓
(incl. components)				

Wastewater	Unit	2018	2019	2020
Volume of wastewater	m³	2,382,498	1,872,285	1,847,735 ✓
Automotive segment	m³	2,357,551	1,847,827	1,818,369 ✓
(incl. components)	m³/Veh.	2.30	1.86	2.21 ✓
Direct discharge[35]	m³	11,228	18,529	8,918
Indirect discharge[35]	m³	2,346,324	1,829,298	2,438,198

Wastewater load[35]	Unit	2018	2019[36]	2020
Chemical oxygen demand	kg	617,759	360,154	309,271 ✓
Total phosphorous content as phosphorous (P)	kg	3,493	3,247	3,901 ✓
Total nitrogen as nitrogen (N)	kg	36,026	31,648	26,339 ✓
Zinc	kg	284	160	85 ✓

35 Direct dischargers: Münchsmünster site; indirect dischargers: Ingolstadt, Münchsmünster, Neckarsulm, Brussels, Győr, Sant'Agata Bolognese (Lamborghini), Bologna (Ducati), Amphur Pluakdaeng (Ducati) sites.
36 Correction to the data collection process for 2019.

Audi Sustainability Key Figures

Waste	Unit	2018[37]	2019[37]	2020
Total volume of waste (excluding scrap)	t	107,071	107,940	98,814 ✓
Automotive segment	t	105,777	106,692	97,654 ✓
(incl. components	kg/Veh.	103.29	107.48	118.52 ✓
Recyclable waste	t	99,670	104,096	93,910 ✓
Automotive segment	t	98,475	102,940	92,826 ✓
(incl. components)	kg/Veh.	96.16	103.70	112.66 ✓
Other recyclable waste	t	56,342	56,936	46,289 ✓
Automotive segment	t	55,232	55,873	45,291 ✓
(incl. components)	kg/Veh.	53.94	56.29	54.97 ✓
Hazardous recyclable waste	t	37,553	40,782	42,074 ✓
Automotive segment	t	37,505	40,729	42,023 ✓
(incl. components)	kg/Veh.	36.62	41.03	51.00 ✓
Non-production-specific recyclable waste	t	5,776	6,378	5,547 ✓
Automotive segment	t	5,737	6,338	5,512 ✓
(incl. components)	kg/Veh.	5.60	6.38	6.69 ✓
Disposable waste	t	7,401	3,844	4,904 ✓
Automotive segment	t	7,302	3,751	4,828 ✓
(incl. components)	kg/Veh.	7.13	3.78	5.86 ✓
Other disposable waste	t	289	414	1,192 ✓
Automotive segment	t	244	383	1,150 ✓
(incl. components)	kg/Veh.	0.24	0.39	1.40 ✓
Hazardous disposable waste	t	6,112	3,170	3,365 ✓
Automotive segment	t	6,059	3,109	3,331 ✓
(incl. components)	kg/Veh.	5.92	3.13	4.04 ✓
Non-production-specific disposable waste	t	1,000	260	347 ✓
Automotive segment	t	999	259	347 ✓
(incl. components)	kg/Veh.	0.98	0.26	0.42 ✓
Metallic waste (scrap; completely recyclable)	t	345,827	320,793	273,371 ✓
Automotive segment	t	345,228	320,200	272,835 ✓
(incl. components)	kg/Veh.	337.12	322.56	331.13 ✓

37 Correction to the classification of waste for 2018 and 2019.

Audi Sustainability Key Figures

Employees and Society

Workforce	Unit	2018	2019	2020
Workforce, Audi Group[38,39]	Unit	91,477	90,783	87,996 ✓
Domestic companies[38,39]	Unit	59,754	60,083	58,432 ✓
of which AUDI AG	Unit	58,813	58,940	57,437 ✓
Ingolstadt plant	Unit	42,784	42,904	42,131 ✓
Neckarsulm plant	Unit	16,029	16,036	15,306 ✓
Foreign companies[38,39,40]	Unit	28,702	27,669	26,612 ✓
Audi Brussels S.A./N.V.	Unit	2,768	2,922	3,052 ✓
Audi Hungaria Zrt.	Unit	12,825	13,079	12,391 ✓
Audi México S.A. de C.V.	Unit	5,682	5,268	5,233 ✓
Automobili Lamborghini S.p.A.	Unit	1,643	1,788	1,769 ✓
Ducati Motor Holding S.p.A.	Unit	1,278	1,290	1,337 ✓
Apprentices[38]	Unit	2,582	2,585	2,493 ✓
Temporary workforce, Audi Group[41]	Unit	2,527	1,957	1,326
Average length of service, AUDI AG[39,41]	Years	17.5	17.9	18.3 ✓
Turnover rate, AUDI AG[38,39,42]	Percent	0.9	0.7	0.6 ✓
New hires, Audi Group	Unit	5,004	4,214	2,181
New hires, AUDI AG	Unit	1,628	1,310	920
Average age[39,41,43]	Years	41.2	41.5	41.8 ✓
Share of production employees[41]	Percent	48.4	48.5	48.4
Share of non-production employees[41]	Percent	48.6	48.5	48.7

Age structure, AUDI AG[39,41]	Unit	2018	2019	2020
< 30 years	Percent	15.7	14.3	12.9 ✓
30–50 years	Percent	54.9	55.1	56.6 ✓
> 50 years	Percent	29.4	30.6	30.5 ✓

38 Annual average figure.
39 Excluding apprentices.
40 Excluding staff employed from other Volkswagen Group companies not belonging to the Audi Group.
41 As of Dec. 31 in the year under review.
42 The employee turnover takes into account: terminations by the employer and/or employee without a rehire guarantee.
43 Excluding fixed-term employees.

Audi Sustainability Key Figures

Proportion of women[41]	Unit	2018	2019	2020
Audi Group[39]	Percent	14.9	15.0	15.2 ✓
AUDI AG	Percent	15.4	15.6	15.8 ✓
of which apprentices	Percent	27.2	25.5	23.8 ✓
of which industrial apprentices	Percent	24.2	22.3	20.3 ✓
of which clerical apprentices	Percent	81.1	80.6	74.2 ✓
Management[44,45]	Percent	10.9	11.9	12.5 ✓
Audi Brussels S.A./N.V.	Percent	6.7	6.9	7.0 ✓
Audi Hungaria Zrt.	Percent	12.8	13.0	12.8 ✓
Audi México S.A. de C.V.	Percent	13.8	14.2	14.8 ✓
Automobili Lamborghini S.p.A.	Percent	20.2	20.5	20.2 ✓
Ducati Motor Holding S.p.A.	Percent	18.4	19.0	17.6 ✓

Average training time per employee AUDI AG[46]	Unit	2018	2019	2020
Training time, total	Hours	13.7	13.0	9.0
Production employees	Hours	8.6	8.3	5.6
Non-production employees	Hours	18.2	16.7	11.7
Employees in management positions	Hours	21.1	23.8	15.6

38 Annual average figure.
39 Excluding apprentices.
41 As of Dec. 31 in the year under review.
44 Excluding leave on partial retirement phase.
45 AUDI AG has management, senior management and top management levels. The key figure reports the percentage of women in all three management groups collectively.
46 With respect to non-production employees.

