VOLKSWAGEN
GROUP CHINA












China Auto Sector Opportunities and Challenges

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Volkswagen Group China

1. **Chinese Market**
2. **Changing Industry**
3. **Volkswagen in China**

Volkswagen's second home market in comparison

Size of the countries

CHINA: 9,562,911 km²

GERMANY: 357,021 km²

Population

	CHINA	GERMANY
INHABITANTS	1,370 million	81 million
DENSITY (People per km²)	139.6	232.1
AVERAGE AGE	37 years	44 years
UNEMPLOYMENT	4.1 %	6.4 %

Economy

	CHINA	GERMANY
GDP	$ 10,916 billion	$ 3,353 billion
GDP PER CAPITA	$ 7,833	$ 41,106
GDP GROWTH RATE	6.9 %	1.5 %
INFLATION	1.4 %	0.2 %
TRADE BALANCE	$ 682.3 billion	$ 291.7 billion

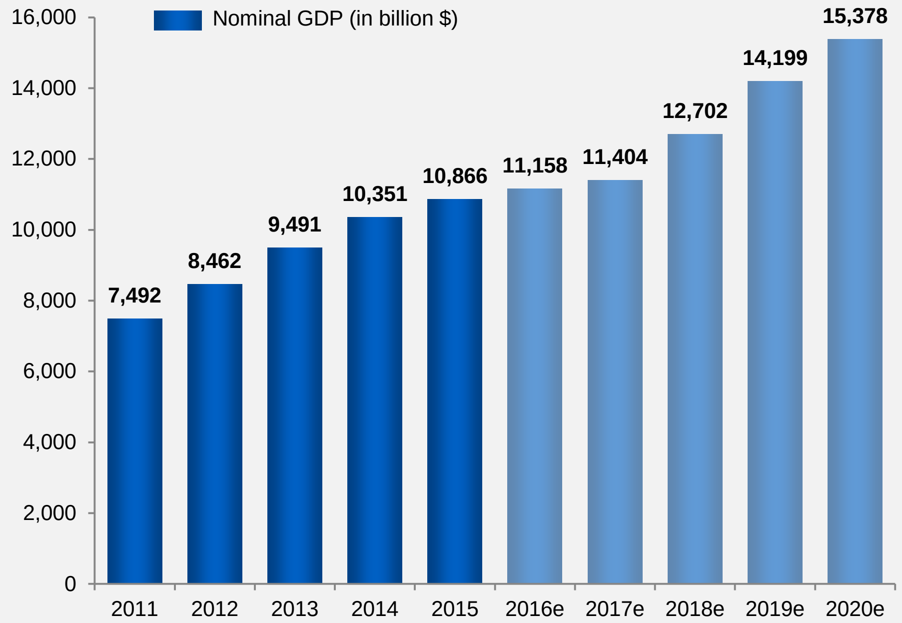
Car industry

	CHINA	GERMANY
TOTAL CAR PARK	83 million	44 million
TOTAL MARKET	19.7 million	3.2 million
PRODUCTION SITES	172	23
DENSITY (Cars per 1,000 Inh.)	84	548
AVERAGE CAR AGE	3.3	9.0

Sources: Data for FY 2015, Statistisches Bundesamt, National Bureau of Statistics of China; IMF; UN DESA: Bundesagentur fuer Arbeit; WTO; IHS; PWC Autofacts, VDA , IHS

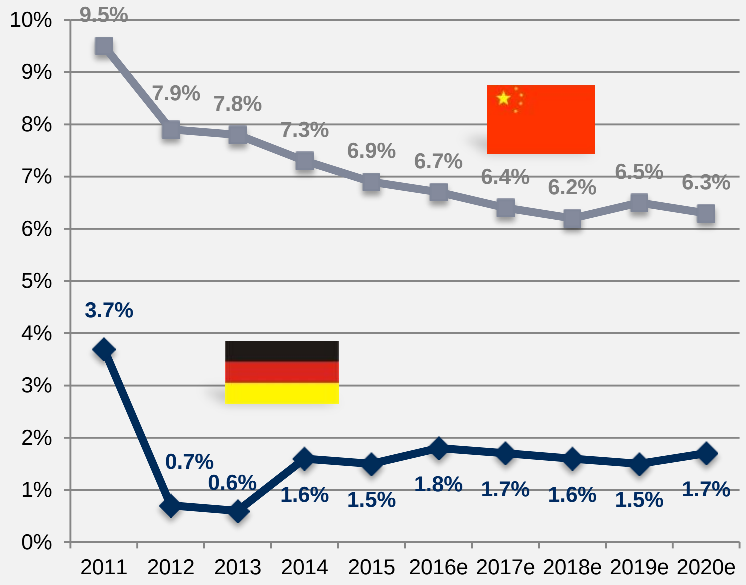
Chinese economy – Declining growth rate towards new normalization

