THE VW QUALITY OF LIFE.

Tomorrow's Growth Strategy





TODAY'S JOURNEY.

Understanding the Diesel Challenge

Overcoming the Diesel Challenge





Scaling Internationally





IMPLICATIONS OF THE VW DIESEL CHALLENGE.

New challenges are brought on by the Volkswagen defeat devices

The Diesel Challenge

Increased Costs

Invalid Value Proposition

Slowing Sales

More than €29B in lawsuits 11M cars with defect

Uncertainty about Diesel globally

Quality & Innovation under scrutiny

Weakening leadership position & momentum in sales

How do we minimize the total costs of the scandal in the short term?

Strategy 2025: What is the VW value proposition? What geographic strategies to achieve scalability and success of Strategy 2025?

Overarching cause: Philosophy of financial performance













PHILOSOPHY PARADIGM SHIFT.

A holistic perspective on success

"By 2018, we want to take our group to the very top of the global car industry"

Focus: Financial Performance

Sales Volume

Profitability

"We need to work together to make sure that Europe <u>remains innovative</u> and competitive as an industrial location in a <u>rapidly changing world</u>"

Focus: Quality of Life

Economic Prosperity

Longevity

Satisfaction

Trust:

Actions speak louder than words. Change internal culture to avoid any more discrepancies.











EXECUTIVE SUMMARY.



Overall Mandate

To be a leader in the quality of life by innovating in the automobile industry

FOCUS

RECOMMENDATION

EFFECT

Economic Prosperity Complying to sanctions, providing goodwill packages

Changing the product portfolio to non-diesel VW, shifting to sustainable operations

Take proactive measures
Reducing all costs by €1,239B

Satisfaction

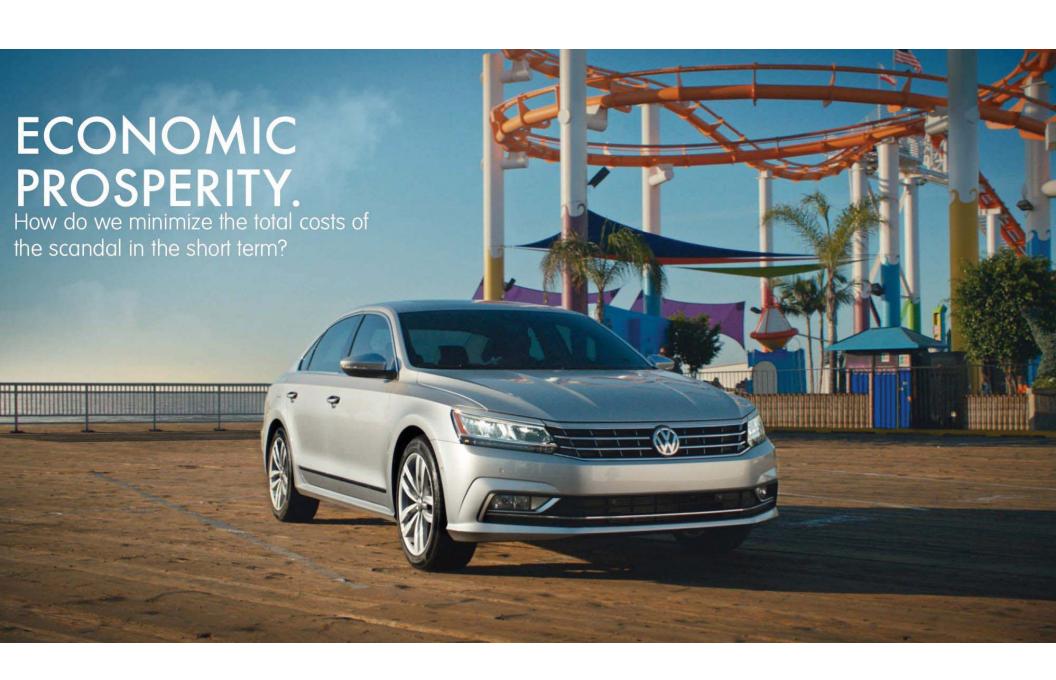
Strategy 2025: A new long term VW business model Creating a superior customer value proposition

Create new LT value proposition Increasing the CLV by 37%

Longevity

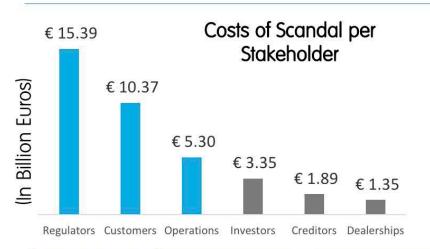
Successfully scaling strategy 2025 going global starting with China

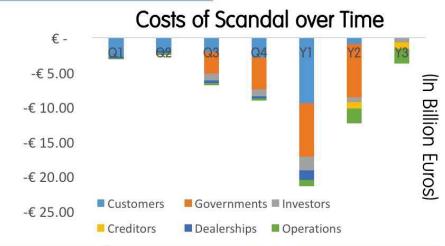
Establish dominance in China Reach market share of 25% by 2020



COST MITIGATION STRATEGY.

