DOWLAIS

DOWLAIS GROUP PLC
VIGO SITE VISIT

OCTOBER 2023

THE DOCUMENT IS NOT AN OFFER OR SOLICITATION OF AN OFFER TO BUY OR SELL SECURITIES. IT IS SOLELY FOR USE AT A PRESENTATION AND IS PROVIDED FOR INFORMATION ONLY AND MUST NOT BE RELIED UPON FOR ANY PURPOSE. THIS PRESENTATION DOES NOT CONTAIN ALL OF THE INFORMATION MATERIAL TO AN INVESTOR.

IMPORTANT: Please read the following before continuing. The following applies to this document, which has been prepared solely for information purposes in relation to Dowlais Group plc (the "Company") and its direct and indirect subsidiaries (together with the Company ("the Group"), to the oral presentation of the information in this document by members of the Business' management and to any question-and-answer session that follows the oral presentation (collectively, the "Information"), each of which should be considered together and not taken out of context.

This document is not, and should not be construed as, a prospectus or offering document, and has not been reviewed or approved by any regulatory or supervisory authority.

No representation, warranty or undertaking, express or implied, is or will be made by the Company or any other person as to, and no reliance should be placed on, the truth, fairness, accuracy, completeness or correctness of the Information or the opinions contained therein (and whether any information has been omitted from the Information) for any purpose. To the extent permitted by law, the Company, each member of the Group and their respective directors, officers, employees, affiliates, advisers and representatives (the "Representatives") disclaim all liability whatsoever (in negligence or otherwise) for any loss, however arising, directly or indirectly, from any use of the Information, this document or its contents or otherwise arising in connection with the Information.

The Information is subject to updating, revision, amendment, verification, correction, completion and change without notice. In providing access to the Information, none of the Company, any member of the Group, nor any of their respective Representatives or any other person undertakes any obligation to provide the attendee or recipient with access to any additional information or to update the Information to reflect material developments after the date hereof or to correct any inaccuracies in any such Information, including any financial data or forward-looking statements. Neither the Company, the Group, nor any of their respective Representatives have independently verified any of the Information. The Information has not been verified to the standards normally expected in connection with the preparation of a prospectus. Certain figures contained in the Information have been subject to rounding adjustments.

You should conduct your own independent investigation and assessment as to the validity of the Information, and the economic, financial, regulatory, taxation and accounting implications of that Information, and you confirm that you are not relying on any recommendation or statement of the Company, any member of the Group or their respective Representatives. You are strongly advised to consult your own independent advisers on any economic, financial, regulatory, legal, taxation and accounting issues relating to the information contained in the Information.

The Information may constitute or include forward-looking statements. These forward-looking statements reflect, at the time made, the Group's beliefs, intentions and current targets/aims. Forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future and are based upon various assumptions. Although the Group believes that these assumptions were reasonable when made, these assumptions are inherently subject to significant known and unknown risks, uncertainties, contingencies and other important factors which are difficult or impossible to predict and are beyond its control. Actual results are subject to future events and uncertainties, which could materially impact the Group's actual performance. No representation or warranty, express or implied, is made that any of these forward-looking statements or forecasts will come to pass or that any forecast result will be achieved. No statement in the Information is intended to be nor may be construed as a profit forecast.

To the extent available, the industry, market and competitive position data contained in the Information comes from official or third party sources. While the Company believes that each of these publications, studies and surveys has been prepared by a reputable source, none of the Company, the Group nor any of their respective Representatives has independently verified the data contained therein. In addition, certain of the industry, market and competitive position data contained in the Information comes from the Group's own internal research and estimates. While the Group believes that such research and estimates are reasonable, they, and their underlying methodology and assumptions, have not been verified by any independent source for accuracy or completeness and are subject to change and correction without notice. Accordingly, reliance should not be placed on any of the industry, market or competitive position data contained in the Information.

This document is not an offer of securities for sale in the United States. Securities may not be offered or sold in the United States absent registration or an exemption from registration, that any public offering of securities to be made in the United States will be made by means of a prospectus that may be obtained from the issuer or the selling security holder and that will contain detailed information about the Company and management, as well as financial statements. Neither this document nor any copy of it may be taken or transmitted or distributed directly or indirectly, in or into or from the United States, or to persons in the United States within the meaning of Regulation S under the Securities Act, except to qualified institutional buyers ("QIBs") as defined in, and in reliance on, Rule 144A under the U.S. Securities Act of 1933, as amended (the "Securities Act") or pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act.

This presentation is only addressed to and directed at persons in member states of the European Economic Area (each a "Relevant State") who are "qualified investors" within the meaning of Regulation (EU) 2017/1129) (as amended, the "Prospectus Regulation") ("Qualified Investors"). In the United Kingdom, this presentation is being distributed only to, and is directed only at, persons who are "qualified investors" within the meaning of the Prospectus Regulation as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 who are persons (i) having professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"); or (ii) falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Order; or (iii) to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000, as amended), in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "Relevant Persons"). This presentation must not be acted on or relied on (i) in the United Kingdom, by persons who are not Relevant Persons, and (ii) in any Relevant State, by persons who are not Qualified Investors. Any investment or investment activity to which this presentation relates is available only to or will be engaged in only with, (i) Relevant Persons in the United Kingdom, and (ii) Qualified Investors in any Relevant State.

This document is also not for publication, release or distribution in any other jurisdiction where to do so would constitute a violation of the relevant laws of such jurisdiction nor should it be taken or transmitted into such jurisdiction and persons into whose possession this document comes should inform themselves about and observe any such restrictions. By accessing the Information, you represent that you are a person who is permitted under applicable law and regulation to receive the Information.

By attending the presentation or reading this document, or accepting delivery of or electronically accessing or reviewing the Information or accepting delivery of the Information you agree to the terms contained herein and to be bound by the foregoing obligations, restrictions, limitations and conditions and, in particular, will be taken to have represented, warranted and undertaken that (A) if in a Relevant State, you are a Qualified Investor; (B) if in the United Kingdom, you are a Relevant Person; and (C) if in the United States, you are a QIB, or (D) irrespective of where you are resident or incorporated, you are an institution that is permitted within your home jurisdiction and in the jurisdiction in which you are accessing the Information, under applicable law and regulation, to access the Information.

Agenda
Monday 30th October

→ **Dowlais overview**	**5:30pm**
→ **Drinks and dinner (open Q&A)**	**6.30pm**

Agenda

Tuesday 31st October

→ Health & safety briefing	8.30am
→ Powder Metallurgy	8.45am
→ GKN Automotive (overview + Vigo intro)	10.15am
→ Vigo plant tour	10.45am
→ Lunch	12.15pm
→ GKN Automotive (technology)	12.45pm
→ Q&A, closing remarks	1.45pm

Leave for airport at 2.45pm

DOWLAIS OVERVIEW

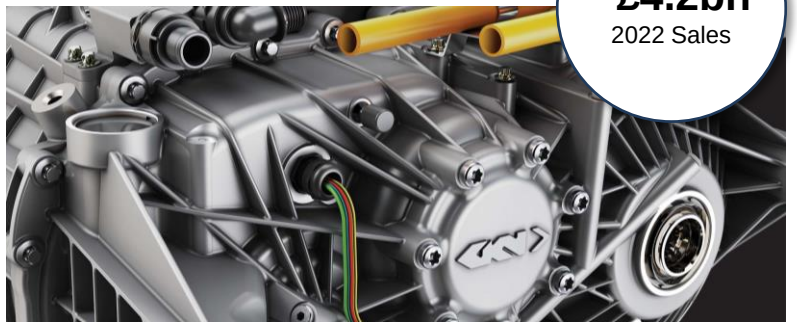
Key takeaways

- Dowlais is a world-class Automotive Group, consisting of two market leading businesses
- We have had a very successful start as a newly listed PLC
- GKN Auto is a technology leader, with an increasingly powertrain agnostic portfolio
- They have well invested, high quality network of plants – Vigo is a good example
- Powder Metallurgy is a high-margin business with revenue and margin growth potential
- They have already secured business on a number of incremental EV products

Dowlais is made up of two world class businesses and an exciting growth prospect

DOWLAIS

AUTOMOTIVE



~£4.2bn
2022 Sales

- #1 global driveline supplier
- Present on 50% of vehicles[1]
- Working with 90% of global OEMs[2]

GKN POWDER METALLURGY

~£1.0bn
2022 Sales

- #1 sinter metals supplier
- #2 powder metal supplier
- Global supply footprint

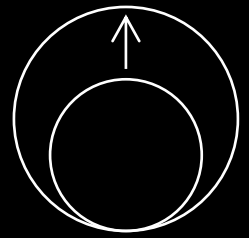
GKN HYDROGEN

- Reliable and secure H_2 storage
- 16 pilot systems
- Healthy pipeline of opportunities

1 Vehicles refers to individual nameplates of global OEMs; 2 Global OEMs are those with manufacturing locations in multiple regions

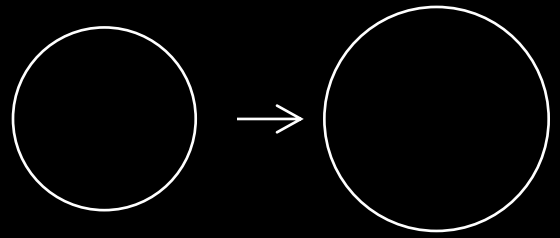
Our strategy is clear and focused

DOW LAIS



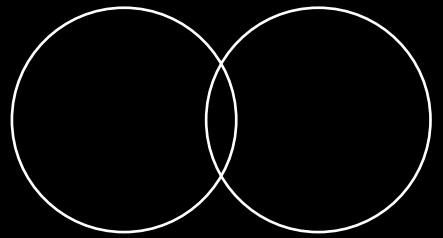
Lead

Market leadership and industry-leading financial performance



Transform

Technological innovation to enable a net zero economy



Accelerate

Sustainable organic growth and disciplined M&A

The automotive market is very dynamic, with multiple factors driving change

DOWLAIS

Mega-trends

Connected

Autonomous

Shared

Electrification

Customer landscape

"Traditional" OEMs

STELLANTIS · VW · TOYOTA · BMW

Chinese Local OEMs

BYD · DONGFENG · GAC GROUP · JMC

Pureplay EV OEMs

TESLA · RIVIAN · Lucid · VINFAST

Geo-politics

Supply chain disruption

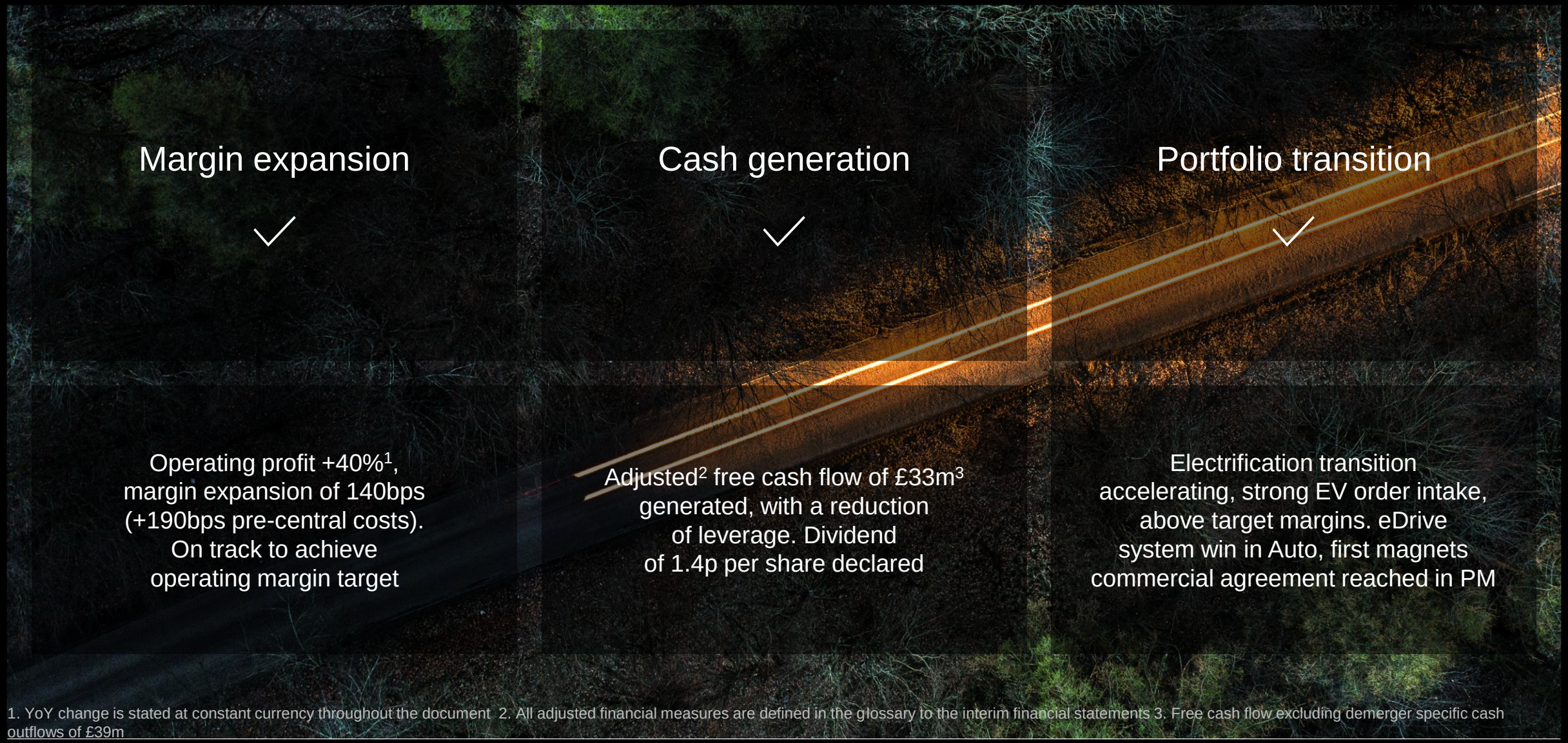
Political & military tension

Trade war

Deglobalisation

H1 2023 HIGHLIGHTS

First half trading ahead. Strong margin expansion, positive free cash flow and accelerated EV transition. Full year expectations unchanged.



Margin expansion

Operating profit +40%[1], margin expansion of 140bps (+190bps pre-central costs). On track to achieve operating margin target

Cash generation

Adjusted[2] free cash flow of £33m[3] generated, with a reduction of leverage. Dividend of 1.4p per share declared

Portfolio transition

Electrification transition accelerating, strong EV order intake, above target margins. eDrive system win in Auto, first magnets commercial agreement reached in PM

1. YoY change is stated at constant currency throughout the document 2. All adjusted financial measures are defined in the glossary to the interim financial statements 3. Free cash flow excluding demerger specific cash outflows of £39m

GKN AUTOMOTIVE

GKN Automotive

Strong first half, on track to deliver financial targets & profitably benefit from EV transition

DOWLAIS

Revenue growth

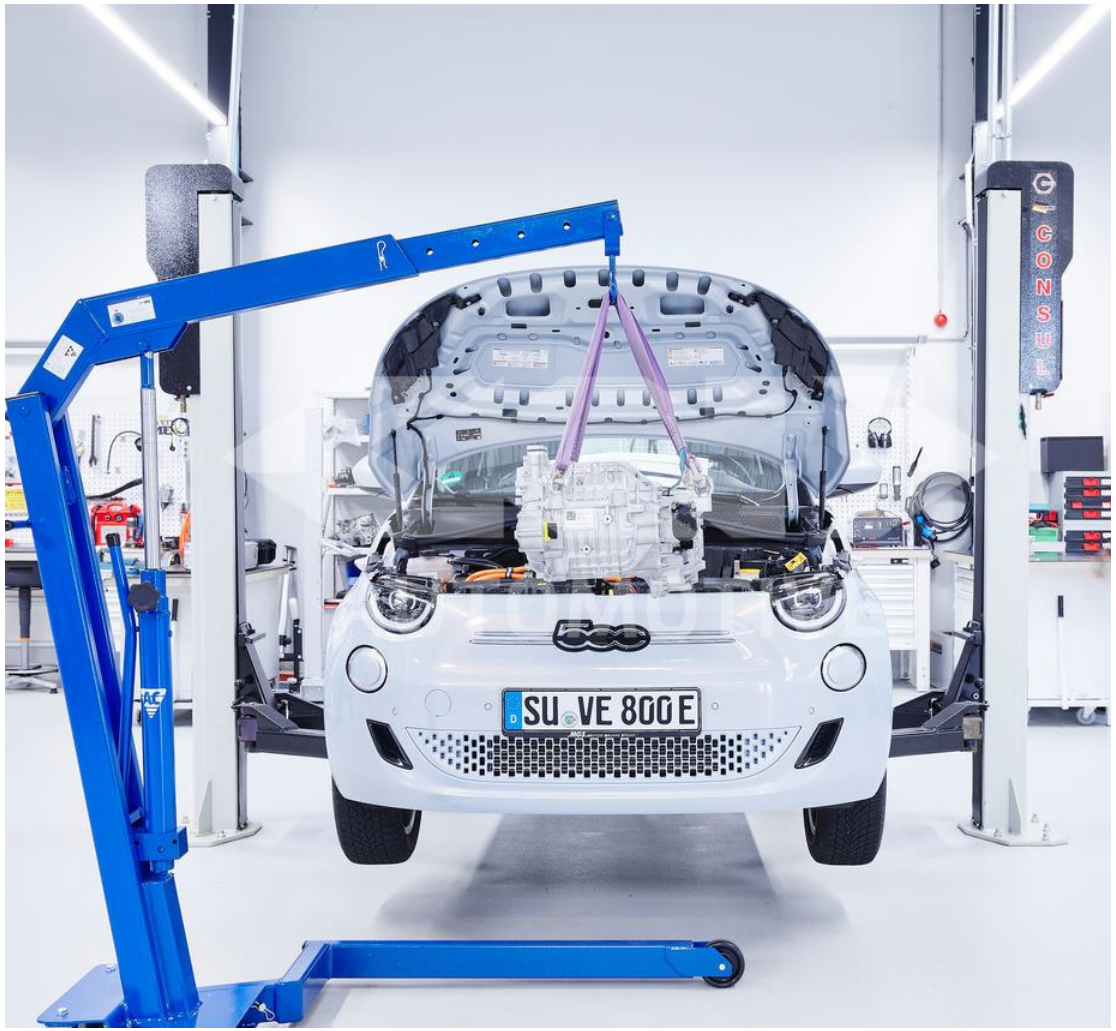
- H1 revenue growth of 12%, aligned with light vehicle production
- Strong growth from sideshafts and across all ePowertrain product portfolios

Margin expansion

- Adjusted operating profit growth of 92%, margin expansion 270bps
- Drop-through margin of 39% driven by strong operational performance and inflation recovery

Portfolio transition

- >£3bn of new business secured in H1, 78% for EVs, above target margin
- Multiple torque management component awards and a profitable eDrive system win



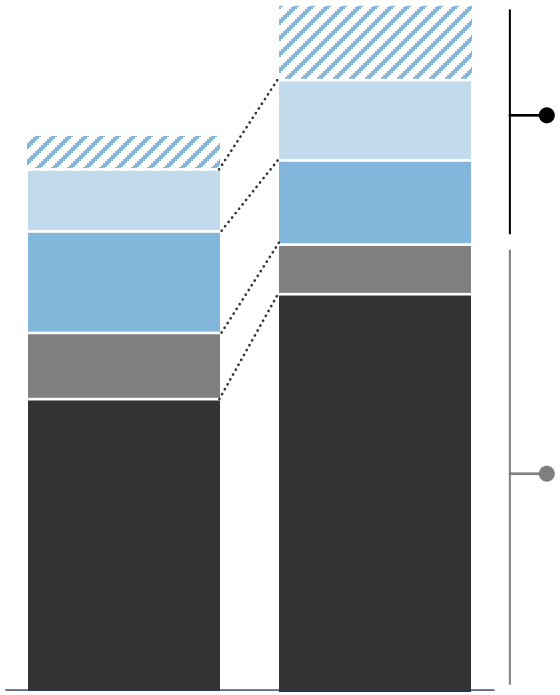
GKN Automotive
Profitable growth from both portfolios

Product portfolio	Impact of electrification	Comment
eDrive systems	↗	Prudent investment in targeted technology developments and smart program choices will deliver profitable growth
ePT components	↗	Market leader in advanced differentials, growth forecast as addressable market increases
AWD	↘	Heritage capabilities very relevant as portfolio transitions to ePT components
Propshafts	↘	Focus on maximising asset utlilisation and cash generation
Sideshafts	↗	Market leader for both ICE & BEV, including in China. Growth forecast through content increase and further share gains

Positive impact of electrification

Negative impact of electrification

Portfolio growth



Growth from total ePowertrain portfolio through a combination of ePT components offsetting AWD and careful eDrive system choices

Growth in core Driveline portfolio despite decline of propshafts

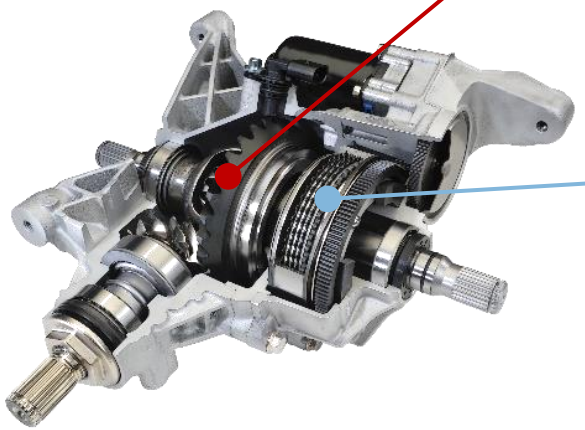
	2023	2028
ICE exposure	~30%	<20%

GKN Automotive

Most components within an AWD system transition to ePT components portfolio

AWD System

- Power Take-off units
- Rear Drive Units



Hypoid gears & shafts

Open differential

Disconnect units

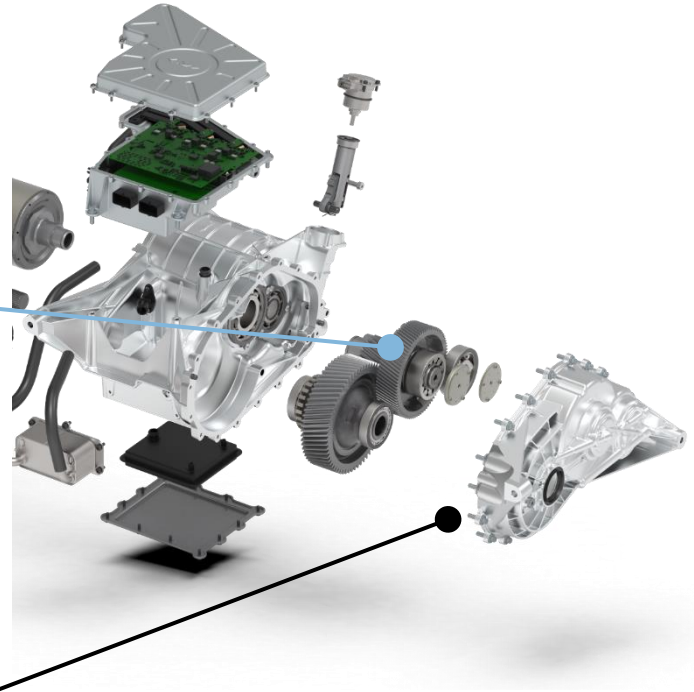
Limited Slip Differential (LSD)

Electronic Torque Manager (ETM)

Helical gears & eDrive gearbox

eDrive System

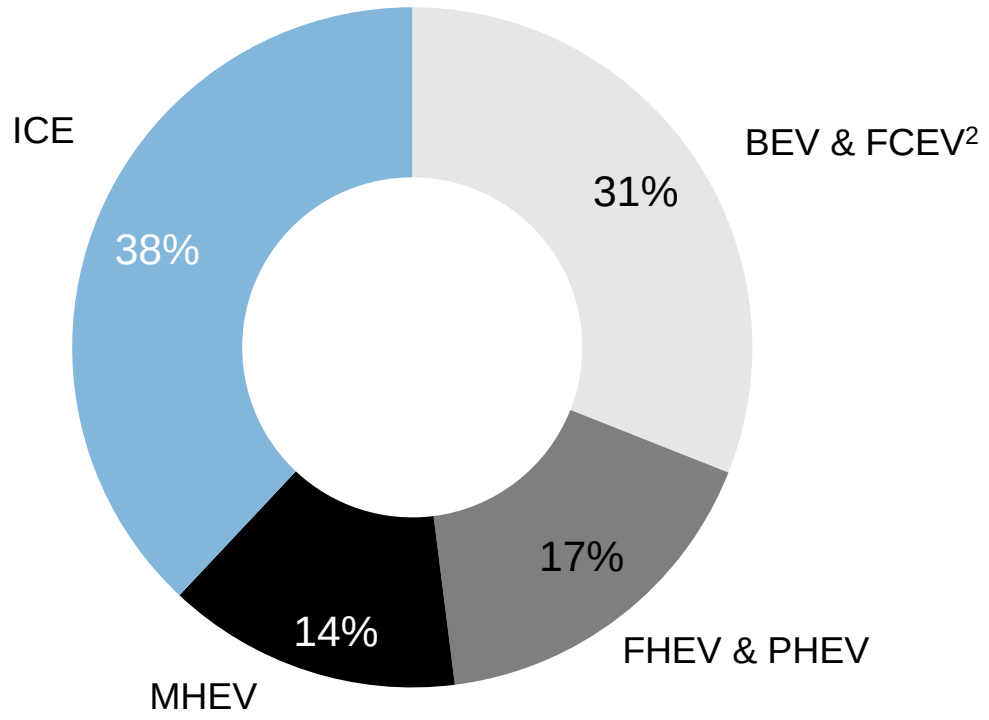
- Electric Drive Units



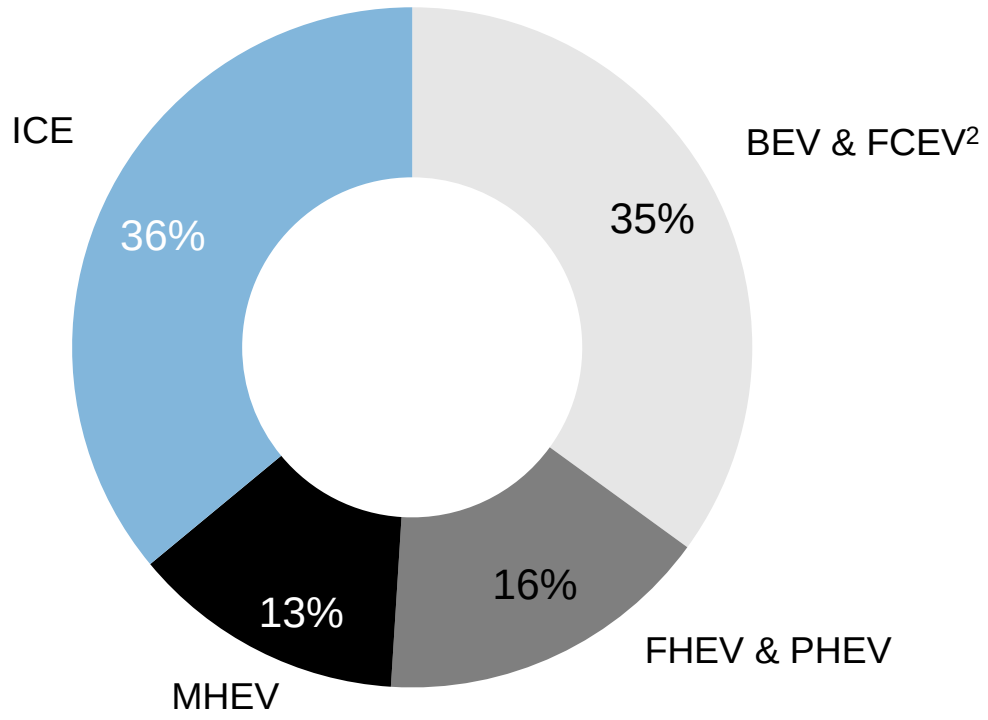
- No re-use
- Transition to eDrive component portfolio
- Incremental eDrive component content

