

VOLKSWAGEN

AKTIENGESELLSCHAFT



Digital Car & Services

Christian Senger

Mitglied des Vorstands Digital Car & Service der Marke Volkswagen PKW

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AKTIENGESELLSCHAFT

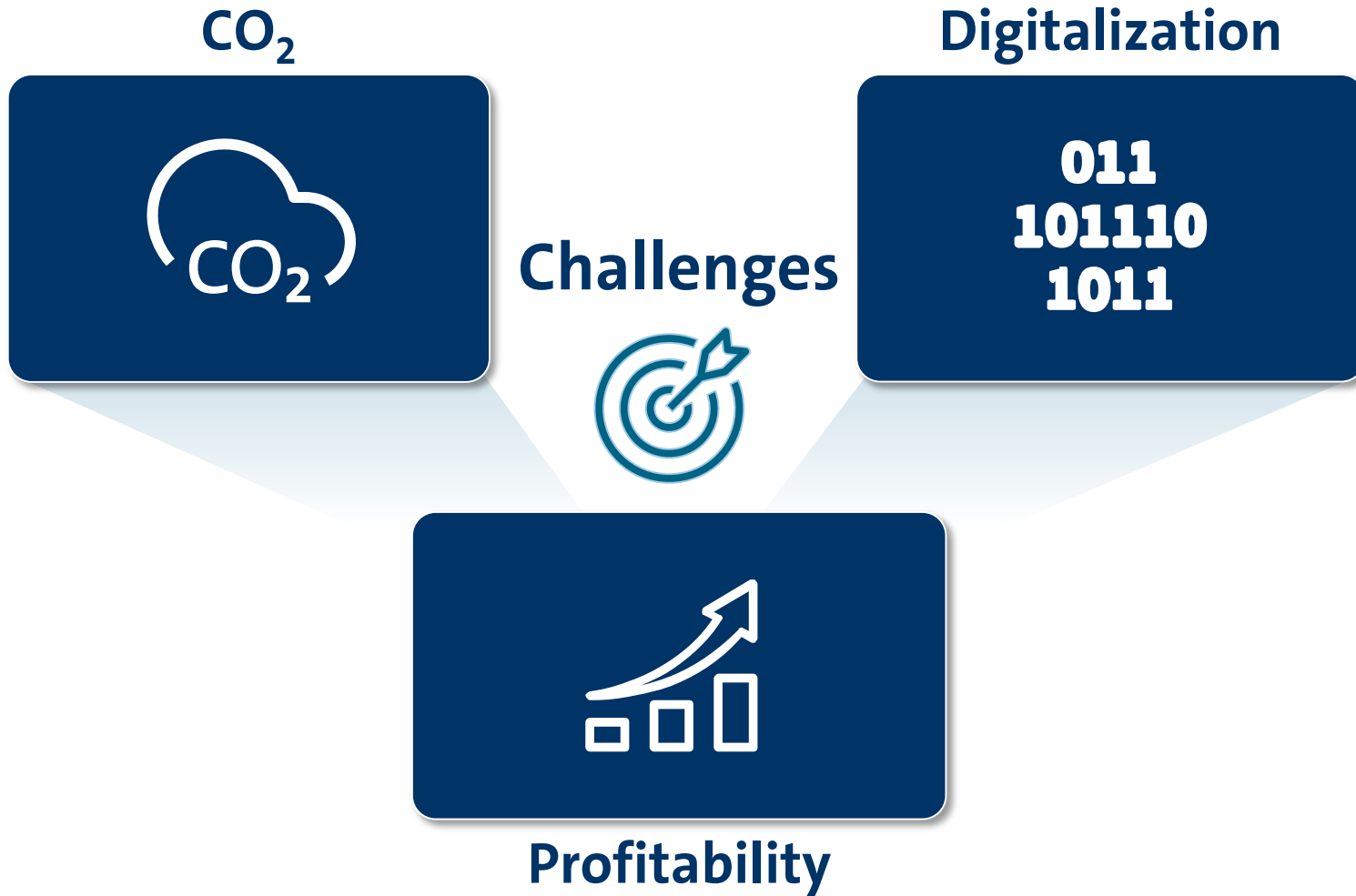


Platform strategy is key to technology leadership and scalability



Volkswagen is the pioneer for platform development

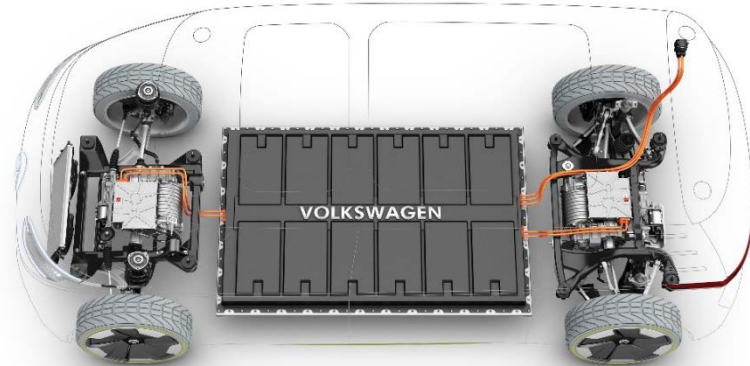
Challenges for the Automotive Industry



Challenges for the Automotive Industry



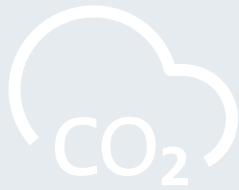
Continuing successful platform strategy with the MEB





