## Ford and Volkswagen to **expand their global collaboration** to advance autonomous driving, electrification and better serve customers





### **DISCLAIMER – Ford Motor Company**



Statements included or incorporated by reference herein may constitute "forward -looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are based on expectations, forecasts, and assumptions by our management and involve a number of risks, uncertainties, and other factors that could cause actual results to differ materially from those stated, including, without limitation:

- · Ford's long-term competitiveness depends on the successful execution of fitness actions;
- Industry sales volume, particularly in the United States, Europe, or China, can be volatile and could decline if there is a financial crisis, recession, or significant geopolitical event;
- · Ford's new and existing products and mobility services are subject to market acceptance;
- · Ford's results are dependent on sales of larger, more profitable vehicles, particularly in the United States;
- · Ford may face increased price competition resulting from industry excess capacity, currency fluctuations, or other factors;
- Fluctuations in commodity prices, foreign currency exchange rates, and interest rates can have a significant effect on results;
- With a global footprint, Ford's results could be adversely affected by economic, geopolitical, protectionist trade policies, or other events, including Brexit;
- Ford's production, as well as Ford's suppliers' production, could be disrupted by labor disputes, natural or man-made disasters, financial distress, production difficulties, or other factors;
- · Ford's ability to maintain a competitive cost structure could be affected by labor or other constraints;
- · Pension and other postretirement liabilities could adversely affect Ford's liquidity and financial condition;
- Economic and demographic experience for pension and other postretirement benefit plans (e.g., discount rates or investment returns) could be worse than Ford has assumed;

- Ford's vehicles could be affected by defects that result in delays in new model launches, recall campaigns, or increased warranty costs;
- Ford may need to substantially modify its product plans to comply with safety, emissions, fuel economy, and other
  regulations that may change in the future;
- Ford could experience unusual or significant litigation, governmental investigations, or adverse publicity arising out of alleged defects in products, perceived environmental impacts, or otherwise;
- · Ford's receipt of government incentives could be subject to reduction, termination, or clawback;
- · Operational systems, security systems, and vehicles could be affected by cyber incidents;
- Ford Credit's access to debt, securitization, or derivative markets around the world at competitive rates or in sufficient
  amounts could be affected by credit rating downgrades, market volatility, market disruption, regulatory requirements,
  or other factors;
- Ford Credit could experience higher-than-expected credit losses, lower-than-anticipated residual values, or higher-thanexpected return volumes for leased vehicles;
- Ford Credit could face increased competition from banks, financial institutions, or other third parties seeking to increase their share of financing Ford vehicles; and
- Ford Credit could be subject to new or increased credit regulations, consumer or data protection regulations, or other regulations.

We cannot be certain that any expectation, forecast, or assumption made in preparing forward-looking statements will prove accurate, or that any projection will be realized. It is to be expected that there may be differences between projected and actual results. Our forward-looking statements speak only as of the date of their initial issuance, and we do not undertake any obligation to update or revise publicly any forward-looking statement, whether as a result of new information, future events, or otherwise. For additional discussion, see "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2018, as updated by subsequent Quarterly Reports on Form 10-Q and Current Reports on Form 8-K.

### **DISCLAIMER – Volkswagen AG**



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.

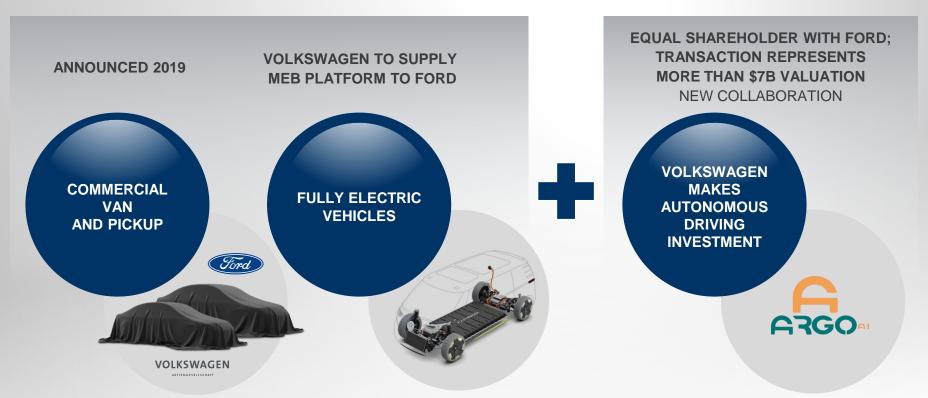
If any of these or other risks occur, or if the assumptions underlying any of these statements prove incorrect, the actual results may significantly differ from those expressed or implied by such statements.