GKN Automotive
Our EV transition is following the market

GKN Automotive order book for 2027[1]



2027 global LV production forecast



1 Propulsion mix of total order book as at October 2023; 2 BEV = BEV + REEV + Series-Hybrid
Source: S&P Global Mobility Alternative Propulsion forecast at October 2023

GKN POWDER METALLURGY

GKN Powder Metallurgy

Strong profit margin trajectory throughout the period & acceleration of portfolio transition

GKN POWDER METALLURGY

Revenue growth

- H1 revenue growth of 2%

Margin expansion

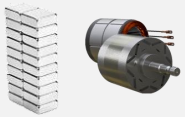
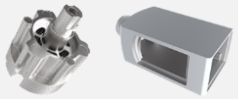
- Adjusted operating profit margin increase of 80bps between H2 ’22 and H1 ’23
- Increase of 170bps between Q1 ‘23 and Q2 ‘23; strong run-rate into H2

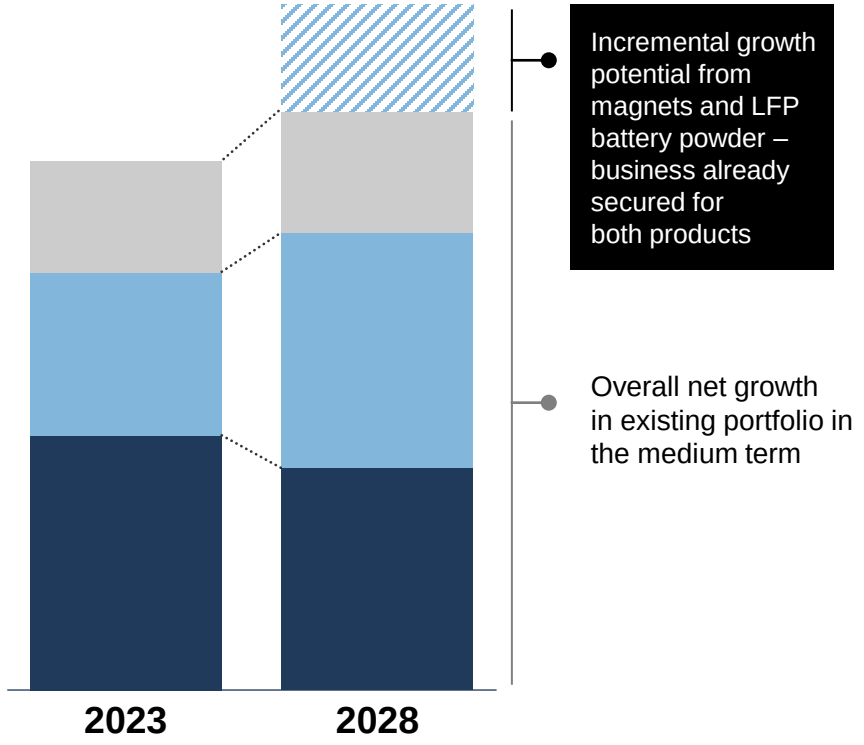
Portfolio transition

- 36% increase in H1 new business bookings, 75% for propulsion agnostic product portfolios, at or above target margins
- Acceleration of portfolio transition to EVs; multiple concrete opportunities defined, contract awarded for BEV differentials and first magnets commercial agreement

GKN Powder Metallurgy

Growth from existing portfolio, with incremental opportunities from new EV products

Product portfolio	Impact of electrification	Comment
Magnets 	↗	First commercial agreement reached, exciting prospects
Powder for LFP batteries 	↗	Currently supplying in China; discussions ongoing in EU/US
Industrial 	—	Stable portfolio; consistent growth in line with market expected
Auto: chassis & EV 	↗	Multiple non-ICE growth opportunities secured
Auto: engine & transmission 	↘	Portfolio decline in line with ICE; controlled reduction in portfolio share of revenues



↗ Positive impact of electrification ↘ Negative impact of electrification — Neutral impact of electrification

GKN Powder Metallurgy

Incremental EV content opportunities identified, and business secured

DOWLAIS

Thermal Management

Electric Pumps for battery and e-Motor cooling

CPV
Up to £15

Differentials

Gears for EV differentials

CPV
Up to £40

X-by-Wire

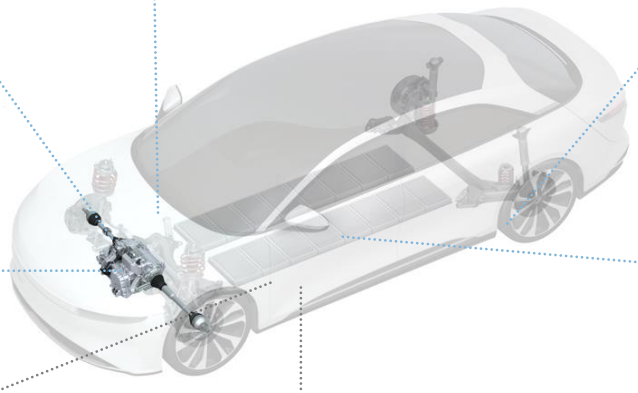
Small gearboxes for electric parking and active brakes

CPV
Up to £15

Magnets

Rare earth magnets for BEV traction motors

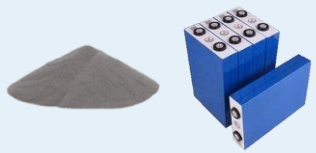
CPV
Up to £150



Iron Powder

Used for Lithium Iron Phosphate batteries (LiFePO4)

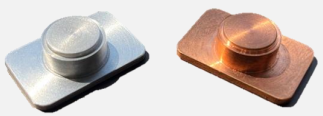
CPV
Up to £55



Battery Terminal

Used in cylindrical and prismatic battery cells

CPV
Up to £60



Bus Bar

Copper bushings for high voltage Bus-Bars

CPV
Up to £12

Product developed & commercial agreement secured

Product under development

Selected examples only– not exhaustive


D O W L A I S

Long term financial targets

Revenue

Growth ahead
of market

EBIT

>11% margin
for combined group[3]

Cash conversion[1]

Consistently ~90%

Leverage[2]

Maintain at
~1.0x – 1.5x

1 Cash conversion calculated as cumulative net cashflow pre-CAPEX / operating profit (EBIT); 2 Leverage refers to ratio of net debt to EBITDA; 3 EBIT margin targets excludes central costs

Capital allocation policy

Operating cash flow

Business investment

Capital to **sustain organic growth,** support transition to EV and increase competitiveness through BCC expansion

Dividend

25% to 35% of adjusted net income

Excess cash

Deleveraging

Maintain ratio at **1.0x – 1.5x** net debt : EBITDA

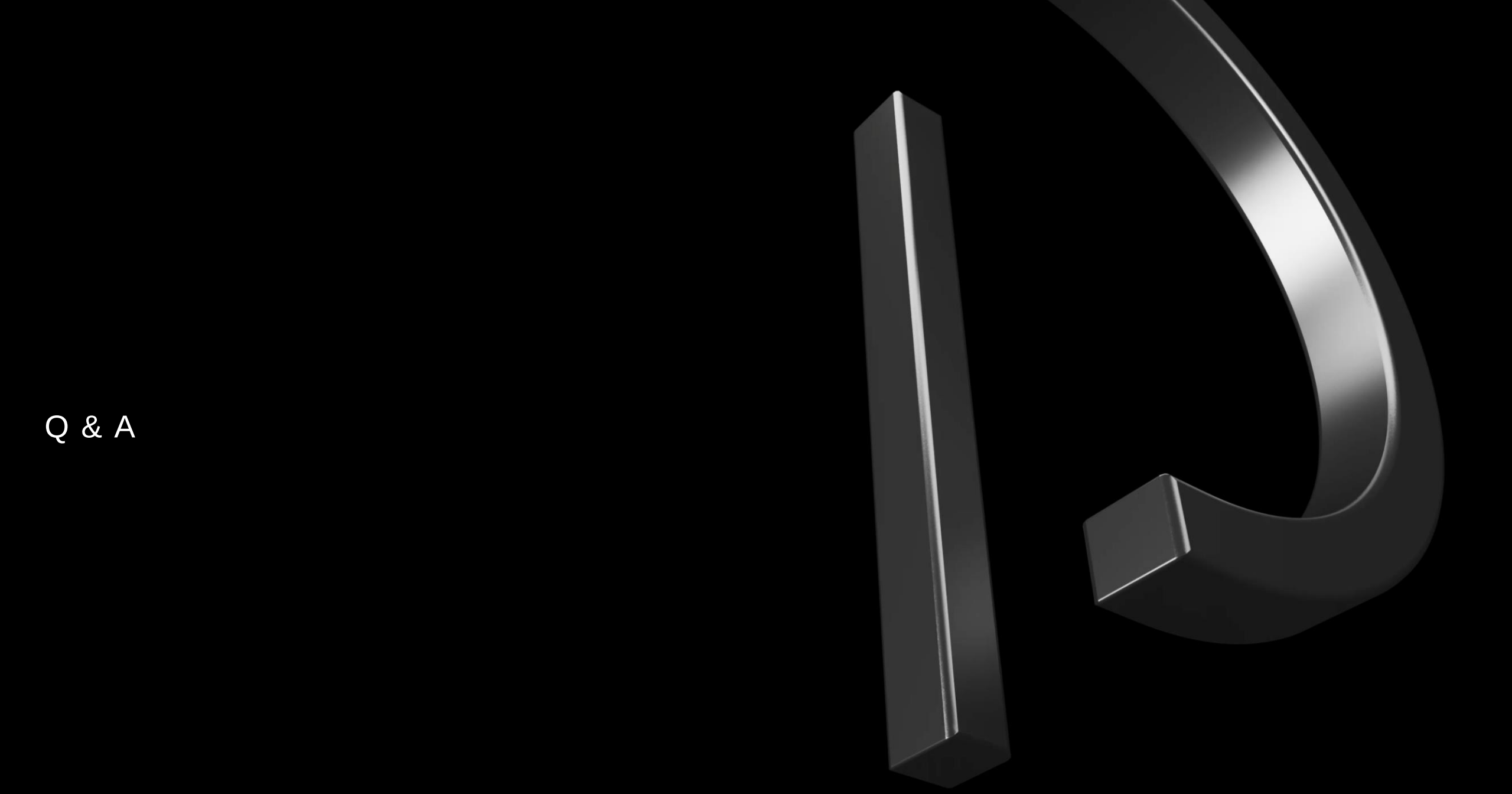
Additional shareholder returns

Capital from any divestitures would result in an appropriate return to shareholders

M&A

Commitment to consider **future ownership of PM** within 2-3 yrs

Q & A




POWDER METALLURGY

Industry leading technology from powder to part

31 October 2023

LET'S SHAPE OUR FUTURE

GKN POWDER METALLURGY

Presenting today

Diego Laurent
Chief Executive Officer

Alessandro DeNicolo
VP Engineering

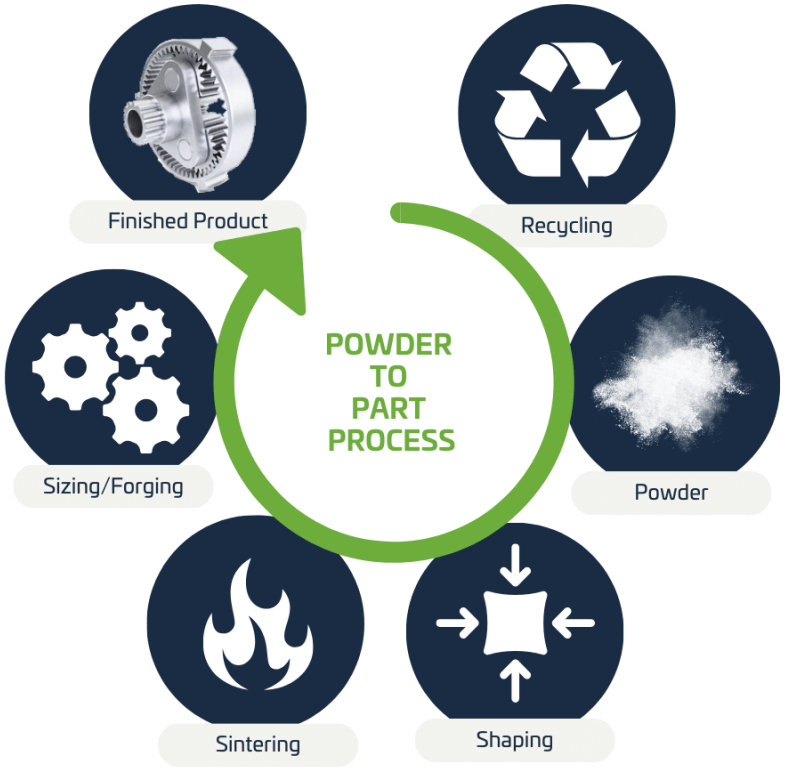
Agenda

- Business Overview
- Market Positioning
- Technology Strategy & Roadmap
- Summary

Business Overview

Introducing Powder Metallurgy (PM)

What is PM?



Why PM?

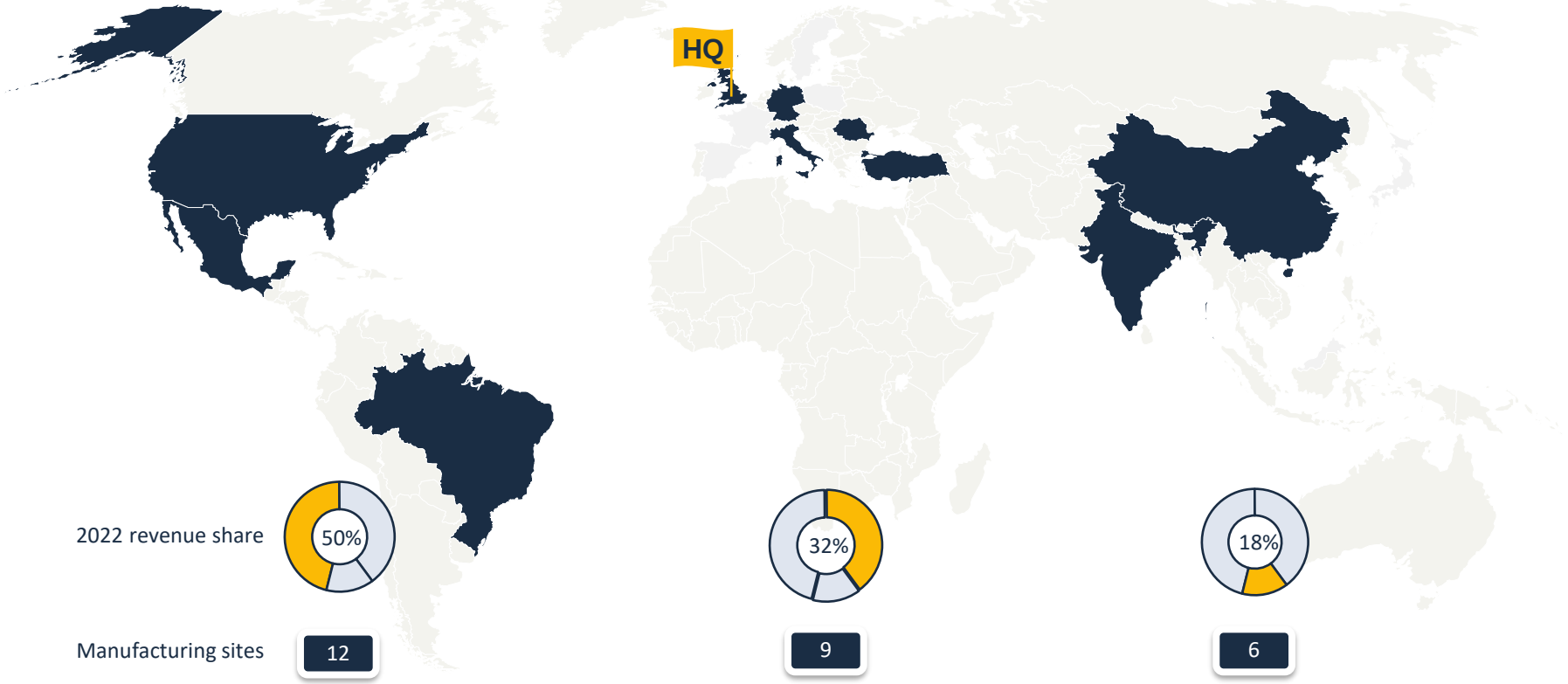
- Powder from scrap metal
- Contributes to the circular economy
- Net-shape capability
- Lower waste manufacturing processes
- Competitive and high quality

SILVER 2023 ecovadis Sustainability Rating

PM™ A recognized green technology

GKN Powder Metallurgy – At a glance

World leading provider of metal powder solutions



	AMERICAS	EUROPE	ASIA
2022 revenue share	50%	32%	18%
Manufacturing sites	12	9	6
Technology centres	2	1	

Sales Revenue ('22) 1 bn

People 5,500+

Customers 3,000+

Our Businesses

GKN POWDER METALLURGY

Powders

World #2
leader in atomized metal powders for various applications

tons/year 250,000

Sinter

World #1
leader in high volume, high precision powder metal components

pcs/day 10,000,000

Additive

Global Player
in digital manufacturing of AM focusing on medium series and aftermarket

pcs/year 2,000,000

Magnets

Expansion
into permanent magnets for electric vehicle markets in Europe and North America

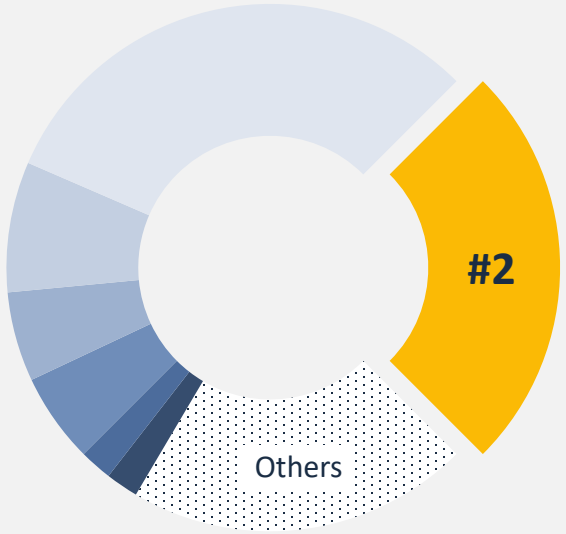
tons/year (planned) *4,000*

Market Positioning

#2 global leader in metal powder, #1 global leader in sinter products

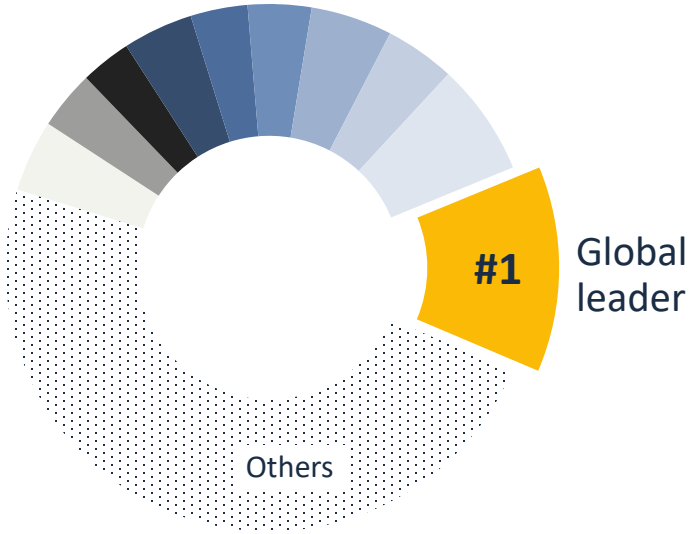
Powder

Market share



Sinter

Market share



Our Leadership Factors

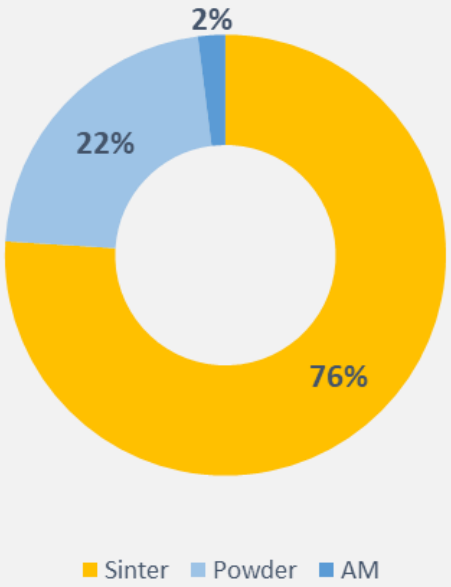
- Breadth of capabilities
- Global manufacturing footprint
- World class co-design
- Manufacturing excellence
- Strong customer relationships
- Focus on sustainability

Data from LEK Market study and management information, applicable 2022

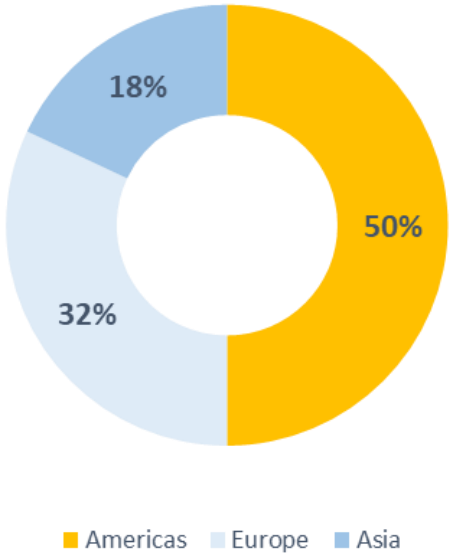
Driving excellence worldwide: powering automotive and industrial segments

Share of the revenue

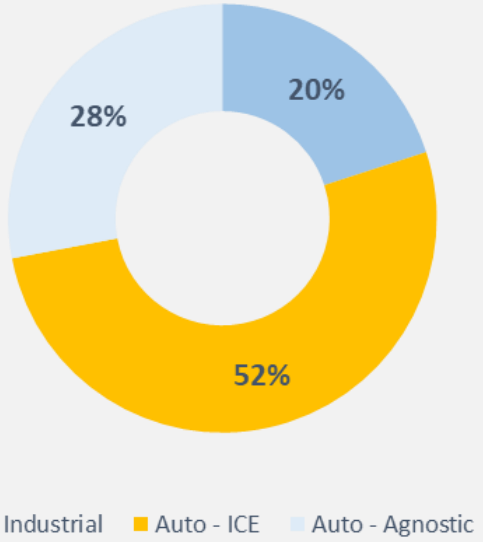
by Business



by Region



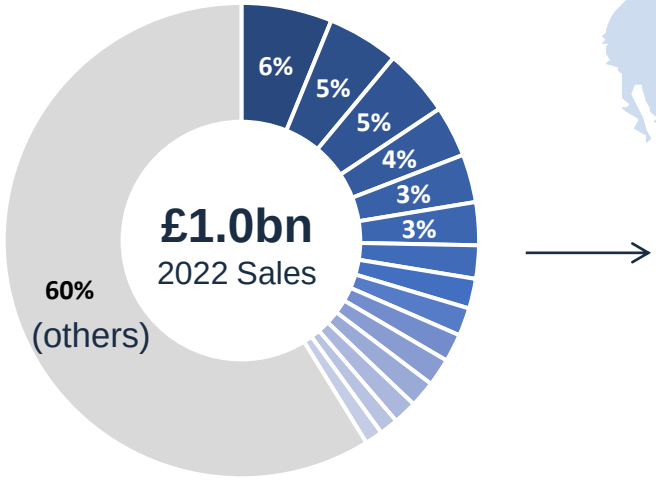
by End Market



Memo: based on 2022 published financial information in Melrose Annual Report

A diversified global customer base, whilst serving locally

Balanced customer mix



Top 10 customers represent near one-third of the revenue

Automotive OEMs

VOLVO
HONDA
The Power of Dreams
Ford
gm
STELLANTIS
TATA MOTORS
JAGUAR
LAND ROVER
长城汽车
Great Wall Motors

Automotive suppliers

LINAMAR
SCHAEFFLER
BorgWarner
MAGNA
ZF
thyssenkrupp
DENSO
BOSCH
Valeo
Miba
PIERBURG
HELLA
AAM
Stackpole
International
metaldyne

Industrials

SCANIA
HITACHI
METCO
INDUSTRIAL
CAPSTAN
ANGELINI
PHARMA
BN
Whirlpool
BLACK+
DECKER
somfy
BLIMO
SIEMENS

Strategy for success

ADAPT

To market and industry changes

GROW

Penetrate EV

PERFORM

Operational excellence

Portfolio transition *Growth* *Margin expansion*

Increasing opportunities in BEV applications, with business secured

Product developed & commercial agreement secured

Product under development

Selected examples only– not exhaustive

Potential content per vehicle

Thermal Management

Electric Pumps for battery and e-Motor cooling

CPV
up to £15

Differentials

Gears for EV differentials

CPV
up to £40

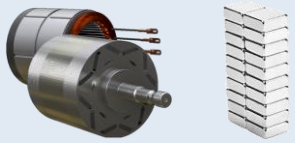
X-by-Wire

Small gearboxes for electric parking and active brakes

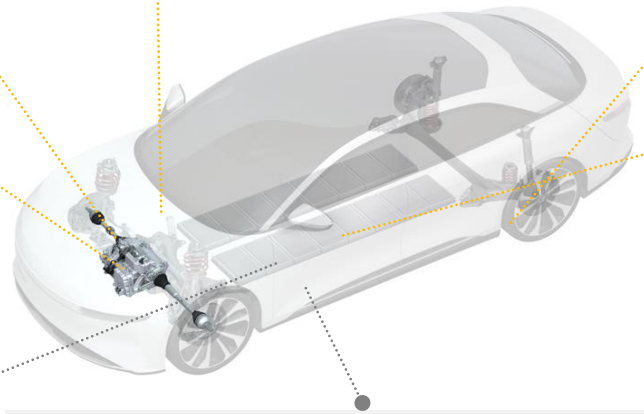
CPV
up to £15

Magnets

Rare earth magnets for BEV traction motors

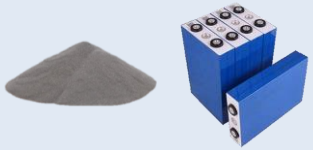


CPV
up to £150



Iron Powder

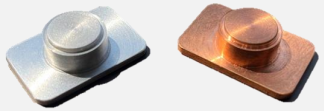
Used for Lithium Iron Phosphate batteries (LiFePO4)



CPV
up to £55

Battery Terminal

Used in cylindrical and prismatic battery cells

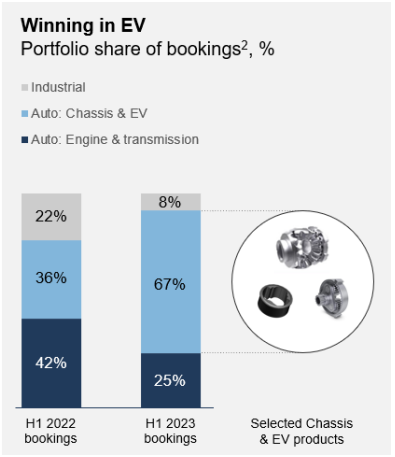


CPV
up to £60

Bus Bar

Copper bushings for high voltage Bus-Bars

CPV
up to £12



Technology Strategy & Roadmap

Market leading engineering capabilities

Global Engineering Footprint

Technology Centres		Product Engineering
Radevormwald, Germany	(Sinter)	Bonn, Germany
Cinnaminson, USA	(Powder)	Bruneck, Italy
Bonn, Germany	(Additive)	Yizheng, China
		Auburn Hills, USA
		Conover, USA

