



Technology with Vision

HELLA GmbH & Co. KGaA

Bankhaus Lampe Deutschlandkonferenz

Baden Baden, April 2019



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This document may contain forward-looking statements and information on the markets in which the HELLA Group is active as well as on the business development of the HELLA Group. These statements are based on various assumptions relating, for example, to the development of the economies of individual countries, and in particular of the automotive industry. Various known and unknown risks, uncertainties and other factors (including those discussed in HELLA's public reports) could lead to material differences between the actual future results, financial situation, development or performance of the HELLA Group and/or relevant markets and the statements and estimates given here. We do not update forward-looking statements and estimates retrospectively. Such statements and estimates are valid on the date of publication and can be superseded.

This document contains an English translation of the accounts of the Company and its subsidiaries. In the event of a discrepancy between the English translation herein and the official German version of such accounts, the official German version is the legal valid and binding version of the accounts and shall prevail.



HELLA Presentation German Conference April 2019

Outline

- HELLA Financial Results H1 FY 2018/19
- HELLA at a Glance
- HELLA' Strategy
- HELLA's View on Automotive Market Trends

Positive sales growth and EBIT increase in H1 FY 2018/19

Financial Results H1 FY 2018/19

Sales

- **HELLA Group** currency and portfolio adjusted **sales grew by 7.3%** YoY to 3.5 bill. EUR

Profitability

- **Adj. Gross Profit margin** at **28.0%** (+0.4%-points YoY)
- **Adj. EBIT** +16 mill. EUR (+5.5% YoY) at **302 mill. EUR**
- **Adjusted EBIT margin** -0.1pp to **8.6%**

Liquidity

- **Adjusted Free Cash Flow from operating activities** increased by **45 mill. EUR** (+42% YoY) to **152mill. EUR**

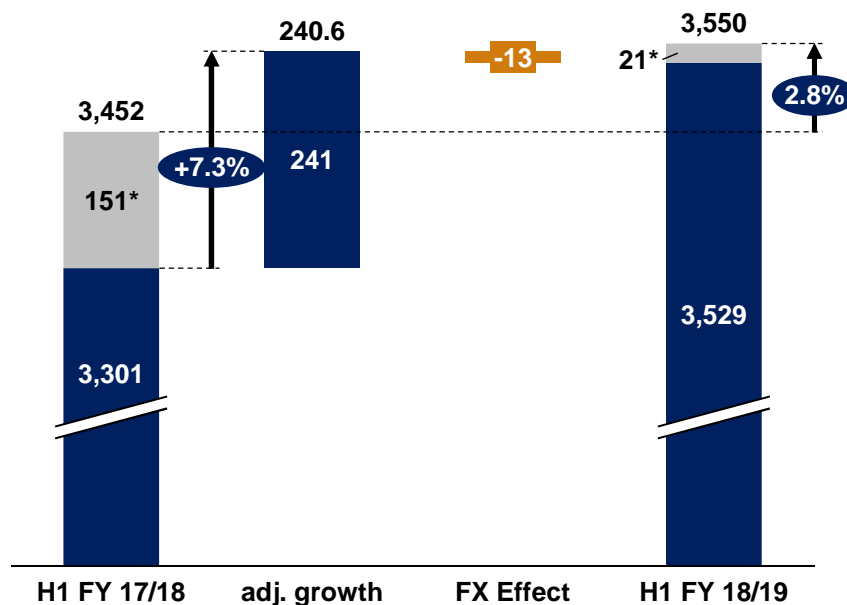
Note: Adjusted P&L and Balance Sheet figures for FY 17/18 and FY 18/19 exclude items from the Wholesale distribution. Adjustments of profitability figures for all years include restructuring expenses. For details see financial report.

Please note that where sums and percentages in the presentation have been rounded, differences may arise as a result of commercial rounding.

HELLA top line growth with positive development in H1 FY 18/19

Financial Results H1 FY 2018/19

HELLA Group sales (EUR millions)