Challenges for the Automotive Industry

CO₂



Challenges



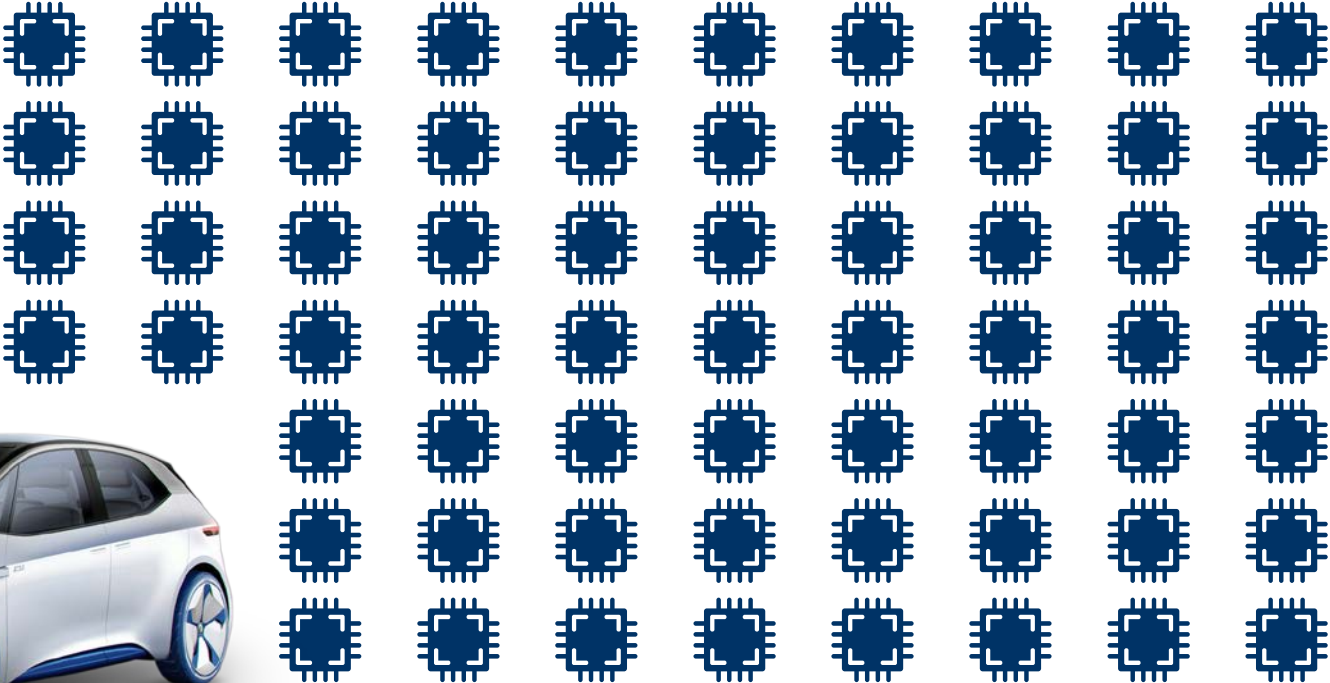
Digitalization

011
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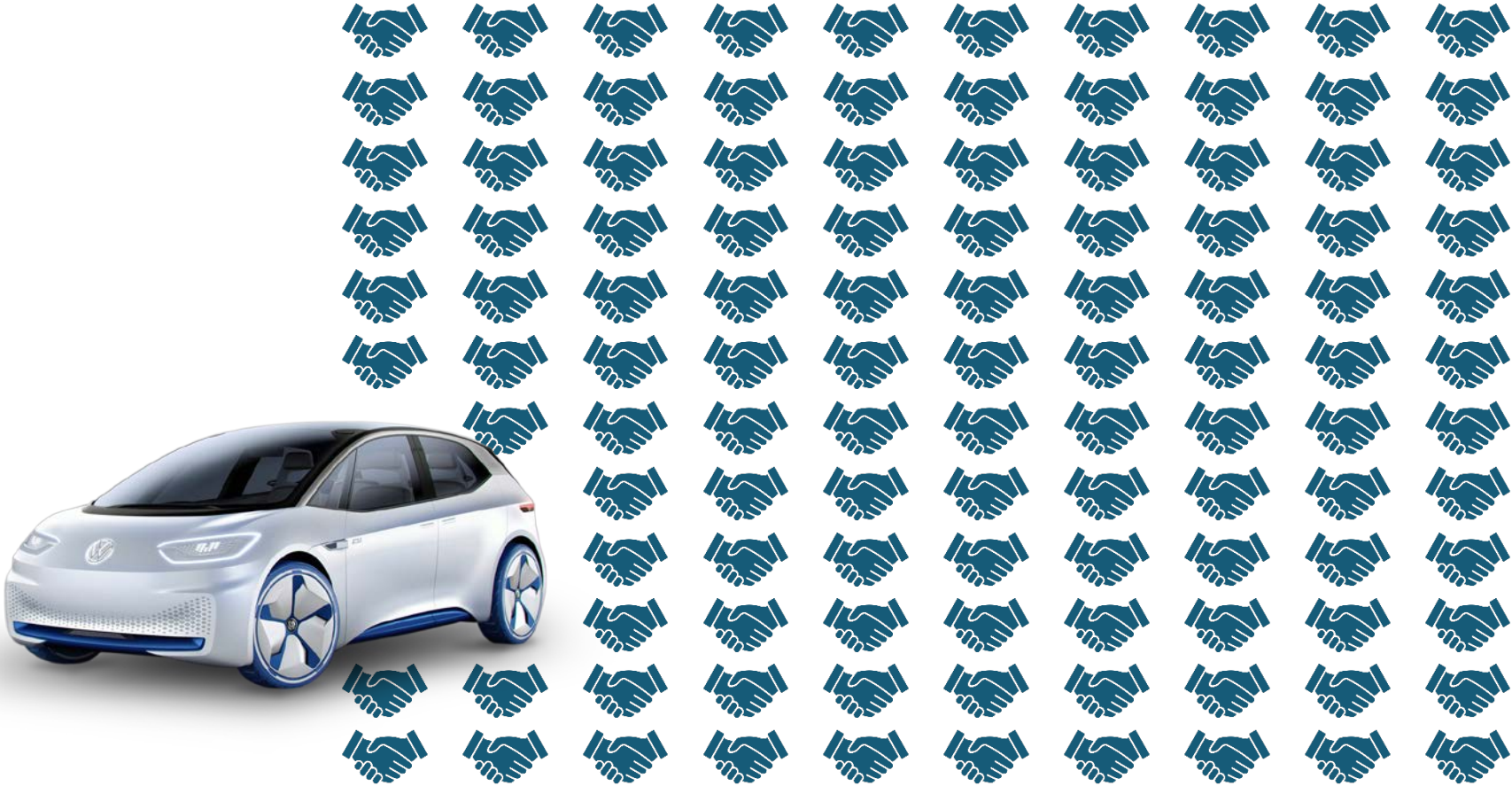


Profitability

70 ECU's per car...



...~ 200 SW-Suppliers...



...Countless connections between ECU's and SW-Functions