Audi Sustainability Key Figures

Other structural data	Unit	2018	2019	2020
Attendance rate, AUDI AG[38,39,49]	Percent	95.2	95.3	95.5 ✓
Frequency of accidents, AUDI AG[41,50]	–	5.6	6.2	6.2 ✓
Proportion of academics, AUDI AG[39,41,46]	Percent	50.9	51.4	52.3 ✓
Proportion of foreign nationals, AUDI AG[41]	Percent	8.4	8.3	8.3 ✓
Proportion of people with severe disabilities, AUDI AG[39,41,48]	Percent	6.5	6.7	6.0 ✓
Contracts to workshops for people with disabilities, AUDI AG	EUR million	7.9	7.3	6.7 ✓
AUDI AG profit share per employee[47]	EUR	3,630	3,880	1,080 ✓
Employee donations[51,52]	EUR	1,283,502	1,296,507	1,284,240 ✓
Expenditure on corporate citizenship[52,53]	EUR million	16.5	17.5	15.1 ✓
Part-time employees, AUDI AG[41]	Unit	3,924	4,448	4,327
Employees on parental leave, AUDI AG[41]	Unit	3,439	3,753	3,788
Number of female employees on parental leave, AUDI AG	Unit	1,229	1,448	1,598
Number of male employees on parental leave, AUDI AG	Unit	2,210	2,305	2,190
Average duration of parental leave	Months	9	9	10

AUDI AG Ideas Program	Unit	2018	2019	2020
Savings	EUR million	109.1	101.3	94.5 ✓
Implementation quota	Percent	55.5	54.4	53.4 ✓

38 Annual average figure.
39 Excluding apprentices.
41 As of Dec. 31 in the year under review.
43 Excluding fixed-term employees.
46 With respect to non-production employees.
47 Payment in the following year; average figure for a skilled worker at AUDI AG.
48 Up to 2019, the severe disability quota was calculated based on the Social Code (SGB) and, from 2020, based on the percentage of employees with severe disabilities and equal opportunities.
49 The attendance rate is calculated using the formula 100 – (sick days/payment-relevant days) × 100.
50 The accident frequency figure indicates how many industrial accidents involving one or more days' work lost occur per million hours worked.
51 AUDI AG Christmas donation and "Last Cents" campaign.
52 Included respectively in the year 2020: Company top-up to the Christmas donation EUR 268,216.00.
53 Includes expenditure in the fiscal year in the areas of education, science, foundations; including donations; not including sponsorship and research.

Fuel/electric power consumption and emission figures

(All data apply to features of the German market.)
As of: February 19, 2021

Model	Combined fuel consumption (l/100 km)	Combined CO_2 emissions (g/km)
Audi A1 Sportback	5.0–4.6	115–106
Audi A1 citycarver	5.2–4.9	119–112
Audi Q2	7.7–4.0	176–107
Audi Q3	9.0–4.5	205–118
Audi Q3 Sportback	9.0–4.5	206–119
Audi A3 Sportback	7.4–3.9	170–102
Audi A3 Sedan	7.3–3.8	166–97
Audi TT Coupé	8.5–6.0	194–137
Audi TT Roadster	8.7–6.4	200–147
Audi A4 Sedan	7.1–4.0	167–104
Audi A4 Avant	9.2–4.0	211–106
Audi A4 allroad quattro	7.3–4.8	168–126
Audi A5 Sportback	8.8–4.0	200–105
Audi A5 Coupé	8.7–4.0	199–104
Audi A5 Cabriolet	8.2–4.2	188–112
Audi Q5	7.5–4.7	185–123
Audi Q5 Sportback	7.6–4.7	186–123
Audi A6 Sedan	7.6–4.3	173–114
Audi A6 Avant	11.6–4.5	265–118
Audi A6 allroad quattro	7.8–5.0	178–132
Audi A7 Sportback	11.6–4.4	265–117
Audi Q7	12.1–6.9	278–181
Audi Q8	12.3–6.9	281–182
Audi A8	10.8–6.5	248–170

Fuel/electric power consumption and emission figures

Model	Combined fuel consumption (l/100 km)	Combined CO_2 emissions (g/km)
Audi R8 Coupé	13.5–13.0	310–297
Audi R8 Spyder	13.6–13.2	311–303
Lamborghini Urus	12.6	292
Lamborghini Huracán	14.5–14.0	329–324
Lamborghini Aventador	20.1–18.8	499–452
Lamborghini Sián	19.8	449

Vehicles with natural gas drive	Combined CNG consumption (kg/100 km)	
Audi A3 Sportback g-tron	3.6–3.5	99–96
Audi A4 Avant g-tron	4.1–3.9	111–105
Audi A5 Sportback g-tron	4.1–3.8	111–104

Plug-in hybrid vehicles	Combined fuel consumption (l/100 km) and combined electric power consumption (kWh/100 km)	
Audi Q3 TFSI e	1.7/16.0–1.4/14.4	39–32
Audi Q3 Sportback TFSI e	1.7/15.9–1.4/14.6	38–33
Audi A3 Sportback TFSI e	1.5/14.1–1.4/13.0	34–30
Audi Q5 Sportback TFSI e	2.0/19.6–1.8/19.3	45–42
Audi Q5 TFSI e	1.9/19.5–1.8/19.3	44–41
Audi A6 Sedan TFSI e	1.6/17.8–1.4/16.7	36–31
Audi A6 Avant TFSI e	1.6/18.1–1.5/17.5	37–34
Audi A7 Sportback TFSI e	1.6/17.9–1.4/16.9	36–32
Audi Q7 TFSI e	3.0/22.4–2.6/21.7	64–59
Audi Q8 TFSI e	2.8/22.9–2.6/21.9	63–59
Audi A8 TFSI e	2.4/19.0–2.2/18.7	54–50

Fuel/electric power consumption and emission figures

Fully electric vehicles	Combined electric power consumption kWh/100 km	
Audi Q2 L e-tron	13.9	0
Audi e-tron	28.8–21.4	0
Audi e-tron Sportback	28.3–20.9	0
Audi e-tron GT quattro	19.6–18.8	0
Audi RS e-tron GT	20.2–19.3	0

The indicated consumption and emissions values were determined according to the legally specified measuring methods. Since September 1, 2017, type approval for certain new vehicles has been performed in accordance with the Worldwide Harmonized Light Vehicles Test Procedure (WLTP), a more realistic test procedure for measuring fuel consumption and CO_2 emissions. Since September 1, 2018, the WLTP has gradually replaced the New European Driving Cycle (NEDC). Due to the realistic test conditions, the fuel consumption and CO_2 emission values measured are in many cases higher than the values measured according to the NEDC. Additional information about the differences between WLTP and NEDC is available at → www.audi.de/wltp.

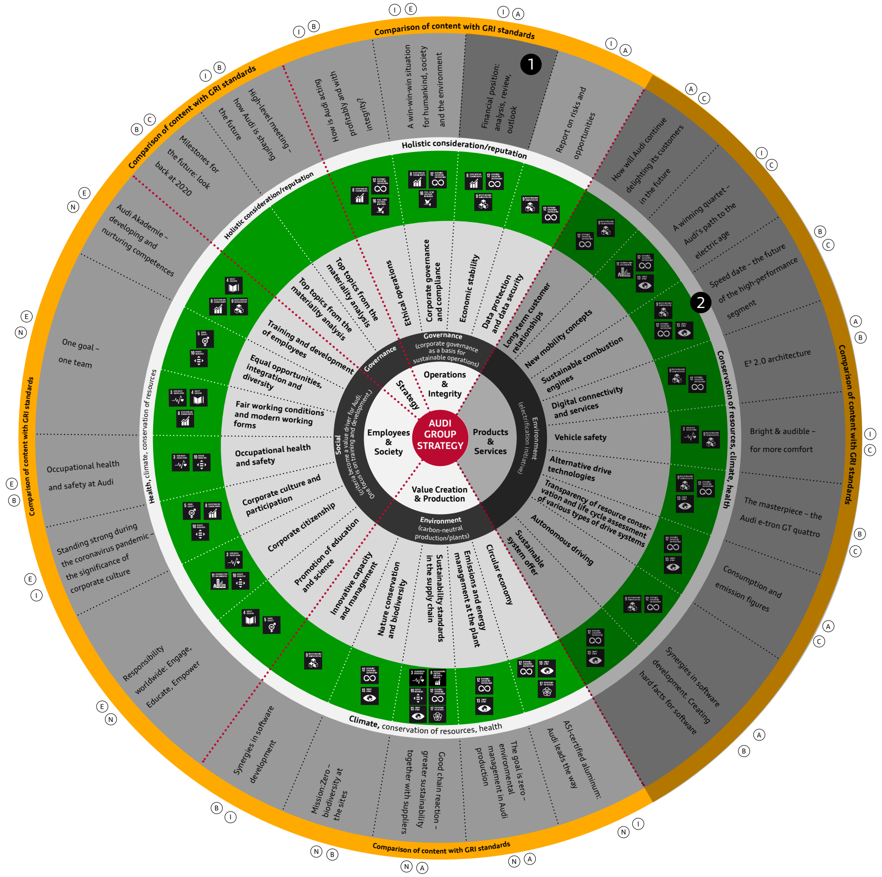
At the moment, it is still mandatory to communicate the NEDC values. In the case of new vehicles for which type approval was performed using WLTP, the NEDC values are derived from the WLTP values. WLTP values can be provided voluntarily until their use becomes mandatory. If NEDC values are indicated as a range, they do not refer to one, specific vehicle and are not an integral element of the offer. They are provided only for the purpose of comparison between the various vehicle types. Additional equipment and accessories (attachment parts, tire size, etc.) can change relevant vehicle parameters, such as weight, rolling resistance and aerodynamics and, like weather and traffic conditions as well as individual driving style, influence a vehicle's electric power consumption, CO_2 emissions and performance figures.

