Report

2022

Combined Annual and Sustainability Report

Dear Readers,

Without a question: 2022 was a challenging year. A year shaped by a difficult situation in the global economy, sharply rising energy prices and continued supply shortages. A year in which we were so terribly caught off guard by the war in Ukraine, which has demanded our solidarity and cohesion more than anything else in recent memory. At the same time, as the team of the Premium brand group, we accomplished a lot together and generated a record operating profit[1] of EUR 7.6 billion thanks to the dedication and team spirit of all employees. The way we took on the challenges of the past year is an enormous achievement for which I would like to thank our more than 87,000 employees worldwide. The results show that, together, we are successfully guiding the Premium brand group with Audi, Bentley, Lamborghini and Ducati through turbulent times – always with our eyes on the horizon.

One milestone in 2023 will be the start of production of the Audi Q6 e-tron family in Ingolstadt on the flexible vehicle architecture of Premium Platform Electric (PPE). The PPE offers the perfect conditions for our future fully electric vehicles. For the next step in digitalization, we are utilizing E³, the new generation of uniform electronic architecture, which we are developing in collaboration with CARIAD, the internal software unit of the Volkswagen Group.

At the same time, we are converting our sites to electric mobility. Starting in 2029, all Audi plants will produce at least one fully electric model. Along the way, we are keeping our eye on the environmental footprint of our vehicles and are continuing to shrink it throughout the entire life cycle. We reduce CO_2 emissions at various levels of the company, starting with the consistent implementation of our Roadmap E and projects related to the circular economy through to the Mission:Zero environmental program. Our plants in Brussels, Győr and Böllinger Höfe in Neckarsulm, where production operations are already net carbon-neutral,[2] are pioneers in this respect. And the first components in our vehicles are already being made partly from secondary materials.

> “Technological innovations for sustainable premium mobility demand a pioneering spirit expert knowledge and good ideas.”

Cover: AUDI AG | Photo: Bernhard Huber

Markus Duesmann
Chairman of the Board of Management, AUDI AG

[1] After special items.

[2] 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.

Car pictured on page 1:
Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.1 (WLTP); CO_2 emissions (combined) in g/km: 0. Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

GRI 2-2; 2-3

Technological innovations for sustainable premium mobility demand a pioneering spirit, expert knowledge and good ideas. Having the right specialists is a key prerequisite for our success. We promote this with modern and flexible working conditions and offer our employees targeted development opportunities for future professional fields, such as with the establishment of our new battery assembly facility at the Ingolstadt site. We will invest around EUR 500 million in this by 2025.

Audi formulated the path to the future early on in the “Vorsprung 2030” strategy, thus opting for a bold course. We are clearly committed to electric mobility. The rising demand for our electric models is confirmation and, at the same time, our driver to keep working on our product portfolio with decisiveness and enthusiasm. The team spirit in the Premium brand group helps us in these efforts. It keeps us moving forward every day. With it, we can and will continue to successfully shape the future. Together. Resolutely. Confidently.

Sincerely,
Markus Duesmann

Reporting period January 1 to December 31, 2022

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Report cycle annually

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.

Content

Combined Annual and Sustainability Report 2022

Lamborghini Huracán STO,[1] Audi e-tron GT quattro,[2] Bentley Batur[3] and Ducati Streetfighter V2 Storm (from left).

Introduction & Strategy

Markus Duesmann
Chairman of the Board of Management, AUDI AG

Operations & Integrity

Products & Services

Value Creation & Production

Employees & Society

Appendix

[1] Lamborghini Huracán STO: fuel consumption (combined) in l/100 km: 13.9 (WLTP); CO_2 emissions (combined): 331 g/km (WLTP).*

[2] Audi e-tron GT quattro: electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[3] Bentley Batur: This model is sold out and is no longer offered for sale.

[4] Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.1 (WLTP); CO_2 emissions (combined) in g/km: 0.*

* Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicles are available only according to WLTP and not according to NEDC.

Photo: Bernhard Huber | Illustration: C3 Visual Lab

Brief portrait

The Premium brand group brings together some of the most successful car and motorcycle brands in the premium, luxury and supercar segments – including the development, production and sales of vehicles, as well as the corresponding services. The Premium brand group[1] is managed by AUDI AG, which has been a wholly owned subsidiary of Volkswagen AG since 2020.

In 2022, the brand group delivered 1,614,231 (1,680,512)[2] cars of the Audi[3] brand, 15,174 luxury models of the Bentley[4] brand 9,233 (8,405)[2] supercars and super SUVs of the Lamborghini brand as well as 61,562 (59,447)[2] motorcycles of the Ducati brand to customers.

As of December 31, 2022, 87,342[4] (85,350)[2] employees were working for the Audi Group all over the world, 55,623 (59,027)[2] of them in Germany. The head office is located in Ingolstadt.

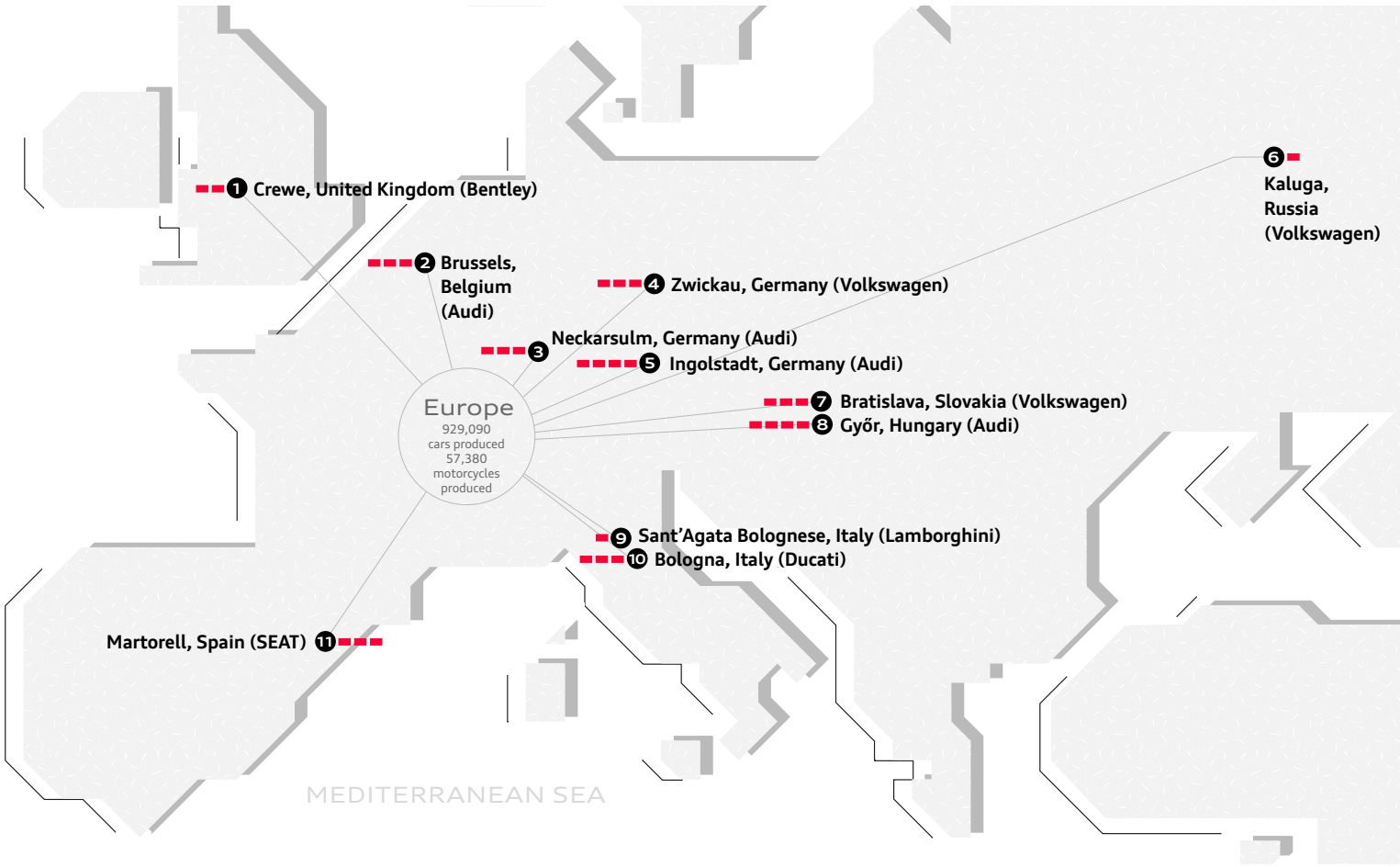
With its sales partners, the Premium brand group[1] is present in more than 100 markets around the world and operated at 22 (20)[2] locations[5] in 13 (12)[2] countries with its production partners. New additions during the reporting period were the multibrand plant in Ningbo (China) and the Crewe plant (United Kingdom) as part of the consolidation of Bentley. Production resumed in São José dos Pinhais (Brazil), while SKD production[6] for Audi in Kaluga (Russia)[7] has been halted since March 2022.

Overview of sites for 2022:

Illustration: C3 Visual Lab

GRI 2-1

[1] The Premium brand group describes the Audi Group with the brands Audi, Bentley, Lamborghini and Ducati. The terms "Audi Group" and "Premium brand group" are used synonymously below. Material consolidated companies can be found in the Fact Pack.
[2] The figures in brackets represent the respective prior-year figures.
[3] The figures for fuel/electric power consumption and CO_2 emissions: see pages 133–135. The allroad, PHEV and CNG (g-tron) models are not declared specifically.
[4] The Bentley brand was consolidated effective January 1, 2022. The production and delivery figures include models of the Bentley brand for the first time in 2022. The number of employees also includes employees of the Bentley brand for the first time.
[5] Sites as of December 31, 2022.
[6] Production of semi-knocked-down (SKD) vehicles. With this procedure, the cars are completely assembled to start with. Then they are partially dismantled and transported as kits to Kaluga or São José dos Pinhais. Assembly is carried out in accordance with the technical and quality specifications of AUDI AG.
[7] Production from January to March 2022. Against the background of the Russian attack on Ukraine, at the beginning of March the Volkswagen Group Board of Management decided to stop the production of vehicles in Russia until further notice.



1 Crewe, United Kingdom
Bentley Motors Ltd.[4]
16,385 vehicles
Bentayga
Continental GT,
Continental GTC
Flying Spur

2 Brussels, Belgium
AUDI BRUSSELS S.A./N.V.
50,302 vehicles
e-tron, e-tron S
e-tron Sportback, e-tron S Sportback
Q8 e-tron, Q8 Sportback e-tron
SQ8 e-tron, SQ8 Sportback e-tron

3 Neckarsulm, Germany
AUDI AG, Audi Sport GmbH
149,127 vehicles
A4 Sedan
A5 Cabriolet, S5 Cabriolet
A6 allroad quattro
A6 Sedan, S6 Sedan,
A6 Avant, S6 Avant, RS 6 Avant
A7 Sportback, S7 Sportback,
RS 7 Sportback
A8, S8, A8 L, S8 L
e-tron GT quattro, RS e-tron GT
R8 Coupé, R8 Spyder

4 Zwickau, Germany
Volkswagen AG
51,685 vehicles
Q4 e-tron
Q4 Sportback e-tron

5 Ingolstadt, Germany
AUDI AG
332,981 vehicles
A3 Sedan, S3 Sedan,
RS 3 Sedan
A3 Sportback, S3 Sportback,
RS 3 Sportback
A4 allroad quattro
A4 Sedan, S4 Sedan
A4 Avant, S4 Avant, RS 4 Avant
A5 Coupé, S5 Coupé, RS 5 Coupé
A5 Sportback, S5 Sportback,
RS 5 Sportback
Q2, SQ2

6 Kaluga, Russia
Volkswagen Group RUS
633 vehicles[7]
Q7,[6] Q8,[6] SQ7,[6] SQ8[6]

7 Bratislava, Slovakia
VOLKSWAGEN SLOVAKIA, a.s.
89,208 vehicles
Q7, SQ7
Q8, SQ8, RS Q8

Key
Vehicles produced in 2022
150,001 to 420,000
50,001 to 150,000
10,001 to 50,000
0 to 10,000

8 Győr, Hungary
Audi Hungaria Zrt.
170,018 vehicles
Q3, RS Q3
Q3 Sportback, RS Q3 Sportback
TT Coupé, TTS Coupé, TT RS Coupé
TT Roadster, TTS Roadster,
TT RS Roadster

9 Sant'Agata Bolognese, Italy
Automobili Lamborghini S.p.A.
9,925 vehicles
Aventador Coupé, Aventador Roadster
Huracán Coupé, Huracán Spyder
Urus

10 Bologna, Italy
Ducati Motor Holding S.p.A.
57,380 vehicles
DesertX, Diavel, Hypermotard,
Monster, Multistrada,
Panigale (Superbike),
Scrambler,
Streetfighter, SuperSport

11 Martorell, Spain
SEAT, S.A.
58,826 vehicles
A1 allstreet, A1 Sportback
RS 3 Sedan

[4] The Bentley brand was consolidated effective January 1, 2022. The production and delivery figures include models of the Bentley brand for the first time in 2022. The number of employees also includes employees of the Bentley brand for the first time.
[6] Production of semi-knocked-down (SKD) vehicles. With this procedure, the cars are completely assembled to start with. Then they are partially dismantled and transported as kits to Kaluga or São José dos Pinhais. Assembly is carried out in accordance with the technical and quality specifications of AUDI AG.
[7] Production from January to March 2022. Against the background of the Russian attack on Ukraine, at the beginning of March the Volkswagen Group Board of Management decided to stop the production of vehicles in Russia until further notice.

Illustration: C3 Visual Lab

1 Changchun, China
FAW-Volkswagen Automotive Co., Ltd.
409,930 vehicles
A4 L Sedan,
A6 L Sedan
e-tron
Q5 L, Q5 L Sportback

2 Tianjin, China
FAW-Volkswagen Automotive Co., Ltd.
77,022 vehicles
Q3, Q3 Sportback

3 Qingdao, China
FAW-Volkswagen Automotive Co., Ltd.
69,785 vehicles
A3 L Sedan
A3 Sportback

4 Anting, China
SAIC Volkswagen Automotive Co., Ltd.
9,561 vehicles
A7 L Sedan
Q5 Roadjet e-tron

5 Ningbo, China
SAIC Volkswagen Automotive Co., Ltd.
2,042 vehicles
Q6 Roadjet

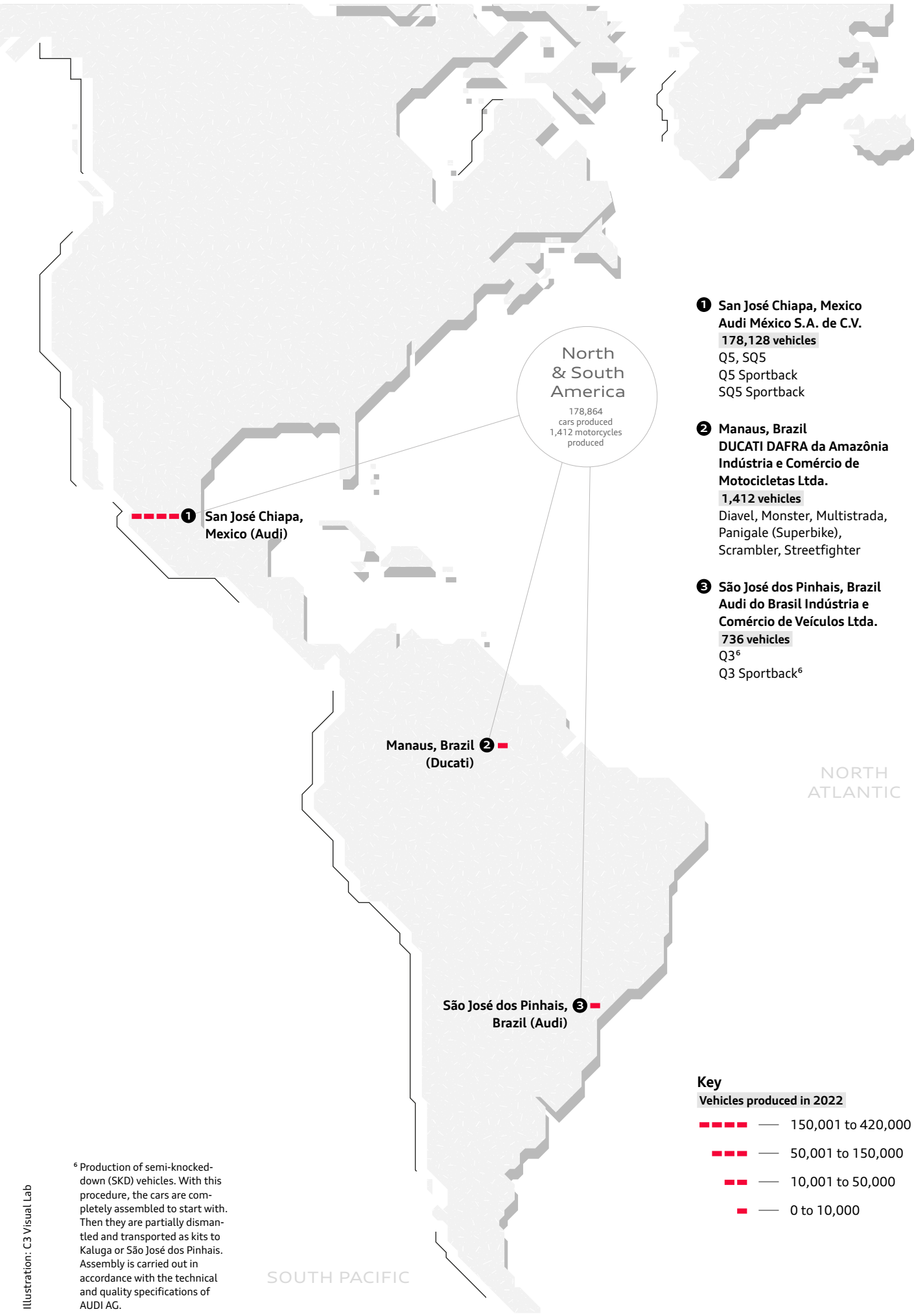
6 Foshan, China
FAW-Volkswagen Automotive Co., Ltd.
37,912 vehicles
Q2 L, Q2 L e-tron
Q4 e-tron

7 Amphur Pluakdaeng, Thailand
Ducati Motor (Thailand) Co., Ltd.
11,503 vehicles
DesertX, Diavel, Hypermotard, Monster, Multistrada, Panigale (Superbike), Scrambler, Streetfighter, SuperSport

8 Aurangabad, India
ŠKODA AUTO Volkswagen India Private Limited
3,690 vehicles
A4 Sedan
A6 Sedan
Q5
Q7

Key
Vehicles produced in 2022
- 150,001 to 420,000
- 50,001 to 150,000
- 10,001 to 50,000
- 0 to 10,000

Illustration: C3 Visual Lab



1 San José Chiapa, Mexico
Audi México S.A. de C.V.
178,128 vehicles
Q5, SQ5
Q5 Sportback
SQ5 Sportback

2 Manaus, Brazil
DUCATI DAFRA da Amazônia Indústria e Comércio de Motocicletas Ltda.
1,412 vehicles
Diavel, Monster, Multistrada, Panigale (Superbike), Scrambler, Streetfighter

3 São José dos Pinhais, Brazil
Audi do Brasil Indústria e Comércio de Veículos Ltda.
736 vehicles
Q3[6]
Q3 Sportback[6]

Key
Vehicles produced in 2022
- 150,001 to 420,000
- 50,001 to 150,000
- 10,001 to 50,000
- 0 to 10,000

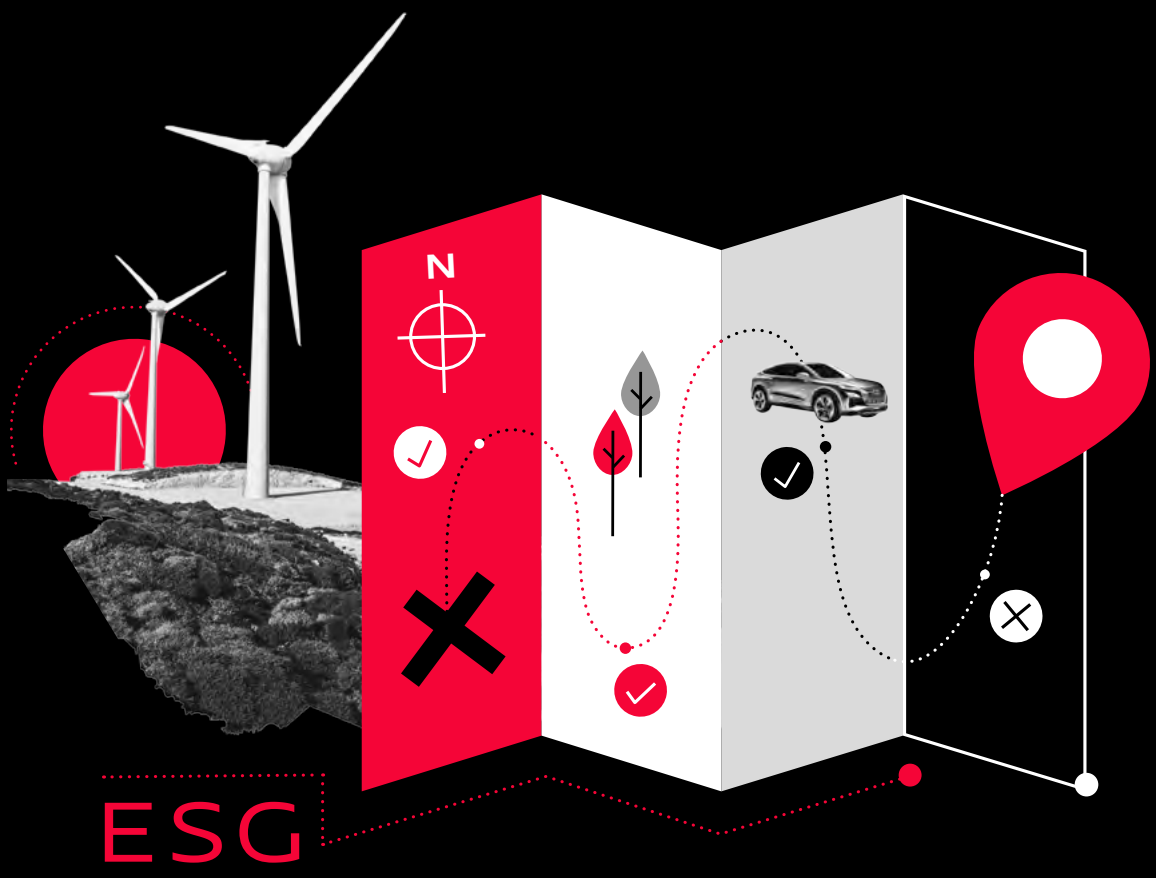
[6] Production of semi-knocked-down (SKD) vehicles. With this procedure, the cars are completely assembled to start with. Then they are partially dismantled and transported as kits to Kaluga or São José dos Pinhais. Assembly is carried out in accordance with the technical and quality specifications of AUDI AG.

Illustration: C3 Visual Lab

1 Strategy

The vehicles shown here are concept vehicles that are not available as series-production vehicles.

Photo: AUDI AG



Strategy

Successful through resilience
10

How does Audi safeguard progress when it comes to key topics? What are the strengths of the Premium brand group – and which models will be launched in 2023? The seven members of the Board of Management of AUDI AG in interview.

How Audi is perceived
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The company is monitoring the opportunities and risks of its operations. The enhanced materiality analysis and impact assessment show which issues are considered important by stakeholders and by Audi.

Sustainable development goals

The following SDGs are at the focus of this company commitment:

Further information on Audi and the UN sustainability goals can be found on pages 110–122.

↗ Our specific measures for the core topic Strategy can be found in the Audi Sustainability Program, important key figures in the appendix.

Illustration: C3 Visual Lab

This team is steering the Premium brand group successfully through challenging times

Markus Duesmann
Chairman of the Board of Management

Jürgen Rittersberger
Member of the Board of Management, Finance, Legal Affairs and IT

Oliver Hoffmann
Member of the Board of Management, Technical Development

Hildegard Wortmann
Member of the Board of Management, Sales and Marketing

Gerd Walker
Member of the Board of Management, Production and Logistics

Dirk Grosse-Loheide
Member of the Board of Management, Procurement

Xavier Ros
Member of the Board of Management, Human Resources

In 2022, the automotive industry was tested by a number of global crises. The Premium brand group passed this test and posted a record result. This is clear evidence of the resilience of Audi, Bentley, Lamborghini and Ducati and, at the same time, delivers the motivation to increase this resilience still further. Through these projects and strategies, the Board of Management is increasing the competitiveness of the Premium brand group to place it on a sound footing for the future.

Text: Sascha Höpfner

Photos: Bernhard Huber

Markus Duesmann

– Chairman of the Board of Management of AUDI AG – **on …**

… the performance of the brand group including Audi, Bentley, Lamborghini and Ducati in 2022

My résumé is positive on all counts. The brand group gathers four strong, emotional brands under one roof, and the record results this year are proof of that. Our goal is for the group to be more than just the sum of its parts. Everyone benefits when key technologies are shared. For example, the early experience that Audi has gained in electric mobility is a great advantage for Bentley and Lamborghini. With the joint strategy we adopted in 2022, we are safeguarding the brands' business models for the long term and have set ourselves clear, ambitious targets for operating performance.

… the changed situation and its consequences for Audi

Free and fair trade has brought us growth and prosperity, so that is something we will continue to advocate. However, it is also true that the geopolitical situation is becoming more and more complex. That is why Audi is resting its business primarily on three strong pillars: Europe, North America and China. We are driving our development fundamentally in China and North America in order to secure our competitiveness in these regions in the long term. In addition, we are making our supply chains more robust by diversifying them wherever possible and appropriate. Closed material cycles, which we are increasingly establishing, also offer opportunities here.

… the affirmation of the corporate strategy "Vorsprung 2030"

Despite changes in the underlying conditions, "Vorsprung 2030" continues to provide the right answers. In fact, the major trends of digitalization, electrification and decarbonization have been given a tailwind by recent developments. Digitalization has gained further momentum as a result of the coronavirus pandemic. Accordingly, software, connectivity and the development of a digital ecosystem surrounding the car remain key fields of action for us. And the current fossil fuel crisis validates our early and firm decision to phase out the production of the last internal combusion engines by 2023.

… measures for reducing CO_2 at Audi

Electric drives are the best and most efficient solution we know to move away from fossil fuels in individual transportation. But we are aware that electric cars currently enter the use phase with a larger carbon footprint. And that is precisely where we are taking action: we are making our plants net carbon-neutral[1] by 2025 and working with our suppliers to decarbonize the supply chain; as an example, we now require them to manufacture battery cells using green electricity. Our overall goal is to reduce CO_2 emissions throughout the life cycle of our vehicles by 40 percent by 2030 compared with the reference year 2018. As such, we as car manufacturers have a great deal of leverage for greater sustainability.

… Audi becoming involved in Formula 1 and why 2026 is the right time to do so

Formula 1 is the ideal stage for us to demonstrate "Vorsprung durch Technik" and to further raise the profile of the Audi brand worldwide. The sport is watched by around 700 million fans on all five continents. That means a massive reach, and it comes at a limited cost thanks to the racing series' spending cap – meaning that Formula 1 has a very good return on investment. The most important prerequisite for our entry, though, were the new regulations for 2026. Formula 1 will then take a big step toward sustainability – with increased electrification and the use of synthetic fuels. The racing series aims to be net carbon-neutral by 2030, and we want to play an active role in helping to achieve this. /

Markus Duesmann joined Audi in April 2020. As Member of the Board of Management of Volkswagen AG, he also heads up the Premium brand group.

[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.

Photo: Bernhard Huber

Jürgen Rittersberger

– Member of the Board of Management of AUDI AG for Finance, Legal Affairs and IT – **on …**

… the record result of the past fiscal year

At EUR 7.6 billion, we achieved a new record operating profit for the Premium brand group last year. Revenue and operating return on sales likewise reached record levels, at EUR 61.8 billion and 12.2 percent, respectively. How did we manage this? With a great deal of cooperation and team spirit, we pulled out all the stops in recent months to maximize our profitability. Above all, we managed to substantially improve our price position in the market. Added to this are a higher profit contribution from after sales and an improved residual value situation in the used car business. Meanwhile, we worked intensively with suppliers and customers, as well as internally across all divisions, to be able to produce our vehicles as quickly as possible despite the disrupted supply chains, particularly for semiconductors. And our Bentley, Lamborghini and Ducati brands also helped drive the overall result for the brand group with a very strong operating performance.
The key figures underline our resilience – the resilience of the brand group, as 2022 was a very challenging year for us. The devastating war in Ukraine, fragile supply chains, coronavirus lockdowns in China, rising energy prices and high inflation tested us time and again. And I expect 2023 will bring many more challenges for us to face. This makes it all the more important for us to further improve our resilience. An important lever in this regard is to lower our break-even point. The lower its level, the more robust and resilient our business is against crises.

… the brand group's business success and the reasons for it

The potential of the Premium brand group is very high. The most recent results of Bentley, Lamborghini and Ducati underline this. I am convinced that the interplay of the four brands gives us the strength to continue to play a leading role in the competitive arena. To succeed in this, however, we need a clear management model for the Premium brand group. Our aim is to intensify our collaboration and at the same time strengthen the position of the brands in their respective segments. For example, synergies in technology development help us in two ways. They save costs and free up resources for the brands to strengthen the brand-specific character of their models. We will benefit immensely from these advantages, particularly where the further electrification and digitalization of our products and services are concerned. Our motto is therefore: we apply management control where it makes sense – for example, in strategy development, planning processes and the allocation of capital – but, at the same time, we give the brands freedom of action wherever possible. Because our aim is not just to maintain the uniqueness and individuality of Bentley, Lamborghini and Ducati, but to further strengthen them.

Jürgen Rittersberger has worked in the Volkswagen Group since 2002 and has been responsible for the Finance, Legal Affairs and IT division at Audi since April 2021.

… the commitment of Audi to ESG – Environmental, Social, Governance

With our "Vorsprung 2030" strategy, we have described our path to successfully mastering the transformation of the automotive industry. ESG is an important pillar in this context and concerns all areas of the company. In recent months, we have worked intensively on describing our ESG goals and integrating them into our processes. In parallel, we have launched projects to improve our ESG performance. One very promising example is the MaterialLoop project in the field of circular economy. In a trial, we are recycling 100 end-of-life vehicles in collaboration with our partners and analyzing how the materials glass, aluminum, plastic and steel can be reused in the production of new vehicles. Our comprehensive voluntary reporting of key figures according to the EU taxonomy underscores just how important ESG is to us. In addition, we are currently undergoing an external ESG rating process to obtain an independent assessment of where we stand. /

Photo: Bernhard Huber

Oliver Hoffmann

– Member of the Board of Management of AUDI AG for Technical Development – **on ...**

... the future of the platform strategy at Audi

We will be expanding our e-portfolio in the next five years: by 2027, we want to offer an all-electric vehicle in our portfolio in all core segments. Then, according to current product planning, we will have more than 20 e-models in our range. That is our clear goal. We are thus demonstrating that we are continuing to systematically advance the transformation to electric mobility. And we are doing so in a way that is typical for Audi – with technological strength and innovative power. At the same time, we are using synergies within the Volkswagen Group to further optimize the cost-effectiveness of our electric models. The new Premium Platform Electric, or PPE for short, which we developed together with Porsche, is based precisely on these principles. It is the basis for the next generation of fully electric Audi models with an 800-volt system, a charging capacity of up to 270 kW and a highly attractive design. With the PPE, we are also bringing the new E³ electronics architecture, developed in collaboration with CARIAD, into series production. Among the new features on board are processors with significantly improved computing power, 5G connectivity, a standardized infotainment platform with a third-party app store, an extensive range of new driver assist systems and, of course, over-the-air updates. The second half of the year will see PPE start at Audi with the Q6 e-tron model series.

... vehicle development on three continents

We want to delight customers with our technology, whether in Europe, Asia, the USA or other regions of the world. But we can only do that if we align the development of our vehicles even more closely with international trends, wishes and requirements. To this end, we have built up a global development network with sites in Germany, Hungary, the USA and Mexico, as well as the recently opened new Research & Development Center in Beijing. On top of this we have the development centers of the brand group: Bentley in Crewe, UK, Lamborghini in Sant'Agata Bolognese, Italy, and Ducati in Borgo Panigale near Bologna, Italy. For Audi, we also operate an international design network with studios in the USA and China. Our design head office is located in Ingolstadt with a staff of 450 creative minds from 25 nations. The international sites serve as trend scouts in two of the most important markets for our brand. Here, small agile teams devote themselves on a daily basis to the number one selling point for Audi: design. They experience the latest trends and the lifestyles of our target groups first-hand. For me, Malibu, for example, is the heart of car culture in California. These impressions flow into the design of our vehicles and blend with our universal design language.

Oliver Hoffmann began his career at Volkswagen AG back in 2004. He has been responsible for the Technical Development division at AUDI AG since March 2021.

... the unmistakable Audi DNA

Amid all our efforts to achieve the greatest possible synergies and economies of scale, we will always keep our focus on the unmistakability of an Audi model that our customers want to experience. That is why whenever we develop a new vehicle, we take great care to carve out the Audi DNA. It can be found in many aspects, from the quality of the interior, through driving characteristics such as lateral and longitudinal acceleration or steering behavior, to the tuning of driver assist systems. At the same time, we are also focused on evolving the Audi DNA for the future. This can already be experienced today, for example, with our electric quattro drive or the recuperation behavior of our electric models. The next step is automated driving. How does a self-driving model steer into a curve? How dynamically or smoothly does it cruise down the highway and change lanes? We are working on all these questions at full speed – for the fully electric and self-driving Audi models of the future.

Photo: Bernhard Huber

Hildegard Wortmann

– Member of the Board of Management of AUDI AG for Sales and Marketing – **on …**

Hildegard Wortmann has been in charge of the Sales and Marketing division at AUDI AG since July 2019. Since September 2022, she has also been Member of the Extended Executive Committee of the Volkswagen Group and responsible for its Sales division.

Photo: Bernhard Huber

… deliveries in 2022

We are consistently and successfully pursuing our Roadmap E. With 118,196 fully electric Audi models, we set a new delivery record last year – an increase of over 44 percent compared with 2021. And I am confident that this trend will continue. Demand for the e-tron GT[2] and Q4 e-tron model series is strong. We can see from current pre-orders that the new Audi Q8 e-tron[3] family is being very well received, too. This model was launched recently on the European market a few weeks ago and will continue the success story of the Audi e-tron, our electric pioneer. Overall, deliveries of the Audi brand were slightly below the prior-year level at 1.61 million vehicles. This was primarily due to supply shortages and challenges in the logistics chain. That we were nevertheless able to hand over so many vehicles is a credit to the strong commitment of our global team. Together we managed the sale of our available models very efficiently. For example, we worked closely with customers to find the best possible vehicle configurations to shorten delivery times. In addition, we consistently increased our profitability, asserted our price position on the market and posted a record result in the Genuine Parts and Genuine Accessories business areas. In this way, we made our contribution to the Group's strong financial performance.

… the Audi ecosystem

If we want to expand electric mobility, we need more than just attractive vehicles. Key success factors include a premium charging experience and a holistic ecosystem. The overall system of electric mobility must excite people. In the future, this will play a key role in their purchasing decisions. We already offer our customers extensive opportunities to charge their cars today: on the one hand with the new Audi charging[4] service with around 400,000 charging points in 27 European countries, and on the other hand with the international expansion of fast-charging options through cooperations within the Volkswagen Group and with partners such as IONITY. In addition, we are steadily expanding our brand-specific premium charging service, the Audi charging hub with charging points that can be reserved. In the long term, we want to create an ecosystem that goes far beyond electric charging. It will be holistic and encompass offerings and services such as navigation, parking, payment, predictive maintenance and mobility services through automated driving.

… the strength of the Audi brand

Over the past decades, Audi has managed to build up a unique premium image. Iconic models such as the Audi TT, the Audi R8 or most recently the Audi e-tron GT[2] have been instrumental in this, as have technologies such as quattro drive. Now we need to create the iconic cars of the future. Especially in times of transformation and change, it is extremely important to have a strong brand as the backbone of the business model. And Audi getting involved in Formula 1 will also make a contribution to this. Hardly any other sport reaches so many people around the world. This move will boost both brand awareness and the Audi brand image internationally and thus contribute to the company's future success. As of late, we have invested heavily in our brand, revised the brand strategy and redefined "Vorsprung." We have consistently communicated our future-oriented stance with our global communication platform "Future is an attitude" and created a new experience format for our customers with the "House of Progress." All of this is paying off. In the recognized Interbrand ranking, the value of the Audi brand rose by 11 percent last year, reaching almost 15 billion US dollars. /

[2] Audi understands the name Audi e-tron GT to mean the models Audi e-tron GT quattro: electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0* and Audi RS e-tron GT: electric power consumption (combined) in kWh/100 km: 22.1–19.8 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[3] Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.1 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[4] More details on Audi charging can be found here.

* Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

Gerd Walker

– Member of the Board of Management of AUDI AG for Production and Logistics – **on …**

Gerd Walker joined AUDI AG in 1997. Following numerous positions in the Volkswagen Group, he has been responsible for the Production and Logistics division since February 2022.

Photo: Bernhard Huber

… the electrification of the plants

We have set out a very clear focus on electric mobility in our corporate strategy "Vorsprung 2030." For this reason, we are now preparing all production sites for the manufacture of electric cars. Two Audi sites already have fully electric vehicles in series production: Böllinger Höfe Neckarsulm and Brussels. With the Audi Q6 e-tron model series, all-electric models will also roll off the production line in Ingolstadt as of this year. And in the next few years, production of all-electric models will also gradually ramp up in Neckarsulm, San José Chiapa in Mexico and Győr in Hungary. As of 2029, all Audi production sites will manufacture at least one fully electric vehicle. Unlike many of our competitors, we are using the existing global Audi production network for this transformation and leading all our sites into the future step by step. We are convinced that we can achieve the same level of efficiency and flexibility in this way as with a completely new plant. However, our path is significantly more sustainable because it conserves precious resources. We only build new plants where we need additional capacity. By the end of 2024 we will complete a new plant in Changchun – the first Audi car plant in China at which only fully electric Audi models will be manufactured.

… future cost savings and flexibility in Audi production

Parallel to the electrification of our plants, we at Audi are seizing this opportunity to simultaneously initiate a far-reaching transformation by adopting a holistic approach in the form of the 360factory. Because our production must be designed to be both flexible and resilient in the long term – in other words, future-proof. To this end, we plan to cut our annual factory costs by half by the year 2033. One way we will do this is by introducing new cloud solutions to fundamentally modernize the IT in our production plants. At the same time, we are working with developers to reduce the complexity of our vehicles in areas that do not benefit our customers. In addition, we will increase the flexibility of our production processes so that we can respond more swiftly to fluctuations in customer demand. For example, during a transition phase, we will produce vehicles with internal combustion engine and electric drive on the same lines.

… environmental protection and attractive jobs

It's clear to us that electric vehicles are only the future if they are produced sustainably. The Mission:Zero environmental program therefore aims to ensure that all Audi production sites worldwide are net carbon-neutral[1] from 2025 onwards. Further sustainability targets will be added by 2030. The Audi production plants aim to reduce their absolute environmental impact in the areas of primary energy consumption, power plant emissions, CO_2 equivalents, air pollutants, local water risk as well as wastewater and waste volumes by half compared with the levels in 2018. We want to achieve this by generating more renewable energy in-house and implementing an increasingly circular economy, among other things. Of course, we are aware that we can only reach these goals by having the best people on our team. That is why we attach great importance to further enhancing the attractiveness of our workplaces. We want to make working hours more flexible even for employees on the assembly line, offer an attractive and modern working environment and add new jobs in disciplines such as electronics or software development.

… logistics in times of crisis

The challenges in the logistics arena are greater than ever before. Until a few years ago, we encountered individual disruptions, some of which were only temporary and particularly intensive in certain regions, such as the volcanic eruption in Iceland that impaired air traffic in 2010. Such events were challenging but, from today's perspective, more easily manageable. Our logistics operations are therefore crisis-tested. Nevertheless, the current situation with global, long-lasting and overlapping crises is posing major challenges for us. The coronavirus pandemic, semiconductor shortages, globally disrupted supply chains, the war in Ukraine and a sharp rise in inflation are all creating unprecedented levels of management complexity. For example, week after week, we decide on the best possible modes of operation for our plants from around 41 trillion different options. /

[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.

Dirk Grosse-Loheide

– Member of the Board of Management of AUDI AG for Procurement – **on ...**

Dirk Grosse-Loheide has been responsible for the Procurement and IT division at AUDI AG since April 2020. In January 2023, he additionally took over responsibility for Procurement at the Volkswagen Passenger Cars brand and was appointed Head of Group Procurement on the Extended Executive Committee.

... responsibility in the supply chain

Our supply chain is long and widely branched. We are talking about over 14,000 direct suppliers from around 60 countries. So we are aware that we bear a great deal of responsibility. For this reason, we are following the Audi Act4Impact approach and focusing on three fields of action: People, Environment and Innovation. The clear goal: together with our partner companies, we want to increase sustainability in our supply chain. Our efforts to achieve this include training programs, targeted exchanges and the cultivation of strategic partnerships – for example, every supplier company must successfully pass our S-Rating (sustainability rating) before we place our first order. We are also driving forward projects to expand the circular economy, and aim to gradually increase the use of recycled materials in our vehicles. Our focus here is on the reuse of aluminum, steel, plastic, glass and the battery. In addition, we focus on the economical and efficient use of water at our sites and in the supply chain. Since 2023, Audi has been the first premium car manufacturer to become a member of the Alliance for Water Stewardship (AWS). Our goal is to continuously improve standards in our supply chain. We have been committed to this for many years, not just since the Supply Chain Due Diligence Act came into force. Nevertheless, we once again scrutinized our processes against the backdrop of the new statutory requirements and made sure we were optimally prepared to comply with them.

... supply shortages for semiconductors

The shortage of semiconductors has been on our minds for many months. The current supply situation will continue to ease in 2023, in terms of both the number of critical semiconductor types and the available volume. Nonetheless, we have to continue to expect considerable shortages of semiconductor technologies specifically for cars as well as of high-voltage semiconductors that are used both in cars and in the field of renewable energies. There is still a structural undersupply across all sectors. This problem will not be resolved in the short term as setting up production capacity for semiconductors takes several years and costs billions. But we have learned a great deal over the past months, and our countermeasures are taking effect. We are working very closely with our first-tier suppliers and the manufacturers of semiconductors in order to minimize the impact of the bottleneck. We are also in constant contact with chip brokers in order to further increase supply security. On top of that, our engineers are developing technical alternatives that will allow us to fall back on other chips for specific parts. /

Change in Procurement

On April 1, Renate Vachenauer will take over as Board Member for Procurement at AUDI AG from Dirk Grosse-Loheide. Renate Vachenauer has a doctorate in electrical engineering and, from 1999 to 2020, was active in various positions in the BMW Group in Germany and abroad. Among others, she was the department director in charge of Transmission/Drive Train Development and later took over responsibility for the “My Journey” business line for navigation, mobility services, e-mobility and map-based proficiency functions. Since April 2021, she has headed the Development Interior, Interaction/Data Management department at AUDI AG. Since January 1, 2023, the current Board Member Dirk Grosse-Loheide has also been the Procurement Board Member for the Volkswagen Passenger Cars brand and heads Group Procurement on the Extended Executive Committee.

Photos: Bernhard Huber, AUDI AG

Xavier Ros

– Member of the Board of Management of AUDI AG for Human Resources – **on …**

.. flexible work models

At Audi, we have created a very modern and forward-looking approach that gives our employees maximum flexibility. The focus here is on striking a balance between working together face-to-face and collaborating digitally. We rely on the responsibility of our employees and do not impose any fixed rules regarding on-site presence, as long as this is compatible with their duties. For us, hybrid working also means that we can make more flexible use of office space, with a gradual introduction of desk-sharing models in the coming years. Moreover, we offer equipment packages to support ergonomic mobile working from home and efficient collaboration in hybrid teams. All of this is set out in our "Hybrid Working" works agreement. Flexible working models at Audi are not limited to office workplaces, by the way. We are also currently developing more flexible working models for employees performing time-sequenced tasks on the production line. As part of this, we are making it easier to access digital offerings from Audi and improving the quality of time spent at the company for our employees in production. We are cooperating with the scientific community to gain an even better understanding of the future needs of employees in the hybrid working world. Together with the University of St. Gallen, we conducted an extensive study. In more than 50 workshops, 1,500 participants looked into the question of how to best organize and shape the new working world. The result: a high degree of self-organization and personal responsibility is the basis for leveraging efficiency potential in hybrid forms of work. Jointly defined rules at the team level thus improve everyone's success.

… the attractiveness of Audi for new employees

It is no secret that we need skilled employees to shape the mobility of the future. But these experts do not come to us automatically. We have to pull out all the stops to attract them. What we are seeing today is competition for talent instead of competition among talent, as was the case in the past. Employer attractiveness is becoming an increasingly important competitive factor. We have three focuses here. First, we offer work that is meaningful. At Audi, we develop and produce cars with cutting-edge technology that fulfill our customers' wishes and at the same time pave the way to the mobility of the future. Second, we promote self-determination, above all through our flexible working models and a leadership culture that relies on trust and autonomous working. And third, we offer planning reliability and security. Not only do we guarantee employment until 2029, but we also have a corporate culture that embraces diversity, respect, appreciation and freedom of expression.

… personnel expansion as well as further education and training

With Audi.Zukunft, we created the basis in 2019 for necessary personnel adjustments. The majority of the socially acceptable job cuts agreed at that time have been made. Now we are turning our attention to internal restructuring and personnel expansion. We are recruiting externally again, above all in future-oriented areas such as electric mobility, digitalization, automation and corporate IT. With our HR transformation program, we are also training our workforce to become sought-after specialists. Our goal is to secure the key skills that Audi needs for its future areas of business by means of upskilling (i.e., learning more advanced skills) and reskilling (i.e., learning new skills). And it is working. In the last two years, there were around 8,000 participants in tailor-made training programs in areas of future significance such as electric mobility and IT. This means, for example, that former combustion-engine engineers are now developing the electric drives of the future, former automotive mechatronics technicians are ensuring that batteries work properly and former production staff are active in the field of IT. Audi has earmarked a further education and training budget of up to EUR 500 million for the period up to 2025 – in my opinion, an extremely important investment in the future of the Four Rings.

Xavier Ros began his career in 1994 in Production Logistics at Audi in Ingolstadt. Since May 2022, Xavier Ros has been Director of Labor Relations and heads up the Human Resources division.

Photo: Bernhard Huber

How Audi is perceived

GRI 3-1

What impact does Audi make on the environment and society? What are the most important topics for the Four Rings? These are questions that the company addresses on an ongoing basis. This makes it aware of the impacts of its business activity and familiarizes it with the priorities of its stakeholders,[1] because it constantly engages with them on matters of central importance. A dialogue that provides an important impetus.

Text: Sven Schulte-Rummel

Audi keeps its eye on the opportunities and risks of its actions, wants to make effective use of its resources and prioritize its activities in the fields of action that are most important for the company. To this end, the company constantly reviews its objectives and develops them through a dialogue with relevant interest groups.

2021 materiality analysis as the foundation

An important means to this end is the materiality analysis, which Audi has carried out since 2012. The company uses the analysis to assess its objectives and compare them with its stakeholders' expectations.

Back in 2021, Audi identified the 16 most relevant sustainability topics for the company, such as "Emissions and energy along the value chain" and "Alternative drives and vehicle emissions." For this purpose, the company analyzed a number of internal and external sources such as industry standards, regulatory standards, rating criteria, studies and competitor comparisons. An online survey of around 2,200 stakeholders[1] was then used to prioritize the sustainability issues that had been identified.

Updated with impact rating in 2022

Audi evolved its materiality analysis in 2022. An impact assessment in accordance with the new standards of the Global Reporting Initiative (GRI)[2] was added to the stakeholder perspectives from the year before. Due to the new requirements of sustainability reporting,[2] the company is now taking a more precise look at its positive and negative impacts on the environment and society. These impacts were evaluated in two steps.

For the first step of the impact assessment, the company's strategy team identified the potential positive and negative impacts for all 16 sustainability topics in the form of opportunities and risks for Audi and, for each of them, calculated the period of impact (short-term or long-term) and the position in the value chain.

In the second step, the individual impacts were evaluated using a scoring method based on their probability of occurrence and their severity (size, scope and reversibility of the impacts, among others). At the end, internal Audi experts in Environmental, Social and Governance (ESG), risk management and strategy validated the impact assessment.

This resulted in an assessment of all opportunities and risks, in other words all impacts for each of the 16 topics. These were then used to prioritize the material topics as "very high," "high" and "medium." All topics that were evaluated as particularly important for Audi in the 2022 fiscal year were given the designation "very high." Finally, this impact analysis (X-axis of the materiality matrix) was supplemented by the stakeholder perspectives from the 2021 materiality analysis (Y-axis of the materiality matrix).

In 2022, Audi identified two main topics as a result of combining stakeholder relevance and the impact assessment: (1) "Emissions and energy along the value chain" and (2) "Alternative drive technologies and vehicle emissions." A total of six of the 16 topics (see diagram on next page) were designated as "very high" in the 2022 fiscal year.