Smartphone Architecture



Apps



Platform



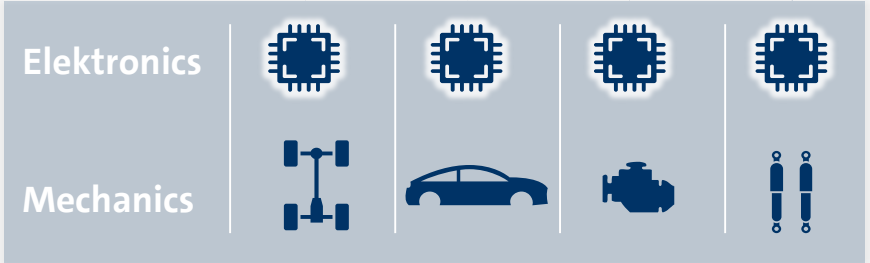
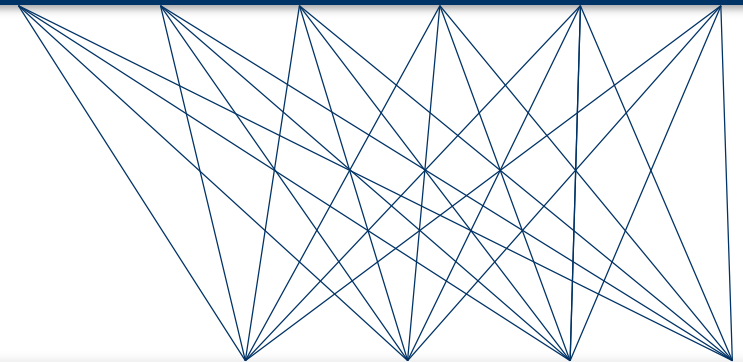
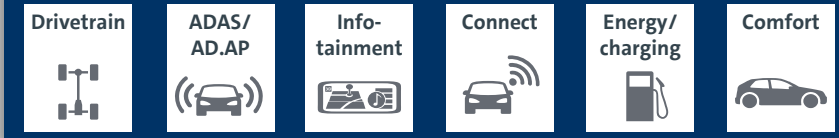
Hardware



Vehicle Architecture



Mobility Services



Solution approach: Following the IT industry and deploy functions on a Group-wide platform