*Wholesale sales excluded

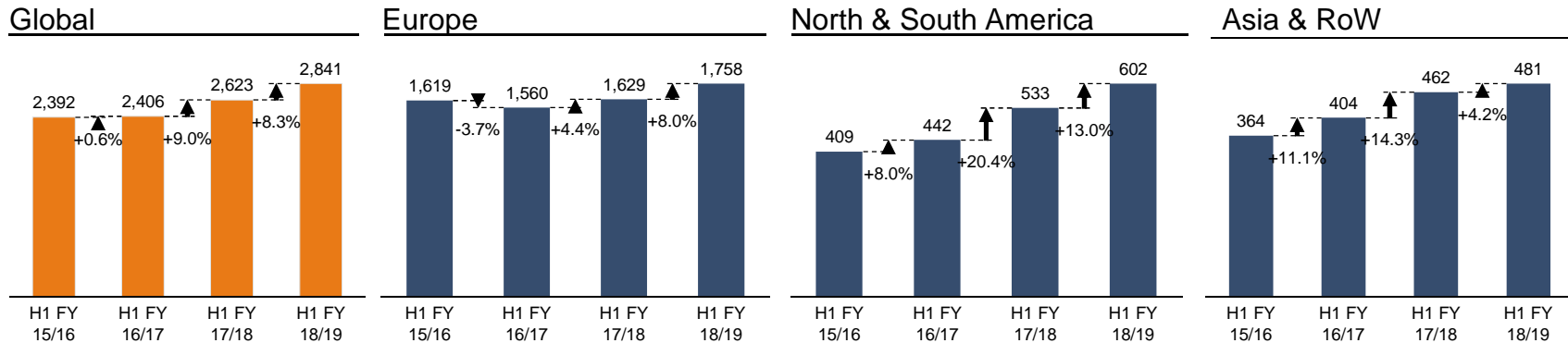
Comment

- **Currency** (-0.4pp) and portfolio (-4.1pp) **adjusted** growth HELLA Group at **7.3%**
- **Reported** sales growth HELLA Group at **2.8%** (increased by **97.7 mill. EUR** to **3,550 mill. EUR**)
 - **Automotive +8.1%** to **2,864 mill. EUR**. Demand for **energy management products, radar solutions** and **advanced lighting systems** drives business.
 - **Aftermarket* +4.5%** to **336 mill. EUR**, **positive** driven by strong Workshop product sales
 - **Special Applications -3.7%** to **204 mill. EUR** with positive development mainly in the core business for agricultural and construction vehicles, as well as for trailers

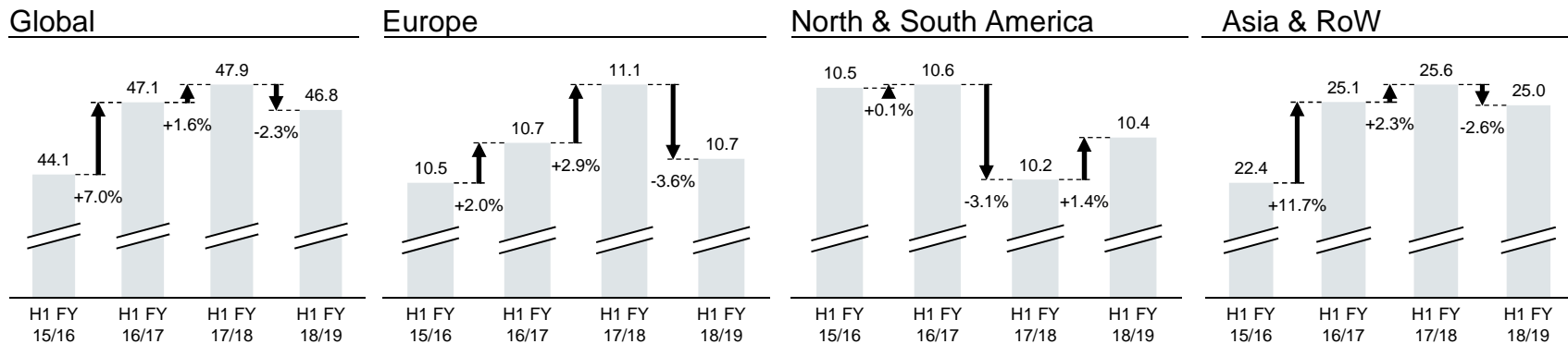
Automotive outperforming LVP in all regions

Financial Results H1 FY 2018/19

HELLA Automotive external sales by region (in EUR millions)



Light vehicle production (in million units)



HELLA Automotive growth vs. market (Light vehicle production growth):

-6.4%	+7.4%	+10.6%	-5.7%	+1.5%	+11.6%	+7.9%	+23.4%	+11.6%	-0.6%	+12.0%	+6.8%
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Source: HELLA; IHS (as of December 2018)