Strategic instrument for greater transparency

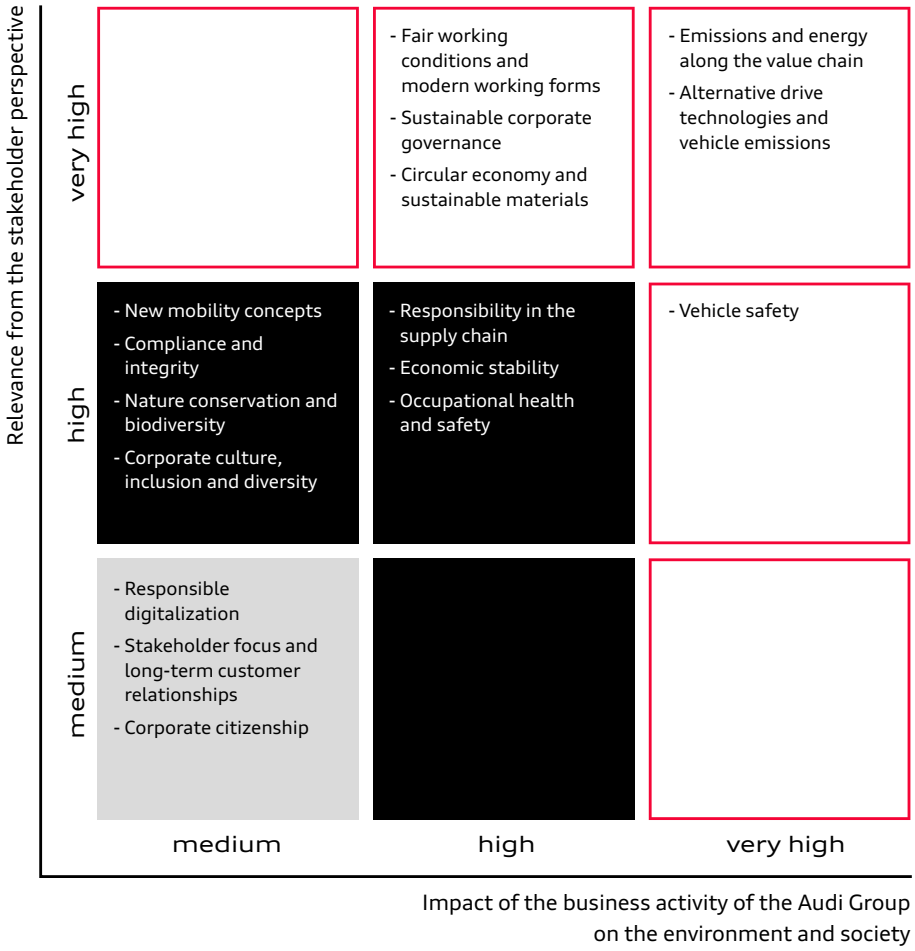
"Audi uses the materiality analysis as a strategic tool. Within the context of sustainability, it creates transparency firstly on the ecological and societal impacts of Audi's actions based on the 16 most relevant sustainability topics, and secondly on the relevance of the topics from the perspective of the different stakeholders for the Audi Group," explains Dr. Roxana Codita, Audi Corporate Responsibility. The analysis thus makes a contribution to the regular review of objectives and resource usage and therefore to the further development of the company. It provides an even better understanding of the interaction between economic success and commitment to sustainability, thereby helping to mesh these two aspects more ›

[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 selection 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 (NGOs) 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.

[2] On January 1, 2023, new "GRI Sustainability Reporting Standards" of the Global Reporting Initiative (GRI) came into effect. This means that all organizations reporting on GRI are required to use these standards for information published on or after this date. Further information can be found here.

Materiality matrix

The materiality matrix visualizes the evaluation of 16 relevant topics or fields of action by stakeholders (Y-axis) and by an analysis of the ecological and societal impacts of the Audi Group (X-axis). The topics are noted in the materiality matrix in accordance with the evaluations of "very high," "high" and "medium." You can find a detailed explanation of the method used to create the materiality matrix online at www.audi.com.



› closely. Dr. Roxana Codita: "When we as a company are aware of our impacts and can manage accordingly, we can act optimally both with regard to risk minimization and opportunity maximization as well as resource allocation."

Dialogue on equal footing

The materiality analysis is not the only means Audi uses to maintain contact with its stakeholders: the company also uses regular dialogue events and conferences to actively involve them. "The goal of engaging in dialogue with stakeholders is to get honest assessments from representatives from politics, industry, science and civil society regarding our strategy for sustainable premium mobility. In addition, the assessments of stakeholders help us continuously improve our performance in the area of ESG[3] factors," explains Dr. Roxana Codita.

There were a number of events in 2022 where stakeholders provided new ideas along with their opinions and suggestions. The Audi Group uses these to fine-tune its objectives, identify key topics early on and improve its ESG performance. For example, a personal stakeholder dialogue on strategic sustainability matters was held in Berlin in 2022. "Audi im Dialog 2022" made it possible to obtain feedback from experts on the "Vorsprung 2030" strategy as it relates to (e-)mobility and the circular economy. At the "Audi Act4Impact Summit" with more than 100 partner companies, Audi encouraged a mutual exchange of ideas about sustainability in the supply chain. /

GRI 3-2

[3] ESG stands for Environmental, Social and Governance.

You can find additional information about dialogue events and Audi's collaboration in external initiatives and associations at www.audi.com.

Illustration: C3 Visual Lab

2

Photo: AUDI AG

Operations & Integrity

Financial highlights

Premium brand group 2022

Deliveries

at
1.6 million
vehicles

slightly below the prior-year level due to challenges in the logistics and supply chain (–3.0 %)

of which
118 thousand
electric vehicles

Continued strong growth for fully electric models (+44.3%)

of which
46 thousand
high-performance models

delivered including the fully electric models Audi e-tron GT quattro[1] and Audi RS e-tron GT[2] from Audi Sport GmbH

Revenue

16.4% increase to
EUR **61.8** billion

above all due to strong price enforcement and the first-time consolidation of Bentley

EU taxonomy

13.5%

of revenue is EU taxonomy-aligned

Net cash flow

strong at
EUR **4.8** billion

thanks to the high result despite burdens on working capital, high tax payments and investments in future-oriented topics

Operating profit

Record profit of
EUR **7.6** billion

thanks to good market performance and strong brands

ROS

12.2%

operating return on sales

ROI

22.2%

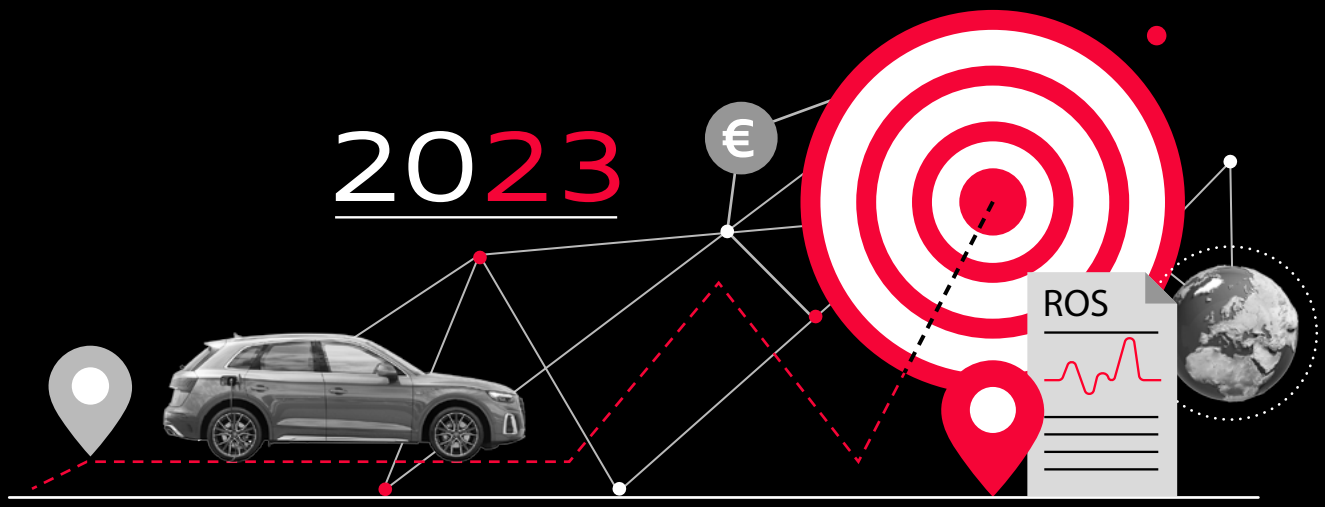
return on investment thanks to record profit

Illustration: C3 Visual Lab

[1] Audi e-tron GT quattro: electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[2] Audi RS e-tron GT: electric power consumption (combined) in kWh/100 km: 22.1–19.8 (WLTP); CO_2 emissions (combined) in g/km: 0.*

* Information on electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.



Outlook: fiscal year 2023

Expected development of the key performance indicators of the Premium brand group

Deliveries
between **1.8** and **1.9** million cars

Revenue
between **69** and **72** EUR billion

ROS
between **9** and **11** %

ROI
between **19** and **22** %

Net cash flow
between **4.5** and **5.5** EUR billion
and therefore still at a high level

R&D
Research and development ratio within the strategic target corridor of
6 to **7%**

CAPEX
Capex ratio within the strategic target corridor of
4 to **5%**

All of the key financial figures in the Operations & Integrity chapter are based on the Audi consolidated financial statements prepared voluntarily in accordance with IFRS. These consolidated financial statements are included in the consolidated financial statements of Volkswagen AG. The figures in brackets represent the respective prior-year figures. The amendments to the IFRS in 2022 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 15, 2023.

The following section on expected developments contains forward-looking statements. These statements are based on current assessments and are by their 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 2022 fiscal year, which will be available on the Internet in German and English by no later than April 30, 2023.

Additional information on our production, delivery and financial figures can be found in the Audi Fact Pack available for download on the Audi Investor Relations website.

Illustration: C3 Visual Lab

Illustration: C3 Visual Lab

Successful crisis management:

How the Premium brand group mastered diverse challenges in 2022

The 2022 fiscal year was characterized by multiple crises and disruptions in the global value chain. The Audi Group[1] countered these with comprehensive crisis management.

Text: Sebastian Pötig

The year 2021 was already significantly affected by problems in the supply of semiconductors, among other reasons due to regional Covid lockdowns and natural disasters. Business operations and key figures of the Audi Group were significantly impacted in the year under review by numerous other crises and the convergence of negative external influences, albeit some temporary in nature. The Audi Group was faced with major challenges in 2022 in a year that was defined by the Russia-Ukraine war, fragile supply chains, ongoing restrictions in the supply of semiconductors, lockdowns in China due to the pandemic, threats of energy shortages and high energy prices, to say nothing of high inflation and fears of recession.

Supplies of semiconductors were therefore restricted throughout all of 2022, impacting planned vehicle production and consequently deliveries. The ›

[1] The Premium brand group describes the Audi Group with the brands Audi, Bentley, Lamborghini and Ducati. The terms "Audi Group" and "Premium brand group" are used synonymously below. Material consolidated companies can be found in the Fact Pack.

› structural undersupply of semiconductors is likely to continue to be felt in 2023, even though there has been some gradual improvement in the supply of parts since the second half of 2022. There were also **further restrictions in supply,** in relation to batteries for plug-in hybrid and fully electric models, for example.

Crisis teams established as early as 2020 worked at great pace in consultation with the Volkswagen Group in order to minimize the impact. The Audi Group collaborated very closely in this respect with its suppliers and in part also with the manufacturers of semiconductors. Group Procurement was also in constant contact with chip brokers in order to further increase supply security. Other key measures included ongoing adaptations in production to take account of installation rates, equipment variants and profit contributions within the Premium brand group as well as the development of technical alternatives and alternative solutions. Furthermore, the Audi brand in particular worked closely with customers to find the best possible alternatives, while partially limiting the range of models and options offered at the same time.

Good price enforcement and reductions in sales incentives in the face of strong market demand had a positive impact on the operating profit of the Audi Group.

Logistics and supply chain affected worldwide

Production and deliveries in China came under strain at times owing to **local lockdowns** as part of the zero-Covid strategy imposed by the government up until the end of 2022. This caused disruptions in the logistics chains as well as temporary closures of production sites and dealerships. Outside of China also, the Premium brand group had to face a number of **logistics constraints,** primarily in the area of truck freight due to a lack of drivers as well as in rail traffic and sea freight.

The **war in Ukraine** and the resulting sanctions imposed on Russia also had a negative impact from an economic perspective. For example, the Audi Group ceased all vehicle deliveries to Russia. In addition, the supply of cable harnesses and other components from Ukrainian suppliers was also restricted at times. The Premium brand group remained generally faithful to the experienced and highly competent supplier network in Ukraine and therefore maintained the supplier relationships as far as possible. In parallel, Audi established suitable duplication sites as part of its efforts to safeguard against geopolitical risks, which can be used in the event of disruptions or further escalation of the war in Ukraine. The Audi Group was therefore able to mitigate the effects for the most part and make up for the temporary production adjustments in most cases.

Volatile prices for commodities and energy

The, in some cases, very sharp rise in commodity prices as a result of the war had a very positive effect on operating profit in the first quarter of 2022 in particular, owing to the valuation effects of existing hedging transactions, though this was pared back significantly from the second quarter. However, commodity prices remained highly volatile in the further course of the year. Furthermore, **energy prices** increased sharply in the year under review, primarily due to the threat of shortages. The effects were successfully constrained thanks to a partial switch from gas to oil as an energy source and the stockpiling of oil to stave off a possible shortage, as well as to intensive energy saving measures in the plants.

A further challenge was posed by **inflation**, which started to increase rapidly mid-way through 2022, especially in the eurozone and the USA. This led to interest rate rises on the capital markets and a significant decline in growth predictions or even fears of recession in the affected regions, which is expected to have an impact on the 2023 fiscal year. Currency markets fluctuated sharply in this context, too. Furthermore, the slowdown in growth in the Chinese economy had a negative impact on the global economic outlook. Increasingly protectionist tendencies such as in the USA, for example, as well as trade restrictions and other geopolitical tensions did not yet have any financial impact on the 2022 fiscal year, however. The Audi Group monitors these risks intensively within its risk management system and in the crisis teams.

In addition to the instruments described, the efficiency measures undertaken in recent years, such as the Audi.Zukunft initiative, the Audi transformation plan and other fixed-cost programs of the brands, have resulted in a much more resilient positioning of the Premium brand group. It was possible to reduce fixed costs significantly and, among other things, the break-even point is being reached a lot earlier than in the past. This was also one of the reasons why the Audi Group recorded such an exceptionally good fiscal year from a financial perspective, despite significant challenges. /

Illustration: C3 Visual Lab

Economic environment

In fiscal year 2022, the global economy exhibited slightly positive growth, although the pace slowed significantly. Global demand for vehicles matched the prior-year level. The world and the core regions in detail:

World

Economy

- Lower positive growth of the global economy compared with the prior year
- National economic performance dependent on factors such as the impact of the Russia-Ukraine war and the effects of the coronavirus pandemic
- Significant year-on-year increase in energy and commodity prices
- Rising inflation worldwide as a result of more restrictive monetary policy coupled with interest rate hikes in many countries
- Large losses on the main stock and bond markets due to the muted economic outlook

Car market

- Global demand for vehicles at the prior-year level
- Heterogeneous growth in the world regions due to the varying degrees of impact of the war between Russia and Ukraine and the effects of the coronavirus pandemic
- Continuing supply shortages for semiconductors and other individual primary products with a gradual improvement over the course of the year

Europe and Germany

Economy in Europe

- Positive growth rate but growth weaker than in the prior year
- Effects of the coronavirus pandemic reduced by the easing of restrictions
- High degree of uncertainty as a result of the Russia-Ukraine war, with some regions seeing an enormous slowdown in growth
- Due to record inflation rates (caused by higher energy prices, among other things), the European Central Bank responded by stepping back from its zero-interest policy and increasing the base rate multiple times

Economy in Germany

- Growth in the gross domestic product during the year under review was somewhat weaker than in Europe; positive labor market development, negative effects from the economy's dependence on exports
- Lower impact of the coronavirus pandemic on the economy than in the previous year
- At times dramatic increase in energy prices, threat of gas shortages due to the Russia-Ukraine war
- Monthly inflation rates at historic highs with consumer confidence at times reaching its lowest levels for years

Car market
- Further decline in new registrations in Europe and thus significantly below the weak prior-year level; very strong decline especially in Central and Eastern Europe
- First half still significantly down on the prior year, new registrations in the second half higher than – in some cases much lower – prior-year figures
- Germany with positive growth rate compared with low prior-year level
- Bottlenecks and disruptions in global supply chains continued to restrict vehicle availability

USA

Economy
- Slight growth of economic performance in the year under review but substantial decline on the prior year which was characterized more by consumer-driven catch-up effects
- Few pandemic-related effects on the economy
- Turnaround in monetary policy with multiple increases in the base rate by the Federal Reserve, largely in response to greatly accelerated inflation

Significant recovery of the labor market compared with the previous year

Car market
- Noticeable decline in sales figures compared with the prior year
- Bottlenecks and disruptions in global supply chains continued to restrict vehicle availability

China

Economy
- Only low growth – zero-Covid strategy and lockdowns significantly impact the Chinese economy during the year under review
- Change in pandemic control strategy at the end of the year resulted in high infection rates

Car market
- Recovery started in 2021 continued at a slow pace
- Semiconductor shortages and lockdowns with production closures and curfews had negative impact

For further information on how macroeconomic conditions affected the sales figures of the Premium brand group, see page 28.

[1] The prior-year figures may have changed as a result of updated data; provisional figures for 2022.

[2] Chinese car market including Hong Kong.

Growth in the gross domestic product (GDP), car markets and deliveries of the Premium brand group in selected countries/regions[1]

	Real GDP growth in %		**Car markets** in vehicles			**Deliveries to customers of the Premium brand group** in vehicles		
	2022	**2021**	**2022**	**2021**	**Δ in %**	**2022**	**2021**	**Δ in %**
Europe	3.6	5.8	12,057,464	13,602,266	–11.4	631,697	619,856	1.9
of which Germany	1.9	2.6	2,651,661	2,622,132	1.1	216,526	181,589	19.2
China[2]	2.8	8.4	21,033,000	20,707,585	1.6	647,221	702,224	–7.8
USA	2.0	6.0	13,870,789	15,079,182	–8.0	193,569	198,510	–2.5
Worldwide	**3.0**	**6.0**	**69,620,066**	**71,071,851**	**–2.0**	**1,638,638**	**1,688,978**	**–3.0**

Production

The Premium brand group increased its production year-on-year – despite supply shortages and lockdowns in China.

The Audi Group manufactured 1,717,896 (1,581,164)[3] vehicles in 2022, an increase of 8.6 percent compared with the previous year. The Audi brand built 1,691,586 (1,572,861) cars in the reporting period and therefore 7.5 percent more premium cars than in the year before. This figure contains 606,252 (607,008) Audi vehicles produced locally by Chinese associated companies. Lamborghini produced 9,925 (8,303) supercars and super SUVs, concluding 2022 with an increase of 19.5 percent. The Bentley luxury brand, consolidated within the Audi Group since January 2022, produced 16,385 (–)[4] vehicles in the period under review. In addition, 70,295 (59,214) motorcycles of the Ducati brand were produced in 2022, a year-on-year increase of 18.7 percent.

The Premium brand group increased the production of fully electric vehicles significantly in 2022 to 127,927 (85,379) vehicles, despite the persistently tense supply situation. The highest percentage increases were recorded for the Audi Q4 e-tron and Audi e-tron GT.[5] In the year under review, the number of plug-in hybrids (PHEV) produced decreased, on the other hand, to 74,227 (83,670)[3] units, above all due to shortages in the supply of parts. The New Energy Vehicles (NEV) share – the share of fully electric vehicles and plug-in hybrids in total car production by the Premium brand group – thus amounted to 11.8 percent (202,154 vehicles).

Production of the Premium brand group, quarterly trend

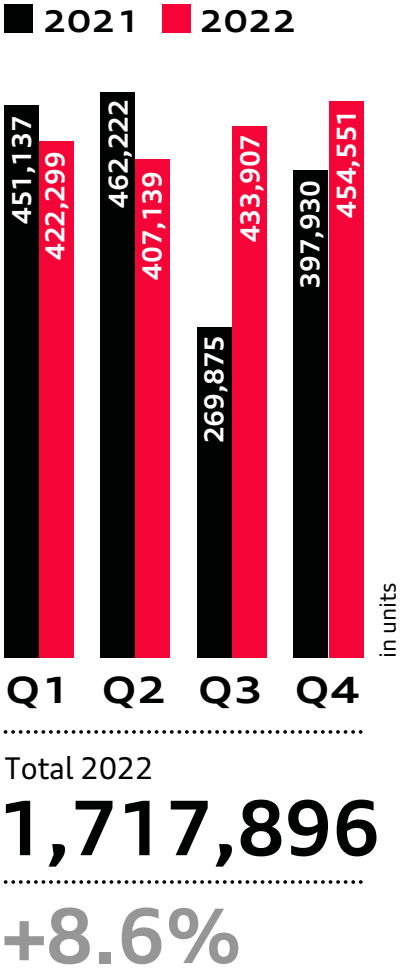


Illustration: C3 Visual Lab

Supply situation gradually improved in the second half of the year – coronavirus lockdowns negatively impacted local production in China

In the year under review, the Audi brand adjusted production as a reaction to the ongoing supply bottlenecks worldwide and coronavirus lockdowns in China. Nevertheless, the production volume stabilized during the course of the year to result in a noticeable year-on-year increase.

While production by the Premium brand group decreased by –9.2 percent year-on-year in the first six months of 2022 due to ongoing supply restrictions, the situation changed in the second half of the year. Recovery effects were especially marked compared with the third quarter of the prior year, which had been impacted very severely by semiconductor shortages. In terms of production, the fourth quarter of 2022 was the strongest single quarter in the year under review and significantly better than the prior-year quarter.

Production at global sites and new models in 2022

In 2022, a total of 533,793 (458,746) vehicles were produced at the German sites, an increase of 16.4 percent compared with the previous year. Of these, 332,981 (285,958) were produced at the Ingolstadt site, while 149,127 (145,092) premium models of the Audi brand were produced in Neckarsulm. During the reporting period, a total of 51,685 (27,696) fully electric models of the Audi Q4 e-tron model line were produced at the Volkswagen multi-brand site in Zwickau, an increase of 86.6 percent compared with the launch year 2021.

[3] Prior-year figure without the Bentley brand, consolidation in the Audi Group since January 1, 2022.

[4] Bentley produced a total of 14,788 cars in the previous year. This figure is purely informative as consolidation in the Audi Group took place effective January 1, 2022.

[5] Audi understands the name Audi e-tron GT to mean the models Audi e-tron GT quattro (electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0* and Audi RS e-tron GT (electric power consumption (combined) in kWh/100 km: 22.1–19.8 (WLTP); CO_2 emissions (combined) in g/km: 0.*

* Information on electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

In Europe, the Brussels site also grew production by 14.7 percent to 50,302 (43,866) electric vehicles. Here, the fourth quarter of 2022 saw the production start of the successor to the fully electric Audi e-tron, the new Audi Q8 e-tron,[6] which will be launched in spring 2023.

The plant in San José Chiapa in Mexico built 178,128 (137,634) vehicles of the Audi Q5 model line, an increase of 29.4 percent.

In China, the associated company FAW-Volkswagen produced 594,649 (605,933) Audi brand vehicles in 2022. The year-on-year decline of –1.9 percent was due especially to plant closures because of coronavirus lockdowns as well as to supply problems. At the same time, the fully electric portfolio at the Foshan (China) site was expanded to include the also locally produced Audi Q4 e-tron. In addition, the associated company SAIC Volkswagen manufactured 11,603 (1,075) vehicles during the reporting period. These included the new Audi Q6 Roadjet[7] model, which has been produced for the local market at the Ningbo (China) plant since 2022.

[3] Prior-year figure without the Bentley brand. Consolidation in the Audi Group since January 1, 2022.

[5] Audi understands the name Audi e-tron GT to mean the models Audi e-tron GT quattro: electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0* and Audi RS e-tron GT: electric power consumption (combined) in kWh/100 km: 22.1–19.8 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[6] Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.1 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[7] The model is manufactured by the associated company SAIC Volkswagen Automotive Co., Ltd., Ningbo (China), and is availabe and sold exclusively in China.

[8] Bentley was consolidated as of January 1, 2022. Therefore, the 2021 figure only includes deliveries to customers of 61 units, sold by an Audi Group sales company. For information: Bentley deliveries in 2021: 14,659 units.

* Information on electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

Deliveries

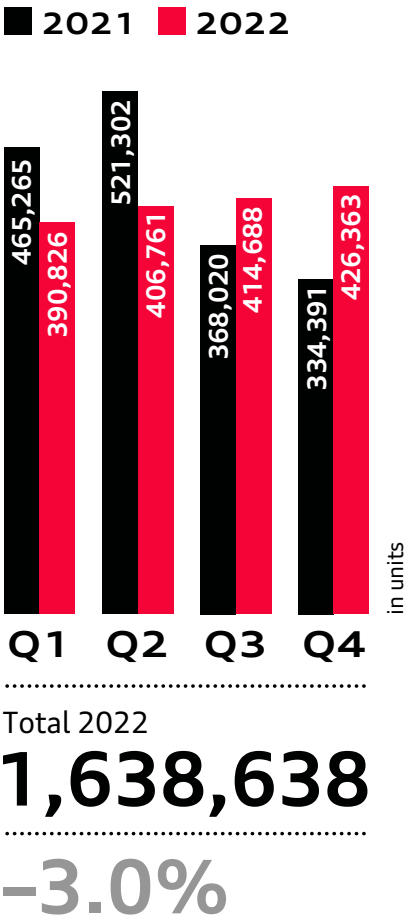
Deliveries of the Premium brand group slightly down on the prior year due to logistics and supply chain challenges – still very strong growth for fully electric models.

In fiscal year 2022, the Premium brand group delivered a total of 1,638,638 (1,688,978)[3] cars. The Audi brand handed a total of 1,614,231 (1,680,512) vehicles over to customers, which was –3.9 percent lower than the previous year's level. The three brands Lamborghini, Bentley and Ducati achieved record values for deliveries. Lamborghini handed 9,233 (8,405) vehicles over to customers, while Bentley delivered 15,174 (61)[8] luxury cars. With deliveries of 61,562 (59,447) motorcycles, Ducati crossed the 60,000 threshold for the first time.

Continued strong growth for electric vehicles

The Audi Group continued to increase deliveries of fully electric vehicles (battery electric vehicles – BEV) in the year under review. A total of 118,196 (81,894) fully electric Audi models were handed over to customers, a year-on-year growth rate of 44.3 percent. As a result, fully electric vehicles increased their share of deliveries from the Premium brand group from 4.8 percent to 7.2 percent. This was driven principally by the Audi e-tron model line with 51,209 units as well as the Audi e-tron GT[5] with 10,042 units. The best-selling fully electric vehicle was the Audi Q4 e-tron with 52,784 units.

Deliveries of the Premium brand group, quarterly trend



Total 2022

1,638,638

–3.0%

Illustration: C3 Visual Lab

Record deliveries of the high-performance models from Audi Sport

In the year under review, deliveries of high-performance models by Audi Sport GmbH exceeded the prior-year level (+15.6%) and achieved a new record of 45,515 vehicles.

In the SUV segment, the Premium brand group delivered a total of 830,901 vehicles to customers. The SUV share (defined as all SUVs delivered as a proportion of total deliveries) stabilized at the prior-year level of 50.7 percent.

Deliveries in the course of 2022 – recovery in the second half of the year following a difficult first half due to supply problems

Alongside production adjustments due to ongoing global supply bottlenecks, logistics challenges had a strong impact on the availability of Audi brand vehicles in the first half of 2022. Despite intensive management measures, the Audi Group recorded a decrease of –19.2 percent in deliveries compared with the strong first half of 2021. During the second half and especially the fourth quarter of 2022, the continued high demand for Audi vehicles could be better satisfied as a result of the gradual improvement in semiconductor availability. By contrast, logistics chains remained disrupted. Deliveries by the Premium brand group in the second half of the year increased by 19.7 percent compared with the prior-year period, which had been greatly impacted by semiconductor supply bottlenecks.

Audi Sport

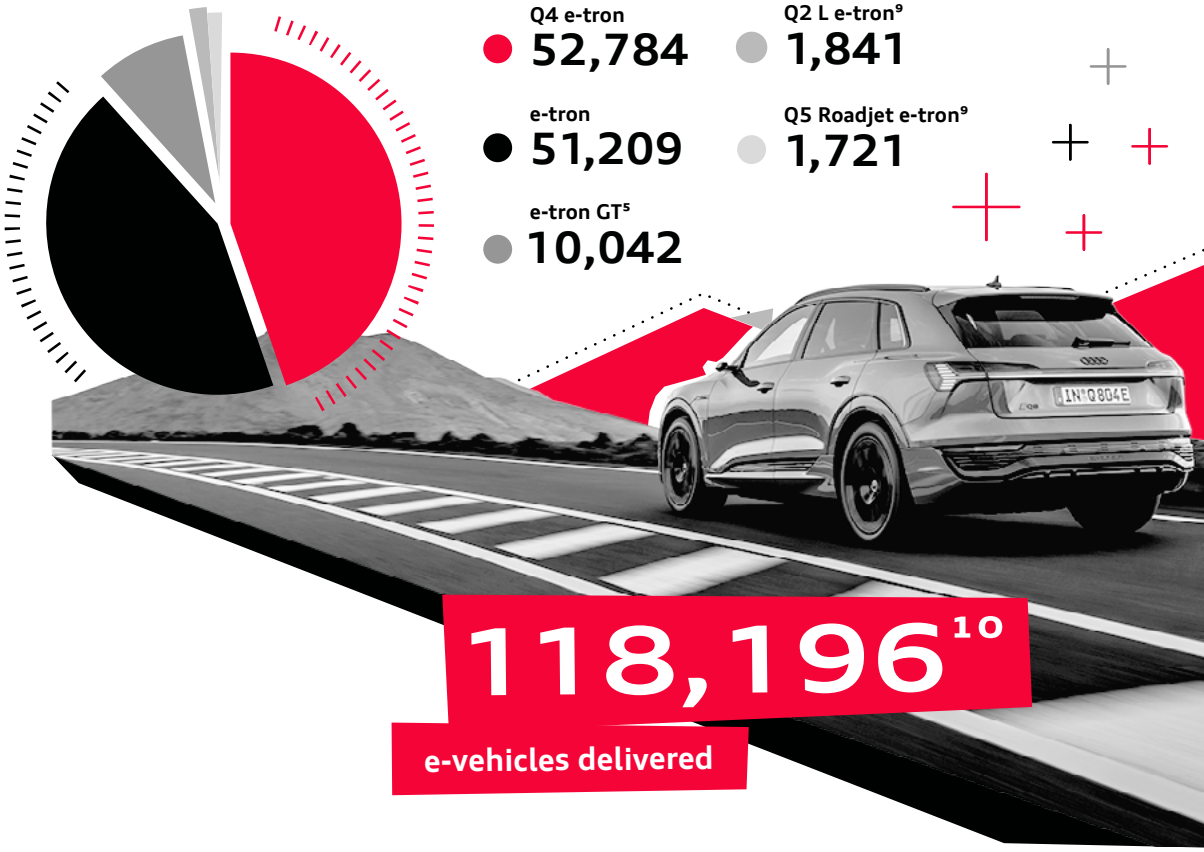
45,515
delivered high-performance models

Slight plus in Europe, USA and China down on the previous year

In Europe, the Premium brand group delivered 631,697 (619,856)[3] vehicles, an increase of 1.9 percent from the prior-year level. Deliveries to the German market especially increased by 19.2 percent to 216,526 (181,589)[3] vehicles. Overall, the Western European markets also outperformed the prior year (+3.9 percent). As well as the Netherlands (+14.2 percent), Austria (+9.7 percent) and Italy (+1.8 percent), a further seven markets in Western Europe saw a year-on-year increase in deliveries in the year under review.

Largely as the result of logistics and supply problems, deliveries by the Premium brand group in the USA decreased year-on-year to 193,569 (198,510)[3] vehicles. Despite a strong second half, this led to a decline of –2.5 percent.

In China, the Premium brand group delivered 647,221 (702,224)[3] vehicles by the end of 2022. The decline of –7.8 percent was due especially to production restrictions related to the coronavirus pandemic as well as to the persistently tense supply situation. The local lockdowns also caused restrictions for dealers such as temporary showroom closures.



[3] Prior-year figure without the Bentley brand. Consolidation in the Audi Group since January 1, 2022.

[5] Audi understands the name Audi e-tron GT to mean the models Audi e-tron GT quattro (electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0. Information on electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC) and Audi RS e-tron GT (electric power consumption (combined) in kWh/100 km: 22.1–19.8 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[9] The models are manufactured by the associated companies SAIC Volkswagen Automotive Co., Ltd., Ningbo (China), and FAW-Volkswagen Automotive Co., Ltd., Foshan (China), and are available and sold exclusively in China.

[10] Including vehicles before market introduction.

* Information on electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

Illustration: C3 Visual Lab

Car deliveries to customers by model series[11, 12]

	2022	2021	Δ in %
Audi A1	55,058	64,178	–14.2
Audi Q2	87,154	110,084	–20.8
Audi Q2 L e-tron[13]	1,841	4,743	–61.2
Audi A3	201,119	179,399	12.1
Audi Q3	238,691	258,616	–7.7
Audi Q4 e-tron	52,784	21,098	X
Audi TT	7,933	8,714	–9.0
Audi A4	232,481	215,227	8.0
Audi A5	60,048	71,340	–15.8
Audi Q5	301,038	293,069	2.7
Audi Q5 Roadjet e-tron[13]	1,721	–	X
Audi Q6 Roadjet[13]	758	–	X
Audi A6	193,617	244,191	–20.7
Audi A7	15,771	19,169	–17.7
Audi e-tron	51,209	49,157	4.2
Audi e-tron GT[5]	10,042	6,896	45.6
Audi Q7	49,629	67,452	–26.4
Audi Q8	33,678	41,584	–19.0
Audi A8	17,992	23,708	–24.1
Audi R8	1,068	1,887	–43.4
Vehicles before market introduction	599	–	X
Audi brand	**1,614,231**	**1,680,512**	**–3.9**
Lamborghini Urus	5,367	5,021	6.9
Lamborghini Huracán	3,113	2,586	20.4
Lamborghini Aventador	753	798	–5.6
Lamborghini brand	**9,233**	**8,405**	**9.9**
Continental	4,581	–	X
Flying Spur	4,155	–	X
Mulsanne	6	–	X
Bentayga	6,432	–	X
Bentley brand[14]	**15,174**	**61**	**X**
Total cars	**1,638,638**	**1,688,978**	**–3.0**

[5] Audi understands the name Audi e-tron GT to mean the models Audi e-tron GT quattro (electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0* and Audi RS e-tron GT (electric power consumption (combined) in kWh/100 km: 22.1–19.8 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[11] Detailed figures for fuel/electric power consumption and emissions can be found on pages 133–135.

[12] The table includes deliveries of 597,368 (620,700) vehicles manufactured locally by Chinese associated companies and available and sold exclusively in China.

[13] Vehicle is manufactured locally by associated companies and available and sold exclusively in China.

[14] The Bentley brand was consolidated effective January 1, 2022; the prior-year figure includes 61 vehicles delivered by an Audi sales company.

* Information on electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

Financial performance indicators

Audi Group posts record profit thanks to good market performance and strong brands, net cash flow at a high level.

Financial performance

The Audi Group generated revenue of EUR 61,753 (53,068) million in the 2022 fiscal year. The 16.4 percent increase compared with the previous year despite an almost constant number of vehicles sold was due to strong price enforcement as well as to the first-time consolidation of the Bentley brand as of January 1, 2022.

Revenue from the sale of cars of the Audi brand increased to EUR 41,081 (36,476) million. In particular, the fully electric models Audi Q4 e-tron, Audi e-tron and Audi e-tron GT[1] posted strong year-on-year sales growth. The Audi A3 and Audi Q5 model lines also made a substantial contribution to revenue growth. During the reporting period, the Lamborghini brand increased revenue from the vehicle business by 20.6 percent to EUR 2,193 (1,818) million. The Bentley brand recorded revenue from the vehicle business of EUR 3,300 million, while the Ducati brand also posted a record figure of EUR 917 (738) million.

The other revenue of the Audi Group was noticeably higher than in the prior-year period at EUR 15,008 (14,089) million. The main reason for this was, above all, increased revenue from sales of genuine parts and engines. This was countered by slightly lower income from parts deliveries to China.

In the year under review, revenue by region gave a positive picture. For example, the Premium brand group posted very strong revenue growth of 44.4 percent in the USA, to EUR 12,706 (8,801) million. While revenue in Europe also increased to EUR 30,460 (26,936) million, in China[2] it remained virtually unchanged from the previous year at EUR 11,081 (11,230) million.

Cost of goods sold increased, mainly due to higher expenses for production materials and procurement. Alongside the first-time consolidation of Bentley, the primary reasons for this were the higher proportion of electric vehicles sold and the increase in commodity and parts prices in the year under review.

Condensed income statement, Audi Group

EUR million	2022	2021	Δ in %
Revenue	61,753	53,068	16.4
Cost of goods sold	–52,237	–45,756	14.2
Gross profit from sales	**9,516**	**7,313**	**30.1**
Distribution expenses	–3,184	–3,084	3.2
Administrative expenses	–759	–655	15.9
Other operating result	1,977	1,925	2.7
Operating profit	**7,550**	**5,498**	**37.3**
Financial result	1,522	1,430	6.4
Profit before tax	**9,072**	**6,929**	**30.9**
Income tax expense	–1,956	–1,280	52.8
Profit after tax	**7,116**	**5,649**	**26.0**

[1] Audi understands the name Audi e-tron GT to mean the models Audi e-tron GT quattro (electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0* and Audi RS e-tron GT (electric power consumption (combined) in kWh/100 km: 22.1–19.8 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[2] As well as the revenue from Audi vehicles (FBU) exported to China, this line item also includes revenue from deliveries of parts to China. Other income from the China business is reported in the financial result.

* Information on electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

A look at research and development in the Audi Group

The research and development ratio[3] was 7.3 (7.4) percent in the year under review and thus slightly above the strategic target corridor (6 to 7 percent). The significant increase in research and development activities was principally attributable to investments in the areas of electrification and digitalization, alongside the first-time consolidation of Bentley. The capitalization ratio[4] was 46.0 (45.3) percent and thus at the prior-year level. The high ratio reflects the present product life cycle of the model range and also demonstrates the ability of the future product portfolio to retain its value. In all, research and development expenditure was significantly above the prior-year level.

[3] This ratio shows research and development activities relative to revenue.

[4] This ratio expresses capitalized development costs in relation to total research and development activities.

Key figures for research and development

EUR million	2022	2021	Δ in %
Research and development activities	4,517	3,913	15.5
⊖ Capitalized development costs	2,079	1,772	17.3
⊕ Amortization of and impairment losses on capitalized development costs	1,600	1,363	17.4
= Research and development expenditure	**4,039**	**3,504**	**15.3**

Other factors affecting the results

Distribution and administrative expenses rose, above all due to the first-time consolidation of Bentley in fiscal year 2022.

There was also a slight year-on-year increase in the other operating result, mainly due to the very strong reduction in residual value risks caused by the positive development of the used car market. Additionally, the line item included – as in the previous year – significant positive effects from commodity hedging.

Currency effects and raw material hedging decreased the operating profit by a total of EUR –226 million compared with the previous year. In addition, far higher prices for the procurement of raw materials reduced the operating profit by an amount in the mid-three-digit million range.

As a result, the operating profit of the Audi Group amounted to EUR 7,550 (5,498) million, thus significantly exceeding the existing record from the previous year. This corresponds to an operating return on sales of 12.2 (10.4) percent.

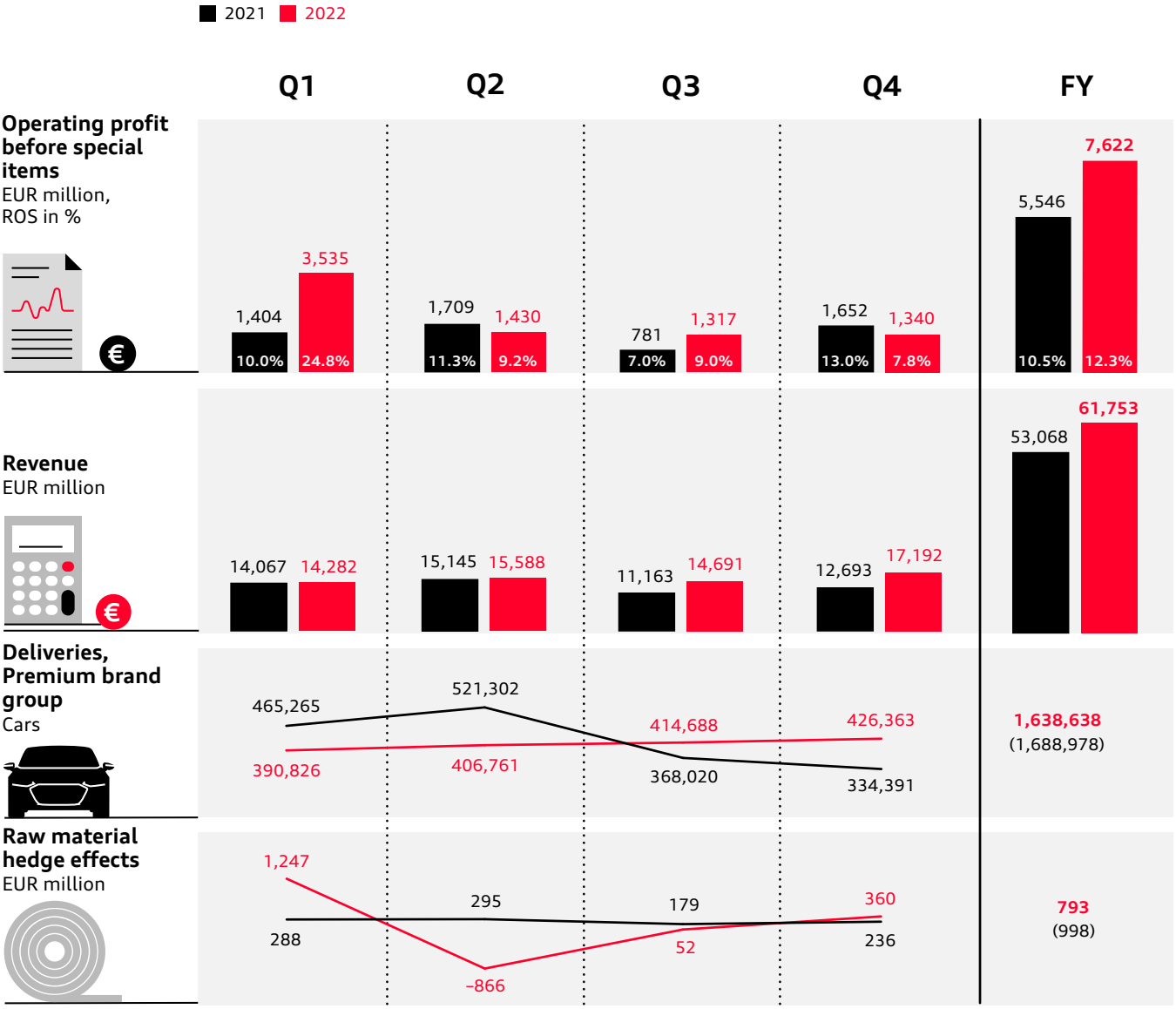
Before special items of EUR –71 (–48) million in connection with the diesel issue, an operating profit of EUR 7,622 (5,546) million and an operating return on sales of 12.3 (10.5) percent were achieved.

Key earning figures, Premium brand group

EUR million	2022	2021	Δ in %
Operating profit before special items	**7,622**	**5,546**	**37.4**
ROS before special items in %	12.3	10.5	1.8 ppt.
Special items[5]	–71	–48	48.6
Operating profit	**7,550**	**5,498**	**37.3**
ROS in %	12.2	10.4	1.8 ppt.
Profit before tax	**9,072**	**6,929**	**30.9**

[5] Special items in connection with the diesel issue.

Quarterly development



All quarters

- First-time consolidation of Bentley with record figures
- Strong genuine parts business
- High price level and positive residual value effects
- Very good performance by the Lamborghini and Ducati brands
- Ongoing fixed-cost discipline, despite higher upfront research and development expenditure and increased performance-related personnel costs

Q1

- High positive valuation effects from commodity hedging as a result of the massive increase in commodity prices associated with the start of the Russia-Ukraine war.
- Deliveries in USA and China substantially down on the prior-year period, also due to semiconductor supply shortages

Q2

- Substantial decline in commodity prices results in decreasing valuation effects of hedging transactions
- Deliveries remain clearly down on the prior year – factors include supply problems and lockdowns in China

Q3

- Significant increase in deliveries compared with the weak Q3/21 caused by supply problems, despite continued supply chain disruption
- Recovery effects on the Chinese market following the easing of coronavirus restrictions

Q4

- High delivery levels and revenue in the closing quarter
- Higher upfront research and development costs, increased material costs and special factors such as consideration of the new collective agreement negatively impact result

Illustration: C3 Visual Lab

Audi Transformation Plan successfully completed

The Audi Transformation Plan (ATP) had a positive effect on the operating profit in 2022, its planned final year. In the year under review, measures totaling more than EUR 4 billion were realized. Due to the supply shortages for semiconductors, the majority of these affected the cost side. Since the beginning of the ATP in 2018, the program has therefore realized around EUR 14.4 billion and thus fell just short of the target of EUR 15 billion due to the lower sales volume on account of the pandemic and supply limitations. The ATP proved to be an effective instrument for safeguarding the profitability of Audi. Many of the measures have a long-lasting impact and have already been implemented in daily business.

Financial result of the Audi Group

The financial result of the Audi Group increased noticeably to EUR 1,522 (1,430) million in the past fiscal year. This was mainly attributable to a significant improvement in the net interest result, mostly due to lower expenses for discounting of provisions because of higher interest rates. The decline in the other financial result had a negative effect. This was especially due to lower income from securities. By contrast, the increased brand settlement from Volkswagen AG for the China business positively influenced the other financial result. There was a noticeable decline in the result from investments accounted for using the equity method.

1,153
EUR million
China business
in the financial result

Overall, the Audi Group's China business contributed EUR 1,153 (1,140) million to the financial result, despite the challenging market situation that included local lockdowns.

Profit after tax considerably higher than in the previous year

In the 2022 fiscal year, the Audi Group posted a profit before tax of EUR 9,072 (6,929) million. The return on sales before tax was 14.7 (13.1) percent. Income tax expense increased very strongly compared with the previous year, by EUR 676 million. This resulted in a profit after tax of EUR 7,116 (5,649) million.

Financial result, Audi Group

EUR million	2022	2021	Δ in %
Result from investments accounted for using the equity method	**271**	**291**	**–7.0**
of which FAW-Volkswagen Automotive Co., Ltd.	44	38	16.9
of which Volkswagen Automatic Transmission (Tianjin) Co., Ltd.	193	235	–17.9
of which SAIC Volkswagen Automotive Co., Ltd.	12	9	27.9
of which There Holding B.V.	–40	–32	23.5
Net interest result	**583**	**191**	**X**
Other financial result	**668**	**948**	**–29.5**
of which brand settlement, China business[6]	905	859	5.4
Financial result	**1,522**	**1,430**	**6.4**
of which China business[7]	1,153	1,140	1.1

[6] Financial brand settlement agreed between AUDI AG and Volkswagen AG and performance-related income for China business in connection with associated companies.

[7] Includes the result from investments accounted for using the equity method: FAW-Volkswagen Automotive Co., Ltd., Volkswagen Automatic Transmission (Tianjin) Co., Ltd., SAIC Volkswagen Automotive Co., Ltd. and brand settlement for China business.

Illustration: C3 Visual Lab

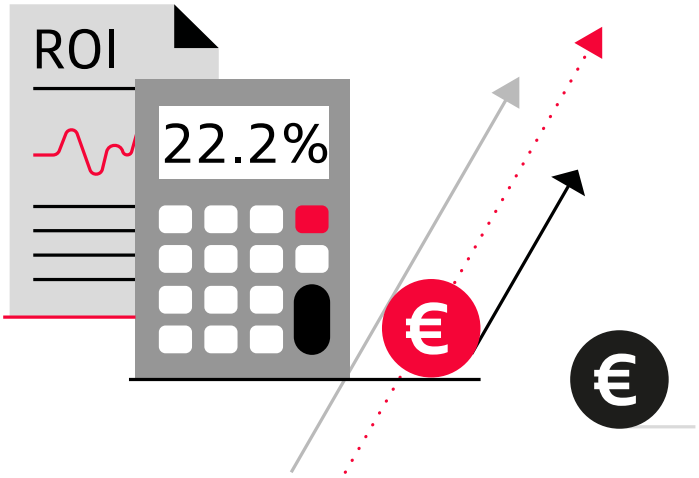


Illustration: C3 Visual Lab

Significant increase in return on investment

The Audi Group's return on investment (ROI)[8] was 22.2 (16.7) percent in the 2022 fiscal year. The positive development in return on investment year-on-year is largely attributable to the higher operating profit after tax.

Development of return on investment in the Premium brand group

EUR million	2022	2021	Δ in %
Operating profit after tax[8]	5,285	3,849	37.3
Invested assets (average)	23,808	23,084	3.1
Return on investment (ROI)[8] in %	**22.2**	**16.7**	**5.5**

[8] Assumed tax rate of 30 percent; further definitions on return on investment can be found in the Audi Fact Pack.

Net worth

Total assets of the Audi Group as of December 31, 2022, increased to EUR 70,812 (66,124) million, largely as the result of the first-time consolidation of Bentley as of January 1, 2022.

Non-current assets of the Audi Group grew, mainly due to higher capitalized development costs and investment in other property, plant and equipment – primarily resulting from the construction of a new plant for electric vehicles by the fully consolidated Audi FAW NEV Co., Ltd., Changchun (China).