Smartphone Architecture



Apps



Platform

iOS App Store SDK Framework



Hardware

Vehicle Architecture



Mobility Services

Drivetrain 	ADAS/AD.AP 	Info-tainment 	Connect 	Energy/charging 	Comfort
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Vehicle Software Platform & One Digital Platform

Volkswagen „VW.os“

Volkswagen Automotive Cloud

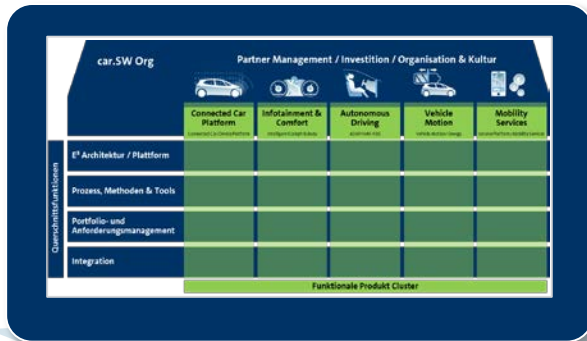


Elektronics

Mechanics

Is „the old industry“ able to transform? We don't care that everybody says, that is impossible. We just do. And we have a plan.

Agile Organization



Consolidation

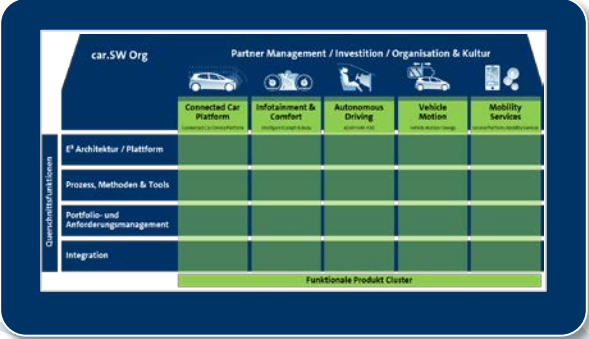


Staffing & Cooperations



Key Levers for car.SW Org.

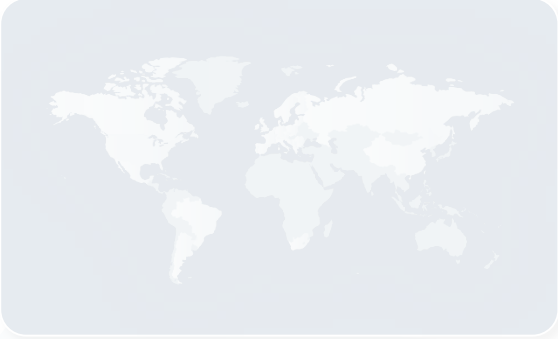
Agile Organization



Consolidation



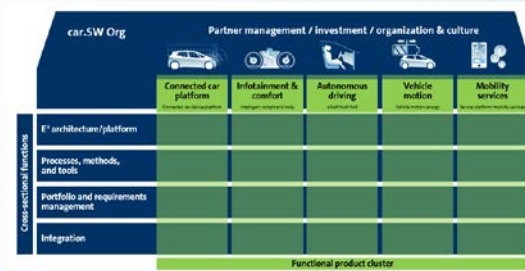
Staffing & Cooperations



Key Levers for car.SW Org.

car.SW Org. as an own “software brand” within the VW Group

car.SW Org.



Timing



First delivery date 2020
Full software stack 2023

Financing



SW licenses for veh.