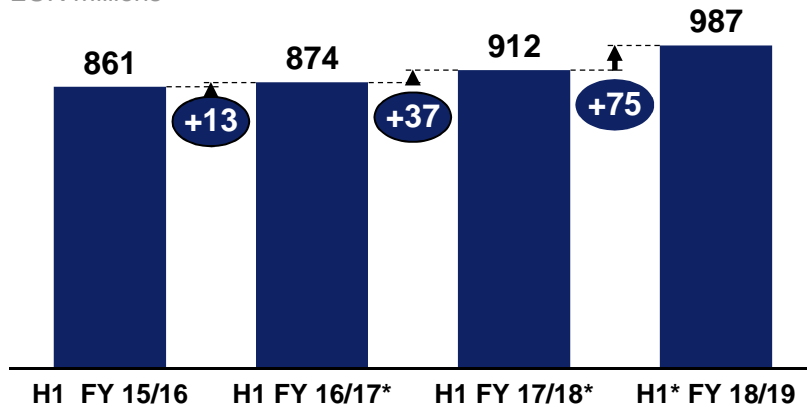


GPM increase due to strong overall business development

Financial results H1 FY 2018/19

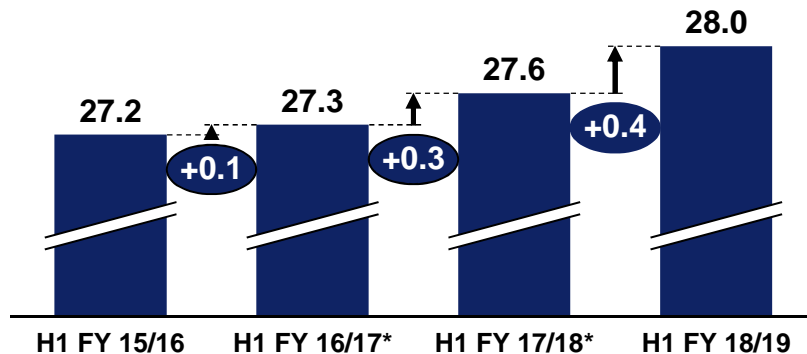
Adj. Gross Profit

EUR millions



Adj. Gross Profit margin

% sales



*Restated for the reclassification of costs.

Highlights

- **Adj. Gross Profit increased by 75 mill. EUR (+8.3%) to 987 mill. EUR**
 - **Automotive** +9.0% to 738 mill. EUR
 - **Aftermarket** +7.0 % to 119 mill. EUR
 - **Special Applications** +8.6% to 81 mill. EUR

Highlights

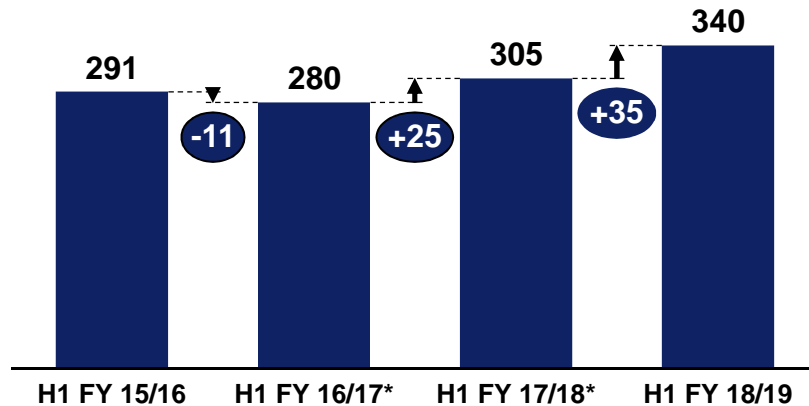
- **Adj. Gross Profit margin improved by 0.4%-points to 28.0%**
 - higher GPM Automotive (+0.2pp) due to higher volumes compensating higher raw material & personal costs
 - increased GPM in Aftermarket (+0.8pp) due to Workshop sales
 - higher GPM in Special Applications (+4.5pp) due growth in the core business

Continuous high R&D expenses to expand leading technological positioning and secure future growth

Financial Results H1 FY 2018/19

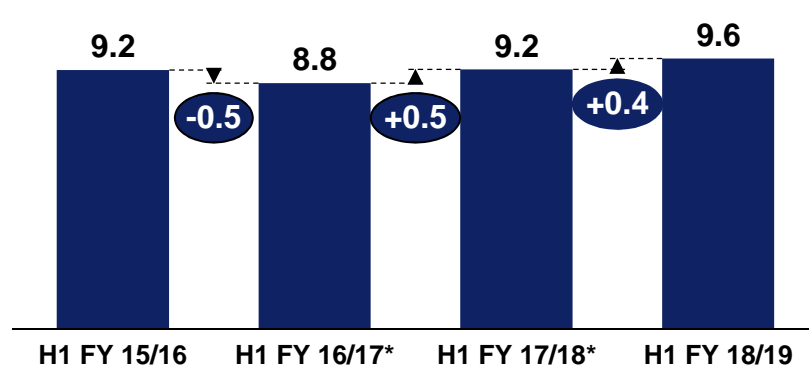
R&D expenses

EUR millions



R&D expenses ratio

% sales



*Restated for the reclassification of costs.

Highlights

- **Absolute R&D expenses** increased by 35 mill. EUR (+11.4% YoY) to **340 mill. EUR**, mainly:
 - secure and strengthen technology leadership along the market trends
 - preparation and realization of production ramp-ups
 - continuous development of international R&D capacities

Highlights

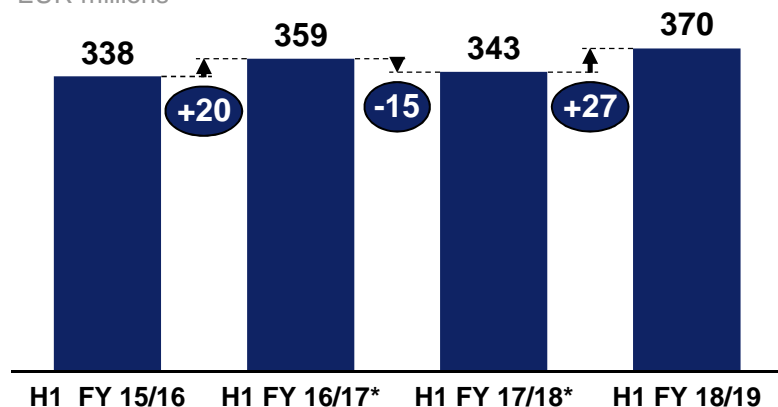
- **H1 FY 18/19 ratio** +0.4pp to **9.6%** due to over-proportional increase in absolute R&D expenses

