

CONFIDENTIAL

The Collaboration Advantage

› How OEMs and Suppliers Reduce
Powertrain & Product Cost

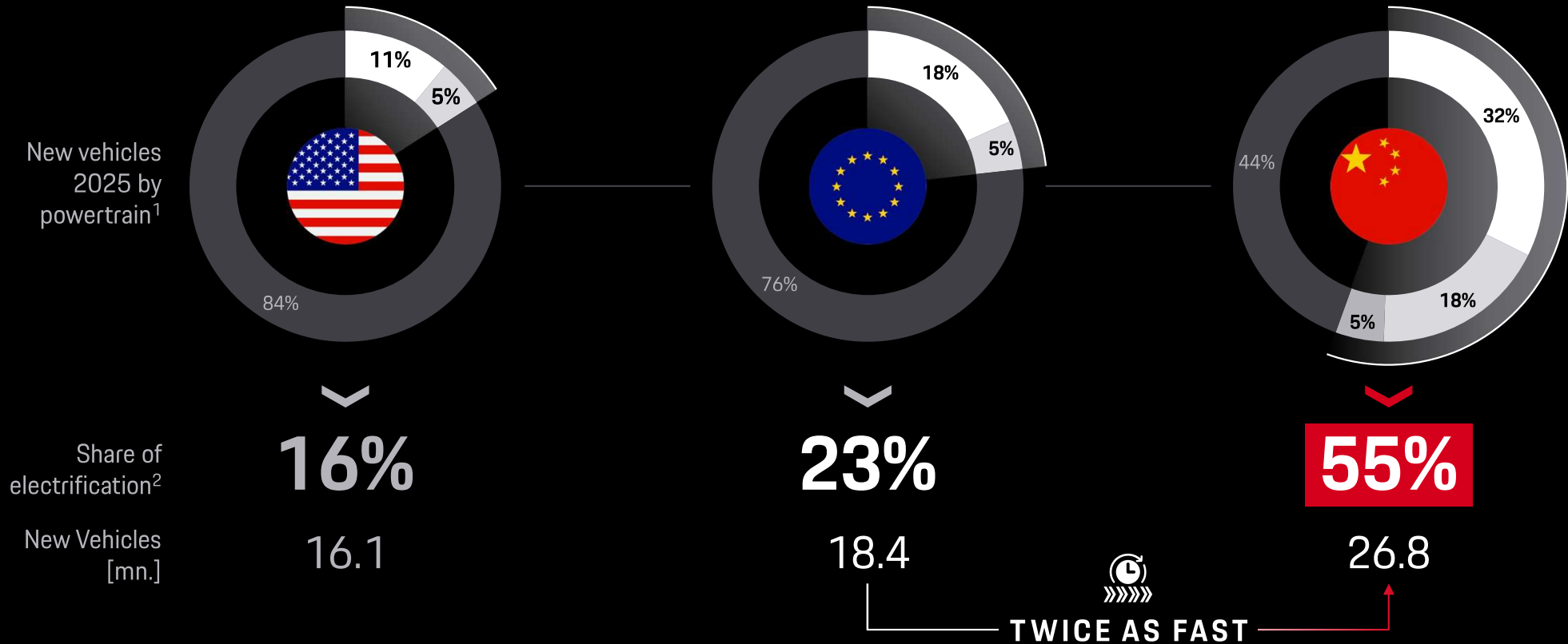
Aachen | Dr. Lukas Mauler | October 7, 2026