Market share



10 million new vehicles/year

Staff



>10,000 software developers

Contracting



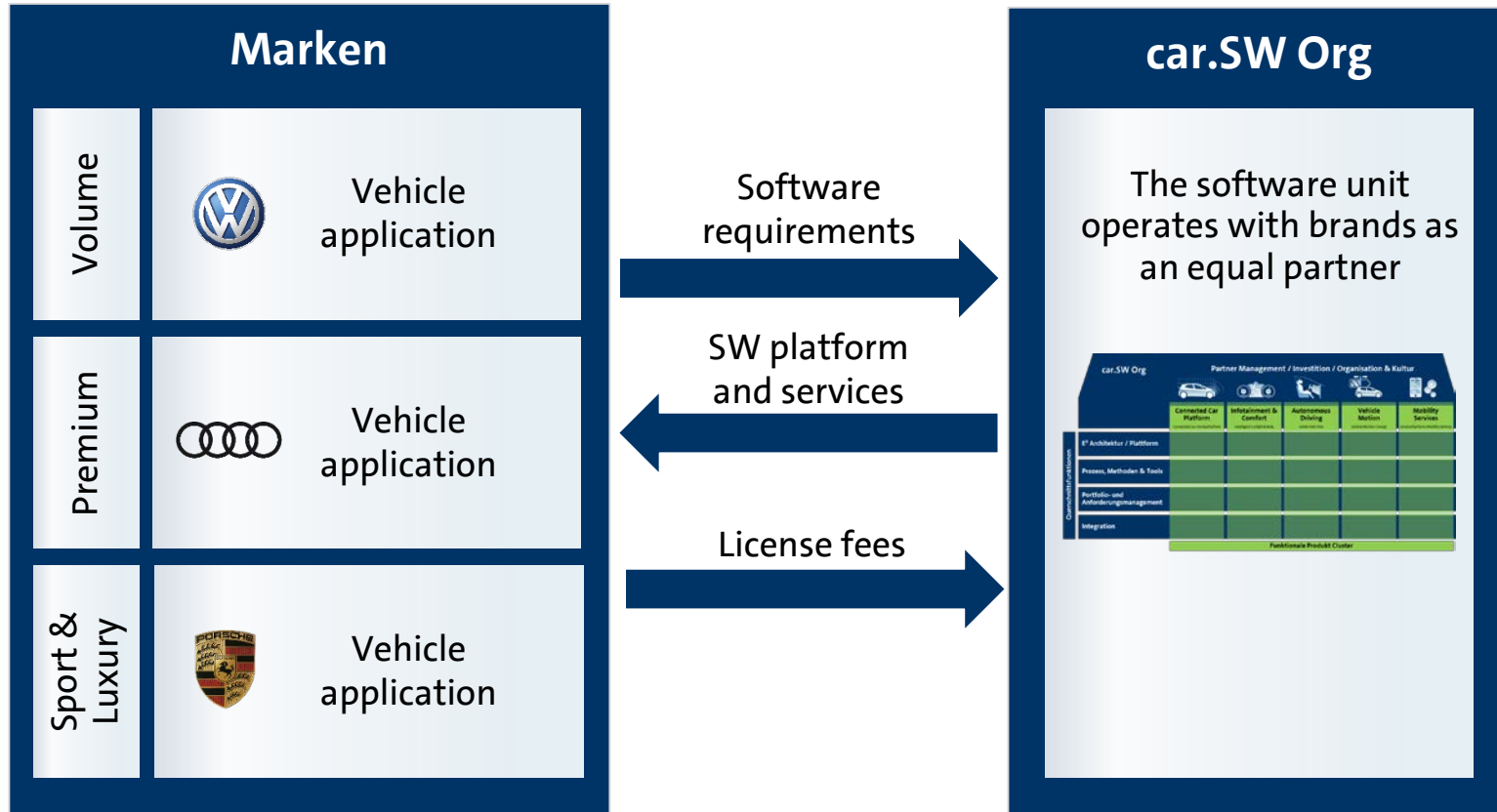
Contracting for all relevant suppliers via car.SW Org