Engineering Strategy

Engineering & Product Roadmap

- Market leading global engineering capability
- Designing new products to enable next generation BEVs
- Bringing PM advantages to BEV, supporting cost-effective systems
- Developing technical expertise in magnets, launching in 2025

Market & Customer

- Taking advantage of the whole industry re-designing their system, for the next generation of EVs
- Solutions provider instead of component supplier

System Engineering & Quality Excellence

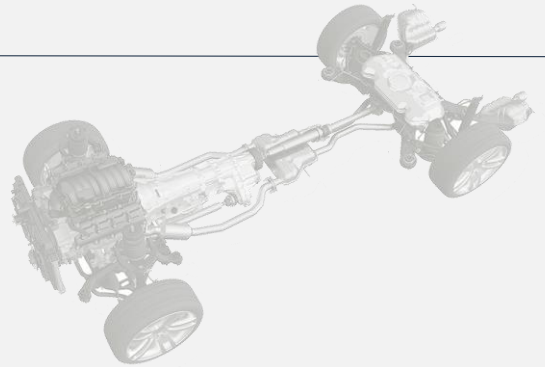
- High focus on safety critical systems
- Robust quality engineering for reliable products

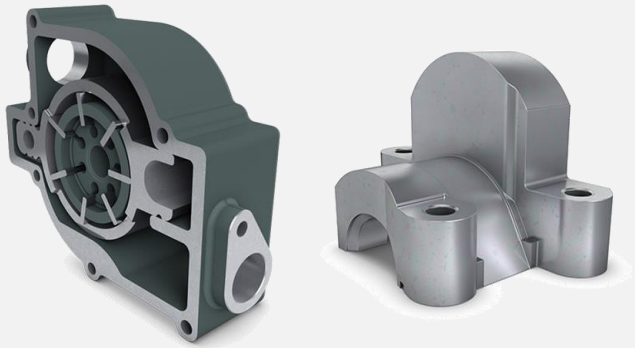
Project Management

- Strong track record of global product launch
- Leveraging excellent know-how transfer across all GKN sites to support customers locally

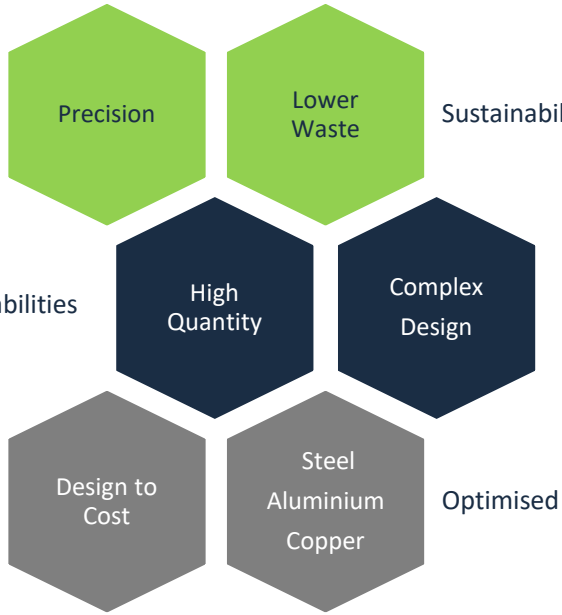
PM in automotive provides a technology advantage across vehicle platforms

ICE

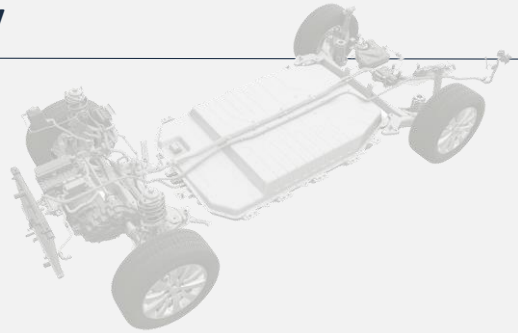




PM Capabilities

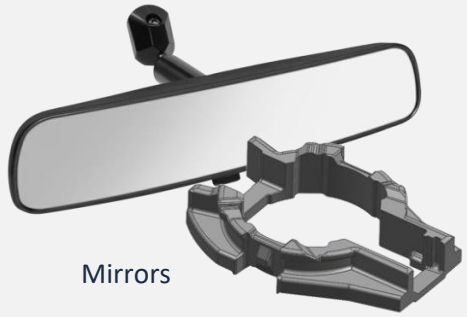


BEV



Our body & chassis products are not impacted by propulsion systems

Body & Chassis

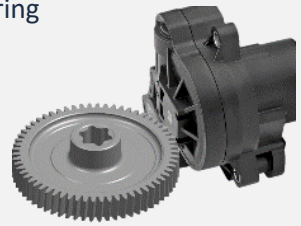


Mirrors

Shock Absorbers

Comfort Systems

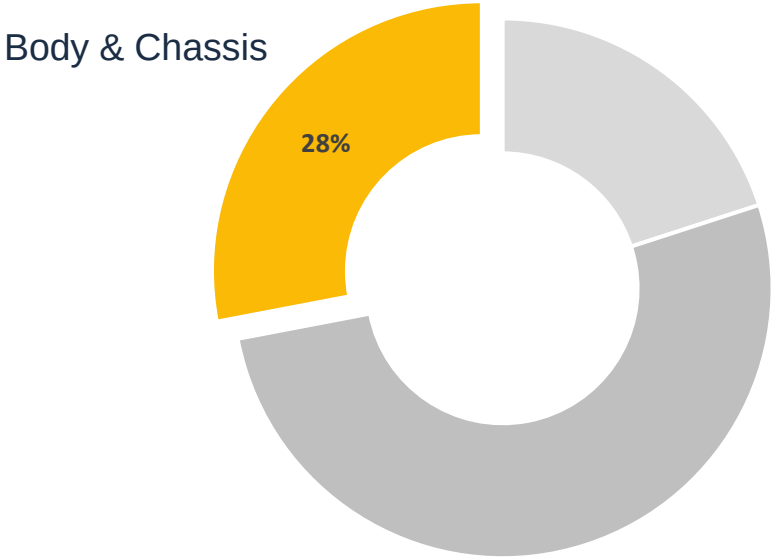
Electric Power Steering



Electric Parking brake

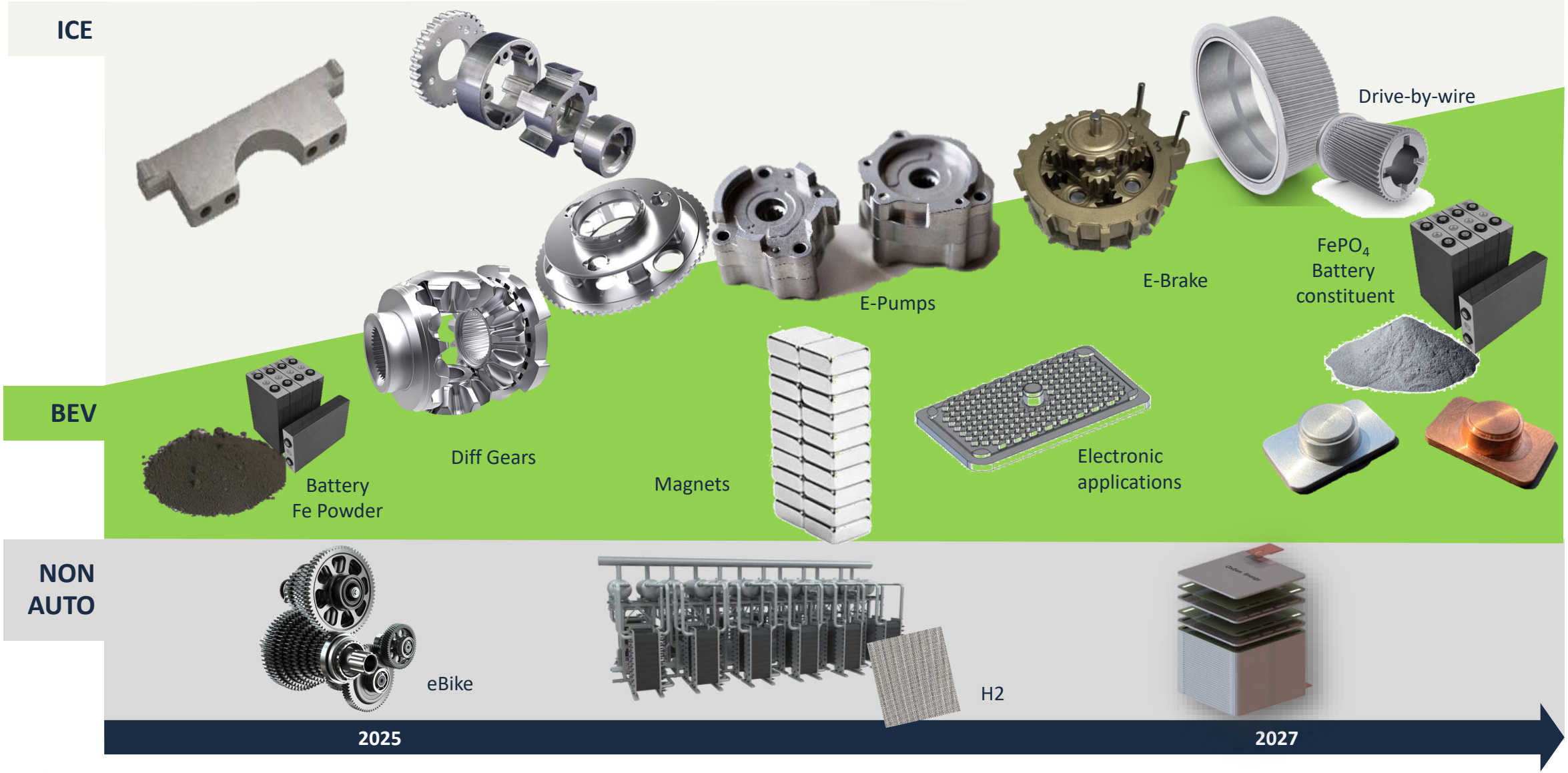
Seats

Share of PM Sales



- None of our B&C components are negatively impacted by vehicle electrification
- Some applications (e.g., comfort systems) will actually benefit from increased fit rates on BEVs

On the way to transition our capabilities to new applications



Identified product groups: sparking innovation in BEV applications

On the initial BEV platforms, OEMs pursued a rapid market entry strategy.

- Many of the car systems (i.e. brake, steering) were carried-over from conventional engines platforms.

Current re-engineering activities from OEMs and Tier 1s create opportunities for PM to add value:

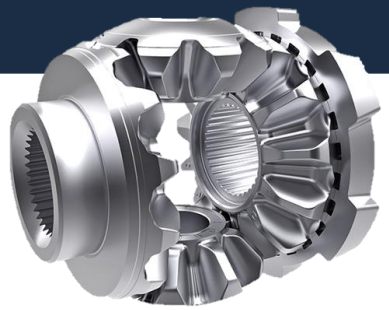
- System redesign for a better BEV integration
- Cost reduction activities
- Overall optimisation to increase range and efficiency

New environmental restrictions requiring redesign offering additional opportunities.

Thermal Management

X-by-Wire

E-Drivetrain



Battery & Electronics

Thermal Management

Potential CPV
Up to £15

Efficient electric oil pumps, HVAC and heat sinks are critical in BEV's

On BEV the thermal management is key and significantly different compared to ICE

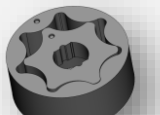
- E- motor cooling for high efficiency
- Battery performance and longevity (incl. during charging)
- Power electronic performance
- Cabin comfort

By re-designing the system, PM is the optimum technology to improve component manufacturing and performance efficiency:

- Cost effective on large scale production
- Wide range of material selection (thermal conductivity)
- Ideal precision range to avoid machining

New business wins

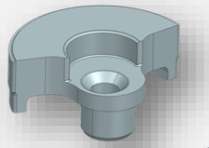
Gerotor for e-axle cooling



WODEER 沃德尔

GAC GROUP

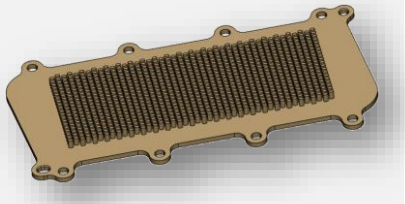
HVAC Balancing Weight



HANON SYSTEMS

Customer Interest

Heat Sink



X-by-Wire

Potential CPV
Up to £15

Increasing use of electromechanical actuation to replace hydraulic system

On ICE cars, electromechanical actuators are already used, while in electric vehicles additional electromechanical systems come into play:

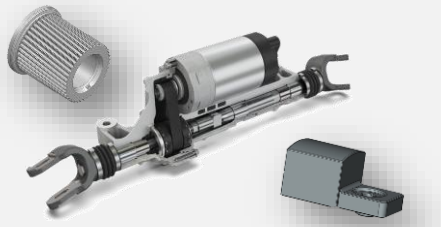
- Active brake
- Steering incl. rear wheel steering

PM is the ideal process for small gearboxes:

- Cost effective high precision components
- 100% quality check for safety components

New business wins

Rear Steer System



Customer Interest

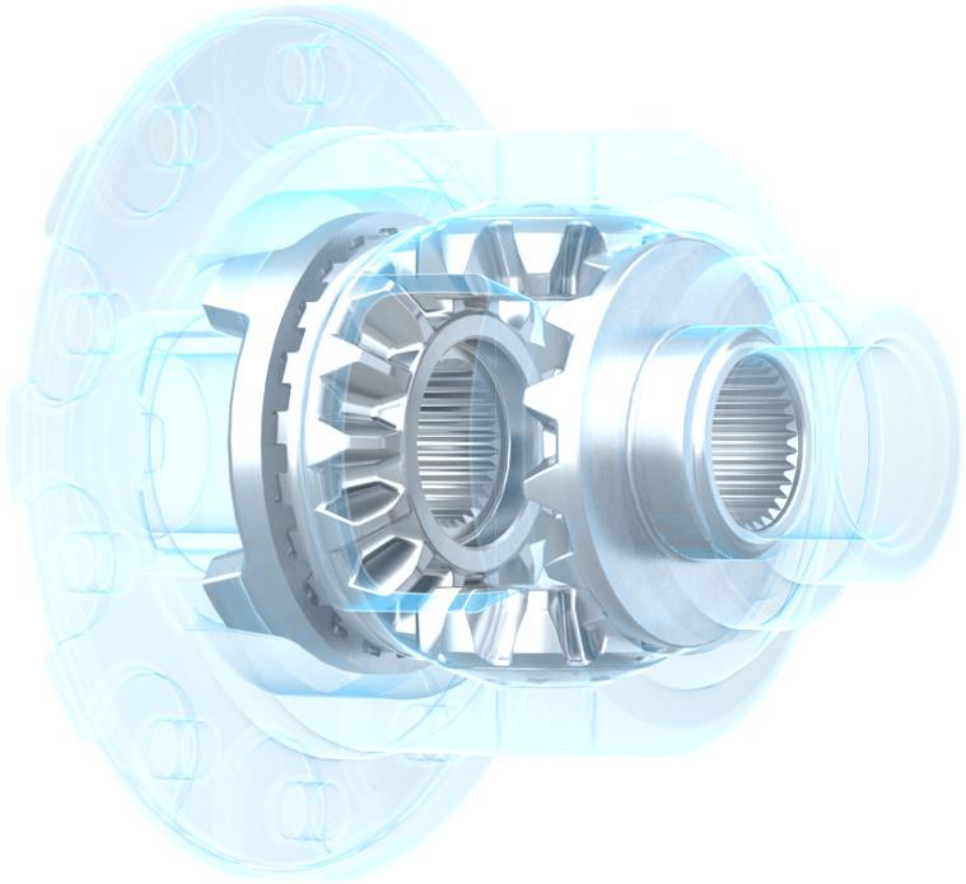
Electro-Mechanical Brake

SCHAEFFLER

High Performance Powertrain components

Potential CPV
Up to £40

High performance differential gears bringing benefit to electric drivetrain



Within BEV architecture differential gears are gaining importance:

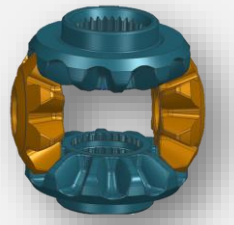
- High number of differential systems in vehicle (one-third of vehicles have a front and rear e-axle with one differentials per e-Axle)
- Active role in energy recuperation during braking

PM can bring unique advantages:

- Implement complex geometries, suitable in particular for lock clutch differential design
- Reduce material waste thanks to pre-shaped raw material billet
- Opportunity to downsize gear design due to enhanced material properties: isotropic structure, clean steel and special case hardening

New business wins

Customer Interest



Connecting elements (Battery and Electronic)

Potential CPV
Up to £60

Connecting Elements and Battery Terminals in complex shapes with PM technology

Connecting elements are essential for the efficient and reliable operation of an electric vehicle electrical system

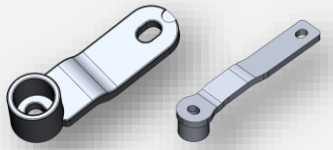
- Bus bars link individual cells in the battery pack.
- Connect the battery to the inverter and the various electrical systems.
- Battery terminals are connecting the Anode and Cathode of the single cell to the circuits

PM can bring unique advantages:

- Copper and Aluminium components
- Geometry freedom to produce multilevel battery terminal, used in prismatic cell
- High conductivity material

Customer Interest

Aluminium & Copper Connecting Elements

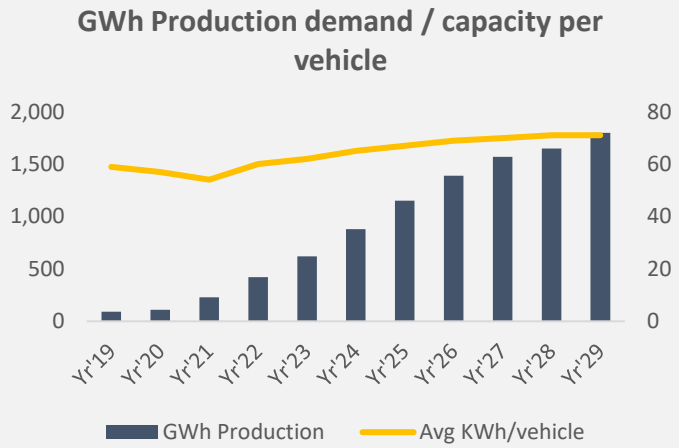


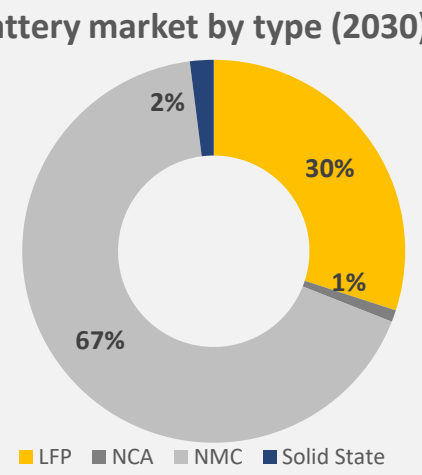
Battery Terminals

Battery Raw Material

Potential CPV
Up to £55

PM powder for batteries: LFP batteries offer great advantages to traditional NMC batteries





Despite their slightly lower power density, LiFePO4 batteries offer several benefits:

- Cost-effective: iron is a much cheaper material
- Safer: lowest risk of fires
- Load cycle up to 100% without degradation

GKN POWDER METALLURGY

Supply iron powder

Develop and supply iron phosphate (avoids impurity issues)

Precursor Materials (pCAM) Manufacturers → **Cathode Active Materials (CAM) Manufacturers** → **LFP Battery Producers/OEMS**

- Raw material supply in USA and Europe

Magnets

Increasing the CPV

Attractive opportunity to expand into e-motor magnets

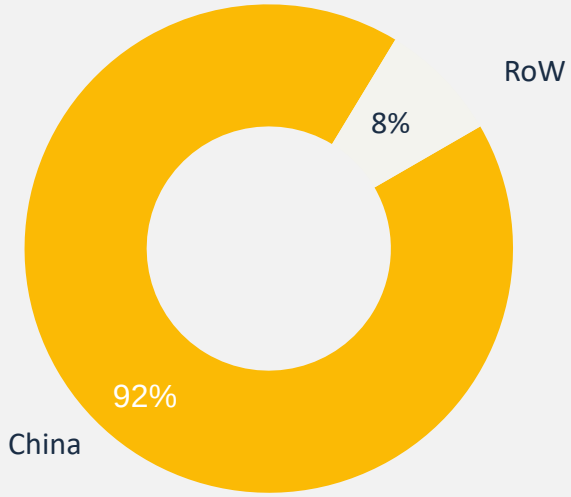
Large market and CPV[1]

- Magnets are key for e-motors

- Sizeable market potential of up to £10bn by 2030
- Rare-earth magnets are a core PM product; expertise suited to manufacturing

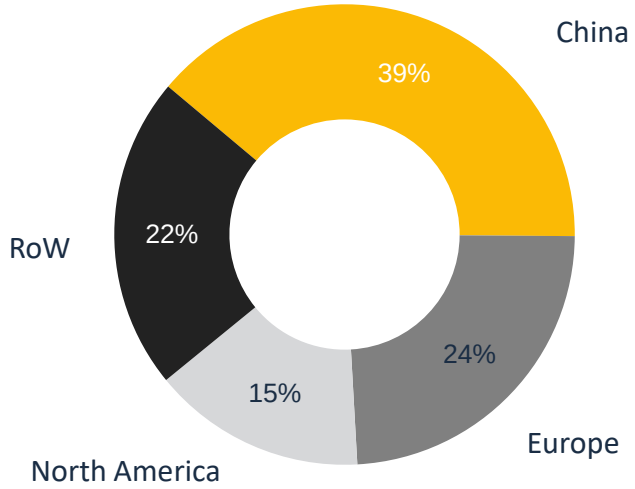
We reduce sourcing risk

- Current magnet production capacity



We reduce production risk

- EV production by 2030



Our approach

→ Sustainable and China-independent supply chain
→ Manufacture in Europe and USA to satisfy local customer requirements
→ Become a key player in North America and Europe, sourcing outside of China

1 Content Per Vehicle, 2 based on IHS forecasts Dec 22

Our go to market and industrialisation plans are being executed

Targeting both OEM's and Tier 1's

- Leveraging existing relationships

Compelling value proposition

- De-risking the supply chain
- Supporting local content requirements
- Strong presence in focus regions

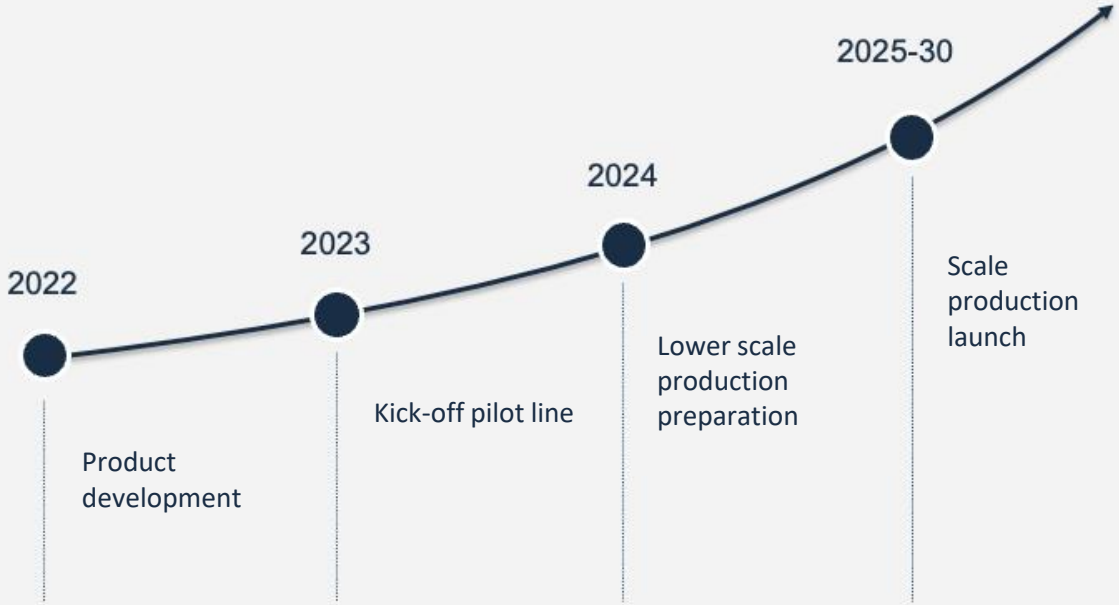
Differentiated positioning

- Automotive specialist
- Advanced material science & process expertise
- Local support and development capabilities

Creating business opportunities

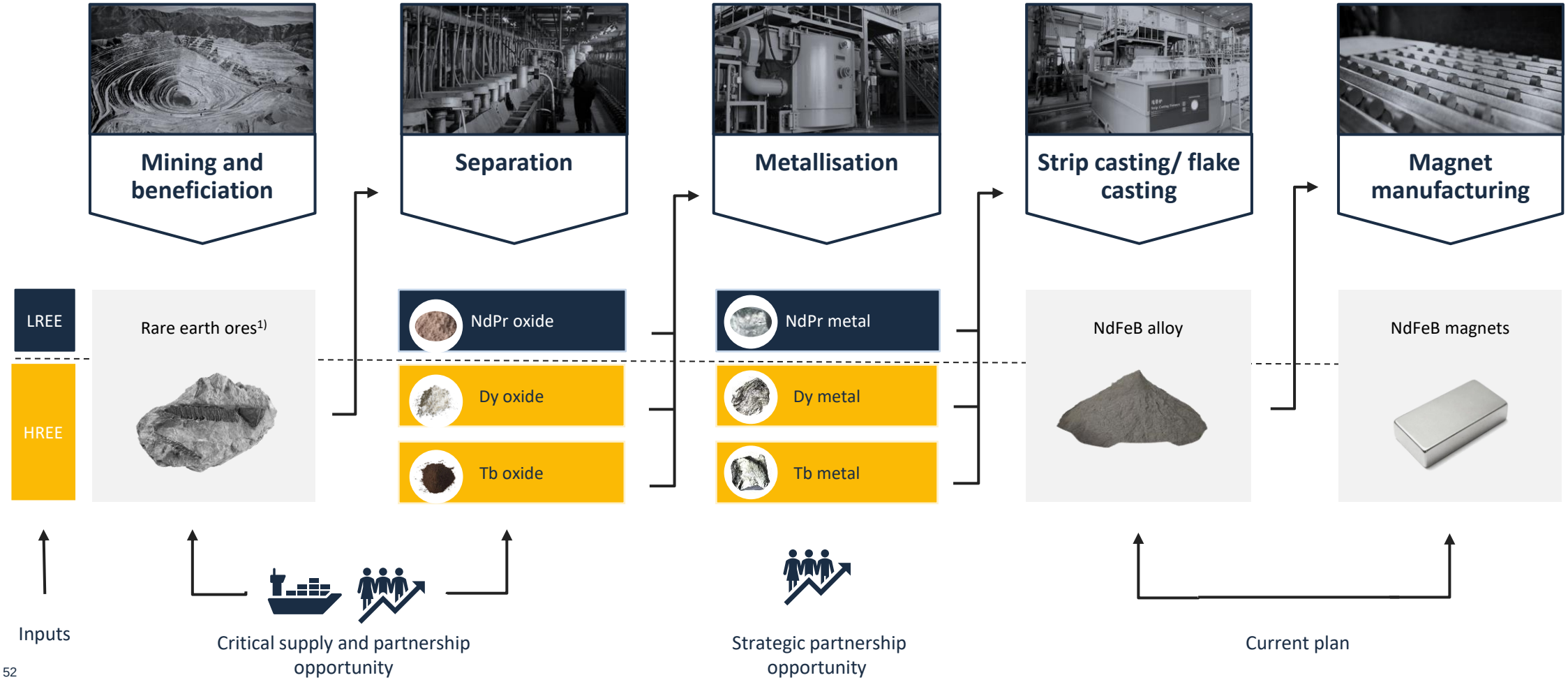
- Schaeffler MOU in place
- Extensive discussions with major BEV-players