Doing the right thing





Stakeholders	Cost	Issue	Strategy
Regulators	€11.3B under Clean Air Act€4.0B for False Advertising	Compliance	Show good faith and have a proactive long term action plan
Customers	 €8.1B in Goodwill Package €495M in Software €1.7B in loss Resale Value 	Retention	Short-term conversion to other non-diesel VW products
Operations	• €3.9B in loss Diesel car sales	Positioning	Shift market position from diesel in USA











THE VW GOODWILL PACKAGE.

Customer retention strategy

Current Strategy	New Strategy	Impact	
Before EPA ruling	After EPA ruling	Looking forward	
\$500 USD Prepaid Loyalty Visa Card	\$3500 USD on VW Repurchase	Increase customer retention	
\$500 USD Dealership Card	Recall of the 550,000 vehicles	of Diesel VW drivers by 50% Strengthening VW green	
Free 24hrs Roadside Assistance	Green initiatives to invest in CO2 reduction	image	





THE GOVERNMENT LAWSUIT.

Comply to sanctions and show good faith

Current Concerns

Approach

Impact and outcome

Current US lawsuit: \$29B USD

Toyota case outcome:
Settlement 70% of initial
Government EV Incentives

Risk of new governmental lawsuits (EU)

EU countries:
Blame on the individuals not the company

Additional sanctions

VW diesel cars cannot be sold in the US:

Shift away from Diesel sales in the market

Lower lawsuit settlement by \$1B USD

Low risk of prolongation of governmental law suits

New US production of EV and hybrids











CHANGE PRODUCTION IN PORTFOLIO.

Shift operations to other green alternatives to appeal to same customers

Keep Original Diesel Value Proposition 2. Shift To E-Vehicle & Hybrid Production

3. Release New Portfolio Offering in USA

Low emission release with a competitively high mileage rate

Quality of product and design

Affordability of purchase







Generate a NPV of €215M by retaining 50% of diesel consumers through purchases of other VW products













PORTRAIT OF THE 2025 INDUSTRY.

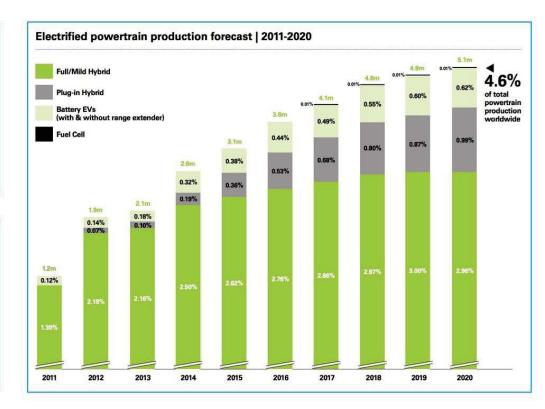
Understanding the needs of tomorrow

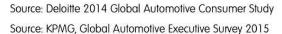
31%

Annual growth rate for e-mobility, 2025

Global

policies for new environmentally friendly solutions Consumers repurchase rate from 4 yrs to 6 yrs









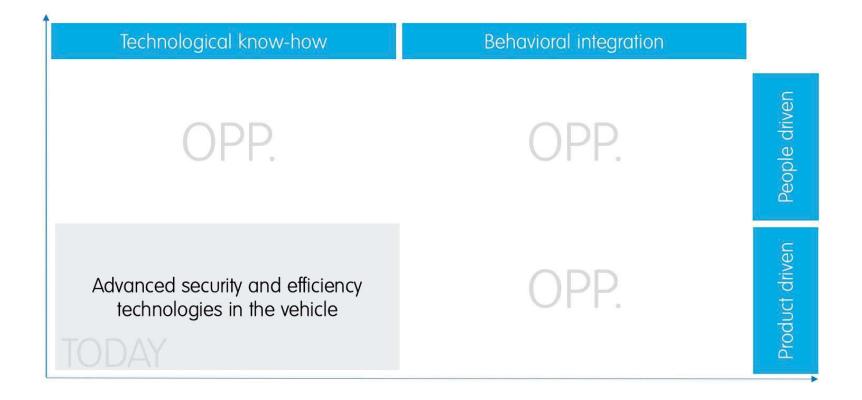






THE NEW VW BUSINESS MODEL.

Creating a superior customer value proposition













THE NEW VW BUSINESS MODEL.