China's economic growth



Source: Worldbank & Wind

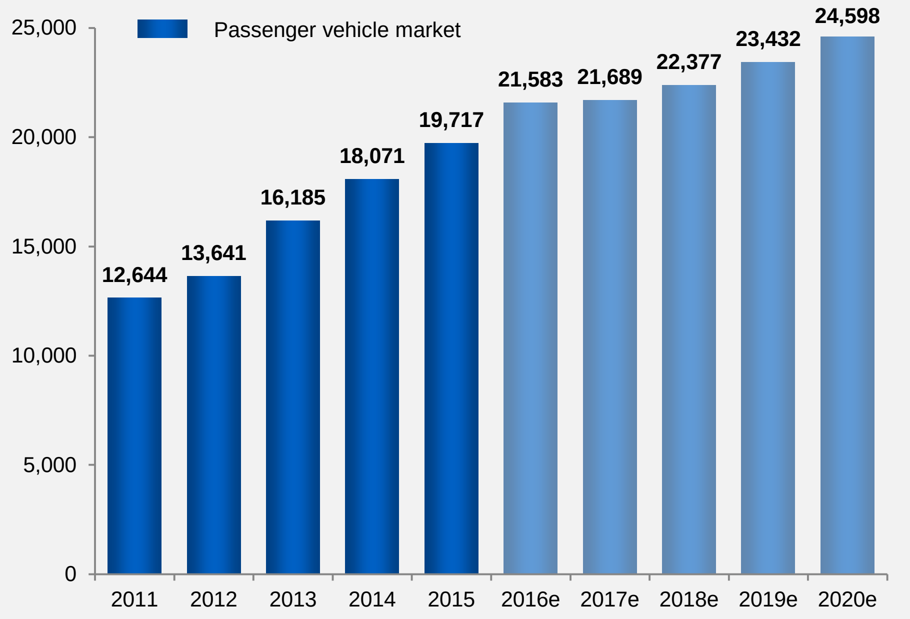
Real GDP growth comparison



Source: Worldbank & Wind and IHS

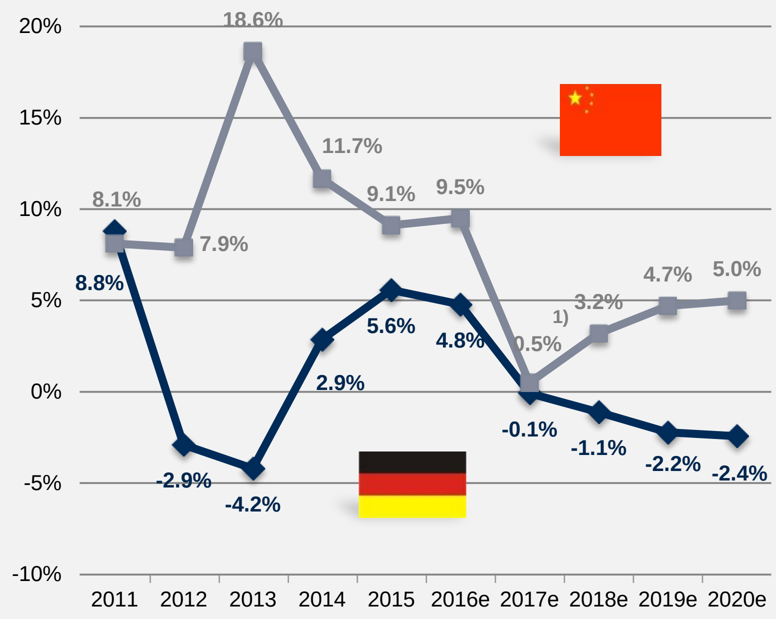
Strong historical car market growth changing towards normalization

Chinese total car market (in '000 units)



Source: HIS, 11/2016

Car market growth comparison

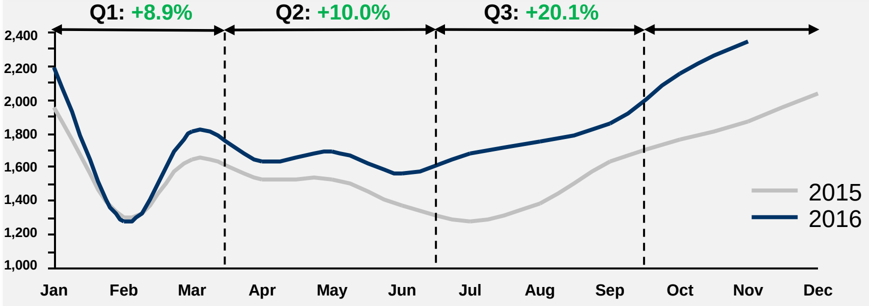


Source: IHS, 11/2016

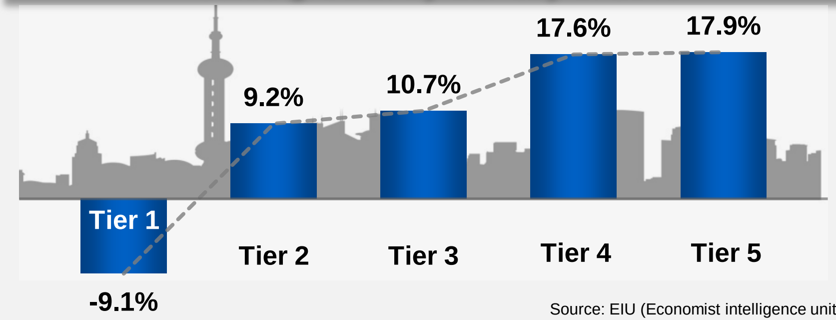
1) 2017 estimate under the assumption of no specific tax cut for cars in China.