SG&A costs with slight increase due to continuous investments

Financial Results H1 FY 2018/19

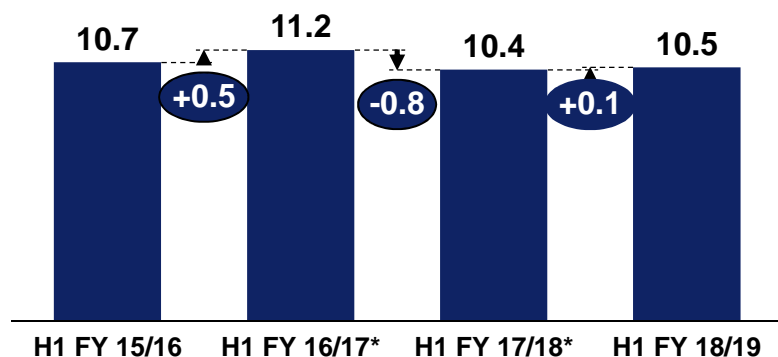
Adj. SG&A expenses

EUR millions



Adj. SG&A expenses ratio

% sales



*Restated for the reclassification of costs.

Highlights

- **Adj. SG&A costs** increased (+27 mill. EUR, +7.9%) to **370 mill. EUR**
 - higher logistic costs (+ 16 mill. EUR)
 - higher admin expenses (+ 10 mill. EUR) with continuous investments in processes, systems and functions
 - lower other adj. income (-1.7 mill. EUR) and expenses due to positive one-offs in PY

Highlights

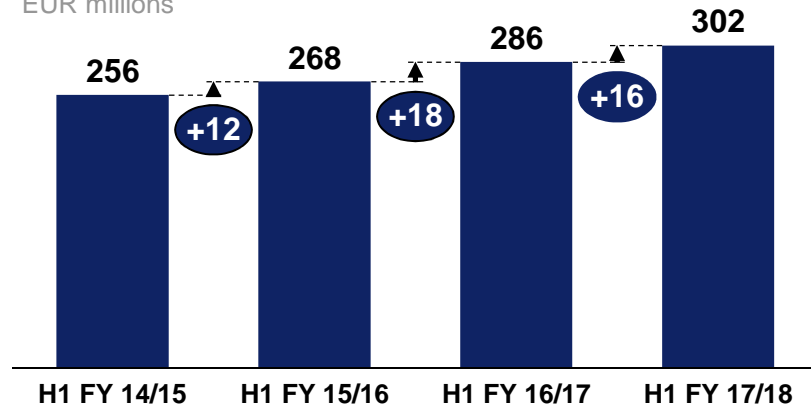
- **Adj. SG&A ratio** increased (+0.1ppt) to **10.5%** due to over-proportional increase in absolute SG&A expenses

Adjusted EBIT above prior-year's level

Financial results H1 FY 2018/19

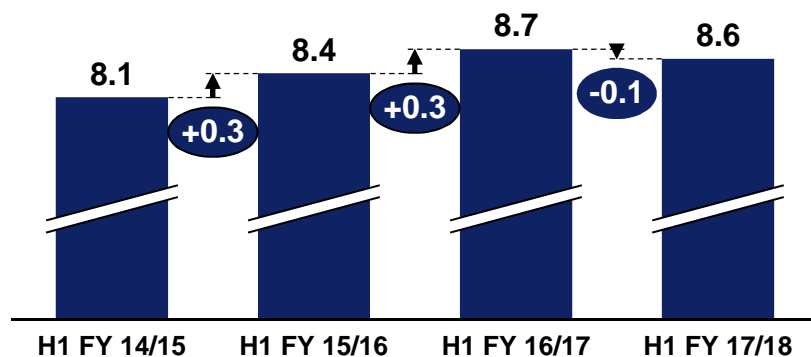
Adjusted EBIT

EUR millions



Adjusted EBIT margin

% sales



Highlights

- **Adjusted EBIT** increased by 16 mill. EUR (+5.5%) to **302 mill. EUR**:
 - increase in adj. Gross Profit by 75 mill. EUR (+8.3%)
 - higher R&D (+35 mill. EUR, +11.4%)
 - increase in adj. SG&A (mainly distribution) by 27 mill. EUR (+7.9%)
 - increase in JV income by 2 mill. EUR (+8.5%)

Highlights

- **Adj. EBIT margin** decreased by **0.1%-points** to **8.6%**:
 - increase of adj. GPM by 0.4pp
 - higher R&D expenses (+0.4pp)
 - higher SG&A (+0.1pp)