Creating a superior customer value proposition

Using at once the vehicle and it's features to integrate VW into the consumer's lifestyle and adapt to habits

Behavioral integration

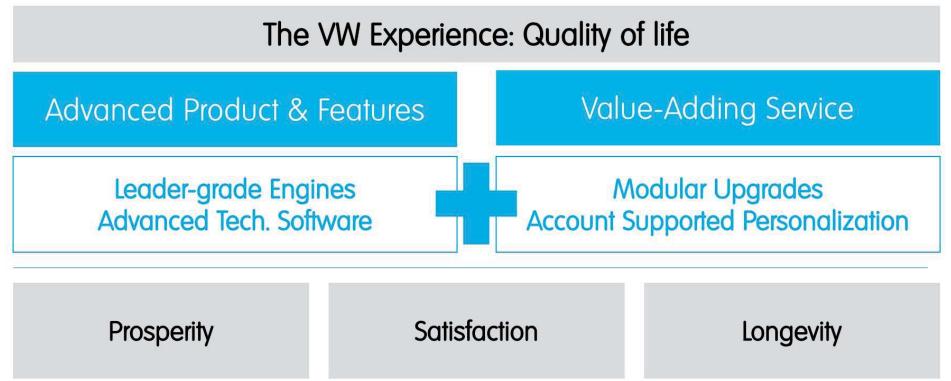
Using at once the vehicle and it's features to integrate VW and adapt to habits





STRATEGY 2025.

Quality of life through integrating VW in the consumers lifestyle













ADVANCED PRODUCT.

VW's leader-grade engines

Become a leader in EVs and hybrids by 2025

Expand Chattanooga plant to produce these new engines

R&D budget at 2.5% of annual sales for 10 yrs

Launch in select global markets in 5 years time

-

Operations

R&D

Timeline

Technical Requirements

Double battery efficiency: from 60miles to 120miles

Stationary storage: stocking the energy from the vehicles environment when inert

Maximize space by minimizing the required size of the battery pack











ADVANCED FEATURES.

Added value through software

Quality of Life through Responsive Technologies

Proactive technologies

Sensors

Push Notifications

VM learns and adapts to user

Integrated user experience between lifestyle and driving experience













VALUE-ADDING SERVICES.

Added value through enhanced technologies and hardware

1. Consumer Accounts

Program & teach VW software consumer preferences and lifestyle habits

Better understand the consumer and their specific needs
Track CLV and upgrade possibilities

2. Upgradable Vehicles

Modular design, easily upgradable

Plug-and-play units that can be changed and updated as years go by Integrate newer technologies in older models

Personalize approach and longer customer lifespan









STRATEGY 2025.

Quality of life through integrating VW in the consumers lifestyle

The VW Experience: Quality of life for the consumer

Advance product & features



Value-adding service

CLV increase by 37%

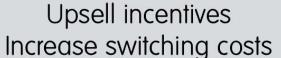


Modular upgrades CRM NPS of 7



Tailored consumer exp. Seamless integration

Increase retention by 5%















VOLKSWAGON GLOBAL OPPORTUNITIES.

VW will need to customize strategy to grow in each region

		Industry Regulations	VW Industry Market Share	Consumer Income Distribution	Supply Chain Support
China	\longrightarrow	Enter through JV's. Changing standards	14.5% of market Dominant leader	Rising middle class and first time car owners	8 factories in China
Western Europe	\longrightarrow	Strict emissions restrictions on CO2 and GHG	12.5% of market Dominant Leader	Large middle and upper class	Factories in 15 European countries
USA	\longrightarrow	Strict emissions restrictions on NOx and PM	2.5% of market Small Player	Large middle and upper class	2 factories in the USA

Source: Volkswagen Group Case Study





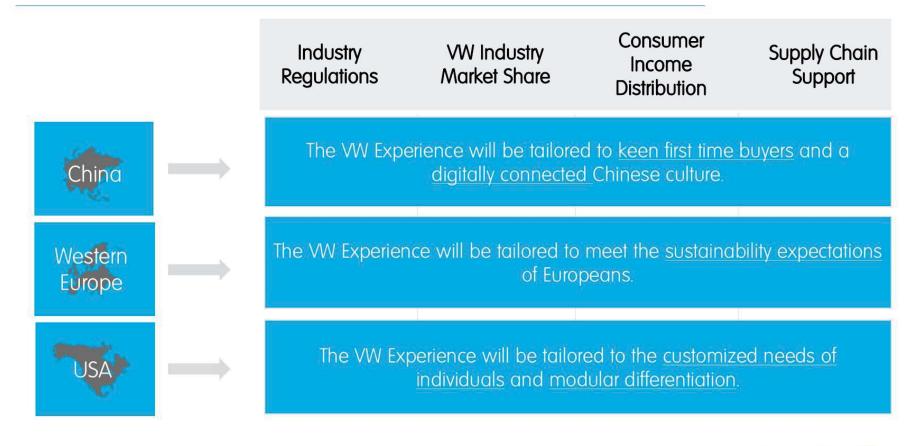






VOLKSWAGON GLOBAL OPPORTUNITIES.