SW ownership

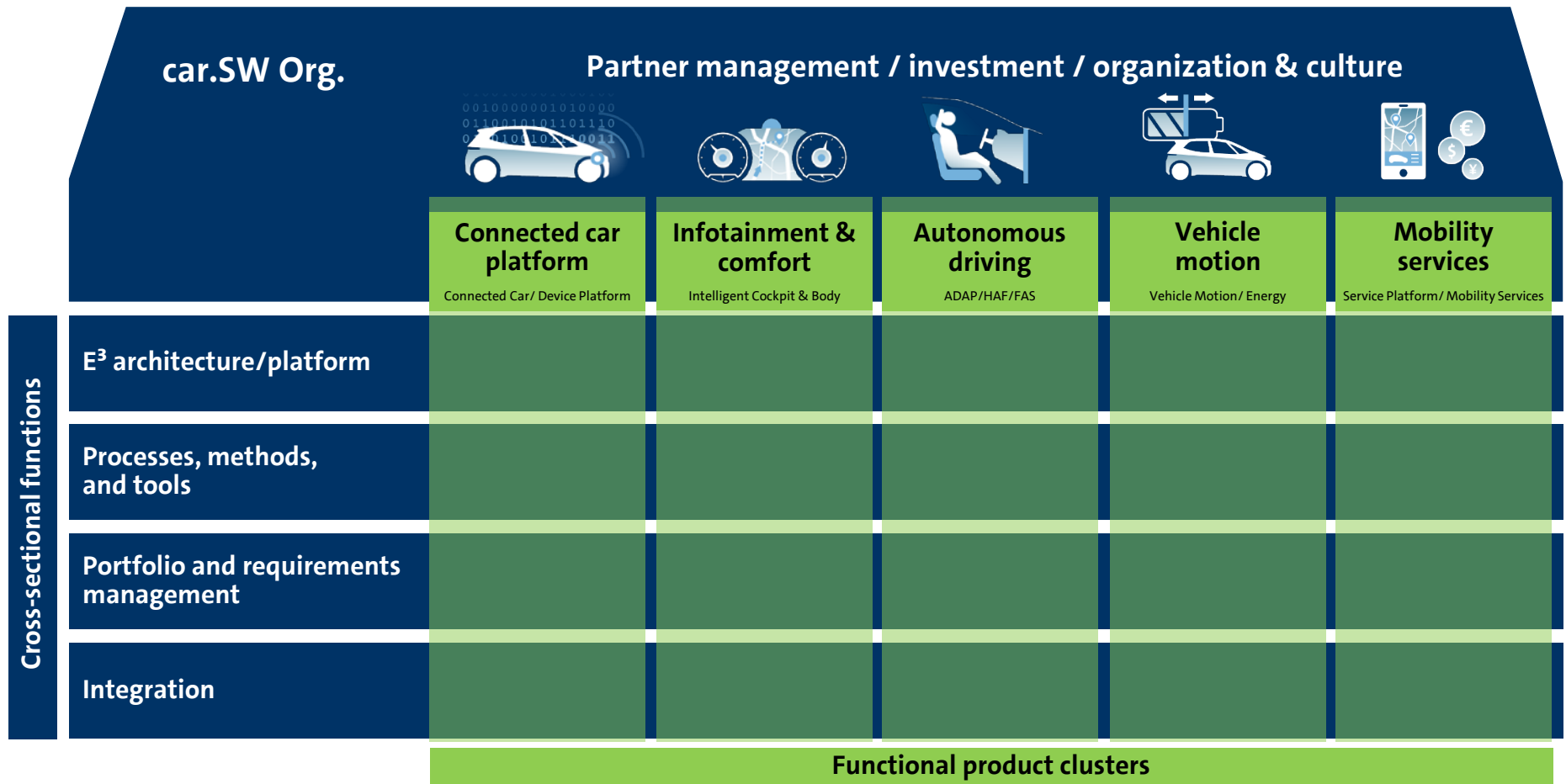


car.SW Org and cooperation partners

Collaboration model for car.SW Org. with brands



Car.SW Org. is structured in 5 product clusters and 4 cross-sectional functions



car.SW Org. is getting alive

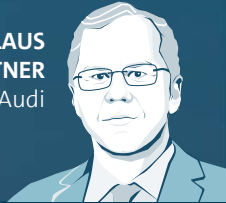


CHRISTIAN SENGER
Member of the Management Board responsible for Digital Car & Services, Volkswagen Passenger Cars

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Volkswagen Group



DR KLAUS BÜTTNER
Audi



THOMAS MÜLLER
Audi



DR MANFRED HARRER
Porsche



CHRISTOPH HARTUNG
Volkswagen Passenger Cars



Connected Car Platform



Transformation of the backends into the “One Device Platform” and standardization of the vehicle operating system for all brands

Infotainment & Comfort



Development of a cross-brand, standardized cockpit and body platform for all future E/E architectures – the “One Infotainment Platform”

Autonomous Driving



A cross-brand “One SW Stack” for driver assistance systems and highly automated driving, scalable from NCAP up to level 3+

Vehicle Motion



Development of software functions for powertrain, driving performance and charging technology combined with a high-performance computing platform

Mobility Services



Responsibility for the technology stack for developing mobility services and digital business models for all brands