Current assets also increased significantly as of December 31, 2022. The improved supply situation compared with the previous year and logistics delays led to an increase in inventories. In addition, trade receivables rose due to much higher volume sales in the fourth quarter. Furthermore, new short-term fixed deposits and loans within the Volkswagen Group should also be mentioned in this context.

The amounts reported in the line item "Assets held for sale and distribution to shareholders" decreased significantly following the transfer of sales companies within the Volkswagen Group.

Equity strengthened by record result

As of December 31, 2022, the equity of the Audi Group increased to EUR 31,582 (26,012) million, giving an equity ratio of 44.6 (39.3) percent. This was attributable especially to the growth in retained earnings as a result of the high profit after tax in 2022. A further positive effect came from actuarial gains due to the higher discount rates for pension obligations.

At the end of 2022, non-current liabilities were significantly lower, primarily due to a drop in provisions for pensions as a result of an increase in the discount rate.

Current liabilities rose, mainly because of higher business-related trade payables compared with the low prior-year level, due to factors such as the consolidation of Bentley.

Condensed balance sheet, Audi Group

EUR million	12/31/2022	12/31/2021	Δ in %
Non-current assets	32,675	31,754	2.9
Current assets	38,119	33,445	14.0
of which inventories	8,336	7,090	17.6
of which trade receivables	5,471	4,416	23.9
of which cash and cash equivalents	9,599	11,628	–17.5
Assets held for sale and for distribution to shareholders	18	926	–98.1
Total assets	**70,812**	**66,124**	**7.1**
Equity	31,582	26,012	21.4
Liabilities	39,230	39,548	–0.8
of which non-current liabilities	14,415	17,149	–15.9
of which current liabilities	24,815	22,399	10.8
of which trade payables	8,632	6,667	29.5
Liabilities held for sale and for distribution to shareholders	–	564	–100
Total equity and liabilities	**70,812**	**66,124**	**7.1**

Financial position

In the 2022 fiscal year, the Audi Group generated cash flow from operating activities of EUR 10,028 (11,471) million.

The year-on-year decline despite the increased profit was especially attributable to higher income tax payments and the negative change in working capital. This was mainly due to the increase in trade receivables resulting from higher volume sales at year-end and increased inventories as a consequence of the improved supply situation in particular and also because of logistics delays. The increase in trade payables had a positive effect on working capital while lower provisions had a negative impact.

Investing activities attributable to operating activities came to EUR –5,221 (–3,714) million in the year under review.

Capital expenditure increased to EUR –2,590 (–1,990) million, mainly due to investments for the construction of the new plant by the fully consolidated Audi FAW NEV Co., Ltd., Changchun (China). The capex ratio in the year under review was 4.2 (3.8) percent.

The capitalized development costs also increased in the reporting period. Changes in participations, such as the first-time contribution to Audi Formula Racing GmbH, Neuburg an der Donau, and transfer of sales companies, had a growth effect on investing activities.

Net cash flow remains strong and net liquidity high

Net cash flow of the Audi Group in the year under review amounted to EUR 4,808 (7,757) million, the second-highest amount in the company's history following the extremely high prior-year value.

Cash flow from investing activities came to EUR –8,369 (–2,973) million and included cash deposits and loans granted within the Volkswagen Group.

Cash flow from financing activities amounted to EUR –4,327 (–7,946) million. It mainly comprised the profit transfer to Volkswagen AG of EUR –4,025 million for 2021.

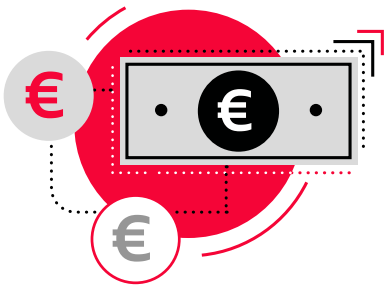
As of the reporting date, cash and cash equivalents decreased to EUR 9,599 (12,022) million. The net liquidity of the Audi Group as of December 31, 2022, was almost unchanged at EUR 22,570 (22,674) million.

Audi is investing in a sustainable future

To drive forward its transformation to a provider of sustainable and connected premium mobility, the Audi Group is earmarking investments[9] of around EUR 28 billion for electrification and digitalization based on the planning round approved at the start of 2023. With a total investment of around EUR 43 billion, almost two-thirds of the upfront expenditure is going into these future-oriented topics.

[9] Capital investments include capital expenditure and research and development costs.

Net cash flow



4,808
EUR million

Condensed cash flow statement, Audi Group

EUR million	2022	2021	Δ in %
Cash and cash equivalents as of January 1	12,235[10]	11,152	9.7
Cash flow from operating activities	**10,028**	**11,471**	**–12.6**
Investing activities attributable to operating activities	–5,221	–3,714	40.6
of which capital expenditure[11]	–2,590	–1,990	30.1
of which additions to capitalized development costs	–2,079	–1,772	17.3
of which change in participations	–697	12	X
of which other cash changes	145	36	X
Net cash flow	**4,808**	**7,757**	**–38.0**
Change in cash deposits and loans extended	–3,148	740	X
Capital contributions from non-controlling interests	143	191	–25.2
Profit transfer to the Volkswagen Group	–4,025	–7,830	–48.6
Dividend payments to non-controlling interests	–	–52	–100
Lease payments, change in miscellaneous financial liabilities	–445	–255	74.7
Change in cash and cash equivalents due to changes in exchange rates	32	319	–90.0
Change in cash and cash equivalents	**–2,636**	**870**	**X**
Cash and cash equivalents as of December 31	**9,599**	**12,022**	**–20.2**
Net liquidity as of December 31	**22,570**	**22,674**	**–0.5**
Cash flow from investing activities	**–8,369**	**–2,973**	**X**
Cash flow from financing activities	**–4,327**	**–7,946**	**–45.5**

[10] Includes EUR 213 million in connection with the first-time consolidation of Bentley as of January 1, 2022.

[11] Capital expenditure includes investments in property, plant and equipment, investment property and other intangible assets according to the cash flow statement.

Illustration: C3 Visual Lab

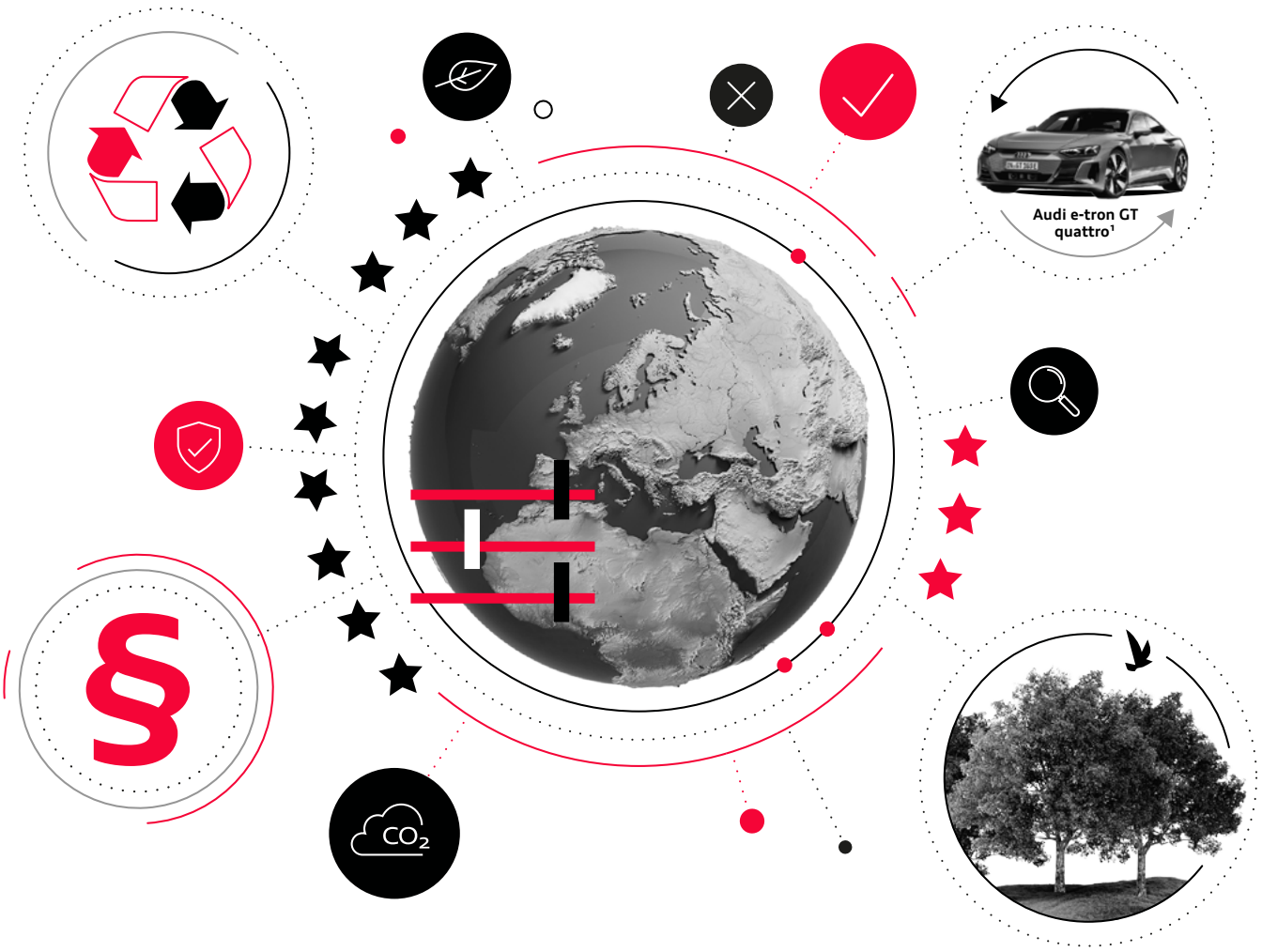


Illustration: C3 Visual Lab

EU taxonomy

The EU taxonomy makes sustainable business operations measurable and comparable. Audi makes voluntary disclosures in accordance with the EU Taxonomy Regulation.

The European Union (EU) is increasing its focus on climate change mitigation. The "European Green Deal" and the goal of becoming climate-neutral by 2050 are an expression of the EU's great ambition and provide the framework for a broad package of measures. The EU taxonomy represents the next logical step on this path and, at the same time, is one of the central measures in the aforementioned package. Its goal is to redirect capital to sustainable investments while fostering transparency and the long term in financial and economic activity. To this end, the EU Taxonomy Regulation and the associated delegating acts define criteria to make companies' sustainable business operations uniformly measurable and comparable. At the same time, the EU taxonomy goes beyond the climate change mitigation aspect to require additional compliance with social aspects, for example.

[1] Audi e-tron GT quattro: electric power consumption (combined) in kWh/100 km: 21.6–19.6; CO_2 emissions (combined) in g/km: 0. Information on electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

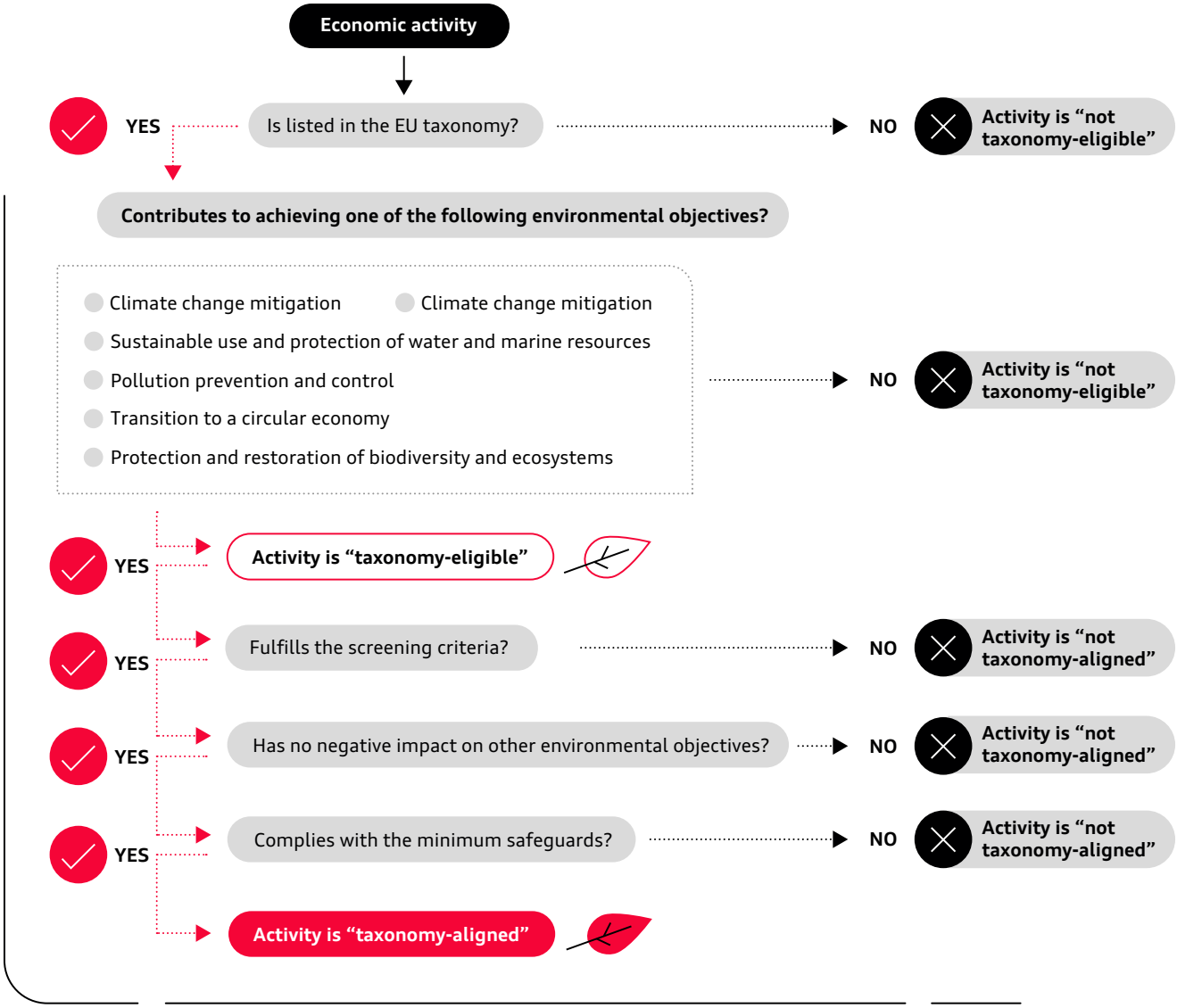
[2] For more detailed information on the EU taxonomy, please also read the Annual Report of the Volkswagen Group.

The Volkswagen Group is committed to the Paris Climate Agreement and aligns its activities with the 1.5-degree goal. It intends to become a net carbon-neutral enterprise by 2050.

Voluntary reporting by the Audi Group[2]

The Audi Group is a fully consolidated Volkswagen Group company and is therefore not required to provide a separate report in accordance with EU taxonomy criteria. Since fiscal year 2021, the Premium brand group is fostering transparency by publishing a voluntary report of the key figures relating to the EU taxonomy, thus reflecting the priority the brands give to ESG (Environmental, Social and Governance) criteria. Sustainability has a central role for the Premium brand group and this is to be demonstrated visibly.

What makes an economic activity taxonomy-eligible or taxonomy-aligned?



1 Taxonomy-eligible

- **Manufacture of low-carbon technologies for transport**
- **Contribution to the environmental goal of climate change mitigation**

The Audi Group's business model covers the development, production and selling of vehicles and the associated activities. Within the meaning of the EU Taxonomy Regulation, activities in these areas are suited to making a substantial contribution to the environmental goal of climate change mitigation through the expansion of clean or climate-neutral mobility.

As part of the environmental objective of climate change mitigation, the Audi Group assigns all the activities listed to the economic activity "Manufacture of low-carbon technologies for transport." This applies to all cars and motorcycles produced, irrespective of their drive technology, and also includes genuine parts.

In the Audi Group's current estimation, hedging transactions and individual activities of subordinate importance, which are reported as other sales revenue in Audi's consolidated financial statements, should not be assigned to an economic activity and are therefore not deemed in the first instance to be taxonomy-eligible.

Other activities which are directly connected with the aforementioned vehicle-related business and, in Audi's estimation, should also be assigned to this economic activity, are currently classified as not taxonomy-eligible. On the basis of the requirements published by the EU, it was not clear which economic activity they should be assigned to in accordance with the EU taxonomy. These activities particularly include the sale of engines and powertrains, as well as parts deliveries and production under license by third parties, which are also reported as other sales revenue.

Illustration: C3 Visual Lab

2 Fulfillment of screening criteria

- **Vehicle CO_2 emissions**
- **BEV = 0 g/km CO_2 and PHEV < 50 g/km CO_2 by 2025**

The key performance indicator for fulfilling the screening criteria is the CO_2 emissions of the vehicles produced by the Audi Group. In our vehicle-related business, we have detailed the vehicles manufactured by us by model and powertrain technology and analyzed the CO_2 emissions associated with them in accordance with WLTP. In this way, we have identified those vehicles among all of our taxonomy-eligible vehicles that meet the screening criteria and with which the substantial contribution to climate change mitigation is measured. Until December 31, 2025, a threshold value of < 50 g/km CO_2 (WLTP) will apply.

These vehicles include the Audi Group's **fully electric vehicles (BEV)**:
» Audi Q4 e-tron, Audi e-tron/Audi Q8 e-tron,[3] Audi e-tron GT[4]

In addition, **most of the plug-in hybrids (PHEV)** produced by the Audi Group also fulfill the screening criteria:
» Vehicles of the model lines Audi A3, Q3, A6, A7 and most of the Audi Q5 and A8 model lines

For fulfilling the screening criteria, a CO_2 threshold of 0 g/km already applies to motorcycles. None of the motorcycles in the Ducati product range met this requirement. At the same time, development work started on fully electric motorcycles in the 2022 fiscal year.

3 Compatibility with other environmental objectives

(Do No Significant Harm, DNSH)

- **No significant harm to the other environmental objectives**
- **Central Volkswagen assessment: criteria fulfilled by Audi**

Ecologically sustainable economic activities within the meaning of the EU taxonomy must not only contribute to at least one of the defined environmental objectives but may also have no negative impact on the other environmental objectives. The DNSH (Do No Significant Harm) criteria for economic activities define the minimum requirements which must be fulfilled in order to exclude any significant harm to any of the other environmental objectives.

In the year under review, the DNSH criteria for the economic activity "Manufacture of low-carbon technologies for transport" for the Audi Group were analyzed at the higher level of the Volkswagen Group. For the vehicle-related business, the analysis was performed at the level of the individual production sites which manufacture or will in the future manufacture Audi vehicles that fulfill the screening criteria named under step 2 above or will do so in the future in accordance with the five-year plan.

The Volkswagen Group's Annual Report presents the key interpretations and analyses used by the Volkswagen Group to examine whether any substantial harm has been done to the other environmental objectives. The result of these assessments is that the Audi Group's vehicle-producing sites fulfilled the DNSH criteria in the year under review.

4 Minimum safeguards

- **Upholding human rights and meeting minimum social standards**
- **Central Volkswagen assessment: criteria fulfilled by Audi**

The minimum safeguards consist of the OECD Guidelines for Multinational Enterprises, the United Nations Guiding Principles on Business and Human Rights, the Fundamental Conventions of the International Labour Organization (ILO) and the International Bill of Human Rights.

The Audi Group is aware of its corporate responsibility for human rights, is committed to these conventions and declarations and affirms its acceptance of the content and principles specified therein.

The Volkswagen Group has performed and concluded human rights risk assessments[5] for all Audi Group companies, including the sites audited in accordance with DNSH criteria. This risk analysis took account of the results and risk assessments from the previous year. For the risks identified in the analysis, the companies received risk-specific measures which had to be implemented. The Group constantly monitors the status of implementation of these measures.
The result of these assessments is that the requirements of the minimum safeguards were fulfilled in the year under review.

[3] Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4-20.1 (WLTP); CO_2 emissions (combined) in g/km: 0.*

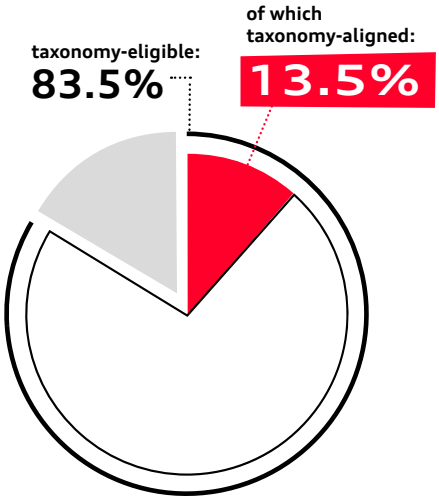
[4] Audi understands the name Audi e-tron GT to mean the models Audi e-tron GT quattro: power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP): CO_2 emissions (combined) in g/km: 0* and Audi RS e-tron GT: electric power consumption (combined) in kWh/100 km: 22.1–19.8 (WLTP); CO_2 emissions (combined) in g/km: 0.*

* Information on electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

[5] Further information on handling sustainability risks in the upstream supply chain can be found in the article "Sustainability in the supply chain."

Illustration: C3 Visual Lab

Audi Group key figures in accordance with the EU taxonomy[6]



EUR 61.8 billion
Audi Group revenue

Revenue

Revenue of the Audi Group in 2022 totaled EUR 61.8 (53.1) billion (see page 31). Of this amount, EUR 51.6 (42.7) billion, or 83.5 (80.6) percent, was attributable to the economic activity "Manufacture of low-carbon technologies for transport" and therefore classified as taxonomy-eligible. This mainly includes the sales revenue from new and used vehicles, including motorcycles, from genuine parts, from extended warranties, and from the rental and lease business.

Of this amount, EUR 8.3 (6.8) billion, or 13.5 (12.8) percent, fulfilled the screening criteria (see step 2). Because it satisfies the DNSH criteria and minimum safeguards, this proportion of sales revenue can be classified as taxonomy-aligned. In the case of fully electric models only, this applied to EUR 6.1 (4.1) billion or 9.8 (7.7) percent of Audi Group revenue. By contrast, revenue from the sale of PHEVs was down on the previous year because of supply problems.

Capital expenditure

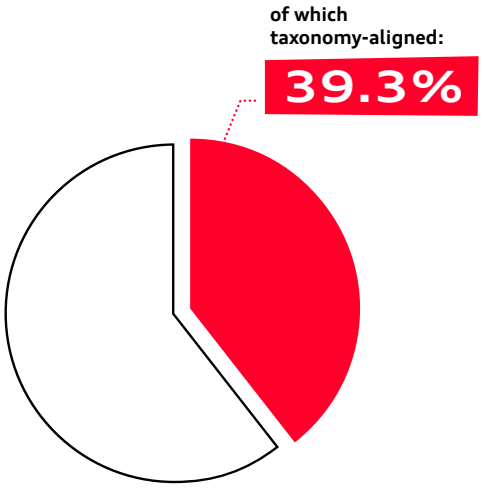
In accordance with the EU taxonomy, capital expenditure covers additions to intangible assets, property, plant and equipment, leasing and rental assets, and investment property.

All capital expenditure attributable to the vehicle-related business was associated with the economic activity "Manufacture of low-carbon technologies for transport." No substantial capital expenditure was assigned to the other activities in the vehicle-related business (especially engines, powertrains, parts deliveries and franchises) that were initially not included.

In fiscal year 2022, additions in the Audi Group amounted to

- EUR 2.3 (2.1) billion from intangible assets
- EUR 2.7 (1.9) billion from property, plant and equipment
- EUR 0.1 (0.0) billion from leasing and rental assets, and investment property

Taxonomy-eligible capital expenditure thus totaled EUR 5.1 (4.0) billion or 100 percent.
Capital expenditure relating to vehicles that meet the screening criteria amounted to EUR 2.0 (1.6) billion. Taking into account the DNSH criteria and minimum safeguards, 39.3 (41.3) percent of total capital expenditure was taxonomy-aligned in 2022.



EUR 5.1 billion
100% taxonomy-eligible capital expenditure

The percentage decrease was largely due to life cycle-related fluctuations in capitalizable development costs for BEVs. Taxonomy-aligned capital expenditure included EUR 1.7 (1.3) billion, or 34.3 (33.5) percent, for fully electric vehicles. This year-on-year increase reflects the Audi BEV roadmap.

[6] The EU taxonomy contains wording and terms which are still subject to interpretation. Their later clarification by the EU may result in reporting changes. There is a risk that key figures reported as taxonomy-aligned might need to be assessed differently. The Audi Group's interpretation is shown below.

Illustration: C3 Visual Lab

Operating expenditure

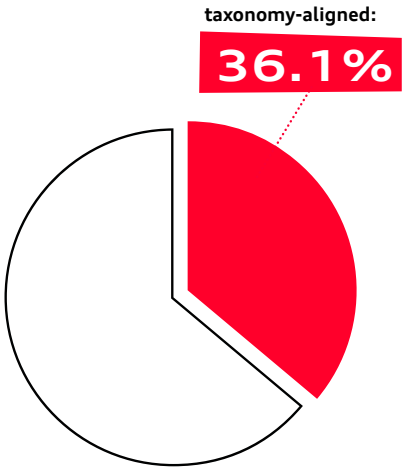
In accordance with the EU taxonomy, operating expenditure covers non-capitalized research and development costs, expenditure for maintenance and repair, and short-term leases.

All operating expenditure attributable to the vehicle-related business is associated with the economic activity "Manufacture of low-carbon technologies for transport" and was therefore classified as taxonomy-eligible.

Thus, of the Audi Group's total operating expenditure:

- taxonomy-eligible operating expenditure: EUR 2.8 (2.5) billion or 100 (100) percent
- taxonomy-aligned operating expenditure: EUR 1.0 (0.8) billion or 36.1 (33.3) percent

The increase in taxonomy-aligned operating expenditure – both absolute and proportionate – is attributable to the growing number of environmentally sustainable projects in accordance with the EU taxonomy.



EUR 2.8 billion

100% taxonomy-eligible operating expenditure

In the case of fully electric vehicles, a total of EUR 0.9 (0.7) billion, or 32.8 (26.4) percent, is included in the taxonomy-aligned operating expenditure.

[3] Audi Q8 e-tron: electric power consumption combined) in kWh/100 km: 24.4–20.1; CO_2 emissions (combined) in g/km: 0. Information on electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

[7] The decarbonization index (DCI) quantifies the average emissions of CO_2 and CO_2 equivalents over the entire life cycle of the Audi passenger car portfolio and is stated in metric tons of CO_2 per vehicle. It includes both direct and indirect CO_2 emissions at individual production sites (Scopes 1 and 2), as well as all other direct and indirect CO_2 emissions over the life cycle of the vehicles (Scope 3).

Progress with e-roadmap and other sustainability topics

The Premium brand group is continuing with its ambitious BEV roadmap. This is reflected, among other things, in the taxonomy-aligned share of revenue of 13.5 percent as well as in the capital expenditure planned for electric mobility and digitalization. Investment in the amount of around EUR 28 billion is earmarked for these future-oriented topics through 2027.

For example, the Bentley and Lamborghini brands (see page 53) are committed to the electrification of their fleet, while Ducati is the exclusive supplier for the electric class of the MotoGP™ World Championship. The Audi brand recently launched the models of the Audi Q8 e-tron[3] family. In addition, starting at the end of the year, the first series-production Audi Q6 e-tron models will leave the production line. In the course of 2026, the brand will then flip the switch and will launch only electric models on the global market from this time on. At the same time, Audi will expand its electric range in the next five years. By 2027, the Four Rings wants to offer an all-electric vehicle in its portfolio in all core segments. Then, according to current product planning, the company will have more than 20 electric models in its range (see page 11).

The measures: noticeable changes

The Premium brand group is not only transforming its product range to electric vehicles, but it is also becoming sustainable and future-proof in many other areas.

One particular focus is on production. Audi is preparing all of its own sites for the production of electric cars, with 2029 as the scheduled finish. By then, all Audi plants will produce at least one fully electric vehicle (see page 15). This is already the case at the plants in Brussels and at Böllinger Höfe Neckarsulm today, and Ingolstadt is set to follow from the end of 2023.

Additionally, the company is improving the ecological footprint of its production sites with the Mission: Zero program (see page 80). A critical building block on the path to becoming a more sustainable company is the reduction of CO_2 emissions along the entire automotive value chain. Audi uses the decarbonization index (DCI[7]) to make its progress visible. The company is also blazing new trails with regard to the circular economy (see page 88) and installs vehicle components that today are already partially made from secondary materials.

The Premium brand group is convinced that a sustainable business model is also measured by consideration of environmental criteria, by the assumption of social responsibility (see page 105) and by sound corporate governance (see page 49). Audi also fosters this philosophy among its partner companies. Since 2019, a positive sustainability rating (S-Rating, see page 93) has been a prerequisite for awarding contracts to suppliers.

ESG is also anchored in the Audi "Vorsprung 2030" strategy. Increasingly, ESG criteria will be considered in corporate and product decisions and management remuneration. For example, since 2022, taxonomy-aligned sales revenue has ranked alongside the DCI as one of Audi's ESG management targets.

Illustration: C3 Visual Lab

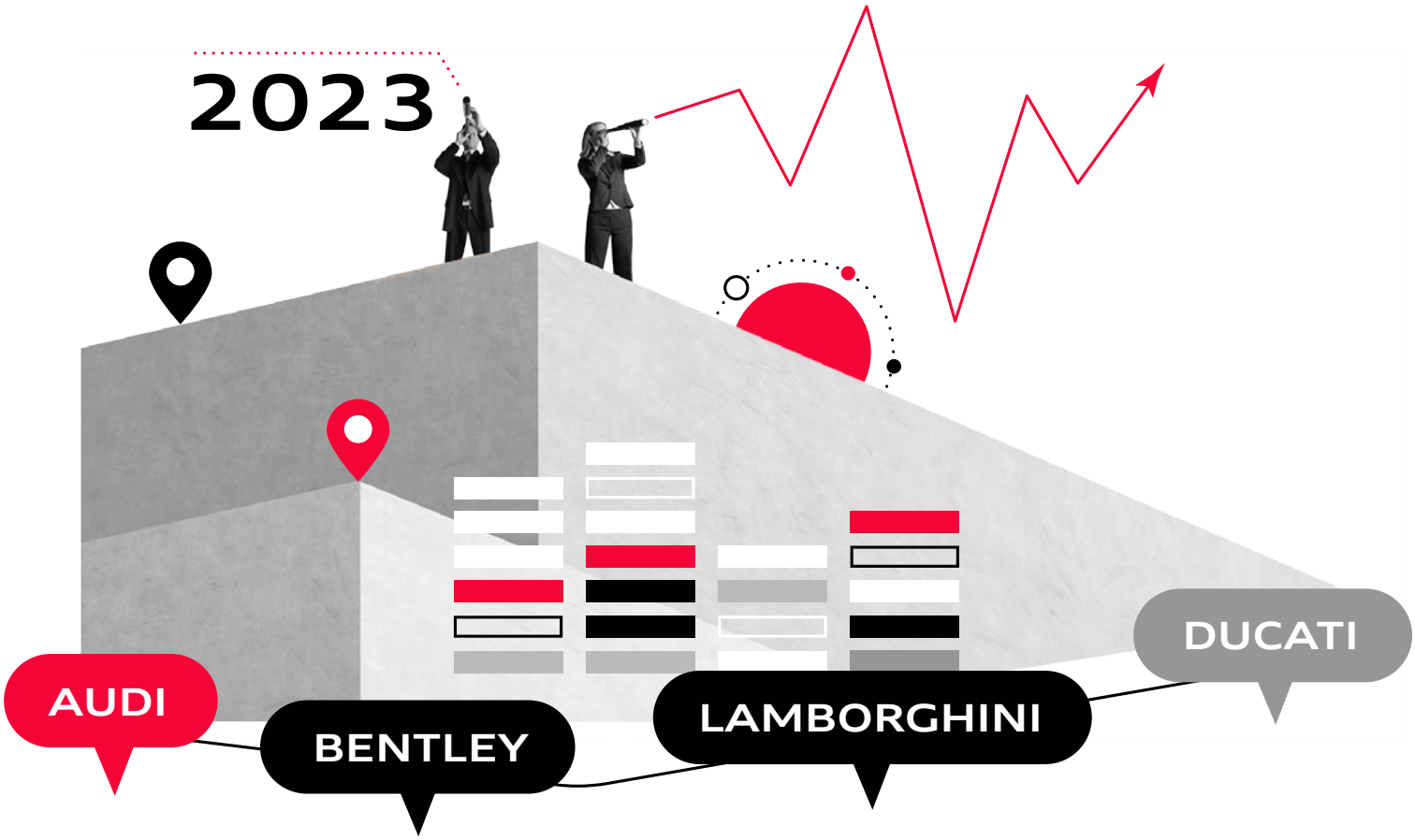


Illustration: C3 Visual Lab

Report on expected developments

Audi expects growth with high profitability to continue – environment remains volatile and challenging.

The Audi Group assumes that the global economy will grow overall in 2023 but that the pace of growth will be slower. Persistently high inflation in many regions and the restrictive monetary measures taken by central banks as a result are likely to have an increasingly negative effect on private consumption. Risks continue to be seen in protectionist tendencies, turbulence in financial markets and structural deficits in individual countries. Moreover, growth prospects will be negatively affected by continuing geopolitical tension and conflicts. In particular, the Russia-Ukraine war continues to harbor risks. Furthermore, it is not possible to rule out risks in connection with the possible occurrence of new variants of the coronavirus, especially regional outbreaks and the associated measures. The Audi Group assumes that both advanced economies and emerging markets will display positive growth rates on average, although their gross domestic product (GDP) may see below-average growth rates.

Development in the automotive industry is closely tied to the course of the global economy. We expect the intensity of competition in the international automotive industry to continue to rise. Uncertainties could result from the ongoing shortages of primary products and raw materials, possibly exacerbated by the consequences of the Russia-Ukraine war, in particular increasing prices and reduced availability of energy.
The Audi Group expects passenger car markets to develop at different rates in the various regions in 2023. Overall, global sales volumes for new vehicles are likely to be noticeably higher than those of the previous year.

In Europe, the Premium brand group expects new registrations of passenger cars to be significantly above the level of the year under review. Supply shortages of primary products and raw materials and the resulting restrictions on vehicle availability could continue to have a negative effect on the volume of new registrations. For the German passenger car market, it is expected that the volume of new registrations will noticeably exceed the prior-year level.

In 2023, Audi also expects sales volumes of passenger cars and light commercial vehicles (up to 6.35 t) in North America overall and in the USA to increase noticeably above the previous year's level. Models in the

SUV and pickup segments are likely to stay the main focus of demand. In addition, it is to be expected that new registrations of fully electric vehicles will see above-average growth.

Moreover, the Audi Group anticipates that the market volume in China will be slightly higher than the 2022 figure. Demand for low-priced entry-level models in the SUV segment is likely to remain very high. Negative effects could come from the ongoing semiconductor shortage, possible measures in connection with the spread of the coronavirus as well as from heightened geopolitical tensions. If no solution is found, the trade conflict between China and the USA is likely to continue to have a negative impact on business and consumer confidence.

Outlook for 2023

Subject to semiconductor supplies and anticipated economic growth, the Audi Board of Management is assuming the following key performance indicators for fiscal year 2023:

Deliveries to customers of Premium brand group cars are likely to amount to between 1.8 and 1.9 million. The Audi Group expects revenue in the range of EUR 69 to 72 billion.

The corridor for the operating return on sales (ROS) is forecast to be between 9 and 11 percent, assuming a sustained high price level for the vehicles. At the present time, the return on investment (ROI) is expected to be between 19 and 22 percent.

The Audi Group is anticipating a net cash flow corridor of EUR 4.5 to 5.5 billion and thus continues to aim for a high level.

Both the research and development ratio and the capex ratio should be within their respective strategic target corridors in fiscal year 2023.

Anticipated development in the key performance indicators of the Audi Group

	Actual 2022	Forecast 2023	Strategic targets
Deliveries of cars of the Premium brand group to customers[1]	1.6 million vehicles	between 1.8 and 1.9 million vehicles	–
Revenue	EUR 61.8 billion	between EUR 69 and 72 billion	–
Operating return on sales (ROS)	12.2%	between 9 and 11%	2030: > 11% until then: 9–11%
Return on investment (ROI)	22.2%	between 19 and 22%	> 21%
Net cash flow	EUR 4.8 billion	between EUR 4.5 and 5.5 billion	–
Research and development ratio	7.3%	within the strategic target corridor of 6 to 7 percent	between 6–7%
Capex ratio	4.2%	within the strategic target corridor of 4 to 5 percent	between 4–5%

[1] This includes delivered Audi models produced locally by associated companies in China and available and sold exclusively in China.

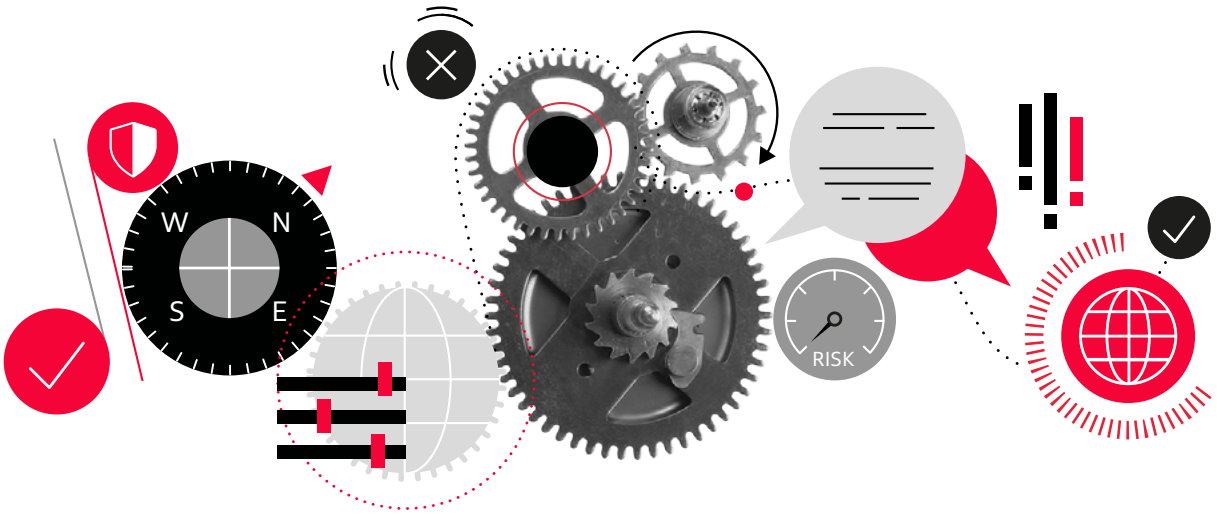


Illustration: C3 Visual Lab

Report on risks and opportunities

Early detection and management of risks and opportunities are decisive factors for ensuring the sustained success of the Audi Group. A comprehensive risk management system and an internal control system provide the basis for this.

Risk Management System in the Audi Group

Addressing risks and opportunities constructively and openly is vital for the Audi Group in order to ensure the lasting success of its entrepreneurial activities. The purpose of an effective Risk Management System (RMS) is to:

- fulfill legal requirements,
- safeguard the company's strategic, operational and financial goals over the long term,
- stabilize and develop the company in accordance with the wishes of its stakeholders,
- fulfill the company's far-reaching duty of care with respect to how it handles risks and
- 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.

In addition to the RMS, the Internal Control System (ICS) ensures that processes within the Audi Group are compliant and stable and is continuously developed. The ICS covers all material risk-carrying business processes including associated control activities across division boundaries. The effectiveness of the control activities is verified regularly.

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. They are communicated to the people responsible in each division and to the Audi Board of Management in a transparent, appropriate and timely manner. All divisions and material subsidiaries of Audi are integrated into the Risk Management System in order to satisfy both corporate and statutory requirements.

Changes in the legal framework with respect to risk management are also continually monitored and accordingly implemented promptly in the company's RMS as well as the ICS.

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 quarterly risk 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 within the 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 a Brand Group Policy to be implemented by material subsidiaries.

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 risk early warning system and the RMS/ICS for accounting are subject to scrutiny by the independent auditor of the consolidated financial statements.

The "Three Lines" model

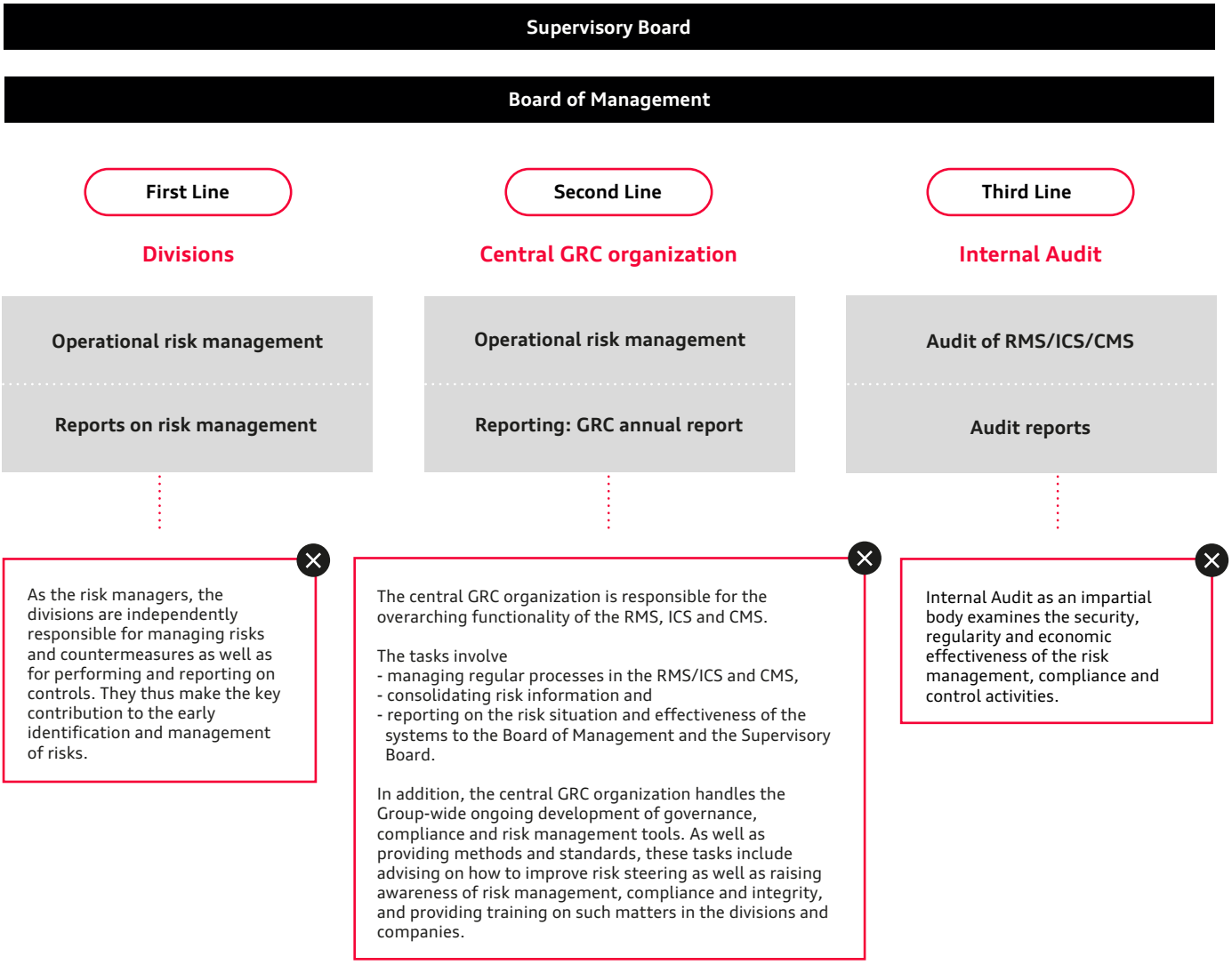


Illustration: C3 Visual Lab

Operating principle of opportunities management

In addition to managing risks effectively, it is necessary in all long-term corporate decisions to identify and use opportunities in order to secure the sustained success of the Audi Group. Opportunities management – which includes such aspects as optimizing revenue and costs and improving 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, which are used to estimate possible effects on the Audi Group. This work is performed in conjunction with Strategic Corporate Planning, the divisions affected and the Controlling area. In addition, the divisions identify and operationalize medium- and short-term potential opportunities. The long-term competitiveness and future viability of Audi are to be safeguarded through its "Vorsprung 2030" strategy as well as through, among other things, efficiency and opportunities initiatives such as fixed-cost programs or Audi.Zukunft, 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 operative 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.

The most significant risks at present relate to the implementation of the ambitious product program, which could subsequently lead to delays in the ramp-up of new vehicle models. Other risks relate to the Chinese market. For example, the latest data points to a slowdown in growth in the premium market, accompanied by intensified competition, especially for electric vehicles. Audi also continues to face a high risk in connection with its general parts supply situation. In addition to ongoing uncertainties concerning the availability of semiconductors, which could again negatively impact production volumes at the sites in 2023, there are also price and supply risks in the gas and energy sectors, which could affect Audi directly as well as the supply chain.

Moreover, general economic risks may arise that could prevent positive growth in global economic output. Among the risks that Audi sees in this area are a failure to successfully contain the coronavirus pandemic in the long term, a further escalation of the Russia-Ukraine war and further geopolitical tensions. Turbulence on the financial, energy and commodity markets, increasingly protectionist tendencies and structural deficits may also jeopardize the development of individual advanced economies and emerging markets.

Material opportunities may arise from a more lively global economy, declining inflation and an easing of the semiconductor and general supply situation. In addition, further synergies may develop within the Volkswagen Group and in particular within the Premium brand group. These synergy effects relate in particular to the areas of development, procurement and production. A further improvement in the positioning of the brands of the Premium brand group represents an additional opportunity.

Sustainable development goals

The following SDGs are at the focus of this company commitment:

Further information on the UN sustainability goals can be found on pages 110–122.

Overall risk situation of the Audi Group

The overall risk situation in the Audi Group has scarcely changed compared with the previous year. While there was a shift of focus in terms of topics, the total number of internally reportable risks and their aggregated assessment remain largely constant compared with the previous year. 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.

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

The topic of sustainability plays a very important role in the strategy, throughout the entire value chain and in the management of the whole company group. Consequently, sustainability aspects are taken into account in important decision-making processes. For example, Audi considers the return on investment (ROI) after CO_2 effects when making product decisions. The decarbonization index (DCI),[1] the BEV share and key figures in line with the EU taxonomy all contribute significantly to managing the company in accordance with sustainability criteria. Risks and opportunities in connection with climate change are also identified and assessed.

Activities relating to a holistic ESG risk management system were further intensified in the year under review. The material medium- and long-term opportunities and risks associated with climate change are explained below.

Focus on sustainability risks

The challenge facing the majority of car manufacturers is to comply with differing and constantly changing global regulations and legislation on vehicle emissions. This results, among other things, in a risk for Audi, too, that it will fail to meet the average target for CO_2 fleet emissions in various regions of the world. In addition, there are risks in connection with the speed of the general shift to electric mobility, particularly with regard to the availability of electric Audi models. Furthermore, risks could arise due to the partially delayed development of the charging infrastructure for electric vehicles.

Electrification as an opportunity

The systematic further development of fully electric drive concepts is a cornerstone of the company's "Vorsprung 2030" strategy. For example, the Audi brand plans to flip the switch in the course of 2026 and to launch only electric models on the global market from this time on. Stronger customer demand for fully electric vehicles and a better supply situation for essential components of electric vehicles, such as batteries, could accelerate the implementation of the planned electrification roadmap.

Current status of the diesel issue

In connection with the diesel issue, AUDI AG has made progress since 2015 on the many proceedings in a large number of countries. 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, they assert alleged rights to damages. Further agreements were reached in this regard in the year under review. 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.

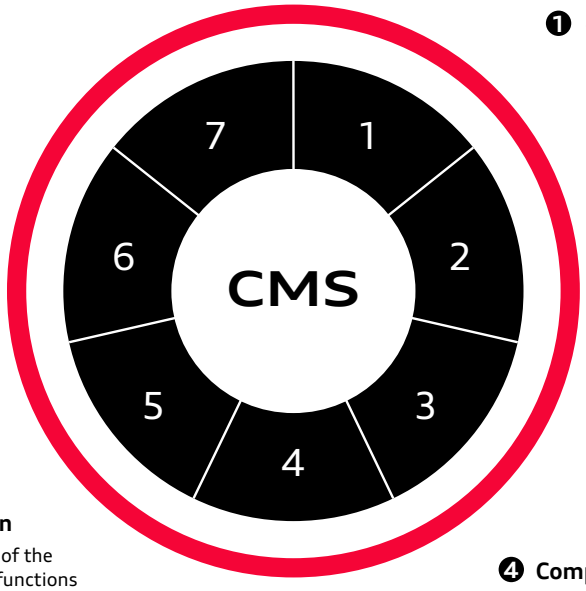
There are also criminal proceedings and investigations still pending against individuals. Of particular note are the main trial proceedings that began at the Munich II Regional Court in September 2020 in which a former Chairman of the Board of Management of AUDI AG is defending himself against allegations in connection with the diesel issue.

The material expenses and earnings from the diesel issue are reflected in the special items described in the explanation of the Audi Group's financial performance (see page 32). In-depth information about the diesel issue can be found in the Volkswagen Group's Annual Report for the 2022 fiscal year.

[1] The decarbonization index (DCI) quantifies the average emissions of CO_2 and CO_2 equivalents over the entire life cycle of the Audi passenger car portfolio and is stated in metric tons of CO_2 per vehicle. It includes both direct and indirect CO_2 emissions at individual production sites (Scopes 1 and 2), as well as all other direct and indirect CO_2 emissions over the life cycle of the vehicles (Scope 3).