Chinese market grows outside tier 1 cities

Market development 2016 vs. 2015 (in '000 units)

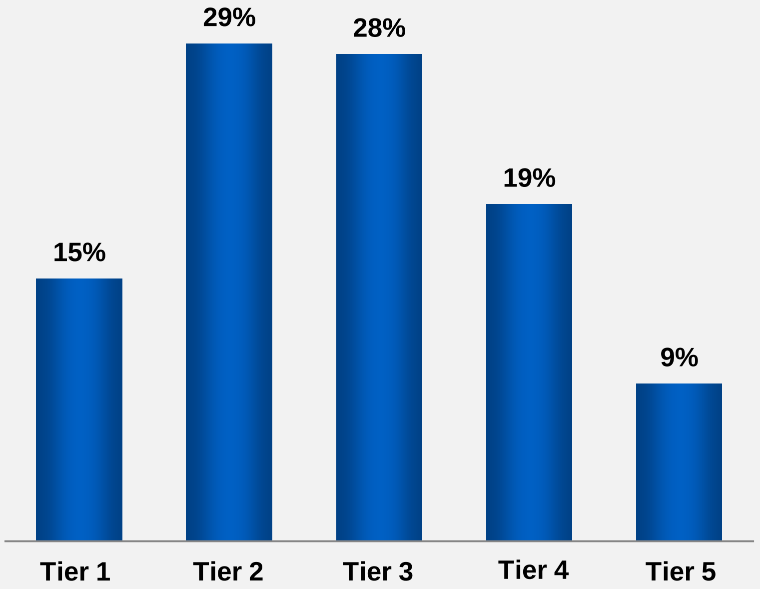


Sales growth by tier city in 2015



Source: EIU (Economist intelligence unit)

Share of total passenger car market sales by tier city in 2015

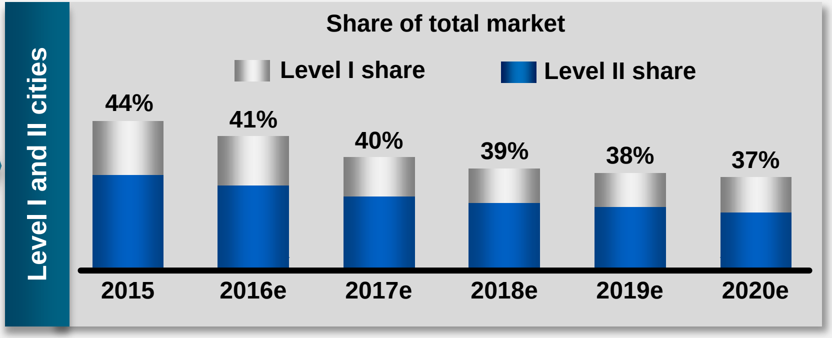


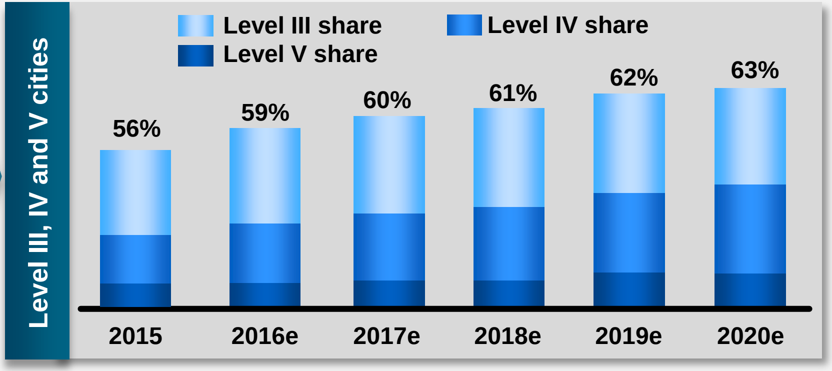
Source: EIU (Economist intelligence unit)

Less developed cities provide new opportunities

	Level I cities	Level II cities
	Beijing Shanghai Guangzhou	Dalian Xi'an Changsha
⌀ cars/1,000 inhabitants	135	136
Number of cities	9	26
Average # of inhabitants (m)	17.2	8.5

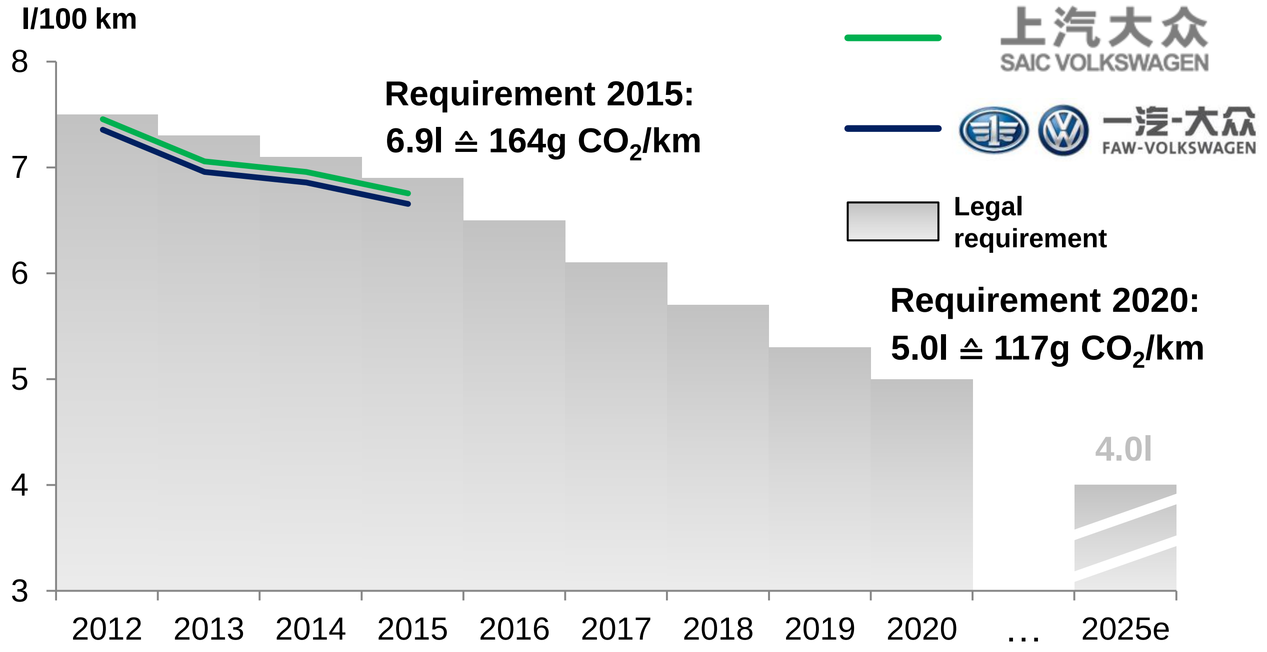
	Level III cities	Level IV cities	Level V cities
	Shantou Hengshui Jingdezhen …	Guyuan Yaan Zigong …	Haibei Jinchang Turpan …
⌀ cars/1,000 inhabitants	94	47	39
Number of cities	68	109	135
Average # of inhabitants (m)	4.9	4.0	1.7