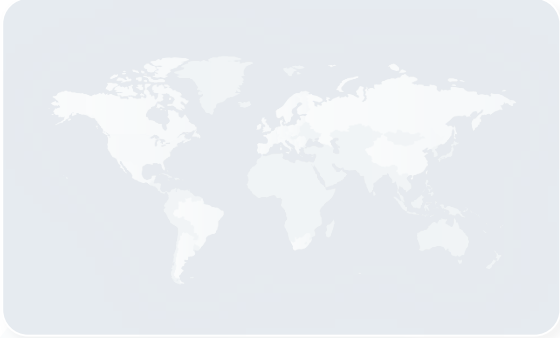
Agile Organization



Consolidation

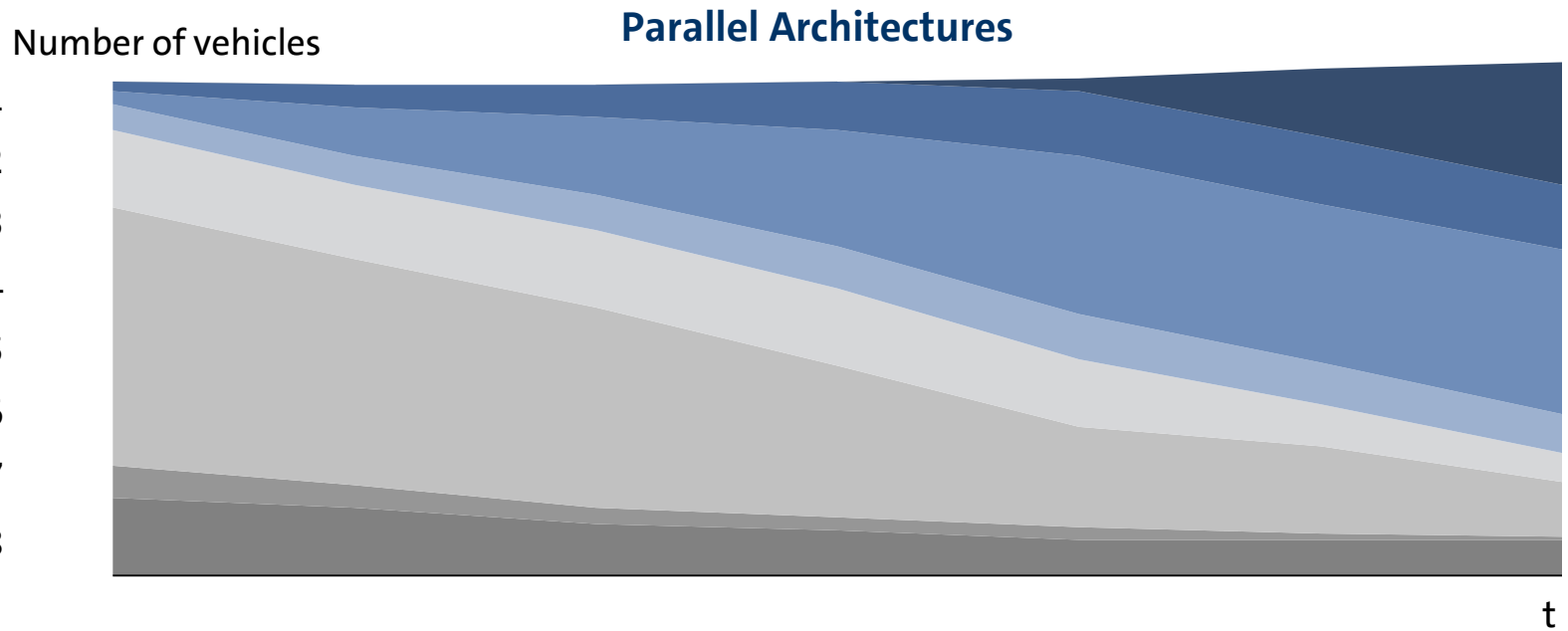


Staffing & Cooperations

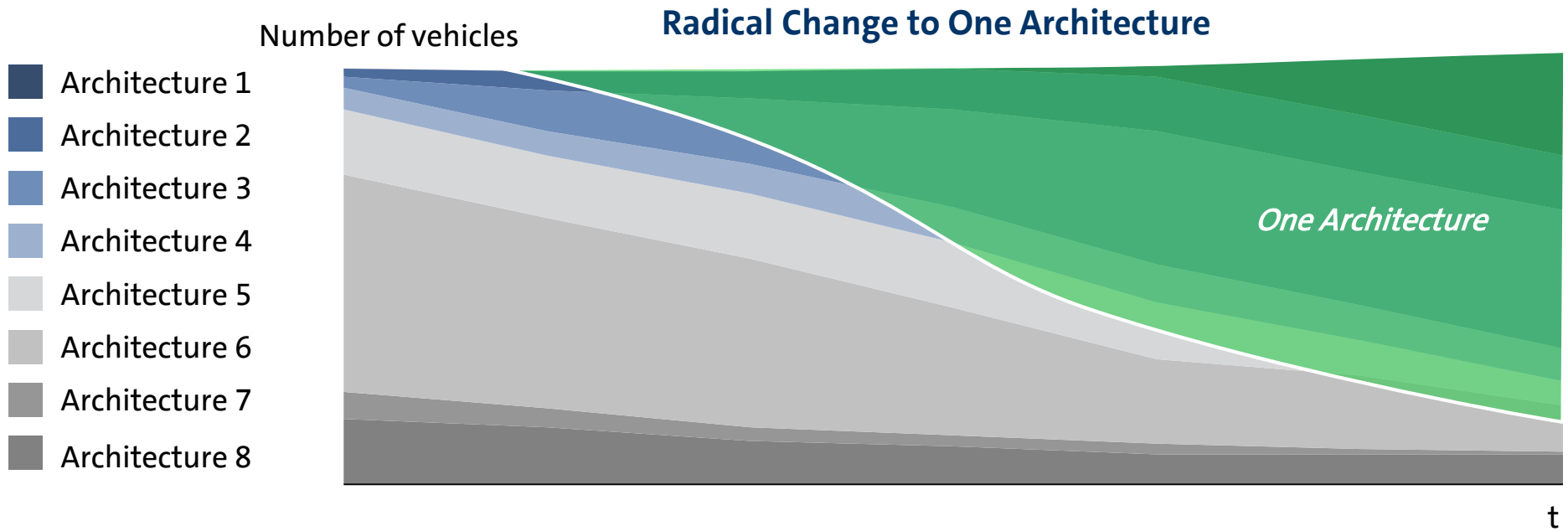


Key Levers for car.SW Org.

From eight...



From eight to one



Agile Organization

car.SW Org		Partner Management / Investition / Organisation & Kultur				
		Connected Car Platform	Infotainment & Services	Autonomous Driving Services	Vehicle Network	Mobility Services
IT Architecture / Platform						
Process, Methods & Tools						
Portfolio and Activity Management						
Integration						
Spenden Produkt Center						

Consolidation



Staffing & Cooperations



Key Levers for car.SW Org.