Porsche Consulting

// THE CHALLENGE

55% vs. 23%: China electrifies twice as fast as Europe

BEV PHEV REEV ICE & HEV



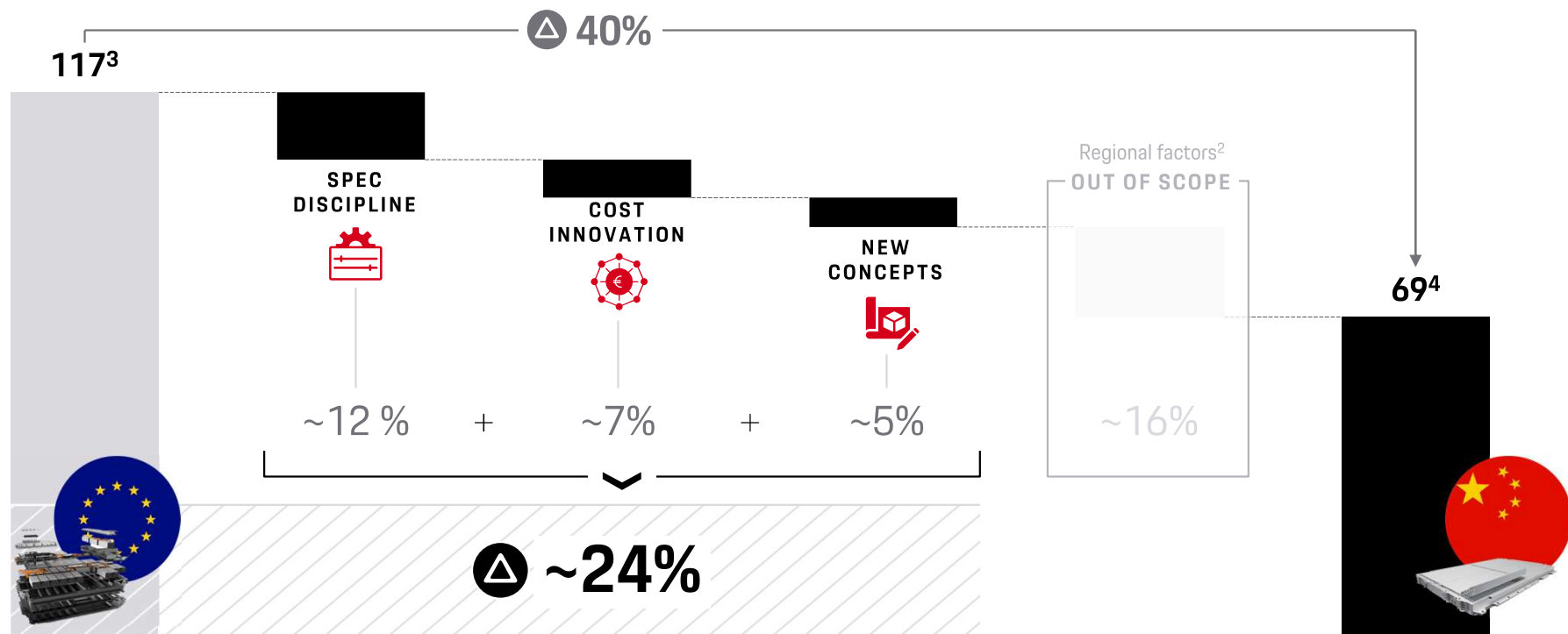
¹ Based on OEM sales forecast | ² Including BEV, REEV, and PHEV

BEV: Battery Electric Vehicle; REEV: Range-Extended Electric Vehicle; PHEV: Plug-in Hybrid Electric Vehicle; HEV: Hybrid Electric Vehicle; ICE: Internal Combustion Engine; Others include Fuel Cell Vehicles and not allocated powertrains
Source: Porsche Consulting; IHS Markit

// THE CHALLENGE

More than half of Chinese OEMs' battery cost advantage can be tackled, but only if all levers are pulled

Battery pack cost [€/kWh]¹
2025

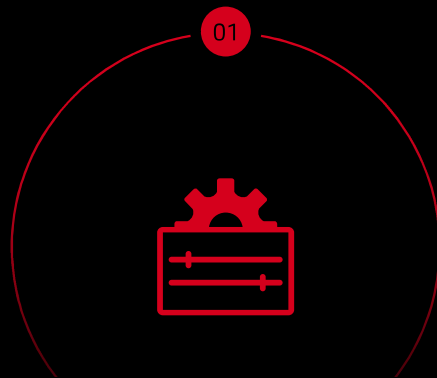


¹ Bottom-up calculation of volume segment BEVs by Porsche Consulting Battery Pack Model (without tariffs) | ² factors influenced by origin only (e.g. labor, energy)

³ NMC prismatic Cell-to-Module integration with ~70kWh capacity | ⁴ LFP prismatic Cell-to-Pack with ~50 kWh capacity