Industrialisation Journey



Connecting the value chain for reliable sourcing of magnets

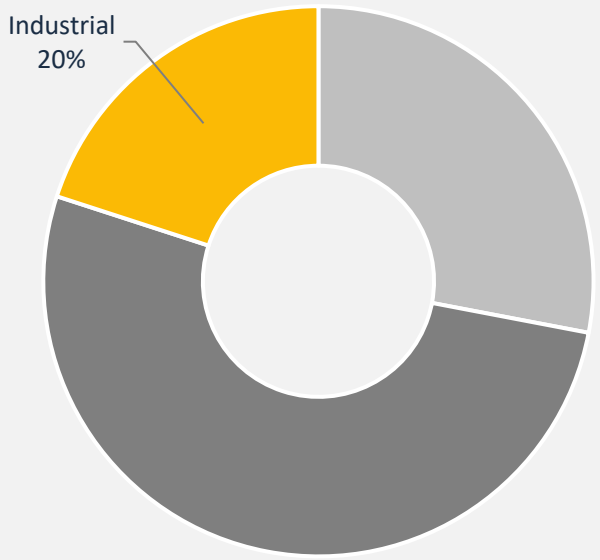
Process Steps



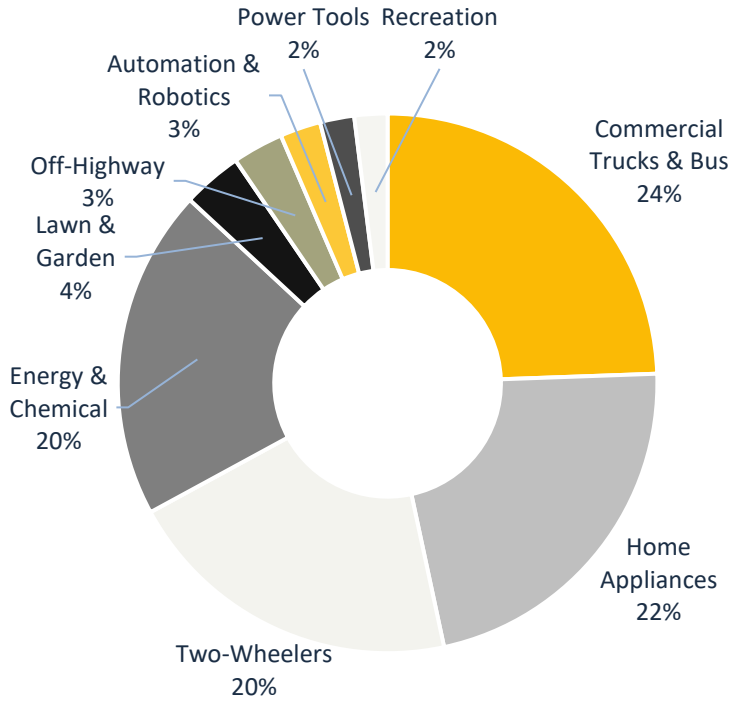
Beyond the Car Market
&
Additive Manufacturing

Green transition also attracting opportunities for our Industrial segment

A relevant part of our business today



With diverse applications



And opportunity to expand

- The green transition is evident in all other non-automotive applications
- Hydrogen generation and storage
- Green-Hydrogen generation is replacing other processes from methane
- Alternative e-mobility growing, such as e-bikes and -scooters
- ICE elimination in other vehicle types, such as lawn and garden

Memo: based on 2022 published financial information in Melrose Annual Report

Possibilities cover a vast range of the industrial sector

Industrial – Focus on high growth sectors

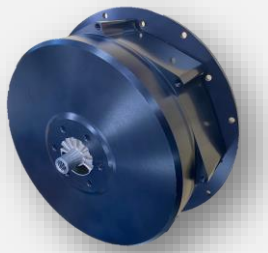
Filters are key part of our Industrial portfolio

There is a growing demand for electrolysers in the market, which brings opportunity

- Porous Transport Layer is a key component for the PEM electrolyser
- Efficient PTL offers the opportunity to reduce the cost of the equipment
- GKN offers a highly efficient PTL material

Gearbox for e-Bike developed from Valeo with high PM content

Premium segment: high torque motor for high-Speed E-Bike



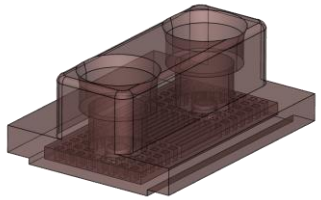
Amplifying possibilities with Additive Manufacturing

Low-scale metal additive manufacturing

Artificial Intelligence requires significant computational power.

- The generated heat quantity requires specific solutions
- Housing for microprocessor with internal cooling channel
- Design not feasible with any other production technology

cerebras



Individual solutions for electric luxury cars

- Steering wheel cover for Cadillac Celestiq
- Move AM from Prototyping to small series

gm

Key Takeaways

- Our industry is changing rapidly
- Powder Metallurgy is adapting and developing new solutions for BEV applications
- We have clear opportunities in both automotive and industrial segments
- Magnets and battery materials add a prospect to grow above the market
- We are focussed on maintaining our market and engineering leadership to drive growth, whilst improving our financial results

LET'S SHAPE OUR FUTURE

GKN POWDER METALLURGY

Who is GKN Powder Metallurgy

Our automotive solutions

Let's shape our future

gknpm.com

AUTOMOTIVE OVERVIEW

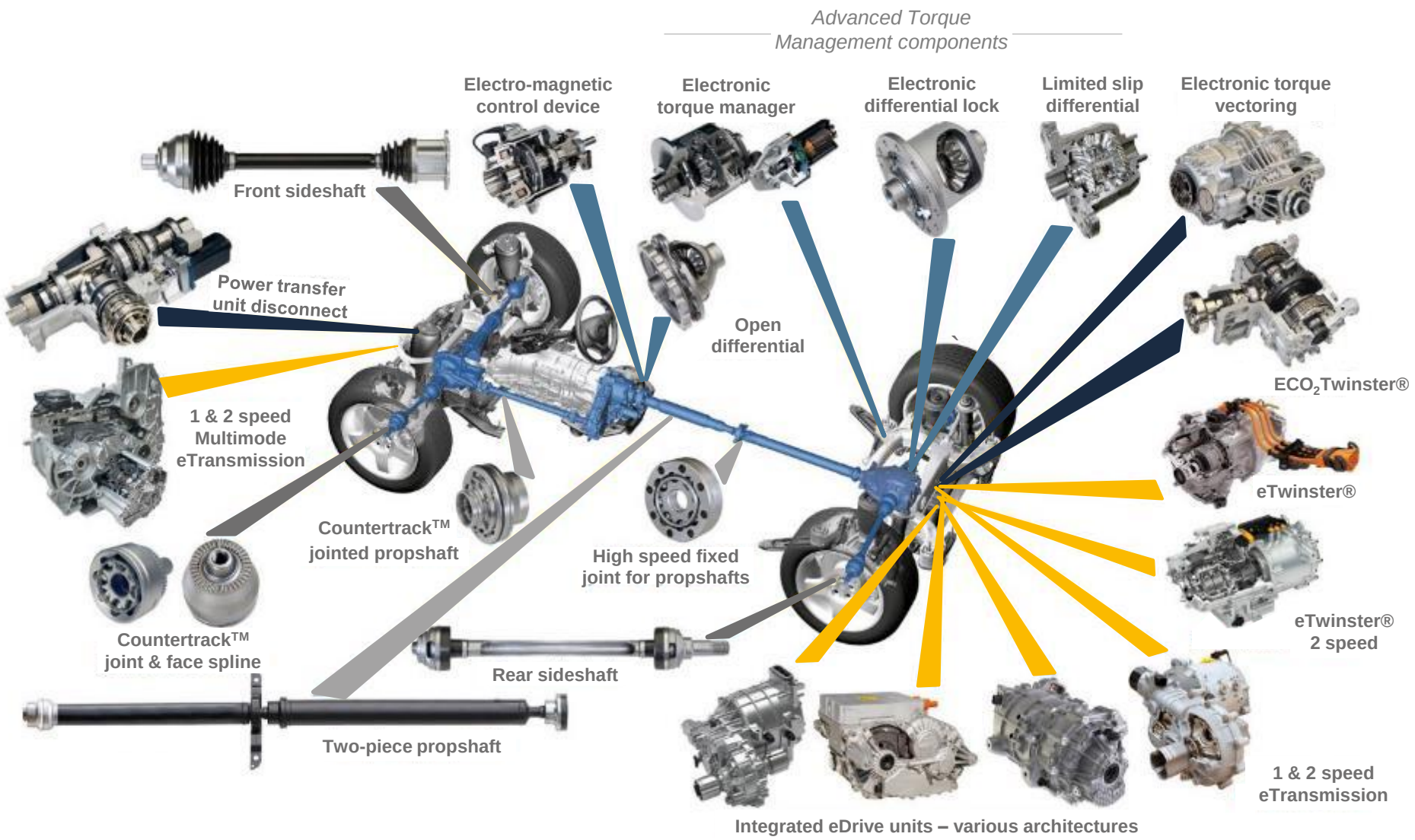
GKN Automotive Overview

The information in this presentation is proprietary and confidential and shall not be disclosed to or used by a third party unless specifically authorised by the relevant GKN company.

October 2023

GKN Automotive business at glance

GKN Automotive comprehensive product portfolio

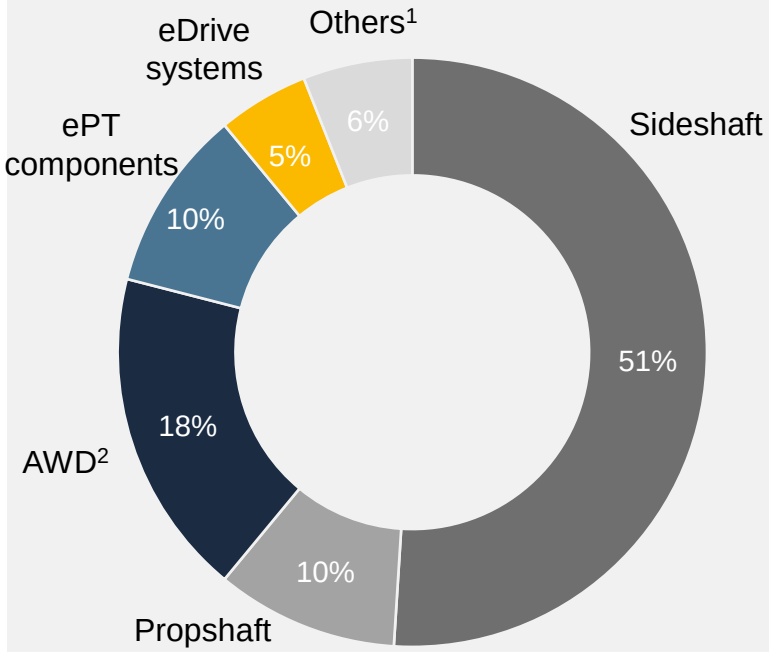


- **Sideshafts**
- **Propshafts**
- **AWD systems**
- **eDrive systems**
- **ePT components**

CONFIDENTIAL

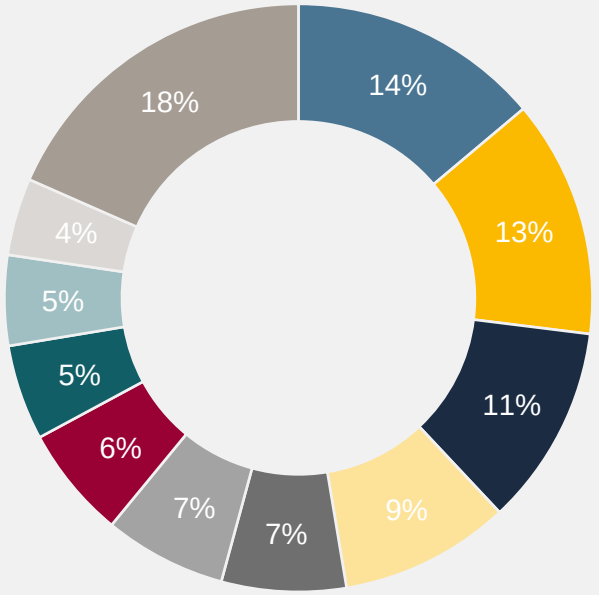
GKN Automotive business at glance

Product mix, 2022[1]



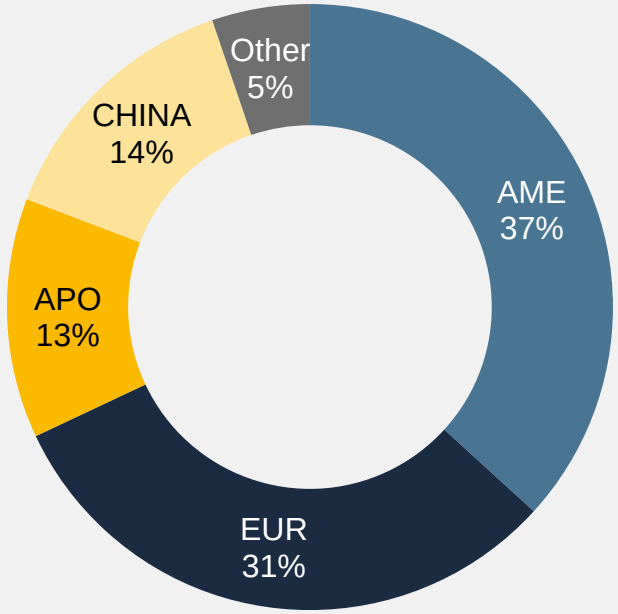
Strong mix of conventional & new technologies

Customer mix, 2022[1]



Balanced customer portfolio

Geographical Mix 2022[1]



Balanced business across geographies

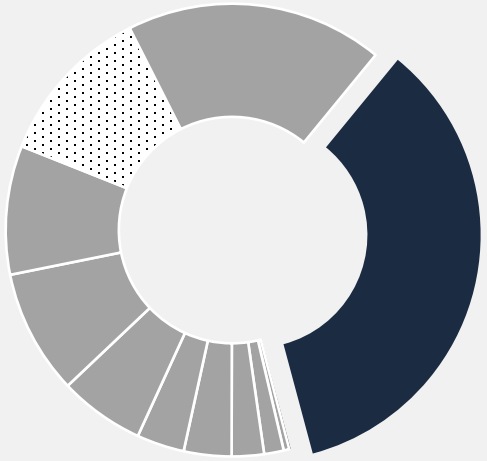
A globally balanced business across products, customers and regions

[1] Based on 2022 Actuals, Includes JVs, FSL, Aftermarket, Cylinder Liners at GKN share; [2] All-Wheel Drive; [3] Includes Niche, Motorsports, and Aftermarket
[4] Internal combustion engine (ICE), battery electric vehicle (BEV); BEV includes fuel cell, series-hybrid and REEV vehicles

CONFIDENTIAL

We are the global leader in Drive systems

Sideshafts



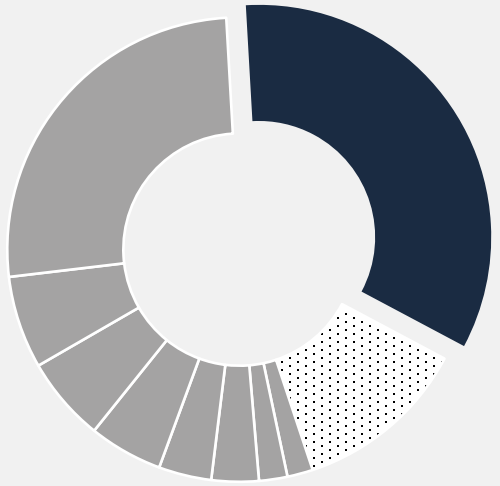
Global Leader

Propshafts

Global Leader

ePT components

Advanced Torque Management components



Global Leader

Sideshaft and propshafts based on 2022 GKN Market Share Model (Addressable Market); ePT components assessment based on external study

CONFIDENTIAL

We work with 90% of global OEMs

Americas

Europe

Asia-Pacific

China

Pure-play EV OEMs

Strongly positioned with traditional and emerging OEMs across all regions

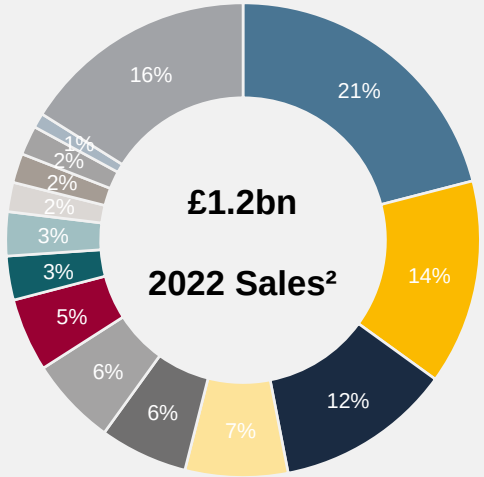
CONFIDENTIAL

We are well positioned to capture ongoing growth in China

Key highlights

- **30+** years of experience through successful JV with HASCO Group
- **#1** market leader in sideshafts & propshafts
- **10** production sites
- **9** live or launch-phase eDrive programmes

Balanced customer case



Selected local OEM's brands

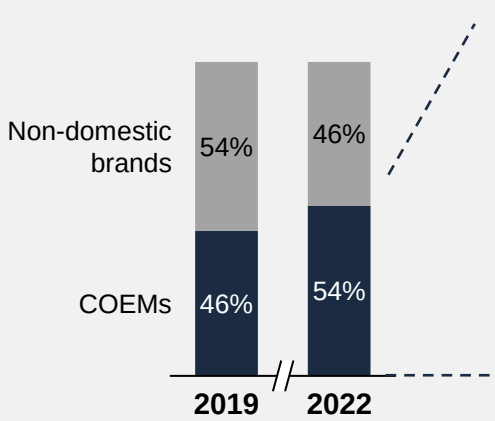
CHANGAN, BYD, 长城汽车 Great Wall Motors, HAVAL, 红旗, 广汽传祺, AION 埃安, 吉利汽车 GEELY AUTO, ROEWE, MG, JAC 江淮汽车, 腾势, 理想, JMC

Selected global OEM's brands

TOYOTA, STELLANTIS, Mercedes-Benz

Increasing COEMs share in China

Brand origin of LV production volumes in China[3]



Top 5 COEMs

1. BYD ✓
2. CHANGAN ✓
3. GEELY ✓
4. CHERY ✓
5. SAIC 上汽集团 SAIC MOTOR ✓

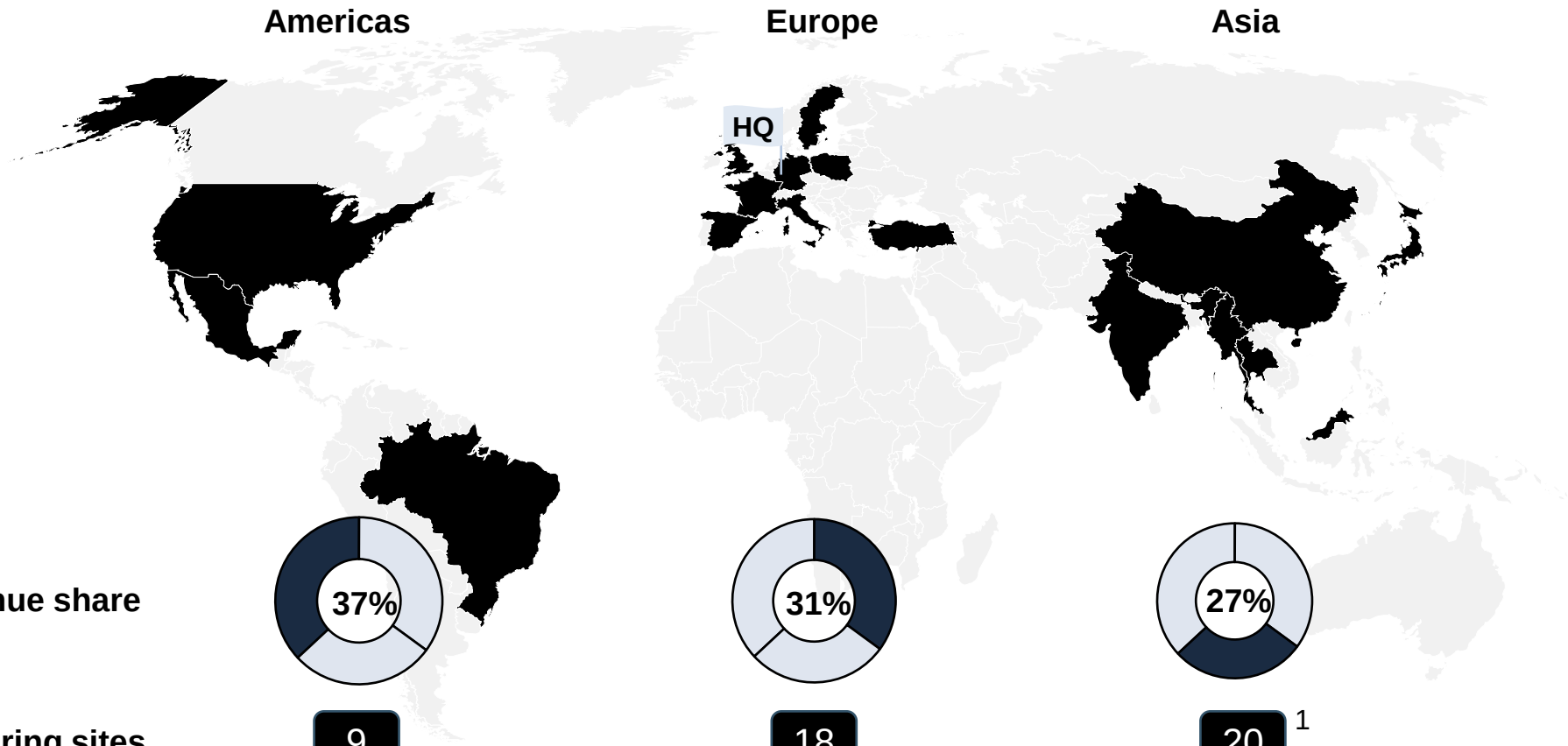
✓ *Customers of SDS*

- GKN Automotive already supplies top Chinese OEMs in their domestic market
- Target to further increase share of sales with COEMs

1. Including China JV employees; 2 JV sales at 100% of which GKN has 50% share 3. Categorization based by vehicle brand - S&P production forecast of Sep 2023

CONFIDENTIAL

We have a well-balanced global footprint



	Americas	Europe	Asia
2022 revenue share	37%	31%	27%
Manufacturing sites	9	18	20 [1]
Technology centres	1	2	3 [2]

1 Incl. 10 from JV; 2 Incl. 1 from JV

CONFIDENTIAL

Our capabilities based on a strong manufacturing expertise and engineering / technology know-how

Manufacturing and process capabilities

Precision Forming

- Forgings for CV joints
- 9 sites globally

CNC Machining

- Gears and functional surfaces in CV joints
- 31 sites globally

Heat treatment

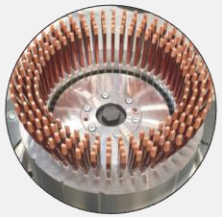
- Induction hardening, carburising and carbo-nitriding, of machined components
- 31 sites globally

Surface treatment

- Painting of parts
- 11 sites globally

Automated Assembly

- Full / largely automated assembly of CV joints, driveshafts, AWD & eDrive systems & components
- 26 sites globally



eMotor assembly

- Full vertical integration of eMotor assembly under industrialisation

Engineering and technology know-how

Mechanical engineering

- +2,000 engineers WW
- +1,500 patents granted
- 6 technology and innovation centers

SW development

- 15+ yrs of Auto SW & 5+ yrs of traction inverter experience
- AUTOSAR SW history / ASPICE L2 proven processes
- +300 engineers across Germany, US, and India

Systems integration

- System design support, simulation support, problem resolution support, validation support
- 11 application eng and 4 vehicle testing facilities

CONFIDENTIAL

GKN Automotive business priorities

We continue working on our priorities

Focus next slides

① Portfolio Transition

- Accelerate the electrification transition → focusing commercial operating model
- Adapt portfolio and secure market leading EV order intake
- Win profitable, niche eDrive system programs

② Margin Expansion

- Streamline our industrial footprint, shifting towards Best-Cost-Countries
- Improve operational efficiency through automation, productivity and continuous improvement initiatives

③ Cash Generation

- Emphasize quality of earnings (cash conversion)
- Improve data visibility and focus strategy on cash control

CONFIDENTIAL

1

Our portfolio is increasingly propulsion agnostic

Product	Impact of electrification	Share of sales 2022 (%)	Share of sales 2028F[1] *(%)*	Strategy
Sideshafts 	↗	~70%	>80%	• Market leader for both ICE & EVs • Growth forecast through content increase and further share gains
ePT components 	↗			• Market leader in advanced differentials • Growth forecast as addressable market increases
eDrive systems 	↗			• Prudent investment in targeted technology developments and selective program choices to deliver profitable growth
Propshafts 	↘	~30%	<20%	• Limit investments, maximising utilisation of existing assets • Maximise portfolio profitability and cash generation
AWD systems 	↘			• Heritage capabilities, very relevant as portfolio transitions to ePT components