Source: EIU (Economist intelligence unit)

Volkswagen Group is taken considerable efforts to meet the legal requirements of average fleet fuel consumption



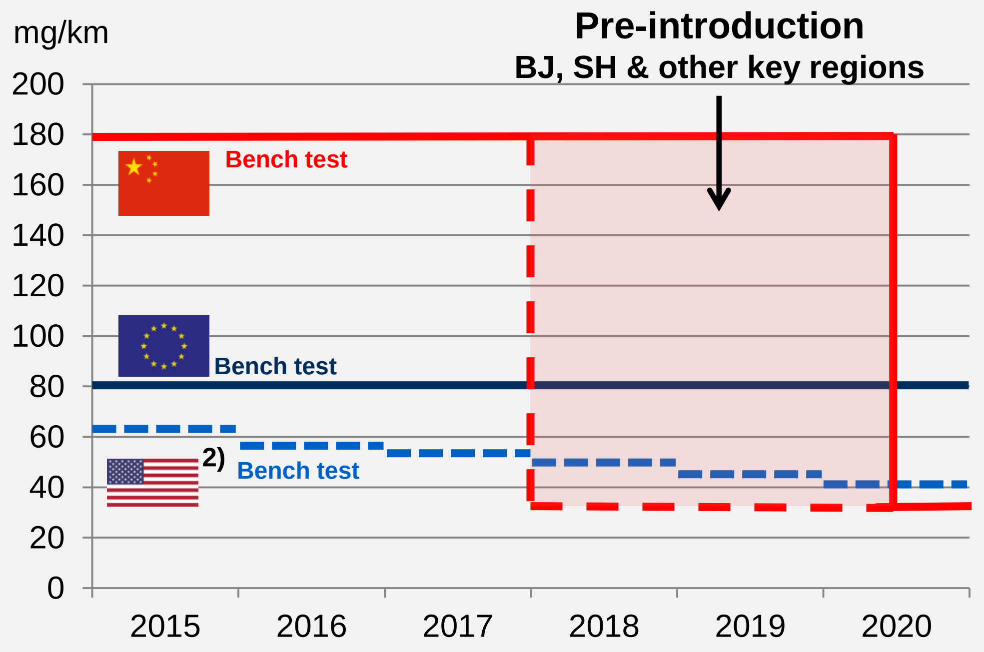
To achieve the legal requirements in China Volkswagen will

- **Develop further emission reducing technologies**

- **Actively engage in the NEV market**

China 6 regulation – Worldwide toughest emission legislation

NOx emission legislation [1)]



[1)] Schematic overview [2)] USA fleet average for NMOG+NOx per model year

Highlights

Emission regulation **China 6 for gasoline engines**

Implementation on national level planned for **2020**

Beijing and Shanghai may start with similar regulation in **2018** and other key regions in **2019**

Roller bench test **NOx** emission should fall **below 35 mg/km**

Further driving emissions need to be reduced dramatically – e.g. CO, THC, PM

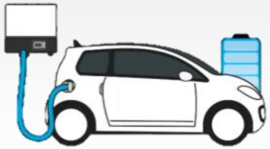
New Energy Vehicle strategy supported by Chinese Government

Subsidies for local NEVs[1)]

- **National subsidies for NEVs**
- **Purchase tax exemption** (10% Net Selling Price)
  - **No „circulation tax“**
  - **Direct subsidy**
- **Additional subsidies from local provinces**

Infrastructure investments

- **Target: Charging infrastructure for 5 million NEVs by 2020**
  - **12,100 charging stations** (mainly along the east coast)
  - **4,800,000 charging pillars**



Number plate access

- **Easier access to number plates in some restricted cities**

- **Free number plates for a certain amount of NEVs**
- **Free parking space for NEVs** (in discussion)
- **Free NEV driving lanes** (in discussion)

1) Subsidies are supposed to run until 2020.