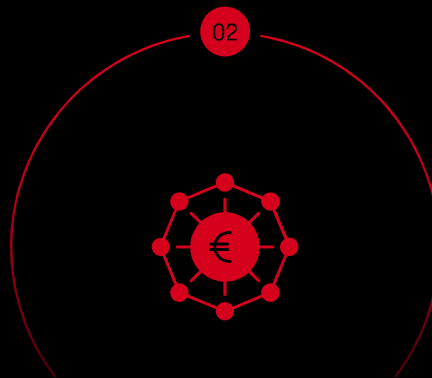
Source: Porsche Consulting

Chinese Players consistently apply three levers to reduce cost



SPEC DISCIPLINE

Is the customer
paying for it?



COST INNOVATION

Can it be built
cheaper?



NEW CONCEPTS

Is there a better way
to deliver it?

Increased product specifications drive avoidable cost increases compared to competitors

B-Segment



**CHINESE
OEM**



Specification Reduced test duration (144h)
Certain corrosion is permitted

Design Steel + PVC; cooling plate without PVC coating

Cost Influence Cost advantage by eliminating PVC coating



**EUROPEAN
OEM**



Long test duration (>700h)
No corrosion is permitted

UFS material and PVC coating of the cooling plate

Cost increase due to UFS material & PVC coating

Adjusting requirements for this example unlocks potential of **€35 per battery pack**

Chinese OEMs reduce cost through functional integration and consequent design for manufacturing

Battery Architecture



CELL TO PACK



Functional integration

Battery integrated into vehicle structure, eliminating structural parts and optimizing cooling and packaging space

Electrical components

OBC, DC/DC converter, sensors and busbars consolidated into integrated units

Design for manufacturing

Adhesive bonding replaces complex bolted and welded joints, prioritizing **production efficiency** over repairability



CELL TO MODULE



Separate battery modules require additional housings and structural components

Separate electronics, sensors and wiring interfaces increase part count, weight and space requirements

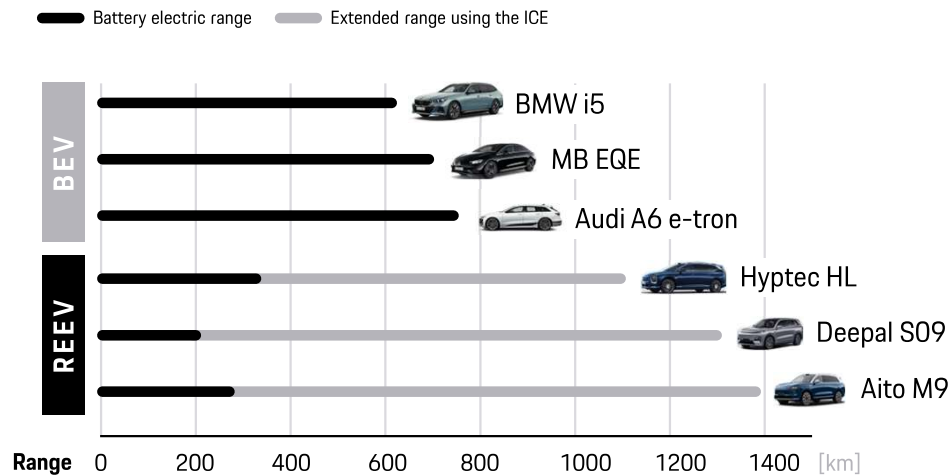
Complex bolted and welded assemblies prioritize **repairability** over production efficiency

Choosing cell-to-pack over cell-to-module has cost potential of  **~10-15 % per battery pack**

Range-extenders can convince range-sensitive customers – while offering lower manufacturing costs