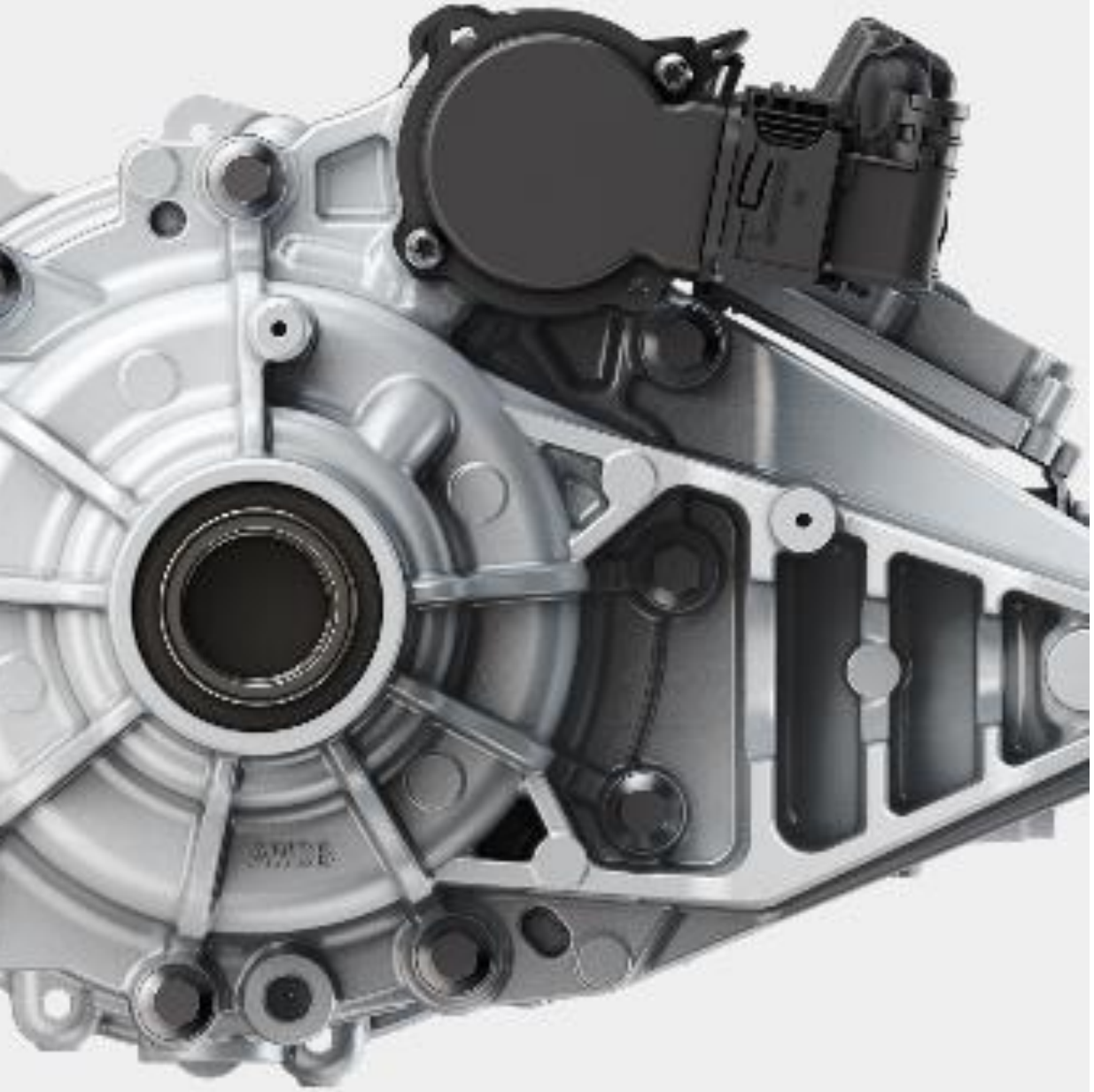
↗ Positive impact from electrification

↘ Negative impact from electrification

1 Estimated share of sales based on market data and GKN Automotive internal order book and revenue forecasts

CONFIDENTIAL

1



Our product portfolio strategy

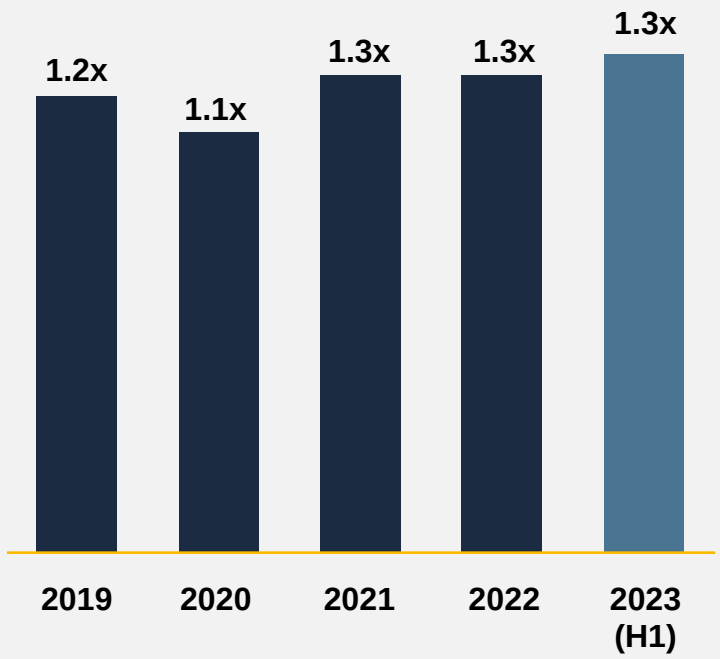
Propshafts Manage	**Sideshafts** Grow
AWD + ePT Components Transition	**eDrive Systems** Selective

1

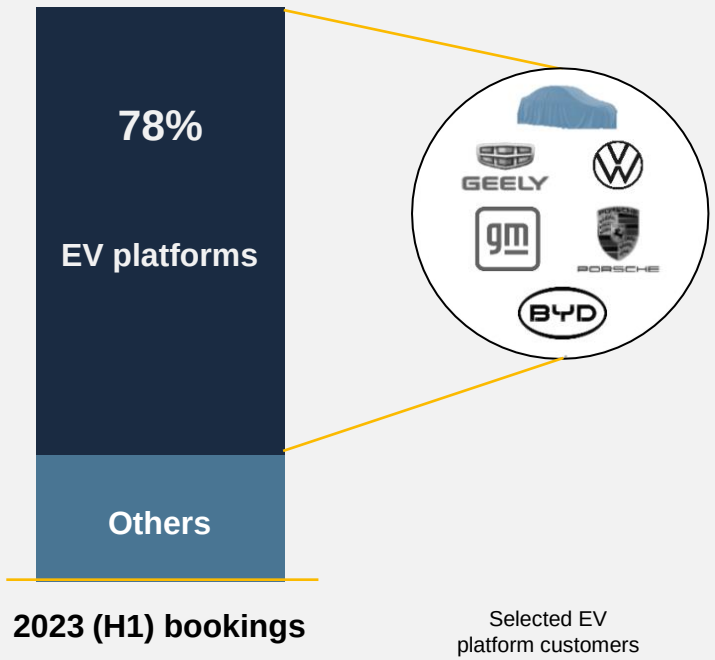
Strong bookings value, heavily focused on EVs and above target profit margins

H1 performance

Driving growth
Book-to-bill ratio[1]



Winning in EV
H1 order book[2], %



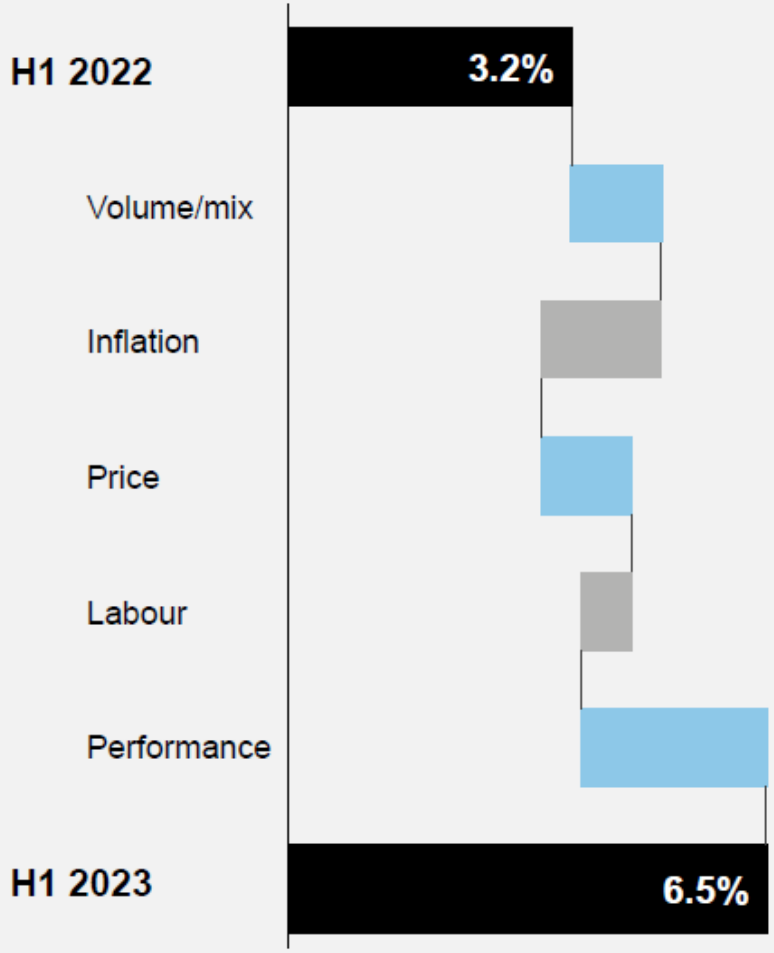
- Record level of new business bookings secured in H1 2023
- >£3bn lifetime revenue awarded at a book-to-bill ratio of .1.3x
- 78% of new business awarded on EV platforms (73% pure BEV)
- Awards from Global, local Chinese and pure BEV customers
- Profitable new business wins supporting margin expansion objectives

1. Book-to-bill ratio refers to the ratio of revenues to lifetime revenue of new business bookings within the given time-period, reported FX rate, excluding aftermarket, cylinder liners and freight services 2. Lifetime revenue split of business booked in H1 2023

CONFIDENTIAL

We are on-track to expand our profit margin

Our financial model to drive margin expansion



Principle

- **Volume/Mix:** Incremental volume provides margin tailwind
- **Inflation/Price:** Price recoveries and purchasing productivity offset material inflation
- **Labour/Performance:** Labour inflation offset by productivity improvements and continuous improvement initiatives

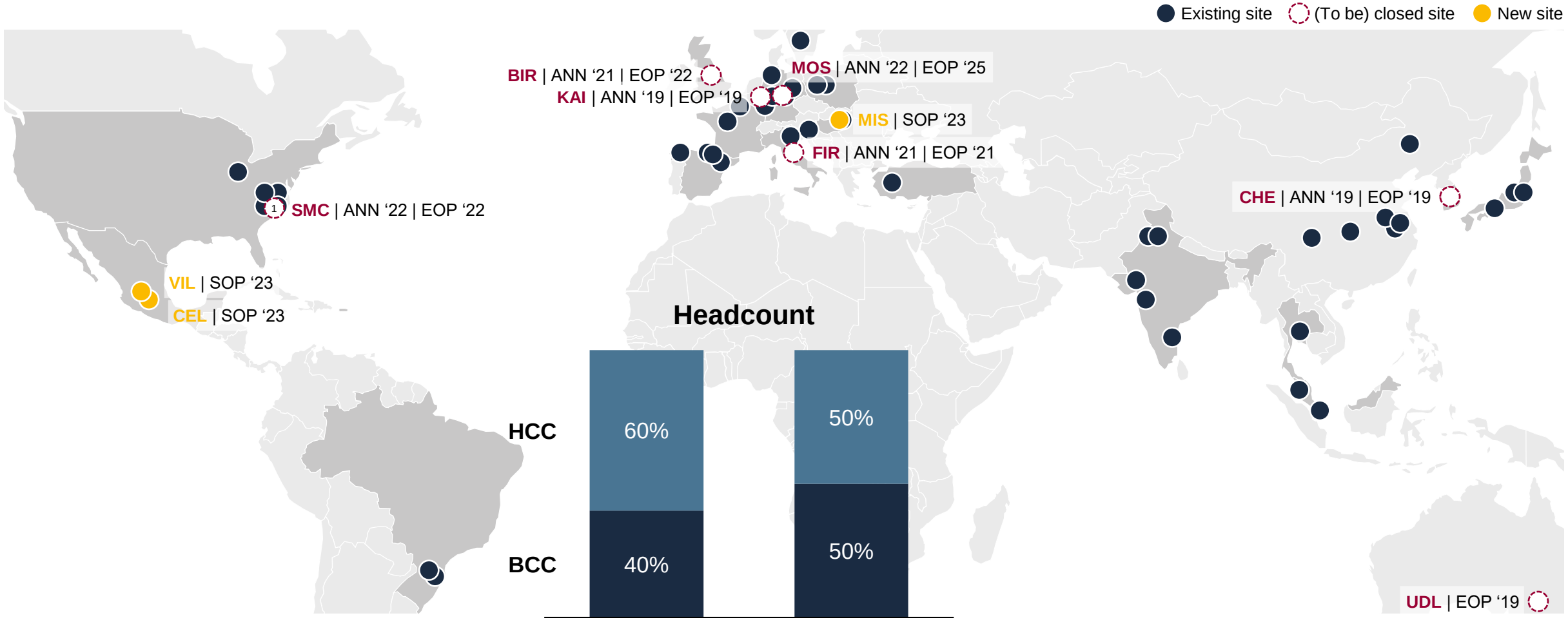
H1 2023 proof points

- £3bn of new business bookings, above target margins; consistently >100% book:bill ratio
- >75% of direct and indirect material inflation offset by purchasing efficiencies and price recoveries
- Continuous improvement initiatives (productivity efficiencies and automation) offsetting labour inflation and incremental benefits from completed/ongoing restructuring

CONFIDENTIAL

We develop our footprint, shifting towards more cost-effective locations…

CONFIDENTIAL



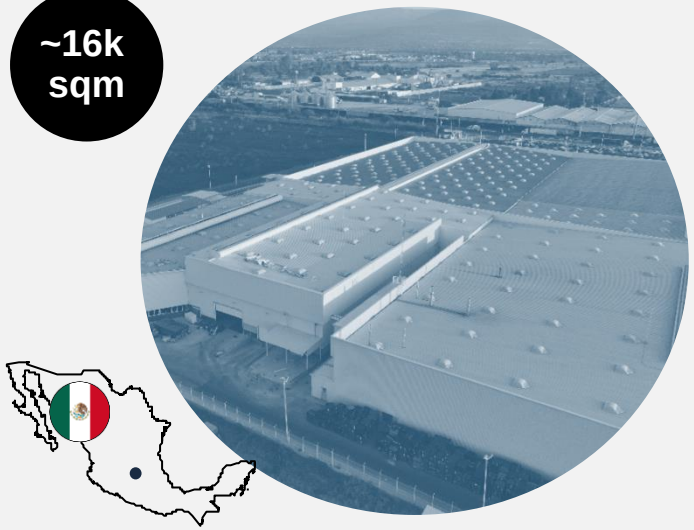
ANN: Announcement Date | EOP: End of Production | SOP: Start of Production
1 Closure of SMC; transfer of SPF planned but not yet approved
2 Excluding Aftermarket sites

Proprietary and confidential restrictions on title slide apply throughout this presentation
CONFIDENTIAL

2

...started production in new plants in Mexico and Hungary

~16k sqm

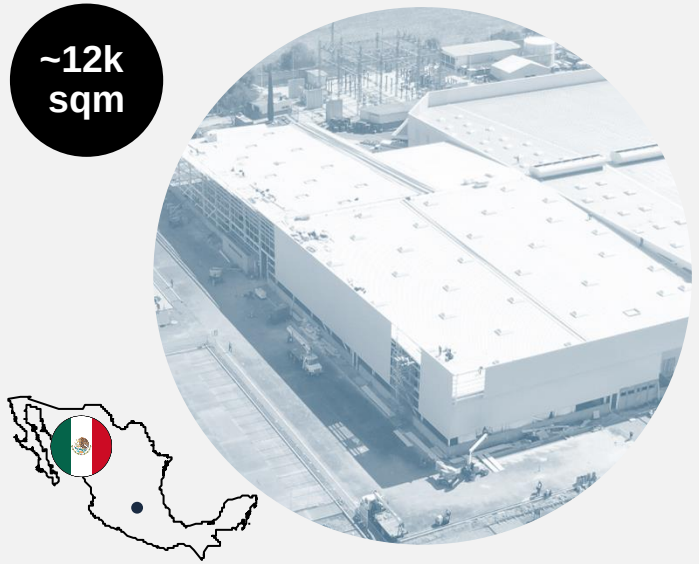


Mexico
Villagran

Operational as of March 2023

- Production expansion to accommodate sideshaft business growth
- Additional raw material warehouse to improve process flow

~12k sqm



Mexico
Celaya

Operational as of March 2023

- Production expansion to accommodate sideshaft business growth
- New engineering centre consolidating offices, testing, prototyping

~60k sqm[1]

Hungary
Miskolc

Operational as of Sep 2023

- New site to increase BCC production share & accommodate business growth
- 2nd building step launched to accommodate component production

1 Includes 2nd building construction step

CONFIDENTIAL

Summary

GKN Automotive – Key Takeaways

- We are the **#1 global drive system supplier** with a well-balanced product, customer and geography mix
- We have developed strong, long-lasting partnerships with our **global customer base** and are well positioned to capture growth in China
- Our **comprehensive drive system portfolio** is well aligned to the needs of electrified platforms
- We are making a significant impact on our operating cost base through investments in **footprint optimisation and productivity improvements** to enable significant margin expansion

CONFIDENTIAL


AUTOMOTIVE
TECHNOLOGY

GKN Automotive Technology

The information in this presentation is proprietary and confidential and shall not be disclosed to or used by a third party unless specifically authorised by the relevant GKN company.

October 2023

Drivetrain and Powertrain Architectures

Drivetrains and Powertrains

Architectures and Products

Drivetrains and Powertrains

Architectures and Products

- Front Wheel Drive
- Front Sideshafts

Drivetrains and Powertrains

Architectures and Products

- Front Wheel Drive
- Front Sideshafts

- All-Wheel Drive
- Rear Sideshafts and Propshaft

Drivetrains and Powertrains

Architectures and Products

- Front Wheel Drive
- Front Sideshafts

- All-Wheel Drive
- Rear Sideshafts and Propshaft

- Complete integrated All-Wheel Drive
- Differential, PTU, RDU & Software

Drivetrains and Powertrains

Architectures and Products

- Front Wheel Drive
- Front Sideshafts

- All-Wheel Drive
- Rear Sideshafts and Propshaft

- Complete integrated All-Wheel Drive
- Differential, PTU, RDM & Software

- Hybrid Electric Vehicle
- eTransmission, Motor, Inverter & Software

Drivetrains and Powertrains

Architectures and Products

- Front Wheel Drive
- Front Sideshafts

- All-Wheel Drive
- Rear Sideshafts and Propshaft

- Complete integrated All-Wheel Drive
- Differential, PTU, RDM & Software

- Hybrid Electric Vehicle
- eAxle, Motor, Inverter & Software

- Electric Vehicle
- eTransmission, Motor, Inverter & Software

Drivetrains and Powertrains

Architectures and Products

- Front Wheel Drive
- Front Sideshafts

- All-Wheel Drive
- Rear Sideshafts and Propshaft

- Complete integrated All-Wheel Drive
- Differential, PTU, RDM & Software

- Hybrid Electric Vehicle
- eAxle, Motor, Inverter & Software

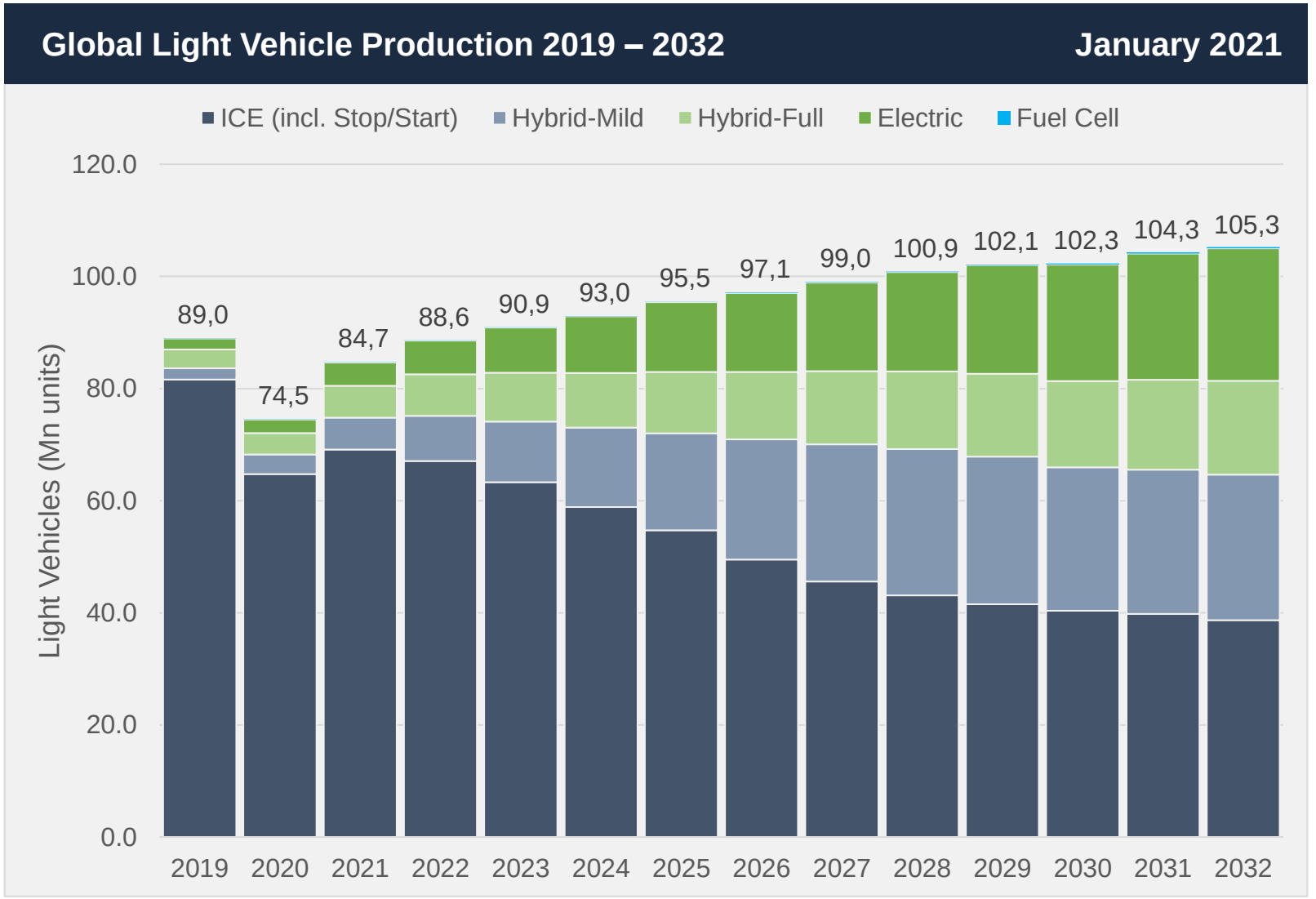
- Electric Vehicle AWD
- eTransmission, Motor, Inverter & Software

Light Vehicle Market

Market Analysis

Propulsion System - Global volume projection

Propulsion System Design	Example
FCV (Fuel Cell Vehicle)	 *Toyota Mirai*
BEV (Battery Electric Vehicle)	 *Audi e-tron GT*
Hybrid-Full *(incl. PHEV)*	 *Volvo XC90 T8*
Hybrid-Mild *(<65V System Voltage)*	 *Fiat 500 MY 2020 Hybrid*
ICE *(incl. stop/start)* (Internal Combustion Engine)	 *Mazda CX-5*



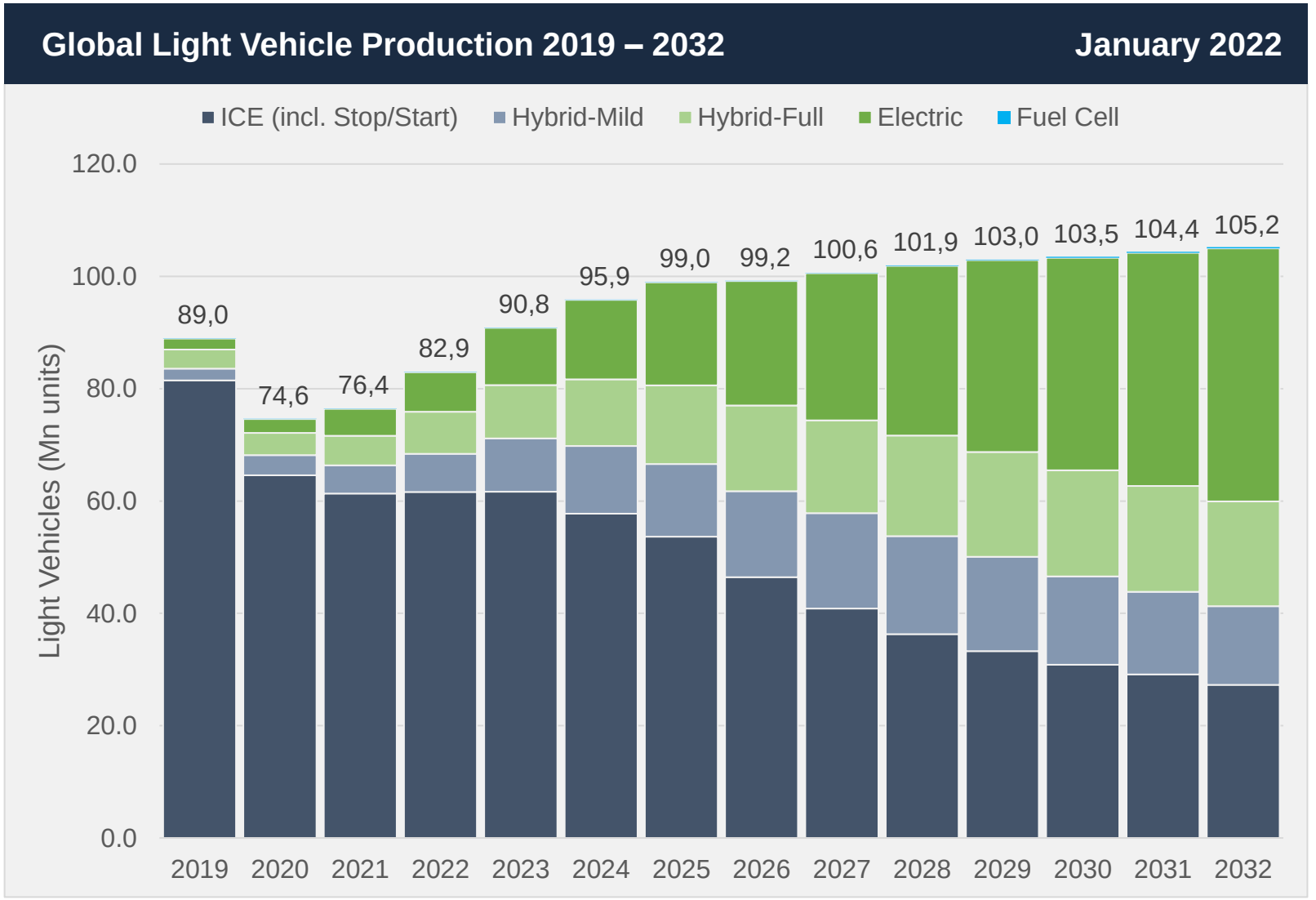
Note: Electric includes REEV & Series-Hybrid

Source: S&P LV Production Forecast Jan 2021

Market Analysis

Propulsion System - Global volume projection

Propulsion System Design	Example
FCV (Fuel Cell Vehicle)	 *Toyota Mirai*
BEV (Battery Electric Vehicle)	 *Audi e-tron GT*
Hybrid-Full *(incl. PHEV)*	 *Volvo XC90 T8*
Hybrid-Mild *(<65V System Voltage)*	 *Fiat 500 MY 2020 Hybrid*
ICE *(incl. stop/start)* (Internal Combustion Engine)	 *Mazda CX-5*



