



Continental Heading into the Future of E-Mobility

Jörg Grotendorst
Hanover, December 15, 2011

We Shape the Megatrends in the Automotive Industry

Safety, Environment, Information, Affordable Cars

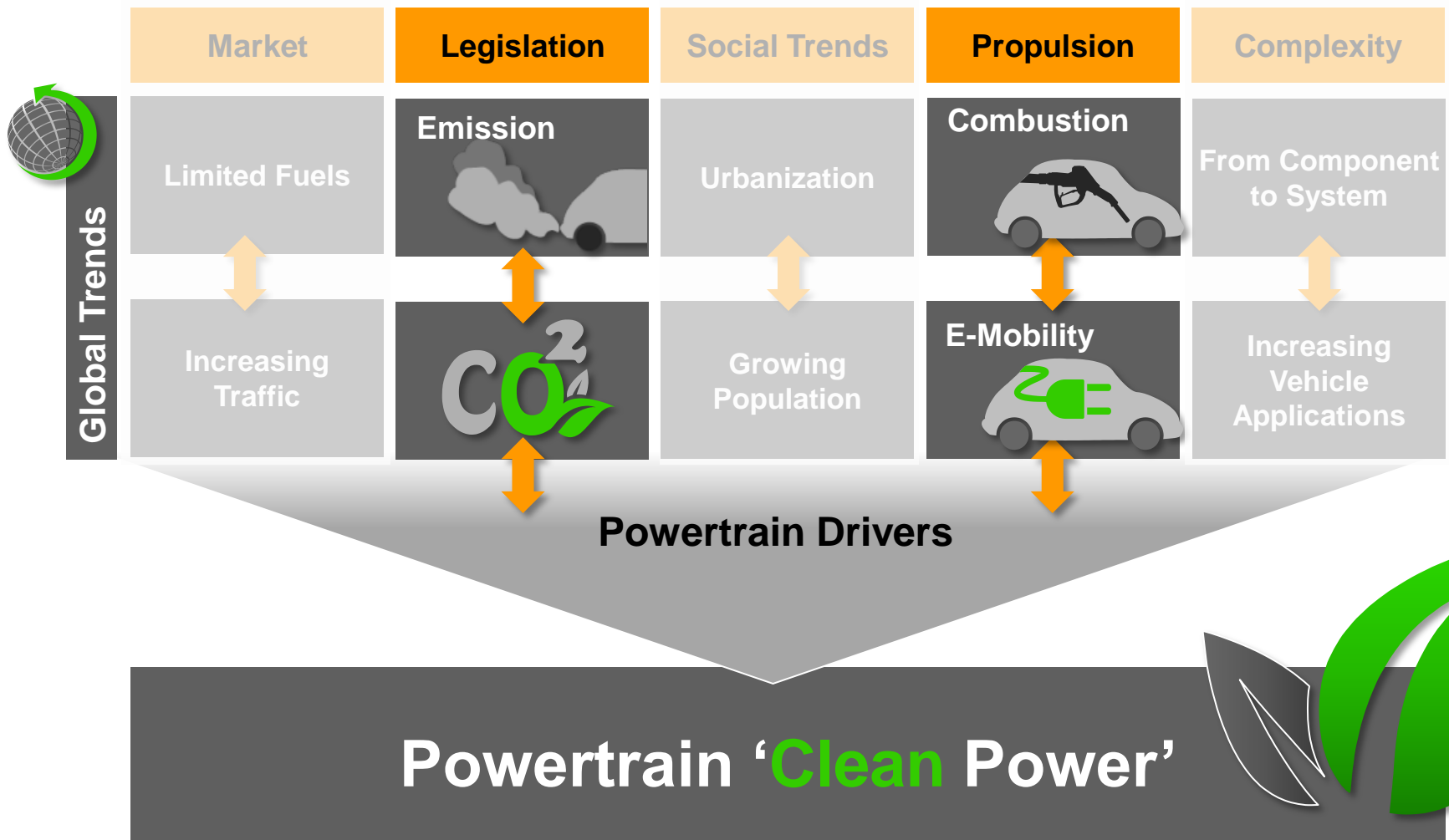


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Powertrain 'Clean Power'