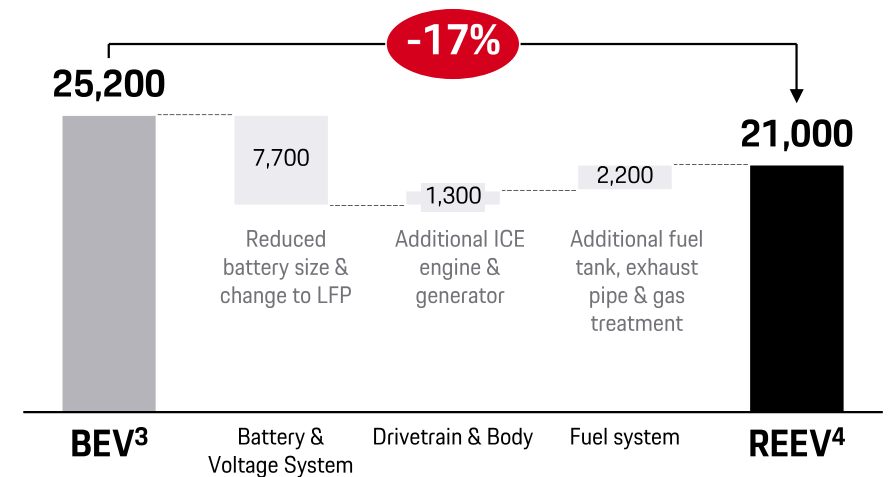
Vehicle range comparison 2025

C segment (executive car) [km]¹



Manufacturing cost comparison² 2025

Average C segment (compact car) SUV "volume brand" [€]



Assuming comparable ranges, REEVs come with reduced manufacturing costs by

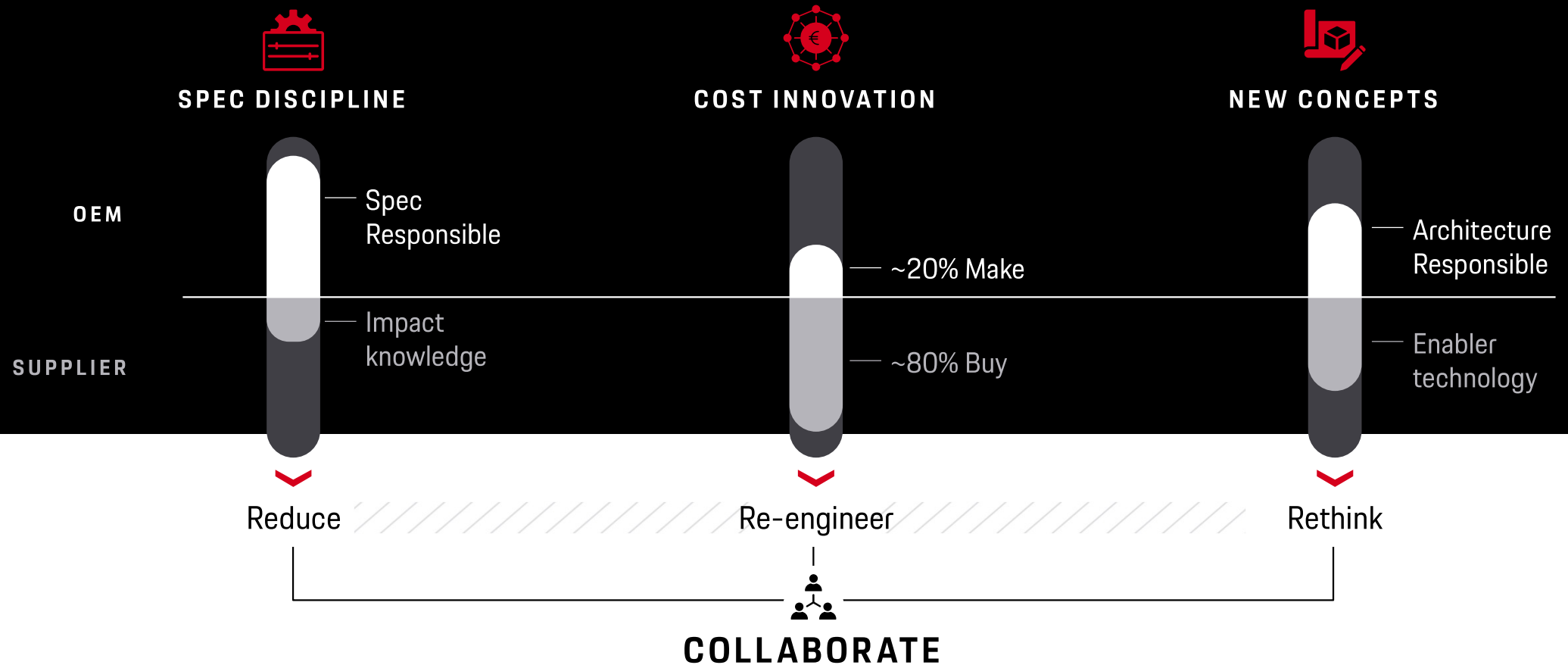
» ~17% compared BEVs

¹ Range of BEV models based on brand announcements according to WLTP assessment, combined range of REEV models based on brand announcements according to CLTC assessment and converted in values according to WLTP assessment