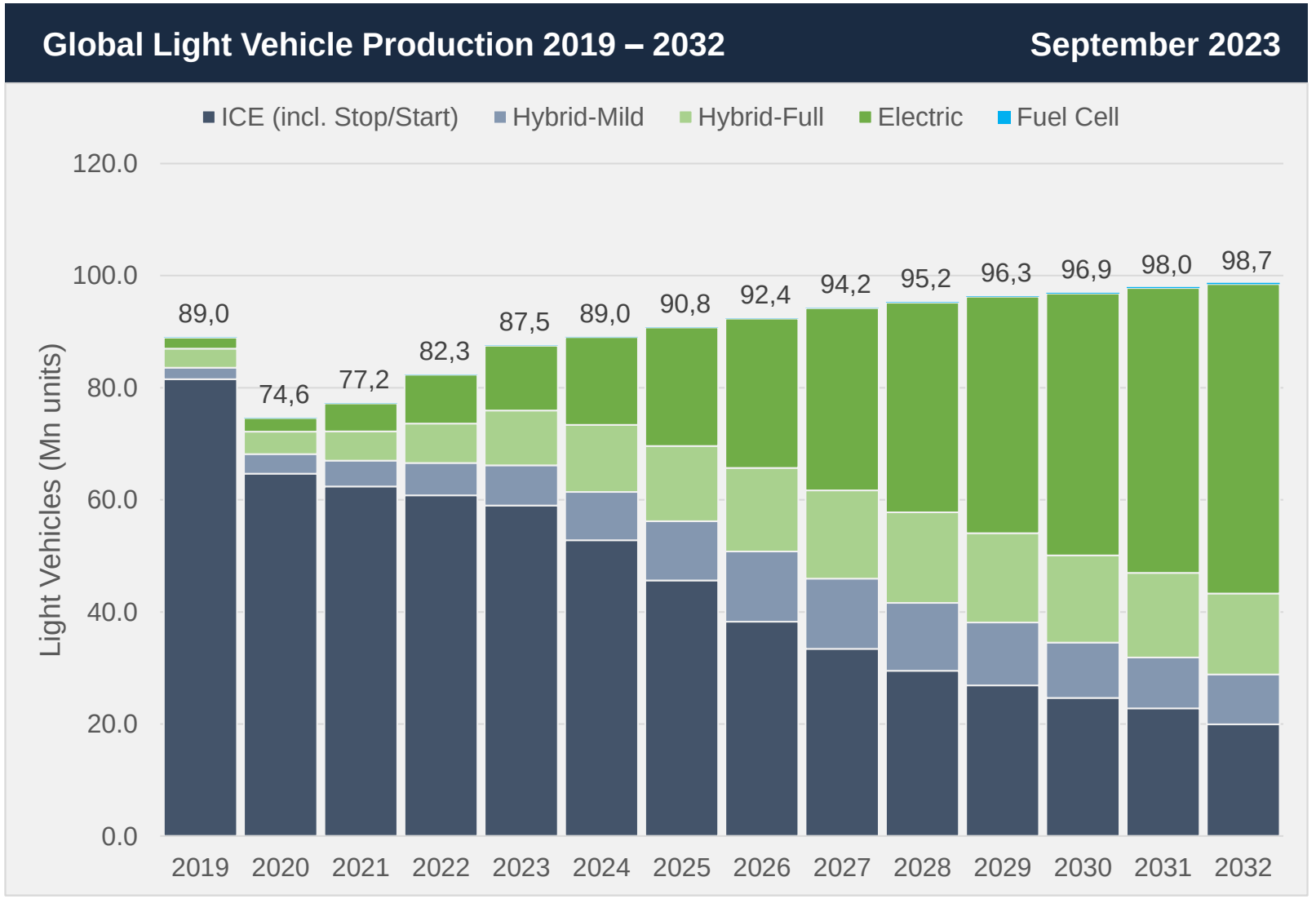
Note: Electric includes REEV & Series-Hybrid

Source: S&P LV Production Forecast Jan 2022

Market Analysis

Propulsion System - Global volume projection

Propulsion System Design	Example
FCV (Fuel Cell Vehicle)	 *Toyota Mirai*
BEV (Battery Electric Vehicle)	 *Audi e-tron GT*
Hybrid-Full *(incl. PHEV)*	 *Volvo XC90 T8*
Hybrid-Mild *(<65V System Voltage)*	 *Fiat 500 MY 2020 Hybrid*
ICE *(incl. stop/start)* (Internal Combustion Engine)	 *Mazda CX-5*



Note: Electric includes REEV & Series-Hybrid

Source: S&P LV Production Forecast Sep 2023

GKN Automotive Engineering

GKN engineering strategic pillars

Engineering & Product Roadmap

- Complete eDrive portfolio with systems, modules and components for main and secondary drive
- End-to-end driveline solutions for electrified vehicles i.e. torque generation, management and transfer

Market & Customers

- Customer-focused organisation from multi-perspectives including commercial, engineering and quality
- Enhanced frequency of interactions and capability exchange e.g., tech days and other events

Business Processes

- Fit-for-purpose business processes according to product evolution e.g., program management and supplier integration
- ASPICE-compliant and industry product safety requirements-adherent
- Proactive resource planning and risk management

Systems Business Capabilities

- Exponential growth in systems knowhow and expertise with focus on software and electronics
- Active development of partnership with leading market players for alternative systems business approach

Global Production

- Lean and improved production footprint for optimal global reach at best cost
- Institutionalised production standards

GKN Automotive Engineering

Global Footprint and Capabilities

Technology centres

01 **Lohmar,** Germany
02 **Bangalore,** India
03 **Auburn Hills,** USA
04 **Shanghai,** China
05 **Daikoji,** Japan
06 **Abingdon,** UK

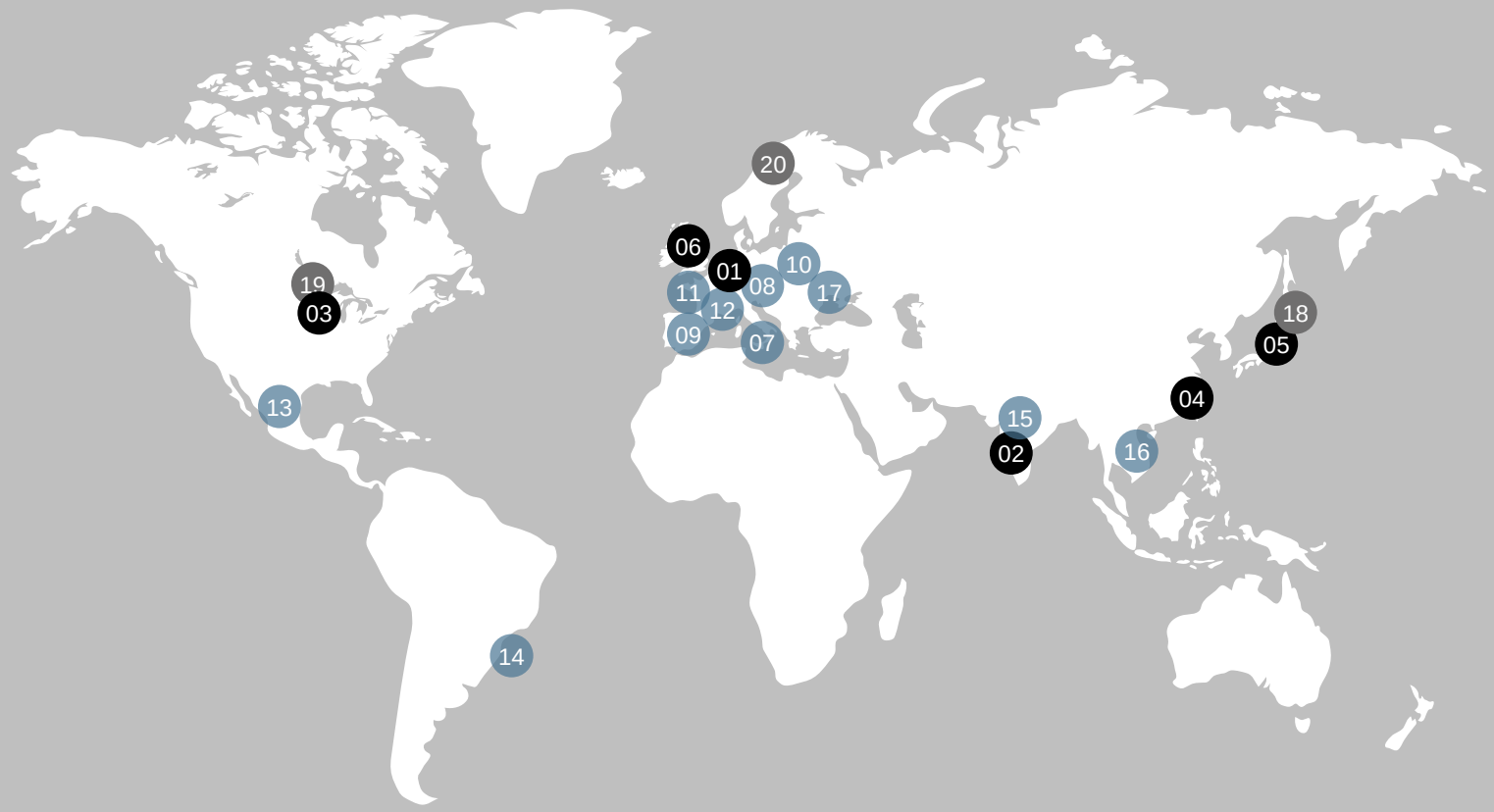
Application engineering

07 **Bruneck,** Italy
08 **Offenbach,** Germany
09 **Zumaia,** Spain
10 **Olesnica,** Poland
11 **Poissy**, France
12 **Arnage,** France
13 **Celaya,** Mexico
14 **Porto Alegre,** Brazil
15 **Faridabad,** India
16 **Rayong,** Thailand

17 **Miskolc,** Hungary – new site with Engineering capabilities

Vehicle test facilities

18 **Tochigi, Japan**
19 **Raco,** USA
20 **Arjeplog,** Sweden



Systems Engineering

Portfolio expansion & capability development building on traditional products

2004 | **2012** | **2014**

All Wheel Drive

Torque Management

Build on our experience in **Gearsets** and **Actuators**

Build on our experience in **Vehicle Integration** **NVH Development**

Build on our experience in **Software Development** **Electronics**

Capabilities added

\+ Transmission Features

\+ E/E Integration for HV Traction Motors

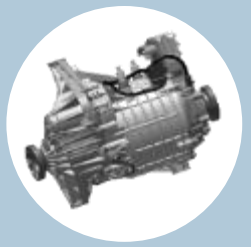
\+ ASPICE & FuSa Systems Engineering enh. Inverter Design

2012 | **2019** | **2024**

eDrive

Torque Generation

eDrive Transmissions



Partial eDrive Systems Integrator

Supply **Inverter**

Built2Print **Motor**

SW

EM

Full eDrive Systems Integrator

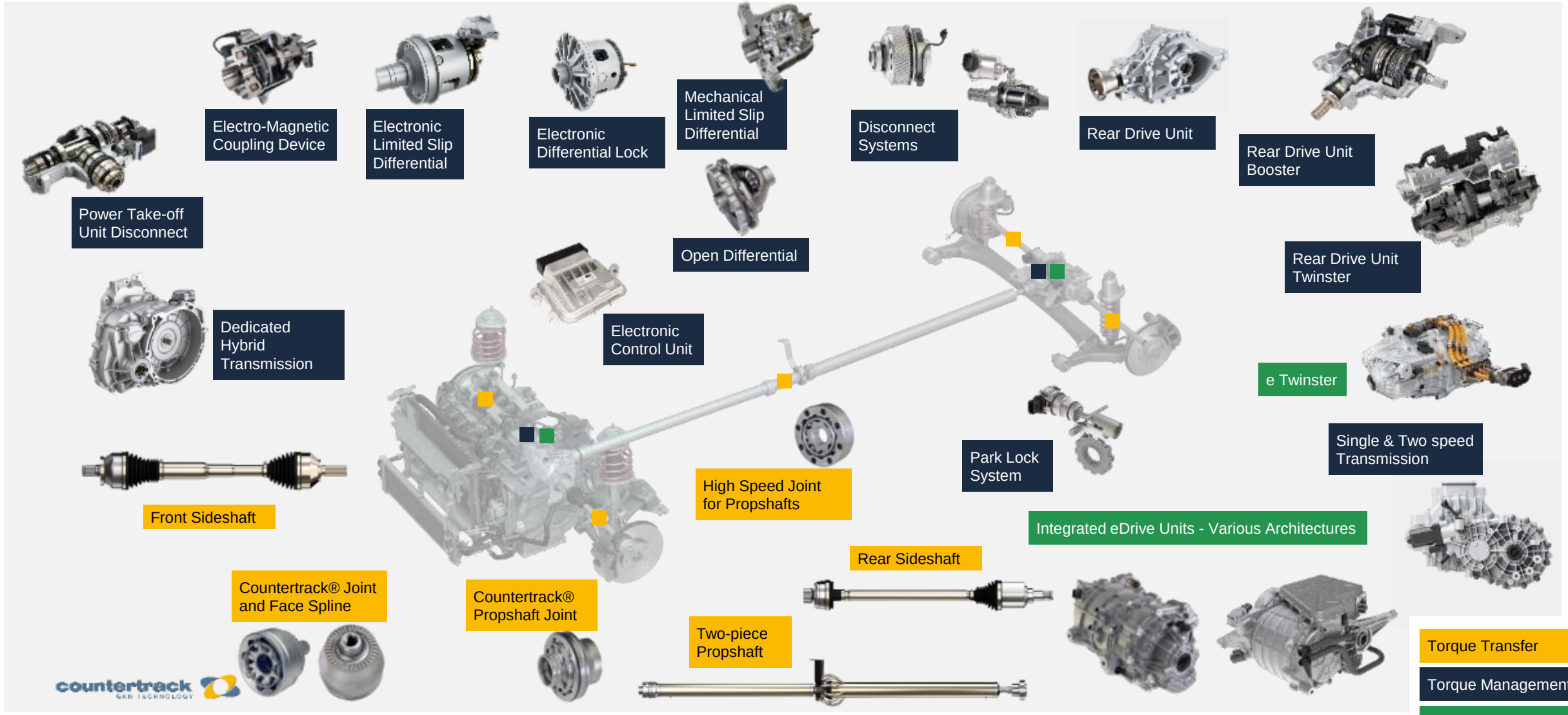
B2S/B2P **Inverter**

Driveshaft

Torque Transfer

Comprehensive product portfolio

Driveline, AWD and eDrive Systems



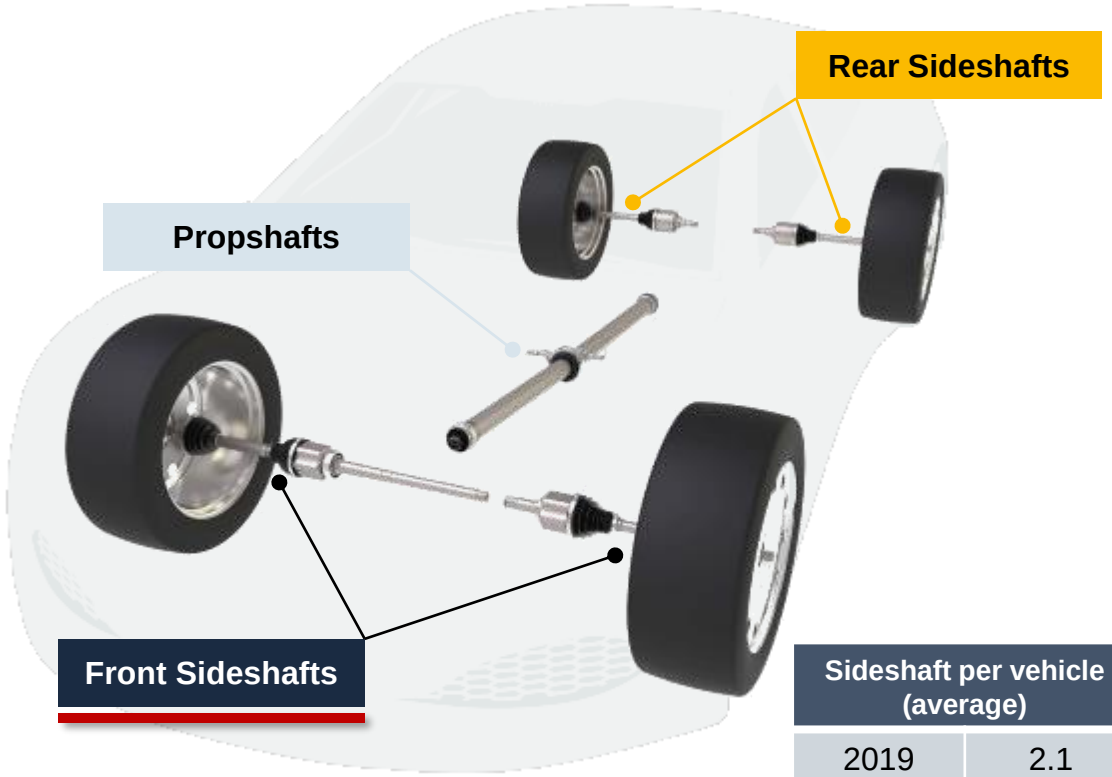
Torque transfer – Sideshafts and Propshafts

Understanding the market drivers
Where do we go from here?

Driveline Technology Roadmap

Market & Commercial - Driveline Products Allocation

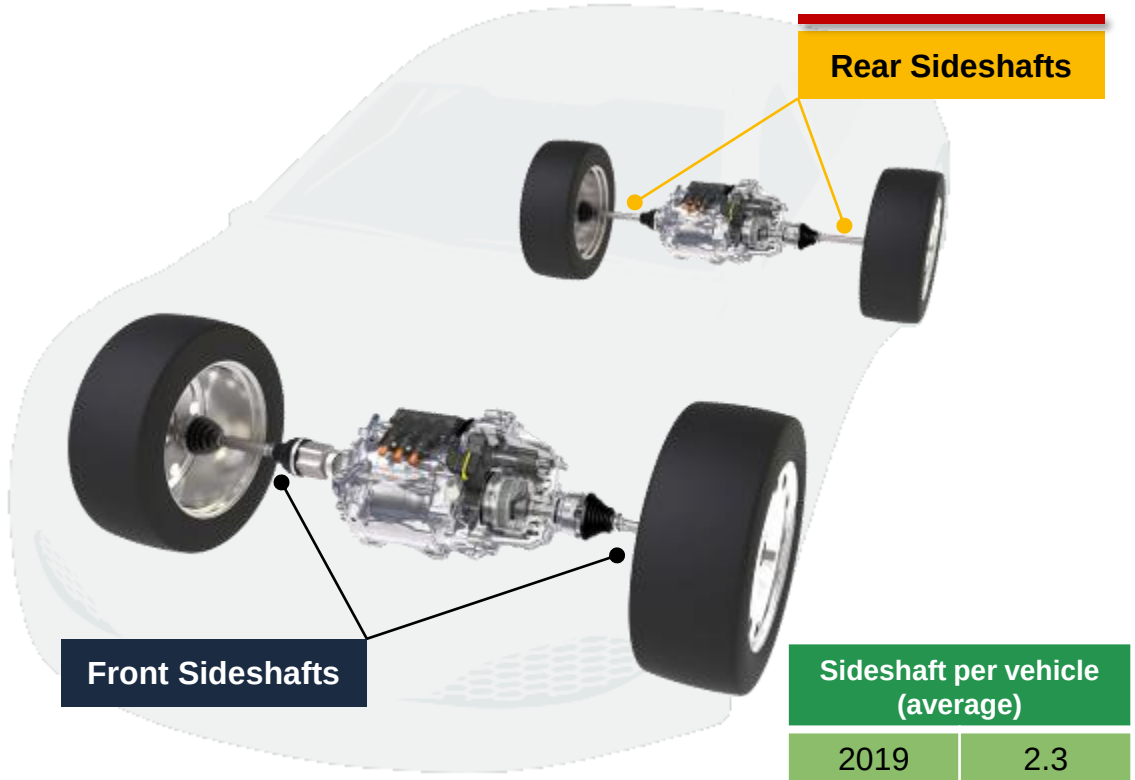
ICE based propulsion (incl. mild & full hybrid)



Main driven axle

Sideshaft per vehicle (average)	
2019	2.1
2030	2.2

Battery electric propulsion



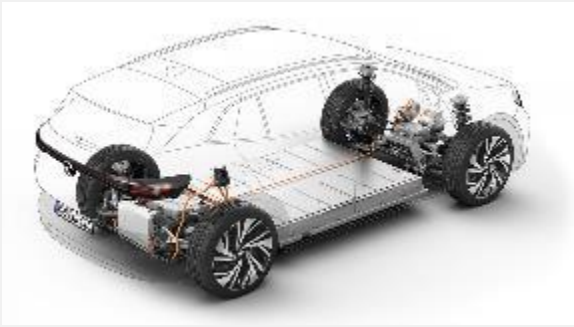
Sideshaft per vehicle (average)	
2019	2.3
2030	2.7

Source: 2022 GKN market model

Driveline Technology Roadmap

Market & Commercial - Growing Rear Propulsion through Electrification

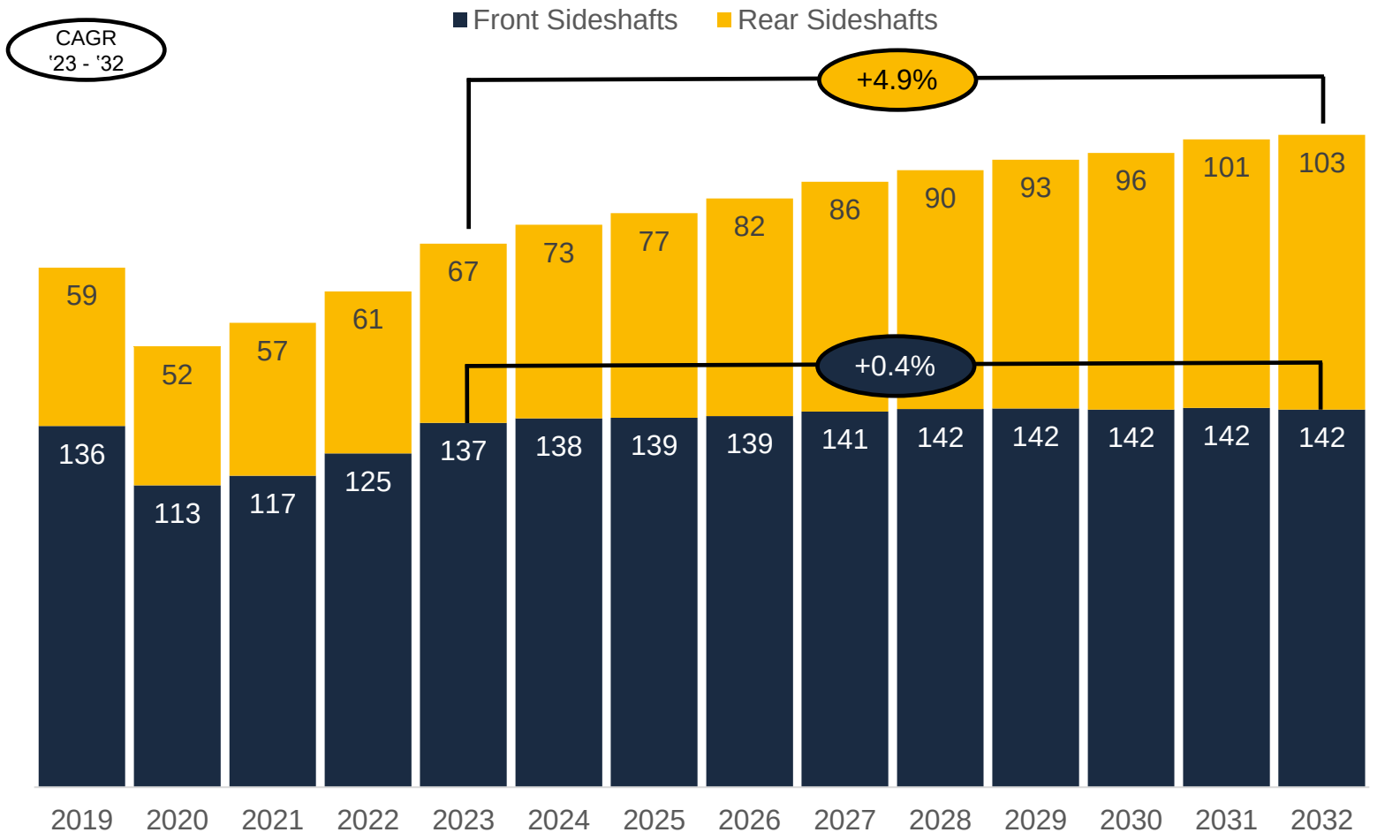
Volkswagen



Hyundai

Volvo

Global Addressable LV Sideshaft Production by Drive Type

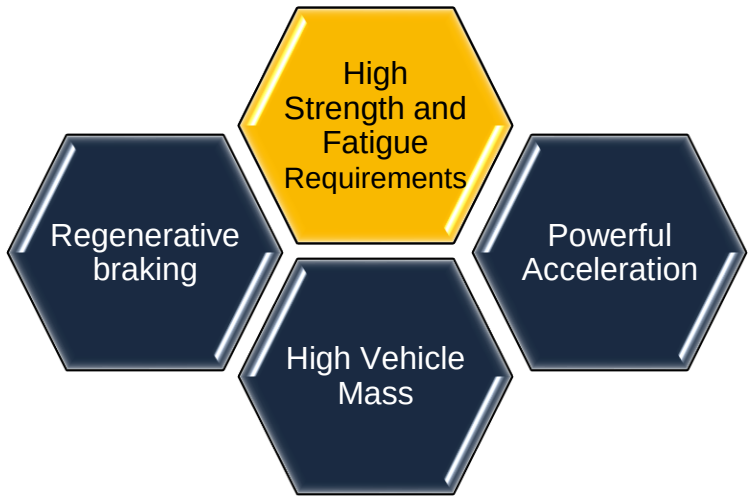


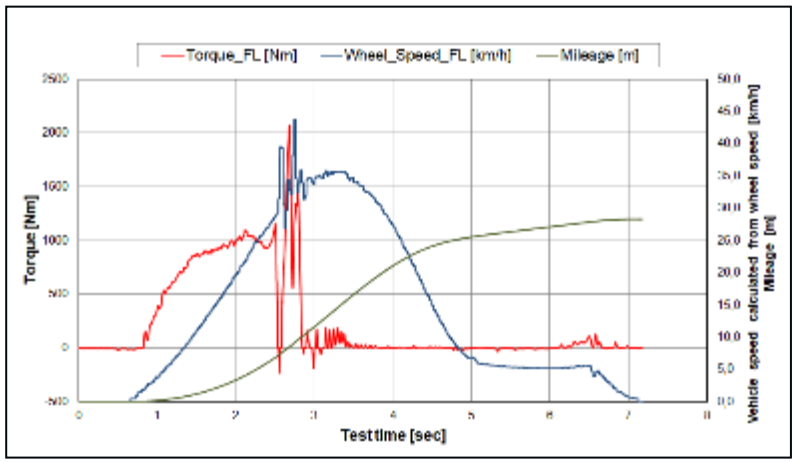
Sources:
LV Volume: S&P September 2023 LV Production Forecast
Addressability by Drive Type: 2022 GKN market model

Visualizing the Driveline Market Space
What is required ?

