Levers to unleash value
Dr. Herbert Diess
Chairman of the Board of Management Volkswagen AG
January 9, 2020 – New York
The following presentations contain forward-looking statements and information on the business development of the Volkswagen Group. These statements may be spoken or written and can be recognized by terms such as “expects”, “anticipates”, “intends”, “plans”, “believes”, “seeks”, “estimates”, “will” or words with similar meaning. These statements are based on assumptions, which we have made on the basis of the information available to us and which we consider to be realistic at the time of going to press. These assumptions relate in particular to the development of the economies of individual countries and markets, the regulatory framework and the development of the automotive industry. Therefore the estimates given involve a degree of risk, and the actual developments may differ from those forecast. The Volkswagen Group currently faces additional risks and uncertainty related to pending claims and investigations of Volkswagen Group members in a number of jurisdictions in connection with findings of irregularities relating to exhaust emissions from diesel engines in certain Volkswagen Group vehicles. The degree to which the Volkswagen Group may be negatively affected by these ongoing claims and investigations remains uncertain.

Consequently, a negative impact relating to ongoing claims or investigations, any unexpected fall in demand or economic stagnation in our key sales markets, such as in Western Europe (and especially Germany) or in the USA, Brazil or China, and trade disputes among major trading partners will have a corresponding impact on the development of our business. The same applies in the event of a significant shift in current exchange rates in particular relative to the US dollar, sterling, yen, Brazilian real, Chinese renminbi and Czech koruna.

If any of these or other risks occur, or if the assumptions underlying any of these statements prove incorrect, the actual results may significantly differ from those expressed or implied by such statements.

We do not update forward-looking statements retrospectively. Such statements are valid on the date of publication and can be superseded.

This information does not constitute an offer to exchange or sell or an offer to exchange or buy any securities.
Volkswagen with its strong brands is one of the largest players in the automotive industry – covering a wide range of customer needs.

- **12** strong brands and **> 150** markets
- Vehicle production **> 44 k** per day
- Global sales **> 10.8 m.** vehicles, market share **> 12%**
- **Cost-effective** electrification of portfolio
- Strong, future-ready own **captive Financial Services**

---

1) 2018, Global Passenger Vehicles Market Share
Since 2017 we have been outperforming the industry...
Growth total markets vs. VW Group deliveries to customers

<table>
<thead>
<tr>
<th>Year</th>
<th>Market Share Development</th>
<th>Deliveries vs. Previous Year</th>
<th>Operating Profit 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>-0.26%</td>
<td>5.5%</td>
<td>14.6</td>
</tr>
<tr>
<td>2017</td>
<td>~0.00%</td>
<td>4.3%</td>
<td>17.0</td>
</tr>
<tr>
<td>2018</td>
<td>0.21%</td>
<td>0.6%</td>
<td>17.1</td>
</tr>
<tr>
<td>1-10 2019</td>
<td>0.56%</td>
<td>-0.5%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

1) Before special items
2) 1-9 2019

Excl. Ducati, MAN and Scania, LCVs only included in NAR and SAM
...and even in a challenging environment we have been gaining market share

Growth total markets vs. VW Group deliveries to customers Jan – Oct. 2019 vs. 2018

- World:
  - Total market: -4.8 %
  - VW Group: -0.5 %

- North America:
  - Total market: -1.8 %
  - VW Group: -1.2 %

- South America:
  - Total market: -5.6 %
  - VW Group: +0.1 %

- Europe:
  - Total market: -0.7 %
  - VW Group: +2.6 %

- China (incl. HK):
  - Total market: -7.2 %
  - VW Group: -1.7 %

---

1) Excl. Ducati, MAN and Scania, LCVs only included in NAR and SAM
Volkswagen Group – Outlook for 2019

Deliveries to customers ('000 vehicles)

+0.9%

<table>
<thead>
<tr>
<th>Year</th>
<th>Deliveries</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>10.7</td>
</tr>
<tr>
<td>2018</td>
<td>10.8</td>
</tr>
</tbody>
</table>

Sales revenue (€ billion)

+2.7%

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>229.6</td>
</tr>
<tr>
<td>2018</td>
<td>235.8</td>
</tr>
</tbody>
</table>

Operating return on sales (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Operating Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>7.4 1)</td>
</tr>
<tr>
<td>2018</td>
<td>7.3 1)</td>
</tr>
</tbody>
</table>

Slightly above prior year
(as of January 9 2020; updated from “on the level of prior-year” at Q3 2019)

2019

grow by as much as 5%

2019

Range of 6.5 – 7.5% (before Special Items)

