NEW AUTO Strategy Presentation
13/07/2021

Speech of Herbert Diess
Chairman of the Board of Management Volkswagen AG

- check against delivery –
It is always fascinating to see the engagement of our people. It's our diversity and scale – our enthusiasm for individual mobility – that make us so unique.

And it is the rich history of mobility that has excited generations – iconic products like the Volkswagen Beetle, the Golf, the Audi Quattro or the Porsche 911.

With our electric models, the IDs, the Audi e-trons or Porsche Taycan, we have laid the foundation for fascinating and precious, future-proof brands.

Six years ago we set ourselves a strategic target: to become global market leader in EVs. Our strategic timeframe was 2025. And we are well on track.

Now it is time to move on, to look ahead. Our new focus: The world of mobility in 2030. We are setting new priorities.

There is strong evidence that many parameters, paradigms, rules of thumbs, heuristic knowledge and experience we have accumulated over the past 100 years of automotive history will fundamentally change. So it is time to reinvent.

We are currently experiencing the transition from the combustion engine to e-mobility – an important step towards a cleaner planet.

The next much more radical change is the transition towards much safer, smarter and finally autonomous cars.

As the car is becoming the most complex, most sophisticated and most desirable internet device, the logic of the smartphone industry might apply.
That means for us: **Technology, speed and scale** will matter more than today. Customers logging into reliable **digital eco-systems** to get new functions by the day will be the new rule of the game.

Until 2030, the world of mobility will have seen the greatest transformation **since the transition from horses to cars** at the beginning of the 20th century.

**The future of cars, the future of individual mobility, will be bright!**

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Today we will present our **strategy through 2030**. We call it „**NEW AUTO**“ because cars are **here to stay.**

**Individual mobility** will remain the most important means of transport in 2030. In fact, people driving or being driven in **owned, leased, shared or rented cars** will still account for **85% of mobility**. Those 85% will be at the **core of our business.**

At the same time cars and our business models will **change more than ever before.**

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Let me take you on a **journey to the year 2030.** Mobility in 2030 will be **autonomous, digital, smart, sustainable and safe.**

Our industry will be able to deliver completely **new user experiences**: **Autonomous vehicles** will be driving us around in an **emission-free, connected, electric world.**
Until 2030, the market for mobility as a service is forecast to grow from less than 10 billion dollars today to more than 100 billion dollars. Propelled by driverless robo taxis moving around in cities and suburban areas.

Imagine that your grandmother or your 8-year-old son can hop in a VW-CAB to visit one another whenever they want, without mom or dad behind the wheel.

Or maybe you just need a quick ride within the city. You can use one of our mobility apps – and an ID.BUZZ\(^1\) will pick up you and your friends, driverless.

Like in robo taxis, in private cars, too, autonomous driving will be available – at least on open highways in many parts of the world.

You can spend your time in the car working, playing with your children, talking to friends or watching movies.

First-class business trips can happen in total privacy, driverless, in premium Audis, or Bentleys. The mobile office will become reality.

Travelers can sleep in electric busses that drive overnight, waking up relaxed at their holiday spots of choice.

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Traffic will be much safer: Vehicles and infrastructure will be communicating to significantly reduce traffic jams and accidents.

\(^1\) The vehicle is not for sale yet
Today, most accidents are caused by human error, failure or fatigue. The virtual driver will be much better and safer than any human.

Cars will become emission-free. Even big SUVs will be environmentally friendly and sustainable. Cars are losing almost all their negative attributes.

And, chances are good that cars will become more accessible in many parts of the world. Because the energy efficiency of EVs is just so much better. And in most parts of the world electric energy is already cheaper than gasoline.

The new world of individual mobility will bring other benefits for society, too. Electric cars will be part of the public electricity management.

Serving as the relevant buffer to stabilize grids and shaving the peaks of oversupply – several 100 hours per year in many grids worldwide – with the share of renewables increasing.

A gigantic power bank for private homes, cities and entire regions.

Cars will balance the renewables capacity. Customers will be compensated for this. Which, as a result, will make charging free of cost at certain hours.

Autonomous driving will also become more affordable over time through scale: Software, miles driven and the small proportional cost of silicon for computer chips will make autonomy relatively cheap given the additional convenience it offers.

Autonomous driving will become a mass market.
For our business models, that means revenue and profit pools will shift gradually through 2030: First from the internal combustion engine – or ICE – to electric vehicles, and later to software and services, with autonomous driving offering new sources of revenue.

The ICE market is set to decline by over 20 percent over the next 10 years.

Maintaining high cash flows from our ICE business to finance the transition will be paramount. Our CFO Arno Antlitz will tell you later why we are confident that we will be able to finance the transition from our own cash flows.