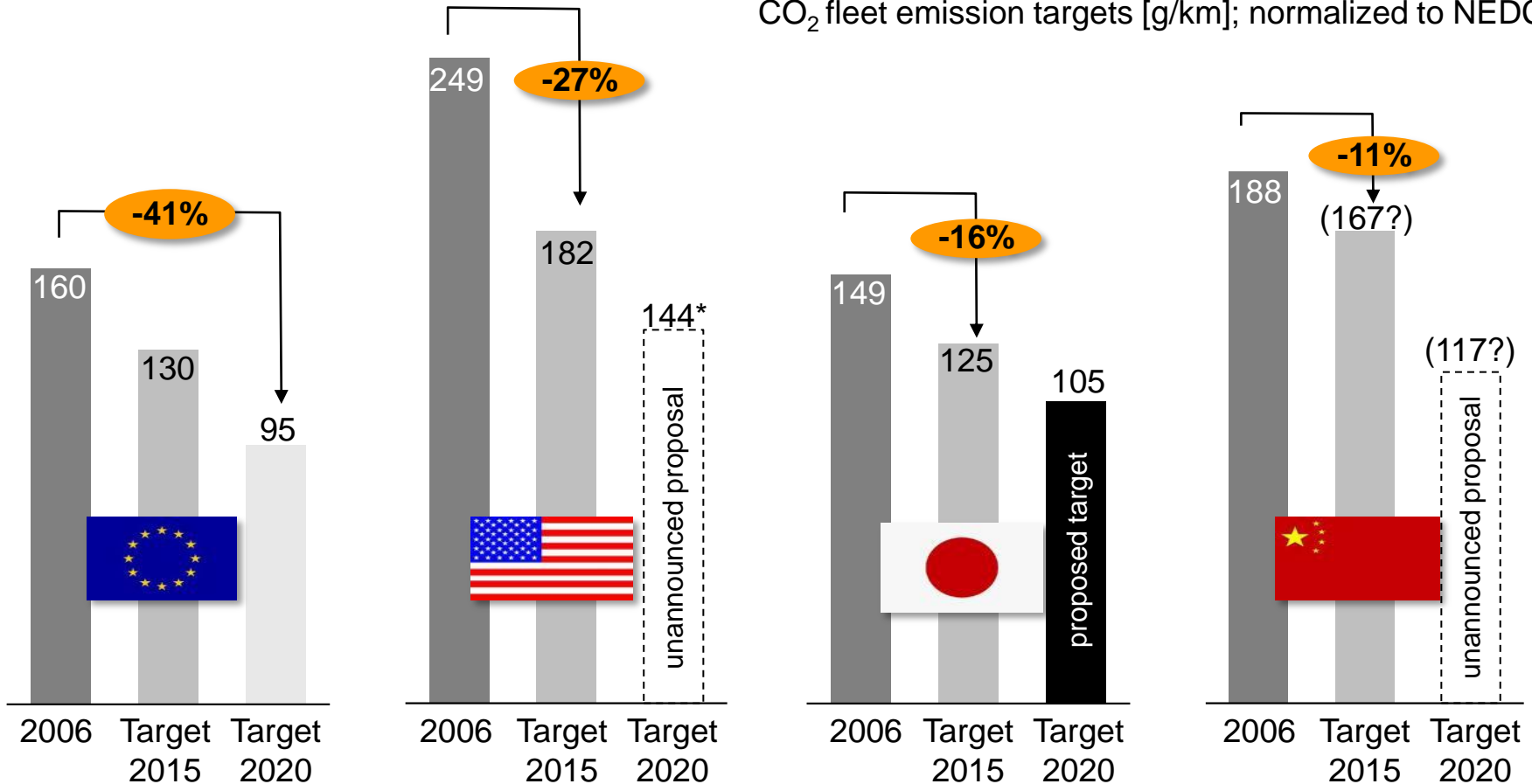
Global Trends for Continental Powertrain



Legislation

Focus on CO₂ and Emission Reduction

Global vehicle requirements for CO₂ reduction
CO₂ fleet emission targets [g/km]; normalized to NEDC