2019

1) before Special Items.
We continuously deliver on demanding financial targets

### Key financial targets

<table>
<thead>
<tr>
<th></th>
<th>2016 Actual</th>
<th>2017 Actual</th>
<th>2018 Actual</th>
<th>2019 Outlook</th>
<th>2020 Strategic Targets</th>
<th>2025 Strategic Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating return on sales</td>
<td>6.7%</td>
<td>7.4%</td>
<td>7.3%</td>
<td>6.5-7.5%</td>
<td>6.5-7.5%</td>
<td>7-8%</td>
</tr>
<tr>
<td>Before Special Items</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on investment</td>
<td>13.9%</td>
<td>14.4%</td>
<td>13.1%</td>
<td>12-14%</td>
<td>12-14%2)</td>
<td>&gt;14%2)</td>
</tr>
<tr>
<td>Automotive Division</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capex ratio</td>
<td>6.9%</td>
<td>6.4%</td>
<td>6.6%</td>
<td>6.5-7%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Automotive Division</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D cost ratio</td>
<td>7.3%</td>
<td>6.7%</td>
<td>6.8%</td>
<td>6.5-7%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Automotive Division</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td></td>
<td></td>
<td></td>
<td>≥ €9 bn</td>
<td>≥ € 10 bn</td>
<td>&gt; € 10 bn</td>
</tr>
<tr>
<td>Automotive Division</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Net Cashflow</td>
<td>€ 4.9 bn</td>
<td>€ 10.3 bn</td>
<td>€5.6 bn</td>
<td>≥ €9 bn</td>
<td>≥ € 10 bn</td>
<td>&gt; € 10 bn</td>
</tr>
<tr>
<td>Automotive Division</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Net Liquidity</td>
<td>€ 27.2bn</td>
<td>€ 22.4 bn</td>
<td>€19.4 bn</td>
<td>&gt; €15 bn2)</td>
<td>&gt; € 20 bn3)</td>
<td>~10% of Group turnover</td>
</tr>
</tbody>
</table>

**Volkswagen Group**

- Delivering consistently on our top line strategic KPIs and reconfirming guidance
- Record underlying cash flow generation levels
- CAPEX and R&D Ratios on track
  - Already holistic investments in future included (hybridization, electric mobility and digitalization)
- Dividend Pay-out-Ratio of 30% embedded in 5-year-planning
  - By 2022 at latest
- Volkswagen has delivered a TSR of 28.5% over the past year

---

1) Excl. Diesel payments and M&A
2) Including the negative IFRS 16 impact, effective from 1st January 2019
TSR: Total Shareholder Return
However, our company valuation is not where it should be!

Market capitalization 2019\textsuperscript{1)} (€ bn)

\textsuperscript{1)} As of 21/11/2019
\textsuperscript{2)} According to Morgan Stanley report from 26/09/2019
\textsuperscript{3)} Estimation Spring 2019
Source: Bloomberg
To ensure future profits, we drive a fundamental transformation towards electrification and digitalisation.

**Transformation**

1. **Electrical transformation:**
   - Battery electric vehicles

2. **Digital transformation:**
   - Fully networked vehicles and autonomous driving

**Commitment to Paris goals 2050**

**Conventional platforms**

**Software & electric platforms**

**We will become a leading automotive software company**
BEVs are the first choice as the most cost-efficient solution for CO₂ reduction...

Measures for CO₂ reduction in €/g CO₂

- Diesel ICE EU7: 95 €/g CO₂
- Gasoline ICE Hybrid
- Gasoline ICE Mild Hybrid
- Gasoline ICE Plug-In Hybrid
- BEV MEB 1st Generation
- BEV MEB 2nd Generation

Example Volkswagen Brand: Ranking CO₂ efficiency indicators (average) for selected CO₂ measures
...therefore we based our strategy on dedicated BEV platforms already in 2015

**1st wave**
- 26 m. cars
- ~33 bn. invest
- Battery supply secured
- 3 World regions: China, USA, Europe

**2nd wave**
- Mission E Cross Turismo
- MEB Entry Family
- e-tron GT
- ID. Buzz
- ID.3
- Vision E
- e-tron Sportback concept
- Taycan
- e-tron
- ID. Crozz

**Our advantage**
- Strong group position in EU/CN guarantees scale effects
- Early decisions on dedicated BEV platforms unleash value
- Multi-brand platforms in dedicated plants provide efficiencies
Customers already experience comparable TCOs in 2020 – 2\textsuperscript{nd} wave BEV will provide even more attractive TCOs

TCO comparison\textsuperscript{1)}

Including government subsidies for many customers BEV TCO are comparable to ICE TCO already today

2\textsuperscript{nd} wave MEB cars will offer better TCOs than ICEs (even without government subsidies)

\textsuperscript{1)} Schematic overview | TCO = Total Cost of Ownership
Based on strong customer interest, we will significantly increase our BEV deliveries