Further information on official fuel consumption figures and the official specific CO_2 emissions of new passenger cars can be found in the "Guide on the fuel economy, CO_2 emissions and power consumption of all new passenger car models," which is available free of charge at all sales dealerships and from DAT Deutsche Automobil Treuhand GmbH, Hellmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen, Germany (→ www.dat.de).

Content Wheel

The aim of the Audi Report 2020 is to ensure that all readers truly understand why these topics are being reported on. There are internal reasons for this (e.g. strategies) as well as external ones (e.g. guidelines, materialities). The Content Wheel gives an at-a-glance view of how the topics are derived and what the underlying strategy is. It shows the key topics in the five chapters “Strategy,” “Operations and Integrity,” “Products and Services,” “Value Creation and Production” and “Employees and Society.” In addition, it ensures that all those involved constantly have their sights set on corporate strategies, reporting standards of the Global Reporting Initiative (GRI) and the United Nations Sustainable Development Goals (SDGs) when it comes to the topic of sustainability.

Content Wheel



❶ Interactive, Click on the topic of a segment to access the story

❷ To find out more about the individual segments of the Content Wheel → see page 318 – page 322.

Note

The allocation of materialities in this graphic is based on the chapters of the Audi Report 2020 so that they are easier to find. The materialities may be allocated to other core topics in the materiality matrix (→ see page 10).

Content Wheel

Sustainability Roadmap
Comparison with the targets of the sustainability program

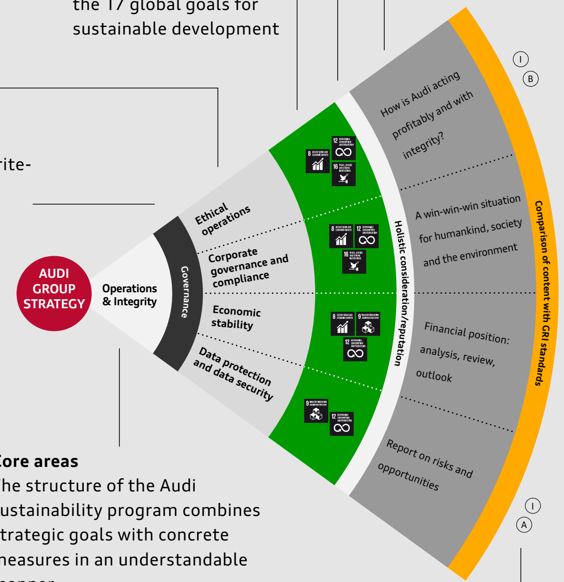
GRI
Comparison with the GRI Standards of the Global Reporting Initiative (GRI)

Materiality analysis
What concerns stakeholders, what do they expect from Audi? Selection of the most important results of the materiality analysis

Topics
Story that documents the commitment of Audi

SDG
Sustainable Development Goals (SDGs), Allocation of the 17 global goals for sustainable development

ESG criteria
Chapter reference for the capital-market-relevant criteria of Environment, Social and Governance (ESG)



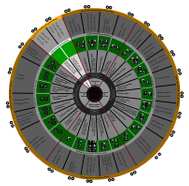
Core areas
The structure of the Audi sustainability program combines strategic goals with concrete measures in an understandable manner

Center
The central element of the Content Wheel is the Audi corporate strategy

Main target groups
The content is primarily aimed at the following stakeholders:

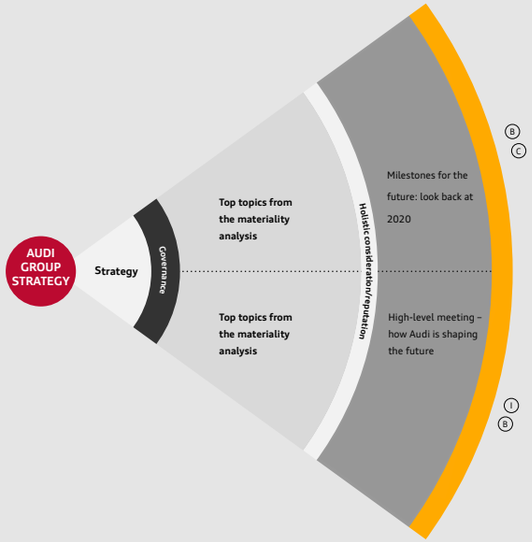
- Ⓘ Investors
- Ⓐ Analysts
- Ⓑ Business journalists/media
- Ⓝ Non-governmental organizations (NGOs)
- Ⓔ Employees and applicants/suppliers
- Ⓒ Customers

Content Wheel



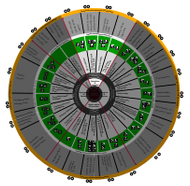
Strategy

The articles in the “Strategy” chapter illustrate and explain the corporate strategy, recent developments, background information and challenges. The six members of the Board of Management of AUDI AG have ample opportunity to express their thoughts. They discuss their most pressing issues, which can also be found on the subsequent pages of the Audi Report 2020.



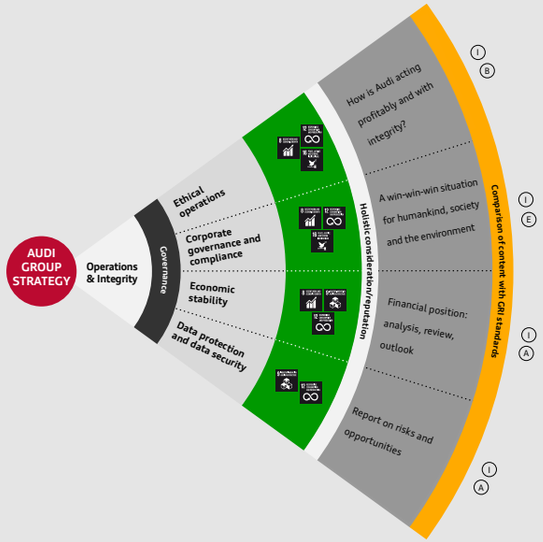
(I) Investors
(B) Business journalists/media
(C) Customers

Content Wheel



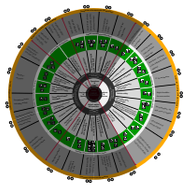
Operations & Integrity

The materiality analysis (→ see page 10) provides information on the relevance of defined action areas for Audi stakeholders. In the core area of “Operations & Integrity,” high priority is given to the topics of “ethical operations,” “economic stability,” “corporate governance and compliance” and “data privacy and security.” The corresponding articles start on → page 63.



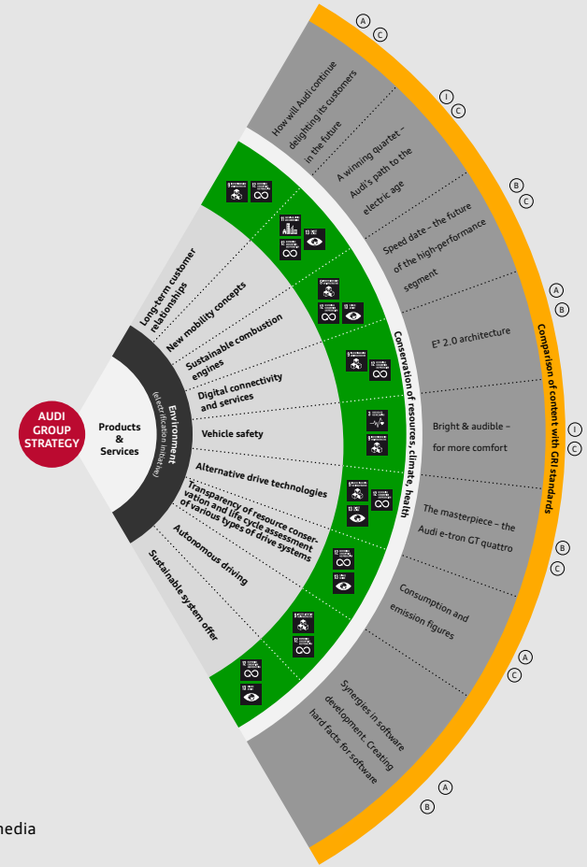
(I) Investors
(A) Analysts
(B) Business journalists/media
(E) Employees and applicants/suppliers

Content Wheel



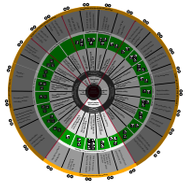
Products & Services

In the core area of “Products & Services,” according to the materiality analysis (→ see page 10), the greatest relevance is afforded to the topic of “vehicle safety,” followed by “alternative drive technologies.” The topics “sustainable combustion engines” and “sustainable system offer” are also rated as important. The corresponding articles start on → page 134.