P&L including reconciliation

Financial Results H1 FY 2018/19

FY comparison

HELLA GROUP		H1 FY 17/18	H1 FY 18/19
in EUR mill.			
Gross Profit *	reported	959.6	997.0
	Adjustments	-48.1	-10.0
	adjusted	911.5	986.9
Other income and expenses	reported	7.9	257.1
	Adjustments	1.8	-249.1
	adjusted	9.7	8.0
Distribution*	reported	284.6	276.3
	Adjustments	-43.2	-19.0
	adjusted	241.4	257.3
Admin*	reported	111.6	126.5
	Adjustments	0.0	-5.3
	adjusted	111.6	121.2
EBIT	reported	289.5	536.8
	Adjustments	-3.1	-234.8
	adjusted	286.4	302.0
Net financial result		-22.9	-25.0
Taxes		-68.0	-68.2
Earnings for the period		198.6	443.6
Earnings per share (EUR)		1.78	3.99

*Reported H1 FY 17/18 restated for the reclassification of R&D costs. For details see financial report

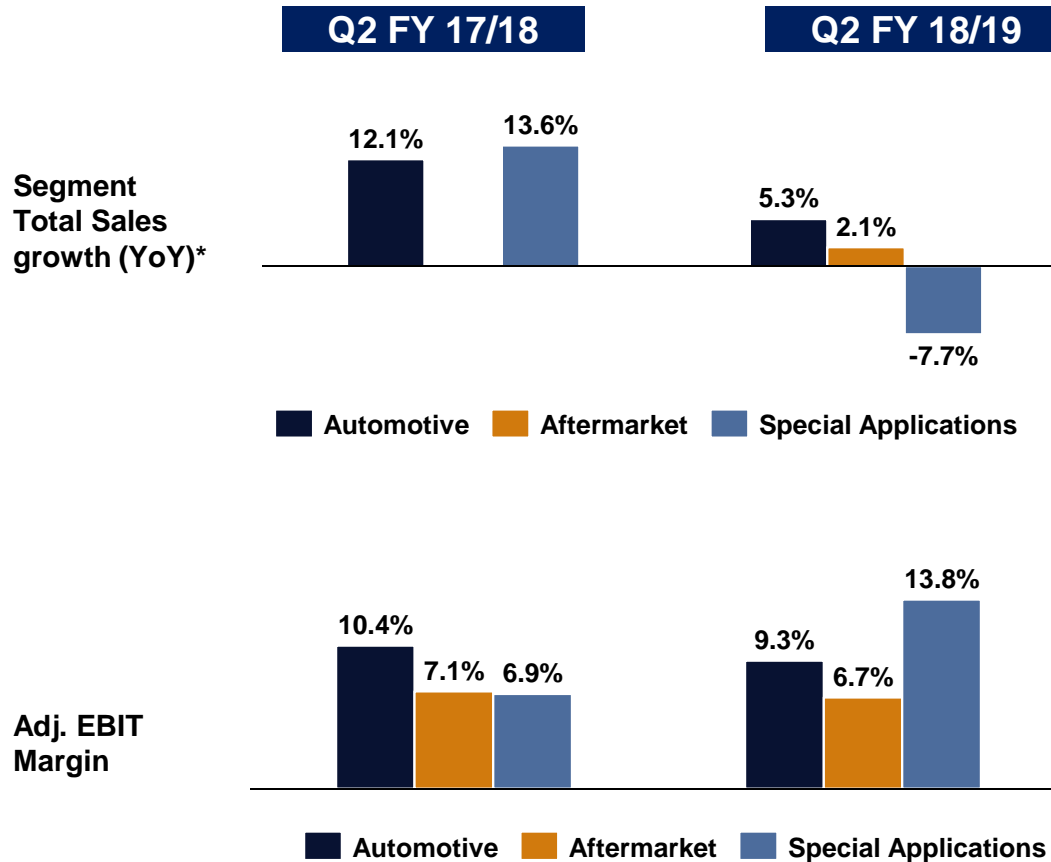
Comments

- Reported EBIT H1 FY 18/19 increased by 247 mill. EUR, thereof + 255 mill. EUR profit from WD
- Net financial result increased slightly with higher obligations from leasing
- Earnings for the period increased driven by growth and profit from Wholesale
- Result driven higher tax payments, tax expense ratio excluding profit from Wholesale disposal relatively stable compared to FY 17/18 (26.6%)
- EPS increased by 2.21 EUR (+124%) to 3.99 EUR

Q2 FY 18/19 Automotive business with lower growth dynamics and margin pressure

Financial Results H1 FY 2018/19

Quarterly comparison



Comments

- Lower Automotive growth dynamics in Q2 FY 18/19, mainly due to weak Chinese market
- Aftermarket with modest total sales growth, IAM influenced by weak development in selective markets like Turkey and Middle East, Workshop products growing +60%
- Special Applications negative due to pre-drawn effects from PY. Growing agricultural, construction, and truck/trailer business. Adj. sales growth by 4.2%
- Q2 FY 18/19 Automotive margin affected by increasing raw material & personal expenses which could not be compensated due to lower growth and increasing R&D
- Aftermarket adjusted EBIT margin declined due to (product) mix effects
- Q2 FY 18/19 adj. EBIT Special Applications due to strong product mix