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.

Ford and Volkswagen extend global alliance, Volkswagen simultaneously invests in Argo Al





# Alliance delivers significant strategic and economic benefits



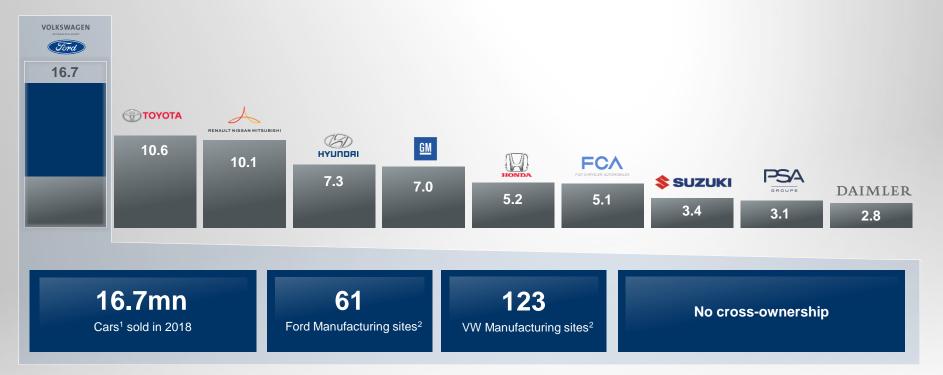


		\$	
LEADING POSITIONS	BROAD GEOGRAPHIC FOOTPRINT	COST BENEFITS	TECH AND CAPABILITY ACCESS
Alliance will be a leader in Light Commercial Vehicles and Medium Pickup Trucks Significant economies of scale	Leading positions around the globe Automakers can serve global markets seamlessly	Shared investment and R&D spend, leading scale in areas of collaboration Several hundred million dollars in joint synergies at peak cycle	Joint programs increase funding for next-gen technology and product enhancements Superior engineering power

# Alliance strengthens complementary competitiveness for both OEMs



Alliance of two key players | 2018 vehicle<sup>1</sup> sales (in mn units)



# Autonomous vehicle development challenges





### **Collaboration with Argo Al aims for industry-leading Self-Driving System platform**













Volkswagen will contribute its Autonomous Intelligent Driving company, funding to Argo AI and cash to Ford in exchange for an ownership stake in Argo AI equal to Ford's position

# New collaboration to deliver significant global scale across the mobility industry



SDS platform



OEMs

VOLKSWAGEN

Leading SDS technology Best global talent pool: strengthening with 200+ AID employees Region-specific market solutions Largest OEM customers + technology validation OEM access and support for vehicle integration Incremental funding commitments

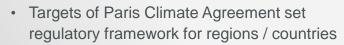
Global scale and reach: leading presence in Europe AV vehicles, hardware and infrastructure Regulatory expertise and social acceptance Financial strength Commitment to electrification Extensive dealer network Focus and track-record on safety

Investment reduces the time to market and significantly expands the market potential of Argo AI

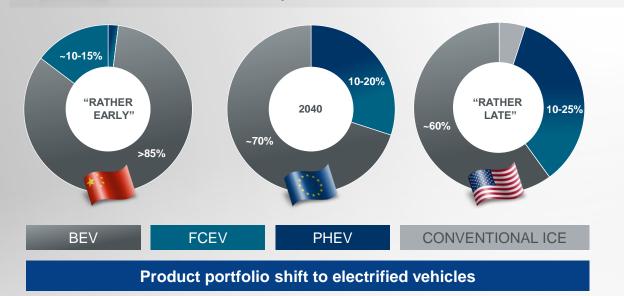
# **EV collaboration positions companies to capitalize on technology paradigm shift**