At the same time by 2030, the global electric vehicle market will be on par with ICE sales.

We will be more profitable with EVs because batteries and charging will increase the share in value add and with our platforms we will be more competitive.

Keeping the batteries for second-life use and finally for recycling will allow for additional value creation. We are aiming at keeping control of the valuable raw material production for first use in the car, second use as home storage and then full recycling. The circular economy.

Direct customer contact and more consecutive lease-cycles will allow us to keep customers longer with us and generate resilient revenues over the entire life cycle of a car, finally also maintaining higher residual values.
We are aiming at higher market shares in EVs. With our global platforms we will increase scale right from the start, in China, the EU and the U.S., allowing even other industry players such as Ford to benefit from our economies of scale.

Electric cars will get cheaper over time driven by advancements in battery technology and scale, with the price for mobility falling below today’s level.

Industry revenues are going to double in size compared to today.

The data we gather through direct customer relationships will allow us to constantly expand and offer better services.

This might explain why tech companies are seeking to enter the mobility industry despite enormously high entry barriers such as capital intensity and long lead times to reach relevant size and customer acceptance.

For comparison: Revenues in the global smartphone market, including app stores, amounted to 500 billion dollars last year. The automotive market is projected to total 5 trillion euros by 2030 – that’s ten times as much.

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With our own combination of world-class brands, supported by then globally leading technology platforms, our position to tap into those profit pools is good.

In the NEW AUTO world, brands will remain a key differentiator.
Customers will still choose a specific design, body style and brand or service quality. But more than ever, brand differentiation will come from software and services.

Our brands will evolve and modernize, become more specific and precise in their value propositions. They will change their customer approaches radically with direct touch points and more immediate and continued customer proximity.

Already today, our brands are leading in their segments.

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Audi is the most advanced premium brand electrifying its product portfolio. The Audi e-tron is the industry’s first fully-electric premium SUV. The Q4 e-tron the first Audi on the MEB platform – probably the most desirable one with clear premium appeal. The e-tron GT\(^2\) has become Audi’s new brand shaper with 800V charging capabilities, impressive performance and outstanding design.

And Audi will further increase its e-product portfolio. Its new strategy is called Vorsprung. Audi is ready to take the lead.

With its high-tech project Artemis – a highly efficient, sophisticated electric car with level 4 driving features – Audi will yet again develop cutting-edge technology for the whole Group. Focusing much more on the spacious luxury interior, which will give the car new proportions and start a new design era for Audi.

\(^2\) Audi e-tron GT - combined power consumption in kWh/100 km: 20.2 - 18.8 (NEDC); combined CO2 emissions in g/km: 0; efficiency class: A+
Now in control of Bentley, Audi will use this technology to build the most sophisticated luxurious Bentley, thereby entering segments that haven’t been accessible to the Audi brand before.

Audi can use the supreme technology at an even higher price range and capitalize on the respective economies of scale.

Bundling Bentley’s all-electric luxury car portfolio with Lamborghini and Ducati in the Audi premium group will further leverage all possible synergies in premium.

With Markus Duesmann and his team now fully in charge of the Group’s premium activities, we have efficiently organized our premium brand portfolio.

The leading premium brand.

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On its Way to Zero, the Volkswagen brand is driving electrification worldwide with its Accelerate strategy. Volkswagen will be the market leader in EVs by 2025, by rolling out the leading BEV platform.

With the complete ID. family – the ID.3, ID.4, ID.5\(^3\) and ID.6\(^4\), as well as the iconic ID.BUZZ\(^5\) coming already next year, Volkswagen has been building up the most comprehensive EV product portfolio in the industry yet.

\(^3\) The vehicle is not for sale yet
\(^4\) The vehicle is not for sale in Europe
\(^5\) The vehicle is not for sale yet
All relevant global segments are already covered by specific EV offerings:

- Golf class: ID.3
- Tiguan: ID.4 / ID.5
- Atlas: ID.8
- Passat: ID.6
- T7: ID.Buzz

And, with its high-tech future project Trinity, a level-4 ready fully electric car, the Volkswagen brand will bring the Artemis technology into the volume segment. Affordable for all.

Leading the volume group, Volkswagen provides scale and technology for our other brands:

CUPRA – with its emotional cars built on Volkswagen’s technology platform MEB – Is already outselling Alfa Romeo and quickly gaining traction in both quality and quantity of sales.

Based on the same technology, Skoda offers state-of-the-art cars with an unbeatable value for money proposition.

With Skoda being the most profitable volume brand and CUPRA at the brink of sustainable profitability, margins in the volume group will continuously improve.