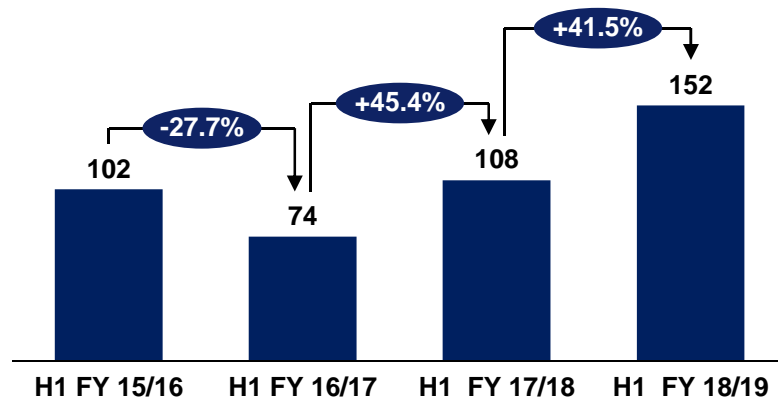
* Q2 FY 16/17 Aftermarket not comparable due to disposal of Wholesale distribution

Adj. Free Cash Flow from operating activities increased with improved Working Capital consumption

Financial Results H1 FY 2018/19

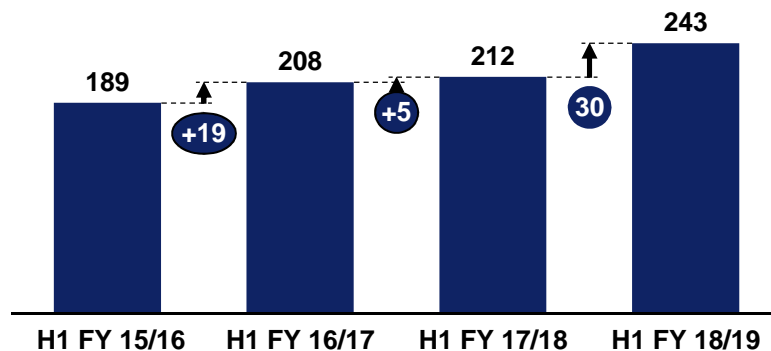
Adj.¹ FCF from operating activities

EUR millions



Adj. Net CAPEX²

EUR millions



1) Adjustments of FCF include restructuring expenses, factoring (Q1 FY 16/17 only) and payments received/made in connection with the sale of shares in FTZ and INTER-TEAM
 2) In accordance with IFRS 15 reimbursement not deducted from CAPEX in H1 FY 18/19, prior year have not been adjusted.

Highlights

- **Adj. Free Cash Flow from operating activities** increased by 45 mill. EUR to **152 mill. EUR**, mainly due to a lower working capital consumption
- **Cash Conversion³ ratio** increased by 12.8pp to **50.4%**

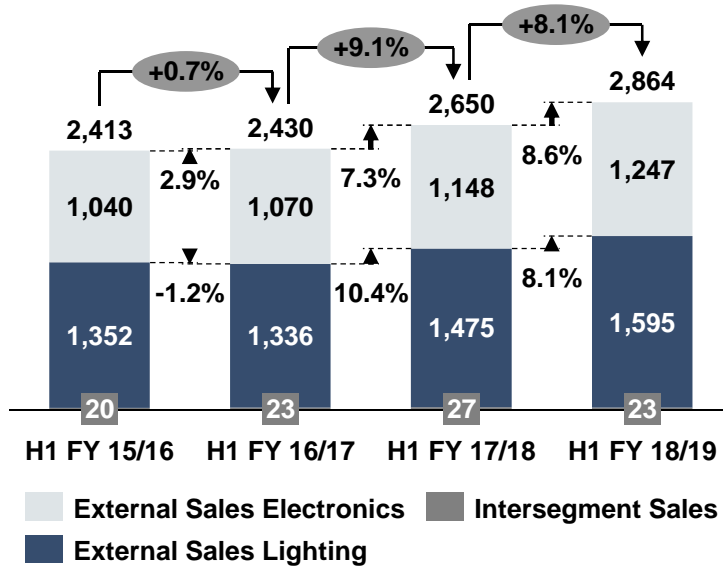
3) Adj. Free Cash Flow from operating activities / adj. EBIT

Highlights

- **Continuous investments** in customer-specific **equipment** and **capacity extensions**
- **No reimbursements** included (in H1 FY 17/18 76 mill. EUR)