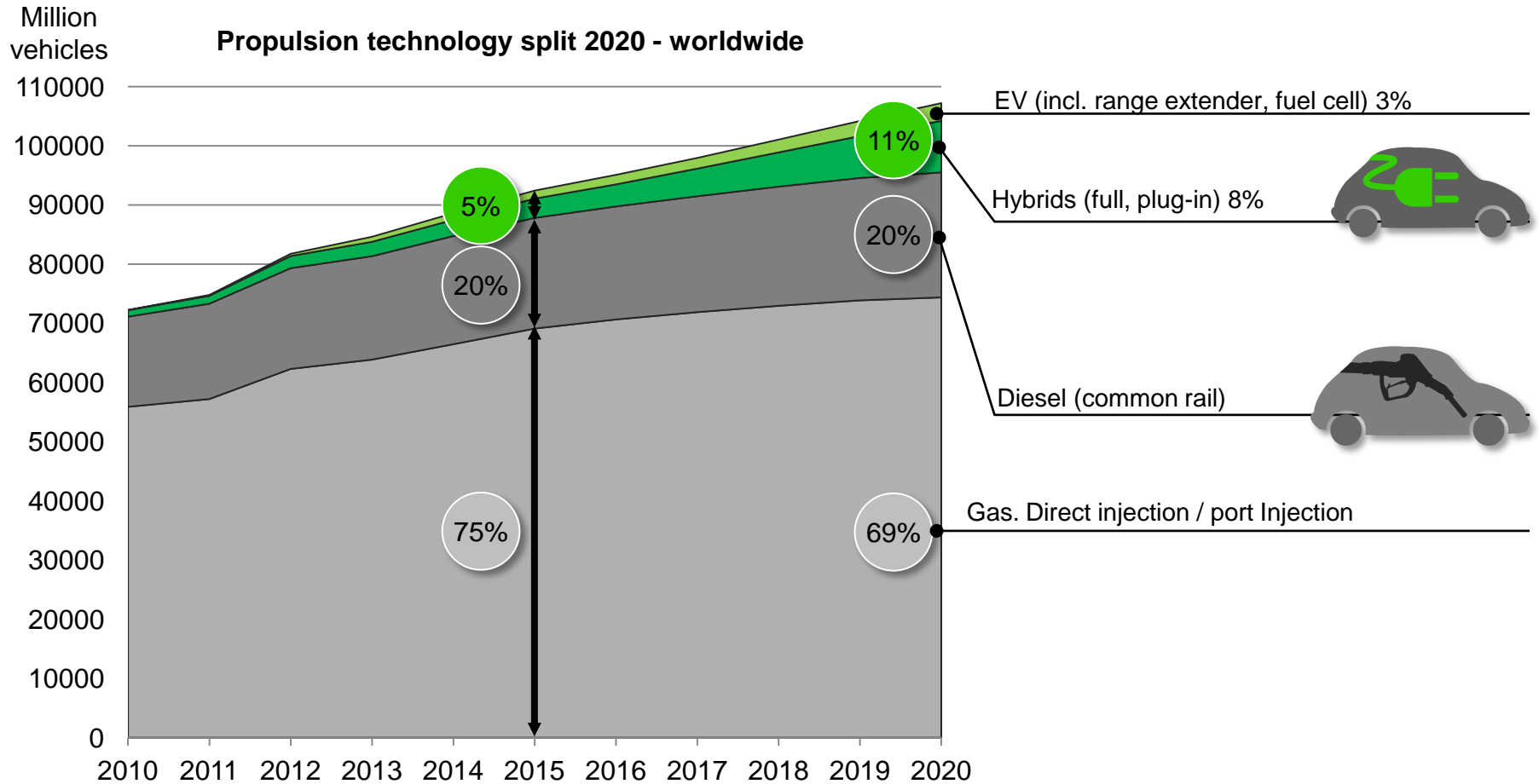


Source: International Council on Clean Transportation, Global Passenger Vehicle Policy Update No. 13 (Aug. 19, 2011)

* Interpolated from 2025 proposal

Propulsion

Combustion Engines Dominant, Clear Trend towards Electrification



Source: Continental Automotive view based on Key Account Organisation, Powertrain Business Units and PS&T under consideration of external sources; Status May 2011

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Challenges for E-Mobility Today