Ethical leadership – corporate culture and governance hand in hand

Text: Frederike Herbst



❶ Compliance and integrity culture
- Integrity management
- Preparation/communication of the Code of Conduct
  - Promotion of a tone from the top and a tone from the middle

❷ Compliance goals
- Preventive advisory function as the Second Line

❸ Compliance risks
- Recording and evaluation of compliance risks in the company
- Development and review of countermeasures

❹ Compliance programs and processes
- Risk prevention in compliance focal areas through target group-specific and needs-oriented consulting, communication and training measures

❺ Compliance organization
- Roles and responsibilities of the compliance and integrity functions
- Structure of the compliance organization within AUDI AG as well as at relevant subsidiaries

❻ Compliance communication
- Defined reporting lines to the Audi Board of Management, the Group Board of Management and the Group Chief Compliance Officer
- Risk-based compliance communication and training measures

❼ Compliance monitoring/ improvement
- Monitoring of compliance measures within the divisions and at subsidiaries
- Continuous and lasting improvement of the CMS

The Compliance Management System
is divided into 7 core elements and combines aspects of compliance and integrity.

Business and ethics are not opposites, but go hand in hand. For companies, this is both an aspiration and a challenge. Audi recognizes its economic, ecological and social responsibility and has aligned itself accordingly – with the "Vorsprung 2030" strategy, a firm commitment to sustainability and binding ethical principles for corporate governance.

Thus, compliance and integrity are an integral part of all business processes and decisions within the Premium brand group. For this to work, it is crucial to have a corporate culture based on shared values.

The four corporate values at Audi are appreciation, openness, responsibility and integrity. They foster a trustful working environment that enables successful collaboration, especially in times of fundamental change – collaboration between employees and managers as well as between the company and its customers, business partners and stakeholders.

Elke Neidlein, Head of Integrity Management, Dr. Anna Ehret, Head of Corporate Culture, and Prof. Dr. Miriam Müthel from WHU Düsseldorf, a university that provides academic support to Audi in the area of integrity management, explain why responsible corporate governance and a corporate culture based on values are key success factors for AUDI AG.

›

Illustration: C3 Visual Lab

Photo: AUDI AG

> “Integrity is a key skill for responsible business conduct.”

Elke Neidlein

Head of Integrity Management and Compliance Communications/ Training, AUDI AG

Legislators, markets and stakeholders provide companies with a framework for legally compliant and ethical conduct – and this is where our work comes in. In our governance role for compliance, integrity and risk management, we mitigate legal and financial risks for Audi, prevent possible misconduct and protect the reputation of our company. A concrete example of this is the Act on Corporate Due Diligence Obligations in Supply Chains, which is based on the UN Guiding Principles on Business and Human Rights and holds companies accountable.

We have long since established effective tools for responsible corporate governance. Among them are our Compliance Management System and our Integrity Management, as well as the Audi Code of Conduct. All employees – whether they are members of the Board of Management or skilled workers – must commit themselves to these principles. All of these tools are being continuously refined using synergies within the Volkswagen Group.

But that is not all. More than anything else, it is our values that make us trustworthy partners for our stakeholders. Integrity, one of the four Audi values, is also a key skill for successful, sustainable and responsible corporate governance. And that is precisely what we have committed ourselves to in the ESG (Environmental, Social, Governance) field of action of our “Vorsprung 2030” strategy, which is founded on integrity and compliance.

For us, acting with integrity is also important when it comes to procuring raw materials and working with suppliers. Product integrity, too, is an integral part of our brand pledge. Our customers can rely on us to ensure that our products comply with internal requirements, laws, regulations and standards at all times. In addition, a conscious approach to data and artificial intelligence also requires a sound understanding of digital ethics.

If business and ethics go hand in hand, ethical conduct and leadership must be part of our corporate culture. This means we need new and additional skills. In our Integrity Skillset training, for example, we teach future managers how to make ethical decisions in an increasingly complex environment and how to lead with values and consequences in mind. By showing them how to resolve dilemmas and act as a role model as managers with integrity, we also contribute to a value-based culture at Audi.

Effective, responsible corporate governance is based on a balanced interplay between systems, regulations and process logic on the one hand and soft factors such as corporate values and culture on the other. All this is essential for the success of our company. ›

Compliance
is understood by the Audi Group to mean the observance of legal provisions, internal company policies and voluntary commitments by the company, its bodies and employees.

Integrity
for Audi means responsible, entrepreneurial action geared towards values and principles that are recognized in society and agreed on within the company.

Together4-Integrity (T4I)
is a global compliance and integrity program of the Volkswagen Group and its brands. With comprehensive tools and various communication and participation formats, it supports the effectiveness of the measures derived from the US Monitorship as a consequence of the diesel issue. AUDI AG has rolled out the program in more than 40 subsidiaries and participations worldwide. The companies will implement the program individually and sustainably on their own responsibility and according to a defined schedule by 2025.

Dr. Anna Ehret

Head of Corporate Culture and Employee Surveys, AUDI AG

> “A value-based corporate culture is essential for our future.”

A value-based corporate culture characterized by trustful leadership and collaboration on an equal footing is a genuine success factor for Audi. We want a culture based on appreciation, openness, responsibility and integrity that also supports our transformation. In this way, we contribute to “People & Culture,” one of the building blocks that form the foundation of our “Vorsprung 2030” strategy. Our way of leading and collaborating is characterized by “empowerment & ownership.”

What this means in concrete terms is that through empowerment, superiors give their employees more room to act and make decisions, thus encouraging independent, self-effective work. At the same time, there needs to be ownership – in other words, employees who are willing to take on personal responsibility. Only if both of these aspects are actively practiced can Audi employees use their skills to contribute optimally to the company’s success.

The key to this is a working environment that offers psychological safety and orientation, a place where different opinions are welcome, calculable risks are taken and mistakes are seen as opportunities to learn. We have already achieved a considerable amount in this respect. Moreover, a culture of trust is essential in order to retain employees and attract specialists and experts.

Of course, Audi, like many other companies, is traditionally defined by technical and financial key figures. Leadership and culture cannot be measured comprehensively, but here, too, we have developed specific key performance indicators (KPIs) such as the Leadership Indicator, which is based on the annual employee survey. This indicator is also specified in the target agreements of our top decision-makers.

Being a manager at Audi means being a role model, coach, pioneer and entrepreneur. We have incorporated this into the Leadership.Compass, our central definition of leadership. To translate this into day-to-day practice, we offer a wide range of tools for managers to examine their own leadership behavior in a confidential setting. For example, we have introduced a 360-degree feedback system that allows participants to obtain feedback from employees, colleagues and their own superiors. The managers find this to be a very valuable way of reinforcing strengths and working on personal fields of action.

Our understanding of leadership is reflected in our HR processes – from the selection of our employees to performance appraisals and development. After all, “We are progress” is not only our motto to present Audi as an attractive employer; above all, it serves as motivation for the people who make Audi what it is today and in the future. ›

Illustration: AUDI AG | Photo: AUDI AG

Sustainable development goals

The following SDGs are at the focus of this company commitment:

Further information on Audi and the UN sustainability goals can be found on pages 110–122.

Corporate culture

at Audi describes the shared values that guide the actions of all employees. The Audi corporate values and the Leadership.Compass with its clusters “Be a role model, be a coach, be a pioneer, be an entrepreneur” serve as orientation to help them put this into practice in their daily work.

More information

and background about the Leadership.Compass can be found at www.audi.com.

Prof. Dr. Miriam Müthel

Chair for Organizational Behavior, WHU – Otto Beisheim School of Management, Düsseldorf

> “Implementing ethical leadership in practice: with the Integrity Skillset.”

Ethical leadership is not only a social mandate but also a success factor in corporate activity. Current studies show a strong connection between ethical leadership and the satisfaction of employees with their task and their superior. Managers who act with integrity are seen to be more trustworthy and more effective. They also contribute to a corporate culture defined by integrity, which in turn increases identification with the employer.

These insights are all the more relevant for companies and their decision-makers as they face increasing pressure from political conflicts, the digital transformation as well as from climate change and increased competition. Even under these conditions, for them it is a question of harmonizing economic targets and ethical conduct.

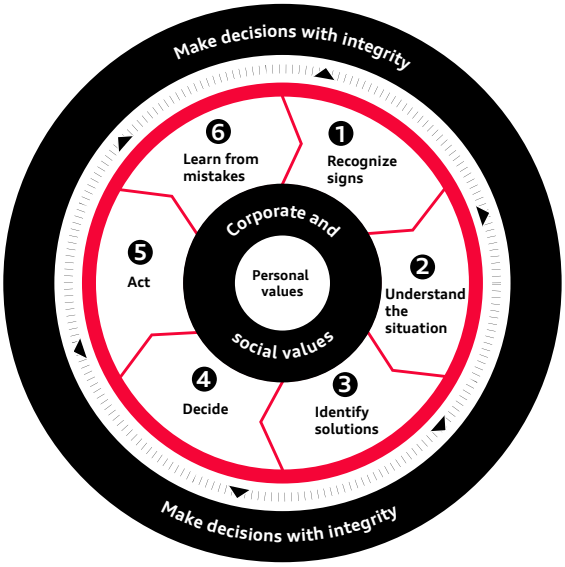
Managers therefore need clear guidance on values and must be in the position to implement these values. Ultimately, it is action and not intention that counts. Empirical research confirms that most people are intrinsically motivated to act compliantly and with integrity. However, they are often unable to see how they can attain both corporate and moral targets simultaneously.

This is where research can provide valuable approaches for everyday practice. In scientific terms, there are six skills that enable those in positions of responsibility especially to act with integrity, even when faced with a dilemma.

The Integrity Skillset trains the following skills:

1. Recognize early signs of misconduct within the company
2. Identify moral and legal dilemmas and understand the overall situation
3. Recognize different action options and identify solutions
4. Systematically prepare and take moral decisions
5. Avoid pseudorational action and act accordingly
6. Critically question individual and company misconduct and learn from mistakes

The Integrity Skillset can provide managers with sustained support in practicing the values in their daily business activities and setting an example. It is therefore now an element of leadership training at Audi.



The Integrity Skillset,

which Prof. Dr. Miriam Müthel developed in collaboration with Volkswagen under the Together4Integrity program, is now an established part of leadership training at Audi. It comprises six ethical leadership skills.

WHU Otto Beisheim School of Management

Illustration: AUDI AG | Photo: AUDI AG

Premium brand group: strong brands among equals

The Volkswagen Group has strong brands distributed across the Volume, Sport and Premium brand groups that are equipped to answer virtually all mobility needs. Audi, Bentley,[4] Lamborghini and Ducati are all part of the Premium group. The four brands supply vehicles with very different and unique characters to meet the demands of customers in the relevant target group. To this end, they are positioned differently in the global markets, with each having its own strategic focus. In the brand group, however, they work together transparently and in continuous dialogue. In this respect, it is important to identity possibilities for collaboration in order to optimize synergy effects between the brands in the best possible way. The key parameters for this are defined by the Volkswagen Group and the brand group management.

The governance model of the Premium brand group focuses on establishing unique selling points for each brand – for example, progressive design at Audi, uncompromising performance standards at Lamborghini, customization down to the last detail at Bentley and emotional driving pleasure on two wheels at Ducati. A top priority at the same time is to leverage synergy potential optimally to ensure mutual success. This is only a contradiction at first glance: for example, the SUVs Audi Q7 and Audi Q8 share the same technical platform with the Lamborghini Urus[5] and the Bentley Bentayga[6] (modular longitudinal matrix) and the same production sites for key components. In terms of look and feel, operation, perceived quality and handling characteristics, the models continue to differ clearly from one another in the customary way – and above all in a manner that is perceptible to customers.

Lamborghini Huracán STO,[1] Audi e-tron GT quattro,[2] Bentley Batur,[3] Ducati Streetfighter V2 Storm (from left).

Utilizing these synergies becomes even more important in view of the growth in electrification and the stronger focus on digitalization and connectivity. Examples of this are the Premium Platform Electric (PPE) developed jointly by Audi and Porsche and the E³ electronic architectures for which CARIAD is responsible. As far as Bentley and Lamborghini are concerned, in particular, this is a decisive advantage over the relevant luxury competition.

Yet collaboration within the brand group extends far beyond Technical Development: in the area of Procurement too, the brands work hand in hand and bundle their requirements for carry-over parts in joint committees, procure these collectively and thus benefit from more favorable terms. In the case of one project in Sales, the Ducati brand is now using the showrooms of Audi dealers at more than 15 sites. And very successfully, with collaboration making a positive contribution to volume growth in 2022.

Examples of successful collaboration can also be found in the area of Design: the motorcycle Ducati Streetfighter V4 Lamborghini is the result of creative collaboration between the two Italian brands. The Ducati designers took their inspiration for the limited edition of 630 + 63 Ducati motorcycles from the Lamborghini Huracán STO[1] supercar.

While exploiting maximum synergies and yet maintaining optimum freedom may seem like a contradiction, it is a strategy that the Premium brand group is pursuing in order to fulfill individual customer requirements and achieve high profitability targets at the same time. And with a great deal of success: in 2022, the four brands achieved top figures. /

[1] Lamborghini Huracán STO: fuel consumption (combined) in l/100 km: 13.9 (WLTP); CO_2 emissions (combined): 331 g/km (WLTP).*

[2] Audi e-tron GT quattro: electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[3] Bentley Batur: This model is sold out and is no longer offered for sale.

[4] Bentley was consolidated as of January 1, 2022, and is therefore included in the financial figures of the Audi Group.

[5] Lamborghini Urus: fuel consumption (combined) in l/100 km: 14.1 (WLTP), CO_2 emissions (combined) in g/km: 320 (WLTP).*

[6] Bentley Bentayga: fuel consumption (combined) in l/100 km: 14.7–13.0 (WLTP), CO_2 emissions (combined) in g/km: 335–294 (WLTP).*

* Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicles are available only according to WLTP and not according to NEDC.

Illustration: C3 Visual Lab

Lamborghini can look back on an absolute record year. The brand delivered 9,233 (8,405) vehicles to customers worldwide, generating revenue of EUR 2,375 (1,948) million, 21.9 percent more than in the previous year. With an operating profit of EUR 614 (393) million, Lamborghini posted a return on sales of 25.9 (20.2) percent – new records in the company's history.

Lamborghini is aiming right at the heart of its clientele with the current portfolio. The order books are filled well into 2024. And new models are already in the starting blocks: in 2022, Lamborghini presented a truly dazzling display of new products, including the launch of the Huracán Tecnica[6] and with new additions in the super SUV family with the Urus Performante[5] and the Urus S.[5] The current Aventador model line, on the other hand, is no longer available. It is now completely sold out. Production of the current generation came to an end in September 2022.

With its "Direzione Cor Tauri" strategy, the brand is following an agenda to gradually decarbonize its future models. Attention is focused here on technologies and solutions that guarantee the type of top performances and driving dynamics befitting the tradition and DNA of genuine Lamborghini models. The first series-production model with plug-in hybrid will be introduced on the market as early as 2023, while hybridization of the entire product range will be completed by the end of 2024. The development highlight is the vision of a future fourth model with all-electric drive, which will promise outstanding performance and be at the forefront in its market segment from the second half of the decade. Based on this strategy, Lamborghini is targeting an operating return on sales of more than 25 percent from 2030. /

Deliveries to customers

9,233

(2021: 8,405)
+9.9%

Revenue in EUR million

2,375

(2021: 1,948)
+21.9%

Operating profit in EUR million

614

(2021: 393)
+56.4%

Operating return on sales (ROS)

25.9%

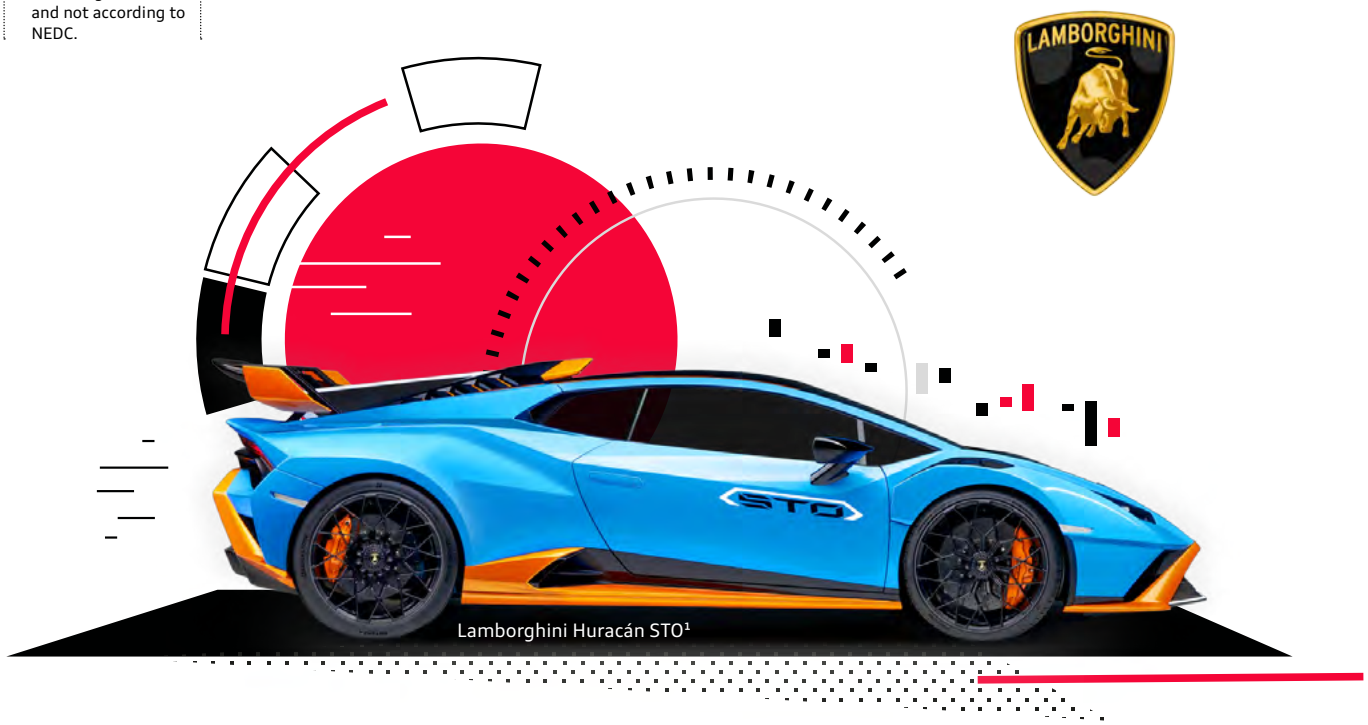
(2021: 20.2%)
+5.7 ppt.

[1] Lamborghini Huracán STO: fuel consumption (combined) in l/100 km: 13.9 (WLTP); CO_2 emissions (combined) in g/km: 331 (WLTP).*

[5] Lamborghini Urus: fuel consumption (combined) in l/100 km: 14.1 (WLTP); CO_2 emissions (combined) in g/km: 320 (WLTP).*

[6] Lamborghini Huracán Tecnica: fuel consumption (combined) in l/100 km: 14.5 (WLTP); CO_2 emissions (combined) in g/km: 328 (WLTP).*

* Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicles are available only according to WLTP and not according to NEDC.



Lamborghini Huracán STO[1]

Illustration: C3 Visual Lab

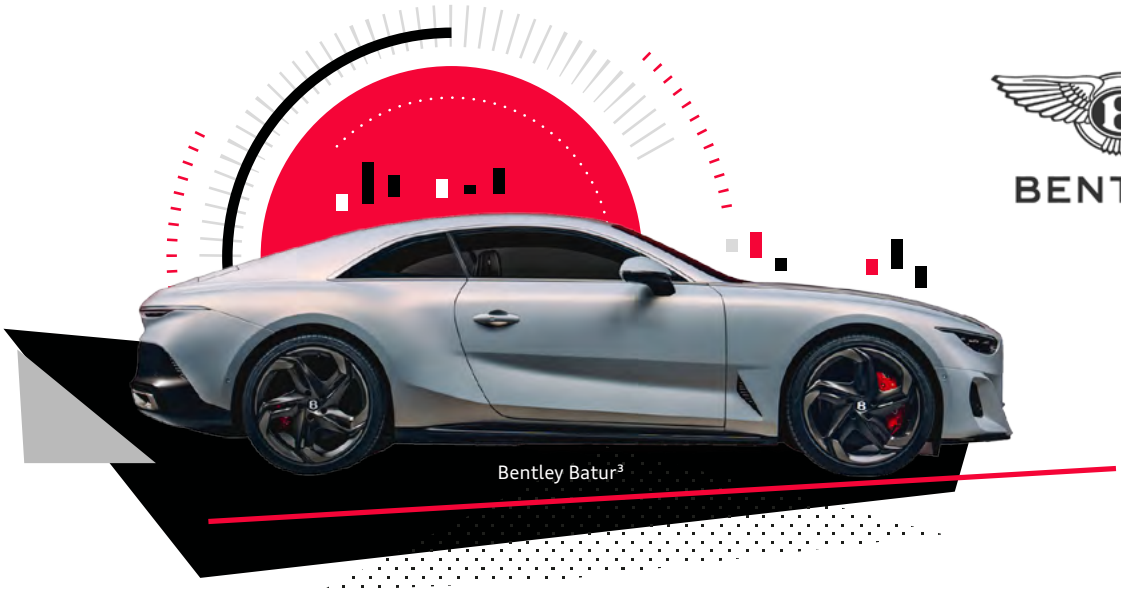


Illustration: C3 Visual Lab

Deliveries to customers
15,174
(2021: 14,659)
+3.5%

Revenue in EUR million
3,384
(2021: 2,845)
+18.9%

Operating profit in EUR million
708
(2021: 389)
+81.8%

Operating return on sales (ROS)
20.9%
(2021: 13.7%)
+7.2 ppt.

Bentley is celebrating a new delivery record for the third time in a row. With 15,174 (14,659) cars delivered, the British car manufacturer topped its previous record by 3.5 percent. The Bentley Bentayga[6] is top of the table in terms of sales figures. The successful luxury SUV remains the biggest-selling model with a share of 42 percent. Revenue grew to EUR 3,384 (2,845) million. The increased demand and the high level of customization of the models were the main driving factors behind the operating return of 20.9 (13.7) percent – a new record for the company. Operating profit reached EUR 708 (389) million.

These figures strikingly demonstrate that Bentley continues to impress its customers time and again – with a tradition that has evolved from the company's long history, with top-class craftsmanship and luxurious materials for customizing the interior, with breathtaking products and a clear strategy for sustainable luxury mobility of the future. And what's really special: Bentley covers all key segments with its portfolio, from the two-door Continental GT[7] coupé to the Continental GTC[8] convertible, the four-door Flying Spur[9] through to the Bentayga[6] SUV with long and short wheelbase. Bentley therefore reaches a very broad target group and appeals primarily to younger groups of buyers in addition to traditional customers. 78 percent of those considering purchasing a Bentley are under the age of 40

Bentley developed the "Beyond100" strategy to ensure long-term success. It paves the way for the gradual electrification of the vehicle fleet and for the net carbon neutrality[12] of the company by 2030. Bentley has already taken the first step toward electrified drive systems. Plug-in hybrid vehicles are available for the Flying Spur[10] and Bentayga[11] model lines. Bentley plans to introduce to markets its first fully electric model in 2026 and expand the electric portfolio to five models by 2030. In its drive toward complete electrification, Bentley is counting on the advantages of the brand group. Use of state-of-the-art electrification technology from the Group platforms gives Bentley the scope it needs to focus on customizing the product portfolio. With this renewed portfolio, Bentley is planning to achieve an operating return on sales of over 20 percent from 2030.

In production too, Bentley is focusing increasingly on sustainability. As the first production site for luxury vehicles in Great Britain, the plant in Crewe in England has been certified as net carbon-neutral[12] since 2018. As a next step, the company is now planning to reduce water consumption, landfill waste and other environmental pollution to an absolute minimum by 2030 for every vehicle produced in Crewe. At the same time, Bentley is investing in the "Dream Factory" concept at the Crewe site. The goal here is to further increase the level of customization of luxury models, while increasing profitability and delivery reliability in tandem. /

[12] 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.

[3] Bentley Batur: This model is sold out and is no longer offered for sale.

[6] Bentley Bentayga: fuel consumption (combined) in l/100 km: 14.7–13.0 (WLTP); CO_2 emissions (combined) in g/km: 335–294 (WLTP).*

[7] Bentley Continental GT: fuel consumption (combined) in l/100 km: 12.1–13.7 (WLTP); CO_2 emissions (combined) in g/km: 275–311 (WLTP).*

[8] Bentley Continental GTC: fuel consumption (combined) in l/100 km: 10.7–14.1 (WLTP); CO_2 emissions (combined) in g/km: 284–320 (WLTP).*

[9] Bentley Flying Spur: fuel consumption (combined) in l/100 km: 14.0–11.6 (WLTP); CO_2 emissions (combined) in g/km: 320–270 (WLTP).*

[10] Bentley Flying Spur Hybrid: fuel consumption (combined) in l/100 km: 3.3 (WLTP); electric power consumption (combined) in kWh/100 km: 24.4 (WLTP); CO_2 emissions (combined) in g/km: 75 (WLTP).*

[11] Bentley Bentayga Hybrid: The vehicle is available to order in most markets, but is currently not available in EU27, UK, Switzerland, Israel, Ukraine, Norway, Turkey and Vietnam.

* Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicles are available only according to WLTP and not according to NEDC.

In 2022, Ducati was able to celebrate its best sporting year of all time having triumphed in both the MotoGP™ and WorldSBK championships. In MotoGP™, Italian rider Francesco Bagnaia won the MotoGP riders' title after an unprecedented comeback. Added to this were the constructors' and teams' world titles. In the 2022 WorldSKB Championship, Ducati also claimed all available titles. In addition to Alvaro Bautista's riders' title, the constructors' and teams' titles in this prestigious racing series went to the brand from Borgo Panigale too. With these trophies, Ducati can add another chapter to its long history of success in motorsports, demonstrating that racing is deeply embedded in the brand's DNA. The Italian brand is setting itself a completely new challenge on the racetrack in 2023. As of this season, Ducati is the only official supplier of motorcycles taking part in the FIM Enel MotoE™ World Championship, the electric class of the MotoGP™ World Championship.

2022 was a successful year for Ducati off the racetrack, too. Despite a very challenging situation on the supply side, Ducati delivered 61,562 (59,447) motorcycles – more than ever before in one year. With deliveries of 10,716 motorcycles worldwide, the Multistrada V4 in its different versions once more proved to be the most popular model among Ducatisti. The Ducati Monster model series also developed extremely positively with 7,971 models sold, followed by the Scrambler 800 family with 6,880 motorcycles delivered. As a result of such strong sales and an improved price position, revenue also rose by 24.0 percent to EUR 1,089 (878) million. Operating return on sales reached 10.0 (7.0) percent. This figure is expected to continue to grow in the next few years and exceed 10 percent from 2030.

Ducati's dealer network is on a growth path, too. The number of distribution facilities increased to a record 821 by the end of 2022. With new dealerships opened in Brunei, Ecuador, El Salvador and Mongolia, Ducati now has a presence in 96 markets. And to make sure the showrooms are well stocked, the Italian brand is planning to refresh and expand its portfolio substantially this year. Eight new models have already been presented and are in the starting blocks. There is great anticipation of the Multistrada V4 Rally, the motorcycle for longer journeys, as well as the new Ducati Scrambler, which confirms the simplicity and authenticity that have always represented essential values for all Scrambler Ducati enthusiasts. Its second generation will be more contemporary and colorful and has an even livelier personality.

The Ducati brand not only offers unique motorcycles, it also creates an entire brand experience for its fans. An example of this are the courses from the Ducati Riding Academy, which allow Ducatisti to improve their riding skills – on and off the road and on the racetrack. Or with events for Ducati fans all over the world like the World Ducati Week, the big Ducati gathering that celebrates the passion for the bikes from Borgo Panigale.

Experiences such as these allow the brand to strengthen its close relationship with the passionate community of Ducatisti as well as offering them unique experiences and products, even beyond the motorcycling world. Building on its outstanding 2022, Ducati wants to steadily enhance and consolidate its brand in the next few years by means of the combination of beauty and technology that enables the company to aspire to an increasingly high level in the premium segment. /

Deliveries to customers

61,562

(2021: 59,447)
+3.6%

Revenue in EUR million

1,089

(2021: 878)
+24.0%

Operating profit in EUR million

109

(2021: 61)
+77.5%

Operating return on sales (ROS)

10.0%

(2021: 7.0%)
+3.0 ppt.

Ducati Streetfighter V2 Storm

Illustration: C3 Visual Lab

3

Products & Services

Photo: AUDI AG

Audi Q4 55 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.6 (WLTP); CO_2 emissions (combined) in g/km: 0. Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

Products & Services

It’s the inner values that count
59

Digitalization and sustainable materials are essential components of modern vehicles interiors. The importance of digital features in particular has been increasing dramatically for years. As a result, Audi is continuing to refine the interior.

Successfully charged
64

Audi is actively promoting the transition to electric mobility with the new Audi Q8 e-tron[1] family, its commitment to establishing a comprehensive charging infrastructure and its own charging services.

Strong structures for safety
68

Vehicle safety is a high priority at Audi, as evidenced by the regular top results achieved in crash tests. Battery-powered electric models are no exception in this respect. In this way, the developers at Audi are ensuring safe driving.

Audi shows sporting strength
73

Audi Sport GmbH celebrated amazing successes in 2022, with high sales figures and a string of motorsport titles. However, the greatest challenge lies ahead. From 2026, Audi will be competing in Formula 1.

Illustration: C3 Visual Lab

[1] Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.1 (WLTP); CO_2 emissions (combined) in g/km: 0. Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle’s selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

↗ Our specific measures for the core topic Products & Services can be found in the Audi Sustainability Program, important key figures in the appendix.

It’s the inner values that count

The car door closes, the gaze turns to the front, the seat provides firm support, the eyes take in the instruments and displays, the hands grip the steering wheel. No other part of a vehicle is experienced as intensively by drivers and passengers as the interior. And it is precisely this space that is now changing more dramatically than it has in the last 100 years – thanks to digitalization and the use of sustainable materials. A look at the past, present and future reveals which aspects are important.

Text: Michael Schulz

Cockpit of the legendary Audi Urquattro, a vehicle in the Audi Q4 e-tron model line and the Audi activesphere concept study (from top).

Photos: AUDI AG

Audi invests know-how, innovative technology and a great deal of passion to generate a brand-typical product experience for its customers. Besides the exterior, sound and driving behavior, it is above all the design and functions of the interior that have a very decisive influence on this experience: it can be felt especially in the moment of silence that follows once the car door has closed, when the cockpit lights up and the driver's hands feel the steering wheel. The interior should be a place where drivers and passengers can feel at ease, while also being extremely functional. With its elegantly designed interiors focused on performance and innovation, Audi has proven for decades that both customers and the developers of the Four Rings have always attached particular importance to inner values, and will continue to do so. Now digitalization and sustainability are opening the door to new concepts and innovative solutions for customers.

Audi Urquattro:[1]
It left its mark on the 1980s with its spectacular design.

Wild and loud: the beginnings of in-car entertainment

"The first car radios? They were around from the late 1920s. But we at Audi Tradition date the start of the era of in-car entertainment – with more than just a radio and a pair of speakers – to the early 1970s," says Audi historian Ralf Friese. The main reason for this development was a new medium that competed with vinyl records: the music cassette. Ralf Friese: "Occupants were now able to make their own playlists. As early as 1973, you could listen to your music on cassette tapes in an Audi – one example being the Audi 100 LS C1.[1] But only if you ordered the 'Neckarsulm' cassette radio." This optional extra turned the dashboard, with its centrally installed speaker, into a soundstage for the top hits of the year.

Entertainment has been a megatrend in the automotive industry ever since. In 1990, the first CD players became available for the Audi V8 D1[1] under the name "Audi Gamma CD." From 1998, it was even possible to watch TV in the Audi V8 D2[1] – at least when the car was parked. The technical prerequisite for this was the "navigation system plus," which could even receive teletext.

My car is talking to me!

The Audi quattro[1] from 1983 is considered something of a legend. Obviously because of its driving performance, but also because of its spectacular digital cockpit displays. But on top of that, it could do something that only the futuristic vehicle in TV series could do at the time: talk. Its on-board computer spoke to the driver. Not in a computer-generated voice, but in the voice of a radio presenter: its repertoire of announcements comprised 15 sentences.

What's more, the on-board computer in the Audi quattro could do math: it continuously kept track of the time, the amount of gasoline consumed, the distance traveled as well as tank capacity and calculated the remaining fuel supply in liters. "The device marked a small but nevertheless important turning point because, in addition to entertainment, the Audi quattro now offered practical functions: the display of vehicle data, then later the integration of telephones, and finally navigation," says historian Ralf Friese, explaining the interior design milestone set by the Audi quattro.[1] Audi's aspiration at the time was to offer its customers sophisticated innovations, and the same is true today.

[1] Vehicle is no longer offered for sale.

[2] To enjoy the holoride experience, passengers need the "Pioneers' Pack" starter package and a holoride-capable Audi vehicle from the A4, A5, A6, A7, A8, Q5, Q7, Q8, Q8 e-tron model lines (electric power consumption (combined) in kWh/100 km: 24.4–20.1 (WLTP); CO_2 emissions (combined) in g/km: 0*), Audi e-tron, Audi e-tron Sportback and Audi e-tron GT quattro (fuel consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/ km: 0*). The prerequisite is the 2023 model year and the third-generation modular infotainment matrix (MIB 3).

* Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

> "The beginnings of in-car entertainment go back such a long way that some of the audio carriers and players have almost disappeared by now."
>
> **Ralf Friese,** Audi historian, Audi Tradition

The future is already the present

A look at the past shows: the interior experience has always continued to evolve. More and more functions are now being added – for passengers as well. And the pace at which new innovations are being developed is increasing. The latest feature is holoride.[2] If desired, it transforms every ride in a wide range of Audi models into an action-packed experience for passengers. ›

Photo: AUDI AG

› And this is how it works: simply put on the VR headset,[3] pick up the controller and immerse yourself in virtual reality. What makes holoride[2] so special is that it adapts the virtual content to the vehicle's movements in real time. If the car changes its speed or turns a corner, the character moves accordingly. In the game "Cloudbreakers: Leaving Haven," for example, a robot is steered through a futuristic landscape. The car ride thus becomes a multimodal gaming event. A positive side effect: the risk of motion sickness, which often occurs when watching movies or animated content in a moving car, is greatly reduced because the visual and sensory experiences are in sync. The games and edutainment content offered by holoride demonstrate creativity – and more are rapidly being added. With the introduction of holoride,[2] Audi is creating a completely new entertainment experience.

Safer on the road – thanks to digital features

The augmented reality head-up display in the Audi Q4 e-tron family is designed not for entertainment, but for safety and comfort. Augmented reality (AR) means that the real world, the viewer's visual perception, is supplemented by digital elements. The AR head-up display from Audi displays important information on the windshield in the driver's field of vision. The information provided by selected assist systems and the turning arrows of the navigation system are visually superimposed in the corresponding place on the real-life outside world and displayed dynamically. They float virtually at a distance of about ten meters in front of the driver. The displays can thus be read in a flash and increase both driving comfort and safety, making them extremely helpful, especially in poor visibility conditions.

New functions through connectivity

Audi is fully focused on connecting the vehicle with its environment (car-to-x services). In many new models, more than 10 invisibly integrated antennas transmit and receive audio, LTE, Bluetooth and GPS signals, enabling Audi to offer new services and functions.

For example, drivers can be advised of the nearest available parking space in the city center (on-street parking via Audi connect) or the nearest available charging station (Audi e-tron route service) or receive early warnings of dangers such as black ice (hazard alerts), since the vehicle can use the Audi fleet's swarm intelligence.

The increasing digitalization of the model series also makes the service "functions on demand" possible, giving customers the chance to add selected optional extras in the areas of driver assistance, lighting or infotainment retrospectively and thus to respond flexibly to changing needs. In this way, they can upgrade the LED headlights to matrix LED headlights with intelligent high-beam control, for example. Among the assist systems that can be added is park assist, while the infotainment package includes the Audi smartphone interface. ›

[3] The use of VR headsets during the journey is: 1) only approved for use by passengers in the outer seating positions of the second seat row; 2) permitted for persons over 1.5 meters tall; 3) only permitted if the VR headset user cannot reach any object in front of them (e.g., the rear surface of the front seat) with their fully outstretched arm (including outstretched fingers); 4) only permitted if the necessary safety features (e.g., mounting device) are attached to the VR headset.

holoride[2] brings in-car entertainment with which the virtual environment can be perceived as real to selected Audi models.

Photo: AUDI AG

Convenience and safety thanks to augmented reality: head-up display in a model of the Audi Q4 e-tron family.

› The Audi smartphone interface ensures excellent and stable connectivity between cell phone and vehicle. The interface establishes a wireless connection to customers' iOS and Android cell phones and places their Apple Car Play or Android Auto environment on the MMI display. Customers can then navigate the content conveniently via the vehicle's controls. While the Audi smartphone interface allows the cell phone to be seamlessly integrated into the Audi infotainment system, the myAudi app turns the cell phone and car into a single unit on the smartphone. The myAudi app bundles the various Audi connect services.

More digitalization thanks to innovative platforms

With their platform strategy, the Volkswagen Group and the Premium brand group are leveraging maximum synergies and thus reducing their development costs. The launch of the Premium Platform Electric (PPE) is the next important step for Audi – both in the area of fully electric drive technology and digitalization. With the new E³ electronics architecture, which is being developed jointly with CARIAD, the PPE will bring a comprehensive digital premium experience to series production. The architecture places an even stronger focus on the digital needs of customers: by connecting to the Volkswagen Automotive Cloud for over-the-air updates so that the vehicle's software is always up to date. By providing improved connectivity based on the 5G mobile communications standard for safety features (e.g., assisted driving, faster hazard warnings) and more efficient and relaxed driving (e.g., traffic light information). And by offering optimized performance, improved navigation functions and new UX/UI.[4]

A space beyond your dreams

Looking into the future: in its concept cars, Audi breaks entirely with conventions that have been in place for decades. The space that surrounds passengers is ›

[4] UX/UI: The abbreviation UX stands for user experience. UI is the abbreviation for user interface.

[5] Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.1; CO_2 emissions (combined) in g/km: 0. Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

Tradition at Audi: innovations for sustainability

If you think sustainability is a topic that has only played a role for a few years, you are mistaken. For the interior, sustainability has been gaining increasing importance at Audi since the 1990s. "That's when we first used biological insulating material for the door panels in selected models," says Ralf Friese, who works at Audi Tradition. "And in some cases, we were already using naturally tanned leather as well."

Today, the demands on sustainability have risen significantly at Audi. Resource conservation, for example through recycling, plays an ever-increasing role. In some parts of selected vehicles, Audi therefore uses recyclates, i.e., reprocessed materials that come from a recycling process. The goal is not just to reduce carbon emissions, but to make cost-effective and efficient use of materials. And Audi plans to continuously increase the proportion of recycled materials in its models.

In the models of the Audi Q4 e-tron family, more than two dozen parts already contain recycled materials. For the Audi Q8 e-tron,[5] the company will not only offer optional interior features such as seat upholstery made of recycled PET bottles, old textiles or fiber scraps; for the first time, there will also be safety-relevant parts that are made partly of mixed plastic waste: the plastic covers of the seat belt buckles.

Many of the materials in the latest Audi concept cars are produced using sustainable or recycled raw materials. For example, the seat cushions in the Audi urbansphere concept[6] are made of a recycled polyamide (Econyl). The armrests and the rear area of the vehicle contain bamboo viscose. Bamboo grows faster than ordinary wood, binds a lot of carbon dioxide and neither herbicides nor pesticides are needed in its cultivation. This is in keeping with a progressive understanding of premium quality, which invariably also includes sustainability.

Photo: AUDI AG

Sustainable development goals

The following are at the focus of this company commitment:

Further information on Audi and the UN sustainability goals can be found on pages 110–122.

› being redefined: for one thing, electric mobility enables a previously unseen division of space due to the different drive components. For another, increasingly automated driving functions[6] mean that the interior can be used more and more as a living and experiential space. Our developers have designed the Audi urbansphere concept[6] especially for megacities, for example. The concept car offers an extremely large interior with four individual seats in two rows: when conversing, passengers can turn to face each other on their swiveling armchairs. Meanwhile, anyone who wants some privacy can cover their head area with a screen mounted behind the head restraint. To share infotainment content – or participate in a video call – passengers can use a large-format OLED screen that swivels from the headlining into the space between the rows of seats. The Audi urbansphere concept[6] is thus equally suitable for use as a luxurious rolling lounge[6] offering first-class comfort and as a mobile office.

In the interiors of the concept cars, new digital features come into their own. Anyone looking around the Audi grandsphere concept[6], for example, will discover neither dial instruments nor screens. Only when the vehicle comes to life at a simple touch of the finger do the controls integrated into the surfaces reveal themselves. They are not physically tangible, as they are projections on the surfaces below the windshield. All the information required is displayed there in ultra-fine resolution.

And in the Audi activesphere concept,[6] which celebrated its world premiere in January 2023, “Audi dimensions” creates a unique experience. At the heart of this new system are innovative mixed-reality headsets – available individually for all occupants at their seat in the car. It is an innovative operating concept that combines the physical and virtual worlds (mixed reality). The high-tech headset[7] that is individually configurable for all passengers provides a view of the real environment, while simultaneously displaying 3D content and interactive elements in the field of vision. All data relevant to the driver – such as driving conditions and navigation – can thus be superimposed. The most important technical innovation in the Audi activesphere concept[6] is the adaptation of augmented reality (AR) for mobility. “Audi dimensions” creates the perfect synthesis of actual surroundings and digital reality.

The Audi “sphere” concept cars show the Four Rings’ vision of sustainable premium mobility. Common to all vehicles is not only the electric drive, but also a consistent focus on the capability for automated driving. This technical layout gives rise to completely new designs, especially when it comes to interiors and opportunities for the people on board – they can use their time productively or simply enjoy the journey. /

Interior with first-class comfort: Audi urbansphere concept.[6]

[6] The vehicle mentioned is a concept vehicle that is not available as a series-production vehicle. The automated driving functions mentioned are technologies currently under development, are not available for series-production vehicles and work only within system limits. All possible uses of the technical systems and functions described represent only a possible concept and are dependent on the respective legal regulations in the relevant country.

[7] The augmented reality headset mentioned is not available for purchase either. The automated driving functions mentioned as well as the augmented reality headset mentioned are technologies currently under development, are not available for series-production vehicles and work only within system limits. All possible uses of the technical systems and functions mentioned represent only a possible concept and are dependent on the respective legal regulations in the relevant country.

Photo: AUDI AG

Successfully charged

Audi is accelerating its transformation to electric mobility with the new Audi Q8 e-tron[1] and the development of a premium charging infrastructure. Five experts recount a success story with a steep learning curve.

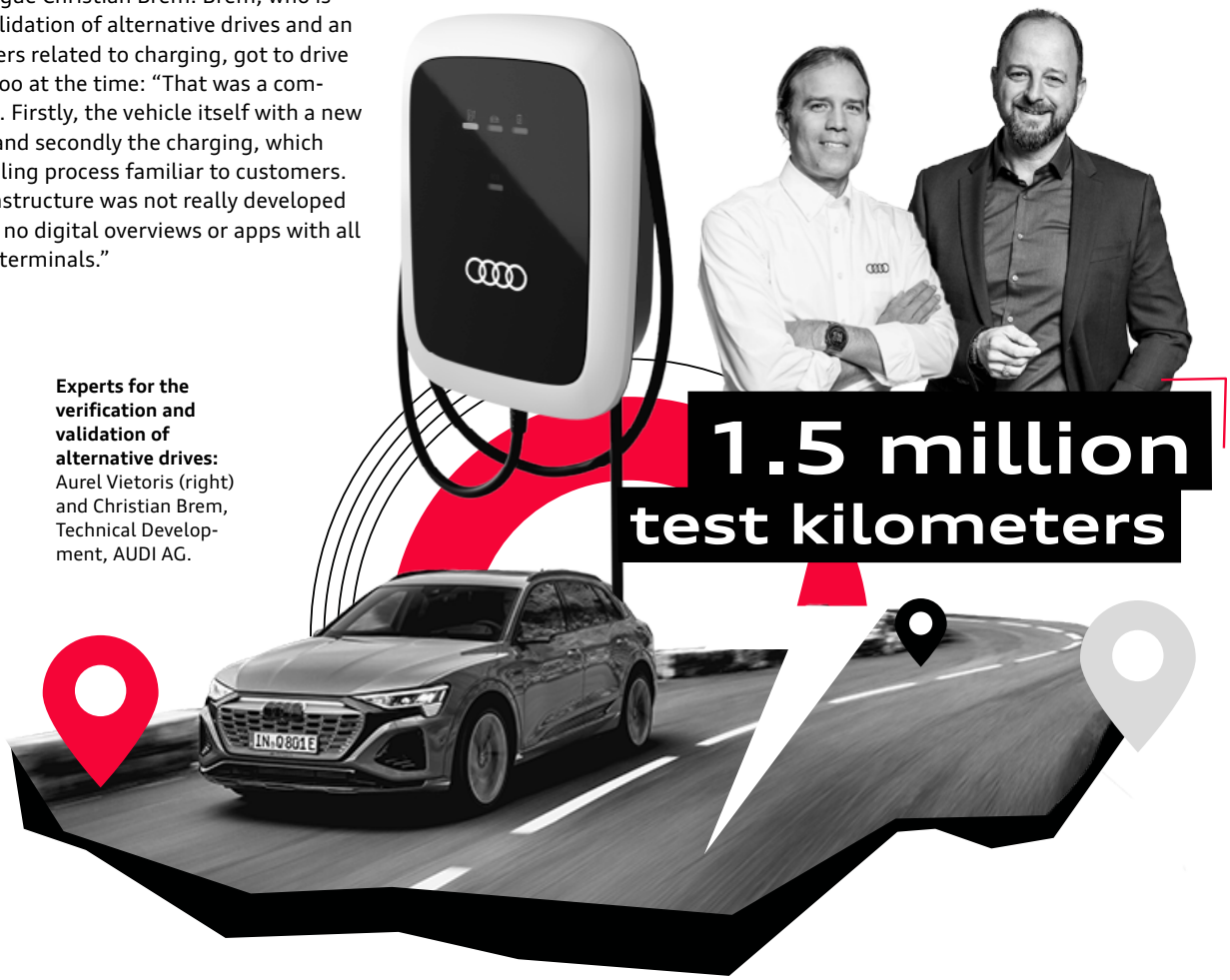
Text: Sven Schulte-Rummel

When is something a success? And how can real progress be identified? "To understand whether something has succeeded and how much progress has been made, you have to first look back to the very beginning and then to the present day," says Aurel Vietoris. Vietoris heads up Verification and Validation Alternative Drives at Audi and is very experienced when it comes to test runs with electric cars. When you listen to him describing the details of the first test runs, you get the sense that the age of electric mobility only began less than a decade ago. "When we conducted the first tests with the Audi e-tron in 2016, this was a time filled with adventures for us as employees in Technical Development. We broke new ground every day," says Aurel Vietoris and looks to his colleague Christian Brem. Brem, who is responsible for validation of alternative drives and an expert in all matters related to charging, got to drive the test vehicles too at the time: "That was a completely new world. Firstly, the vehicle itself with a new drive technology and secondly the charging, which replaces the refueling process familiar to customers. The charging infrastructure was not really developed as yet, there were no digital overviews or apps with all the fast-charging terminals."

[1] Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.1; CO_2 emissions (combined) in g/km: 0. Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

Exhaustive tests for quality and compatibility

Fill up as quickly and easily as possible and get back on the road again without delay – that's what drivers want, regardless of whether the fuel is petrol, diesel, gas or electricity. When it comes to test runs with electric Audi models – from the first generation of the Audi e-tron to the Audi Q8 e-tron[1] today – one thing is true: "We want to make sure our models are compatible with the local fast-charging terminals, no matter which market we are selling into – from China and South Korea to Europe and South Africa, all the way to the USA. The challenges in this respect are the different ›



Experts for the verification and validation of alternative drives: Aurel Vietoris (right) and Christian Brem, Technical Development, AUDI AG.

Illustration: C3 Visual Lab | Photos: AUDI AG, Elli

Sustainable development goals

The following SDGs are at the focus of this company commitment:

Further information on the Audi sustainability strategy and the UN sustainability goals can be found on pages 110–122.