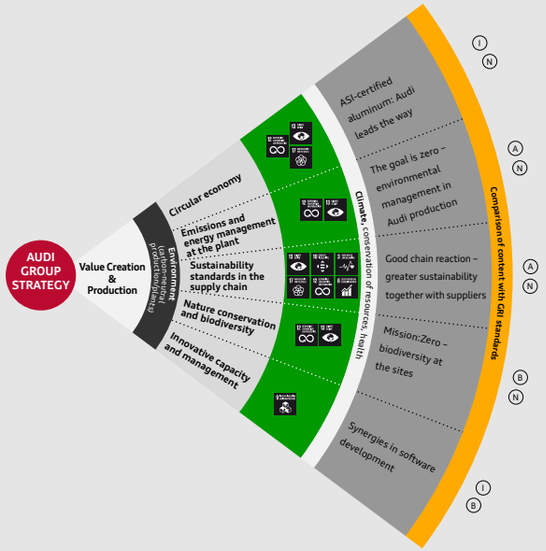
(I) Investors
(A) Analysts
(B) Business journalists/media
(C) Customers

Content Wheel



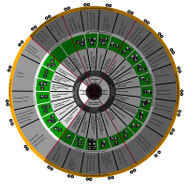
Value Creation & Production

In the core area “Value Creation & Production,” the following topics are important for Audi stakeholders according to the materiality analysis performed (→ see page 10), “circular economy,” “emissions and energy management (in the plant)” and “sustainability standards in the supply chain.” The stories on these topics are featured in this report starting on → page 212.



(I) Investors
(A) Analysts
(B) Business journalists/media
(N) Non-governmental organizations (NGOs)

Content Wheel



Employees & Society

According to the materiality analysis (→ see page 10), the topics of “fair working conditions and modern working forms,” “equal opportunities, integration and diversity” and “occupational health and safety” are of particular importance to Audi stakeholders in the area of “Employees & Society.” You can read about these topics starting on → page 251.

(I) Investors
(B) Business journalists/media
(N) Non-governmental organizations (NGOs)
(E) Employees and applicants/suppliers

Independent Auditor's Limited Assurance Report

The assurance engagement performed by Ernst & Young (EY) relates exclusively to the German PDF-version of the "Audi REPORT | combined annual and sustainability report" of AUDI AG. The following text is a translation of the original German Independent Assurance Report.

To AUDI Aktiengesellschaft, Ingolstadt

We have performed a limited assurance engagement on selected sustainability key figures in the overview "Audi Sustainability Key Figures" for the year 2020 in the "Audi REPORT | combined annual and sustainability report" of AUDI AG, Ingolstadt, for the reporting period from 1 January 2020 to 31 December 2020 (hereafter the report).

Our engagement exclusively relates to the selected key figures in the overview "Audi Sustainability Key Figures" in the annex of the "Audi REPORT | combined annual and sustainability report" of AUDI AG and to the German PDF-version of the report. The assured selected key figures are marked with the symbol "✓" (hereafter selected key figures). The report is published as PDF-version under → www.audi.com/de/company/sustainability.html.

Independent Auditor's Limited Assurance Report

Management's responsibility

The legal representatives of AUDI AG (hereafter: "the Company") are responsible for the preparation of the report in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative (hereafter "GRI criteria") as well as the selection of the criteria to be assessed.

This responsibility includes the selection and application of appropriate methods to prepare the report as well as making assumptions and estimates related to individual sustainability disclosures which are reasonable in the circumstances. Furthermore, the legal representatives are responsible for such internal controls that they have considered necessary to enable the preparation of a report that is free from – intended or unintended – material misstatement.

Auditor's declaration relating to independence and quality control

We are independent from the Company in accordance with the provisions under German commercial law and professional requirements, and we have fulfilled our other professional responsibilities in accordance with these requirements.

Independent Auditor's Limited Assurance Report

Our audit firm applies the national statutory regulations and professional pronouncements for quality control, in particular the by-laws regulating the rights and duties of Wirtschaftsprüfer and vereidigte Buchprüfer in the exercise of their profession [Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer] as well as the IDW Standard on Quality Control 1: Requirements for Quality Control in audit firms [IDW Qualitätssicherungsstandard 1: Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis (IDW QS 1)].

Auditor's responsibility

Our responsibility is to express a limited assurance conclusion on the selected key figures that are marked with the symbol "✓" in the report based on the assurance engagement we have performed.

We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information", issued by the International Auditing and Assurance Standards Board (IAASB). This Standard requires that we plan and perform the assurance engagement to obtain limited assurance about whether the selected key figures that are marked with the symbol "✓" in the report of the Company for the reporting period from 1 January 2020 to 31 December 2020 have been prepared, in all material respects, in

Independent Auditor's Limited Assurance Report

accordance with the GRI criteria. In a limited assurance engagement the assurance procedures are less in extent than for a reasonable assurance engagement and therefore a substantially lower level of assurance is obtained. The assurance procedures selected depend on the auditor's professional judgment.

Within the scope of our assurance engagement, which has been mainly conducted between November 2020 and February 2021, we performed amongst others the following assurance and other procedures:

> Inquiries of employees concerning the sustainability strategy, sustainability principles and sustainability management of AUDI AG,
> Inquiries of employees of the Company's headquarters as well as the employees responsible for the data capture and consolidation as well as the preparation of the report in order to assess the sustainability reporting system, the data capture and compilation methods as well as internal controls to the extent relevant for the limited assurance engagement on the selected key figures that are marked with the symbol "✓" in the report,
> Identification of likely risks of material misstatement regarding the selected key figures,
> Inspection of the relevant documentation of the systems and processes for compiling, aggregating and validating data, on which the selected key figures that are marked with the symbol "✓" are based in the reporting period and testing such documentation on a sample basis,
> Inquiries and inspection of documents on a sample basis relating to the collection and reporting of the selected key figures that are marked with the symbol "✓" in the report,
> Analytical measures at group level and on the level of selected sites regarding the quality of the reported data,
> Conducting virtual site visits to evaluate the processes for collecting, aggregating, and validating the data as well as the reliability of the reported data at group level,
    AUDI AG (Ingolstadt, Germany)
    AUDI AG (Neckarsulm, Germany)
    Audi Brussels S.A./N.V. (Brussels, Belgium)
> Evaluation of the presentation of the selected key figures that are marked with the symbol "✓" in the report,
> Critical review of the draft report to assess plausibility and consistency.

Assurance conclusion

Based on our assurance procedures performed and assurance evidence obtained, nothing has come to our attention that causes us to believe that the selected key figures that are marked with the symbol "✓" in the report for the period from 1 January 2020 to 31 December 2020 have not been prepared, in all material respects, in accordance with the GRI criteria.

Intended use of the assurance report

We issue this report on the basis of the engagement agreed with AUDI AG. The assurance engagement has been performed for the purposes of the Company and the report is solely intended to inform the Company as to the results of the assurance engagement and must not be used for purposes other than those intended. The report is not intended to provide third parties with support in making (financial) decisions.

Engagement terms and liability

The "General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften [German Public Auditors and Public Audit Firms]" dated 1 January 2017 are applicable to this engagement and also govern our relations with third parties in the context of this engagement (→ www.de.ey.com/general-engagement-terms). In addition, please refer to the liability provisions contained there in no. 9 and to the exclusion of liability towards third parties. We assume no responsibility, liability or other obligations towards third parties unless we have concluded a written agreement to the contrary with the respective third party or liability cannot effectively be precluded.

We make express reference to the fact that we do not update the assurance report to reflect events or circumstances arising after it was issued unless required to do so by law. It is the sole responsibility of anyone taking note of the result of our assurance engagement summarized in this assurance report to decide

Independent Auditor’s Limited Assurance Report

whether and in what way this result is useful or suitable for their purposes and to supplement, verify or update it by means of their own review procedures.