COP21 · CMP11 PARIS 2015





- Existing fleet CO<sub>2</sub> neutrality by 2050
- From Tank-to-Wheel to Lifecycle

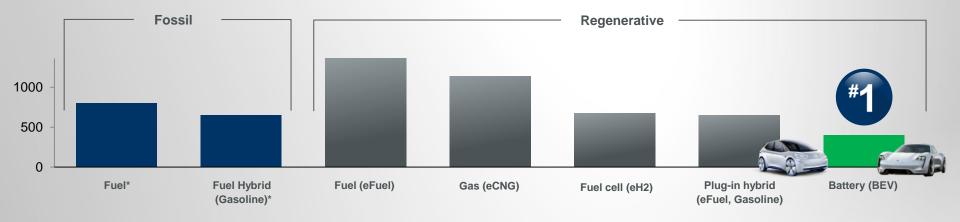


- Achieve significant share for "future technologies" (BEV, FCEV, PHEV)
- Align platform strategy to the future's technology portfolio
- Assess further measures to achieve CO<sub>2</sub> neutrality

### **BEV drive technology demands** the least primary energy

Primary energy demand in Wh/km for lifecycle



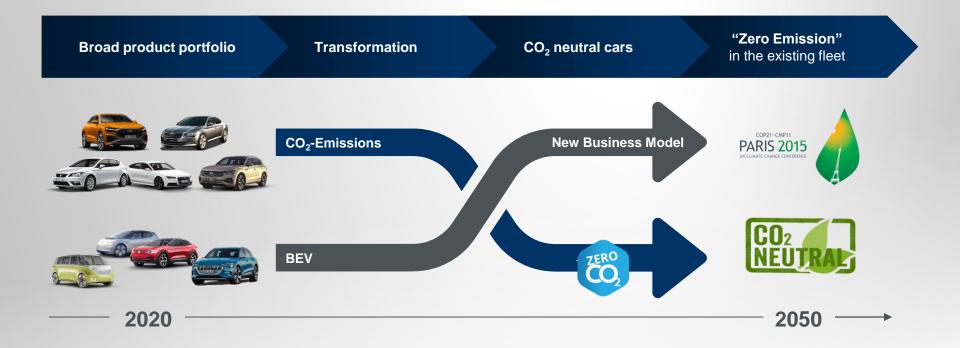




Example: A-Segment 200,000 km,  $CO_2$  and energy balance over lifecycle of vehicle and fuel/alternative \* Not comparable on an energy use basis, not  $CO_2$  neutral