To capture market trend opportunities, VW will need to customize strategy to grow in each region













GLOBAL PASSENGER CAR INDUSTRY.

Diverse OEM market trends are driving unique strategies in different regions



Diesel car sales are dominant (>50%) in European countries



Electric and hybrid vehicle sale growth is fluctuating

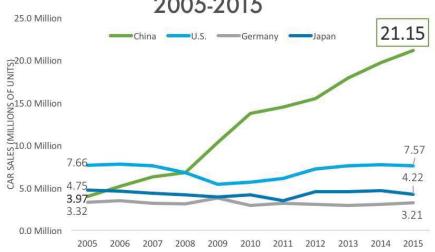


Electric and hybrid vehicles are becoming increasingly popular, overtaking US in sales

Volume of sales increasing globally led by China and emerging markets

Fierce competition in established markets keeping sales price stable





Opportunity for technological innovation in power trains and services in modular systems to differentiate OEM players











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Europe

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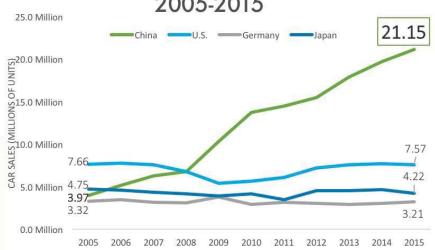


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VW IN CHINA BY 2025.

The VW Experience will be tailored to keen first time buyers and a digitally connected Chinese culture.

Consumer

Geographic:

Large city cores (Pilot: Shenzhen)

Demographic:

First time car buyer Middle class

Psychographic:

Family-Focused Simplicity In Usage Premium Brands

Product

Hybrid and electric cars
Volkswagen and other premium
brands

Service

After sales service Digital connectivity Added family value

The VW Experience

Brand Quality Assurance
Customer Communication



Increase market share from 15% to 25% by 2020 and generating a NPV of €6.12B.



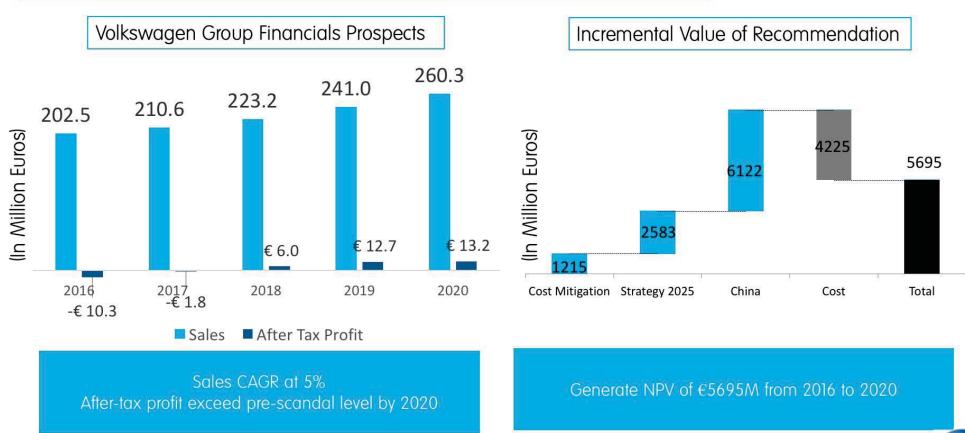








FINANCIAL OUTLOOK.





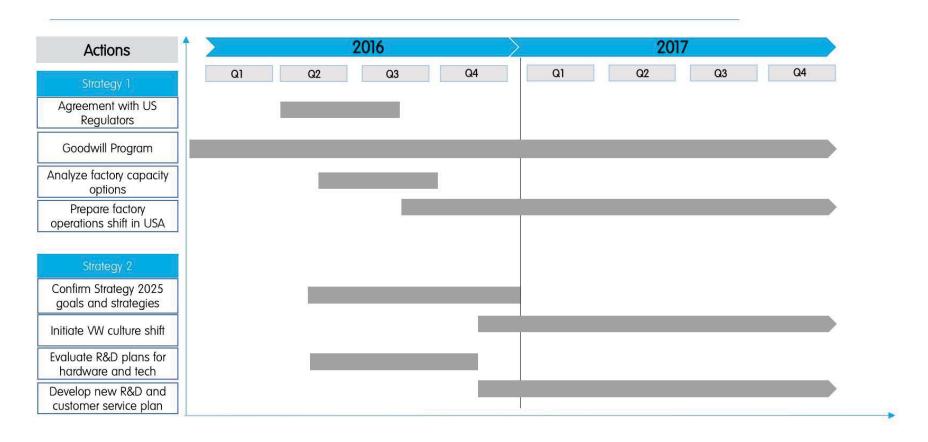








QUALITY OF LIFE: S.T. ACHIEVEMENTS.