Driveline Technology Roadmap

Characteristics of Electric Vehicles - Understanding the market

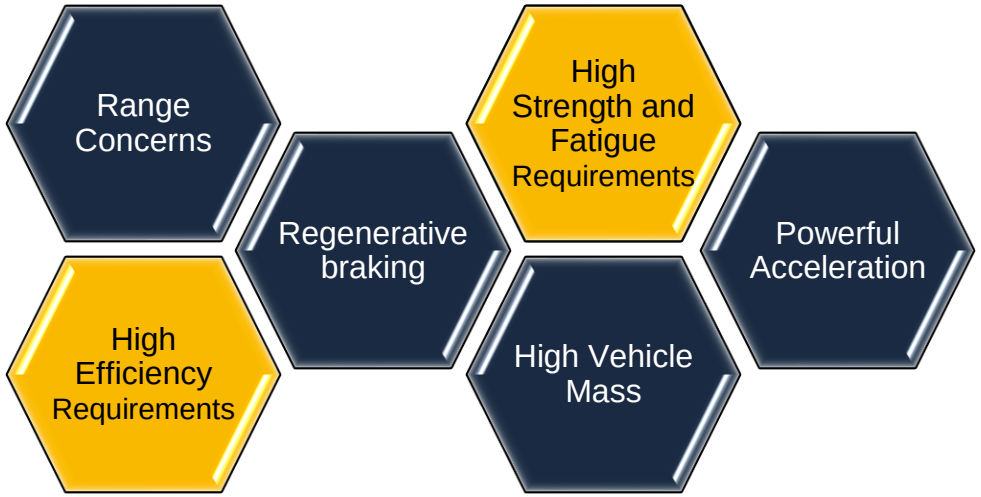


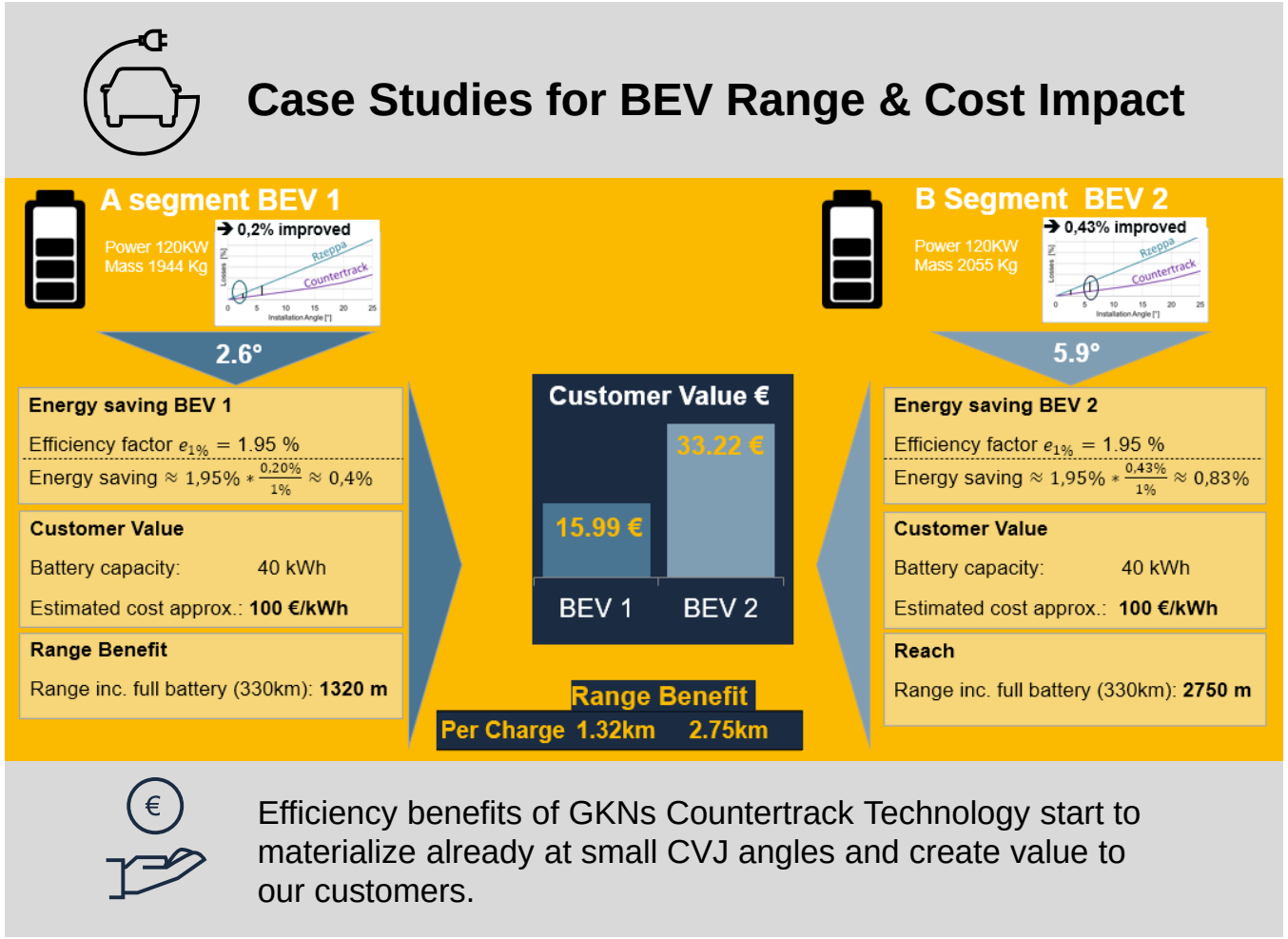


21.03.2019 14:51:02 6800 -0576,4[ms] 512x508, 2522 Hz, 396 µs, *2,
SpeedCam MiniVis e2 #00127, V1.11.28

Driveline Technology Roadmap

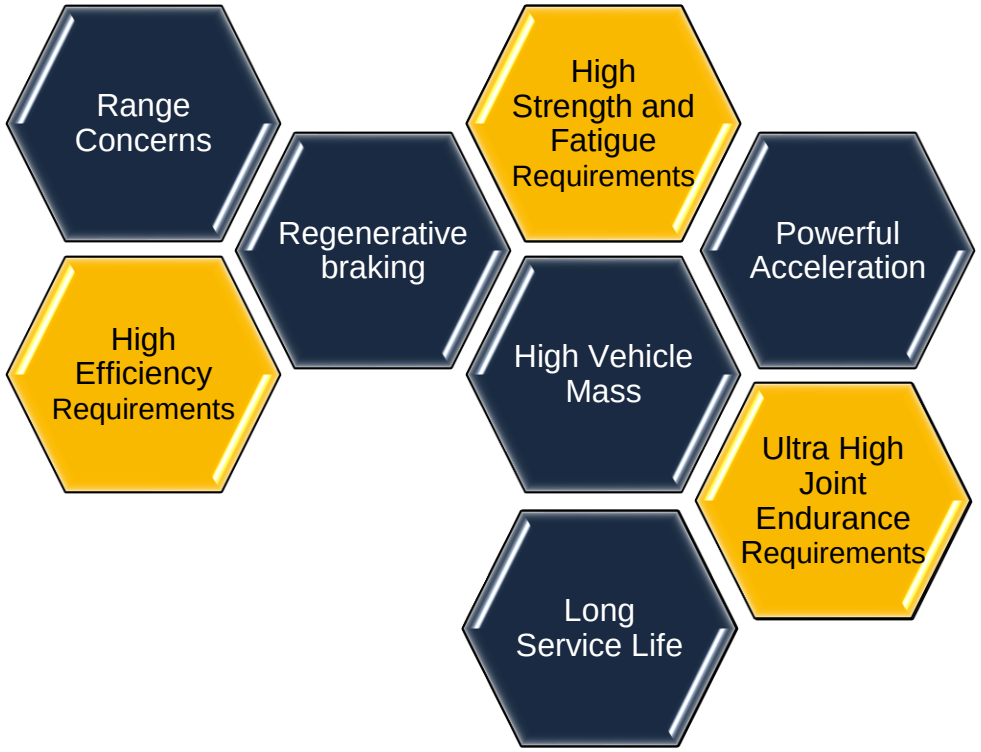
Characteristics of Electric Vehicles - Understanding the market

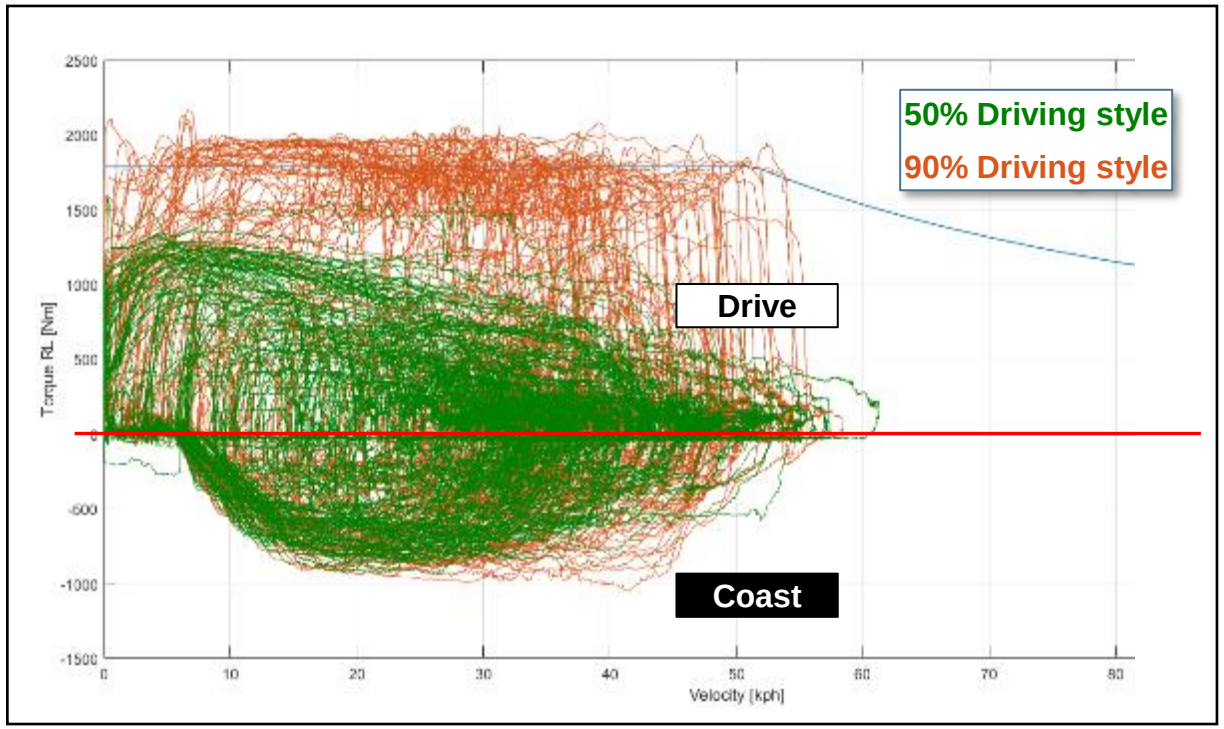




Driveline Technology Roadmap

Characteristics of Electric Vehicles - Understanding the market

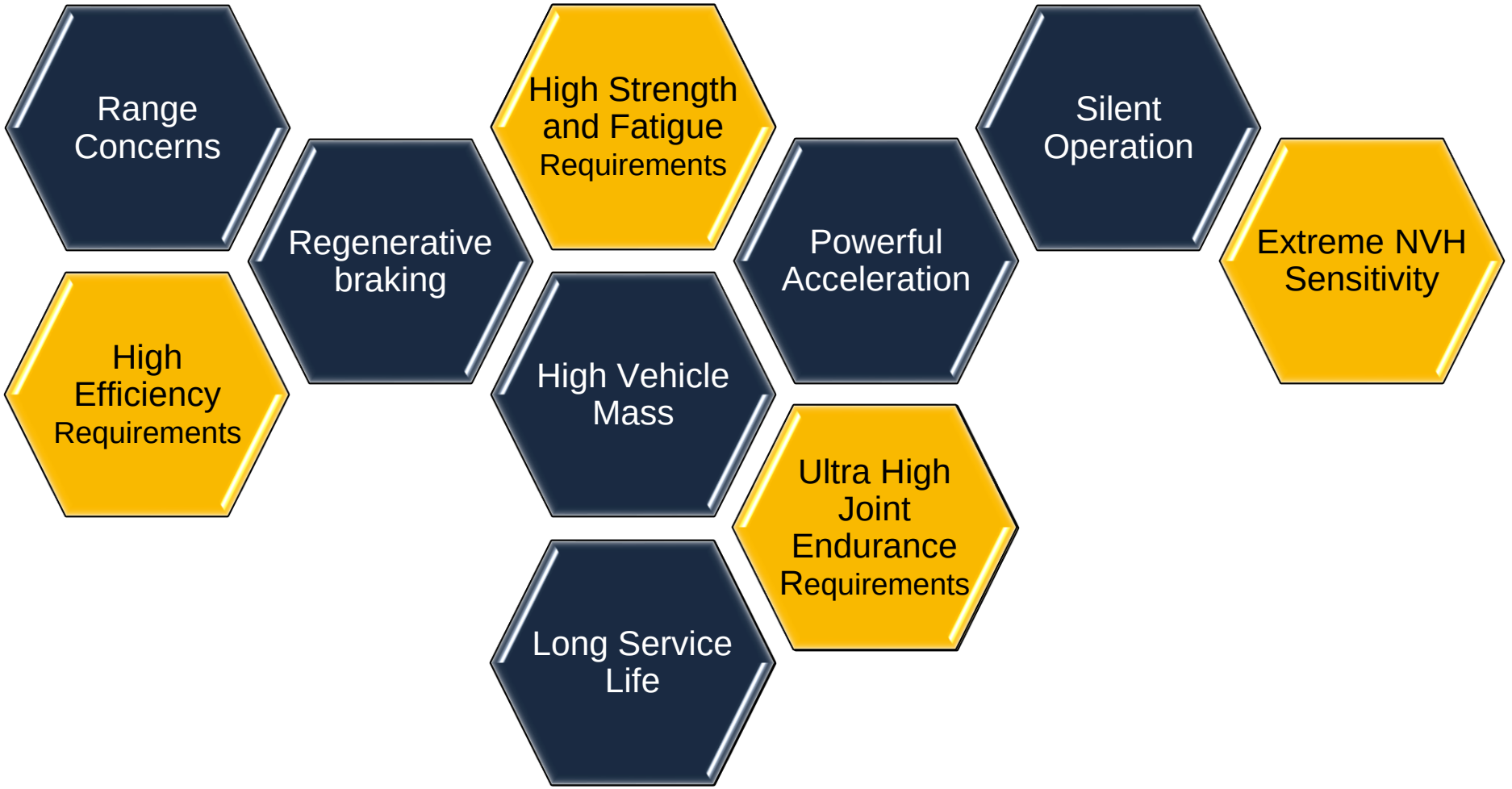




- Constant high torques during all acceleration events
- Increased negative torques through regenerative breaking

Driveline Technology Roadmap

Characteristics of Electric Vehicles - Understanding the market



Visualizing the Driveline Market Space

How do we serve the market ?

Driveline Technology Roadmap

Sideshaft Solutions - Products Allocation by Sizes

B Segment | C Segment | D Segment | E Segment | E Segment

	9	11	13	15	17	20	23	26	29	33	37	41	46	51	56	62	69	77	85

C to E Segment – Battery electric vehicles

Electrified Commercial Vans / Pickups and SUVs

Visualizing the Driveline Market Space

Where do we focus our efforts ?

Product Strategy & Focus

Sideshaft Solutions

Product Strategy

A standardized range of sideshaft systems fully adaptable to the changing needs of the market as vehicle electrification continues

Our Development

- Priority on streamlining and standardization, eliminate old technology
- Strengthen our customer intimacy through partnering and collaboration on new powertrain standards
- Continuous cost improvements through VA/VE

Focus

Primary Focus

- New global rear sideshaft outboard joint range
- New global rear sideshaft inboard joint range
- DO3 product range for BEV front sideshafts
- Expansion of established portfolio towards larger sizes

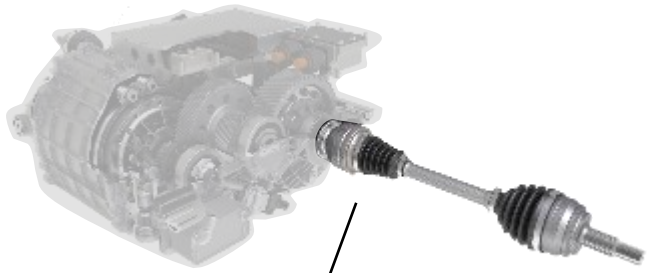
Secondary Focus

- Implementation of 1st electrification wave learnings into established product range – Drive evolution
- Next generation of shudderless tripod joints

Driveline Technology Roadmap

New rear sideshaft strategy for electrified vehicles

- High torque transfer
- Large articulation angles
- Low friction
- Silent operation



Inboard Joints

DO Family | Tripod Family | VL3 Family

Outboard Joints

Countertrack Family | VL3 Family

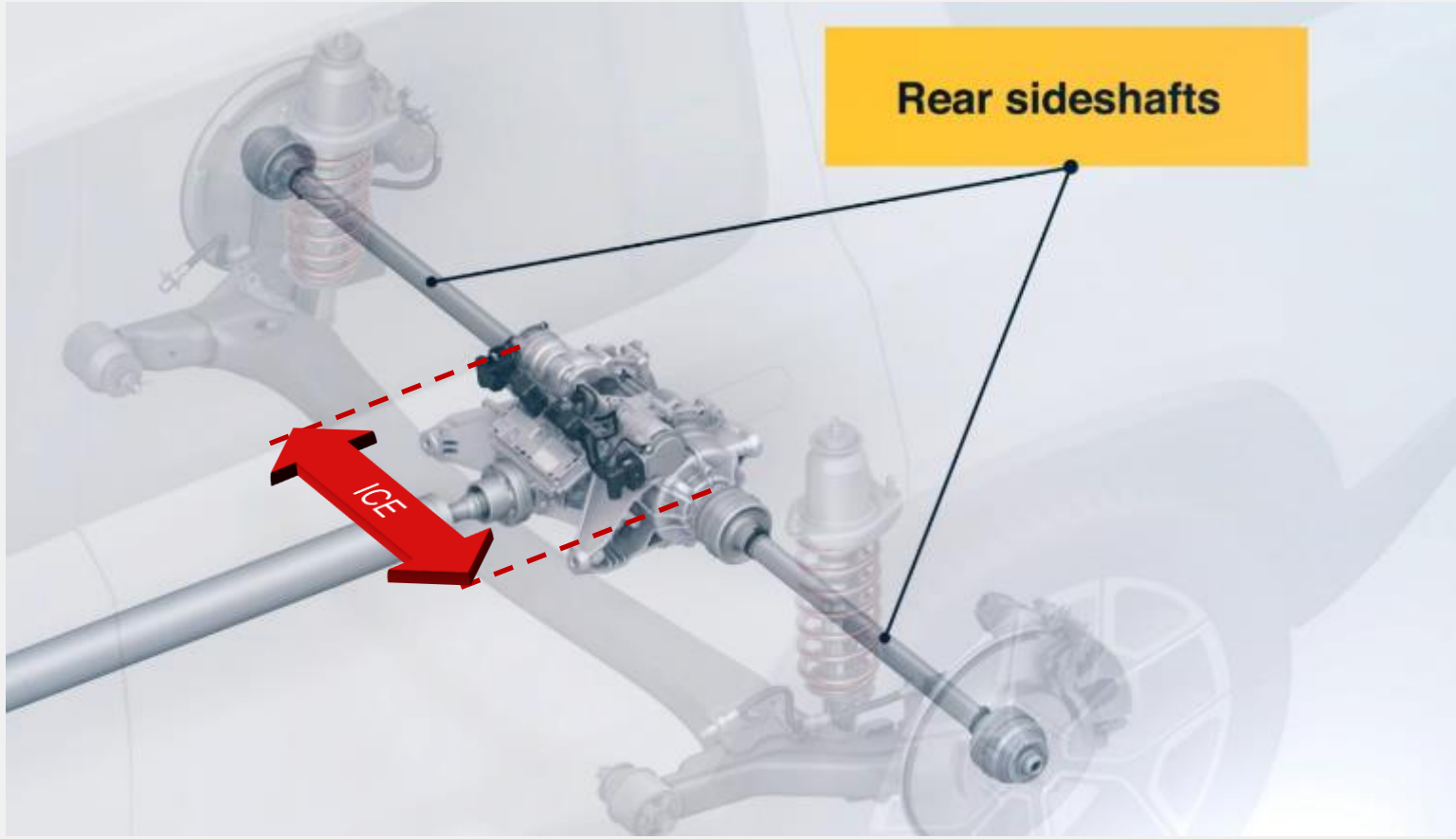
Proprietary and confidential restrictions on title slide apply throughout this presentation

Driveline Technology Roadmap

New rear sideshaft strategy - the past

- Traditional **rear** wheel drive solutions require small angles and limited plunge capacity

Mechanical Rear Axle

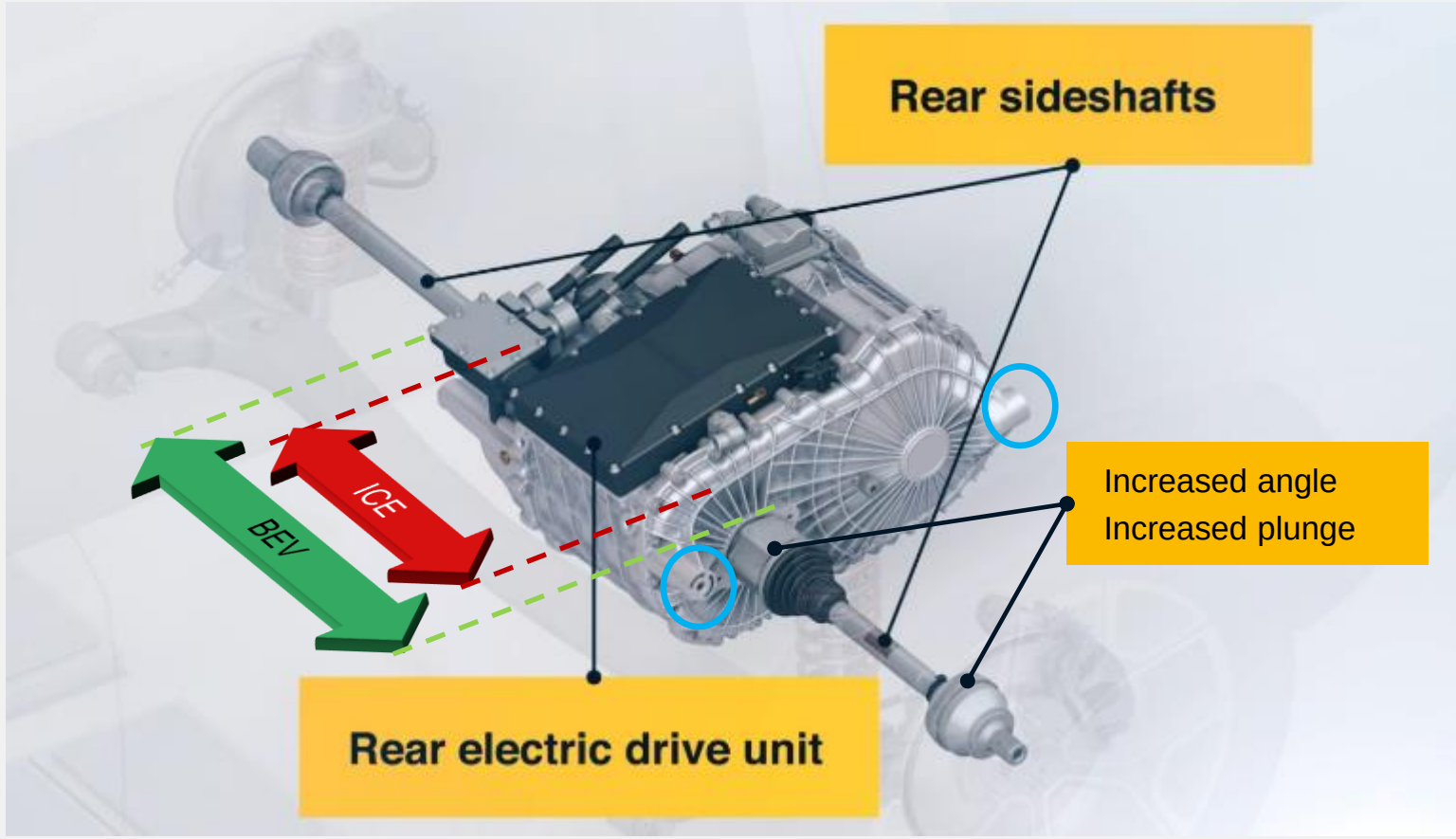


Driveline Technology Roadmap

New rear sideshaft strategy - the change

- Electrical **rear** axle solutions are considerably wider, thus lead to shorter shaft length with overall increased installation angles
- Softer **mountings** elements, lead to larger aggregate movements, which requires larger plunge capacity

Electrical Rear Axle

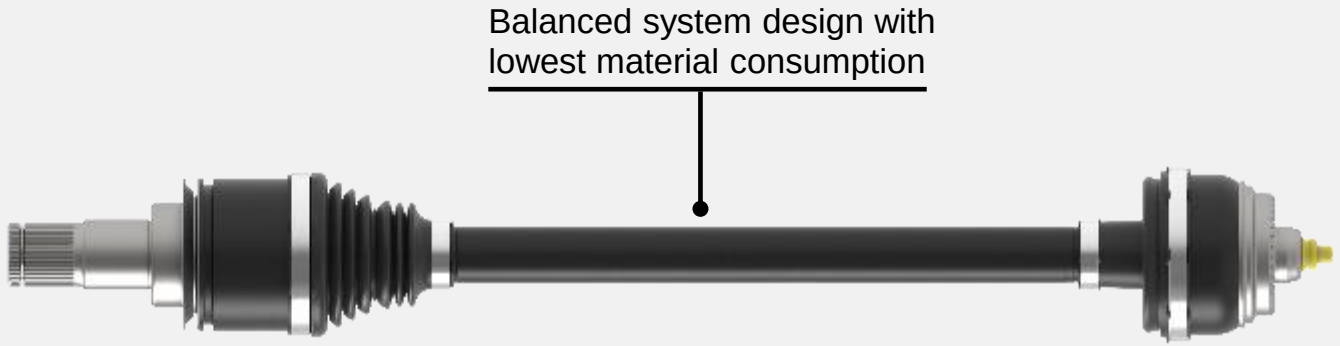


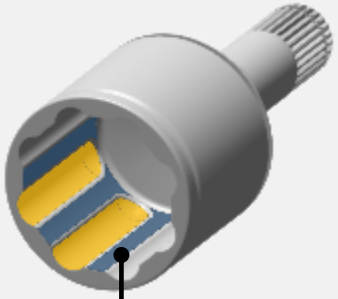
Driveline Technology Roadmap

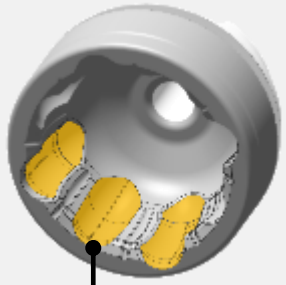
New rear sideshaft strategy - drive for the best cost

- Provide most **cost competitive** solutions
- Contributes to GKN ESG targets during processing

Holistic approach to system cost







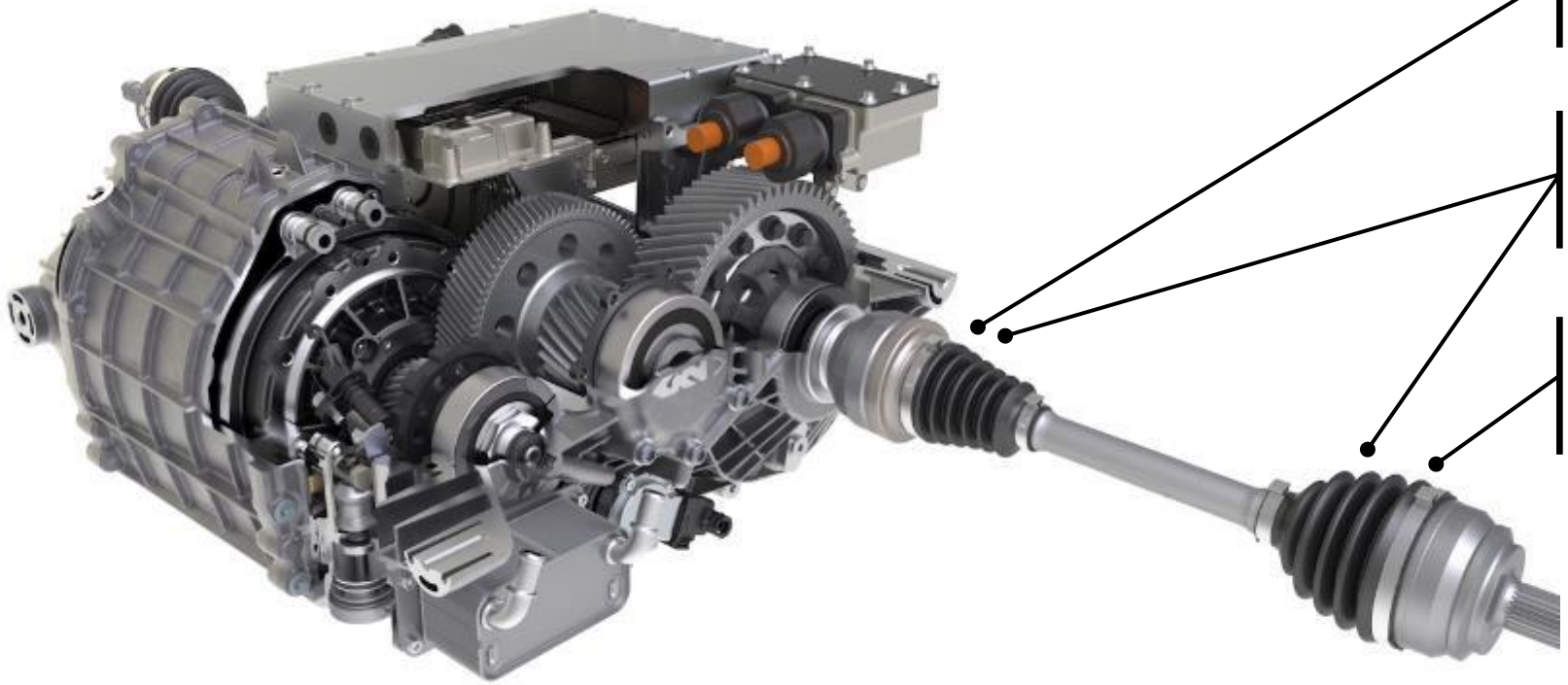
Designed to support precision forming of final geometries, such as **cage spheres** or **ball tracks** during forging process