Bringing adequate IT competence into the car.SW Org.

60 %

Share of In-house Contribution



Capability Building

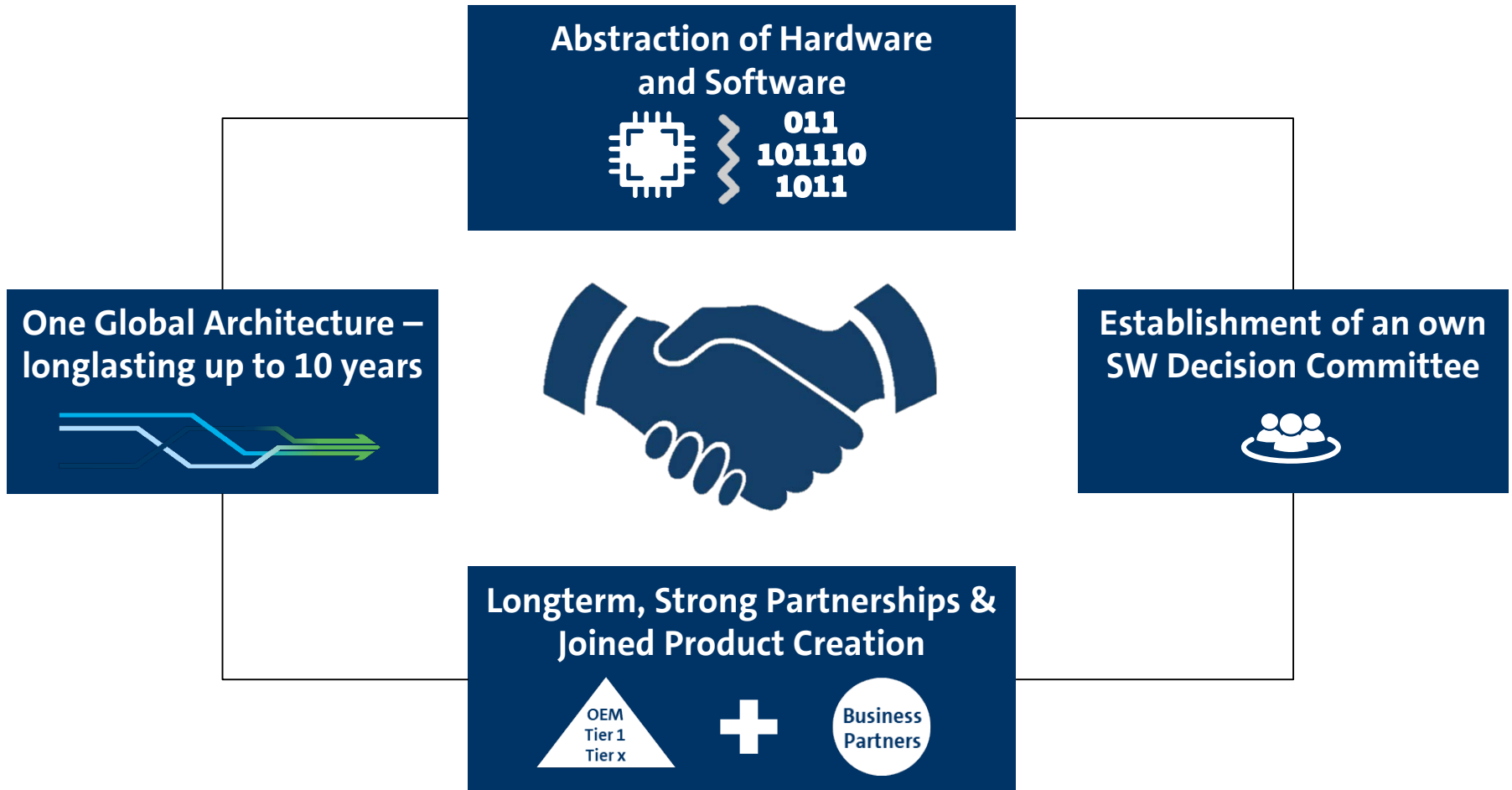


In-house Trainings

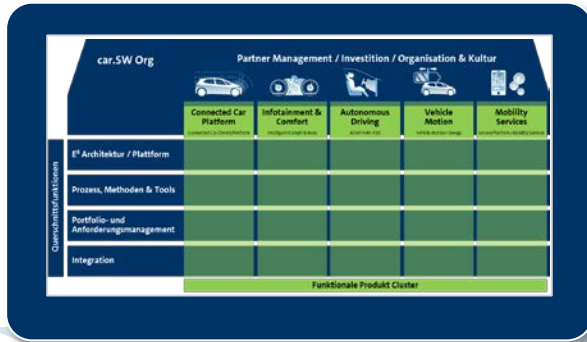


Hub

Changing the cooperation model between car.SW Org. and Suppliers



Agile Organization



Consolidation



Staffing & Cooperations



The digital mind
of mobility