Focus on Technical and Economical Aspects

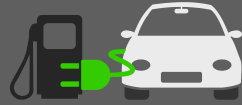
Technical Challenges



Energy storage



Driving range



Infrastructure

Economical Challenges

Cost

Subsidy business for OEM

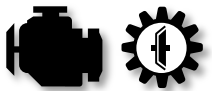


Price

High end consumer prices



Battery costs are expected to drop by almost 60% in the next 10 years



Combustion engines remain the most affordable solution for the next 20 years



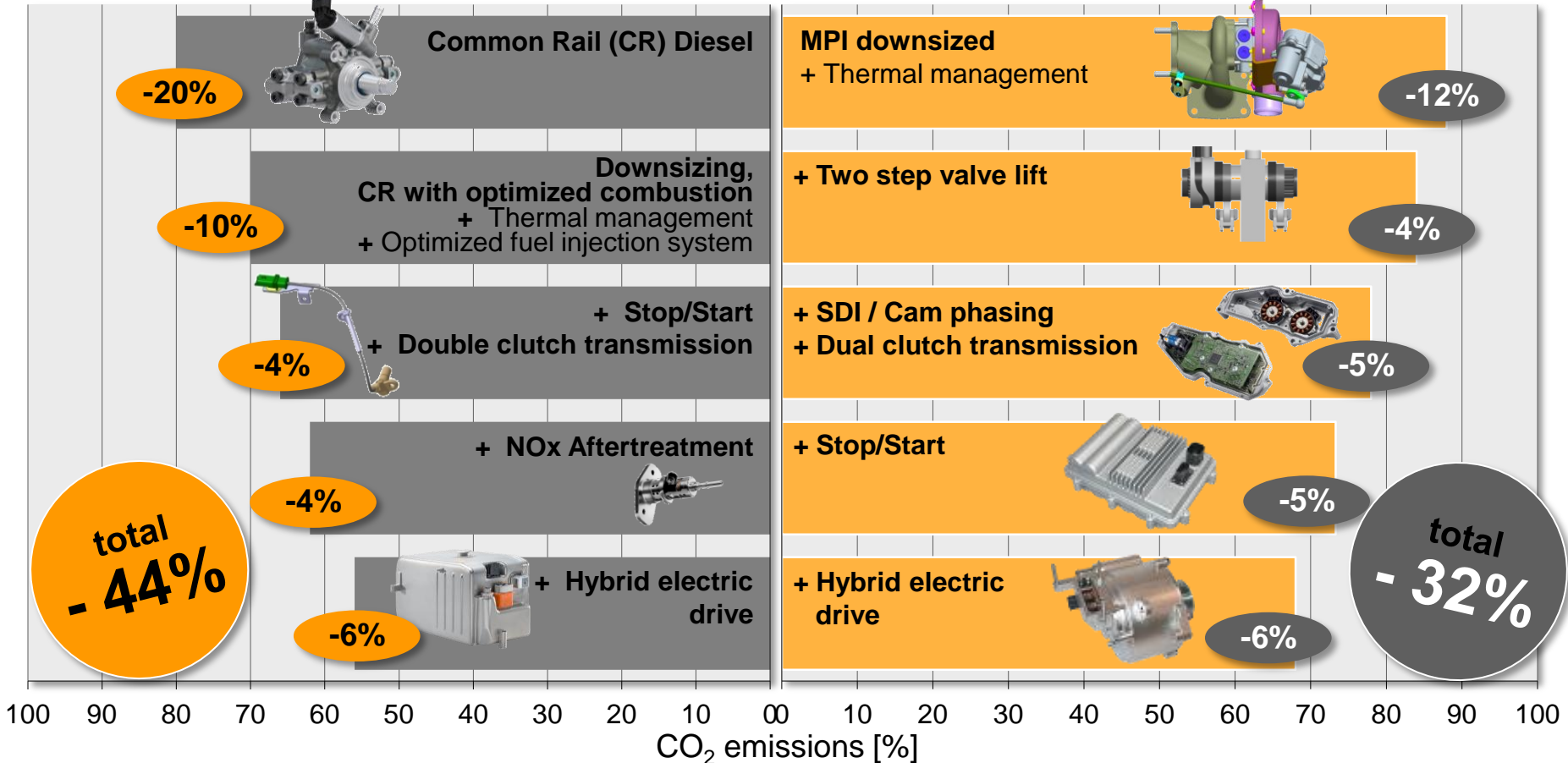
Alternative fuels may replace fossil fuels to make internal combustion CO₂ neutral

Full Potential of Combustion Engine Still to Be Realized

Key Technologies for Reduction of CO₂ Emissions in NEDC

Diesel engine

Naturally-aspirated gasoline engine



Reference: 1.4 t vehicle with 4-cyl. 1.6 l gasoline MPI naturally-aspirated (155 g CO₂/km = 100%)

Safe, Efficient and Comfortable E-Mobility: Extensive Continental Portfolio (product selection)

Power electronic 2nd generation

Separately excited synchronous motor

Smart charging app
(Charge level can be seen at all times in Smartphone)