Leverage joint concepts that make use of low ammount of overall **functional surfaces**

No machining on internal geometries

Driveline Technology Roadmap

New rear sideshaft strategy - Summary



Increased plunge distances due to softer mountings

Increased installation angles through shorter shaft length

Increased wheel angles due to rear steering systems

Efficient joint technologies required to improve range

Increased strength and durability needs due to insane vehicle mass and power

All based on competitive overall cost and quality

Clear technology leadership in sideshafts

GKN Automotive advantage

Long history of innovation
Leading efficiency, superior NVH[1], low weight and a broad product portfolio developed over decades of product technology leadership

Intimacy with the OEM engineering community
Close relationships at all OEMs and reputation for tailored advanced solutions and high flexibility as well as complete vehicle systems expertise

Global cost competitiveness
Industry leading scale and recent footprint adjustments provide customers with premium quality products at a competitive cost level

xEV drive optimisation

GKN has developed a suite of technologies tailored to the unique needs of xEV, focusing on efficiency & silent operation

An updated, agile commercial approach fits the needs of both xEV units of established players and new pure play customers

Long history of Innovation providing solid foundation for electrification journey

GKN Automotive is optimising its industry leading sideshafts for xEVs

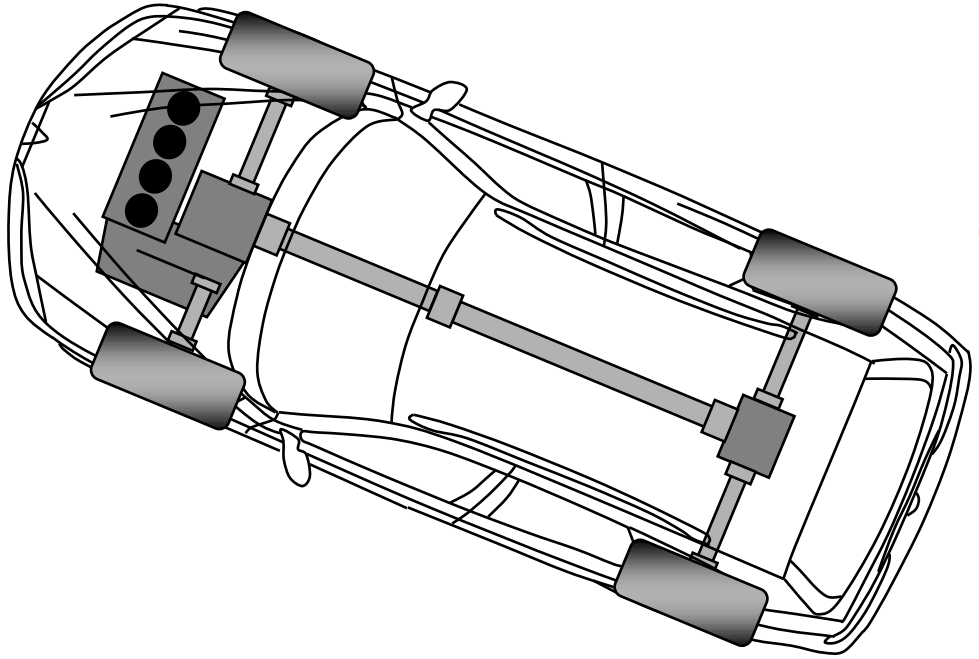
[1] Noise, vibration & harshness

Torque Management – AWD and ePowertrain Components

Product overview AWD Portfolio

East-West Configuration

Power Take-off Unit and Disconnect



Rear Drive Unit Booster

Rear Drive Unit Twinster

Rear Drive Unit EMCD

Components In AWD System for E-W configuration, detailed in Components Product Plan

Open Differential

Electronic Differential Locker

Electronic Torque Manager

Disconnect Unit

Mechanical LSDs

Twinster*

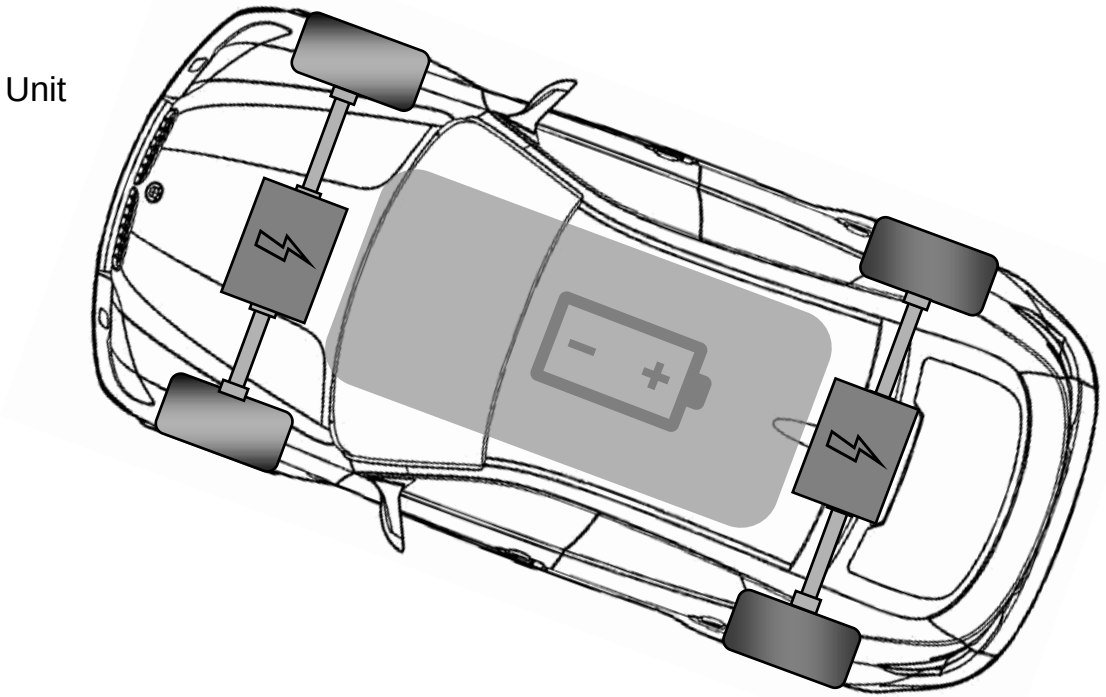
Electronic Magnetic Coupling Device

Electronic Control Unit

* Twinster under discussion, specific approval required

Product overview eDrive Portfolio

Front Electric Drive Unit



Rear Electric Drive Unit

Components in eDrive Systems

Open Differential

Electronic Differential Locker

Mechanical LSDs

Electronic Torque Manager

Disconnect Unit

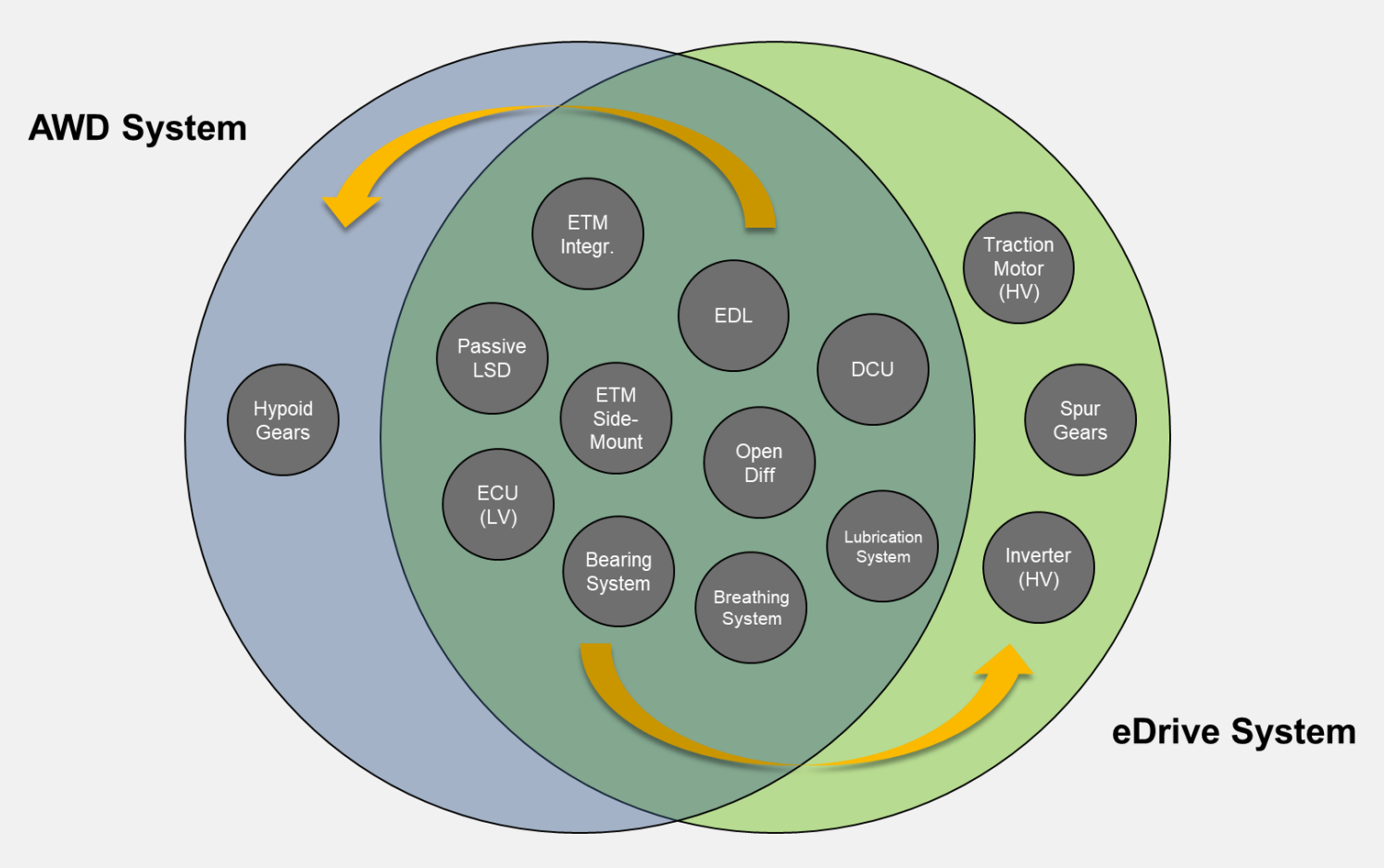
Twinster*

Park Lock System

Electronic Control Unit

* Twinster under discussion, specific approval required

ePT components continue to be commercially highly relevant for last ICE platforms as well as for electrified powertrains



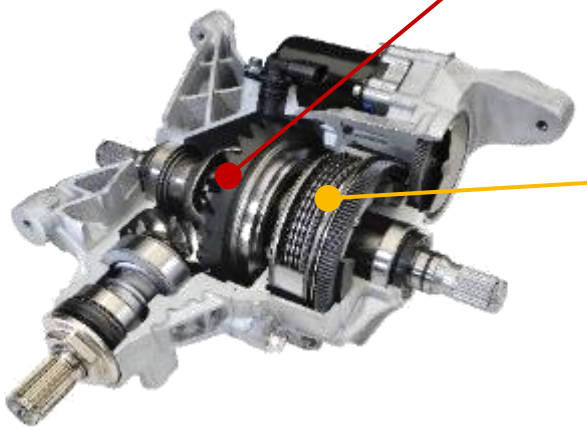
Shared technology between AWD and eDrive Applications

- AWD heritage is the enabler of our eDrive growth, traditional AWD technologies are critical to eDrive success
- Most components still requested for BEV platforms and continued to be required for current business and last ICE platforms
- **Increased number of AWD architectures and the efficiency focus in BEVs will lead to a growing ePT component market and a progression of the technology**

Most components within an AWD system transition to eDrive components portfolio

AWD System

- Power Take-off units
- Rear Drive Units



Hypoid gears & shafts

Open differential

Disconnect units

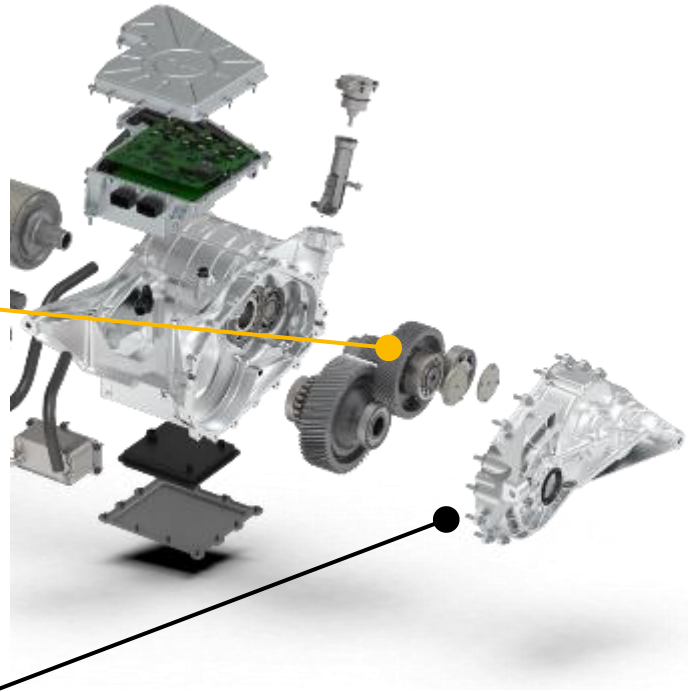
Limited Slip Differential (LSD)

Electronic Torque Manager (ETM)

Helical gears & eDrive gearbox

eDrive System

- Electric Drive Units



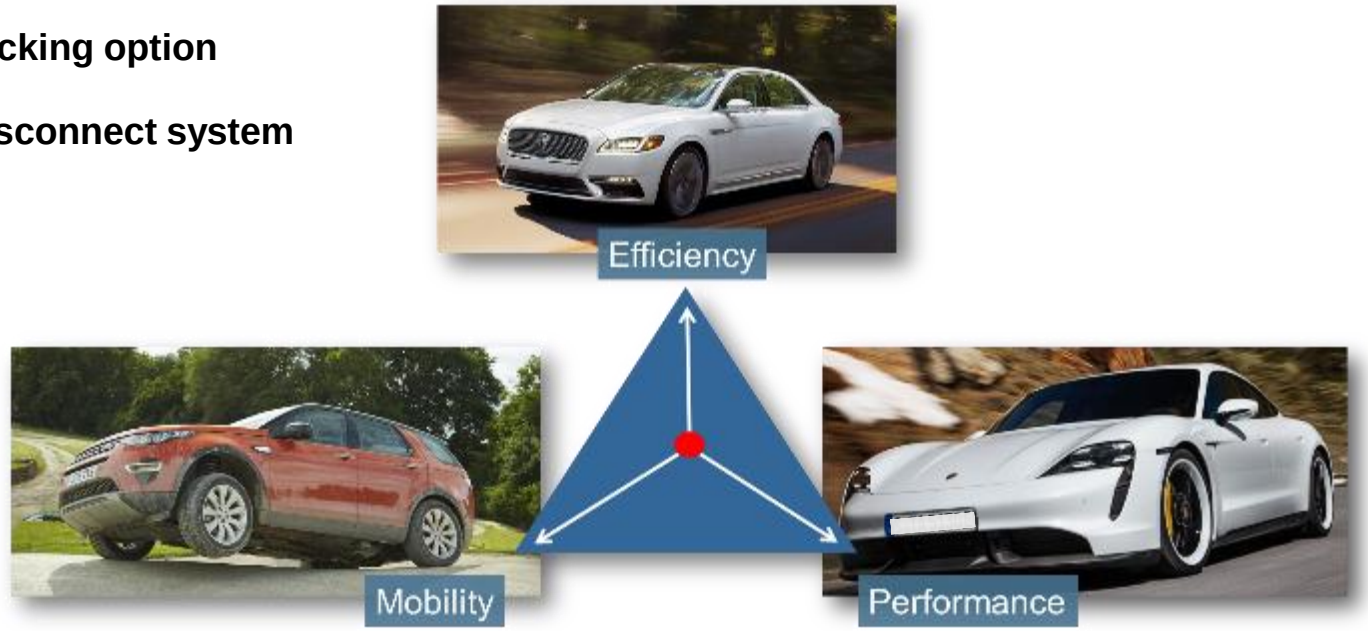
- No re-use
- Transition to eDrive component portfolio
- Incremental eDrive component content

GKN ePowertrain components

Summary

Independent of its propulsion system, every vehicle…

- with one motor driving more than one wheel needs a **differential**
- with focus on vehicle dynamics & traction benefits from a **limited slip differential**
- with offroad capabilities typically features a **differential locking option**
- with two driven axles can improve efficiency by using a **disconnect system**



Product Technology Strategy & Focus

ePowertrain Components

Product Strategy

A streamlined range of components to support eDrive systems and AWD mechatronic/mechanical systems composed of a set of standardized building blocks

Our Development

- Priority on streamlining, standardizing, optimizing and reviving our component portfolio
- A-Spice Level compliant with system-level requirements
- Continuous cost improvements through VA/VE
- Baseline ECU development and application
- Focus on electro-mechanical actuation, specifically in BEV environments
- Monitor smart actuator market

Focus

Primary Focus

- Open Differentials
- Electronic Differential Lockers (EDL)
- Electronically-controlled LSDs (ETM)
- Mechanical (passive) LSDs
- Disconnect Units (DCU)
- Park Lock systems
- Electronic Control Units (ECU)

Secondary Focus

- Electronic Magnetic Coupling Devices (EMCD)

Torque generation: eDrive Systems

Our eDrive technologies have powered >2 million vehicles to date

Selected vehicles equipped with GKN Automotive eDrive systems

Vehicle still in production or launch phase

13 eDrive vehicles over 10 brands with combined peak volume of 300k/yr

Since 2019

Coaxial eDrive System

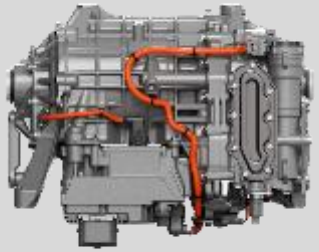
KEY TECHNICAL DATA

System Power	60kW
eMotor Torque	240Nm
Output Torque	2400Nm
Weight	16kg (*)
2-1 system	
(directed source eMotor)	

Semi-Integrated Offset eDrive System

KEY TECHNICAL DATA

System Power	80kW
eMotor Torque	160Nm
Output Torque	2000Nm
Weight	54kg
3-1 system	
(full system responsibility)	



Coaxial eDrive System with integrated active motor components

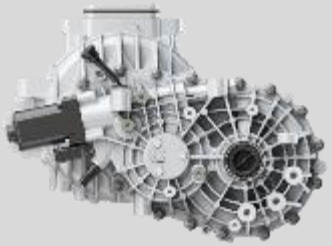
KEY TECHNICAL DATA

System Power	90kW
eMotor Torque	250Nm
Output Torque	2900Nm
Weight	76kg
3-1 system	
(full system responsibility)	

Coaxial eDrive Semi-Integrated System with planetary gear set

KEY TECHNICAL DATA

System Power	75kW
eMotor Torque	265Nm
Output Torque	2650Nm
Weight	79kg
2-1 system	
(1st planetary Gearbox)	



Semi-Integrated Offset eDrive System

KEY TECHNICAL DATA

System Power	94kW
eMotor Torque	220Nm
Output Torque	2100Nm
Weight	65kg
2-1 system	
(1st launch of GKN eMotor)	

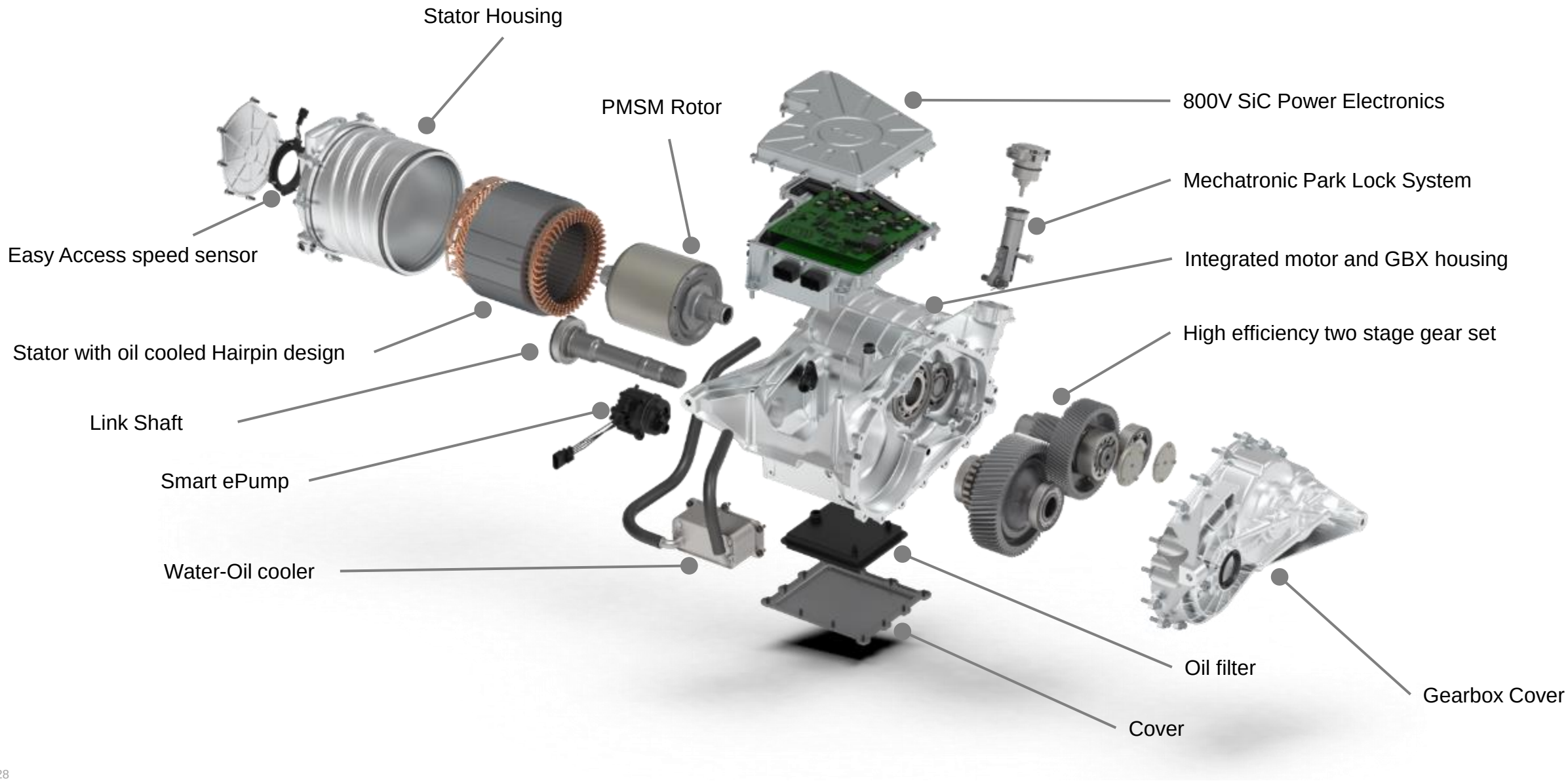
Coaxial eDrive System

KEY TECHNICAL DATA

System Power	68kW
eMotor Torque	144Nm
Output Torque	1410Nm
Weight	16kg (*)
2-1 system	
(directed source eMotor)	

(*) Gearbox only

GKN Gen 2 eDrive – Example Configuration



eDrive Product Offerings

Inhouse capabilities (Make vs buy Strategy)

Systems	Modules	Components	Components optional
eDrive 3-in-1 Systems 	Software	Software	
	Inverters	Inverters	
	eDrive 2-in-1 eAxles 	Traction Motors 	Stator 
			Rotor
			Motor Assy Parts
		Gearbox 	Differential 
			Gear Set
			Actuators
			Gearbox Assy Parts
Sys Assy Parts	Sys Assy Parts	Sys Assy Parts	Disconnect Actuator 
			Torque Manager
			Park Lock Actuator

Engineering Systems Services around eDrive Offerings

System design support, simulation support, problem resolution support, validation support

Inhouse capability	External partner (eg EMS)	Bought out components

Launching next Generation GKN Automotive eDrive System

TISAX AUTOMOTIVE SPICE® ISO 26262

	40kW	60kW	80kW	100kW	120kW	140kW	160kW	180kW	200kW	220kW	240kW	260kW

Gen 2 eDrive Platform
ASPICE compliant 3-in-1 system platform
Focus Peak Power Range: 60kW – 210kW
First launch in 2024 (European Major OEM)

Inverter & Software

Inverter Platform
400V Si IGBT Technology
800V SiC MOSFET Technology
Software Platform

eMotor

eMotor Family
PMSM / Hairpin Winding / 3 Rotor Diameters / Scalable Length
ASM / Round Wire Winding / 1 Rotor Diameter / Scalable Length

Transmissions & Actuators

Transmission Technology
Offset / Coaxial / Coaxial Planetary Layouts
Active & Passive Components: Open & Limited Slip Differentials, Disconnect Systems, Park Lock Systems, Torque Vectoring

Summary

Summary

- **Vehicle electrification is progressing and GKN Automotive are adapting its portfolio to align to this transition**
- **GKN over the years has evolved its portfolio from “Torque Transfer” via “Torque Management” to “Torque Generation”**
  - **Torque transfer** products (sideshafts) are growing on electric vehicles. We are seeing increased content value and fit rate on BEVs and GKN are winning a strong market share
  - **Torque management** portfolio is evolving as most of the components within an AWD system transition to eDrive. Incremental content is available from eDrive gear sets and gearboxes
  - GKN Automotive’s **torque generation** (eDrive) capabilities are comprehensive across each element of the system. The market is being approached very cautiously, with selective, profitable, niche programs being undertaken
- **This comprehensive approach enables GKN to serve its customers with drivetrain components and full electric powertrain systems for current and future vehicle architectures**

Q&A

CLOSING REMARKS

Recap

DOWLAIS

- Dowlais is a world-class Automotive Group, consisting of two market leading businesses
- We have had a very successful start as a newly listed PLC
- GKN Auto is a technology leader, with an increasingly powertrain agnostic portfolio
- They have well invested, high quality network of plants – Vigo is a good example
- Powder Metallurgy is a high-margin business with revenue and margin growth potential
- They have already secured business on a number of incremental EV products