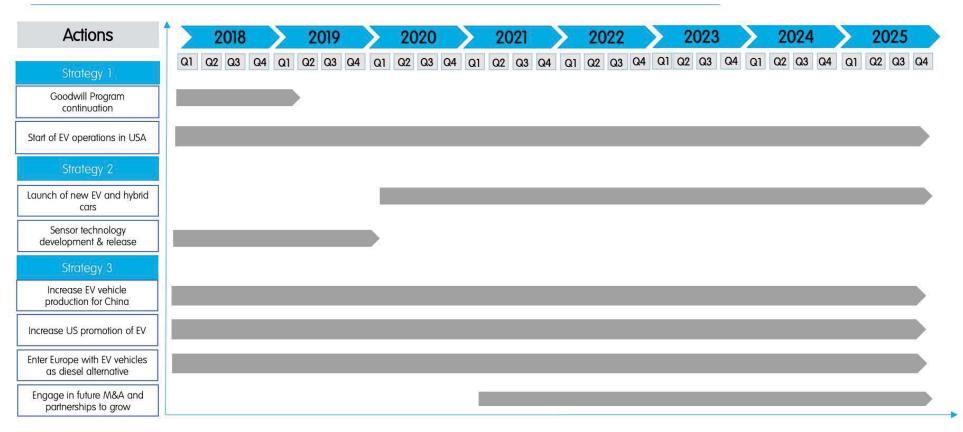








QUALITY OF LIFE: LT MILESTONES.







KEY TAKEAWAYS: QUALITY OF LIFE.

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Successfully scaling Strategy 2025 Going global starting with China Establish dominance in China Reach market share of 25%by 2020





<u>Presentation Slides</u> <u>Implications of scandal</u>

Executive summary

Cost mitigation

Change in portfolio

2025 industry landscape

2025 strategy

Product

Features

Services

Global opps

Global industry

Chinese market

<u>Financials</u> Implementation

Current Sit - Backups

Core competencies

Purchasing cycle

Consumer perceptions on

defeat

M&A growth

VW factories

Philosophy shift

VW passenger vehicles

<u>Satisfaction - Backups</u> EV sales - China & USA

Competitors EV market

Consumer account

Modular examples

Satisfaction risk & mit

China - Backups

China strategy

Successes in China

Chinese implementation

Chinese auto restrictions

Risk & mitigation

<u>Financials</u>

CLV analysis

Cost mitigation

Stategy 2025

China

Overall

Kpis

Alternative

VW TODAY

An innovative future for VW built core competencies

Core Competencies

How you've done it

German Engineering

Quality & Innovation

Unique technical know-how

A Strong Value Chain

MQB Manufacturing

Flexibility and Cost efficiency

A Global presence

Recognizable international brands: VW, Audi, Porsche





THE VW CUSTOMER EXPERIENCE.

Quality of life through the sustainable customer life journey



Providing a car that fits your need today

> The perfect car through technological innovations

The best VW employees: understanding the need

Providing sustainable and tailored solutions

The modular car

A longer life with the vehicle

A new vehicle with the same relationship

Listening and knowing your customer at all times

A holistic VW family account evolving with the consumer

In car experience: A proactive VW app - push notifications

VW Provides Value at every stage of the consumer life cycle.











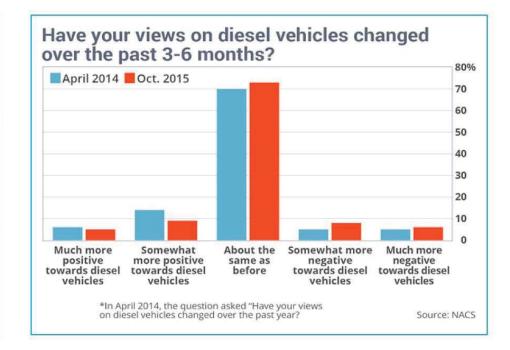
CONSUMER PERCEPTION ON SCANDAL

Diesel industry is lightly affected

86% of VW drivers are concerned about the environmental impact of their car

83% questioned the impact on its resale value

73% feared the performance of their vehicle would be affected













SATISFACTION - RISK & MITIGATION

Playing our cards right to anticipate what could go wrong

Risk

Fear for security towards the smart software

Modular to cannibalize sales of new automobiles

Competitor Pressure

Encrypted Data – Activated only when app is within range
Use of biometrics
Possibility to wipe data at a distance

New cars ownership, 2006: 4.3 years New cars ownership, 2006: 6.5 years Thus, new possibility to make money during those 2.2 years.