SAIC VOLKSWAGEN PHIDEON

Volkswagen Group China

1. Chinese Market

2. **Changing Industry**

3. Volkswagen in China

HOW OUR INDUSTRY IS CHANGING

The key trends in the automotive world at a glance

NOVEL | PRODUCT INNOVATION | OPTIMIZING

Future vehicle concepts
Autonomous | Electrified | Connected

Advanced mobility solutions
Robotaxi | PRT, GRT, FRT*

Today's vehicle concepts
SUV/CUV trends | Budget cars

Current OEM core business

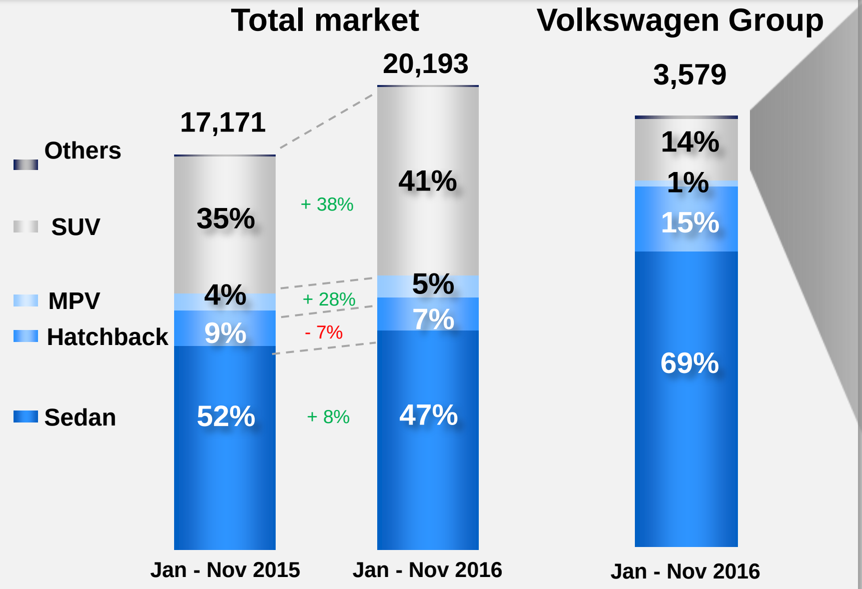
Sharing & Mobility On Demand
Shared | Conventional drive system

TRADITIONAL | BUSINESS MODEL INNOVATION | REVOLUTIONARY

*PRT = Personal Rapid Transit; GRT = Group Rapid Transit; FRT = Freight Rapid Transit

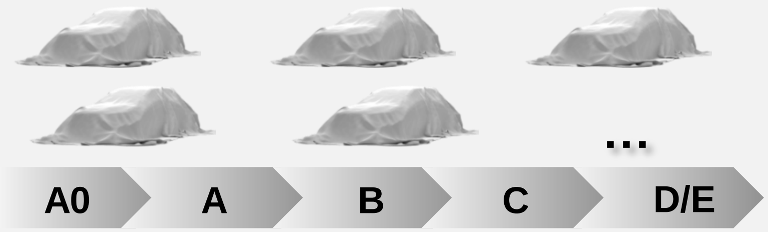
Strong growth in SUV segment – 10 additional locally produced SUVs planned over the next years

Passenger Car deliveries by body style (in ‘000 units)



Current SUV portfolio of Volkswagen Group in China

Significant SUV portfolio expansion planned in 2016 - 2020



Volkswagen is making digital transformation a top priority with focus on digitalization and autonomous driving

Volkswagen Group Future Centers

- **Three new Volkswagen Group Future Centers** in Silicon Valley, Potsdam and **Beijing**
- **Approach:** Designers and digitalization experts work hand in hand to create the car of the future

Our Goal

Best in class customer experience, interface design and user friendliness, new interior concepts, integration of infotainment and entertainment systems

20th Century: Engine is the core of the automobile	21st Century: Self-driving system is the core of the automobile

Top fields of use

Individual urban mobility	Commercial vehicles	Premium cars	Public transport-ation

Group is building on strong knowledge base – initiative started to get to market ahead of competitors

THE ELECTRIFICATION INITIATIVE OF THE VOLKSWAGEN GROUP

- Goal: to position Volkswagen as a driving force behind the expansion of electro-mobility; e-car to become a new hallmark of the Group
- >30 new pure-electric vehicles by 2025
- Annual unit sales of 2 to 3 million e-cars by 2025, equivalent to 20–25 percent of total sales

Volkswagen Group China will be prepared to deliver around 1.5 million zero emission cars to Chinese customers by 2025

Phase 1

Locally produced plug-in hybrids based on current toolkits

+ + **Range: up to 1.000km**
Pure electric: up to 60km

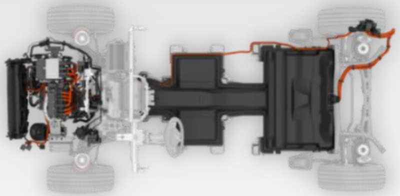
Audi A6 L e-tron

Volkswagen Phideon PHEV

Phase 2

Locally produced pure electric vehicles based on current toolkits

+ **Pure electric: up to 300km**

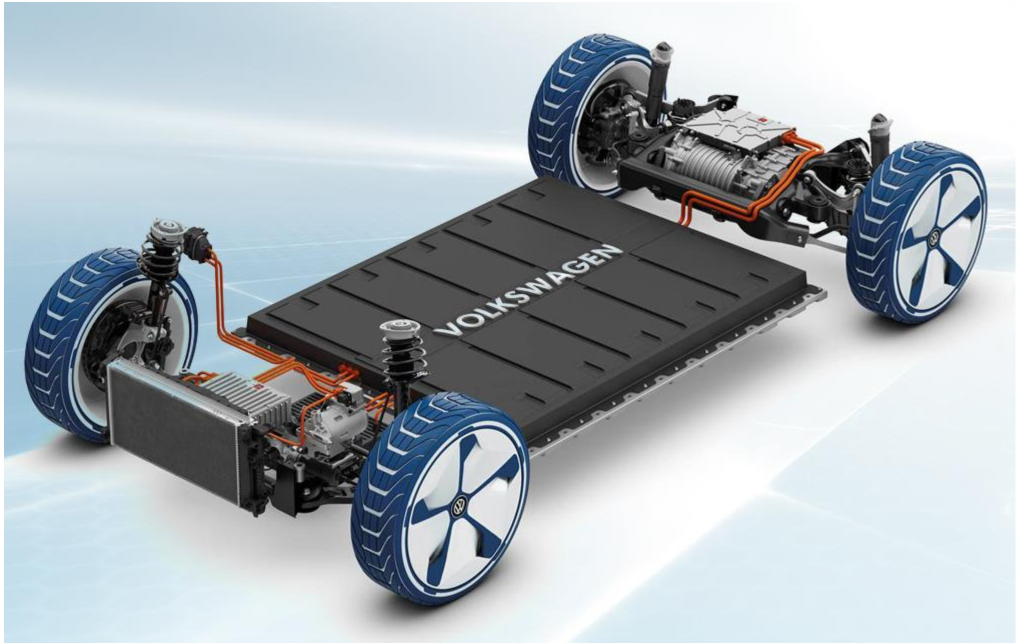


Phase 3

Locally produced pure electric vehicles based on scalable electric toolkit (MEB) for different vehicle classes