Automotive segment with increasing growth, profitability under pressure

Financial Results H1 FY 2018/19

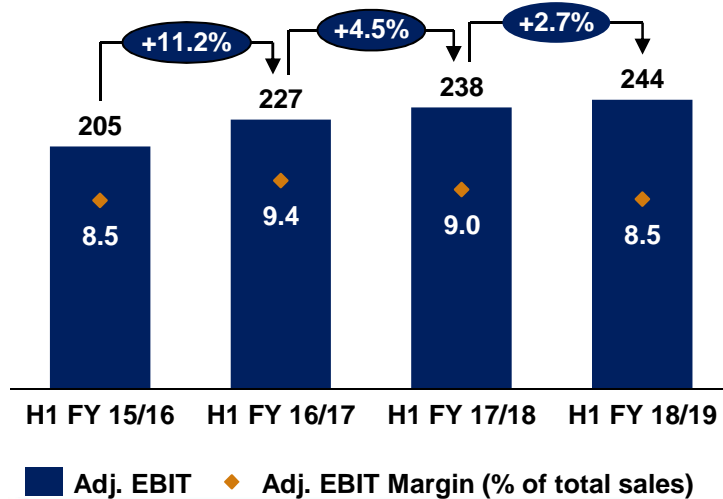


Automotive Sales

- **Growth of 8.1%** with ongoing production ramp-ups and higher demand for:
 - energy management and driver assistance products
 - innovative / advanced lighting products
 - Demand driven by **NSA** and **Europe** (ex. Germany)

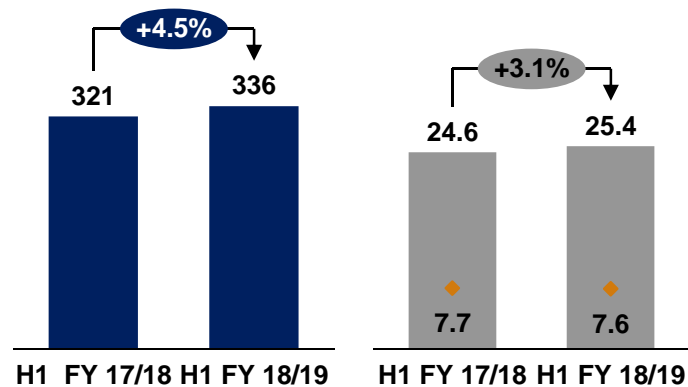
Automotive Profitability

- **Increase of adj. EBIT by 2.7% to 244 mill. EUR, mainly:**
 - increase in **Gross Profit**, increasing volumes compensating higher raw material and personal expenses especially in Q1, GPM +0.2pp
 - increase in **R&D** to strengthen technology leadership along the megatrends and to prepare production ramp-ups, R&D ratio + 0.4pp
 - increase in **distribution** expenses (+12.2%) ratio + 0.1pp to 3.5%, including one time efforts for acquiring new customer projects

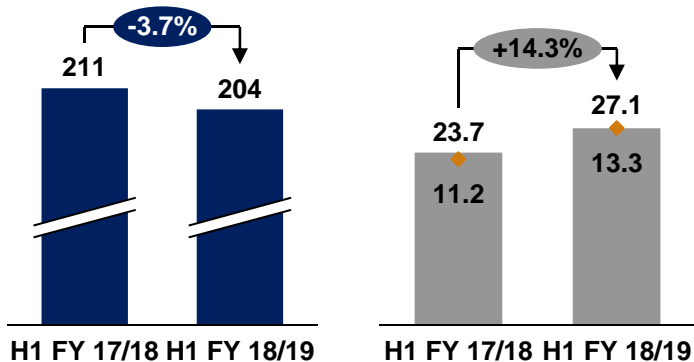


Non Automotive segments with positive contributions

Financial Results H1 FY 2018/19



■ adj. EBIT
◆ adj. EBIT Margin



■ Total Sales
■ EBIT
◆ EBIT Margin

*The figures for the Aftermarket segment exclude the items from wholesale distribution.

Aftermarket*

- **Total sales growth (+4.5%)** due to **workshop business** and positive **IAM** demand
- **Decrease in adj. EBIT margin by 0.1pp to 7.6%**
 - Growth in GPM by 0.8pp due to positive mix effects
 - Higher distribution and admin costs ratios (+0.3pp each) mainly event related

Special Applications

- **Negative top-line development (-3.7%)**:
 - increasing demand in **Construction and Agricultural** sector, other product groups e.g. **Trailer and Trucks** also **growing**
 - **End of production in Australia** with negative especially on growth in Q2
- **Profitability up by 14.3%** (excluding Australia closing +16.7%), margin + 2.1pp to 13.3% (excl. Australia + 1.2pp to 13.7%)
 - Underlying business with positive development



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- HELLA Financial Results H1 FY 2018/19
- HELLA at a Glance
- HELLA Strategy
- HELLA's View on Automotive Market Trends

As one of the top 40 automotive suppliers worldwide HELLA specializes in innovative lighting systems and vehicle electronics

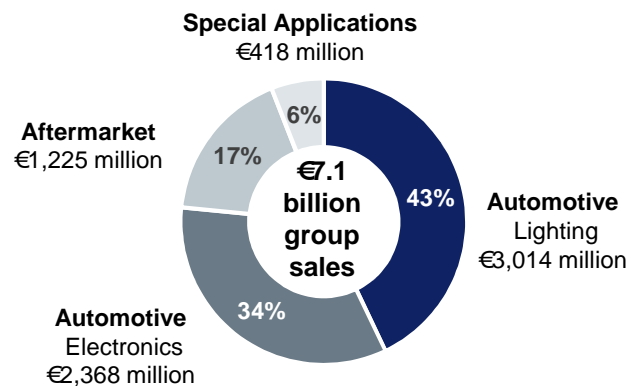
HELLA at a Glance – Overview

KEY FACTS

- **Founded 1899** in Lippstadt (Germany)
- Global footprint with over **40,000 employees** at more than **125 locations** in some **35 countries**
 - Thereof **41 research & 28 production sites**
- Integrated business portfolio in **Automotive, Aftermarket, and Special Applications**
- **Leading market positions** in automotive **Lighting and Electronics**
- One of the **top 40 automotive suppliers** in the world and **one of the 100 largest German industrial companies**