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6 The vehicle is not for sale yet
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8 The vehicle is not for sale in Europe
9 The vehicle is not for sale yet
Volkswagen Commercial Vehicles is evolving more and more into a lifestyle brand, offering the range of famous California vehicles. And soon launching our most emotional electric car so far, the ID. Buzz\textsuperscript{10}.

It will significantly contribute to enhancing the appeal of the Volkswagen brand, reloading it with emotions and love, particularly in the U.S. where the coming home after 30 years will boost our EV campaign in the market and bring back the emotional touch with all the memories from the `70s.

With the ID. Buzz AD, Volkswagen is preparing the ground for autonomous robo taxis, laying the ground for Mobility as a Service and Transport as a Service.

Through the combination of our commercial vehicle platforms with Ford, we are becoming very competitive in the light commercial vehicles and medium pickup trucks segment worldwide.

Commercial vehicles are currently undergoing the most radical transformation of all our brands with a lot of upside potential.

The leading volume brand.

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Porsche performs in a league of its own. The company has shown resilient EBIT margins of above 15\% over the past years.

\textsuperscript{10} The vehicle is not for sale yet
Porsche has always maintained a **higher degree of independence** while being **industrially integrated** into the Group – contributing technology and benefiting from scale and the Volkswagen manufacturing footprint.

Today, Porsche is **stronger** than ever before.

It has embraced **electrification early** and will sell **80% EVs by 2030**. The company will be **climate neutral** at that point as well.

Porsche is a strong testimony how an **automotive icon** can remain an **outstanding sports and performance brand** while repositioning towards **electrification** and **sustainability**.

**The most desirable electric sports car.**

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To leverage future profit pools in a new mobility world, we are creating platforms that will be leading in the industry. The platform approach will be key to success in the new technology world.

As strategic backbones, these platforms will offer **cutting-edge technology** at **unparalleled scale**, at **high quality** and **competitive cost**. Available **worldwide**. They will allow our brands to tailor unique customer experiences fast.

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The Mechatronics Platform, the next generation of our hardware platforms in the succession of MQB, MLB, MEB and PPE, will allow us to reduce complexity over time as we will consolidate our existing platforms to one architecture for the entire e-product portfolio from entry level to top of the range, from 85 to 850 KW. Our super-platform.

It will be 100% electric and ready for autonomous driving, available for all models and brands, allowing to address all segments and allow for excellent differentiation for our brands.

To improve and speed up our Mechatronics platform competencies we will invest around 800 million Euros into a new research and development facility in Wolfsburg, further improving best practices in platform design. The core of the SSP platform and its modules will be designed in the new campus Sandkamp.

Markus Duesmann and Thomas Schmall will lead the entire program and Markus will tell you more about it later.

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Hardware platforms are the backbones that ensure customers get the best product and quality at the best price. It’s software that will ensure the seamless integration of NEW AUTO into our customers’ digital lives. And it is software that will deliver even higher economies of scale.

CARIAD is developing the software backbone for all group cars – our own software stacks. The Volkswagen OS will be the platform to deploy new software and features anywhere at any time and turn the car into a continuously improving self-learning machine.
By 2030, we target that 60% of our sales and up to 40 million cars will be based on our own software stacks, gathering large amounts of data that will constantly make our products better.

CARIAD is well on its way to define the next software platforms and is continuously contributing more and more to our advancements in software, i.e. starting now the software updates in the ID. product range.

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With the electrification of our fleet, we are building up the core competencies: battery cell technology, including chemistry and raw materials, charging and energy.

Volkswagen will be one of the biggest battery users globally. That is why we are working on our own cell format across all brands, which we will start rolling out in 2023. By 2030 it will cover 80 percent of our electric volume.

We will continue to expand our charging network in our key regions – for that we’ve teamed up with leading energy companies including BP, Enel and Iberdrola across Europe.

We are also continuing to invest into our charging infrastructures in the U.S. with Electrify America and in China with CAMs.

The expansion of our charging and energy business will allow us to provide seamless services from charging to energy management.

Thomas Schmall and Elke Temme will share exciting news on our battery and charging business later on.
By 2030, Volkswagen will also have systems capabilities for robo taxi fleets. Mobility and transport as a service, fully autonomous, will be an integral part of our business model in 2030.

Robo taxi services require four different layers of activities.

- **A booking platform** to match demand and supply, holding the customer data and managing the payments. This platform can be highly profitable.

- The **operation of the fleet**, a services business, which we are testing with our MOIA brand in Hamburg.

- The **autonomous vehicle**. We will start with the ID. Buzz AD. More specific designs for driverless operations and more convenience are already in development.