+ **Pure electric: up to 600km**
Speed charging of 80% in just 15min

The Volkswagen brand will implement MEB to make electric vehicles affordable and profitable



Key measures

- Concept determined by: customer benefit and package for cost-optimized implementation of e-components
- MEB: economies of scale from use of MEB across entire Group
- “Design for manufacturing“:
  higher productivity,
  shorter manufacturing time
- Lower material and distribution costs
- Significant reduction in variants
- Early involvement of suppliers

Urban Mobility is evolving from traditional transportation to "New Mobility" trends

Traditional Transportation

Car **Ownership**

Limited Choices

Government funded Public Transit

Unconnected and suboptimal

Technology

Financing

New Business Model

Multimodal and **Shared** Transport

More Choices

Public and **private** transit operate in parallel

On-demand and **Connected**

New Urban Mobility

Source: McKinsey "Urban mobility at a tipping point", September 2015

Volkswagen Group is exploring business opportunities through strategic partnerships in 4 key areas

1 Ride Sharing

- Driver Partnership Program
- Customized vehicles for on-demand mobility
- R&D Autonomous Driving

2 Mobility Club

- Premium Mobility Club
- Executive Mobility Club
- Car-sharing Mobility Club

3 Car Sharing

- New business model is to be adopted for the rollout nationwide

4 Financial Leasing and PoC e-Commerce

- Proactive Sourcing
- Financial Leasing

SAIC VOLKSWAGEN TERAMONT

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Volkswagen Group China at a glance[1)]