### Volkswagen Group – BEV volume by regions
(BEV share of total Group Deliveries in %)

<table>
<thead>
<tr>
<th>Year</th>
<th>Europe</th>
<th>China</th>
<th>NAR</th>
<th>RoW</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>≈ 1%</td>
<td></td>
<td></td>
<td></td>
<td>≈ 3 mn units</td>
</tr>
<tr>
<td>2020*</td>
<td>≈ 4%</td>
<td></td>
<td></td>
<td></td>
<td>&gt; 20%</td>
</tr>
<tr>
<td>2021*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2023*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2024*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Target
Our dedicated BEV strategy enables us to meet CO₂ requirements

...we already started MEB development in 2015

...over fulfillment towards Paris 2050 goals
We expect cost parity between BEVs and ICEs in the near future

Product cost development BEV vs ICE

1) Schematic overview
In the future, software will be a main differentiator in the automotive industry...

**Today**

- 100 million lines of code per vehicle
- Approximately $10 per line of code
- Example: Navi system 20 million lines of code

**Tomorrow**

- >200 - 300 million lines of code are expected
- Level 5 autonomous driving will take up to 1 billion lines of code

...therefore, we invest 7 billion Euro in a dedicated software organisation and will start operation in January 2020

A strong team...

More customer value...

...develops software in-house

...less complexity for us

<table>
<thead>
<tr>
<th>Software experts</th>
<th>2020</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connected Car</td>
<td>7,000</td>
<td>&gt;10,000</td>
</tr>
<tr>
<td>Intelligent Cockpit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driver Assistance Systems &amp; Automated Driving</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle Motion/ Energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Platform</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-functional</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• Increase in-house share software development from 10% to 60%
• All news cars on VW.OS from 2025 on
• Migrate parallel solutions to gain scale, e.g. One Infotainment & One cloud

• Cost reduction due to
  – significantly lower direct material cost
  – reduced development cost
  – smoother new vehicle launches
  – reduced warranty cost

• Always up-to-date functions in all vehicles
• Higher residual values
• Lower maintenance downtimes

~ 0.5 bn synergies by 2025 from standardisation of infotainments

Example
We rigorously allocate capital and seek intelligent partnerships...
...and continue to drive cost reduction initiatives

Selected examples

**Personnel cost reduction**

- “Zukunftspakt” VW brand: (gross) Headcount reduction >10,600 since the start of the Zukunftspakt

- “Roadmap Digitale Transformation” VW brand: up to -4,000 jobs (indirect) until 2023

- “Audi.Zukunft”: agreement with workers council, up to -9,500 jobs until 2025

**Zero-based budgeting program 2020**

- Tight alignment of cost with strategic priorities
  - Technical development
  - Investments
  - Sales and Marketing

- Elimination of redundant activities across brands

**Synergies through structural improvements**

- Single-brand cross-functional responsibility for synergetic vehicle families

- One-for-all Engineering

- Worldwide logistics systems optimisation

- New market area concept

---

1) Net reduction > 6,900, status 09/2019
2) Direct: additional productivity improvements to secure mid-/long-term competitiveness (+5% improvement p.a. until 2023)
We group our vehicles in synergy families in order to realise substantial savings

**Today**

- Successful market positioning
- Brand-specific design
- Synergistic concepts
- High share of carry over parts
- Scale effects through modular platform concept

**Target picture – 1st wave**

- 4 cross-brand synergy families
- Cross-functional lead responsibility in one brand

1. 1st Model family
2. 2nd Model family
3. 3rd Model family
4. 4th Model family
We capture further synergies through „one-for-all“ module engineering and reduce complexity significantly

Dedicated module strategies with one lead developer – *example front seats*

- Uniform, *standardized* seat mounting for all brands and platforms
- One dedicated *high seater* module (SUV)
- One dedicated *low seater* module (Sedan)
- 30% less modules
- 60% less variation

Planned complexity reduction – *example engine-gearbox combinations*

within MQB [EU28]:

<table>
<thead>
<tr>
<th>Year</th>
<th>Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>≈100</td>
</tr>
<tr>
<td>2024</td>
<td>≈60</td>
</tr>
</tbody>
</table>

-40%

**VW: -36%** engine- / gearbox combinations in Golf 8 vs. Golf 7
We are convinced that we have a strong Investment Proposition

**TOGETHER 2025+**

**FOCUS AND SPEED**

- Strong brands with clear positioning and great products that inspire customers
- A leading position in China with global footprint and value creating growth
- Fully committed to "Go to Zero" and shaping e-mobility
- Transforming to one of the leading automotive software players
- Business portfolio optimisation and rigorous allocation of capital
- Taking complexity out and pushing for industry-leading economies of scale
- Delivering on demanding financial targets and committed to dividend pay out ratio

**Shaping mobility – for generations to come.**

**Integrity as the foundation of a successful business**

**Unleash value**