[1] Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.1 (WLTP); CO_2 emissions (combined) in g/km: 0.*

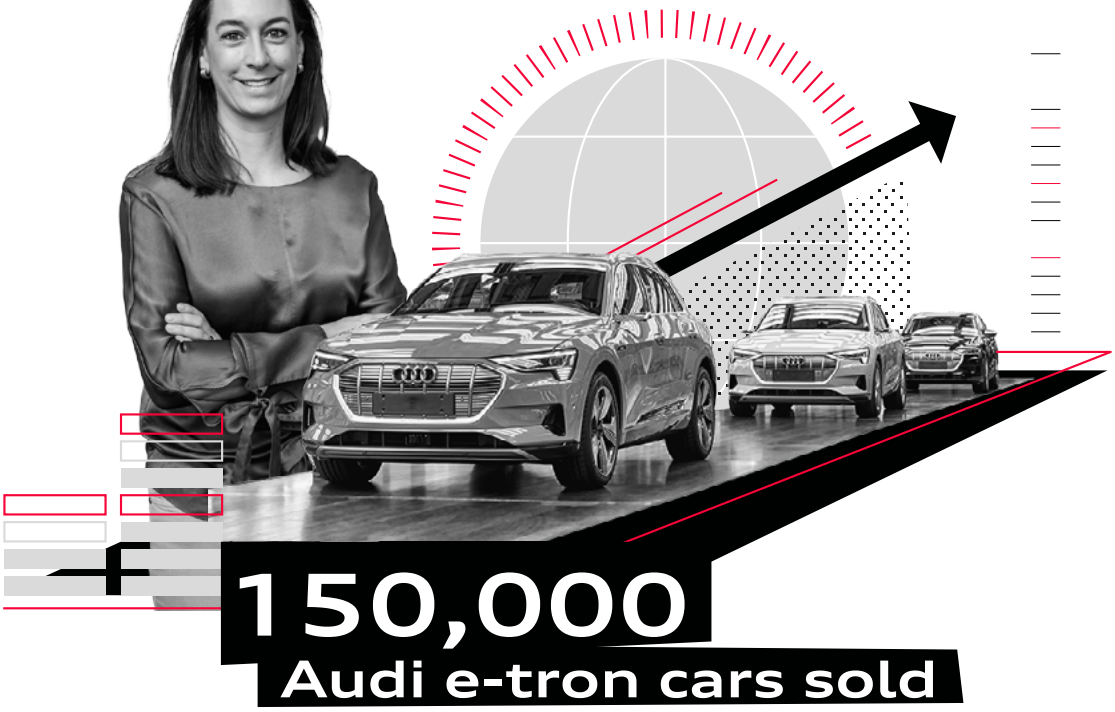
[2] Audi e-tron GT quattro: electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[3] Audi Q2 e-tron: The model is manufactured by the associated company FAW-Volkswagen Automotive Co., Ltd., Changchun (China), and available and sold exclusively in China.

[4] Audi Q5 e-tron: The model is manufactured by the associated company SAIC Volkswagen Automotive Co., Ltd., Shanghai (China), and available and sold exclusively in China.

[5] Modular vehicle architectures, or so-called platforms, make it easier to position the most diverse derivatives in the market cost-efficiently.

* Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.



Satisfied with the successes of electric vehicles: Dr. Christiane Zorn, Head of Product Marketing, AUDI AG

Illustration: C3 Visual Lab

› plug and charging standards," explains Christian Brem. "We were really just starting out in 2016 and had to first develop procedures for how to test the charging process: with outside temperatures of plus 50 degrees Celsius and minus 30 degrees Celsius, with interruptions and deliberately simulated errors, with different charge states – from a discharged to a fully charged battery. Our tests were, and still are, really exhaustive, because we know how irritating customers would find it if they couldn't charge their vehicle. You might forgive your smartphone for being too hot to charge, but not your car."

"Compared with its predecessor, the new Audi Q8 e-tron[1] demonstrates especially clearly just how far we have come with the topic of charging," explains Aurel Vietoris. The emphasis here is on smart charging functions and smart battery management. Vietoris: "We made adjustments, for example, to increase the usable battery capacity for customers, which can produce a greater range." Premium comfort is also provided by the charging timer, for instance, by allowing customers to set the precise time of departure. "This is done directly in the vehicle or conveniently via the myAudi app," explains Aurel Vietoris. "The automatic charging process therefore charges the battery to a preset level as close as possible to the departure time. In addition, preconditioning adjusts the temperature of the vehicle interior to the desired level prior to departure."

Audi sets benchmarks for the Group

Sophisticated processes and quality standards in development and testing demonstrate the level of professionalism of the company in dealing with electric mobility. Audi has defined benchmarks here to the benefit of all of the Group's brands. For example, with accurate reports for how test vehicles are tested at the charging terminals. Christian Brem: "Through our work we lay the foundations to help us develop future electric cars throughout the entire Volkswagen Group – regardless of the brand and the underlying technological drive platform."

The company has continued to expand its fully electric portfolio over recent years with the Audi e-tron, Audi e-tron GT[2] and Audi Q4 e-tron models as well as, for the Chinese market, the Audi Q2 e-tron[3] and Audi Q5 e-tron.[4] The use of synergies in the Volkswagen Group has been a proven procedure in this regard for many years in order to be able to offer customers high-tech vehicles that are adapted in terms of character to the respective brand. For example, the Audi e-tron GT[2] and Audi Q4 e-tron share the same drive platforms[5] with models from the Group brands Porsche, Volkswagen, Seat and Škoda. This philosophy will also continue to be pursued in drive platforms such as the PPE (Premium Platform Electric) or, in the future, the SSP (Scalable Systems Platform) and primarily the electronics architectures (E³) developed by the Group brand CARIAD. ›

› International success

Even the Audi e-tron, Audi's first fully electric production vehicle, benefited from platform synergies and became a direct success. "Since it was introduced around five years ago, we have sold more than 150,000 units in 99 markets," says Dr. Christiane Zorn, Head of Product Marketing at AUDI AG. "The numbers speak for themselves and prove what a major success story this is." The model was the top-selling passenger car in Norway in 2020, for example. In addition, the Audi e-tron was awarded the distinction of "Best car to buy" (Green Car Reports) in the USA.

The Audi Q8 e-tron,[1] which is set to hit dealerships in selected markets in 2023, will build on these successes. In many key aspects, it overtakes its predecessor. For example, its range – measured according to WLTP – has been increased by more than 30 percent to up to 600 kilometers.[6] The maximum DC charging capacity has increased to 170 kW, which means that the battery in the Audi Q8 e-tron[7] can be charged from 10 percent to up to 80 percent in just 31 minutes.[8]

The electric drive system of the Audi Q8 e-tron[1] combines the extremely varied demands that drivers make of a full-size SUV in a complete package with high performance.

Audi e-models more popular than ever

Worldwide

+ 44.3%

Increase in Audi e-models sold compared with 2021

2021	81,894
2022	118,196

total Audi e-models delivered

Audi tests the prototype of the Q6 e-tron model line in the far north

Illustration: C3 Visual Lab, Photo: AUDI AG

[1] Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.1 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[2] Audi e-tron GT quattro: electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[6] Audi Q8 Sportback 55 e-tron quattro: electric power consumption (combined) in kWh/100 km: 24.1–19.9 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[7] Audi Q8 55 e-tron quattro: electric power consumption (combined) in kWh/100 km: 24.4–20.6 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[8] The charging duration of the battery can vary depending on various factors, such as the ambient temperature, the use of other country-specific connectors and use of the preconditioning function (e.g., remote-controlled air-conditioning of the vehicle). More detailed information about charging duration can be found online here.

[9] Audi charging is available from Volkswagen Group Charging GmbH (Elli), Mollstrasse 1, 10178 Berlin, Germany. Further information on the number of charging points as well as the latest price and contract information can be found here.

[10] The Plug & Charge function can be used only with an Audi charging tariff, a Plug & Charge-capable Audi e-tron vehicle and after prior activation in the myAudi app by the key user and is available only at compatible charging stations.

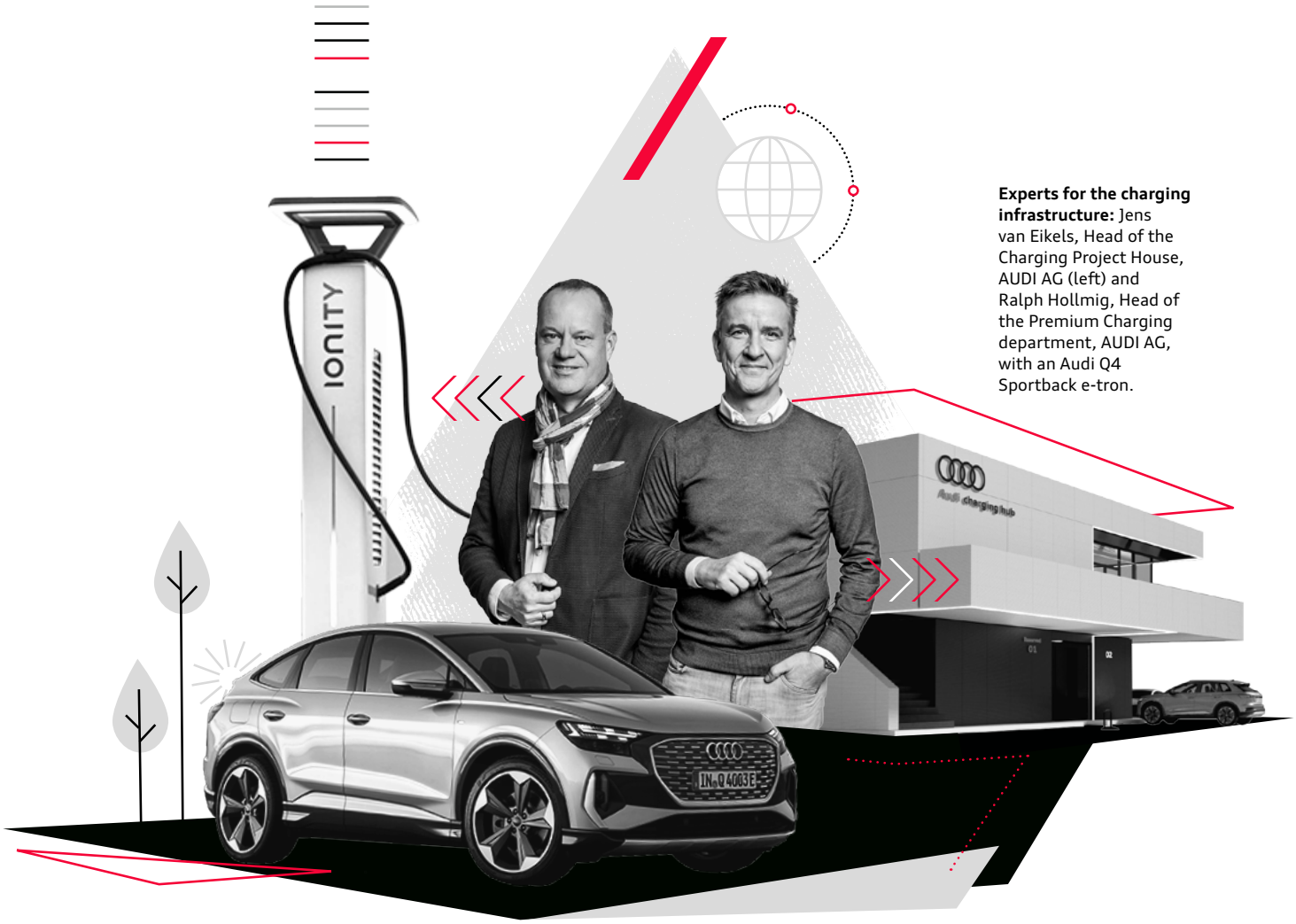
* Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

Customer needs at a glance

One thing is certain: if the issue of charging is not dealt with properly, the transformation to electric mobility will also not succeed. There is no time to lose therefore when it comes to expanding the charging infrastructure. Governments all over the world are deciding to invest billions in public charging networks, with news about new fast-charging parks practically every day. Take the EU, for example, where the number of publicly accessible charging stations grew by 580 percent between 2015 and 2021. In fall 2022, the federal government in Germany stated that its goal was to roll out one million publicly accessible charging points by 2030. Current situation? According to the German Federal Network Agency, there were over 63,500 charging points in Germany in December 2022, including over 12,500 fast-charging terminals. The expansion of the charging infrastructure is an important basis for the electric initiative of the Four Rings. Audi will expand its e-portfolio in the next five years: from 2026, all new vehicles introduced on the global market will be e-models. By 2027, the company wants to offer an all-electric vehicle in all core segments. Then, according to current product planning, Audi will have more than 20 e-models in its range.

What progress has Audi made on the topic of the charging infrastructure? "We focused from the outset on the requirements and demands of customers," says Jens van Eikels, who heads up the Charging project house. "Just shortly after the market introduction of the Audi e-tron, the company was already offering customers extensive opportunities to charge their cars: both for charging at home including a green electricity offer and for public charging." Since the beginning of 2023, customers have had access to around 400,000 public charging points throughout Europe with Audi charging[9] as well as to the IONITY fast-charging network – a joint venture in which the Volkswagen Group is involved with Porsche and Audi. Audi is also collaborating with partners in China and the USA to develop the charging infrastructure.

However, attention is not focused at present on expanding the charging infrastructure in terms of quantity, but also as regards quality. Thus, making sure that the charging experience is as positive as possible is increasing in importance. Plug & Charge[10] is one such feature that guarantees this in selected models such as the Audi Q8 e-tron:[1] at compatible charging terminals, the vehicle authorizes itself when the charging cable is inserted and activates the terminal; the billing process is fully automatic as well. In addition, the team of Jens van Eikels has already set its sights firmly on charging infrastructure issues that will be important for customers in the future, such as bidirectional charging (see box on next page). ›



Experts for the charging infrastructure: Jens van Eikels, Head of the Charging Project House, AUDI AG (left) and Ralph Hollmig, Head of the Premium Charging department, AUDI AG, with an Audi Q4 Sportback e-tron.

› With its Audi charging hubs, Audi is also establishing modern fast-charging stations with high-power charging bays that can be booked in advance and with the option of a lounge for customers. “With our Audi charging hubs we are placing the emphasis on a premium charging experience,” explains Ralph Hollmig, who heads up the “Premium Charging” department. The first Audi charging hubs have already been in operation for a number of months and are used frequently by customers. “We are especially satisfied with the repetition rate of 70 percent. It shows that customers are being encouraged to return because of the good experience with the charging process locally and the atmosphere,” says Hollmig.

Electric cars for a premium experience

Progressive performance and long ranges thanks to excellent energy efficiency in vehicles such as the Audi Q8 e-tron[1] or Audi e-tron GT quattro[2] on the one hand – a charging experience fitting of Audi’s premium credentials on the other: experts from Development and Sales have succeeded in accelerating their own transformation to electric mobility with tailor-made solutions for customers. “We had a very steep learning curve,” says developer Aurel Vietoris reflecting on the early days. “Thanks to the experiences gained along the way, we can now offer a truly premium experience – both in terms of driving and charging.” /

Bidirectional charging

Bidirectional charging involves integrating the electric car into the domestic power grid. The high-voltage battery of the electric car is not only charged via the wall box at home but can also supply energy back to the house as a decentralized storage medium. If home owners have a photovoltaic system, the electric car serves as a temporary storage medium for the domestically generated eco-electricity. When the sun is no longer shining, the vehicle can supply the stored electricity back to the house. Bidirectional charging at home – also known as vehicle-to-home (V2H) – has great potential to reduce the home owner’s electricity costs and increase network stability.

Further information on bidirectional charging can be found at **www.audi.com**.

[1] Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.1 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[2] Audi e-tron GT quattro: electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0.*

* Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle’s selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

Illustrations: C3 Visual Lab

Audi e-models

Strong structures for safety

Before buying a fully electric Audi, it is not unusual for customers to ask whether, in the event of an accident, electric vehicles are as safe as Audi models with a combustion engine. Development engineers at Audi have answers with convincing details.

Text: Judy Born

A glance beneath the skin

The high-voltage battery and body form a strong structure. The high-voltage components are located in a frame that is 2.28 meters long, 1.63 meters wide and 0.34 meters high, underneath the occupant cell. The battery – here in an Audi Q8 55 e-tron quattro[1] – is protected by a surrounding frame made of cast aluminum nodes and extruded aluminum sections.

[1] Audi Q8 55 e-tron quattro: electric power consumption (combined) in kWh/100 km: 24.4–20.6; CO_2 emissions (combined) in g/km: 0. Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

Illustration: AUDI AG

Hundreds of thousands of customers are totally excited about their decision to buy an electric car. But there are still a number of drivers who remain skeptical about electric cars, even in 2023 – despite the fact that they are increasingly filling the streets in many towns and cities. One reservation that is often voiced concerns the topic of safety. What happens to the battery if there is a crash? Is the flow of electricity immediately interrupted? In the event of an accident, is there a greater risk of fire with an electric car compared with a vehicle powered by gasoline or diesel?

Crash tests[2, 3] performed by independent organizations provide important parts of the answer to these questions: for example, the Audi Q4 e-tron[2] received the top rating of five stars in the Euro NCAP crash test[4] – just as the Audi e-tron[3] did in 2019 as the brand's first electric car. ›

› The important thing about the Euro NCAP tests: "The criteria for our crash tests are basically the same as for vehicles with combustion engine and electric vehicles. With electric cars, however, more attention is paid to the inspections following an accident," explains Michiel van Ratingen, Secretary General of Euro NCAP. "There is a concern with electric vehicles that the battery will be damaged in an accident and result in fire. Engineers working on electric cars therefore face additional requirements in relation to energy management, vehicle deformation and interruption of voltage following impact."

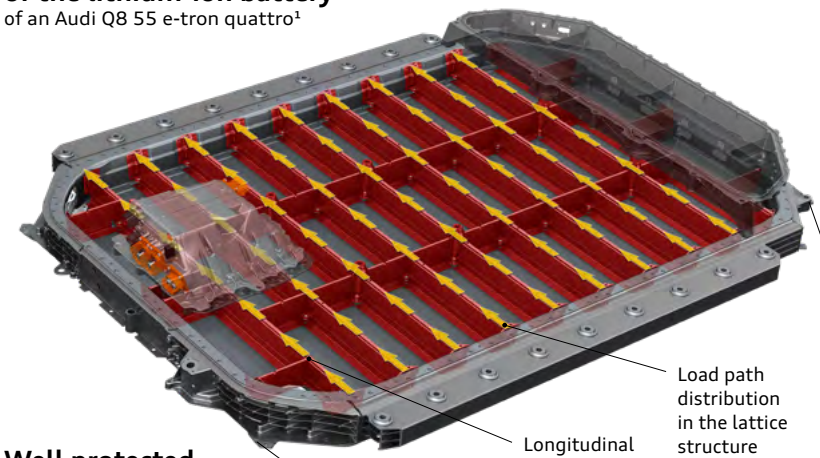
Crash tests for more safety

The five-star ratings[2, 3] are no surprise to the safety experts at Audi since the company has always worked on high standards for vehicle safety and has also clearly formulated this requirement in its Corporate Regulations. As early as 1938, engineers at DKW, one of the four founding brands of today's AUDI AG, carried out systematic rollover tests with various DKW models in Golm near Potsdam – the first crash tests in the history of the automobile. These were complemented by reproducible crash tests that took place on a purpose-built facility in the central Auto Union testing department.

"Each of our models, regardless of drive system, meets the high internal standards," says Dr. Thorsten Adolph, expert for front and rear crashes in the Whole Vehicle Development department. "This involves a lot of know-how, hard work – not to mention significant computing power. Crash simulations are now an indispensable part of model development: our specialists perform thousands of crash simulations each year before the first real prototype is built."

"We go the extra mile to ensure our vehicles offer a very high level of protection. And we are delighted when we get such good results from independent ›

Integrated crash structure of the lithium-ion battery
of an Audi Q8 55 e-tron quattro[1]



Well protected from all sides
Structure of the lithium-ion battery of an Audi Q8 55 e-tron quattro[1]

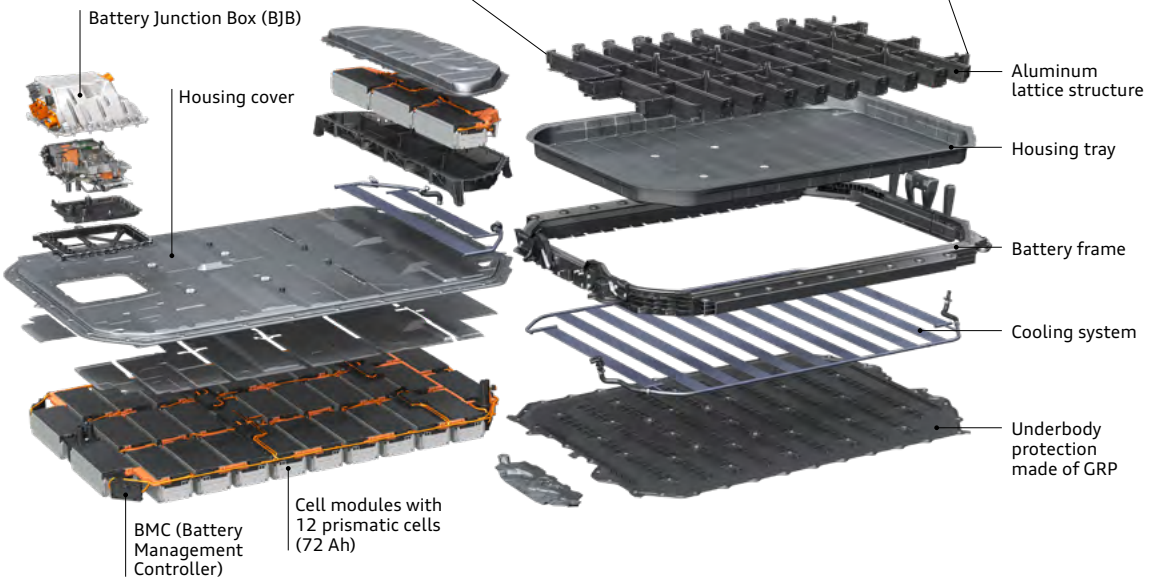


Illustration: AUDI AG

[1] Audi Q8 55 e-tron quattro: electric power consumption (combined) in kWh/100 km: 24.4–20.6; CO_2 emissions (combined) in g/km: 0. Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

[2] Detailed results Audi Q4 e-tron.

[3] Detailed results Audi e-tron.

[4] NCAP stands for New Car Assessment Program. Euro NCAP is an association of European transport ministries, automobile clubs and insurance associations. The organization conducts crash tests on new car models. A model that is awarded five stars is one of the most safely tested vehicles in the world at present.

› crash tests,"[2] says Michael Broscheit, expert for consumer protection at Audi. "Especially considering the skepticism that unfortunately still exists among consumers regarding electric cars. We have very high standards when it comes to safety, Audi invests a great deal – and that applies not only to crash simulations, but also of course when it comes to developing the individual components, especially with regard to battery cells."

Crash and overload tests at the battery testing center

"There are two major differences regarding the safety of an electric car compared with a vehicle with combustion engine," explains Audi development engineer Sebastian Jäckisch.

> "Our specialists perform thousands of crash simulations each year."
>
> **Dr. Thorsten Adolph,** expert on front and rear crashes, Whole Vehicle Development, AUDI AG

"Firstly, it is important to really safeguard the high-voltage battery in the event of a crash. The battery consists of a stable housing that is designed to protect the battery modules sufficiently against damage even in a heavy collision," explains Jäckisch (see infographic on previous page).

Audi has the necessary expertise for building this safety-relevant component itself – the company has been assembling the battery module in Brussels for several years now and the assembly of pre-production batteries for the next generation of electric vehicles is currently underway in Ingolstadt.

"And secondly, the risk of electric shocks has to be minimized. For this purpose, the high-voltage system is designed so that it is safe to touch. In other words, live parts are electrically insulated and made inaccessible. At the same time, the high-voltage system is shut down after an accident in which the airbag is triggered so that the power in the high-voltage system is automatically reduced," explains the engineer.

The quality of the battery cells is another important factor. The Premium brand group can rely in this respect on the know-how of its own battery testing center in Gaimersheim. Here, the individual cells and the battery system as a whole have to pass numerous intensive tests. The Audi experts conduct crash and overcharge tests, while the service life and mileage of several hundred thousand kilometers are reconstructed on test rigs. In this way, Audi is working to ensure as high a level of product safety as possible in all its electric models – all the way to the individual battery cell. /

Photo: Private

Jochen Schäfer, M. Eng., is Managing Director of Defensio Ignis, a firm of experts and engineers in the area of fire safety, first aid and occupational safety in Linnich. He is also a commissioned fire safety engineer of the Mecklenburg-Western Pomeranian Chamber of Engineers, a publicly certified expert for preventive fire safety (FH) and according to DIN EN ISO/IEC 17024, a senior fire inspector and specialist fire service consultant to the German Fire Services Association (DFV).

Sustainable development goals

The following SDGs are at the focus of this company commitment:

Further information on Audi and the UN sustainability goals can be found on pages 110–122.

4 questions for … Jochen Schäfer,

external honorary consultant of the DFV (German Fire Services Association)

1

Mr. Schäfer, how is a battery fire extinguished and how does the process differ between electric cars and vehicles with a combustion engine?

Water is and clearly remains the best means of extinguishing a fire. The advantage: water is available almost everywhere, unlike firefighting foam, for example, which is used by the fire service to starve the burning fuel of the necessary oxygen. However, we need a lot more water in the case of an electric car than for a vehicle with combustion engine because we need to cool the battery after extinguishing the fire. This is the only way we can ensure as far as possible that other components do not subsequently catch fire again.

2

How does the fire service deal with an accident involving an electric car?

Basically it's not much different to the procedure for cars with a combustion engine: we secure the scene of the accident and the vehicles involved and check the use of rescue equipment such as cutters, spreaders or rescue cylinders. But there is one decisive difference compared with combustion models: to protect the passengers and the emergency responders, we have to be sure to work along the clearly marked high-voltage components during the technical accident rescue. This is not complicated, but it is necessary to ensure that live wire, for example, are not cut by rescue shears.

3

How do the responders know where to find these components?

A rescue data sheet is issued by manufacturers for their vehicles, whether electric or with combustion engine, which contains a precise description of all the information needed by the emergency responders. These rescue guidelines can be downloaded online or via app. Modern electric cars also issue an emergency call automatically to the nearest rescue center in the event of an accident. This also includes data about the vehicle, making it immediately apparent what model is involved.

4

Do you think there is an increased risk of fire in the event of an accident with an electric car compared with a vehicle with combustion engine?

Without question: no, not at all!

Transparency, protection and responsibility

Illustration: C3 Visual Lab

Digitalization offers immense opportunities: not only does it enable new services and useful functions, it also makes mobility smarter and more personal. Data and information are necessary to develop these solutions and help us understand customers' wishes even better.

Digital services and functions tailored to their needs are already an important selling point for many customers today. Fully connected AUDI AG models offer customers a wide range of digital experiences, even if most of the digitalization in a vehicle takes place in the background and therefore "invisibly" – because seamlessly integrated and with intuitive operation – enhances comfort and convenience.

The Audi Q4 e-tron model line offers a number of digital features. The Premium brand group attaches great importance to data privacy and cyber security for its models.

Digitalization as a central topic

Responsible digitalization is a central topic for our customers and the company and sets the brands in the Premium brand group apart from the competition. It goes without saying that the quality standards that customers of Audi vehicles are used to also remain ›

› valid in the digital age. Attention in this respect focuses on data privacy and data security.

Right of self-determination on data

Data privacy relates to the protection of personal data. The focus here is on the right of self-determination on data. This means that each individual can decide for themselves which personal data they disclose and who is allowed to use this information.

Audi treats data privacy as a high priority. This is true in respect of all IT solutions and starts with the development of products and services.

The conscientious use of data within the scope of applicable legislation is therefore regarded as an integral part of corporate responsibility and is also embedded in the Corporate Policy on Data Protection. Audi complies fully with applicable laws on personal data, data privacy and personal rights to privacy. Legal security is essential for digital business models. when handling the personal data of its customers, Audi complies with legal requirements with regard to transparency, self-determination and data minimization.[1]

Cyber security: protecting the vehicle from attacks

Data security (including cyber security) deals with the general protection of data, irrespective of whether or not this is personal data. Data security therefore does not deal with the question of whether data may be collected and processed, rather which measures must be taken to ensure that this data is protected.

Whether customer, vehicle or production data: it is very important to Audi that essential security standards are met. The company therefore continually enhances its security systems to prevent attacks on the IT infrastructure as far as possible, to identify such attacks in good time and to limit their consequences to the greatest possible extent. In doing so, Audi complies fully with legal requirements.

Many teams of IT security experts from various relevant business areas (including Development, Corporate Quality, Production, Sales and IT) collaborate closely 24/7 all year round. This does not just apply to the Premium brand group but to the entire Volkswagen Group worldwide. At the same time, it is recognized that security is not a product but a process, as defined by Bruce Schneier, a U.S. expert for cryptography and computer security. Audi is bound by international information security standards, for example, the ISO/IEC 27000 series which was developed and published by two international organizations and is used by entities to implement effective information security management systems (ISMS).

Automotive security is an integral part of vehicle development in the Audi Group. Protecting the vehicle and back-end infrastructures is essential at Audi, as is the secure transmission of data. Because new models are connected to and interact with the outside world, Audi is aware of the risk to vehicle systems caused by hackers. For this reason, the company uses technical, organizational and process-based measures as well as recognized and proven mechanisms and standards to ensure due regard for automotive security as early as the development stage. Internal IT security experts develop safeguards right from the design stage of the systems and identify and eliminate vulnerabilities. The certified cyber security and software update management systems (UNECE Regulations R.155 and R.156) also contribute to security.

Preventing attacks using modern encryption technologies: Audi uses processes of the kind used, for example, for online banking, both when connecting from the car and from a smartphone to the Audi back-end. Data is stored in encrypted form on the Audi servers and the online connection to the myAudi platform also takes place exclusively in encrypted form. Communication between smartphone and car for critical functions such as the digital key is permitted only once the secure Audi server has matched both the vehicle and smartphone with each other. Access to data for administrative purposes is traceably documented. /

You will find **further information** on data privacy and security on the Audi website and on the Audi portal "Data Subject Rights."

[1] Transparency means that Audi informs its customers in a suitable manner regarding the use of their personal data. This includes, in particular, which data are collected and processed, what purposes underly use of the data and whether the data are transferred to third parties. Transparency also means informing customers as to which of their personal data are held by Audi. Of course, data secrecy applies to all personal data.

Audi collects, stores, transfers and uses personal data solely as permitted by legal provisions. Should the use of personal data go beyond contract processing requirements or other legally permitted reasons, consent for the specific purpose is obtained from the customer. As a matter of principle, personal data are only used for the specific purposes for which they were originally recorded and for the purpose or wish defined by the customer.

Audi also applies the principle of data minimization. As far as possible, the company uses anonymized or pseudonymized data, unless the collection, processing and use of personal data are necessary in pursuit of a legitimate interest.

Audi shows sporting strength


Audi RS Q e-tron[1]


Audi R8 LMS GT3 evo II


Audi RS 6 Avant performance[2]


Formula 1 show car

Launched 40 years ago with just a handful of employees, Audi Sport GmbH today defines the sporty and exclusive image of the Four Rings. The Audi models with the highest performance, which carry the abbreviations R and RS, bear the signature of Audi Sport, as do the various customer racing cars and the Audi RS Q e-tron[1] entered at the Dakar Rally. Audi Sport achieved success at all levels in 2022 – from sales figures to countless race victories and titles. Audi is now taking on a new challenge and will be competing in Formula 1 from 2026.

Text: Sven Schulte-Rummel

Photos: AUDI AG

[1] Audi RS Q e-tron: This vehicle is the Dakar Rally race car; it is not available for purchase. Closed track, professional driver. Do not imitate.
[2] Audi RS 6 Avant performance: fuel consumption (combined) in l/100 km: 12.7–12.2; CO_2 emissions (combined) in g/km: 289–277.
Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.
Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment.

High performance is the core idea not only behind all of the products of Audi Sport GmbH, but behind everything Audi Sport does. “That is what drives us,” says Rolf Michl, Managing Director of Audi Sport GmbH and Head of Audi Motorsport. And the drive is an important keyword when it comes to Audi Sport vehicles: no matter whether there is an internal combustion engine or an electric motor under the hood, all R and RS models from Audi Sport are breathtaking, dynamic and full of character. They deliver top performance wherever and whenever desired, but also ensure relaxed confidence on long journeys. And that is important because many Audi RS drivers use their cars for business travel or shopping trips on a daily basis.

Born in motorsport, tested under extreme conditions and brought to production maturity – these are the hallmarks of the high-performance vehicles from Audi Sport. “The RS models are the dynamic spearhead of their particular model series. They captivate customers with pure emotion and shape the sporty image of the Audi brand,” explains Dr. Sebastian Grams, who as Managing Director of Audi Sport GmbH is responsible for the series-production range. “In 2022, we delivered a total of 45,515 vehicles – an increase of 15.6 percent compared with the prior year.”

The financial success of Audi Sport is also aided by the Audi exclusive customization program, which aims to fulfill exclusive and individual customer needs. From paint finishes in the customer’s preferred color to luxurious interior options such as high-quality leather, decorative stitching and selected woods to limited special editions – the wide range of options leaves little to be desired. This appeals to customers all over the world: in 2022, Audi exclusive realized ten R and RS special editions and customized one in four Audi R8 vehicles. ›

[3] Audi RS 7 Sportback performance: fuel consumption (combined) in l/100 km: 12.5–12.0; CO_2 emissions (combined) in g/km: 284–273. Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle’s selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

#1 Audi Sport

Audi RS 7 Sportback performance[3]

History

Audi Sport GmbH – formerly quattro GmbH – was established in 1983 as a wholly owned subsidiary of AUDI AG.

Location

Audi Sport GmbH has its headquarters in Neckarsulm and employs around 1,500 people (as of February 2023).

Products

Audi Sport GmbH is in charge of the R and RS models, all Audi motorsport activities, customization via the Audi exclusive program and the Audi collection – lifestyle accessories and merchandise ranging from clothing to model cars and watches.

Photo: AUDI AG

› Audi Sport offers its customers a wide range of choices with its high-performance product portfolio. With 16 different models, it is larger than ever before. The electric showpiece is the Audi RS e-tron GT.[4] As the first fully electric RS model, the four-door coupé marks the beginning of a consistent electrification strategy by Audi Sport. Today it is clear that electrification and performance are a perfect fit. The two elements create a new dimension for a sporty driving experience. And customers have come to value this. In 2022, the Four Rings delivered 10,042 cars from the Audi e-tron GT[5] family. Dr. Sebastian Grams: "This success and in particular the consistently positive response to the Audi RS e-tron GT[4] confirm our strategy of further electrifying our portfolio in the coming years. Our goal: we want to provide our customers with the right offering for each specific segment – from broad-based electrification via mild hybrids to the flexibility of a plug-in hybrid and the special driving experience of an electric car." To achieve this, Audi Sport is taking advantage of in-house synergies and relying, among other things, on the new Premium Platform Electric (PPE) architecture developed jointly by Audi and Porsche. The architecture offers a high performance spectrum and is thus suitable as a basis for high-performance vehicles such as the RS models.

Collaboration and the resulting synergies within Audi and the Premium brand group (see also page 54) are already important cornerstones of Audi Sport's success today. Visitors to the sports car production facility at Böllinger Höfe in Neckarsulm can see this for themselves: not only are the models of the Audi e-tron GT[5] and Audi R8 series built on a shared assembly line, the team in the body shop also works simultaneously on the body of the Lamborghini Huracán and the Audi R8 – almost exclusively by hand.

The latter model family is set to have a special year in 2023: the new Audi R8 GT,[6] limited to 333 vehicles, will delight customers worldwide. For the first time, Audi is combining the most powerful configuration of the naturally aspirated V10 engine with rear-wheel drive. At the same time, the R8 GT[6] is the final edition of the exclusive supercar.

Helping customers get to the top

The Audi R8 is also the technical basis for most of the successes achieved in customer racing. Audi Sport offers a total of three R8 motorsport models with different performance levels, plus a racing version of the Audi RS 3 Sedan.[7] All Audi Sport customer racing cars have one thing in common: the Audi Sport DNA. And that is in great demand. In 2022, the customer racing department produced the 300th Audi R8 LMS GT3, bringing the total number of race cars built over the course of 14 years to 750. The year 2022 was also successful on the race track. Never before have Audi Sport customer racing and its teams clinched so many titles and podium positions. "We topped our previous record from the year before by an impressive 11 titles, for a total of 76. Overall, we have claimed 290 individual victories in 806 races, including three at 24-hour races. That's also a first-class achievement," analyzes Rolf Michl. ›

#2 Audi Sport customer racing

History

Since 2009, Audi Sport customer racing has been offering race cars that are entered in various racing series worldwide by its customers' teams. Initially, the focus was on GT3 racing, but now the company's lineup of four vehicles means its business rests on four pillars.

Vehicles

Customers can currently choose from four racing car models: the Audi RS 3 LMS as well as the Audi R8 LMS GT2, GT3 and GT4.

Successes in 2022

The teams achieved a victory rate of 36 percent in more than 800 races. Overall victories in major endurance races across the globe and notable title wins characterized the past season.

[4] Audi RS e-tron GT: electric power consumption (combined) in kWh/100 km: 22.1–19.8 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[5] Audi e-tron GT quattro: electric power consumption (combined) in kWh/100 km: 21.6-19.6 (WLTP); CO_2 emissions (combined) in g/km: 0.*

[6] Audi R8 Coupé V10 GT RWD: fuel consumption (combined) in l/100 km: 15.0–14.9 (WLTP); CO_2 emissions (combined) in g/km: 341–339 (WLTP).*

[7] Audi RS 3 Sedan: fuel consumption (combined) in l/100 km: 9.4–8.9 (WLTP); CO_2 emissions (combined) in g/km: 214–201 (WLTP).*

* Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

Photo: AUDI AG

#3 Dakar Rally

Involvement

Since 2022, the Dakar Rally has been the flagship event in the Audi brand's motorsport activities. The Audi RS Q e-tron[1] managed to cross the finish line of the world's toughest desert rally at the very first attempt on its 2022 debut, scoring four stage victories along the way. In 2023, the team's efforts paid off as well, with the Audi drivers even leading the rally for three days before accidents caused some of them to retire and others to lose time.

Vehicles

The car used for the Dakar Rally is a prototype through and through: the Audi RS Q e-tron[1] combines an electric powertrain with an energy conversion system consisting of TFSI engine and generator. Its maximum drive power is 263 kW.

Teams

The three pairs of Audi drivers competing in the 2023 Dakar Rally included experienced motorsport heavyweights. Stéphane Peterhansel, who has already won the Dakar Rally 14 times, shared the cockpit with Edouard Boulanger. Fellow racer Carlos Sainz – a three-time Dakar winner and two-time World Rally champion – started alongside Lucas Cruz. Audi DTM legend Mattias Ekström drove the Audi RS Q e-tron[1] together with Emil Bergkvist.

[1] This vehicle is the Dakar Rally race car; it is not available for purchase. Closed track, professional driver. Do not imitate.

› Preparations for the 2024 Dakar Rally have begun

However, one vehicle in the Audi Sport lineup is not available for purchase by customers: the Audi RS Q e-tron[1] with which the company competes in the Dakar Rally. The task the Four Rings has set itself is no less than to revolutionize endurance rallying and rank among the best. As the first manufacturer to use an electrified drive system in combination with an efficient energy converter, Audi will compete against conventionally powered rivals for overall victory in the world's toughest rally.

The legendary event was held in the Saudi Arabian desert for the fourth time in January 2023. Audi started with three Audi RS Q e-tron[1] cars of the second evolution stage in 2023 – with significant improvements over the first version in terms of bodywork and aerodynamics as well as with new operating strategies that further improved the efficiency of the electric drive.

The stages on the route between the Red Sea and the Persian Gulf were longer and more difficult than in the previous year, ranging from 114 to 447 special stage kilometers. Despite various setbacks, the team achieved good individual results, especially on the final stages. "We definitely lacked the necessary racing luck this year, among other things," says Rolf Michl. "But the most important thing for us is that the complex drive technology worked without a hitch under these really challenging conditions." Needless to say, Audi is keeping its sights firmly set on a podium finish: "We started our preparations for the 2024 Dakar Rally right away and will come back even stronger." ›

Photo: AUDI AG

#4 Formula 1

Photo: AUDI AG

Involvement

As of 2026, Audi will be competing in Formula 1 and is looking to demonstrate its technological expertise in the racing series with the greatest reach in the world. That same year, new regulations will be introduced, prescribing, among other things, the use of synthetic fuels and an increase in the share of electric drive power to around 50 percent. Costs will be limited by a budget cap. In addition, Formula 1 has set itself the goal of making its racing series net carbon-neutral by 2030.

Goal

The combination of high performance and competition is a driver for innovative ideas that can subsequently be incorporated into series-production models. The pinnacle of motorsport is a global stage and a sophisticated development laboratory at once. Moreover, the company's involvement in Formula 1 is intended to raise the profile of the Four Rings and the image of the Audi brand on an international level.

Power unit

New Formula 1 regulations will apply from 2026. The electric drive will then contribute nearly as much power as the internal combustion engine, which produces around 400 kW (544 PS). The highly efficient 1.6-liter turbo engines will run on synthetic fuel – another entry requirement for Audi.

› Involvement in the top class

Innovation comes about in particular when people are faced with major challenges. And Audi is taking on what is probably the biggest challenge when it comes to combining sustainability, innovation and maximum performance in motorsport: as of 2026, the brand with the Four Rings will be competing in the FIA Formula 1 World Championship. "Motorsport is an integral part of our history and the Audi DNA. With Formula 1, we're moving on to the next chapter," says Oliver Hoffmann, Board Member for Technical Development at AUDI AG. "There's simply no better place to demonstrate 'Vorsprung durch Technik'." Audi will be competing in Formula 1 with strategic partner Sauber as its entry team, a company in which the Four Rings has a minority stake. With around 30 years of competitive experience, Sauber is one of the most renowned and long-established Formula 1 teams.

"Formula 1 is a global stage for our brand and a challenging development laboratory at once," says Oliver Hoffmann. Thanks to the new regulations that are going to be introduced, 2026 is exactly the right time for Audi to make its entry – Formula 1 and Audi are both pursuing clear sustainability goals. Among other things, the new rules of the international automobile association FIA stipulate the use of synthetic fuels, while at the same time raising the share of electric drive power to around 50 percent. Formula 1 has also set itself the ambitious goal of making its racing series net carbon-neutral by 2030.

The entire power unit, consisting of electric motor, battery, highly efficient combustion engine and energy recovery system, is being developed by Audi at the site of Audi Formula Racing GmbH in Neuburg an der Donau, a company founded specifically for this purpose. This means a Formula 1 drive system will be made in Germany for the first time in more than a decade.

Audi is running on an ambitious schedule until its first race in the 2026 season: development of the power unit is in full swing. At the start of 2023, the company already had around 240 employees working on the Formula 1 project, with the number set to rise. The site's expansion in terms of both personnel and technical infrastructure is scheduled to be largely completed this year. The Motorsport Competence Center in Neuburg an der Donau, which opened in summer 2014, is considered one of the most modern of its kind and is being expanded for the Formula 1 project. A new building measuring around 3,000 square meters, which is scheduled to be completed in the first quarter of 2024, will primarily house new test rigs for the development of the power unit. Electricity and heat supply in Neuburg are already carbon-neutral.

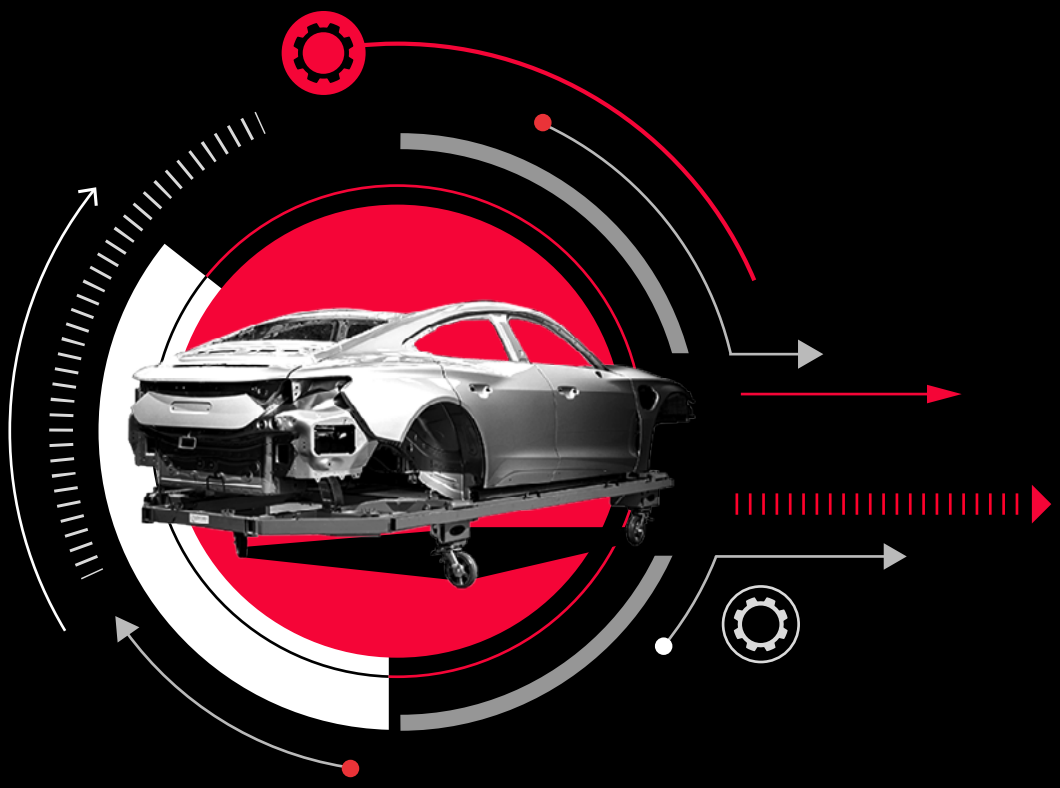
Financially, too, the motorsport venture is on a firm footing. This is partly due to the cost cap prescribed in the Formula 1 regulations, which greatly limits the expenditure for each team and season. From 2023, this budget ceiling will also apply to the development of the power unit. /

4

Value Creation & Production

Photo: AUDI AG

Audi e-tron GT quattro: electric power consumption (combined) in kWh/100 km: 21.6–19.6 (WLTP); CO_2 emissions (combined) in g/km: 0. Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.



Value Creation & Production

Less is more

80

At Audi, economic success and environmental protection go hand in hand. That is why the company has been pursuing the Mission:Zero environmental program for many years. A progress report.

Back to a new life

88

How does the circular economy work in practice? Finding this out is the goal of the MaterialLoop pilot project in which Audi is giving new life to materials from 100 end-of-life vehicles.

Assuming responsibility

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People, innovations and environment: by focusing on these three fields of action, Audi is seeking to work with its partners to improve environmental and social standards in the supply chain. How the company is doing this.

↗ Our specific measures for the core topic Value Creation & Production can be found in the Audi Sustainability Program, important key figures in the appendix.

Illustration: C3 Visual Lab

Less is more

Illustration: C3 Visual Lab

Even in challenging times, Audi remains committed to achieving net carbon-neutral[1] production at all of its own sites by 2025. The Mission:Zero environmental program is smoothing the way to increasing sustainability in production and logistics.

Audi is committed to the Paris Climate Agreement and its goals. The company is aware of its responsibility in ensuring a sustainable future. Numerous measures along the value chain contribute to the goal of achieving net carbon neutrality[1] as a company by 2050. One focus is the decarbonization of production and logistics in order to achieve the target of carbon neutrality[1] at Audi production sites by 2025.

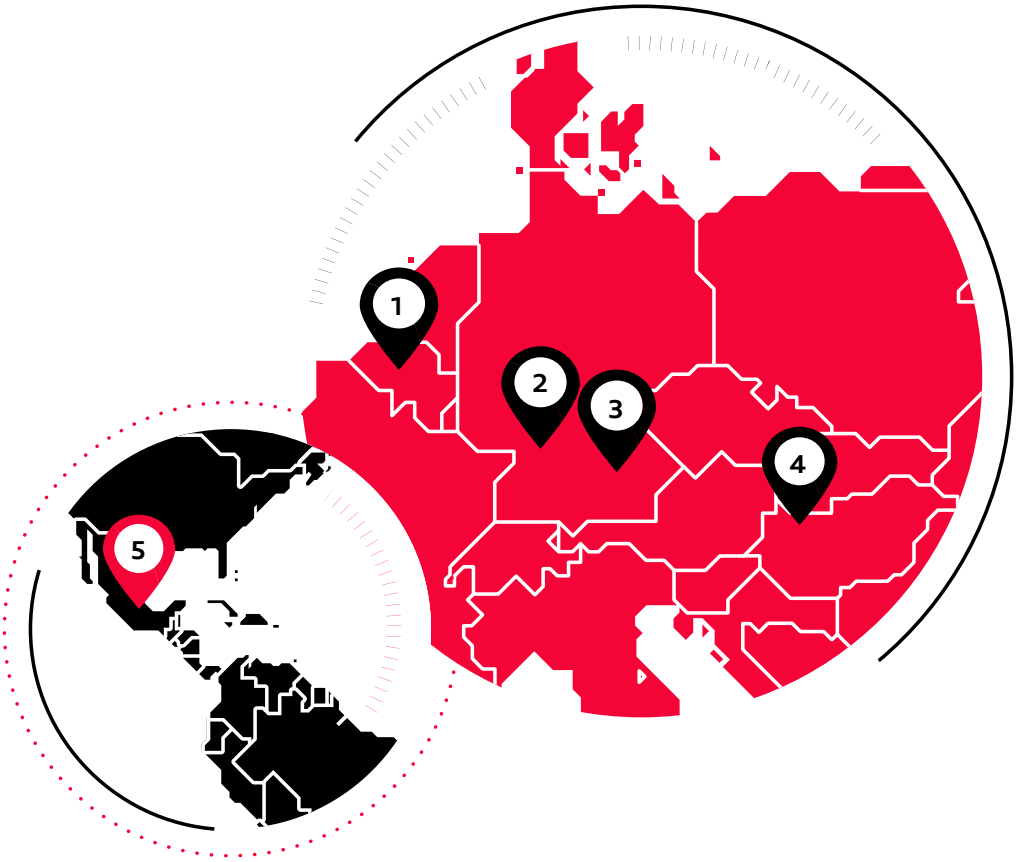
"Audi is taking a strategic approach and has consolidated all environmental protection activities in production and logistics in the Mission:Zero environmental program," explains Dr. Achim Diehlmann, Head of Environmental Protection at the Neckarsulm site and the Mission:Zero project manager. "Our focus is on the four action areas of decarbonization in production and logistics, water usage, resource efficiency and biodiversity." The guiding principles are the United Nations Sustainable Development Goals (SDGs) and the Volkswagen Group's environmental mission statement. /

[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.