More than 150 models

12 fascinating brands

1984: first Joint Venture Shanghai VW was founded

1990: FAW-VW was founded in Changchun

More than 95,000 employees end of 2015

~320,000 employees within dealer network in 2015

29 production plants end of 2015

Around €4.4 billion investments planned for 2016

More than 18% market share in China's passenger car market in 2015

Over 25 million cars delivered since market entry

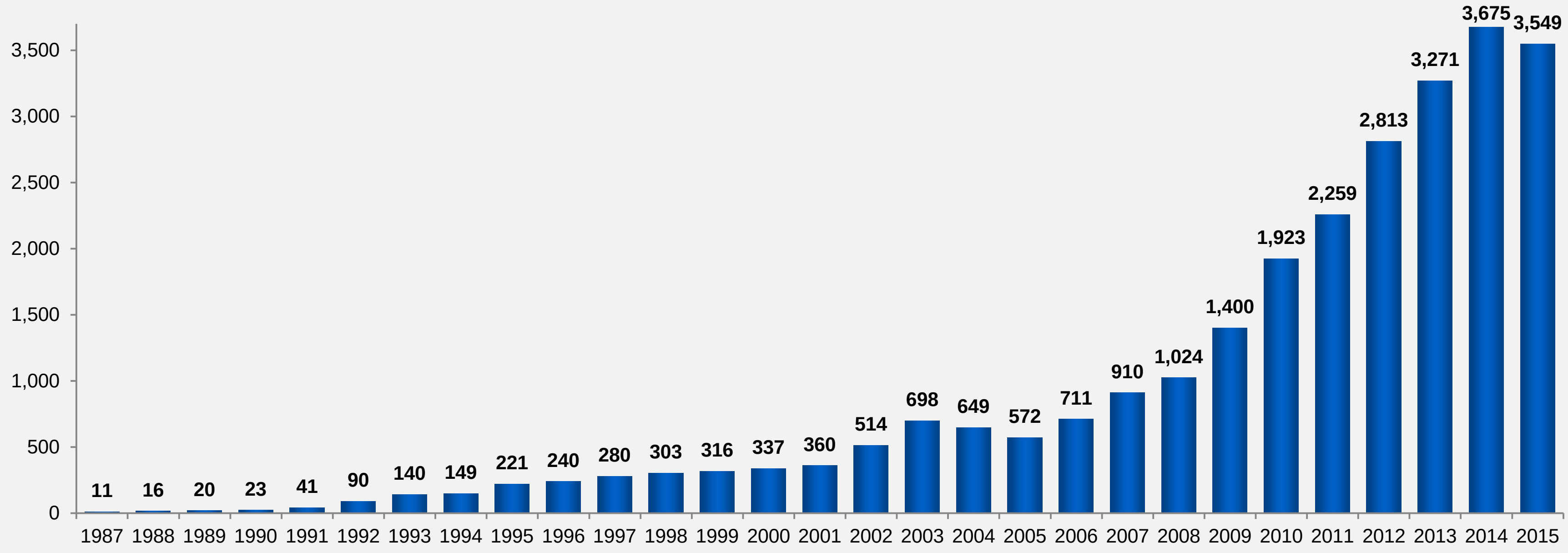
3.55 million deliveries in 2015

Proportionate operating profit of €5.2 billion in 2015

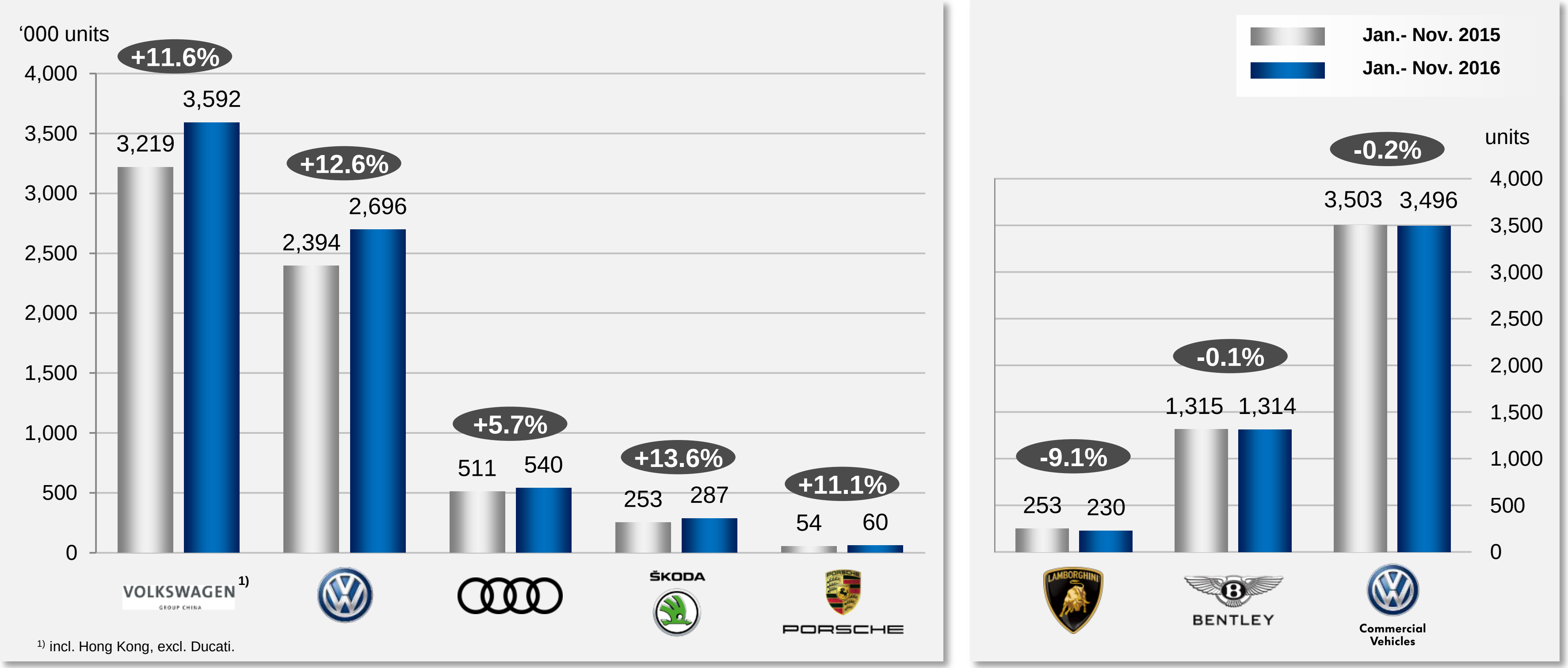
1) Data as of end 2015.

Volkswagen Group in China – A long-term success story

Volkswagen Group development of deliveries to customers (in '000 units)



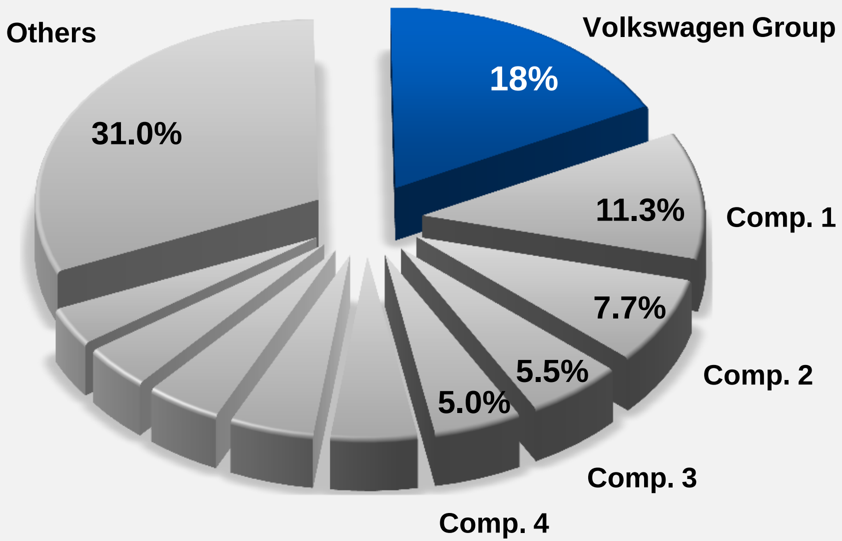
Deliveries to customers by brand January to November 2016



1) incl. Hong Kong, excl. Ducati.