Electro-hydraulic brake MK C1

Lithium-ion battery

Conti.eContact

evSAT Sensor (Switching off of high-voltage battery in the event of an accident)

Global network of some **1,600 specialists**

2009-2013 some **90 series projects** at **17 manufacturers** worldwide

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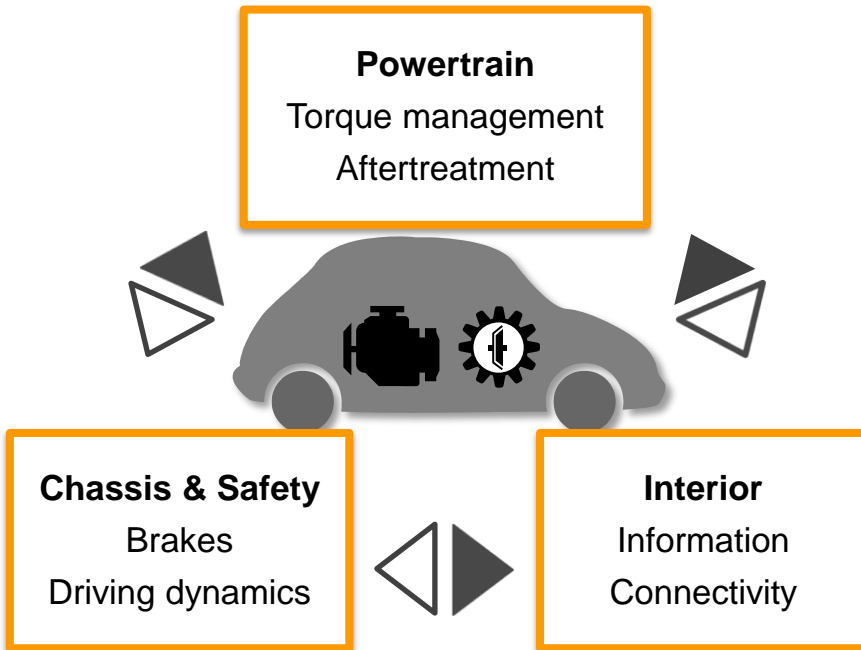


Outlook

Comprehensive Energy Management Thanks to System Integration

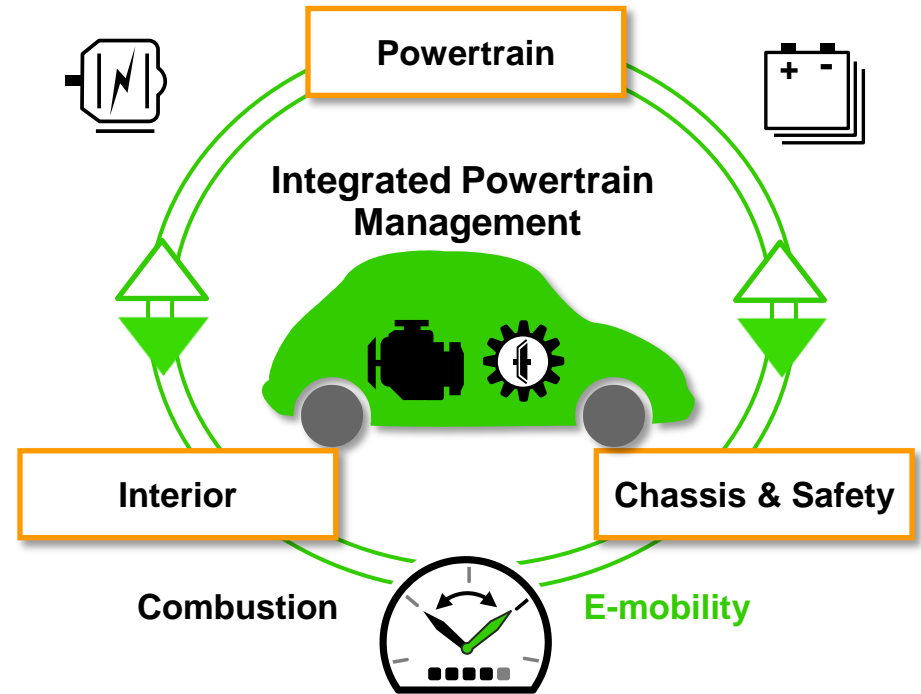
Today

Dedicated interfaces



Tomorrow

Overall system integration & optimization



Energy Management

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Thank you for your attention!

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