> Strong market share Years of experience Differentiate through the VW experience



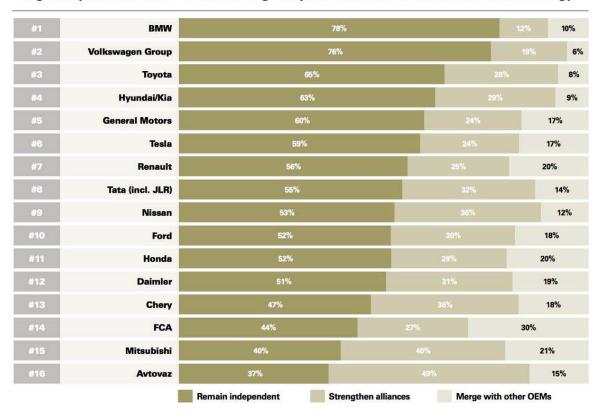






GROWING THROUGH M&As

For globally established OEMs, remaining independent is the number one survival strategy



Next 5 years: Current value chain & alliances enough for VW to grow

Note: Percentages may not add up to 100 due to rounding. Sorted descending by % remain independent Source: KPMG's Global Automotive Executive Survey 2015 Source: KPMG, Global Automotive Executive Survey 2015





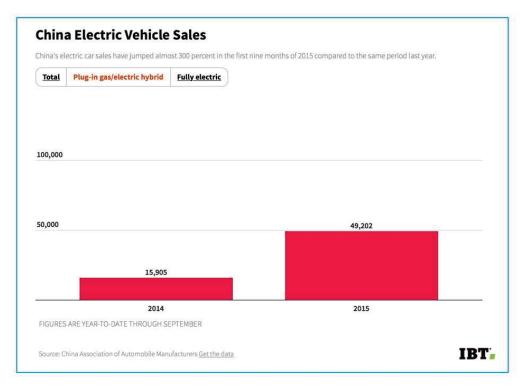


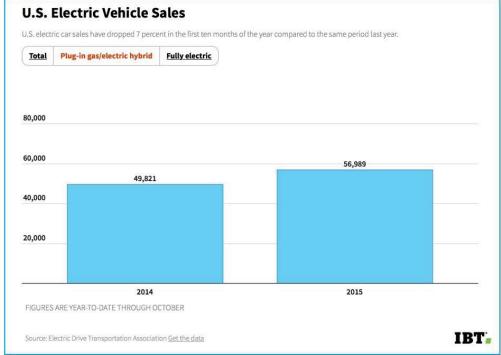




EV Sales

China to grow much faster than the US











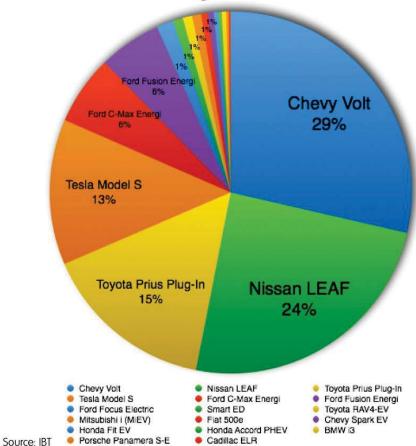




COMPETITORS IN EV INDUSTRY.

Race for success in tomorrow's biggest market

Market Share of Plug-In Vehicles to Date in USA



Competitor	MS	Advancements
Tesla	13%	215 miles autonomous
Nissan	24%	Value
Toyota	15%	Value
Chevrolet	29%	Driveability











VW CONSUMER OF TOMORROW.

Understanding the drivers of gen Y

Industry Standards:

Fuel Efficiency Cost Safety Drivability

Purchase Expectations:

Connectivity
Comfort & Design
Customization

Previous Gen Commuter:







Utility

Low Cost

Convenience

Gen Y Commuter:







Low Cost

Convenience

Love to Drive











SATISFACTION - CONSUMER ACCOUNTS.