Munich, 17 March 2021

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Nicole Richter
Wirtschaftsprüferin
(German Public Auditor)

Hans-Georg Welz
Wirtschaftsprüfer
(German Public Auditor)

GRI content index

The Audi Group is reporting on its sustainability performance for the year 2020 pursuant to the international standard of the Global Reporting Initiative (GRI). This report was prepared in accordance with the “core” option of the GRI Standards.

The information in this report was chosen on the basis of a materiality analysis performed in 2019. The report was submitted to GRI for the performance of the GRI Materiality Disclosures Service. GRI confirmed the proper positioning of the materiality-related disclosures (102-40 to 102-49). The German version of the Sustainability Report was used for this service.

GRI Standards		Page	Statement/comment
Universal standards			
GRI 101: Foundation 2016			
GRI 102: General Disclosures 2016			
Organizational profile			
GRI 102-1	Name of the organization	32	
GRI 102-2	Activities, brands, products, and services	32 ff. 40 ff.	
GRI 102-3	Location of headquarters	32	
GRI 102-4	Location of operations	32 ff.	
GRI 102-5	Ownership and legal form	32	
GRI 102-6	Markets served	32 ff.	
GRI 102-7	Scale of the organization	32 ff. 309	
GRI 102-8	Information on employees and other workers	114 f. 309 f.	
GRI 102-9	Supply chain	222 ff.	

GRI Standards		Page	Statement/comment
GRI 102-10	Significant changes to the organization and its supply chain	32 ff.	
GRI 102-11	Precautionary principle or approach	65 ff. 120 ff.	
GRI 102-12	External initiatives	312 ff. 212 ff.	→ Sustainibility Roadmap
GRI 102-13	Membership of associations and interest groups		Audi works in a variety of initiatives, associations and work groups to discuss ecological, economic and social issues in partnership with stakeholders. The list (see below) of memberships and activities exemplifies the company’s dialogue with industry, politics, science and society. This is only a selection of our numerous involvements that also reflect the interests of the company’s stakeholders. This depiction was created using the five chapters of this report to illustrate the connections to the topics reported in the Audi Report 2020. Strategy > eNOVA Strategykreis Automobile Zukunft, Berlin > VDA Verband der Automobilindustrie e.V., Berlin Operations & Integrity > Deutsches Institut für Compliance (DICO), Berlin > Gesellschaft für Datenschutz und Datensicherung e.V. (GDD), Bonn > Zentrum für Wirtschaftsethik gGmbH (ZfW), Berlin Products & Services > Deutsches Verkehrsforum e.V., Berlin Value Creation & Production > Biodiversity in Good Company Initiative e.V., Berlin > Co₂ncept plus – Verband der Wirtschaft für Emissionshandel und Klimaschutz e.V., Munich Employees & Society > Deutsche Gesellschaft für Arbeitsmedizin und Umweltmedizin e.V. (DGAUM), Munich > Stiftung “Jugend forscht” e.V., Hamburg > Verein zur Förd. kult. Belange in der Region IN, Ingolstadt
Strategy			
GRI 102-14	Statement from senior decision-maker	2 f.	
GRI 102-15	Key impacts, risks, and opportunities	40 ff. 81 ff. 120 ff.	
Ethics and integrity			
GRI 102-16	Values, principles, standards, and norms of behavior	65 ff. 40 ff. 120 ff.	
GRI 102-17	Mechanisms for advice and concerns about ethics	72 75	→ www.audi.com/en/company/integrity-compliance-and-risk-management/whistleblower-system.html

GRI Standards		Page	Statement/comment
Governance			
GRI 102-18	Governance structure		The Annual General Meeting, the Supervisory Board and the Board of Management make up the executive bodies of AUDI AG. The Annual General Meeting of a stock corporation is the meeting of the corporation’s shareholders or owners at which they exercise their rights with regard to the stock corporation’s affairs. The Board of Management manages the business of AUDI AG and of the Audi Group in accordance with the law, the Articles of Incorporation and Bylaws of AUDI AG and the Rules of Procedure issued by the Supervisory Board. Corporate governance also gives due consideration to the corporate goals and to shared interests within the Volkswagen Group network. At the time the report was completed, the Board of Management of AUDI AG consisted of six members. The Supervisory Board oversees and advises the Board of Management’s running of the business. The Supervisory Board of AUDI AG comprises ten shareholder representatives and ten employee representatives as provided for by law. The composition of the Supervisory Board and Board of Management of AUDI AG as well as the dates on which members took up office are provided on the website of AUDI AG → here.
GRI 102-19	Delegating authority		→ www.audi.com/en/company/sustainability/core-topics/operations-and-integrity/firmly-anchored-responsibility.html
GRI 102-20	Executive-level responsibility for economic, environmental, and social topics		→ www.audi.com/en/company/sustainability/core-topics/operations-and-integrity/firmly-anchored-responsibility.html
GRI 102-21	Consulting stakeholders on economic, environmental, and social topics		→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 102-22	Composition of the highest governance body and its committees		→ www.audi.com/en/company/profile/company-management.html
GRI 102-23	Chair of the highest governance body		→ www.audi.com/en/company/profile/company-management.html
GRI 102-24	Nominating and selecting the highest governance body		→ www.audi.com/en/company/investor-relations/capital-market-compliance-and-corporate-governance/corporate-governance/diversity-concept.html
GRI 102-25	Conflicts of interest		→ www.audi.com/en/company/profile/company-management/methods-and-practices-of-the-board-of-management-and-supervisory.html → www.audi.com/en/company/integrity-compliance-and-risk-management/whistleblower-system.html → www.audi.com/en/company/profile/company-management/methods-and-practices-of-the-board-of-management-and-supervisory.html → www.audi.com/en/company/profile/company-management/information-on-corporate-governance-practices.html
GRI 102-26	Role of highest governance body in setting targets, values, and strategies		→ www.audi.com/en/company/sustainability/core-topics/operations-and-integrity/firmly-anchored-responsibility.html

GRI Standards		Page	Statement/comment
GRI 102-27	Collective knowledge of highest governance body		→ www.audi.com/en/company/sustainability/core-topics/operations-and-integrity/firmly-anchored-responsibility.html
GRI 102-28	Evaluating the highest governance body's performance		Volkswagen Sustainability Report 2020 (→ see page 10 f. and page 60 f.) Annual Report 2019, Corporate Governance Report (→ see page 45 ff.)
GRI 102-29	Identifying and managing economic, environmental, and social impacts	10 7	
GRI 102-30	Effectiveness of risk management processes	123 f.	
GRI 102-31	Review of economic, environmental, and social topics	10 7	
GRI 102-32	Highest governance body's role in sustainability reporting	7	→ www.audi.com/en/company/sustainability/core-topics/operations-and-integrity/firmly-anchored-responsibility.html
GRI 102-33	Communicating critical concerns	123 f.	
GRI 102-34	Nature and total number of critical concerns	65 ff.	In 2020, 450 reports of possible regulatory violations were received. The number is somewhat lower than the previous year's figure of 694 reports. Short-time work as a result of the coronavirus is among the reasons for the reduction. The continued high number of non-anonymous reports in 2020 and the fact that a large number of the tip-offs received were reported directly to the Audi Investigation Office show that a high level of trust remains in the whistleblower system.
Stakeholder engagement			
GRI 102-40	List of stakeholder groups	7	
GRI 102-41	Collective bargaining agreements	273 f.	The Audi Works Council plays an active role in shaping the future at Audi. For example, all works agreements are reached jointly with the employee representatives at AUDI AG. The latter also oversee compliance with applicable legislation, directives, accident prevention regulations, wage agreements and works agreements reached in favor of the employees.
GRI 102-42	Identifying and selecting stakeholders	7	