Volkswagen Group – No. 1 in the Chinese passenger vehicle market

Passenger vehicles market share, YTD November 2016

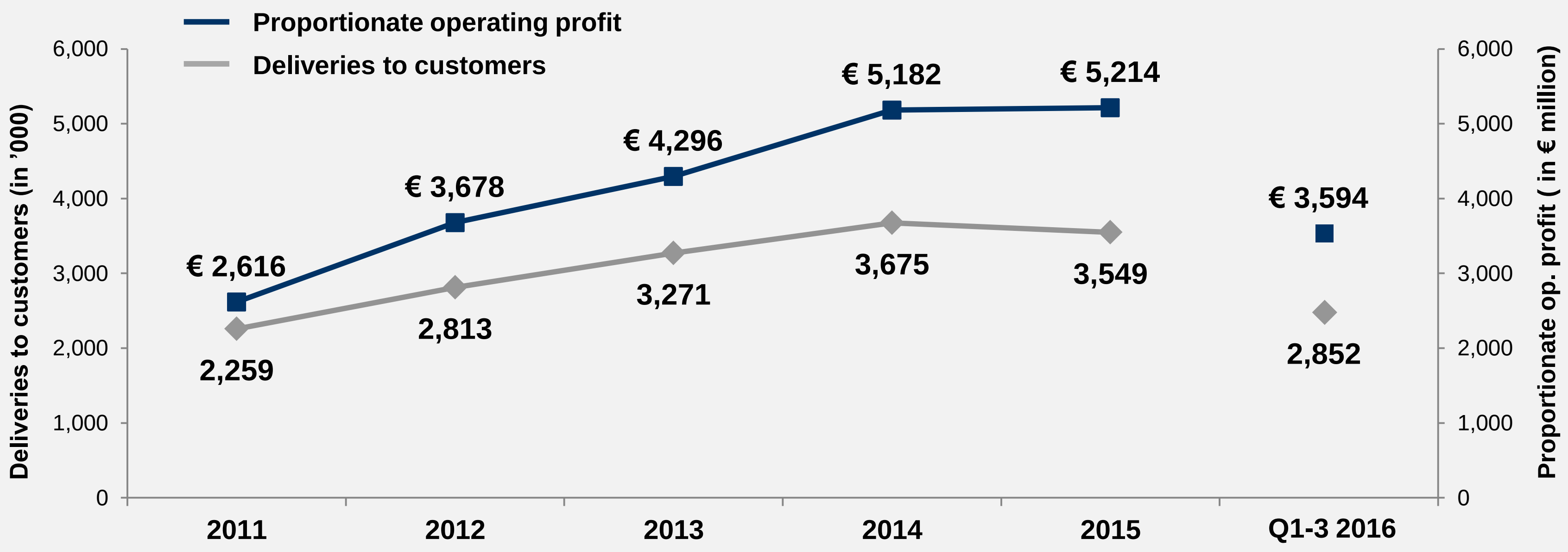


Rank	Group	Market share (Delta vs YTD Nov 2015)
1	**Volkswagen Group**	- 1.0%
2	Comp.1	+ 0.2%
3	Comp. 2	- 0.6%
4	Comp. 3	+ 0.5%
5	Comp. 4	- 0.2%

Source: CKD from China Passenger Car Association (CPCA), CAAM; FBU from insurance data

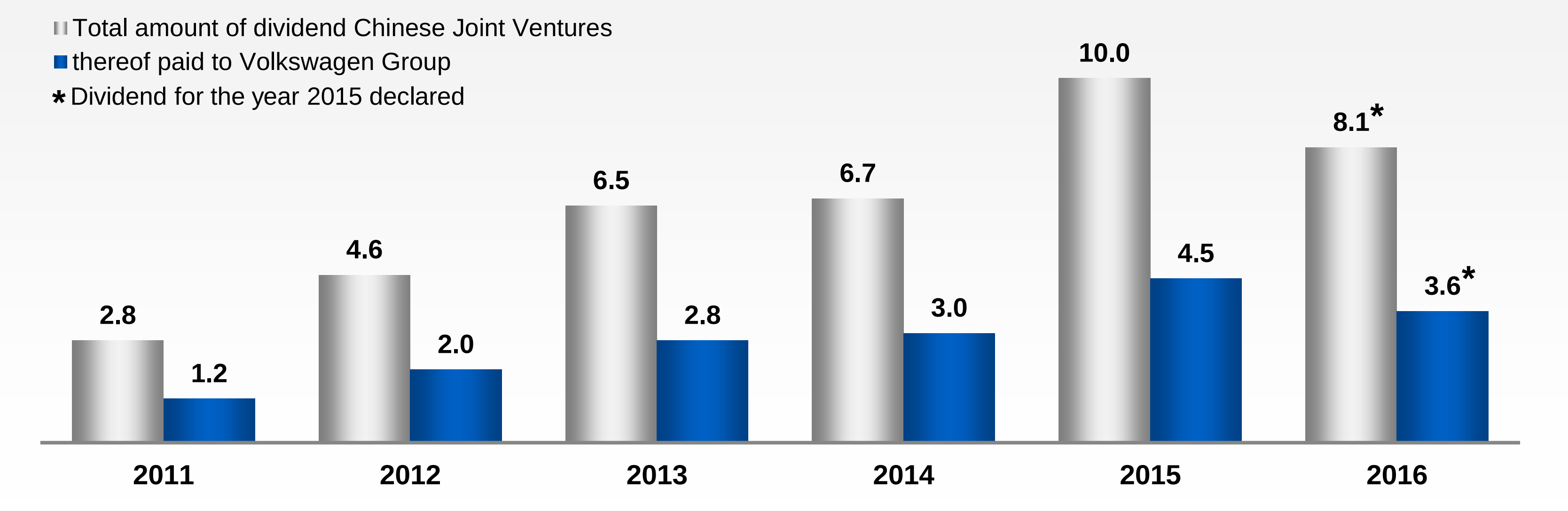
Strong volume and profit development of Volkswagen Group China

Volkswagen Group deliveries to customers and proportionate operating profit in China



Chinese Joint Ventures generate substantial, self-funded growth and at the same time robust dividend pay-out

Total amount of dividends paid out to Joint Venture partners (in € billion)



ŠKODA KODIAQ

Audi A6 L

C-TREK

Panamera 4S Executive

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