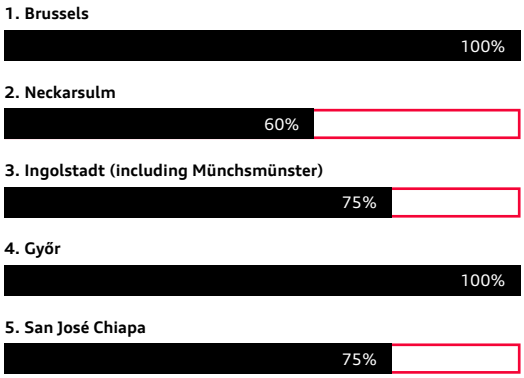
Mission:Zero – decarbonization

Net carbon-neutral[1] Audi sites[2]
Status 2022

The goal is for all Audi sites[2] to be net carbon-neutral[1] by 2025. This includes CO_2 emissions generated directly at the site (Scope 1)[3] and indirect CO_2 emissions from energy procured through external suppliers (Scope 2).[4] The reported figures in the diagram establish the amount of CO_2 emissions already saved at the sites by using 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.



Status as regards achieving net carbon neutrality[1] at the site in percent



The year 2022 was a challenging year for the global Mission:Zero team led by Dr. Achim Diehlmann and especially for the experts in the "Decarbonization" action area. Markus Faigl, Head of the "Decarbonization of sites" action area: "The war in Ukraine is also impacting our work. It was a new experience for us to face the question of whether we would actually be supplied with gas. In response to this energy crisis, we developed contingency plans and had to revise our existing energy supply concepts." ›

[2] Audi plants in: Brussels (Belgium), Neckarsulm and Ingolstadt and (Germany), Győr (Hungary) and San José Chiapa (Mexico).

[3] Scope 1: 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. These emissions account for a significant portion of Scope 1 according to GHG Protocol.

[4] Scope 2: indirect CO_2 emissions. This figure measures the CO_2 emissions generated during the production of purchased energy (electricity, heating, cooling). These emissions account for a significant portion of Scope 2 according to GHG Protocol.

Illustration: C3 Visual Lab

› Since the launch of Mission:Zero, it has been the clear aim of Audi to not only cut its energy consumption but also reduce its dependence by generating its own renewable energy. The challenge now is the new demand being made on the speed at which this transition is taking place. Markus Faigl: "The energy crisis in 2022 has accelerated this process. We want to move faster to achieve greater energy independence and become more resilient as a result." Rising energy prices have also increased the pressure on the company to act and step up the pace of progress along its chosen path. Every kilowatt hour of energy it produces itself at lower cost does not have to be purchased expensively.

Markus Faigl and his team see this as an opportunity: "The current situation has been a catalyst for increasing the amount of renewable energy we produce ourselves and procure from nearby suppliers. Throughout the past year, we have been screening technologies in order to select optimal measures for our own production of renewable electricity and heat." The result: in the medium term, the company will significantly increase its own production of renewable electricity and heat and its procurement from nearby suppliers – for example, by installing photovoltaic systems and using heat pumps to recover the waste heat from production processes. The company also wants to switch to green electricity for a large share of processes that have previously relied on fossil fuels. "What we mustn't forget, however, is efficiency," says Markus Faigl. The rule still is: "Each kilowatt hour we save does not need to be produced or procured. We can achieve this, for example, by using more LED bulbs at our sites or by retrofitting ventilation systems with more energy-efficient motors."

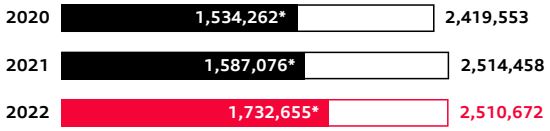
Carolin Fichtner is the Mission:Zero team expert on emissions in the logistics chain. "In 2022, we were successful in shifting more from road to rail," explains the Head of the "Decarbonization in logistics" action area. One measure stands out in particular: the switch in cell module transportation to the Audi plant in Brussels, which is now to take place as a rule by rail and no longer by road. This has cut CO_2 emissions by just under 3,800 metric tons[8] each year. "Optimized transportation concepts and alternative technologies promise to yield substantial reductions in CO_2 emissions. For this reason, top of the agenda for 2023 is working with Volkswagen Group Logistics to develop a long-term roadmap for organizing the most climate-friendly transportation to and from our plants and to choose appropriate transport technologies – for example, biogas or electric trucks. We are also seeking to anchor our sustainable logistics requirements in our vehicle projects to ensure a focus on low emissions in the logistics chain at the early stage of planning." /

Energy intensity of the Audi Group – Automotive segment[5] in MWh/vehicle

A variety of carefully thought-out energy-saving measures – such as reducing the room temperature in offices and halls coupled with a mild winter – led to considerably lower energy consumption: the energy intensity of the Group relating to automotive production including component manufacturing was 2.74 MWh per vehicle[5] (MWh/vehicle) in the year under review. That is 12.74 percent (0.4 MWh/vehicle) less than in 2021.

Energy consumption within the Audi Group total/by type[6] in MWh

Total energy consumption within the Group (in MWh) actually went down a little – despite the fact that the Audi Group produced over 100,000 vehicles more in 2022. The share of energy from renewable sources increased year-on-year by around 5.89 percent to 69.01 percent.



* from renewable energy sources

Emissions Automotive segment (including components) in kg/vehicle (intensity of greenhouse gas emissions (Scope 1[3, 7] and Scope 2[4, 7] in kg CO_2/vehicle)

Total CO_2 emissions per vehicle produced in the year under review (in kg) also fell considerably. The intensity quotient – the intensity of greenhouse gas emissions related to automotive production including component manufacture – amounted to 203.73 kg CO_2 per vehicle in the year under review.

[5] The energy intensity indicated refers to automotive production (including 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.

[6] 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.

[7] The process of selecting relevant emissions and the emission factors applied are anchored – like the entire key figure collection process – in the Volkswagen standard 98000. 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.

[8] This figure is a forecast for the year as the measure was introduced during the year. The forecast is based on planned production in 2023 at the Audi Brussel site. It is dependent on fluctuations in the production program at the site.

Illustration: C3 Visual Lab

Mission:Zero – water

The careful use of this resource is a key aspect of Mission:Zero and the company's environmental policy," says Daniel König, Head of the "Water Usage" action area. Audi aims to use water sparingly and efficiently. By 2035, the Four Rings plans to roughly halve its ecologically weighted water consumption[9] at its sites in Ingolstadt, Neckarsulm, Győr, San José Chiapa and Brussels. "This is an ambitious target and a major contribution toward greater sustainability for the company," explains Daniel König. The vision for the future? "In the long term, we also want to be independent when it comes to water."

Audi is pursuing a hotspot-based approach to water consumption and will first tackle those sites where availability is critical or consumption is particularly high. The company has defined four measures for the conscious and sparing use of water. First: more efficient processes and state-of-the-art water-saving technologies, for example in paint shops and in various galvanizing baths or adapted leak testing processes during assembly. Second: closed water cycles in which the water is treated and reused multiple times within the plant. Third: increased use of rainwater. And fourth: no use of drinking water in production.

For example, in 2022, Audi agreed with its Belgian partner Hydria to integrate the Brussels South wastewater treatment plant into the water supply for production operations at its Brussels plant. The aim is a successive transition until probably the end of 2024 until drinking water is no longer used in vehicle production. This should save around 100,000 cubic meters of drinking water each year.

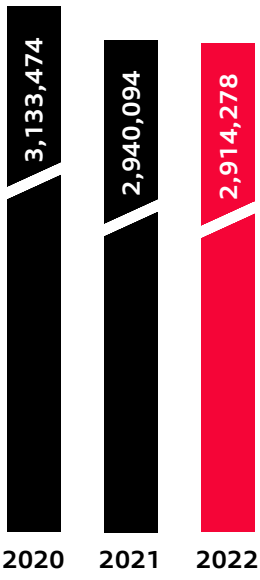
As of 2025, the Audi plant in Neckarsulm aims to obtain its process water entirely from the effluent of the neighboring wastewater treatment facility, which is also where the site discharges its wastewater. The resulting water cycle will reduce fresh water consumption by more than 70 percent. Audi México in San José Chiapa is the first plant of a premium car manufacturer in the world to produce its cars completely without wastewater. In order to minimize its water consumption, Audi in Mexico is also relying on a large on-site rainwater reservoir with a capacity of around 234,000 cubic meters.

Moreover, in January 2023, Audi was the first premium car manufacturer to become a member of the Alliance for Water Stewardship (AWS). ›

[9] Ecologically weighted water consumption makes it possible to compare absolute water requirements at all Audi sites worldwide, while taking into account the prevailing local water stress factors and the use of rainwater. This allows the company to prioritize savings in areas where water availability is particularly short.

Fresh water consumption in the Audi Group in m³ and in m³/vehicle

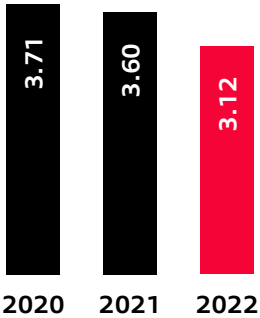
Careful use of resources such as water is a key component of the Audi environmental program Mission:Zero. In 2022, the Audi Group succeeded in reducing its water consumption significantly compared with the previous year – calculated in m³ per vehicle produced in the year under review and also in total. There are various reasons for this: as well as technical solutions (optimization of filter backwashing cycles during water pretreatment) and weather-related reasons (reduction in cooling requirements), the repair of leakages was also responsible for this decrease.



Fresh water consumption total in m³

Total volume of wastewater discharge in m³/vehicle

The volume of wastewater, measured in m³ per vehicle, decreased in 2022. In absolute terms, however, the volume increased because 2022 was the first year in which the figures for Bentley (approximately 94,000 m³) were also added. In summary: the number of vehicles produced (Premium brand group) was up by around 15 percent over the previous year, but wastewater discharge only rose by around 7 percent.



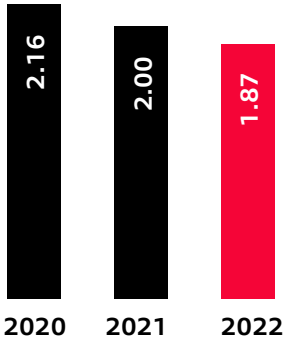
Fresh water consumption Automotive segment (incl. components) in m³/vehicle

Illustration: C3 Visual Lab

› This global network of companies, NGOs and public-sector bodies is committed to the responsible use of water resources across the value chain. Through this membership, the Audi San José Chiapa site in Mexico can apply for certification according to the International Water Stewardship Standard, also known as the AWS Standard. The aim of the AWS Standard is for water to be used as efficiently as possible (water management), while taking into account all relevant stakeholders in the relevant catchment area (water stewardship). To achieve this, the AWS focuses on a concept that goes beyond pure water management and covers five aspects: Good Water Governance, Sustainable Water Balance, Good Water Quality Status, Important Water-Related Areas, and Safe Water, Sanitation, and Hygiene for All. During certification, water management is appropriately assessed at both the site and catchment levels. For instance, the following questions must be answered: Where is there scope for reducing water consumption? Where can water pollution be prevented? And how can Audi ensure that other parties, such as local farms, do not suffer any disadvantages? “Our membership of the AWS is an important step for us because it also indicates to the outside world that we have aligned with its guidelines,” explains Daniel König. /

Total volume of wastewater discharge in m³/vehicle

The volume of wastewater, measured in m³ per vehicle, decreased in 2022. In absolute terms, however, the volume increased because 2022 was the first year in which the figures for Bentley (approximately 94,000 m³) were also added. In summary: the number of vehicles produced (Premium brand group) was up by around 15 percent over the previous year, but wastewater discharge only rose by around 7 percent.



Volume of wastewater
Automotive segment (incl. components)
in m³/vehicle

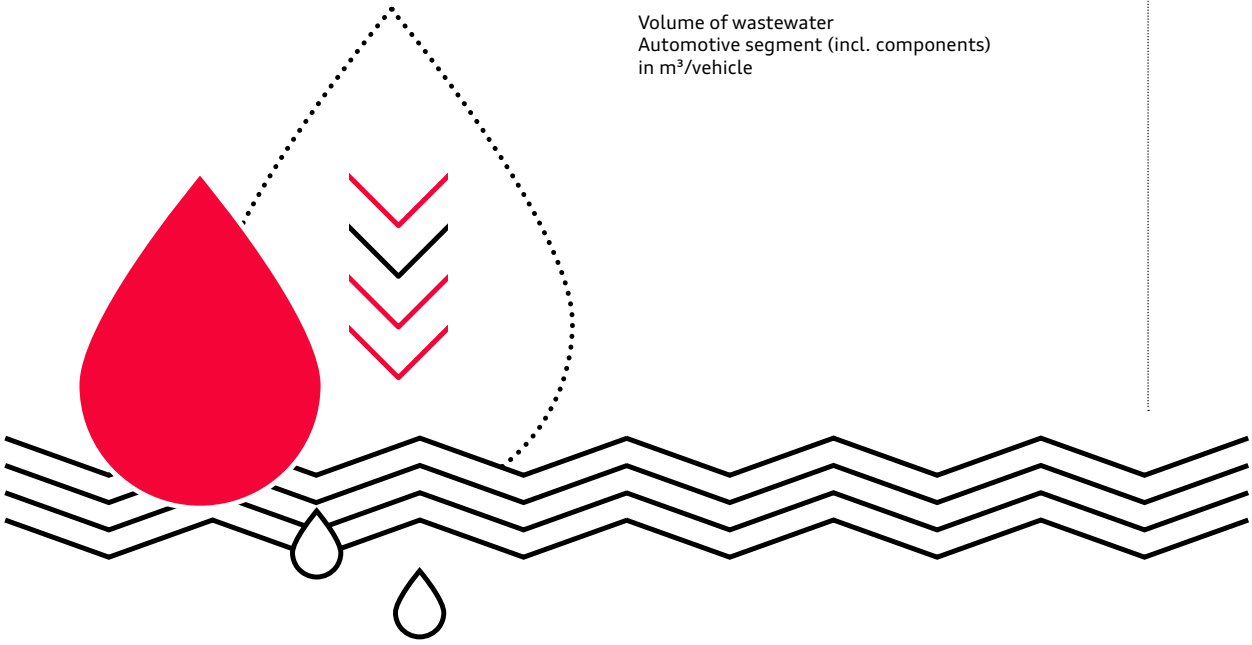


Illustration: C3 Visual Lab

Mission:Zero – resource efficiency

[10] The figure indicates annual reductions on the basis of optimizations implemented at the Audi sites Ingolstadt, Neckarsulm, Győr, Brussels and San José Chiapa and is based on their production program 2022.

Natural resources are important production factors and a basis for industrial added value. However, resources are limited. The goal is not to use raw materials faster than they can be replaced by nature and its ecosystems, thus ensuring sustainable renewal. "At Audi, we want to use resources even more effectively and efficiently than we have in the past. To this end, we are continuing to develop our skills and approaches so that we ultimately use less," explains László Horváth, Head of the "Resource Efficiency" action area.

Resource efficiency starts with the correct use of materials throughout the production process and ends with material recycling as late as possible. László Horváth: "Our goal is to feed materials into cycles because that saves resources and energy that would otherwise be needed to produce new raw materials." Wherever technically and economically feasible, closed loops are thus to become an integral part of the automotive value chain at Audi.

The target for this action area is to reduce the amount of waste per vehicle within the plant by 10 percent by 2025 (base year: 2019) and increase the proportion of material recycled by 10 percentage points (base year: 2019). Other than that, reducing disposable waste remains the top priority. The goal is to decrease the volume by 35 percent compared with the base year 2010. According to László Horváth, three aspects in particular help to achieve these targets.

First: close collaboration. "In the past, each Audi production site developed its own solutions for reducing waste without networking with other sites. Mission:Zero has changed that. We now work together and share our best practices."

Second: material flow analyses, which are detailed input/output analyses. "These help to identify the greatest potential and produce a 'Go to Zero' checklist which we then work through successively," explains Horváth.

Third: data-driven environmental protection using digital tools. "Our CO_2 calculator, which is currently being tested at several sites, will help our colleagues in Logistics and Procurement to take the right decisions on packaging materials."

When it comes to packaging, we have been applying the principle of as much as necessary, as little as possible since 2022. Thanks to a large number of optimization measures in conjunction with suppliers, the team responsible for resource efficiency in the supply chain reduced plastic waste by just under 550 metric tons[10] in the year under review. This won the project the "Zero Impact Factory Award" from the Volkswagen Group. Project manager Lutz Roth is satisfied: "This award in the Group and above all our results show that we are on the right course."

Carolin Rauch from Supply Chain Development is familiar with the challenges involved with reducing packaging waste. "Packaging is a major issue for us as logistics specialists. On the one hand, we need to reduce packaging, but it's also a question of using renewable raw materials. Our goal is to use more than 90 percent recyclable packaging, in new vehicle projects by 2030," explains Rauch. /

Metallic waste (scrap; completely recyclable)

Total volume of waste (excluding scrap)

Recyclable waste

Disposable waste

Illustration: C3 Visual Lab

Total weight of waste by disposal method in t

Wherever possible, Audi closes material cycles in order to reduce waste. In the year under review, 274,118 metric tons of metallic waste were generated throughout the Group, all of which is destined for recycling.

The volume of waste excluding metallic waste (scrap) was up, primarily due to optimized data collection: waste from construction work at the Neckarsulm site was included in this category for the first time in 2022. Approximately 90,000 metric tons of excavated soil from a construction project increased the total volume of waste to 188,666 metric tons, of which 97.24 percent is recyclable. Construction activity also explains the increase in the category of disposable waste.

No major discharges of chemicals, oils or wastes to the environment occurred during the reporting period.

Illustration: C3 Visual Lab

Mission:Zero – biodiversity

What does it take to successfully advance biodiversity? Dr. Antje Arnold, Head of the "Biodiversity" action area, is certain: "Ambitious goals. Because you can't achieve ambitious goals if you don't set them – and would fall far short of what could actually be achieved." Thanks to this philosophy and a lot of persistence, Dr. Antje Arnold can look back at 2022 with satisfaction and forward to 2023 with anticipation. One thing is especially important to the success of the project: raising awareness.

"Raising awareness means ensuring that we all understand that our planet's biodiversity is the basis for human life and that we must commit to preserving and reinstating it," explains Dr. Antje Arnold. "To be honest, we're at the same place now with this issue as we were with climate change 15 years ago. Back then, only few people were concerned about climate change – today, we can all feel the effects in our everyday lives." For this reason, Dr. Antje Arnold and her colleagues are trying to generate enthusiasm for the issue – at the plant and beyond. Alongside local biodiversity projects that include renaturalizing open spaces at all sites and greater networking of the company with NGOs, governments and the immediately neighboring communities, the biodiversity index is a particular help.

This index was a joint development with Volkswagen and records 58 biodiversity parameters for five Audi production sites.[2] Factors include the degree of ground sealing at a site, the number of native plant species found at a site, campaigns to raise employee awareness and external conservation projects. Dr. Antje Arnold explains: "Projects undertaken in collaboration with external conservation initiatives are an important factor of the index. They enable us to extend our sphere of activity beyond the factory limits, raise awareness of us as a brand and boost our image." For example, Audi employees were able to work with the regional bird protection society to maintain renaturalized spaces outside the factory fence.

The advantage of the index is that it makes it easier to track progress, sites are comparable and the effectiveness of individual measures is quantifiable. Of course, this index is also coupled with an ambitious goal. Arnold: "By 2025, we want to increase our index by 50 percentage points, achieving an average of half of the biodiversity index across all Audi plants." /

[2] Audi plants in: Ingolstadt and Neckarsulm (Germany), Brussels (Belgium), Győr (Hungary), San José Chiapa (Mexico).

More information on Mission:Zero is available online here.

Environmental management at Audi

Sustainable development goals

The following SDGs are at the focus of this company commitment:

Further information on Audi and the UN sustainability goals can be found on pages 110–122.

Audi carefully analyzes environmental aspects in its worldwide manufacturing network – with the vision of building its cars in net carbon-neutral plants[1] by 2025. Along with CO_2 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.

The Audi production sites in Germany and abroad have management systems accredited according to DIN EN ISO 14001[11] or DIN EN ISO 50001.[12] The European sites, in particular, are validated additionally in accordance with the EMAS, the 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. The Chairman of the Board of Management defines the environmental and energy policy, which is binding for the entire company. Its requirements are reviewed periodically and amended as necessary.

The environmental and energy 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 significant deviations between the actual values and the reported data are identified in the following year, the data is updated. The individual key figures for 2021 were updated in this report using the actual values for 2021.

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, Crewe (Bentley; since 2022), 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 for car production (Ingolstadt, Münchsmünster, Neckarsulm, Brussels, Győr, San José Chiapa, Crewe (since 2022) and Sant' Agata Bolognese sites) including San Jose Chiapa) is also shown separately for better comprehensibility. /

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

[12] ISO 50001: Ingolstadt, Neckarsulm, Győr, Brussels, San José Chiapa, Crewe and Sant'Agata Bolognese sites.

Back to a new life

Does the circular economy in the automotive industry work in practice as well as in theory? Audi is attempting to find this out and is testing how to close as many material cycles on balance as possible in the MaterialLoop project involving 100 used vehicles.

Text: Sven Schulte-Rummel

Illustration: C3 Visual Lab

¹ Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.1 (WLTP); CO_2 emissions (combined) in g/km: 0. Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

The final hour has struck for this Audi – before it embarks on a new life: disassembly work for MaterialLoop.

The life cycle of vehicles tended to end rather abruptly up to now. For all the time spent taking trips together, sharing experiences and creating countless memories, the scrap heap was often the final resting place with only a small proportion of the materials being reused to produce new vehicles. As part of a pilot project involving 100 used vehicles, Audi is now looking to forge new paths and aiming to ensure that the greatest possible proportion of materials make their way back into the automotive value chain. In the future, a growing number of material cycles are to be closed on balance in collaboration with partner companies. The MaterialLoop project provides Audi with a wide range of new insights on its journey toward implementing a circular economy.

Can nature act as a role model to show car companies how they can economize? "Yes", says Dennis Christian Meinen with conviction. The expert for circular economy at AUDI AG pauses briefly and then adds: "Waste is an alien concept in nature, it's all about material cycles. Audi is therefore using nature as a model to close increasingly more cycles along the value chain."

The circular economy contrasts with the traditional, linear business model, which focuses on large quantities of easily accessible raw materials and low-priced energy. Yet the world's resources are finite and energy is becoming increasingly precious – the efficient use of both is essential. And not only in economic terms: "There is a clever definition of sustainability that we also strive to follow at Audi: anything we can make last forever is sustainable – with the emphasis on 'forever'," says Dennis Christian Meinen.

Breeding ground for innovations

The finiteness of natural resources is one of the factors that make the development of closed cycles a key sustainability issue for the Premium brand group. Ultimately, each new vehicle is a source of valuable resources and parts (see infographic). Increasingly establishing cycles is not a retrograde step in terms of technology. On the contrary: it is an opportunity to encourage and demand technical innovations. Dennis Christian Meinen explains: "The responsible use of resources lies at the heart of the circular economy. We want to preserve the value of products and materials for as long as possible. Attention is focused in this respect on durability, reparability and thus also the recyclability of our products."

Use of secondary materials and maintaining high quality standards should, however, not be at odds with each other. It is therefore important to return automotive secondary materials of the highest possible quality back into the automotive production cycle. "Downcycling still takes place today for different material flows from end-of-life vehicles," says Philipp Eder, a strategist in Audi Procurement. "That means: the qualitative properties of a new product made from recycled material are lower than those of the original product. For example, if the metal from end-of-life vehicles is turned into structural steel or if car windows are remanufactured to become water bottles or insulating material then we end up in such a downward spiral." Audi Procurement is therefore pressing ahead with projects to integrate more materials and parts in the future into a closed cycle, with the aim of preserving the same level of quality.

Examples of this are the Aluminum Closed Loop and the recently established PlasticLoop. Audi is installing safety-relevant parts in the Audi Q8 e-tron[1] model line which for the first time were partially produced from mixed automotive plastic waste by means of a chemical recycling process:[2] the plastic covers for the seat belt buckles. The parts produced are of the ›

[1] Audi Q8 e-tron: electric power consumption (combined) in kWh/100 km: 24.4–20.1 (WLTP); CO_2 emissions (combined) in g/km: 0. Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

[2] At least 70 percent of the plastic granulate used in seat belt buckle covers (including fillers and additives) comes from the pyrolysis oil produced in the PlasticLoop project, which was supplied during the process of manufacturing the plastic granules. The allocation of waste-based pyrolysis oil to the plastic granulate is carried out as part of a mass balance approach with a qualified credit transfer. This means that it is confirmed by ecocycle GmbH, an independent external certification body, that the project members have replaced the quantities of fossil resources required for the seat belt buckle covers with pyrolysis oil produced from mixed fractions of automotive plastics. The intention is to provide sufficient pyrolysis oil in the scope described above for the entire production life cycle of the Audi Q8 e-tron[1] based on currently projected production figures.

[3] Post-consumer recycled materials are secondary materials that have already been used by consumers.

Photo: AUDI AG

Recycling of raw materials for the MaterialLoop pilot project.

› same high quality as new goods and have the same technical properties. Audi is therefore showing how recycling is possible without loss of quality. However, it is not just in isolated cases that Audi is intending to use parts from recycled plastic material: the aim is to achieve increased use of secondary materials, especially post-consumer recycled materials[3] from end-of-life vehicles.

On the path to sustainable solutions

Valuable primary materials can be saved by reusing automotive materials. Meanwhile, direct access to the secondary materials could also lead to improved certainty of supply in the future. Regulatory standards are also increasingly moving in this direction, for example, in the EU with the End-of-Life Directive, which is currently being revised – this was another reason why the Four Rings launched the MaterialLoop project in fall 2022. With a total of 100 end-of-life vehicles and in collaboration with 15 partners from industry and research, the project involves examining how vehicles that are no longer serviceable can be used as material sources for producing new vehicles, identifying which recyclable materials offer yet further potential, determining which new technical processes need to be developed and establishing what is already economically and ecologically feasible today.

In addition, the project acts as a source of valuable information for designing future models. “Design for Recycling” also plays an important role in optimizing the recyclability of products. The idea is to design parts and their components in such a way that they can be separated and sorted by material type during the recycling process when they reach their end of life. “Our objective is to make it even easier to reconcile recyclability with all of the technical requirements for our product. This is a major challenge, but offers us the opportunity to establish end-of-life vehicles as a high-quality material resource,” says Philipp Renner, who is responsible within Technical Development for matters relating to the circular economy.

The insights gained in the project will be collated in guidelines in collaboration with Technical Development and other departments and should help to optimize recycling-friendly component development. The MaterialLoop project focuses on the four material groups aluminum, steel, plastic and glass (see infographic on page 91). ›

Dennis Christian Meinen
Strategy Sustainability/Circular Economy, AUDI AG

Philipp Renner
Circular Economy/Technical Development, AUDI AG

> “We want to preserve the value of products and materials for as long as possible.”
>
> **Dennis Christian Meinen,** Strategy Sustainability, AUDI AG

Photos: AUDI AG

› Technically feasible – but also viable in series production?

On the topic of glass, Audi already took the first steps in April 2022. “We developed a process together with our project partners which allows automotive glass that can no longer be repaired to be reused to produce new windshields,” says Philipp Eder describing the preliminary outcome of another of Audi’s pilot projects with three partner companies from the automotive glazing industry. Remanufacturing damaged automotive glazing means that less energy and fewer raw materials need to be used overall to produce new windows. Ultimately, the use of processed material allows a reduction in the demand for primary materials such as quartz sand, for example. In addition, up to 30 percent less carbon dioxide is emitted during remanufacturing when compared with producing new glass. “This process will be tested for series production until 2023 in order to gain experience of material quality, stability and costs. If glass recycling can be performed economically and ecologically, this process should be used to produce windshields for the Audi Q4 e-tron in the future,” says Philipp Eder.

The entire industry is called upon

Philipp Eder, Dennis Christian Meinen and Philipp Renner are well aware that many processes cannot simply be converted overnight. But with the courage to embrace innovative technologies and new requirements in vehicle development it is possible to integrate numerous materials and parts into smart cycles – as proven by the MaterialLoop project. Philipp Eder: “Over the course of recent years we have learned from various circular economy projects that we can benefit from specialist know-how from the most diverse areas of the company and also from other industries. If all partners pull together, then more and more cycles can be closed.” This is what Audi is aiming to achieve with the MaterialLoop project – after all, the potential of the circular economy is far from being exhausted as yet. ›

Philipp Eder
Strategy Procurement, Sustainability Supply Chain, AUDI AG

> “If everyone pulls together, then more and more cycles can be closed.”
>
> **Philipp Eder,** Strategy Procurement, Sustainability Supply Chain, AUDI AG

Closed material loops: the MaterialLoop pilot project

In the MaterialLoop project, Audi is testing a closed loop for end-of-life vehicles together with 15 project partners. The goals: first, to return as much material as possible from 100 end-of-life vehicles to the automotive cycle without loss of quality (avoiding downcycling). Second, to build knowledge with regard to design and engineering: how and from which materials should components be designed and manufactured in the future so that they can be kept in the automotive cycle? After removing components that are suitable for reselling as used parts, the focus of the MaterialLoop project was on recycling the material groups steel, aluminum, plastic and glass.

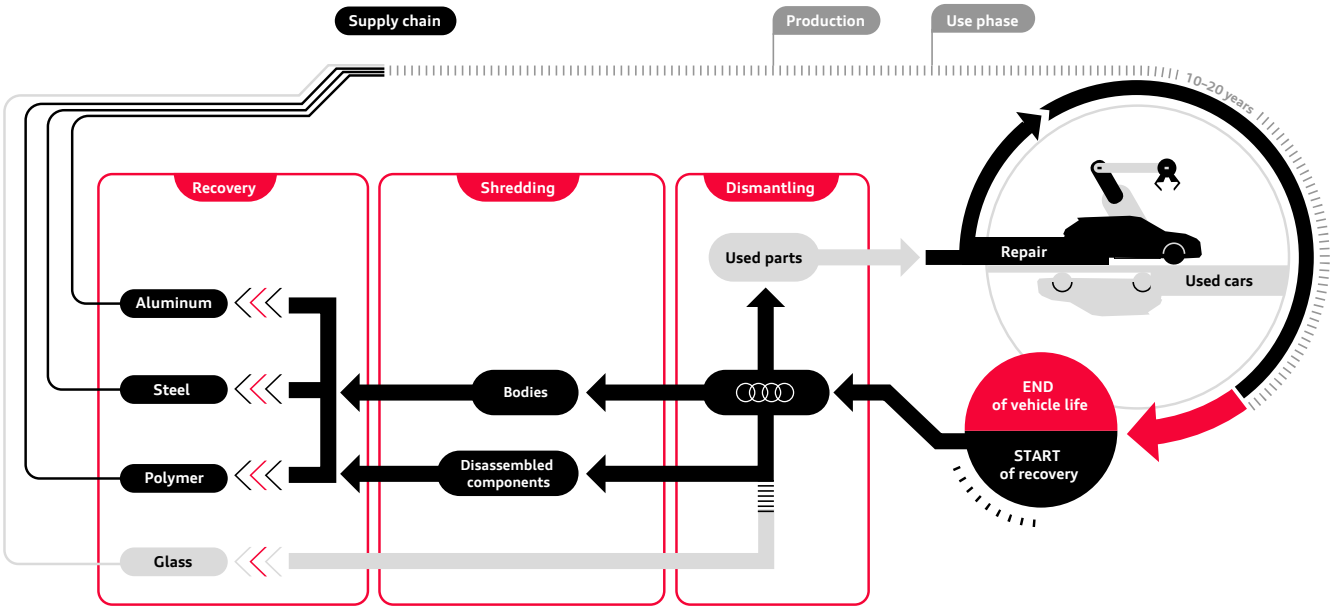


Illustration: C3 Visual Lab, Photo: AUDI AG

Disassembly in the pilot plant for battery recycling in Salzgitter: the battery systems are stripped of all attachments and broken down into the individual modules.

Sustainable development goals

The following SDGs are at the focus of this company commitment:

Further information on Audi and the UN sustainability goals can be found on pages 110–122.

Life in it yet

The lithium-ion battery is the central element and largest component of an electric car. But what happens to the battery when the electric vehicle reaches its end of life? Disposal does not make sense either ecologically or economically. High-voltage batteries from scrapped electric cars can continue to be used meaningfully even after many years of service on the road.

Audi is developing an approach for this together with the Volkswagen Group. First, the state of health of the high-voltage battery is tested. This is done in a matter of minutes, with an analysis software developed by Audi, for example. Depending on the remaining capacity identified by the test system, the high-voltage battery can be used for one of three different purposes.

First: remanufacturing. This means that due to its condition and material value (e.g., control units and modules), the high-voltage battery can be remanufactured and then reused as a replacement part in an electric vehicle.

Second: a second life. The high-voltage battery is still in a fair to good condition and can therefore have a second life outside an electric vehicle for many years to come. For example, this can be in a flexible fast-charging terminal, in the Audi charging hubs, a mobile charging robot, a driverless transport system, a home electricity storage system or an emergency power backup system. Audi is currently testing a variety of uses.

Third: efficient recycling. This is done in Germany, for example, at a Volkswagen pilot plant in Salzgitter. High-voltage batteries that can no longer be used and whose condition is too poor for continued road use are first preconditioned here (discharge and dismantling). The energy storage units (e.g., module and/or cell) are then broken down by mechanical processes and sorted into individual fractions such as aluminum, copper, plastics and “black powder.” The “black powder” contains valuable battery raw materials like lithium, nickel, manganese, cobalt and graphite, which are separated by type by specialist partner companies using hydrometallurgical processes. These are then reprocessed in subsequent process steps into new cathode material, among other things.

PowerCo in Salzgitter is a European stock corporation in which the Volkswagen Group bundles its global battery activities. The objective of PowerCo is to manufacture battery cells with a recycling rate of more than 90 percent as part of a raw material closed loop. The annual manufacturing capacity of the cell factory is expected to be 40 GWh in the future – enough for around 500,000 electric vehicles. The Salzgitter cell factory is a blueprint and starting point for the global battery offensive – with six cell factories in Europe and the prospect of further factories in North America in the future. /

Volume of raw materials processed by Audi in vehicles in 2022.

Diagram is based on the production figures of AUDI AG in 2022 and current disassembly studies for individual models in the various product lines; figures may not add up due to rounding.

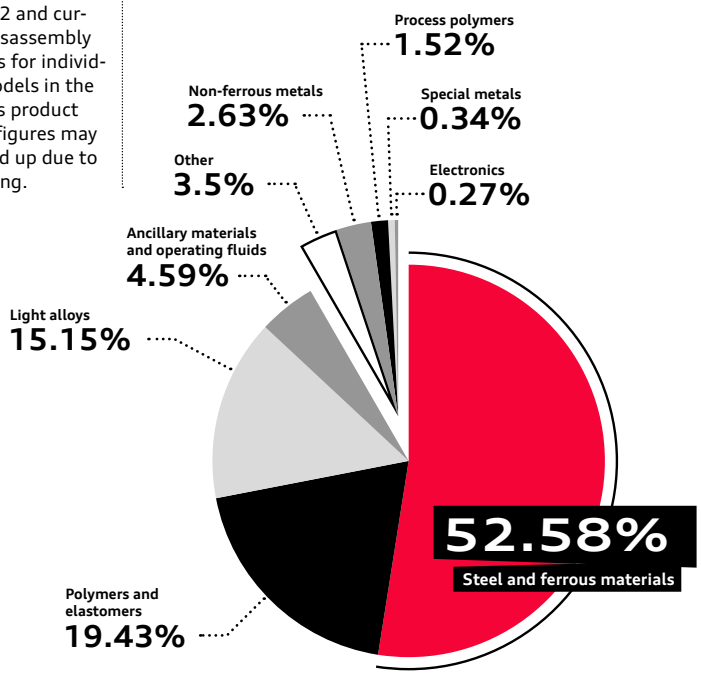


Illustration: C3 Visual Lab, Photo: Volkswagen AG

Dr. Johanna Klewitz

Lukas Petersik

Roland Dieling

Dr. Felix Homfeldt

Taking responsibility: respecting human rights – protecting the environment

The Audi supply chains are widely branched. The company works with more than 14,000 suppliers in over 60 countries. This comes with a major responsibility, which reaches far beyond Audi's own factory gates. Intelligent management of the supply chain offers a tremendous opportunity in this respect because it plays a key role on the path toward a more sustainable company: a visit to Audi Procurement.

Text: Maximilian Höke

Photos: Bernhard Huber

“We set out clear guidelines for compliance, environmental and social requirements.”

Dr. Johanna Klewitz, Head of Sustainability Supply Chain, AUDI AG

Every Audi vehicle produced leaves a footprint. And we are responsible for ensuring that this footprint is not only as small as possible but – where possible – also has a positive effect,” says Bernd Zielke, Head of Procurement Management. A modern vehicle contains around 3,000 to 5,000 parts on average from many different suppliers. This clearly shows the extent of the scope of responsibility that lies with procurement employees at Audi.

Bernd Zielke: “Our strategic goal is to have a positive impact on people and the environment through our method of corporate governance – not only in the case of our direct suppliers but also along their supply chain. That is why we are initiating far-reaching positive changes throughout the entire manufacturing process – from raw materials through to the finished car.”

But with which structures and measures can Audi achieve this goal in the widely branched supply chain? “We have divided the topic into three fields of action: people, innovation and environment,” explains procurement strategist Marco Philippi. “And through each of these areas we plan to positively change the status quo in the supply chain together with our partners.

Bernd Zielke
Head of Procurement Management, AUDI AG

Marco Philippi
Head of Procurement Strategy, AUDI AG

Collaboration is essential because it is only by working with our partners and their partners that we will be able to minimize risks throughout the supply chain, if possible reducing negative consequences and having a positive impact.”

Three field of action for a sustainable supply chain ✓

An Audi consists of many thousands of individual parts, requires a complex manufacturing process and is based on widely branched global supply chains. Potential environmental and social risks, such as CO_2 emissions or working conditions along battery supply chains, increase the complexity of supply chain management. The company aspires to manage its supply chains responsibly to generate effective results for the environment and people. Doing so means analyzing and understanding potential social and environmental risks in the supply chains and then taking appropriate measures to mitigate or avoid them. At the same time, Audi views its supply chain as an opportunity to have a positive impact on people and the environment. This ambition is the basis for the strategy on responsible supply chain management, which falls under the responsibility of the “Sustainability Supply Chain” department within the Procurement division. Three fields of action give concrete form to this ambition:

- People: Audi is continuously working to improve working conditions for people, for example when handling critical raw materials in the supply chain.
- Environment: Audi develops standards aimed at ensuring compliance with environment-related requirements in the supply chain.
- Innovation: by increasingly integrating new technologies such as artificial intelligence, Audi aims to continually increase traceability in its complex global supply chains.

Social responsibility, in particular, has become even more important since the German Supply Chain Due Diligence Act (LkSG) came into force in Germany in January 2023. The act (see box on next page) is derived from the United Nations Guiding Principles on Business and Human Rights.

Field of action: people ✓

Audi recognizes its corporate responsibility for human rights and takes its lead from the UN Guiding Principles on Business and Human Rights. The foundations of any collaboration are the contracts that Audi enters into with its suppliers – and this is where human rights and other social aspects play an important role.

Any company that wishes to work with Audi must comply with the binding principles of the Code of Conduct for Business Partners of the Volkswagen Group (CoC). This Code of Conduct sets out clear requirements for Audi business partners in terms of compliance, the environment and social issues, and also forms the basis for the sustainability rating (S-Rating). A positive S-Rating is a basic prerequisite for entering into a business relationship with Volkswagen AG ›

Photos: Bernhard Huber

"Most emissions are not attributable to our direct suppliers, however, but occur in the upstream production processes."

Dr. Felix Homfeldt, expert on decarbonization, AUDI AG

"We want to develop effective solution approaches together with the relevant partner companies."

Roland Dieling, environmental expert, Sustainability Supply Chain, AUDI AG

Photos: Bernhard Huber

› or a Group brand. All companies of the Volkswagen Group follow the same S-Rating process – and Audi is no exception. With the help of the S-Rating, Audi assesses the environmental and social performance of suppliers using sustainability criteria. The S-Rating is calculated on the basis of the suppliers' production locations and is mandatory for all relevant companies that wish to enter into a business relationship with Audi. It is required for any company that has more than ten employees at its production location. Microenterprises with fewer than ten employees can be exempted from having to comply with the S-Rating requirement. A self-assessment questionnaire (SAQ), standardized for the automotive industry, forms the basis for the S-Rating. The evaluation is based on the answers provided by the suppliers. By the end of the reporting period on December 31, 2022, a total of around 16,000 suppliers had completed an SAQ for the S-Rating.

Regardless of the result, the SAQ is helpful in identifying and actively addressing shortcomings and deficiencies. To this end, the SAQ offers concrete suggestions to suppliers in order to improve their results. Some 6,700 suppliers doing business with the Volkswagen Group in the year under review were able to improve their ratings during the year based on their self-assessment questionnaires. If a supplier's answers in the SAQ do not result in a positive rating, an additional on-site check can be arranged at the supplier's production location. The purpose of this on-site check is, among other things, to verify on the spot the working conditions and information provided by employees in the course of interviews. As a supplementary inspection tool, the on-site check is only necessary if the result of the self-assessment falls short of a certain score threshold so that the risk limit is exceeded. In the year under review, 252 on-site checks were carried out in the Volkswagen Group. If violations are discovered, the suppliers are obliged to address these. If more than one discrepancy is found, this may result in a re-audit. In extreme cases, the business relationship may be terminated.

A further important tool of responsible supply chain management is the Supply Chain Grievance ›

Auditing firm Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft performed a limited assurance engagement on the paragraphs marked with the symbol ✓ up to the next subheading.

Overview of the Act on Corporate Due Diligence in Supply Chains

Applies since January 1, 2023, to companies based in Germany with 3,000 or more employees and from 2024 to companies with 1,000 or more employees.

Governs compliance with human rights and environmental obligations in the upstream and downstream value chains as well as in the company's own business operations.

Punishes violations with fines and penalties (up to two percent of consolidated annual sales) and exclusion from public contract awards.

› Mechanism (SCGM). This is applied when there is evidence of a potential violation of the Code of Conduct for Business Partners by a supplier. Information may be reported at any time via the Whistleblower System at whistleblower-office@audi.de. In the period under review, 145 reports of violations were processed in the Volkswagen Group using the Supply Chain Grievance Mechanism. A total of four suppliers were blocked temporarily for new awards of contract due to serious violations.

These measures are complemented by, for example, the Raw Materials Due Diligence Management System (RMDDMS) of the Volkswagen Group. Since 2021, the Volkswagen Group has reported annually in the "Responsible Raw Materials Report" on status, progress and targets. The RMDDMS focuses on 16 raw materials such as cobalt, leather or aluminum. The potential risk of human rights violations is especially high in the extraction and production processes of these materials. The RMDDMS helps to identify, assess and minimize these risks on the basis of the five stages of the "Due Diligence Guidance for Responsible Business Conduct" of the OECD and the requirements of the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas."

The Volkswagen Group and its subsidiaries share responsibility for the focus raw materials. This makes it possible to leverage synergies and, at the same time, establish uniform standards for supply chain management. Within the RMDDMS, Audi is responsible for devising risk-mitigating measures and the risk analysis for the raw material aluminum.

This role also has historic reasons. AUDI AG has already been a member of the Aluminium Stewardship Initiative (ASI) since 2013 and, using the "Chain of Custody"[1] standard, follows an approach that is aimed at the sustainable production of aluminum along the entire value chain. All members of the initiative ensure, for example, respect for human rights throughout the value chain and collaborate in developing joint solutions and measures to achieve this. Representatives of indigenous peoples who live close to bauxite mines are an integral part of the ASI organizational structure. Dialogue with trade union representatives also plays an important role.

The measures listed above are an integral part of the "Responsible Supply Chain" system (ReSC system) for procurement processes developed jointly with the Volkswagen Group in the reporting year (Volkswagen AG Sustainability Report 2022). The ReSC system is mandatory and must be implemented worldwide by all brands of the Volkswagen Group. It is incorporated in all relevant policies of the Group and its brands. Using a systematic risk analysis, the Volkswagen Group aims to eliminate or mitigate human rights risks along its supply chain, put an end to any violations and continuously improve the sustainability performance of suppliers.

However, in the context of supply chain management, respect for the fundamental rights of others is not only important with regard to working conditions. The Audi "Supplier Diversity & Inclusion" initiative focuses on social and economic participation. The objective of this initiative is to make the supply chains more diverse. To this end, the initiative identifies companies on the basis of two criteria. First, they create added value at the social level by offering solutions for social or ecological challenges (social businesses). Second, they are managed by members of under-represented groups (minority-owned business), such as women, people with disabilities, BIPoC,[2] members of the LGBT_IQ[3] community or others. Furthermore, Audi has entered into a partnership with Yunus Social Business, the global organization for social innovation. As a participant in its "Unusual Partners" program, Audi is advocating for greater integration of social businesses in the value chain by endeavoring to engage social businesses more often in the future, thus promoting diversity in the supply chain.

Another focus of the "Unusual Partners" program – besides the search for suitable social businesses for Audi – is capacity building. Online training courses for suppliers and Audi employees on the topic of social procurement are already being implemented. Social innovations can thus become a lever for making the supply chain more diverse. ›

Photos: Bernhard Huber

[1] The "Chain of Custody" documents where a company purchases how much aluminum and where it is sold to. As a result, the entire aluminum cycle of certified companies can be traced.

[2] Black, Indigenous and People of Color.

[3] Lesbian, Gay, Bisexual, Transgender, Intersex, Queer. The underscore in LGBT_IQ symbolizes the range of transgender people.

› **Field of action: innovation √**

Innovations are not only relevant for supply chain management at a social level, however. A glance at the field of action innovation shows the diversity of the approaches.

Together with other brands of the Volkswagen Group, Audi is increasingly integrating artificial intelligence (AI), among other technologies, into its processes. Intelligent algorithms are used, for example, to check early on whether there are potential sustainability risks in the supply chain. For instance, the AI developed by the company Prewave analyzes publicly accessible news from more than 150 countries in over 50 languages in real time. Subsequently, an artificial intelligence evaluates the information semantically and consolidates the various sources. The AI understands the meaning of the news items and classifies them based on whether potential sustainability violations are suspected. A sustainability risk reported in the media that meets the criteria defined in the Code of Conduct for Business Partners is therefore automatically reported. Thanks to this technology, Audi can respond more quickly when necessary. It is then up to the SCGM team of experts to investigate the issue in accordance with the Supply Chain Grievance Mechanism (SCGM) process and, if necessary, take appropriate action.

Alongside this technical innovation, Audi also depends on innovative approaches. With the Act4Impact sustainability initiative, the company is developing a network of key partners to collaborate on solutions for a more sustainable supply chain.

For example, a special online training portfolio on the topic of sustainability was established for this purpose, which is intended primarily for employees of suppliers of the Volkswagen Group. From this target group, around 3,000 participants completed this training in 2022 alone. Audi has also devised the Act4Impact Playbook. Each chapter of this manual aims to show the suppliers possible ways to improve sustainability and to inspire them to develop suitable processes and practices themselves.

> “Our suppliers may not discriminate against any employees and they must recognize the basic right of all employees to form and join trade unions and employee representative bodies.”
>
> **Dr. Johanna Klewitz,**
> Head of Sustainability Supply Chain, AUDI AG

> “Digital tools and innovative approaches are crucial on the path toward a more sustainable supplier network.”
>
> **Lukas Petersik,**
> Sustainability Supply Chain, AUDI AG

Field of action: environment ✓

From an environmental point of view, sustainability in the supply chain means, among other things, ensuring that all processes emit as little CO_2 as possible – even before a part reaches Audi.

In 2018, the company launched a CO_2 program in the supply chain. The “Sustainability Supply Chain” team is closely involved in the resulting decarbonization activities of the company as a whole. The measures adopted with suppliers support the higher-level corporate goal of reducing Audi’s carbon emissions over the entire life cycle of an Audi vehicle by 40 percent by 2030 relative to the starting year of 2018. This progress made is measured using what is referred to as the decarbonization index (DCI, see box).
Audi is addressing CO_2 hotspots to ensure a targeted approach to decarbonization. Together with its DCI process partners in the company, the “Sustainability Supply Chain” team has identified certain materials and parts that are expected to have the highest ›

Decarbonization index

On the road to climate-friendly mobility, Audi is using the decarbonization index (DCI),[4] which is a strategic indicator for reducing CO_2 for all brands in the Volkswagen Group. The DCI factors in the entire value chain – from the extraction of raw materials and production to the provision of fuel and electricity and vehicle emissions through to recycling.

[4] The decarbonization index (DCI) describes the average emissions of CO_2 and CO_2 equivalents over the entire life cycle of the Audi passenger car portfolio (in the regions of Europe [EU 27, United Kingdom, Norway and Iceland], China and USA) und and is stated in metric tons of CO_2 per vehicle. It includes both direct and indirect emissions of CO_2 and CO_2 equivalents at individual production sites (Scopes 1 and 2), as well as all other direct and indirect emissions of CO_2 and CO_2 equivalents over the life cycle of the vehicles in the AUDI AG portfolio (Scope 3). The use phase is calculated over 200,000 km, taking into account region-specific fleet values without legal flexibility. The CO_2 intensity of the charging current of electrified vehicles is also calculated on the basis of region-specific electricity mixes. Vehicle maintenance is not considered in this calculation. Vehicle life cycle assessments used as a data basis for the calculation of supply chain and recycling emissions have been verified by external and independent parties according to the ISO 14040 standard.