GRI Standards		Page	Statement/comment
GRI 102-43	Approach to stakeholder engagement	7	Delegates of the employee representative bodies of the Audi Group meet at least twice a year in the framework of the Audi Committee to advise on topics of international importance for the Group as a whole and to enter into exchanges in this regard with the Audi Board of Management. In addition, individual support is provided for the respective sites on specific topics. The spokesperson for the Audi Committee is the Chair of the General Works Council of AUDI AG, Peter Mosch, with Supervisory Board mandates in Volkswagen AG and AUDI AG. On the Supervisory Board of AUDI AG, the employees' elected representatives perform duties such as monitoring executive management, approving important corporate processes and appointing the members of the Board of Management. The intention is to give a voice to international colleagues in this and other key committees too and to represent the interests of the employees as well as the interests of the domestic sites. The Social Charter, which will also be implemented in the future at AUDI AG, was amended at the end of 2020 and following this revision defines economic efficiency and job protection as equal-ranking corporate goals. In addition to the Social Charter, there is also a Charter on Labor Relations, a Charter on Temporary Work and a Charter on Vocational Education, which set out guiding principles on the respective topics for the entire Group. There are also elected youth and apprentice representative bodies as well as disabled employee representatives at AUDI AG who specifically take up the concerns of the employee groups that they represent.
GRI 102-44	Key topics and concerns raised	7 10	
Reporting practice			
GRI 102-45	Entities included in the consolidated financial statements	81 ff. 32 ff. 7	
GRI 102-46	Defining report content and topic boundaries	7 10 315 ff.	
GRI 102-47	List of material topics	7 10 315 ff.	
GRI 102-48	Restatements of information	7 ff.	
GRI 102-49	Changes in reporting	7 ff.	
GRI 102-50	Reporting period	9	
GRI 102-51	Date of most recent report	9	
GRI 102-52	Reporting cycle	9	
GRI 102-53	Contact point for questions regarding the report	350	
GRI 102-54	Declaration on reporting in accordance with the GRI Standards	330	

GRI Standards		Page	Statement/comment
GRI 102-55	GRI content index	330 ff.	
GRI 102-56	External assurance	323 ff.	
Topic-specific disclosures			
Economic Performance			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	7 10 315 ff. 291 ff.	
GRI 103-2	The management approach and its components	291 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 201	**Economic Performance 2016**		
GRI 201-1	Directly generated and distributed economic value	302 ff. 99 ff.	The bargaining partners consider the ratio of the entry level wages to the statutory local minimum wage when structuring compensation as part of the collective bargaining process.
GRI 201-2	Financial implications and other risks and opportunities due to climate change	120 ff. 136 ff. 152 ff.	
GRI 201-3	Defined benefit plan obligations and other retirement plans	109 f.	
Market Presence			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 32 ff.	
GRI 103-2	The management approach and its components	32 ff. 266	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 202	**Market Presence 2016**		
GRI 202-1	Ratios of standard entry level wage by gender compared with local minimum wage		The bargaining partners consider the ratio of the entry level wages to the statutory local minimum wage when structuring compensation as part of the collective bargaining process.
GRI 202-2	Proportion of senior management hired from the local community		Audi fundamentally supports the employment and qualification of local employees. The Group is convinced that these employees are knowledgeable about the region and the local market, and have good networks that are helpful for the further development of their locations. The proportion of foreign nationals at AUDI AG was 8.3 percent in 2020.

GRI Standards		Page	Statement/comment
Indirect Economic Impacts			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 248 f. 276 ff.	
GRI 103-2	The management approach and its components	276 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 203	**Indirect Economic Impacts 2016**		
GRI 203-1	Infrastructure investments and services supported	248 ff. 276 ff.	
GRI 203-2	Significant indirect economic impacts	275	
Procurement Practices			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 222 ff.	
GRI 103-2	The management approach and its components	222 ff. 225	Volkswagen Sustainability Report 2020 (→ see page 59 f. and page 64 f.)
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 204	**Procurement Practices 2016**		
GRI 204-1	Proportion of spending on local suppliers		→ www.audi.com/en/company/sustainability/stakeholder-management.html
Anti-corruption			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 65 ff.	
GRI 103-2	The management approach and its components	65 ff.	
GRI 103-3	Evaluation of the management approach	65 ff.	
GRI 205	**Anti-corruption 2016**		
GRI 205-1	Operations assessed for risks related to corruption	65 ff.	The Audi Group places a high priority on preventing corruption. Within our company, the department Compliance AUDI AG/Management System, Integrity (I/GC-C) helps to ensure sustainable prevention of corruption. As part of the ICRA (Internal Compliance Risk Assessment) standard process, compliance risk profiles – in the area of corruption among others – are created for each company. Each company has to implement appropriate individual measures once the risk profile has been created, which help to mitigate the risk.

GRI Standards		Page	Statement/comment
GRI 205-2	Communication and training about anti-corruption policies and procedures		In the year under review, 44 national and international participations were supported in the compliance focal area of anti-corruption in the course of consultancy inquiries, the implementation of policies and the execution of training programs. Fundamentally, all those entities where AUDI AG holds a majority interest or management responsibility or that are of particular importance are included in the process. In addition, the proper implementation of measures is verified as part of on-site inspections and external audits. Companies can also report risks, problems and incidents in the area of corruption, among others, to the Compliance & Integrity department as part of hot topic reporting. One hot topic in relation to corruption was reported in the year under review.
GRI 205-3	Confirmed incidents of corruption and actions taken		Within the scope of the whistleblower system, in 2020 the Audi Investigation Office received two centrally filed reports of a regulatory violation with regard to corruption for which further investigative steps were initiated. These reports are still under investigation at present. Two further possible suspected cases of corruption were examined in 2020, which had already been received in the whistleblower system in 2019. In one case, no regulatory violation was identified, while appropriate personnel measures were taken in another.
Anti-competitive Behavior			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 291 f.	
GRI 103-2	The management approach and its components	291 f.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 206	**Anti-competitive Behavior 2016**		
GRI 206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices		Cases of actual and suspected compliance violations of anti-trust law are isolated cases. The total number of cases is not reported for confidentiality reasons.
Materials			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 293 114 ff.	
GRI 103-2	The management approach and its components	296 ff. 214 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html

GRI Standards		Page	Statement/comment
GRI 301	**Materials 2016**		
GRI 301-1	Materials used by weight or volume	222 ff. 225	
GRI 301-2	Recycled input materials used	222 ff. 214 ff.	
GRI 301-3	Reclaimed products and their packaging materials	308	
Energy			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 296 ff. 230 ff.	
GRI 103-2	The management approach and its components	296 ff. 230 ff.	
GRI 103-3	Evaluation of the management approach	120	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 302	**Energy 2016**		
GRI 302-1	Energy consumption within the organization	304	302-1 f: The process of collecting key figures including definition of scope is anchored in the Volkswagen 98000 standard (→ see page 248 ff.) and does not provide for extrapolation at overall site level.
GRI 302-3	Energy intensity	230 ff. 304	
GRI 302-4	Reduction of energy consumption	230 ff. 304	
Water and Effluents			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 296 ff. 230 ff. 226 ff.	
GRI 103-2	The management approach and its components	296 ff. 230 ff. 226 f.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 303	**Water and Effluents 2018**		
GRI 303-1	Interactions with water as a shared resource	240 ff. 307 ff. 226 f.	
GRI 303-2	Management of water discharge-related impacts	240 ff.	

GRI Standards		Page	Statement/comment
GRI 303-4	Water withdrawal	240 ff. 307	303-4 c: The site in Mexico was the only site where water pollution was identified, although the site is 100 percent wastewater-neutral. 303-4 d–e: As with the entire process for collecting key figures, the process for identifying the relevant wastewater load and wastewater limits is anchored in the Volkswagen 98000 standard (→ see page 248 ff.). Owing to the size of the Group, Audi sites are subject to different legislation. Some incidents are dealt with at a local level. There is no Group data available on incidents at present for this reason.
Biodiversity			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 296 ff. 230 ff.	
GRI 103-2	The management approach and its components	296 ff. 230 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 304	**Biodiversity 2016**		
GRI 304-1	Operational sites owned, leased, managed in, or adjacent to protected areas and areas of high biodiversity value outside protected areas	246 f.	
GRI 304-2	Significant impacts of activities, products, and services on biodiversity	246 f.	
GRI 304-3	Habitats protected or restored		→ www.audi.com/en/company/sustainability/stakeholder-management.html
Emissions			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 296 ff. 230 ff.	
GRI 103-2	The management approach and its components	296 ff. 230 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html