² Costs excluding OEM margin, logistics costs, dealer fees and taxes | ³ Total range 500km, Battery size 92kWh, Total Power 140 kW, Battery chemistry NMC | ⁴ Total range 500km, Battery size 22kWh, Total Power 140 kW, Battery chemistry LFP
Source: Porsche Consulting; OEM websites; insideevs.com

// THE ANSWER

To fully unlock cost levers for the domestic automotive industry, a collaborative approach is required



// OPEN COMPUTE PROJECT



Source: Porsche Consulting, Meta, AMD



**SUCCESS
FACTORS**

**Minimized
Requirements**

+

**Shared
Requirements**

IMPACT

-25%

Cost 
reduction

// IKEA PRICE FIRST



× Home furnishing supplier



Source: Porsche Consulting, IKEA



**SUCCESS
FACTORS**

**Joint
Target Price**

+

**Open-Book
Mindset**

IMPACT

-75%

Price 
reduction

// NAXTRA BATTERY



Source: Porsche Consulting, CATL, Changan, Ronbay



**SUCCESS
FACTORS**

**Long-Term
Commitment**



**Orchestrated
Innovation**



IMPACT

-100%

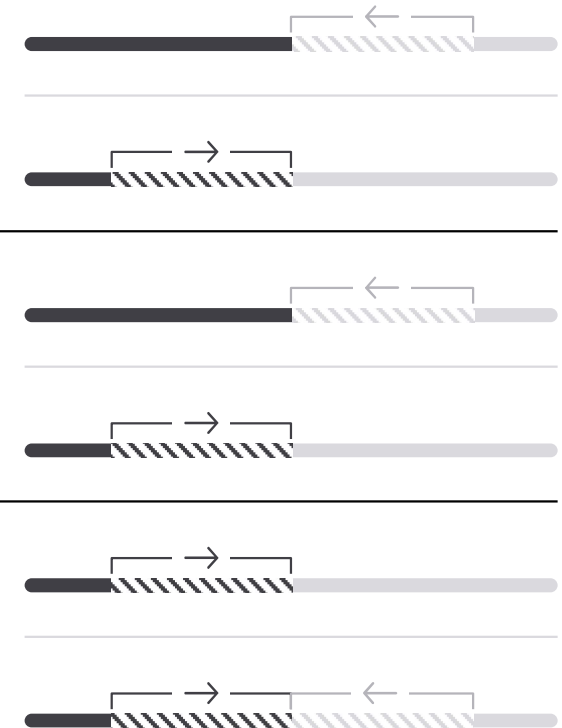
Lithium 
reduction

To leverage success factors, the domestic European automotive industry needs to move closer together

	Success factors 	IMPLICATION European automotive
 SPEC DISCIPLINE	Minimized Requirements	Suppliers systematically challenge OEMs' requirements
	Shared Requirements	OEMs and suppliers define requirements together from the start
 COST INNOVATION	Joint Target Price	Establish a culture of continuous cost engineering towards shared targets
	Open-Book Mindset	Create shared incentives for sustainable cost reduction
 NEW CONCEPTS	Long-Term Commitment	Build strategic long-term partnerships at eye level
	Orchestrated Innovation	Drive innovation through joint, end-to-end problem-solving

Responsibility

— OEM — Supplier



Proven methodologies turn a new mindset into measurable impact



SPEC DISCIPLINE

Spec-Sheet Analysis 



COST INNOVATION

Product Cost Ideation 



NEW CONCEPTS

Cost-Based Partnering Strategy



Requirement Benchmarking



Should-Cost Analysis 



Supplier Innovation Sprints



Sensitivity Assessment 



Supplier Cost Workshops



Portfolio Expansion Strategy



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