› savings potential. The biggest emissions driver in the supply chain for an electric vehicle is the high-voltage battery, followed by parts made of aluminum and steel. Together, parts from these three categories generally account for more than half of the carbon footprint. Most CO_2 emissions are not attributable to direct suppliers, however, but occur in the upstream production processes.

Together with the companies involved in these upstream production processes, Audi therefore focuses in various areas on the use of green energy in the production of selected parts. In addition, CO_2-reduced aluminum is used and, in the future, CO_2-reduced steel. The company also deploys recycling concepts and makes use of secondary material. Using secondary aluminum, for example, enables energy savings of up to 95 percent compared with primary aluminum. A good example of how internal recycling loops are closed in the sense of the circular economy is the Aluminium Closed Loop, which has been implemented in increasingly more plants over the years – currently in Ingolstadt, Neckarsulm, Győr and the multi-brand site Bratislava. The offcuts produced in the press shop are sorted by grade and returned to our suppliers. They can then use the high-grade secondary material to produce new aluminum sheet and thus require less primary aluminum. Proof of the fact that this process works is provided by the "Chain of Custody" certificate awarded to Audi in 2020 by the Aluminium Stewardship Initiative for the Ingolstadt and Neckarsulm sites. This certificate verifies that the material used in the press shop is obtained from a supply chain that is ASI-certified from end to end. On the basis of this – and our own performance certification – the offcuts can also be declared as being compliant with the "Chain of Custody." Close collaboration with suppliers is an important foundation for success in relation to all of these activities. In 2022, Audi was able to reduce net carbon emissions[4] by more than 375,000 metric tons by means of measures taken in the supply chain together with suppliers.

> "In 2018, we launched a CO_2 program in the supply chain. At the start, it was a question of building knowledge and gaining experience. The 'Sustainability Supply Chain' team is now an established organizational element of the decarbonization activities of the entire company."
>
> **Dr. Felix Homfeldt,**
> expert on decarbonization, AUDI AG

A further focal point in the environment field of action is the environmentally compatible and efficient use of resources like water.

Regional differences in the availability of clean water pose a particular challenge in developing a water strategy for the supply chain. Audi therefore pursues a risk-based approach that takes regional availability into account. It analyzes which regions are subject to high levels of water stress and identifies the materials that require particularly large amounts of water to produce. Based on the intersection between these regions and materials, Audi identified hotspots. For these, in the next step, effective solution approaches are to be developed together with the relevant suppliers.

As further proof of its commitment, in January 2023 Audi became the first premium automotive manufacturer to join the Alliance for Water Stewardship. The global network of companies, NGOs and governmental organizations is dedicated to achieving more sustainable and responsible use of water as a resource in collaboration with the relevant stakeholders. /

> "The challenges in developing a water strategy for the supply chain are especially the regional differences in the availability of clean water."
>
> **Roland Dieling,** environmental expert, Sustainability Supply Chain, AUDI AG

Sustainable development goals

The following SDGs are at the focus of this company commitment:

Further information on Audi and the UN sustainabi lity goals can be found on pages 110–122.

[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.

5

Employees & Society

Photo: AUDI AG

Audi e-tron GT quattro: electric power consumption (combined) in kWh/100 km: 21.6–19.6; CO_2 emissions (combined) in g/km: 0.
Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.

Employees & Society

Sustainability at all levels
101

Environmental awareness, social commitment and entrepreneurial responsibility – these topics play a major role at Audi. A visit to three Audi employees shows how they are implemented in practice.

Powering transformation from within
106

Audi is using special training and development programs to prepare its employees for new tasks and technologies, at the same time countering a shortage of skilled labor. A visit to the new battery assembly facility in Ingolstadt.

↗ Our specific measures for the core topic Employees & Society can be found in the Audi Sustainability Program, important key figures in the appendix.

Illustration: C3 Visual Lab | Photos: AUDI AG

Sustainability at all levels

Environmental awareness and eco-friendly operations, social commitment and farsighted corporate governance are what constitute a sustainable company. But what does this mean in practice? A visit to three people who see sustainability not just as their job but as their mission in life.

Text: Ramona Riegler and Johannes Palm

Photo: Max Kratzer

Photo: Max Kratzer

Michael Hügel: Nature and technology in harmony

"I commute between the office at Audi, my office at home and the outdoors." No matter where Michael Hügel is working, he likes to be surrounded by nature – whether at local tree-planting campaigns organized by the Audi Environmental Foundation or even in his office at home: the sustainability expert and his family live in a wooden house.

Since 2009, Michael Hügel has been part of the small team which established the Audi Environmental Foundation, a nonprofit company that is a wholly owned subsidiary of AUDI AG. The Foundation is a part of social and environmental commitment at Audi.

Initially, the Audi Environmental Foundation focused on nature-related projects to protect the environment and biodiversity, such as the founding project "Oak Forest": "We didn't just plant trees at random, but asked ourselves together with the Technical University of Munich: how can we plant the trees in such a way that we achieve the highest possible carbon capture while maintaining a high level of biodiversity," says Hügel. The internationalization of this research approach has already seen more than 100,000 oak trees planted at various sites worldwide.

As time went on, more and more projects were added that linked environmental protection with the Audi DNA – and thus also with "Vorsprung durch Technik." This gave rise, for example, to today's "Greenovation" field of action, which promotes the development of innovative environmental protection technologies and makes them a reality. The current Greenovation project finds Michael Hügel and his team supporting German-Indian start-up company Nunam, whose work includes developing energy storage systems based on used battery modules from test vehicles. These systems can be used, for example, to provide light to shops in rural areas of India, allowing some traders to continue working after dark. The Audi Environmental Foundation supports the Greenovation project not only financially, but also through active project work and networking with relevant partners. One of the goals of the Audi Environmental Foundation is always to create awareness of the fact that modern technology and environmental protection complement each other perfectly.

Dr. Carina Behrends: Diversity in practice

Creating awareness is also part of the mission of Dr. Carina Behrends, a member of the Diversity & Inclusion (D&I) team at Audi. For nearly three years, she has been working to promote D&I throughout the Premium brand group – for example, through training, by refining HR processes and through dialogue in partnerships with international diversity initiatives and New Work projects.

Michael Hügel, expert on sustainability, Audi Environmental Foundation

"Diversity has very great potential. When different perspectives, ideas and opinions come together, this can result in plenty of innovation, especially at an international company like Audi and the entire Premium brand group. We want to take advantage of this potential," summarizes Dr. Carina Behrends. Studies, like recently by McKinsey, show that companies with greater diversity have a 25 percent higher chance of achieving above-average profitability. At the same time, they are more attractive as employers, as shown by a StepStone survey.

Commitment to D&I involves significantly more than many people think. Dr. Carina Behrends and her team give Audi a voice on national and international platforms and events, for example, and enter into dialogue with experts from other companies about what can be done to achieve equal opportunities ›

Dr. Carina Behrends, expert on diversity & inclusion, AUDI AG

Equal participation

17.7 percent women at the second management level and 9.2 percent at the first management level: this means that AUDI AG narrowly missed its own targets of 17.8 percent and 9.4 percent respectively by the end of 2022. The company had set these targets in compliance with legislation on the equal participation of women and men in management positions in the private sector. The goal for year-end 2025 is to increase the percentage of women to 20.0 percent at the second management level and 12.0 percent at the first management level. This involves consistently implementing the Audi Diversity Strategy, which includes realizing flexible work-time models and expanding job sharing offers, especially in management. Women made up 40 percent of the Supervisory Board as of December 31, 2022. To ensure that this situation is maintained, the Supervisory Board has set itself a target of 30 percent for 2025, which is to be satisfied separately by the shareholder and employee representatives. The Supervisory Board has also set a formal target of two women on the Board of Management by 2026. There was one woman on the Board of Management of AUDI AG at the end of 2022.

Photo: Max Kratzer

› for everyone, both in the business world as well as in society at large.

Diverse, inclusive and international: This is what Dr. Carina Behrends considers to be the ideal working environment. “We want to create an environment in which everyone can do their best.” This is also the focus of Sarah Schwellinger’s work. One of her tasks is ensuring diversity in the entire Audi supply chain.

Sarah Schwellinger: Standing up for human rights

At 8:00 a.m., Sarah Schwellinger starts another day full of emails and telephone calls to various suppliers of the Audi Group whose issues need clarifying. Today, she answers questions such as “What sustainability requirements do I have to fulfill as a supplier to Audi?” or “How can I, as a supplier to Audi, help to ensure that my own suppliers respect human rights?”

Audi works with over 14,000 supplier companies from 60 countries. “Due to the large number of suppliers and subcontractors, we have to deal with a very high level of complexity on a daily basis. That’s why we first address the areas where the risks are highest,” says Sarah Schwellinger, an expert on human rights due diligence in the supply chain. A few years ago, Audi set up a dedicated organizational unit within the Procurement division to keep track of everything: Sustainability Supply Chain. Here, Sarah Schwellinger and her colleagues join forces with suppliers to ensure, for example, that CO_2 emissions in the supply chain are reduced, material loops are closed, new technologies are harnessed for more sustainable supply chains and the working conditions at supplier companies meet international standards. To achieve this, they use the “Sustainability Rating” (S-Rating) that was introduced in 2019. The S-Rating is a tool that the company and its suppliers use together to ensure that human rights, occupational safety and environmental protection are observed along the supply chain. To verify these points, they inspect the human rights policy and the environmental management system for suppliers and sub-suppliers, for example, or interview employees during risk-based on-site checks. A positive S-Rating is a prerequisite at Audi for awarding contracts to suppliers and makes a significant contribution to sustainability in the supply chain. A negative rating is taken ›

› very seriously: the supplier company must work through the documented points before another on-site check is carried out on a case-by-case basis. “The aim, however, is not only to uncover problems, but also to solve them together. To prevent problems from occurring in the first place, we offer our suppliers regular training courses and training materials,” Schwellinger explains.

“Supplier Diversity & Inclusion” is part of this training. Sarah Schwellinger and her team are committed to creating awareness of this field, for example by integrating it into training materials for suppliers or by holding workshops for procurers and interface partners. However, supplier diversity and inclusion also plays a major role when selecting new suppliers: Audi wants to expand its cooperation with diverse companies[1] and thus not only leverage the innovative strength of such companies, but also create added value in the supply chain and in society.

People & Culture: focusing on people

Michael Hügel, Dr. Carina Behrends, Sarah Schwellinger – all three are engaged in positive social change, thereby making an important contribution to sustainable further development at Audi, as are Ralph Ilsanker and his colleagues from Human Resources Strategy. In collaboration with the Audi Group and its subsidiaries, the team has evolved a concept to strengthen the optimal working culture.

“‘People & Culture’ is a holistic concept that integrates people, culture and work,” explains Ralph Ilsanker. The measures extend across four levels: from the individual and the team to the company as a whole and, via AUDI AG, to the world beyond (see infographic, page 105). Here, too, an international approach is taken. The concept was rolled out to the entire Premium brand group and the sites in 2022.

One new project based on this concept is “better normal,” which is aimed at making the working environment more flexible.

Better normal: a working world for everyone

Ensuring a balance between work and personal life and creating optimal working conditions are priorities for Audi. As a result, hybrid working is already the new reality in many areas of the Audi Group today. The 2022 revision of a works agreement smoothed the way for this, with mobile and on-site work considered to be equivalent working models. There are no rigid rules. Instead, the concept is built on flexibility and individual responsibility, which not only ensures the best possible working conditions for each person but also fosters productivity throughout the company. The revised works agreement also entitles employees to various equipment packages, which include IT equipment and office furniture to ensure appropriate and healthy mobile working conditions for employees.

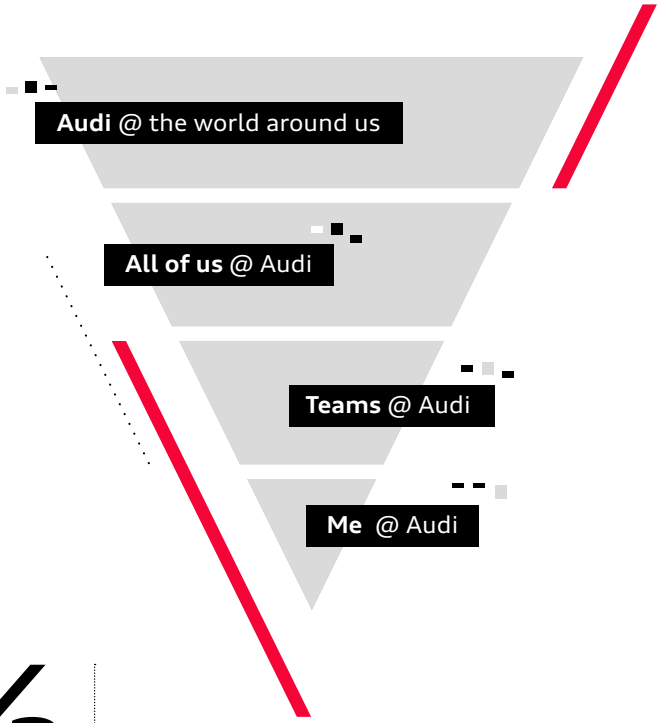
The coronavirus pandemic and the resulting changes to day-to-day working have been and remain a not insignificant catalyst for this development. Although it is now possible to return to work in the office, the benefits of hybrid working continue to be used. Between October and December 2022, around two-thirds of all employees with variable working hours models participated in hybrid work, i.e., a combination of working in the office and working from home.

The next step of the “better normal” project is to create the technical conditions and spaces at the Ingolstadt and Neckarsulm locations to make hybrid work even more attractive and efficient for the sites’ employees. New office concepts with creative rooms, project spaces and optimized meeting rooms foster ›

Sarah Schwellinger, expert on human rights in the supply chain, AUDI AG

[1] Diverse companies are those that either create social added value by solving societal or ecological challenges (social businesses) or are owned by people from underrepresented groups (minority-owned businesses).

Photo: Max Kratzer



› personal networking and interaction. Individual work stations will be gradually replaced by flexible desk-sharing models with work zones that satisfy various needs: concentrated working, personal networking, efficient meetings and room for creation.

"The implementation of these measures is fully under way. In 2023, the working environment at Audi will further change visibly," explains Gerald Kolbeck, who heads the "better normal" project. In addition, tangible improvements in working conditions are to be implemented in areas like production where hybrid working is not possible, for example, through flexible shift working models and the provision of modern break and recreation rooms.

Sustainability in practice

Dr. Carina Behrends, Sarah Schwellinger, Michael Hügel, Ralph Ilsanker and Gerald Kolbeck: at first glance, they have little in common, are employed in different areas of the company and work on different topics. However, one overarching goal unites them: ESG.[2] Each of them demonstrates how social engagement, farsighted corporate governance and environmental awareness can be implemented in practice. And, as a community, they demonstrate how sustainability is practiced at all levels at Audi. /

Corporate citizenship

In 2022, **the Premium brand group** spent a total of EUR 50.5 million on corporate citizenship. The group supported numerous projects with the focus on the guiding principles of Engage, Educate, Empower. These projects ranged from welfare-oriented activities, such as donations, to investments in the social environment with a clear connection to strategic corporate goals, such as the doctorate program as well as the participation in public research projects on topics like the battery pass. Further activities of the brand group relate to corporate sponsorship, own project initiatives and partnerships in a social context as well as to initiatives and associations that focus on sustainability such as the Global Battery Alliance, the UN Global Compact and the Alliance for Water Stewardship.

Illustration: C3 Visual Lab

2/3

Between October and December 2022, around two-thirds of all employees with variable working hours models participated in hybrid work, i.e., a combination of working in the office and working from home.

[2] ESG stands for Environmental, Social and Governance.

Sustainable development goals

The following SDGs are at the focus of this company commitment:

Further information on Audi and the UN sustainability goals can be found on pages 110–122.

People & Culture

Audi @ the world around us

Audi is taking responsibility and working to ensure an environment worth living in – both at the company and outside it. One way of achieving this is through commitment to diversity & inclusion and corporate citizenship. Measures include concepts to balance work and care-giving, childcare options and the "Audi Volunteers" initiative that facilitates volunteering by Audi employees.

All of us @ Audi

The goal is to establish a positive and modern culture coupled with a new understanding of leadership. The new Leadership.Compass, for example, contributes to this: this is the central definition of leadership at Audi and contains guidance for how Audi wants to lead – by empowerment and ownership.

Teams @ Audi

Audi is fostering the creation of high-performance teams, the transformation of the workforce and the implementation of a digital working world. One of the projects aimed at driving these developments is "better normal."

Me @ Audi

Audi is seeking to ensure a positive experience for all employees. An integral aspect of this is the holistic approach to health management with measures to promote physical and mental health. The offering includes, for example, the Audi Health Guides, who serve to effectively communicate and share the wide range of health information and Audi health management services. There are currently more than 70 Health Guides from all divisions active at the Ingolstadt site.

Powering transformation from within

Audi is systematically pressing ahead with the switch to electric mobility and meeting the challenges of transformation head on with reliably flexible structures and with adherence to its culture and its values.

Text: Ramona Riegler and Ludwig Bremauer

Photo: AUDI AG

By 2023, production of the last internal combustion engines will have been phased out. Employees from all divisions – from Development to Procurement through to Production – strive every day to ensure the successful transformation to electric mobility. Not only does this involve challenges, it also offers opportunities. To take advantage of these, Audi has developed intensive training and development programs to optimally prepare its workforce and is thus counteracting the shortage of skilled labor simultaneously. A glance at the career progression of plant operator Daniel Mayer and the establishment of the battery assembly facility in Ingolstadt shows how well this is working.

In the Ingolstadt factory hall, myriads of orange-colored robot arms operate in six line sections to assemble the high-voltage batteries for the next generation of Audi electric vehicles based on the Premium Platform Electric (PPE). “The assembly is highly complex technically, but actually quite easy to explain. There’s a tray including cooling system in which we mount the high-voltage battery system with its individual modules and connections onto a heat dissipation paste. We then glue-down the lid and install a control unit as the interface to the vehicle. And before the battery is then finally ready, there are a number of safety tests to carry out,” explains Daniel Mayer.

Daniel Mayer, plant operator in battery assembly, Ingolstadt, AUDI AG

Driving innovation through initiative

The qualified electromechanical engineer began his career at Audi as a production specialist in pre-assembly for the rear axle of the Audi A5. This is an area with established processes and a wealth of ›

› experience. With the electrification of mobility, however, not only are the vehicles changing, but also proven production processes. Daniel Mayer was quick to recognize that this would open up new professional opportunities: “The future of mobility is electric: I therefore decided to take a sabbatical in 2018 and completed my training as a master electrician during that time.”

He wanted to apply his newly acquired skills to the electrification of Audi and seized the opportunity in 2020. As part of a basic unit with around 20 Audi employees, he familiarized himself with the subject so that he could play his part in developing the new battery assembly facility in Ingolstadt. Two years later, Daniel Mayer is now responsible for two assembly line sections. He checks every work step, knows every movement of his robots precisely and documents any noticeable problems in order to ensure a smooth start to series production.

He learned about the special requirements of manufacturing high-voltage batteries during the course of various training programs, including at the Audi Akademie. He acquired technical and theoretical knowledge, such as safety rules for working with high voltage, off the job in courses and lectures. “But on-the-job learning was more to my liking,” laughs Daniel Mayer. For this, he enjoyed lively exchanges with experts at the battery competence center in Neckarsulm and the battery testing center in Gaimersheim. From foundational research on battery cells to development of prototypes and new manufacturing technology through to service life test rigs and prototype assembly of high-voltage rechargeable batteries – the experts are the source of electrical expertise at Audi and share their knowledge in the Group.

No future without vision

Several hundred batteries for the Audi Q6 e-tron family will leave the assembly line per shift following the start of production in the second half of 2023. “For us the battery is the heart of the car,” explains Philipp Heizmann, who heads up battery assembly in Ingolstadt. Some technologies at the plant are being used for the first time at Audi. Applying them in series production was an exciting process. Or, as Daniel Mayer puts it: “That was real pioneering work.”

A team of specially selected employees are currently working in battery assembly in Ingolstadt. “Transformation is driven by motivation – and motivation is high in the workforce,” says Heizmann. “When we began to set up the facility, we were faced with an empty hall and had to first define the basic principles. That was a major challenge,” he recalls. Support came and continues to come from the first Audi battery assembly facility in Brussels, which provided experience and know-how from the outset. For example, process planning engineers who helped set up the assembly in Brussels are now actively involved in Ingolstadt. Meanwhile, synergies within the Volkswagen Group are also being utilized. Colleagues from Volkswagen, Škoda, Audi Ingolstadt and Audi Brussels meet regularly: “We swap ideas regularly both within our brand group and in the Group – the world of high-voltage batteries is well networked in this respect,” concludes Philipp Heizmann.

Sustainable development goals

The following SDGs are at the focus of this company commitment:

Further information on Audi and the UN sustainability goals can be found on pages 110–122.

“That was real pioneering work.”

Daniel Mayer, plant operator in battery assembly, Ingolstadt, AUDI AG

Recruitment of staff is now the next step. A workforce of 300 Audi employees is planned by the end of 2023 to support the mobility transformation in Ingolstadt. To this end, people are specifically being sought from within the company’s own ranks who can then be trained specially for battery assembly. Interest in the cutting-edge jobs is high: “Everyone working here brings a special mindset. These are people who want to play a part and help shape the future of mobility,” enthuses Philipp Heizmann.

Together for innovation

Experts from the area of battery production, the Audi Akademie, battery assembly in Brussels, the battery testing center in Gaimersheim and the battery competence center in Neckarsulm work closely together to develop tailor-made training paths for employees like Daniel Mayer. Since 2021, some 200 employees are being trained, or have already completed their training, for the ramp-up of production of the Q6 e-tron family. A further 1,200 employees will be trained or retrained by the end of 2023.

“This is a rolling process. We continue to refine our training paths in order to continually improve our efficiency and adapt them to changing requirements on an ongoing basis,” explains Benedikt Meier, who acts as the interface between production and the Audi Akademie in his role as coordinator and responsible qualified electrician.

In addition to a range of different development and retraining measures, Audi is also expanding its electric expertise within the Group continually with ›

Photo: AUDI AG

› cutting-edge apprenticeship vocations and work-study degree programs. These include, for example, work-study degree programs in robotics, electrical and information technology and artificial intelligence as well as apprenticeships as an automotive mechatronics technician specializing in systems engineering and high-voltage technology or an IT specialist for application development.

A bright future together

Switching a vehicle manufacturer whose focus is internal combustion engines to electric mobility in just a few years is a major accomplishment. Technically, structurally and culturally. Tamara Staniszewski knows that only too well. She is a training consultant and expert in preparing Audi employees to take on higher-level or different tasks. “People who already work for us are extremely valuable – they know our systems, our processes, our culture,” she says. This eliminates the need for extensive induction training and means that we can make time savings of a good six months per capita compared with hiring an external skilled employee.

Together with Strategic HR Planning, she knows precisely which job clusters need to be transformed in the course of electrification in order to address the needs of the employees from these areas.

This culture of open dialog in the company and the motivation of the Audi employees are what make electrification in the Group possible. “Helping to set up the first Audi battery production facility in Germany – being part of it – that is an experience I will never forget,” sums up Daniel Mayer.
The transformation of the automotive industry brings enormous challenges – but likewise major opportunities for the future. Audi is actively helping to shape this change. Equipped with decades of experience and strengthened by highly motivated and strategically trained Audi employees, the Group will not only make the switch to electric mobility, it will master it superbly, too. /

Training at Audi

Developing and nurturing competences: the transformation calls for new key skills. The Audi Akademie pools all training activities at Audi – from vocational training to advanced training and competence development – and thus helps to secure Audi’s competence lead in collaboration with the various departments.

7,377
Number of advanced training events*

508,311
Number of training hours*

Participation in training measures:*

51,164

Of which transformation training:

around **16,000**

Of which with a focus on digitalization:

around **7,000**

* AUDI AG Germany (excluding web-based training (WBT), including training centers). All figures refer to 2022.

Illustration: C3 Visual Lab

Appendix

A focus on the Sustainable Development Goals of the United Nations

Audi links its sustainability activities to the Sustainable Development Goals of the United Nations. In doing so, it places the spotlight on the five goals where the biggest difference can be made.

17

SDGs at a glance

All Agenda 2030 goals can only be achieved if nobody is left behind:

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 is guided by the Sustainable Development Goals. Internal workshops were conducted to identify the SDGs to which Audi can make the greatest contribution with its actions. To this end, the topics and results of the materiality analysis were compared with the SDGs to determine which of the five sustainability goals the company can have the greatest influence on. Of course, Audi endeavors to make a comprehensive contribution and therefore also works toward SDGs other than the five listed below; the stories in each chapter of the Audi Report provide examples of this. **However, the following five SDGs are at the focus of the company commitment:**

Audi supports the UN Global Compact

Audi is a member of the United Nations Global Compact (UN GC), the world's largest initiative for sustainable corporate governance. This membership in one of the most active platforms for dialogue among industry, civil society and politics is an important pillar of stakeholder management.

Audi reports on its progress with regard to the implementation of the 10 principles of the Global Compact and its activities to promote sustainable development as part of its annual Communication on Progress, which is available on the website of the UN Global Compact.

AUDI AG | UN Global Compact

United Nations Global Compact

Audi is committed to long-term, wide-scale economic growth, full and productive employment and humane work for everyone.

Audi is working on a robust infrastructure, promoting sustainable industrialization and supporting innovations.

Audi meets the challenges of urbanization with intelligent, sustainable and urban mobility concepts.

With production as environmentally friendly as possible, Audi also fosters sustainable consumption. Resource and energy efficiency are two key elements in this context.

Audi produces and develops products with the goal of enabling climate-friendly individual mobility.

Audi Sustainability Program

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.”

Audi Sustainability Program
Operations and Integrity (Table 1 of 2)

Goal	Measure	Target date	Equivalent SDGs
9 to 11 percent operating return on sales, >11 percent from 2030 onwards[1]	Implementation of the Audi “Vorsprung 2030” strategy[2]	Continuous development	8
Over 21 percent return on investment (ROI) as a strategic target[1]	Implementation of the Audi “Vorsprung 2030” strategy[2]	Continuous development	8
6.0 to 7.0 percent research and development ratio as a strategic target[1]	Implementation of the Audi “Vorsprung 2030” strategy[2]	Continuous development	8, 9
4.0 to 5.0 percent capex ratio[1] as a strategic target	Implementation of the Audi “Vorsprung 2030” strategy[2]	Continuous development	8
Self-finance the transformation to provider of sustainable, individual premium mobility	Implementation of the Audi “Vorsprung 2030” strategy[2]	Continuous development	8
EUR 15 billion measure potential through the Audi Transformation Plan on the cost and revenue side 2018–2022[3]	Programs already set up with Project Management Office (PMO) and work packages from the Board of Management. Flanked by ongoing monitoring and control	2022[2]	8
Reinforce Group-wide compliance and integrity	Implementation of Volkswagen Group-wide compliance and integrity program, Together-4Integrity, on the basis of the international ethics and compliance initiative in all companies incl. post-monitoring measures	2025	8, 16
	Strategic communication and training measures on compliance and integrity	Continuous development	8, 16

[1] The strategic target corridor mentioned applies with immediate effect.

[2] The Audi Transformation Plan was concluded as of December 31, 2022.

[3] The Audi Transformation Plan (ATP) also had a positive effect on the operating profit in 2022, its planned final year. In the year under review, measures totaling more than EUR 4 billion were realized. Due to the supply shortages for semiconductors, the majority of these affected the cost side. Since the beginning of the ATP in 2018, the program therefore realized around EUR 14.4 billion and thus fell just short of the target of EUR 15 billion due to the lower sales volume on account of the pandemic and supply limitations. The ATP proved to be an effective instrument for safeguarding our profitability. Many of the measures have a long-lasting impact and have already been implemented in daily business.

Audi Sustainability Program
Operations and Integrity (Table 2 of 2)

Goal	Measure	Target date	Equivalent SDGs
Enhancement of an ESG management system	Enhancement of processes, methods, structures and robust data systems	2023	12
Global protection and responsible handling of personal data	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 and establishing an appropriate risk management system	Continuous development	8, 16
Creation of a globally uniform foundation for carrying out responsible marketing activities[4]	Decision and worldwide rollout of the Responsible Marketing Guideline	2023	5, 8, 10

[4] The worldwide rollout was successful once the guideline had been distributed to the markets via email and/or via marketing database.

Audi Sustainability Program
Products and Services (Table 1 of 2)

Goal	Measure	Target date	Equivalent SDGs
Decarbonization index (DCI): Reduction in the CO_2 footprint (life cycle) per vehicle model on a fleet basis by 30 percent by 2025 compared with the base year 2015 and by 40 percent by the year 2030 (base year 2018)[1, 2]	Creation of DCI roadmap as well as derivation and implementation of decarbonization measures across the entire life cycle	2025	
Significantly reduce fuel consumption for every new vehicle compared with the predecessor model	Switch 70 percent of new vehicles with combustion engines sold worldwide to mild hybridization or plug-in hybridization	2022[3]	
Ensuring technological compatibility of Audi products for use with synthetic fuels as a contribution to defossilizing the existing fleet[4]	Appraisal and implementation of the necessary technical requirements for the use of synthetic fuels retroactively for vehicles with a production year starting from 2015	2025	
Expand the range of electric drive concepts	40 percent of new Audi vehicles feature an electric drive (availability of at least one battery electric vehicle for each core segment)	2025	
Global protection and responsible handling of personal data	Fine-tune the organizational processes to validate privacy by design, privacy by default	Continuous development	
Responsibility for the safety of customers and other road users	Portfolio of predictive assistance and safety systems	Continuous development	

[1] As a Group-wide KPI, the decarbonization index (DCI) measures the average emissions of CO_2 and CO_2 equivalents over the entire life cycle (from the extraction of raw materials to recycling) of the Audi passenger car portfolio and is stated in metric tons of CO_2 per vehicle. It includes both direct and indirect CO_2 emissions at individual production sites (Scopes 1 and 2), as well as all other relevant direct and indirect CO_2 emissions over the life cycle of the vehicles (Scope 3). The Audi DCI goals make a contribution to the decarbonization of the Volkswagen Group.

[2] Fleet of new cars sold in EU, USA and China export.

[3] Due to the marked increase in market share for BEVs, this goal will no longer be pursued, as this would mean that the mild hybridization combustion engine measure would no longer make a significant contribution to a reduction of CO_2 fleet emissions. Furthermore, the limited availability of supplier parts (semiconductors, cable harnesses from Ukraine, etc.), in conjunction with the prioritized use of the available materials in BEVs, plays a role.

[4] The basis for this is exclusively renewable fuels of non-biological origin* (RFNBO), which have no negative impacts on the use of raw materials for the production of food. The biofuels used are produced exclusively from second-generation* residual materials, which are residual materials that are generated during the production of food, left behind on arable land and not used for other purposes.

* See the Renewable Energy Directive(RED II).

Audi Sustainability Program
Products and Services (Table 2 of 2)

[5] With the strategic refocus within the Group for new mobility business models, Audi is adapting its mobility portfolio to the new strategy.

[6] Focus on developing battery-powered electric vehicles, cf. technical clarity.

Goal	Measure	Target date	Equivalent SDGs
Enhance road safety	Further development of technologies toward assisted/automated driving	2025	
Develop an attractive mobility portfolio[5]	Development of new business models as part of the new focus on synergies within the Group	2028	
Maintain long-term competitiveness with reference to fuel cell drive concepts[6]	Various technology and market monitoring activities as well as safeguarding access to technology. The focus is on possible changes to framework conditions, e.g., future availability of renewable energies, etc.	Continuous development to safeguard access to technology	

Audi Sustainability Program
Value Creation and Production (Table 1 of 3)

Goal	Measure	Target date	Equivalent SDGs
Integrate sustainability into supplier relationships	Training for all procurement employees in order to raise awareness of sustainability standards in supplier relationships	Continuous development	8, 12, 13
	Training for suppliers in order to raise awareness of sustainability standards in the supply chain	Continuous development	8, 12, 13
	Sustainability Rating (S-Rating) as a mandatory criterion for awarding contracts	Continuous development	8, 12
	Involvement in industry standards and Group tools to ensure compliance with environment-related and social standards in the supply chain	Continuous development	8, 12, 17
	Supply Chain Grievance Mechanism: Further development of the supply chain grievance mechanism; grievance channel is publicly accessible[1]	Continuous development	8, 10, 17
	Development of preventive measures relating to ESG risks in the supply chain	Continuous development	8, 12, 17

[1] The speak-up email address for potential breaches by suppliers is publicly accessible on the Audi website: www.audi.com/en/company/sustainability/core-topics/value-creation-and-production/supply-chain-responsibility/commitment-is-an-act.html

Audi Sustainability Program
Value Creation and Production (Table 2 of 3)

[2] Will no longer apply in the future, as integrated in DCI activities. CO_2 reduction measures in the supply chain will be continued as part of Audi decarbonization activities.

[3] Will no longer apply in the future as an individual measure through integration in DCI activities. Continuation of the content, in particular tracking, if individual measures are required, e.g., in specifications. CO_2 reduction measures in the supply chain will be continued as part of Audi decarbonization activities.

Goal	Measure	Target date	Equivalent SDGs
Integrate sustainability into the supply of raw materials	Raw Material Due Diligence Management: OECD-compliant raw materials management	Continuous development	
	Adaptation of existing processes through successive implementation of human rights duty of care for critical raw materials in the supply chain	Continuous development	
Integrate environmental measures into the supply chain	Holding of CO_2 workshops with selected hotspot suppliers to identify measures with potential to reduce CO_2 emissions[2]	Continuous development	
	Rollout of the Aluminum Closed Loop in other plants	2025	
	Anchoring the use of green electricity in the supply chain[3]	Continuous development	
	Development of a “Responsible Water Stewardship Program” for the supply chain	Continuous development	
The aim of Act4Impact is to build a network of partners in our supply chain who want to bring about improvement from an economic, environmental and social perspective.	With the Act4Impact program, we want to roll out the Audi Act4Impact Playbook globally for our suppliers to show them possible ways to improve sustainability	2025	

Audi Sustainability Program
Value Creation and Production (Table 3 of 3)

Goal	Measure	Target date	Equivalent SDGs
Achievement of the Group target figure for the reduction of the environmental impact of production (UEP) of 35 percent. The UEP 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	
Systematic reduction in overall energy consumption at the sites	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[4]	Detailed planning and implementation of site-specific packages of measures for achieving targets	2025	
	Extension of the ASI performance standard/ chain of custody to include other aluminum components and AUDI AG production sites	2024	
Anchoring circular economy concepts in the company	Creating concepts for the recycling of high-voltage batteries	2025	
	Formulation of a KPI set for the internal management of circular economy concepts	2022[5]	- 
Integrating sustainability into the supplier chain and adding own value to high-voltage storage devices	Development of sustainability principles and collaboration on 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	

[4] Győr and Brussels are already net carbon neutral; Audi regards net carbon neutrality as a state in which voluntary and globally conducted compensation projects offset, at least quantitatively, after exhausting other options aimed at reducing the CO_2 emissions caused by Audi products or activities and/or currently unavoidable CO_2 emissions within the scope of the supply chain, manufacturing and recycling of Audi vehicles. This excludes CO_2 emissions produced throughout the utilization phase of a vehicle, meaning from the point when a vehicle is delivered to a customer.

[5] Goal achieved as planned in 2022 through finalization of a KPI set. Initially, the focus is on increasing the use of secondary materials in vehicle projects.

Audi Sustainability Program
Employees and Society (Table 1 of 4)

Goal	Measure	Target date	Equivalent SDGs
Make working hours and place of work more flexible	Establishment of mobile working	Continuous development	8
	Introduction of “better normal” on the basis of the “hybrid working” works agreement (10/2022)[1]	2024	8
Update methodology and content of vocational and advanced training	Extension of digital learning methods	2025	4
	Modification of content of vocational and advanced training in relation to strategic future-oriented topics	2025	4
Promote employee health	Setup of digital offerings as part of company health promotion	2022[2]	8, 3
	Expansion of healthy (also including vegetarian and vegan) meal options as well as consistently aligning the meal plans with the ESS line principles of Audi gastronomy[3]	2023	3, 12, 13
Promote equal opportunity	Increase in the proportion of women in the first management tier below the Board of Management to 12 percent and to 20 percent in the second management tier	2025	5
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	5, 10

[1] Specific steps for 2023 and 2024:
- Conclusion of the “better normal” office environment test fields (incl. desk sharing) in the first half of 2023
- Rollout (first wave) of the “better normal” office environment (incl. desk sharing) in the second half of 2023
- Rollout (second wave) of the “better normal” office environment in 2024
- Measures to improve the working world in the production areas in 2023 (e.g., quality of time spent at the company, digitalization).

[2] Organize and carry out (online) presentations and campaigns in the actions areas of exercise, nutrition and mental health. Continuation of the online modules and additional modules planned for 2023. Piloting of the multiplier function of the Health Guides to anchor and raise awareness for health and health-related topics.

[3] Specific measures in 2023:
Introduction of a vegan campaign month (always January) with the goal of every other dish in the main menu lines (Classic and Green Line) being vegetarian or vegan.

Audi Sustainability Program
Employees and Society (Table 2 of 4)

Goal	Measure	Target date	Equivalent SDGs
Promote work-life balance	Expansion of childcare through the continuous adjustment of enrollment slots in regional childcare facilities and the addition of more slots. Expansion of vacation childcare through expanded cooperation with regional partners[4]	2027	
	Focusing on work–life balance: Establishment of themed weeks related to professional life and care in the fields of prevention, dementia and terminal care/grieving[5]	2023	
	Promotion of employee mobility by strengthening the provision of job tickets and promoting carpooling	Continuous development[6]	
Further develop voluntary programs	Audi Social Day as an international Volunteer Day for the first time at all Audi production sites simultaneously[7]	2023	

[4] Intensification of planning with regard to the expansion of childcare offers at the Ingolstadt and Neckarsulm sites.

[5] Execution of three themed weeks strengthens the focus on the topic of professional life and care, which is highly relevant in society.

[6] Goal will no longer be communicated in the future, as the job ticket and other support offers have already been established.

[7] International expansion of the offers with regard to employee volunteering.

Audi Sustainability Program
Employees and Society (Table 3 of 4)

[8] The Audi Leadership Principles were updated in 2022 and renamed Leadership.Compass as a result.

[9] More than 6,000 participants in modules on leadership and collaborative culture in 2022.

Goal	Measure	Target date	Equivalent SDGs
Promote a corporate culture within the meaning of the Volkswagen Group Essentials, the Audi corporate values and the Leadership.Compass	Group-wide execution of the role model program for managers and supervisors. Every manager with leadership responsibility is required to complete at least two measures per year for the promotion of an open culture of dialogue and a trusting, collaborative culture.[8]	Continuous development	
	Establishment of the Essentials Indicator to sustainably anchor the Volkswagen Group Essentials and to measure the progress in terms of culture. Achievement of the targets determined Group-wide is tracked over the long term and communicated comprehensively throughout the company.	Continuous development	
	Support of the culture shift through initiatives, formats and events.[9]	Continuous development	

Audi Sustainability Program
Employees and Society (Table 4 of 4)

Goal	Measure	Target date	Equivalent SDGs
Increase employer attractiveness	Introduction of Audi bicycle leasing[10]	2023	11, 13
	Initiation and promotion of future-oriented events with the focus on corporate citizenship/innovation (e.g., One Young World Summit)[11]	Continuous development	8
Provide access to education for the public	Public “Wissenschaft im Dialog” (Academia in Dialogue) events at the Ingolstadt & Neckarsulm sites[12]	Continuous development	4
Further development of research and teaching in future-focused fields at universities and institutes of higher education	Support of universities through endowed professorships	Continuous development	4
Promote mental health	Stages II & III: Expansion of support services and establishment of a physical and mental health network and holistic care structures[13]	2023	3
Promote flexible cooperation within the company	Creation and establishment of new cooperation formats such as agile process workshop, Denkwerkstatt in Berlin	Continuous development	8
Establishment of a new, integrity-based understanding of leadership	Development of the leadership culture by anchoring the Audi understanding of leadership within the company, e.g., in setting objectives and performance management. Long-term tracking of the leadership culture via Leadership.Indicator	Continuous development	8
Encouraging employees to provide ESG ideas	Integration of sustainability as its own category in the Audi Ideas Program so that submitted ideas can be correspondingly categorized.	2024	9

[10] With regard to the environmental challenges of climate change, the employees of AUDI AG should be granted the opportunity in the future to benefit from models of bicycle leasing at favorable conditions.

[11] The MQ! Innovation Summit took place four years in a row: in Ingolstadt in 2017 and 2018, in Beijing in 2019 and as a worldwide online event in November 2020. The event did not take place the last two years due to the pandemic and it will now no longer be continued.

[12] “Wissenschaft im Dialog” (Academia in Dialogue) was supposed to begin with new lectures over the course of 2021. This could not proceed as planned due to the coronavirus pandemic. This measure will not be continued.

[13] Successful piloting of the Mental Health Checkup (consultation on the early detection and early intervention for the typical indications of burnout). Scientific evaluation of the results of the Mental Health Checkup and publication in an academic journal. Goal for 2023: Establishment of the Mental Health Care @ Audi specialist function with a focus on early detection, early intervention and relational prevention.

GRI 2-5

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 2022 in the overview for the period from January 1, 2022, to December 31, 2022. The key figures audited are identified by the "✓" symbol. The Independent Auditor's Report can be found on → page 136.

Operations and Integrity

	Unit	2022	2021	2020
Revenue	EUR million	61,753	53,068	49,973
Operating profit	EUR million	7,550	5,498	2,569
Profit before tax	EUR million	9,072	6,929	4,187
Profit after tax	EUR million	7,116	5,649	3,774
Total capital investments	EUR million	5,345	3,972	3,654
Research and development activities	EUR million	4,517	3,913	3,662
Operating return on sales	Percent	12.2	10.4	5.1
Return on investment	Percent	22.2	16.7	7.4
Capex ratio[1]	Percent	4.2	3.8	3.8
Net cash flow	EUR million	4,808	7,757	4,589
Equity ratio	Percent	44.6	39.3	36.1

[1] The capex ratio 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

	Unit	2022	2021	2020
Production				
Cars	Cars[1]	1,171,896	1,581,164	1,664,265
	Engines and electric drives	1,680,671	1,621,468	1,662,481
Motorcycles	Motorcycles	70,295	59,214	44,827
Deliveries to customers				
Cars	Cars	1,638,638	1,688,978	1,700,258
Audi brand[2]	Cars	1,614,231	1,680,512	1,692,773
Germany	Cars	214,678	180,883	214,427
Outside Germany	Cars	1,399,553	1,499,629	1,478,346
Bentley brand[3]	Cars	15,174	61	55
Lamborghini brand	Cars	9,233	8,405	7,430
Motorcycles	Motorcycles	61,562	59,447	48,042
Product-related CO_2 emissions				
CO_2 emissions of the European (EU 27+2) fleet of new passenger cars for the Audi brand; EU excl. UK from 2021 onwards	g CO_2/km (WLTP since 2021)[4]	120.76[5] ✓	122.1[5]	103.18[6]

[1] Including the Audi models that were manufactured locally by the associated companies FAW-Volkswagen Automotive Co., Ltd., Changchun (China) and, since 2021, by SAIC Volkswagen Automotive Co., Ltd., Shanghai (China); including the Bentley brand since 2022.

[2] Including the vehicles delivered that were manufactured and sold locally by the associated companies FAW-Volkswagen Automotive Co., Ltd., Changchun (China) and, since 2021, by SAIC Volkswagen Automotive Co., Ltd., Shanghai (China).

[3] The Bentley brand has been a part of the Audi Group since 2022; in previous years, vehicles of the Bentley brand were delivered through Audi sales companies.

[4] Since January 2021, newly registered vehicles must state WLTP (Worldwide Harmonized Light Vehicles Test Procedure) figures in all countries that have adopted EU legislation on vehicle usage. This new standard has replaced the NEDC (New European Driving Cycle) standard, which applied from 1992 onwards. The WLTP standard takes the average driving situation more extensively into account than the NEDC and therefore discloses a more realistic figure for fuel consumption and CO_2 emissions. The WLTP figure is therefore higher than the old NEDC figure. A precise conversion of the values between the two methods is not possible.

[5] Subject to the official data of the European Commission in the annual CO_2 fleet monitoring report of the Volkswagen emissions pool.

[6] The CO_2 figure in g/km for 2020 is based on the EU 27+3 and the NEDC emissions cycle and corresponds to the official data of the European Commission.

Audi Sustainability Key Figures
Value Creation and Production[1]

[1] Figures refer to the Ingolstadt, Münchsmünster, Neckarsulm, Brussels, Győr, San José Chiapa, Crewe (Bentley) since 2022, 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 January 20, 2023. 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 deviations between the actual values and the reported data are identified in the following year, the data is updated. The individual key figures for 2021 were updated in this report using the actual values for 2021.

[2] 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.

	Unit	2022	2021	2020
Energy				
Total energy consumption[2]	MWh	2,510,672 ✓	2,514,458	2,419,553
Automotive segment (incl. components)	MWh	2,486,169 ✓	2,488,118	2,396,752
	MWh/veh.	2.74 ✓	3.14	2.91
Of which from renewable energy sources	MWh	1,732,655 ✓	1,587,076	1,534,262
Automotive segment (incl. components)	MWh	1,730,130 ✓	1,585,205	1,532,357
	MWh/veh.	1.91 ✓	2.00	1.86
Electricity	MWh	1,488,916 ✓	1,420,814	1,411,306
Automotive segment (incl. components)	MWh	1,432,100 ✓	1,403,908	1,396,591
	MWh/veh.	1.58 ✓	1.77	1.69
Heating (incl. district heating)	MWh	716,474 ✓	816,483	738,877
Automotive segment (incl. components)	MWh	708,787 ✓	807,050	730,792
	MWh/veh.	0.78 ✓	1.02	0.89
Of which district heating	MWh	337,074 ✓	381,552	321,801
Automotive segment (incl. components)	MWh	336,507 ✓	380,928	321,406
	MWh/veh.	0.37 ✓	0.48	0.39
Combustion gases for production processes	MWh	345,020 ✓	276,938	269,096
Automotive segment (incl. components)	MWh	345,020 ✓	276,938	269,096
	MWh/veh.	0.38 ✓	0.35	0.33
Refrigeration (externally sourced)	MWh	262 ✓	222	273
Automotive segment (incl. components)	MWh	262 ✓	222	273
	MWh/veh.	0.0003 ✓	0.0003	0.0003
Exported energy	MWh	2,733 ✓	3,156	3,291
Automotive segment (incl. components)	MWh	1,858 ✓	2,036	2,777
	MWh/veh.	0.0020 ✓	0.0026	0.0034

[1] Figures refer to the Ingolstadt, Münchsmünster, Neckarsulm, Brussels, Győr, San José Chiapa, Crewe (Bentley) since 2022, 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 January 20, 2023. 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 deviations between the actual values and the reported data are identified in the following year, the data is updated. The individual key figures for 2021 were updated in this report using the actual values for 2021.

Audi Sustainability Key Figures
Value Creation and Production[1]

	Unit	2022	2021	2020
Fuels				
Total fuel use	MWh	949,070	1,010,796	982,376
Automotive segment (incl. components)	MWh	914,972	973,747	950,762
	MWh/veh.	1.01	1.23	1.15
Of which from renewable energy sources	MWh	238,974	169,889	135,423
Automotive segment (incl. components)	MWh	238,974	169,889	135,423
	MWh/veh.	0.26	0.21	0.16
Natural gas	MWh	801,572 ✓	910,050	866,575
Automotive segment (incl. components)	MWh	769,582 ✓	875,289	837,069
	MWh/veh.	0.85 ✓	1.11	1.02
Heating oil	MWh	55,166 ✓	7,909	15,905
Automotive segment (incl. components)	MWh	55,166 ✓	7,909	15,905
	MWh/veh.	0.061 ✓	0.010	0.019
Diesel (test rigs)	MWh	14,466	16,573	20,275
Automotive segment (incl. components)	MWh	14,466	16,573	20,275
	MWh/veh.	0.02	0.02	0.02
Gasoline (test rigs)	MWh	77,866	76,264	79,620
Automotive segment (incl. components)	MWh	75,758	73,977	77,512
	MWh/veh.	0.08	0.09	0.09

Audi Sustainability Key Figures
Value Creation and Production[1]

	Unit	2022	2021	2020
Emissions[2]				
Total CO_2 emitted (Scope 1 and Scope 2)	t	189,078 ✓	232,419	231,632
Automotive segment (incl. components)	t	184,752 ✓	227,966	227,795
	kg/veh.	203.73 ✓	287.88	276.46
Of which direct (Scope 1) CO_2 emissions[3]	t	144,808 ✓	169,700	172,835
Automotive segment (incl. components)	t	141,642 ✓	166,081	169,666
	kg/veh.	156.19 ✓	209.73	205.92
Of which indirect (Scope 2) CO_2 emissions[4]	t	44,270 ✓	62,719	58,796
Automotive segment (incl. components)	t	43,110 ✓	61,885	58,129
	kg/veh.	47.54 ✓	78.15	70.55
VOC emissions[5]	t	992 ✓	772	825
Automotive segment (incl. components)	t	991 ✓	771	824
	kg/veh.	1.09 ✓	0.97	1.00
Direct NO_x emissions[6]	t	188 ✓	173	178
Automotive segment (incl. components)	t	184 ✓	171	173
	kg/veh.	0.20 ✓	0.22	0.21
Sulfur dioxide	t	1.20	2.14	2.04
Automotive segment (incl. components)	t	0.98	2.14	2.04
	kg/veh.	0.001	0.003	0.002
Total dust	t	46	39	33
Automotive segment (incl. components)	t	45	38	32
	kg/veh.	0.05	0.05	0.04
CO_2 reductions in logistics[7]	t CO_2e	– [8]	8,994 ✓	11,802
Intensity quotients for greenhouse gas emissions (Scope 1 and 2)[3,4,9]	kg/veh.	203.73	287.88	276.46

[1] Figures refer to the Ingolstadt, Münchsmünster, Neckarsulm, Brussels, Győr, San José Chiapa, Crewe (Bentley) since 2022, 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 January 20, 2023. 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 deviations between the actual values and the reported data are identified in the following year, the data is updated. The individual key figures for 2021 were updated in this report using the actual values for 2021.