GRI Standards		Page	Statement/comment
GRI 305	**Emissions 2016**		
GRI 305-1	Direct (Scope 1) GHG emissions	230 ff. 306	305-1 e: Audi fundamentally uses the real emission factors of the energy suppliers. If this is not possible, calculations are conducted on the basis of the VDA's standard factors. As with the entire process for collecting key figures, this process is anchored in the Volkswagen 98000 standard (→ see page 248 ff.).
GRI 305-2	Energy indirect (Scope 2) GHG emissions	230 ff. 306	305-2 a: As with the entire process for collecting key figures, the process for selecting the relevant emissions as well as the emissions factors used are anchored in the Volkswagen 98000 standard (→ see page 248 ff.). Audi fundamentally uses the real emission factors of the energy suppliers. If this is not possible, calculations are conducted on the basis of the VDA's standard factors. All Audi manufacturing sites were converted extensively to green electricity as of January 1, 2020. Owing to the size of the Group, a disproportionately high level of effort would be required to manually calculate all location-based emissions as a reference. No reporting therefore takes place for this reason. 305-2 e: As with the entire process for collecting key figures, the process for selecting the relevant emissions as well as the emissions factors used are anchored in the Volkswagen 98000 standard (→ see page 248 ff.). Audi fundamentally uses the real emission factors of the energy suppliers. If this is not possible, calculations are conducted on the basis of the VDA's standard factors.
GRI 305-4	GHG emissions intensity	306	
GRI 305-5	Reduction of GHG emissions	230 ff. 306	
GRI 305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	306	305-7 b: As with the entire process for collecting key figures, the process for selecting the relevant emissions as well as the emissions factors used are anchored in the Volkswagen 98000 standard (→ see page 248 ff.). Audi fundamentally uses the real emission factors of the energy suppliers. If this is not possible, calculations are conducted on the basis of the VDA's standard factors.
Effluents and Waste			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 296 ff. 230 ff. 226 f.	
GRI 103-2	The management approach and its components	296 ff. 230 ff. 226 f.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 306	**Effluents and Waste 2016**		
GRI 306-1	Water discharge by quality and destination	230 ff. 226 f. 308	
GRI 306-2	Waste by type and disposal method	230 ff. 308	
GRI 306-3	Significant spills	230 ff. 308	

GRI Standards		Page	Statement/comment
Environmental Compliance			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 296 ff. 230 ff. 226 f.	
GRI 103-2	The management approach and its components	296 ff. 230 ff. 226 f.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 307	**Environmental Compliance 2016**		
GRI 307-1	GRI 307-1, Non-compliance with environmental laws and regulations	69 65 ff. 23 128	
Supplier Environmental Assessment			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 296 ff. 222 ff.	
GRI 103-2	The management approach and its components	296 ff. 222 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 308	**Supplier Environmental Assessment 2016**		
GRI 308-1	Explanation of the material topic and its boundary	222 ff.	Volkswagen Sustainability Report 2020 (→ see page 64 f.)
GRI 308-2	The management approach and its components	222 ff.	Volkswagen Sustainability Report 2020 (→ see page 65 f.)
Employment			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 299 ff. 266 ff.	
GRI 103-2	The management approach and its components	299 ff. 266 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html

GRI Standards		Page	Statement/comment
GRI 401	**Employment 2016**		
GRI 401-1	New employee hires and employee turnover	266 ff. 309	401-1 a: Data on the rate of new employee hires is not available since this key figure is not collected. Audi uses the absolute number of employees in relation to new employee hires. The following are taken into account as regards employee turnover, terminations, resignations at the employee's own request without a rehire guarantee and service termination agreements. Absolute figures are not used as an internal control and are therefore not available in a reportable format. 401-1 b: The data for the entire Audi Group is not recorded systematically at present. Collecting this data manually would be highly complex due to the autonomy of the companies, and a disproportionately high level of effort would be required owing to the size of the Group. No reporting therefore takes place for these reasons and also due to the fact that the figure is not relevant for control purposes.
GRI 401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	266 ff.	
GRI 401-3	Parental leave	266 ff. 311	
Labor/Management Relations			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 299 ff. 253 ff.	
GRI 103-2	The management approach and its components	299 ff. 253 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 402	**Labor/Management Relations 2016**		
GRI 402-1	Minimum notice periods regarding operational changes		In the event of operational changes, the company undertakes to inform the employees of these in a timely manner.
Occupational Health and Safety			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 299 ff. 264 f.	
GRI 103-2	The management approach and its components	299 ff. 264 f.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html

GRI Standards		Page	Statement/comment
GRI 403	**Occupational Health and Safety 2018**		
GRI 403-1	Occupational health and safety management system	264 f.	
GRI 403-2	Hazard identification, risk assessment, and incident	264 f.	
GRI 403-3	Occupational health services	262 f. 264 f.	
GRI 403-4	Worker participation, consultation, and communication on occupational health and safety	264 f.	As part of the Audi ergonomics strategy, the company promotes intelligent work organization along with measures to apply the standards on an international scale, for example. Through targeted consultations, Audi raises its employees' awareness of the issue and encourages them to put forward their own suggestions, thus allowing them to design their own workplace. The ergonomics coordinators at all Audi sites discuss measures and developments several times a year.
GRI 403-5	Worker training on occupational health and safety	262 f. 264 f.	
GRI 403-6	Promotion of worker health	264 f.	
GRI 403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	262 f. 264 f.	
GRI 403-8	Workers covered by an occupational health and safety management system	262 f. 264 f.	

GRI Standards		Page	Statement/comment
GRI 403-9	Work-related injuries	264 f. 311	403-9: As in the past, the current scope of the published data relates to AUDI AG. The possibility of extending reporting to the production sites is being examined at present. Due to conversion of the process to a combined report, which is published earlier than before, the figures for all production sites could not yet be published this year. 403-9 a ii: The data is not available in reportable format as yet; collection is being examined presently. 403-9 a iii: The data is used to calculate the frequency of accidents; publication is being examined presently. 403-9 a iv: Injuries are categorized at Audi on the basis of the catalog of the professional association. No evaluation of the data is available at present in reportable form; publication is being examined. 403-9 a v: The data is used to calculate the frequency of accidents; publication is being examined presently. 403-9 b: The current contractual situation with the companies working for Audi does not permit access to the required information. 403-9 c–d: Audi fulfills the statutory requirements and performs risk assessments for all activities according to relevant standard works. Details are not published for confidentiality reasons.
Training and Education			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 299 ff. 275 266 ff.	
GRI 103-2	The management approach and its components	299 ff. 275 266 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 404	**Training and Education 2016**		
GRI 404-1	Average hours of training per year per employee	310 275 266 ff.	Information by gender is not currently available.
GRI 404-2	Programs for upgrading employee skills and transition assistance programs	275 266 ff.	
GRI 404-3	Percentage of employees receiving regular performance and career development reviews	266 ff.	

GRI Standards		Page	Statement/comment
Diversity and Equal Opportunity			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 299 ff. 266 ff.	
GRI 103-2	The management approach and its components	299 ff. 266 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 405	**Diversity and Equal Opportunity 2016**		
GRI 405-1	Diversity of governance bodies and employees	266 ff. 309 ff.	405-1: The data for the entire Audi Group is not available since this information is not relevant for control purposes owing to the autonomy of the companies and the size of the Group. Collection and publication are being examined presently. 405-1 b ii: Only the key figure for AUDI AG is relevant for control purposes owing to the size of the Group and the autonomy of the companies. The scope is limited to AUDI AG data for this reason. Collection and publication are being examined presently.
GRI 405-2	Ratio of basic salary and remuneration of women to men	266 ff.	
Human Rights Assessment			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 299 ff. 73 f.	
GRI 103-2	The management approach and its components	299 ff. 73 f.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 412	**Human Rights Assessment 2016**		
GRI 412-1	Operations that have been subject to human rights reviews or impact assessments	214 ff. 225	Volkswagen Sustainability Report 2020 (→ see page 64 f.)