# E-Mobility will become the new business model of Volkswagen











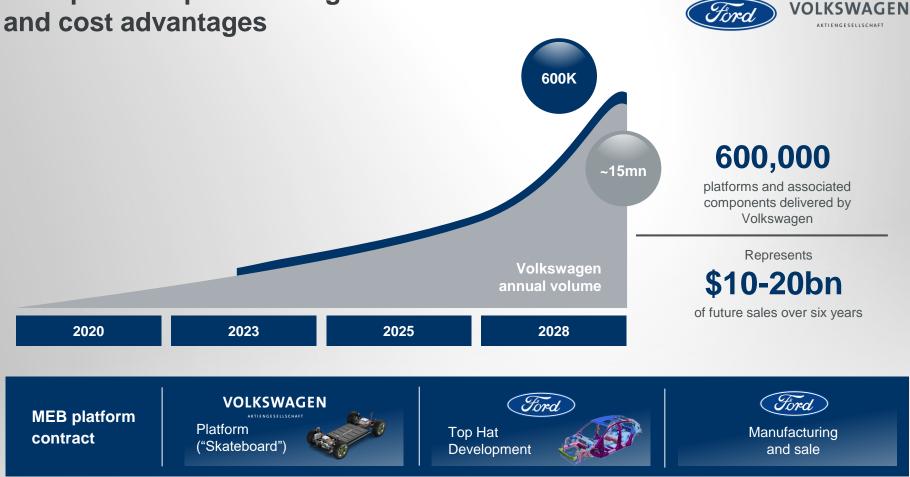
### Superior customer experience

Exceptional versatility

Strong cost competitiveness

Enables high-volume zero-emission vehicles

# **MEB platform provides significant scale**



### **The Argo AI difference**

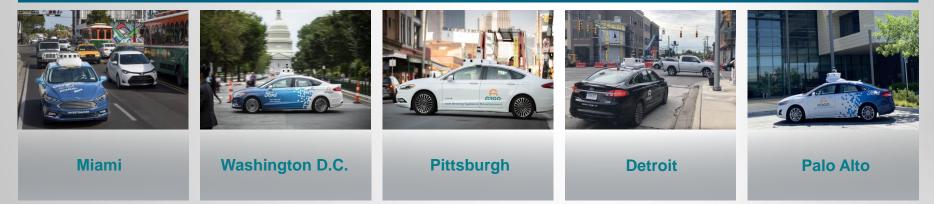


	Self-Driving Platform Designed for Scale	Development of production-quality code from outset Collaboration with automaker partners for fully-integrated, safe vehicles
CCC Cont	Multi-city development approach	Collection of a wide range of local road infrastructure, driving behavior and traffic law data Accelerates time of learning for self-driving system
	Naturalistic driving	Human-like driving characteristics for comfortable ride experience Safer performance due to blending in more naturally with local traffic behavior
	Expertise and experience matters	Engineering team consists of 70% advanced degrees and 10 years field experience average Leadership and management comprised of industry veterans with commercialization experience
	Investing for the future	Creation of Carnegie Mellon Argo AI Center for Autonomous Vehicle Research In-house LiDAR development to push envelope of sensing capabilities

### **Multi-city development approach**



#### Currently testing in five cities; expanding to one more this year



#### Expanding to Europe next year

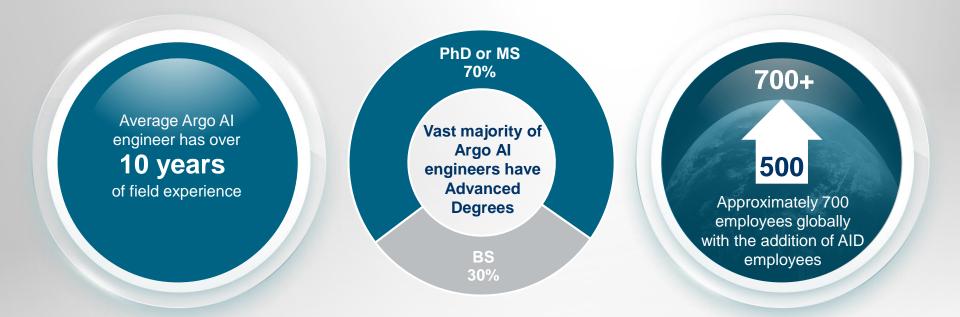
The Advantages:

Mapping: Diverse library of experiences allows for accelerated expansion into new citiesDriving style: Ability to handle varied road actors and local driving behaviorSafety: Diversity accelerates training of detection systems, prediction models and motion planning

### **Expertise and experience matters**



### High quality, global workforce that promotes a culture of safety and transparency



## **Q&A** Session





# Ford and Volkswagen collaboration creates global strategy to win in AVs, EVs and select vehicles



1

Global collaboration to expand to AV and EV, no cross-ownership



**Working toward AV leadership** by strengthening Argo Al at more than \$7bn valuation



**MEB platform** aims to establish itself as an **industry leader**, win-win contract



Collaboration to produce AVs, EVs, LCVs and pickups yielding synergies of several hundred million dollars / euros for each company at peak cycle

Creates

**Better addresses** 

customer needs

Shared investment costs while maintaining independent companies and unique competitive advantages

new revenue opportunities