[2] The process of selecting relevant emissions and the emission factors applied are anchored – like the entire key figure collection process – in the Volkswagen standard 98000 (see page 133). Generally, Audi uses the real emission factors of the energy suppliers. If this is not possible, calculations are made on the basis of the VDA's standard factors. Note: This footnote does not relate to the key figure for "CO_2 reductions in logistics."

[3] 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. These emissions account for a significant portion of Scope 1 according to GHG Protocol.

[4] Indirect CO_2 emissions: This figure measures the CO_2 emissions generated during the production of purchased energy (electricity, heating, refrigeration). These emissions account for a significant portion of Scope 2 according to GHG Protocol.

[5] VOC (volatile organic compounds) emissions: This figure consists of emissions from paint shops, test rigs and other facilities

[6] Direct NO_x emissions: This key figure consists of NO_x emissions caused by plant boiler houses, paint shops and the operation of test rigs.

[7] In Germany, Austria and the Netherlands, rail shipments are handled by DB Schenker entirely carbon-neutrally.

[8] Since 2020, the key figure "CO_2 reductions in logistics" has only been 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 by the publication date at present.

[9] Intensity quotients of greenhouse gas emissions: sum total of direct and indirect CO_2 emissions per vehicle produced. Stated in kg of CO_2/vehicle.

Audi Sustainability Key Figures
Value Creation and Production[1]

	Unit	2022	2021	2020
Water				
Total fresh water consumption	m³	2,914,278 ✓	2,940,094	3,133,474
Automotive segment (incl. components)	m³	2,825,806 ✓	2,847,458	3,060,097
	m³/veh.	3.12 ✓	3.60	3.71
Fresh water consumption, internal catchment	m³	1,716,820 ✓	1,814,687	1,887,602
Automotive segment (incl. components)	m³	1,648,922 ✓	1,743,089	1,831,589
	m³/veh.	1.82 ✓	2.20	2.22
Precipitation used	m³	157,608 ✓	196,079	172,926
Surface water from lakes, rivers, oceans	m³	543,445 ✓	509,809	572,606
Groundwater	m³	1,015,767 ✓	1,108,799	1,142,070
Fresh water consumption, externally sourced	m³	1,197,458 ✓	1,125,407	1,245,872
Automotive segment (incl. components)	m³	1,176,884 ✓	1,104,369	1,228,508
	m³/veh.	1.30 ✓	1.39	1.49
Wastewater				
Volume of wastewater	m³	1,717,280 ✓	1,603,384	1,808,352
Automotive segment (incl. components)	m³	1,698,866 ✓	1,579,948	1,778,986
	m³/veh.	1.87 ✓	2.00	2.16
Direct discharge[2]	m³	120,078	4,355	8,918
Indirect discharge[2]	m³	1,597,202	1,575,593	2,386,336
Wastewater load				
Chemical oxygen demand	kg	441,705 ✓	299,823	309,271
Total phosphorous content as phosphorous (P)	kg	6,408 ✓	3,361	3,901
Total nitrogen as nitrogen (N)	kg	59,918 ✓	32,269	26,339
Zinc	kg	346 ✓	94	85

[1] Figures refer to the Ingolstadt, Münchsmünster, Neckarsulm, Brussels, Győr, San José Chiapa, Crewe (Bentley) since 2022, 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 January 20, 2023. 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 deviations between the actual values and the reported data are identified in the following year, the data is updated. The individual key figures for 2021 were updated in this report using the actual values for 2021.

[2] Direct dischargers: Münchsmünster site; indirect dischargers: Ingolstadt, Münchsmünster, Neckarsulm, Brussels, Győr, Crewe (Bentley), Sant'Agata Bolognese (Lamborghini), Bologna (Ducati), Amphur Pluakdaeng (Ducati) sites.

[1] Figures refer to the Ingolstadt, Münchsmünster, Neckarsulm, Brussels, Győr, San José Chiapa, Crewe (Bentley) since 2022, 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 January 20, 2023. 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 deviations between the actual values and the reported data are identified in the following year, the data is updated. The individual key figures for 2021 were updated in this report using the actual values for 2021.

Audi Sustainability Key Figures
Value Creation and Production[1]

	Unit	2022	2021	2020
Waste				
Total volume of waste (excluding scrap)	t	188,666 ✓	97,446	100,035
Automotive segment (incl. components)	t	187,077 ✓	95,995	98,875
	kg/veh.	206.29 ✓	121.23	120.00
Recyclable waste	t	183,467 ✓	94,296	95,229
Automotive segment (incl. components)	t	181,939 ✓	92,908	94,145
	kg/veh.	200.62 ✓	117.33	114.26
Other recyclable waste	t	53,651 ✓	50,038	46,279
Automotive segment (incl. components)	t	52,268 ✓	48,827	45,281
	kg/veh.	57.64 ✓	61.66	54.96
Hazardous recyclable waste	t	35,684 ✓	38,847	42,188
Automotive segment (incl. components)	t	35,593 ✓	38,708	42,138
	kg/veh.	39.25 ✓	48.88	51.14
Non-production-specific recyclable waste	t	94,133 ✓	5,411	6,762
Automotive segment (incl. components)	t	94,078 ✓	5,373	6,727
	kg/veh.	103.74 ✓	6.78	8.16
Disposable waste	t	5,198 ✓	3,150	4,806
Automotive segment (incl. components)	t	5,138 ✓	3,087	4,730
	kg/veh.	5.67 ✓	3.90	5.74
Other disposable waste	t	898 ✓	1,253	1,206
Automotive segment (incl. components)	t	890 ✓	1,245	1,164
	kg/veh.	0.98 ✓	1.57	1.41
Hazardous disposable waste	t	942 ✓	1,590	3,253
Automotive segment (incl. components)	t	890 ✓	1,534	3,219
	kg/veh.	0.98 ✓	1.94	3.91
Non-production-specific disposable waste	t	3,359 ✓	307	347
Automotive segment (incl. components)	t	3,358 ✓	307	347
	kg/veh.	3.70 ✓	0.39	0.42
Metallic waste (scrap; completely recyclable)	t	274,118 ✓	269,328	273,656
Automotive segment (incl. components)	t	273,511 ✓	268,706	273,120
	kg/veh.	301.60 ✓	339.33	331.47

[1] Average figure for the year.
[2] Excluding apprentices.
[3] Excluding staff not belonging to the Premium brand group employed by other Volkswagen Group companies.
[4] As of December 31 of the year under review.
[5] Employee turnover takes the following into account: terminations by the employer and/or employee without a rehire guarantee.
[6] Excluding fixed-term employees.

Audi Sustainability Key Figures
Employees and Society

	Unit	2022	2021	2020
Workforce				
Workforce, Premium brand group[1]	Number	87,996 ✓	85,750	87,996
Domestic companies[1, 2]	Number	55,311 ✓	56,889	58,432
of which AUDI AG	Number	54,361 ✓	55,936	57,437
Ingolstadt plant	Number	39,642 ✓	41,189	42,131
Neckarsulm plant	Number	14,719 ✓	14,747	15,306
Foreign companies[1, 2, 3]	Number	29,861 ✓	26,073	26,612
Audi Brussels S.A./N.V.	Number	2,934 ✓	3,015	3,052
Audi Hungaria Zrt.	Number	11,914 ✓	12,039	12,391
Audi México S.A. de C.V.	Number	5,026 ✓	5,069	5,233
Automobili Lamborghini S.p.A.	Number	1,934 ✓	1,830	1,769
Bentley Motors Ltd.	Number	3,876 ✓	–	–
Ducati Motor Holding S.p.A.	Number	1,734 ✓	1,560	1,337
Apprentices[1]	Number	2,369 ✓	2,337	2,493
Temporary workforce, Premium brand group[4]	Number	1,913	1,226	1,326
Average length of service, AUDI AG[2, 4]	Years	19.0 ✓	18.7	18.3
Turnover rate AUDI AG[1, 2, 5, 6]	Percent	0.9 ✓	0.7	0.6
New hires, Premium brand group	Number	4,575	1,820	2,181
New hires, AUDI AG	Number	925	815	920
Average age[2, 4, 6]	Years	42.5 ✓	42.3	41.8
Share of production employees[4]	Percent	47.8	48.0	48.4
Share of non-production employees[4]	Percent	49.3	49.0	48.7
Age structure, AUDI AG[2, 4]				
< 30 years	Percent	12.2 ✓	12.1	12.9
30–50 years	Percent	56.4 ✓	56.4	56.6
> 50 years	Percent	31.5 ✓	31.5	30.5

Audi Sustainability Key Figures
Employees and Society

[1] As of December 31 of the year under review.

[2] Excluding apprentices.

[3] Excluding leave phase of partial retirement.

[4] AUDI AG has management, senior management and top management levels. The key figure reports the percentage of women in all three management groups collectively.

[5] The average training times for 2022 for the first time include time-independent development programs (web-based training, online learning platforms) in addition to time-dependent development programs (classroom training, live online training).

[6] The term "Total benefit" replaces the term "Savings" used in reports in previous years, although the definition and calculation of the key figure remain unchanged.

	Unit	2022	2021	2020
Proportion of women[1]				
Premium brand group[2]	Percent	15.9 ✓	15.4	15.2
AUDI AG	Percent	16.4 ✓	15.9	15.8
of which apprentices	Percent	23.3 ✓	22.8	23.8
of which industrial apprentices	Percent	20.0 ✓	19.3	20.3
of which clerical apprentices	Percent	54.3 ✓	63.6	74.2
Management[3,4]	Percent	13.2 ✓	13.0	12.5
Audi Brussels S.A./N.V.	Percent	7.3 ✓	7.3	7.0
Audi Hungaria Zrt.	Percent	12.9 ✓	12.6	12.8
Audi México S.A. de C.V.	Percent	15.5 ✓	14.7	14.8
Automobili Lamborghini S.p.A.	Percent	19.2 ✓	19.6	20.2
Bentley Motors Ltd.	Percent	18.3 ✓	–	–
Ducati Motor Holding S.p.A.	Percent	18.3 ✓	18.1	17.6
Average training time per employee AUDI AG				
Training time, total[5]	Hours	13.0	9.1	9.0
Production employees[5]	Hours	7.4	6	5.6
Non-production employees[5]	Hours	17.1	11.8	11.7
Employees in management positions[5]	Hours	25.5	13.7	15.6
AUDI AG Ideas Program				
Total benefit[6]	EUR million	80.1 ✓	142.9	94.5
Implementation quota	Percent	59.2 ✓	58.0	53.4

Audi Sustainability Key Figures
Employees and Society

	Unit	2022	2021	2020
Other structural data				
Attendance rate, AUDI AG[1, 2, 3]	Percent	94.2 ✓	95.5	95.5
Accident frequency, Premium brand group[4, 5, 6]	–	5.0 ✓	4.6	6.2
Accident frequency, Automobili Lamborghini S.p.A.[5, 7]	–	1.8	1.9	–
Accident frequency, Bentley Motors Ltd.[5, 8]	–	2.2	–	–
Accident frequency, Ducati Motor Holding S.p.A.[5, 7]	–	3.7	2.8	–
Industrial accidents, Premium brand group[4, 7, 9]	Number	520 ✓	475	–
Industrial accidents, Automobili Lamborghini S.p.A.[7]	Number	6	6	–
Industrial accidents, Bentley Motors Ltd.[8]	Number	16	–	–
Industrial accidents, Ducati Holding S.p.A.[7]	Number	13	9	–
Proportion of academics, AUDI AG[2, 10, 11]	Percent	50.8 ✓	52.2	52.3
Proportion of foreign nationals, AUDI AG[10]	Percent	8.4 ✓	8.3	8.3
Proportion of people with severe disabilities, AUDI AG[10, 12]	Percent	6.0 ✓	6.0	6.0
Contracts to workshops for people with disabilities, AUDI AG	EUR million	6.9 ✓	6.2	6.7
AUDI AG profit share per employee[13]	EUR	8,510[14] ✓	5,640	1,080
Employee donations[15]	EUR	968,386 ✓	1,621,586	1,284,240
Expenditure on corporate citizenship[16]	EUR million	50.5 ✓	16.4	15.1
Part-time employees, AUDI AG[2,10,17]	Number	4,474	4,373	4,327
Employees on parental leave, AUDI AG[10]	Number	3,833	3,729	3,788
Number of female employees on parental leave, AUDI AG	Number	1,725	1,648	1,598
Number of male employees on parental leave, AUDI AG	Number	2,108	2,081	2,190
Average duration of parental leave	Months	10	10	10

[1] Average figure for the year.

[2] Excluding apprentices.

[3] The attendance rate is calculated using the formula 100 – (sick days/payment-relevant days) × 100.

[4] Position as of January 13, 2023.

[5] The key figure for accident frequency states the number of accidents that result in at least one day's absence from work per million hours worked.

[6] From 2021, the key figure includes all vehicle-producing companies of the Premium brand group, excluding Lamborghini, Ducati and Bentley, which are reported separately. The key figure for 2020 relates exclusively to AUDI AG.

[7] These key figures are reported for the first time from 2021.

[8] These key figures are reported for the first time from 2022.

[9] The key figure includes all vehicle-producing companies of the Premium brand group, excluding Lamborghini, Ducati and Bentley, which are reported separately.

[10] As of December 31 of the year under review.

[11] With respect to non-production employees.

[12] Percentage of employees with severe disabilities and equal opportunities.

[13] Payment in the following year; average figure for a skilled worker at AUDI AG.

[14] The Audi profit share was further refined in accordance with the negotiation commitment arising from Audi.Zukunft. The value is subject to the outstanding formal approval of the General Works Council and IG Metall and was calculated on the basis of the principles developed with the Works Council.

[15] AUDI AG Christmas donation, "Last Cents" campaign and special donations.

[16] The composition of the key figure was revised in 2022: included are expenses of AUDI AG in connection with donations, corporate sponsorship, own project initiatives and partnerships in a social context, research partnerships as well as membership contributions for initiatives and associations that focus on sustainability. Likewise included are social commitments by the international companies Audi Brussels, Audi Hungaria and Audi México and by Bentley, Ducati and Lamborghini.

[17] Excluding leave phase of partial retirement.

Consumption and emission figures

All data apply to features of the German market.
As of: February 15, 2023

Models	Combined fuel consumption (l/100 km) (WLTP)	Combined CO_2 emissions (g/km) (WLTP)
Audi A1 Sportback	6.8 – 5.3	155 – 120
Audi A1 allstreet	6.4 – 5.6	146 – 128
Audi Q2	8.5 – 4.7	193 – 123
Audi Q3	10.1 – 5.0	228 – 131
Audi Q3 Sportback	10.1 – 5.0	229 – 132
Audi A3 Sportback	9.5 – 4.2	216 – 111
Audi A3 Sedan	9.4 – 4.1	214 – 108
Audi TT Coupé	9.2 – 6.6	208 – 151
Audi TT Roadster	9.3 – 6.8	210 – 155
Audi A4 Sedan	7.8 – 4.6	190 – 120
Audi A4 Avant	10.1 – 4.7	229 – 124
Audi A4 allroad quattro	8.1 – 5.7	194 – 150
Audi A5 Sportback	10.0 – 4.7	226 – 123
Audi A5 Coupé	9.8 – 4.7	223 – 122
Audi A5 Cabriolet	9.4 – 5.0	213 – 132
Audi Q5	9.2 – 5.6	230 – 146
Audi Q5 Sportback	9.1 – 5.6	229 – 147
Audi A6 Sedan	8.8 – 5.1	199 – 133
Audi A6 Avant	12.7 – 5.3	289 – 139
Audi A6 allroad quattro	9.1 – 5.8	208 – 152
Audi A7 Sportback	12.6 – 5.2	285 – 137
Audi Q7	12.8 – 7.8	290 – 204
Audi Q8	13.6 – 8.0	308 – 210
Audi A8	12.2 – 7.0	277 – 183
Audi R8 Coupé	13.1 – 12.5	297 – 284
Audi R8 Spyder	13.9 – 13.4	316 – 305
Bentley Bentayga	21.7	294
Bentley Continental GT	23.3–20.6	311–275
Bentley Continental GTC	26.4–20	320–284
Bentley Flying Spur	18.8	340
Lamborghini Urus	14.1	320
Lamborghini Huracán	14.9 – 13.9	338 – 328
Lamborghini Huracán STO	13.9	331
Lamborghini Aventador	18.0 – 18.0	442
Lamborghini Sián	19.2 – 18.5	447

Consumption and emission figures

Models	Combined CNG consumption (kg/100 km) (WLTP)	Combined CO_2 emissions (g/km) (WLTP)
Vehicles with natural gas drive		
Audi A3 Sportback g-tron	4.2 – 3.9	115 – 108
Audi A4 Avant g-tron	5.0 – 4.3	136 – 118
Audi A5 Sportback g-tron	4.8 – 4.3	133 – 116

Models	Combined fuel/electric power consumption (l/100 km / kWh/100 km) (WLTP)	Combined CO_2 emissions (g/km) (WLTP)
Plug-in hybrid vehicles	WLTP specification	WLTP specification
Audi Q3 TFSI e	2.1/17.2 – 1.6/15.8	47 – 36
Audi Q3 Sportback TFSI e	2.0/17.0 – 1.6/15.9	46 – 37
Audi A3 Sportback TFSI e	1.4/15.8 – 1.1/14.4	31 – 24
Audi Q5 Sportback TFSI e	1.9/23.4 – 1.6/22.1	42 – 35
Audi Q5 TFSI e	1.8/23.3 – 1.5/21.9	42 – 34
Audi A6 Sedan TFSI e	1.6/21.1 – 1.0/18.6	35 – 24
Audi A6 Avant TFSI e	1.6/21.5 – 1.3/19.8	37 – 30
Audi A7 Sportback TFSI e	1.6/21.2 – 1.1/18.9	36 – 25
Audi Q7 TFSI e	2.2/23.9 – 2.0/23.0	51 – 45
Audi Q8 TFSI e	2.6/25.2 – 2.1/23.3	58 – 47
Audi A8 TFSI e	2.2/23.8 – 1.7/21.9	49 – 40
Bentley Flying Spur Hybrid	3.3/24.4	75

Consumption and emission figures

Models	Combined electric power consumption kWh/100 km	Combined CO_2 emissions (g/km)
Fully electric vehicles	WLTP specification	WLTP specification
Audi Q4 e-tron	20.2 – 16.4	0
Audi Q4 Sportback e-tron	19.7 – 16.0	0
Audi Q8 e-tron	24.4 – 20.1	0
Audi Q8 Sportback e-tron	24.1 – 19.5	0
Audi e-tron GT quattro	21.6 – 19.6	0
Audi RS e-tron GT	22.1 – 19.8	0

The indicated consumption and emissions values were determined according to the legally specified measuring methods. The WLTP test cycle replaced the NEDC test cycle fully on January 1, 2022. NEDC values are therefore not available for new vehicles that have been type-approved since this date. The figures reported do not refer to any 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. Due to the more realistic test conditions, the consumption and CO_2 emission values measured are in many cases higher than the values measured according to the NEDC. As a result of this, vehicle taxation could change accordingly as of September 1, 2018. Additional information about the differences between WLTP and NEDC is available at www.audi.de/wltp.

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).

Auditor's report

GRI 2-5

Independent auditor's report on a limited assurance engagement

To AUDI AG, Ingolstadt

We have performed a limited assurance engagement on selected sustainability key figures for the year 2022 in the overview "Audi Sustainability Key Figures" as well as selected disclosures in the "Audi Report | Combined annual and sustainability report" of the AUDI AG, Ingolstadt, (hereinafter the "Company"), which have been marked with the symbol "✓" in the report for the period from 1 January to 31 December 2022 (hereafter the "report").

Our engagement exclusively refers to the disclosures marked with the "✓" symbol in the German PDF-version of the report. Not subject to our assurance engagement are other references to disclosures made outside the report as well as prior-year disclosures.

Responsibilities of the executive directors

The executive directors of 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.

These responsibilities of the Company's executive directors include the selection and application of appropriate non-financial reporting methods and making assumptions and estimates about individual non-financial disclosures that are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal control as the executive directors consider necessary to enable the preparation of a report that is free from material misstatement, whether due to fraud (manipulation of the report) or error.

Independence and quality assurance of the auditor's firm

We have complied with the German professional requirements on independence as well as other professional conduct requirements.

Our audit firm applies the national legal requirements and professional pronouncements - in particular the BS WP/vBP ["Berufssatzung für Wirtschaftsprüfer/vereidigte Buchprüfer": Professional Charter for German Public Accountants/German Sworn Auditors]) in the exercise of their Profession and the IDW Standard on Quality Management issued by the Institute of Public Auditors in Germany (IDW): Requirements for Quality Management in the Audit Firm (IDW QS 1) and accordingly maintains a comprehensive quality management system that includes documented policies and procedures with regard to compliance with professional ethical requirements, professional standards as well as relevant statutory and other legal requirements.

Responsibilities of the auditor

Our responsibility is to express a conclusion with limited assurance on the key figures and disclosures that are marked with the symbol "✓" in the report based on our assurance engagement.

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" issued by the IAASB. This standard requires that we plan and perform the assurance engagement to obtain limited assurance about whether any matters have come to our attention that cause us to believe that the selected key figures and disclosures that are marked with the symbol "✓" in the report of the Company are not prepared, in all material respects, in accordance with the GRI criteria. Not subject to our assurance engagement are other references to disclosures made outside the report and prior-year disclosures.

In a limited assurance engagement, the procedures performed are less extensive than in a reasonable assurance engagement, and accordingly, a substantially lower level of assurance is obtained. The selection of the assurance procedures is subject to the professional judgment of the auditor.

In the course of our assurance engagement we have, among other things, performed the following assurance procedures and other activities:

- Gain an understanding of the structure of the sustainability organization and sustainability management,
- Inquiries of the executive directors and relevant employees involved in the preparation of the report about the preparation process and about disclosures in the report,
- 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 and disclosures that are marked with the symbol "✓" in the report,
- Identification of likely risks of material misstatement regarding the selected key figures and disclosures,
- 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,
- Inquiries and inspection of documents 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 selected key figures that are marked with the symbol "✓" in the report,
- Conducting 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 México S.A. de C.V. (San José Chiapa, Mexico),
- Critical review of the draft report to assess plausibility and consistency.
- Evaluation of the presentation of the selected key figures that are marked with the symbol "✓" in the report.

Assurance conclusion

Based on the assurance procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the selected key figures and disclosures that are marked with the symbol "✓" in the report from 1 January to 31 December 2022 have not been prepared in all material aspects, in accordance with the GRI criteria.

We do not express an assurance conclusion on the other references to disclosures made outside the report and prior-year disclosures.

Restriction of use

We draw attention to the fact that the assurance engagement was conducted for the Company's purposes and that the report is intended solely to inform the Company about the result of the assurance engagement. As a result, it may not be suitable for another purpose than the aforementioned. Accordingly, the report is not intended to be used by third parties for making (financial) decisions based on it. Our responsibility is to the Company alone. We do not accept any responsibility to third parties. Our assurance conclusion is not modified in this respect.

General 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 accept 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 will not update the 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 summarized result of our work contained in this report to decide whether and in what way this information is useful or suitable for their purposes and to supplement, verify or update it by means of their own review procedures.

Munich, 8 March 2023

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Nicole Richter
Wirtschaftsprüferin
[German Public Auditor]

Hans-Georg Welz
Wirtschaftsprüfer
[German Public Auditor]

GRI Index

The Audi Group reported on the period from January 1, 2022 to December 31, 2022 in accordance with the GRI Standards. The information in this report was chosen on the basis of an enhanced materiality analysis. An impact assessment in accordance with the new standards of the GRI was added to the stakeholder perspective in 2022.

For the purpose of the Content Index Essentials Service, GRI Services examined whether the GRI index is presented clearly and in accordance with the standards and whether the references in respect of disclosures 2-1 to 2-5, 3-1 and 3-2 correspond to the relevant sections in the main part of the report. The German version of the Audi Report was used for this service.

Universal Standards	
GRI 1	Foundation 2021
GRI 2	General Disclosures 2021

GRI 2: General Disclosures 2021	Disclosure	Page	Comments/omission
1. The organization and its reporting practices			
Disclosure 2-1	Organizational profile	4	
Disclosure 2-2	Entities included in the organization's sustainability reporting		The information in the Audi Report generally refers to the Audi Group. The material fully consolidated companies are detailed in the Audi Fact Pack. If there are deviations in the figures or requirements, this is indicated in the Audi Report.
Disclosure 2-3	Reporting period, frequency and contact point	2, 155	
Disclosure 2-4	Restatements of information		There were no restatements of information in the year under review.
Disclosure 2-5	External assurance	123, 136	
2. Activities and workers			
Disclosure 2-6	Activities, value chain and other business relationships	4, 93ff.	
Disclosure 2-7	Employees	123	2-7 a) These disclosures are key figures relating to employees. Depending on the key figure, the basis is either the annual average number or the reporting date December 31, 2022; this is indicated accordingly for each key figure. 2-7 b) i. - ii. As of December 31, 2022, of the 87,342 employees of the Premium brand group, 1,913 were fixed-term employees and 85,429 were permanent employees. 2-7 b) iv. - v. As of December 31, 2022, 46,933 people (of which 41,609 men and 5,324 women) were employed full-time at AUDI AG, and 4,474 people (of which 1,390 men and 3,084 women) were employed part-time (both figures excluding apprentices, excluding leave on partial retirement phase). 2-7 e) There were no significant fluctuations in the number of employees during the reporting period and between the reporting periods. 2-7 b) i.-ii. Information by region and gender is not available. 2-7 b) iv. -v. Information by region is not available. These figures are not relevant for control purposes and are therefore not collected. 2-7 b) iii Employees without guaranteed working hours do not play a role at Audi, so no figures are collected.
Disclosure 2-8	Workers who are not employees		Workers who are not employees only play a subordinate role at Audi. Key figures relating to workers who are not employees are therefore not relevant for control purposes and are not available.

GRI 2: General Disclosures 2021	Disclosure	Page	Comments/omission
3. Governance			
Disclosure 2-9	Governance structure and composition		Further information on GRI www.audi.com/en/company/profile/company-management.html
Disclosure 2-10	Nomination and selection of the highest governance body		Further information on GRI
Disclosure 2-11	Chair of the highest governance body		The Chairman of the Supervisory Board of AUDI AG is a member of the board of Management of Volkswagen AG. He does not hold a management position at AUDI AG.
Disclosure 2-12	Role of the highest governance body in overseeing the management of impacts		Strategy development, as well as the subsequent derivation and pursuit of targets relating to sustainability, is fully integrated into the corporate governance model of AUDI AG. The Board of Management of AUDI AG plays an active and decisive role in this regard. The Supervisory Board is informed about important decisions and approves key directions as part of its responsibilities. This overall process also includes the appropriate consideration of the legitimate interests of stakeholders, who are determined in advance of the strategy development and who are involved in depth in the decision-making process. As part of the standard process, the implementation status of target measures is first monitored in parallel with the project. An impact analysis is then carried out to determine the effectiveness with regard to the original stakeholder interaction. In the annual planning round that follows, the impact analysis serves as the new input parameter for process and impact improvement.
Disclosure 2-13	Delegation of responsibility for managing impacts		Responsible and sustainable corporate governance is part of the corporate culture of AUDI AG. To best record the impacts of the organization on the economy, the environment and people, the Board of Management of AUDI AG has created structures to account for impacts in the strategy and to integrate them into the business operations of the company. The Board of Management as a whole is responsible for the ESG strategy of AUDI AG, which also includes delegation and coordination with other members of management. AUDI AG has defined a regular process in which responsible parties report to the Board of Management at defined intervals. This reporting involves the presentation of quantitative and qualitative information on the performance of programs and initiatives. Additionally, ad hoc reports can be presented to the Board of Management at any time.
Disclosure 2-14	Role of the highest governance body in sustainability reporting	2	The Audi Board of Management approves and bears overall responsibility for the Audi Report.

GRI 2: General Disclosures 2021	Disclosure	Page	Comments/omission
Disclosure 2-15	Conflicts of interest		Further information on GRI
Disclosure 2-16	Communication of critical concerns		Regular exchanges take place regarding the activities of Governance, Risk & Compliance. Within this framework, the Chief Compliance Officer presents scheduled and ad hoc reports to the Board of Management, Supervisory Board, Group Chief Compliance Officer and Group Integrity Officer of AUDI AG as well as the Volkswagen Group, including reports on the Whistleblower System. Also included in the reporting duties of Governance, Risk & Compliance are quarterly risk reports and the annual internal Governance, Risk & Compliance report, which are submitted to the Board of Management of AUDI AG and the Audit Committee of the Supervisory Board of AUDI AG. In 2022, 461 reports of possible regulatory violations were received. This is in line with the previous year's level. The reports contained substantial information and were mostly non-anonymous, confirming once again that trust in the Whistleblower System is high.
Disclosure 2-17	Collective knowledge of the highest governance body		AUDI AG has a balanced Board of Management structure with various areas of expertise, qualifications, backgrounds and capabilities in order to make a positive impact on the performance of the company, improve its market share and strengthen its financial position. Upon their nomination, the members of the Board of Management are reviewed regarding whether they possess the necessary capabilities, experiences and industry knowledge to be a part of the Board of Management and to fulfill requirements. Moreover, the Board of Management regularly takes part in internal and external training courses (as part of workshops on the sustainability strategy, Board of Management meetings, interactions with the Volkswagen Sustainability Council) to expand its knowledge and expertise. The members of the Board of Management are also encouraged to regularly take part in events and conferences to keep their knowledge and expertise up to date, as is required by the business and the standing of the company.
Disclosure 2-18	Evaluation of the performance of the highest governance body		Further information on GRI
Disclosure 2-19	Remuneration policies		Further information on GRI
Disclosure 2-20	Process to determine remuneration		Further information on GRI
Disclosure 2-21	Annual total compensation ratio		For reasons of confidentiality, this information cannot be published.

GRI 2: General Disclosures 2021	Disclosure	Page	Comments/omission
4. Strategy, policies and practices			
Disclosure 2-22	Statement on sustainable development strategy	2, 10ff.	
Disclosure 2-23	Policy commitments		Further information on GRI
Disclosure 2-24	Embedding policy commitments		The success of our company depends on our achievement of goals while maintaining compliance with legal regulations and internal company policies. In our everyday work, our Code of Conduct shows the way to live up to this commitment. Our Code of Conduct determines the material principles that apply to the day-to-day work at our company. They apply Group-wide and are binding for all employees, regardless of hierarchy level. For all important corporate decisions, statements from Compliance & Integrity as well as from other experts – for example from the Sustainability, Corporate Strategy and Legal Service departments – are a fixed component of the submissions to the Board of Management.
Disclosure 2-25	Process to remediate negative impacts		Further information on GRI
Disclosure 2-26	Mechanisms for seeking advice and raising concerns		Potential misconduct and regulatory violations on the part of employees of the Audi Group can be reported to the Audi Investigation Office via the Whistleblower System – confidentially, anonymously, at any time and in every language. The reporting channels and the rules of procedure for the Audi Group complaint mechanism have been published on www.audi.com. Potential violations of the Code of Conduct for Business Partners can be reported via speakup.supplychain@audi.de.
Disclosure 2-27	Compliance with laws and regulations		Any known cases of actual and suspected compliance violations are isolated cases without a systemic cause. The total number of cases is not considered for confidentiality reasons.
Disclosure 2-28	Membership associations		Audi works in a variety of initiatives, associations and work groups to discuss ecological, economic and social issues in partnership with stakeholders. The material memberships in Germany can be found in the lobby register. Additionally, Audi is active in major international multistakeholder sustainability initiatives such as the Aluminium Stewardship Initiative and the Global Battery Alliance. Additional information can be found here.

GRI 2: General Disclosures 2021	Disclosure	Page	Comments/omission
5. Stakeholder engagement			
Disclosure 2-29	Approach to stakeholder engagement	18	www.audi.com/en/company/sustainability/stakeholder-management.html
Disclosure 2-30	Collective bargaining agreements		The proportion of AUDI AG employees to whom collective bargaining agreements apply is 99.87 percent. The working and employment conditions of employees of AUDI AG who are not subject to collective bargaining agreements are determined based on the collective bargaining agreements that apply to other employees.

GRI 3: Material Topics 2021	Disclosure	Page	Comments/omission
Disclosure 3-1	Process to determine material topics	18	www.audi.com/en/company/sustainability/stakeholder-management/materiality-analysis.html
Disclosure 3-2	List of material topics	19	Material topics for Audi are: emissions and energy along the value chain; alternative drive technologies and vehicle emissions; vehicle safety; fair working conditions and modern working forms; sustainable corporate governance; circular economy and sustainable materials; responsibility in the supply chain; economic stability; occupational health and safety; new mobility concepts; compliance and integrity; nature conservation and biodiversity; corporate culture; integration and diversity; responsible digitalization; stakeholder focus and long-term customer relationships; corporate citizenship.
Topic-specific Disclosures			
Material topics: economic stability; sustainable corporate governance			
GRI 201 Economic Performance 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on GRI
201-1	Direct economic value generated and distributed	20ff.	
201-2	Financial implications and other risks and opportunities due to climate change	45	
Material topic: responsibility in the supply chain			
GRI 204: Procurement Practices 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics	93ff.	
204-1	Proportion of spending on local suppliers		Audi is an internationally operating company and maintained production facilities in 12 different countries around the world during the reporting period. Services and products are procured on the basis of a global supplier base, with a focus on resource-optimized procurement. The term “major operations” is used to refer to sites in Europe and North America; associated companies in China are not included in this analysis. The term “local” refers to the entire region in which the respective operation is located. Under these assumptions, the volume of products and services procured locally by major operations accounted for 64.9 percent of the total Audi procurement volume in the year under review. Of that figure, Europe accounted for 55.1 percent (Germany: 38.5 percent) and North America for 9.8 percent.

	Disclosure	Page	Comments/omission
Material topics: compliance and integrity; sustainable corporate governance			
GRI 205: Anti-corruption 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on GRI
205-1	Operations assessed for risks related to corruption		Further information on GRI
205-2	Communication and training about anti-corruption policies and procedures		The web-based training (WBT) courses on anti-corruption and dealing with public officials that are mandatory for all indirect employees, management and Board of Management were combined in one WBT course, which achieved a participation rate of 96.32 percent. Additionally, a new mandatory WBT on insider law was introduced whose participation rate was 99.31 percent. The new Board of Management members for Production and Logistics (P) and Human Resources and Organization (S) of AUDI AG received mandatory executive training on the Audi Code of Conduct and anti-corruption, and the entire Board of Management received training on the topic of transformation through integrity. In addition to the continuous raising of awareness through risk-based communications and training measures, the “Compliance Dialogue” digital dialogue format was established for all employees and managers. It would not make sense to break down the key figures by region for the information on the governance body, as it is located in Germany. No breakdown by employee category and by region for the other criteria has been carried out, because this is not relevant for control purposes.
205-3	Confirmed incidents of corruption and actions taken		In 2022, two suspected cases of serious regulatory violations concerning corruption were reported to the Audi Investigation Office and forwarded to Audi Auditing for further examination. In one of the cases, another regulatory violation was determined that resulted in personnel consequences. For the second case, a regulatory violation was determined that, however, had no relevance to corruption.
Material topic: compliance and integrity			
GRI 206: Anti-competitive Behavior 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on GRI
206-1	Legal actions for anti-competitive behavior, anti-trust and monopoly practices		Cases of actual and suspected violations of anti-trust law are isolated cases. The total number of cases is not reported for confidentiality reasons.

	Disclosure	Page	Comments/omission
Material topic: circular economy and sustainable materials			
GRI 301: Materials 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on GRI
301-1	Materials used by weight or volume	86	The materials used are calculated based on the analysis of selected models. The process is currently being revised. No information for 2022 is available. It is currently not possible to break down the total weight into renewable and non-renewable materials. We plan to continuously expand the use of renewable materials going forward.
301-2	Recycled input materials used		The percentage of recycled input materials is currently not calculated for all models in the product portfolio. Audi plans to continuously increase the proportion of recycled input materials. Selected pilot projects, for example MaterialLoop, analyze the feasibility for potential use in series production.
301-3	Reclaimed products and their packaging materials		Information with the required level of detail is not currently available.
Material topic: emissions and energy along the value chain			
GRI 302: Energy 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics	81	Further information on GRI
302-1	Energy consumption within the organization	82, 125ff.	302-1 f) The process of collecting key figures including definition of scope is anchored in the Volkswagen standard 98000 and does not provide for extrapolation at overall site level. 302-1 g) The process of selecting relevant emissions and the emission factors used are anchored in Volkswagen standard 98000, 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 made on the basis of the VDA's standard factors.
302-2	Energy consumption outside of the organization		The information is not currently available and we are working toward making it available in the coming reporting periods.
302-3	Energy intensity	82, 125ff.	
302-4	Reduction of energy consumption	82, 125ff.	
302-5	Reductions in energy requirements of products and services	82	The information for the key figures from 302-5 b) and c) is not currently available and we are working toward making it available in the coming reporting periods.

	Disclosure	Page	Comments/omission
Material topic: nature conservation and biodiversity			
GRI 303: Water and Effluents 2018			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on GRI
303-1	Interactions with water as a shared resource	83, 125ff.	The information for the key figures from 303-1 c) and d) is not currently available and we are working toward making it available in the coming reporting periods.
303-2	Management of water discharge-related impacts		The information is not currently available and we are working toward making it available in the coming reporting periods.
303-3	Water withdrawal	125ff.	303-3 a) iii. Seawater is not collected and is therefore not listed separately. 303-3 b) and c) The information is not currently available and we are working toward making it available in the coming reporting periods.
303-4	Water discharge	125ff.	303-4 b) The information is not currently available and we are working toward making it available in the coming reporting periods. 303-4 c) All production sites are weighted according to the water stress present in the region. Necessary water management measures are derived from the assessment. 303-4 d) 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 standard 98000. 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.
303-5	Water consumption	125ff.	303-5 b) and c) The information is not currently available and we are working toward making it available in the coming reporting periods.
Material topic: nature conservation and biodiversity			
GRI 304: Biodiversity 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on GRI
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas		The information is not currently available and we are working toward making it available in the coming reporting periods.
304-2	Significant impacts of activities, products and services on biodiversity		The information is not currently available and we are working toward making it available in the coming reporting periods.

	Disclosure	Page	Comments/omission
Material topics: alternative drive technologies and vehicle emissions; emissions and energy along the value chain			
GRI 305: Emissions 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on GRI
305-1	Direct (Scope 1) GHG emissions	80, 82, 125ff.	305-1 e) Generally, Audi uses the real emission factors of the energy suppliers. If this is not possible, calculations are made 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 standard 98000.
305-2	Energy indirect (Scope 2) GHG emissions	80, 82, 125ff.	305-2 a) The process of selecting relevant emissions and the emission factors used are anchored in Volkswagen standard 98000, 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 made 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) The process of selecting relevant emissions and the emission factors used are anchored in Volkswagen standard 98000, 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 made on the basis of the VDA's standard factors.
305-3	Other indirect (Scope 3) GHG emissions		This information is not currently reported for reasons of confidentiality.
305-4	GHG emissions intensity	80, 82, 125ff.	Some of the information is not currently available and we are working toward making it available in the coming reporting periods.
305-5	Reduction of GHG emissions	80, 82, 125ff.	Some of the information is not currently available and we are working toward making it available in the coming reporting periods.
305-6	Emissions of ozone-depleting substances (ODS)		The information is not currently available and we are working toward making it available in the coming reporting periods.
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx) and other significant air emissions	125ff.	305-7 b) The process of selecting relevant emissions and the emission factors used are anchored in Volkswagen standard 98000, 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 made on the basis of the VDA's standard factors.

	Disclosure	Page	Comments/omission
Material topic: circular economy and sustainable materials			
GRI 306: Waste 2020			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on GRI
306-1	Waste generation and significant waste-related impacts	80, 85, 88, 129	
306-2	Management of significant waste-related impacts	85, 88	
306-3	Waste generated	85, 129	
306-4	Waste diverted from disposal		The information is not currently available and we are working toward making it available in the coming reporting periods.
306-5	Waste directed to disposal		The information is not currently available and we are working toward making it available in the coming reporting periods.
Material topic: responsibility in the supply chain			
GRI 308: Supplier Environmental Assessment 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics	93ff.	
308-1	New suppliers that were screened using environmental criteria	93ff.	Any company that wishes to work with Audi must comply with the binding principles of the Code of Conduct for Business Partners of the Volkswagen Group. This Code of Conduct sets out clear requirements for Audi's business partners in terms of compliance, the environment and social issues, and also forms the basis for the sustainability rating (S-Rating). A positive S-Rating is a basic prerequisite for entering into a business relationship with Volkswagen AG or a Group brand. Volkswagen Code of Conduct for Business Partners
308-2	Negative environmental impacts in the supply chain and actions taken	93ff.	Any company that wishes to work with Audi must comply with the binding principles of the Code of Conduct for Business Partners of the Volkswagen Group. This Code of Conduct sets out clear requirements for Audi's business partners in terms of compliance, the environment and social issues, and also forms the basis for the sustainability rating (S-Rating). A positive S-Rating is a basic prerequisite for entering into a business relationship with Volkswagen AG or a Group brand. Volkswagen Code of Conduct for Business Partners

	Disclosure	Page	Comments/omission
Material topic: fair working conditions and modern working forms			
GRI 401: Employment 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on GRI
401-1	New employee hires and employee turnover	123ff.	The key figures are currently not calculated by age group, gender and region. These are not relevant for control purposes.
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees		All part- and full-time employees of AUDI AG subject to collective bargaining agreements are offered a variety of benefits including, for example, retirement benefits, an entitlement to parental leave and medical benefits.
401-3	Parental leave	123ff.	In general, all employees of AUDI AG are entitled to parental leave in accordance with the legal regulations. The key figures 401-3 c) through e) are not relevant for control purposes and are therefore not collected.
Material topic: fair working conditions and modern working forms			
GRI 402: Labor/Management Relations 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on 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. Besides statutory obligations, which are complied with in full, arrangements in company agreements also apply.
Material topic: occupational health and safety			
GRI 403 Occupational Health and Safety 2018			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on GRI
403-1	Occupational Health and Safety 2018		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.

	Disclosure	Page	Comments/omission
403-2	Hazard identification, risk assessment and incident investigation		Comprehensive risk assessments and regular workplace inspections, including an evaluation, are part of the basic repertoire in the daily work routine at Audi in order to prevent accidents and health impairments. In general, employees are to notify their manager immediately of any hazards or defects and flaws in safety systems and work equipment if they are not able to resolve them themselves. The results of the risk assessments, workplace inspections and the investigation of incidents are continuously integrated into the improvement of the level of occupational health and safety at Audi.
403-3	Occupational health services		Comprehensive health management at Audi ensures that employees have access to high-quality occupational health services. In the case of activities that are potentially hazardous to human health, for instance, occupational health medicals and suitability examinations are offered.
403-4	Worker participation, consultation and communication on occupational health and safety		Members of the Works Council and/or employees are represented in committees and working groups. Additionally, the Works Council exercises its rights in accordance with the Labor Management Relations Act and organizes itself by location into its own committees on occupational health and safety and environmental protection.
403-5	Worker training on occupational health and safety		To guarantee that all aspects of occupational health and safety are observed, Audi offers a wide range of training courses for various employees in order to prevent potential hazards. For example, there are training courses for new employees, group leaders or employees who must work with critical machinery.
403-6	Promotion of worker health		The company offers a number of programs to promote the health of its workforce. Many of the activities now take place digitally – with the advantage that employees at the sites can participate and access is less complicated.
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships		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. Clear requirements have been defined for external firms that work in the operational areas of Audi sites. These requirements include operational regulations, instructions and prohibitions, as well as processes that must be strictly followed in the interest of occupational health and safety, fire safety and environmental protection.
403-8	Workers covered by an occupational health and safety management system		Occupational health and safety measures apply to all employees of AUDI AG.
403-9	Work-related injuries	123ff.	In 2022, there were no fatal workplace accidents in the Audi Group. Workplace accidents involving temporary workers or employees of external companies are not included in the reported accident frequency figure for reasons of confidentiality and data protection. All injuries sustained at any of the Audi Group's vehicle-producing companies are documented and analyzed in accordance with country-specific requirements. Similarly, all hazards that employees face at the companies are systematically assessed and documented as required by country-specific regulations. Details are not published for confidentiality reasons.
403-10	Work-related ill health		For reasons of data privacy, we cannot publish any key figures related to work-related ill health.

	Disclosure	Page	Comments/omission
Material topic: fair working conditions and modern working forms			
GRI 404: Training and Education 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on GRI
404-1	Average hours of training per year per employee	123ff.	No evaluation of the key figure by gender is available, because this is not relevant for control purposes.
404-2	Programs for upgrading employee skills and transition assistance programs		AUDI AG offers a variety of measures aimed at upgrading employee skills and providing transition assistance, including, on the one hand, company qualification and training, private professional development and educational consultation. On the other hand, the company also offers partial retirement and time-asset exemptions, for example.
404-3	Percentage of employees receiving regular performance and career development reviews		Taking equal opportunity and equal treatment into account, the disciplinary managers/supervisors conduct an annual appraisal meeting for all employees of AUDI AG with variable performance-based pay as well as for non-pay-scale employees.
Material topic: corporate culture, integration and diversity			
GRI 405: Diversity and Equal Opportunity 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		Further information on GRI
405-1	Diversity of governance bodies and employees	123ff.	405-1 a) i gender: SB: 40% (8) women, 60% (12) men Board of Management: 14.3% (1) women, 85.7% (6) men 405-1 a) ii age groups: SB: <30 years: 0% | 30-50 years: 40% | >50 years: 60% Board of Management: <30 years: 0% | 30-50 years: 28.6% (2) | >50 years: 71.4% (5)
405-2	Ratio of basic salary and remuneration of women to men		Through collective bargaining agreements involving the unions and management, AUDI AG undertakes to ensure that part-time and full-time employees receive equitable and fair pay; the activity alone determines remuneration.
Material topic: responsibility in the supply chain			
GRI 414: Supplier Social Assessment 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics	93ff.	AUDI AG Declaration on Human Rights Volkswagen Code of Conduct for Business Partners
414-1	New suppliers that were screened using social criteria	93ff.	Any company that wishes to work with Audi must comply with the binding principles of the Code of Conduct for Business Partners of the Volkswagen Group. This Code of Conduct sets out clear requirements for Audi's business partners in terms of compliance, the environment and social issues, and also forms the basis for the sustainability rating (S-Rating). A positive S-Rating is a basic prerequisite for entering into a business relationship with Volkswagen AG or a Group brand.

	Disclosure	Page	Comments/omission
414-2	Negative social impacts in the supply chain and actions taken	93ff.	Any company that wishes to work with Audi must comply with the binding principles of the Code of Conduct for Business Partners of the Volkswagen Group. This Code of Conduct sets out clear requirements for Audi's business partners in terms of compliance, the environment and social issues, and also forms the basis for the sustainability rating (S-Rating). A positive S-Rating is a basic prerequisite for entering into a business relationship with Volkswagen AG or a Group brand.
Material topic: vehicle safety **GRI 416: Customer Health and Safety 2016**			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics	68ff.	
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 the binding internal Code of Conduct. 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. All product and service categories are reviewed regarding their impact on health and safety before they are delivered to customers. 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 requirements for the necessary product safety or regulatory conformity are not met. Likewise, the APS handles responses to inquiries from authorities and consumer protection associations in the area of product safety and conformity when vehicles and products already on the market are affected.
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), Product Compliance Management System (PCMS) and the Committee for Product Safety (APS), the interface to the Compliance Management System (CMS) should also be highlighted, in particular, in terms of continuous development and improvement. Goals in this respect include exchanging information on process weaknesses, initiating improvement measures when necessary and therefore minimizing compliance risks related to 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 compliance in the company. After starting regular operations in 2021, the focus was on the development of the PCMS in 2022. Every employee plays their part in ensuring that product compliance risks are minimized by complying with regulations in Corporate Policy U_059. On the basis of Corporate Policy U_002, Audi also monitors its products after they have been marketed. If this results in indications of potential deviations in the required product safety or conformity, the APS sees to the requisite clarification of facts and, if necessary, initiates necessary measures in coordination with the relevant national government agencies where applicable. This includes any necessary product corrections. For reasons of confidentiality, no specific key figures can be reported.

	Disclosure	Page	Comments/omission
Material topic: responsible digitalization			
GRI 418: Customer Privacy 2016			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics	71f.	
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 2022.
Material topic: new mobility concepts			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		www.audi.com/en/innovation/concept-cars.html
Material topic: stakeholder focus and long-term customer relationships			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics	19	www.audi.com/en/company/sustainability/stakeholder-management.html
Material topic: corporate citizenship			
GRI 3: Material topics 2021 Disclosure 3-3	Management of material topics		www.audi.com/en/company/sustainability/core-topics/employees-and-society/corporate-citizenship.html

The advancement of its products and services has a very high priority for AUDI AG. This also applies to the Audi Report. The QR code will take you to the website of the Audi Report and to a survey. Your feedback is important to us!

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Audi SQ8 e-tron: electric power consumption (combined) in kWh/100 km: 28.0–24.6 (WLTP); CO_2 emissions (combined) in g/km: 0. Information on fuel/electric power consumption and CO_2 emissions in ranges depends on the vehicle's selected equipment. Consumption and emission figures for the vehicle are available only according to WLTP and not according to NEDC.