Using data to provide top experience

Data Collected	Geographic routes Traffic patterns Favorite places
Data Used	Internally ONLY Understanding the consumer's preferences Provide insightful assistance
Opt-in/out	Consumer has the choice to activate or not the software





MODULAR EXAMPLES



1. Security Features

2. Tech. Features

3. Navigation Units

4. Climate Control



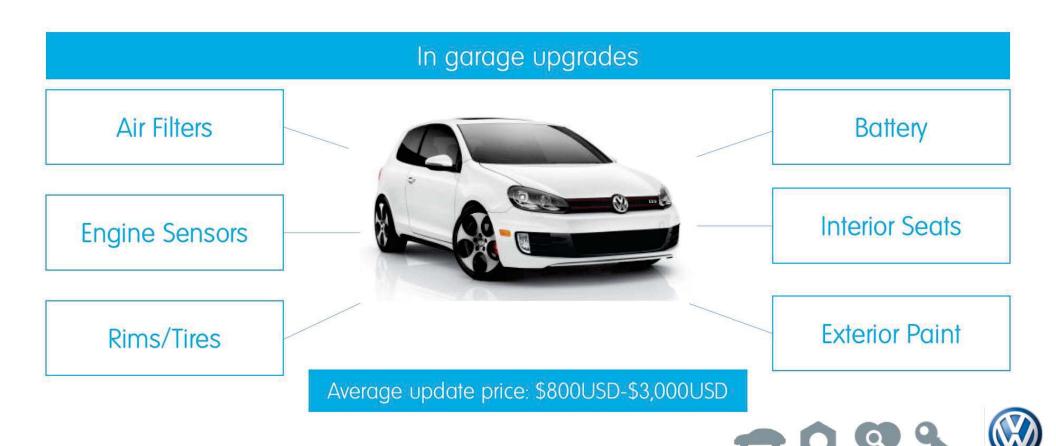








MODULAR CUSTOMIZATION Upgrades during the usage and ownership



QUALITY OF LIFE OVERALL KPI's

Quantitative

- Minimization of Lawsuit Costs
- Time to Firm Profitability
- Increase In Customer Lifetime Value
- Increase in Market Share
- Increase In Net Promoter Score

Qualitative

- Brand Perception
- Customer Loyalty
- Customer Service





THE CHINA STRATEGY TACTICS

Our Strategy

Trend We Address

Impact

EV and Hybrid **Product Expansion**

Growth in EV and Hybrid Sales: China #1 sales of EV and Hybrids for VW, tightening in emission regulations

Increase In VW FV and Hybrid Product Sales

Modular Service Expansion

After-Sales Market Growth: Projected 20% growth in revenue until 2020

Increase In After-Sales Service Revenue, Increased **Customer Loyalty**

Account Application Creation

Simplicity of Knowledge Communication: Digital channels are now primary source of communication for consumers

Increase In Customer Communication, Increase In Proactive Notification

Source: McKinsey: The Road to 2020 and Beyond











SUCCESS WITHIN CHINESE REGULATION

- Extended JV with First Auto Works for 25 more years in 2015
- Higher stake approved by government from 2016 to 2041
- JV with SAIC moving in to Xin Jiang Province
- Increasing operations in Western China where automobile density is low





FUTURE CHINESE IMPLEMENTATION



Reduce risk of operation reduction by moving towards cities with no automobile restrictions

Move West towards cities with low automobile density to grow size of market

Move towards cities with a growing middle class and strong GDP growth

Source: Volkswagen Investor Report 2013











CHINESE AUTO RESTRICTIONS

Restrictive policies for new car sales in additional eight tier-1 and tier-2 cities



Chinese local governments are imposing sanctions on the number of automobiles on the road

Capping the number of licenses allows less access to potential consumers

Source: Volkswagen Investor Report 2013











VW GLOBAL FACTORY LOCATIONS

Global 61 production locations and factories in 150 countries



Source: Volkswagen Website

- > Amphur Pluakdaeng Rayong
- > Aurangabad
- > Bang Pakong
- > Busan
- > Changchun
- > Changzhou
- > Chengdu
- > Dalian
- > Foshan
- > Kuala Lumpur
- > Nanjing
- > Ningbo
- > Narasapura
- > Ping Chen City
- > Pithampur

China:

29 vehicle production and component product locations to leverage for expansion and production













RISK AND MITIGATION: CHINESE EXPANSION

Risks

- #1. Expansion opportunities in China are limited (due to regulation, decrease in market growth, etc)
- #2. Competing technologies such as the electric motorbike capture sales
- #3. OEM auto Chinese competition become stronger in domestic market

Mitigations

- #1. Expand our Quality of Life offerings in other countries with high growth in sales (Czech, Poland)
- #2. Only 34% of the Chinese population currently own cars, and there is a 50% purchase intention for an EV, and willingness to spend
- #3. Chinese brands are perceived as lower in quality by domestic consumers compared to foreign brands





WHY FOCUS ON PASSENGER CARS?