GRI Standards		Page	Statement/comment
GRI 412-2	Employee training on human rights policies or procedures		Audi uses a range of training measures to convey information on the topic of human rights in the company. For example, a chapter of the "Audi Code of Conduct and Ethical Decision-Making" WBT has been used for around two years now to provide a basic understanding. The training is obligatory for the entire workforce. As of December 31, 2020, 98.6 percent of all employees had completed the approx. 45-minute training. The topic is likewise anchored in the form of basic knowledge in the 30-minute WBT on "Compliance Awareness," which has been available on a voluntary basis since the beginning of 2020. Around 400 employees took part in this training in the past year. The 90-minute face-to-face training on "Business and human rights in the corporate context – respecting human rights" took place for the first time at the end of 2020. This training course can be booked by all employees, although it is specifically aimed at employees who have direct responsibility for or heightened impact on the topic in their everyday work. This training will be intensified further in 2021. Participation in the obligatory WBT Code of Conduct: 98.6 percent In figures: Actual participation: 54,087 Target participation: 54,837 (As of Dec. 31, 2020) Participation in voluntary Life Online Training on Human Rights: 13 participants (As of Dec. 31, 2020) (Note: One training course took place in 2020) Participation in the voluntary WBT Compliance Awareness: 400 participants including repeat participants (As of Dec. 31, 2020)
GRI 412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	214 ff. 225	→ www.audi.com/de/company/sustainability/s-rating.html
Local Communities			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 276 ff.	
GRI 103-2	The management approach and its components	276 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 413	**Local Communities 2016**		
GRI 413-1	Operations with local community engagement, impact assessments, and development programs	276 ff. 222 ff.	

GRI Standards		Page	Statement/comment
Supplier Social Assessment			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 296 ff. 276 ff. 214 ff.	
GRI 103-2	The management approach and its components	296 ff. 276 ff. 214 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 414	**Supplier Social Assessment 2016**		
GRI 414-1	New suppliers that were screened using social criteria	222 ff. 225	Volkswagen Sustainability Report 2020 (→ see page 64 f.)
GRI 414-2	Negative social impacts in the supply chain and actions taken	222 ff. 225	Volkswagen Sustainability Report 2020 (→ see page 64 f.)
Customer Health and Safety			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 293 ff. 76 f.	
GRI 103-2	The management approach and its components	293 ff. 76 f.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 416	**Customer Health and Safety 2016**		
GRI 416-1	Assessment of the health and safety impacts of product and service categories		Audi's commitment to quality is based also and especially on social change, customer requirements, statutory and regulatory requirements as well as internal company policies and a binding Code of Conduct. The process-driven quality management system defines regulations in this respect that are to be applied by the organizational units to their tasks, projects and associated processes for the purpose of organization, implementation and continuous enhancement. All divisions formulate their quality requirements in goals, control these independently based on key figures, are subject to independent controls and contribute to the achievement of corporate goals. Audi attaches particular importance to producing high-quality and safe vehicles. And it continues to keep an eye on its products even after they have been delivered to customers – in line with product monitoring obligations. On the request of the Board of Management, the Product Safety Committee (APS) examines topic-related reports for delivered vehicles and products and initiates measures if there are any doubts as to their product safety or if a regulatory violation is suspected. In addition, the APS answers questions from authorities and consumer associations in relation to product safety.

GRI Standards		Page	Statement/comment
GRI 416-2	Incidents of non-compliance concerning the health and safety impacts of products and services		In addition to interfaces to the Environmental Compliance Management System (ECMS) and Product Compliance Management System (PCMS), the interface to the Compliance Management System (CMS) should also be highlighted in terms of continuous development and improvement. Objectives in this respect include exchanging information on process weaknesses, initiating improvement measures when necessary and therefore minimizing compliance risks. Product integrity is the obligation to maintain product safety and product conformity. In 2020, Audi began establishing product integrity and the Product Compliance Management System (PCMS) as a regulatory framework for ensuring product integrity in the company. Every employee plays their part in ensuring that product integrity risks are minimized by complying with regulations in the Corporate Policy U_059.
Marketing and Labeling			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	10 76 f.	
GRI 103-2	The management approach and its components	76 f.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 417	**Marketing and Labeling 2016**		
GRI 417-1	Requirements for product and service information and labeling	312 ff.	
GRI 417-2	Incidents of non-compliance concerning product and service information and labeling		AUDI AG never provides general information on the scope of field measures.
GRI 417-3	Incidents of non-compliance concerning marketing communications	72	
Customer Privacy			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 296 ff. 204 ff.	
GRI 103-2	The management approach and its components	296 ff. 204 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html

GRI Standards		Page	Statement/comment
GRI 418	**Customer Privacy 2016**		
GRI 418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data		As in the previous year, there were no substantiated complaints concerning breaches of customer privacy in 2020.
Socioeconomic Compliance			
GRI 103	**Management Approach 2016**		
GRI 103-1	Explanation of the material topic and its boundary	315 ff. 10 296 ff.	
GRI 103-2	The management approach and its components	296 ff.	
GRI 103-3	Evaluation of the management approach	120 ff.	→ www.audi.com/en/company/sustainability/stakeholder-management.html
GRI 419	**Socioeconomic Compliance 2016**		
GRI 419-1	Non-compliance with laws and regulations in the social and economic area		Any known cases of actual and suspected compliance violations are isolated cases. The total number of cases is not reported for confidentiality reasons.

Publication Details

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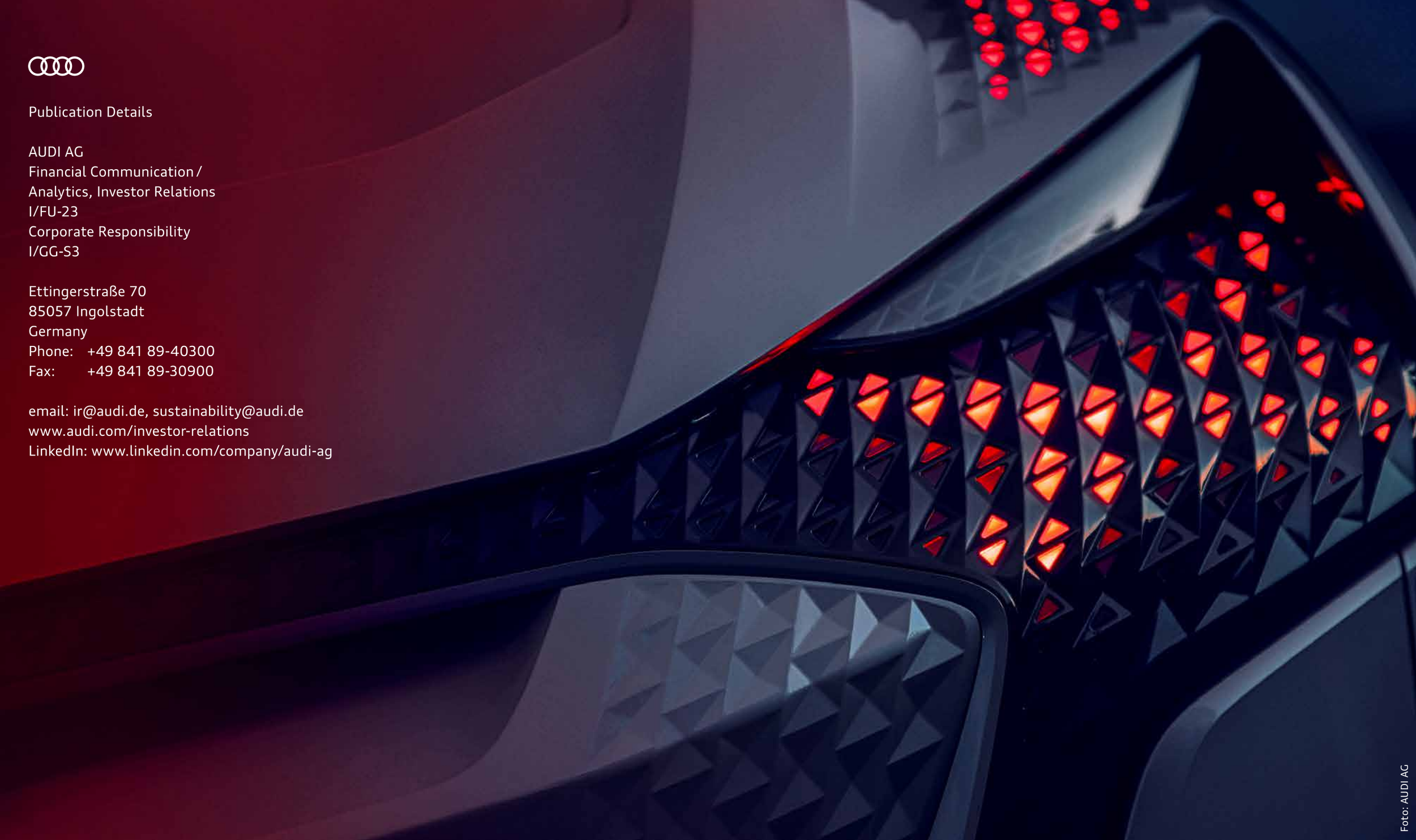

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