- And the **virtual driver**, the most complex software system the world has seen so far – in fact, a worldwide active neuronal network, which continuously improves its driving capabilities. Also potentially very profitable because this AI software system could theoretically replace millions of taxi drivers globally.

At the same time, we will grow our finance and lease business and expand our sharing and subscription offerings.

**Christian Senger** and **Christian Dahlheim** will give you more details later today.
Sustainability – reducing our CO2 footprint and so safeguarding the future of individual mobility – is our mission.

By 2030 we will reduce the carbon footprint per car by 30% over its entire lifecycle, in line with the Paris Agreement. This equals a reduction of roughly 15 tons of CO2 per car to 34 tons.

By the end of the decade we anticipate our share of BEV sales will rise to around 50% worldwide. Within the next two years, we will have switched our manufacturing sites in Europe to 100% renewable energy.

By 2040, we expect to achieve nearly 100% zero-emission vehicles in all major markets. And by 2050 at the latest, our global operations will be climate-neutral.

Over the next 10 years, we will heavily invest in the largest transformation Volkswagen has ever gone through.

For investments in future technologies, we have earmarked 73 billion euros until 2025, representing currently 50% of our total investments.

And we will continue to raise efficiency throughout the Group.

- We are on track to meet our 5 percent fix cost reduction program for the next two years.
– We have committed ourselves to reducing material costs by another 7 percent – a challenge given the soaring raw material prices
– We have started a working capital management initiative.
– And we are optimizing our ICE business with fewer models, a much reduced ICE drivetrain portfolio, which we just agreed to reduce by another third, and a better price mix.

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In 2030, China, the U.S. and Europe will remain our main focus of our activities. The next level of technologies will evolve in China and the U.S., while the EU is set to become the leader in decarbonization.

Starting from a strong basis in our two home markets – Europe and China – North America will be our main focus to grow our market share.

In regard to the U.S. market, there’s never been a point in time where we were better positioned to significantly increase our market share.

The Biden plan gives us a unique opportunity to start from a better position than the competition, having built up an open charging infrastructure across the U.S. and having invested in the transition towards EVs in Chattanooga already.

We are ready to bring a wide range of highly attractive EVs tailored to the U.S. market. And participate over-proportionally at a time when everybody has to start from scratch. The ID.4 had a flying start.

In China, Volkswagen has been the unrivaled market leader for many years with high profitability.
Our goal is to **achieve this position** also in the **Chinese e-mobility world**, competing with very innovative and speedy local brands and technology companies.

China will play a **crucial role** for the success of our strategy through 2030.

We achieved major milestones in recent months: Taking **majority stakes** in e-mobility businesses for Audi and Volkswagen for the first time. Investing in **local battery manufacturing**. And ramping up our **software capabilities**, with a CARIAD subsidiary, and launching our worldwide EV portfolio in **dedicated sites, Shanghai and Foshan**.

With the ID.6, ID.4 and ID.3 we are **rapidly rolling out our e-portfolio** this year. Our key electric joint venture **Volkswagen Anhui** will become the **local hub** for our **mechatronic architecture**. A new R&D center is under construction.

As China will grow faster than the rest of the world, we are gearing up our operations **with more local skills and capabilities**.

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Taking our **660,000 people** through the transition is the biggest task for our leadership and requires a **new flexibility** and **adaptability** for each individual. Giving vision, direction and confidence is key to making the transition a success.

We have the **right strategy** to be at **least as successful in NEW AUTO as in the old world**. We are providing the training, reskilling and adequate working environments.

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11 The vehicle is not for sale in Europe
Together with the works council, we have made our German sites fit for the future, turning our plant in Zwickau into an e-mobility site and planning similar groundbreaking transformations for our plants in Emden and Hanover.

The transformation of our Group Components is unparalleled in the industry. With Trinity and Artemis we are planning two flagship projects for Wolfsburg and Hanover.

Our workers representatives have been supporting the strategy, ensuring alignment between management and the workforce and facilitating change, starting with the “future pact” back in 2016. In times of unprecedented change, our employees at our German sites will have job security through 2029.

So much restructuring in such a short time would not have been possible without reliable labour relations. My thanks therefore goes to the works council, led by Daniela Cavallo.

Because competitive profitability is a basis for long-term safe jobs, it is an important goal for us. I am convinced that together with Daniela Cavallo we have a solid basis of trust to continue working successfully on our future.

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The mobility world will be changing radically over the next decade.

Individual mobility has a bright future as we are making it emission-free, safe and convenient.

Being driven safe and comfortably, fast though smooth in beautiful cars will be a very desirable new experience.
Volkswagen, with its innovative brands and state-of-the art platforms in its NEW AUTO strategy, is preparing to play an important role in this new world.