- Most of our business revenue is obtained from passenger sales
- Our growth is in double digits in passenger vehicles in emerging markets in Asia and Eastern Europe
- Bus and commercial vehicle sales have been heavily decreasing in previously demanding markets
- Consumer demand still greatly exists for passenger vehicle purchases









Pessimistic

Car life cycle	YO	Y1	Y2	Y3	Y4	Y5	Y6	TV
Profit from Car Sale	\$3,066							¢2.772
Profit from upgrades				\$240	\$240			\$2,773
NPV for 1 car Life cycle	\$3,466							
CLTV	\$5,387							

Optimistic

Car life cycle	YO	Y1	Y2	Y3	Y4	Y5	Y6	TV
Profit from Car Sale	\$3,066							¢4.044
Profit from upgrades			\$240	\$240		\$240		\$4,944
NPV for 1 car Life cycle	\$3,672							
CLTV	\$7,098							

\$1,060 - \$2,300 increase per customer



Average increase of 37% in the CLTV

Assumptions	
Current Average Car price	\$39,500
Future average price	\$42,000
Revenue from one upgrade	\$2,000
Profit margin on sale of car	7.30%
Profit margin from on upgrade	12%
Current retention ratio	50%
Discount rate	5.38%
Current CLTV	
Updates (Optimistic)	0
Updates (Pessimistic)	2

	Pessimistic	Optimisti			
Average # of VW purchases	1.8	2.5			
Average # of upgrades	2	3			

COST MIGITATION FINANCIALS.

Decreasing realized losses

Operations Savings		2015		2016	2017		2018	
US Diesel Sales	62400			31200	31200			
US Average Car Price	\$	39,000.00	\$	39,000.00	\$ 39,000.00	\$	39,000.00	
VW Sales	\$	2,434	\$	1,217	\$ 1,217	\$	1,217	
Profit Margin		7%		7%	7%		7%	
EBIT	\$	165	\$	83	\$ 83	\$	83	
Tax	\$	50	\$	25	\$ 25	\$	25	
Depreciation	\$	50	\$	50	\$ 50	\$	50	
Change in NWC	\$	14	\$	14	\$ 14	\$	14	
Capex	\$	10	\$	10	\$ 10	\$	10	
FCF Recommend	\$	142	\$	84	\$ 84	\$	84	
FCF Base	\$	142	\$	-	\$ 	\$	3 55 2	
Increment FCF	\$.	\$	84	\$ 84	\$	84	
Discounted CF			\$	84	\$ 80	\$	76	
WACC		5.28%						
NPV (USD)	\$	239						
NPV (EURO)	€	215						

€1B in Lawsuit Settlement Reduction from estimated €15.3B





STRATEGY 2025 FINANCIALS.

Increasing Customer Lifetime Value

Sales in 2015 € 202B

Addressable Portfolio 30% or €60B

Adoption Rate 25% or €15B

CLV Achievable **Increase** 17%

NPV € 2.58B from 2016 to 2020









CHINA STRATEGY FINANCIALS.

Achieve 25% market share by 2020

China Strategy		2015	1	2016		2017		2018		2019			2020
China Market (Units)		24,855,172		26,346,483		27,927,272		29,602,908		31,379,083		33,2	61,827
Growth Rate		6%		6%		6%		6%		6%			6%
VW Market Share		15%		17%		19%		21%		23%			25%
VW Chinese Car Sales Units		3,728,275		4,478,902		5,306,181		6,216,610		7,217,188		8,3	15,456
Average Car Price	€		€	18,000		18,000	€	18,000		18,000			8,000
VW Sales (Value)	€	67,108	€	80,620	€	95,511	€	111,898	€	129,909	€	149	9,678
Profit Margin		7%		7%		7%		7%		7%			7%
EBIT	€	4,898	€	5,885	€	6,972	€	8,168	€	9,483	€](0,926
Tax	€	979	€	1,177	€	1,394	€	1,633	€	1,896	€		2,185
Depreciation	€	3,362	€	4,039	€	4,785	€	5,607	€	6,509	€		7,499
Change in NWC	€	1,007	€	1,209	€	1,433	€	1,678	€	1,949	€		2,245
Capex	€	3,290	€	3,952	€	4,682	€	5,485	€	6,368	€		7,337
FCF Recommend	€	2,985	€	3,586	€	4,249	€	4,978	€	5,779	€		6,658
FCF Base	\$	2,985	\$	3,164	\$	3,354	\$	3,556	\$	3,769	\$		3,995
Increment FCF	€ -		€	422	€	894	€	1,422	€	2,010	€		2,663
Discounted CF	€ -		€	400	€	807	€	1,218	€	1,636	€		2,059
WACC		5.28%											
NPV	€	6,122											

STRATEGY 2025 ALTERNATIVES

Considerations

Collaborative Consumption

Main counter argument

Many operational difficulties Very targeted value – VW appeals to a large demographic

Self Driving cars

Not scalable enough for desired scalability Not relevant enough for differentiation in our value proposition

Continuing Diesel

Long term trends are a threat to this industry Current perception of the VW diesel vehicle after the scandal