SALES BY BUSINESS SEGMENT

external sales, fiscal year 2017/18*



*Including Wholesale business

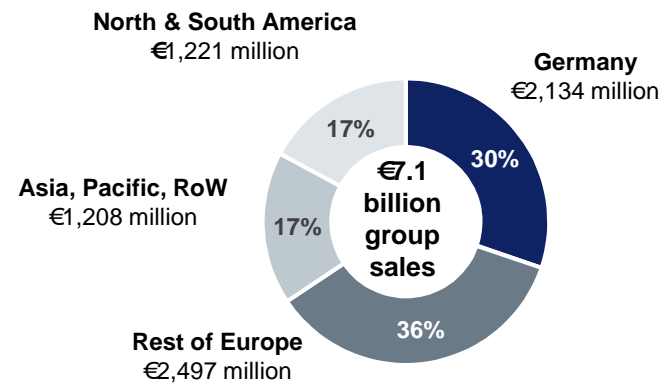
KEY FINANCIALS

in EUR millions and % of sales

	FY 2016/17	FY 2017/18*	Change
Sales	6,585	7,060	+7.2%
Adjusted EBIT	534	581	+8.8%
Adjusted EBIT margin	8.1%	8.2%	+0.1% points
Adjusted Free Cash Flow	149	241	+61.7%

SALES BY REGION

based on the HQs of HELLA's customers, fiscal year 2017/18*



In the Automotive segment, HELLA develops and produces innovative solutions for automobile manufacturers worldwide

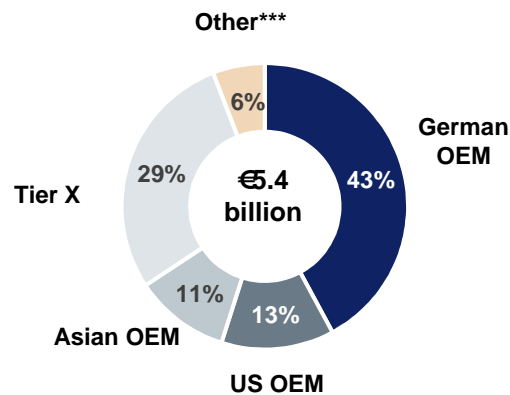
HELLA at a Glance – Business Segment Automotive

BUSINESS OVERVIEW*

Lighting <ul style="list-style-type: none"> ▪ Headlamps ▪ Rear Combination Lamps ▪ Small Lamps ▪ Interior Lighting ▪ Lighting Electronics 	<ul style="list-style-type: none"> ▶ #1 market position in LED headlamps Europe ▶ #3-4 global and #1-2 European market position in OE passenger car lighting
Electronics <ul style="list-style-type: none"> ▪ Components ▪ Energy Management ▪ Driver Assistance Systems ▪ Body Electronics ▪ Steering 	<ul style="list-style-type: none"> ▶ #2-3 global and #1-2 European market position in defined automotive electronic segments

AUTOMOTIVE SALES BY CUSTOMERS

fiscal year 2016/17



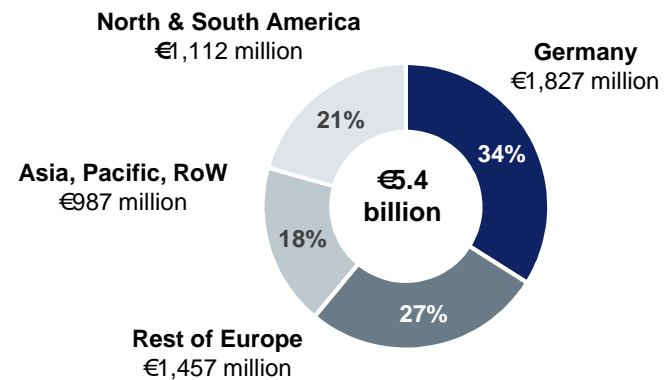
KEY FINANCIALS

in EUR millions and % of sales

	FY 2016/17	FY 2017/18	Change
External Sales	4,980	5,383	+8.1%
Adjusted EBIT**	444	457	+2.8%
Adjusted EBIT margin**	8.8%	8.5%	-0.3% points
Ext. Sales Lighting	2,788	3,014	+8.1%
Ext. Sales Electronics	2,191	2,368	+8.1%

AUTOMOTIVE SALES BY REGIONS

fiscal year 2017/18



*) All figures related to the selected markets and product categories based on HELLA's portfolio, as covered in an external market study commissioned by HELLA (2014)

***) Adjustments including restructuring expenses

***) Including European OEM (ex Germany) and trucks.



HELLA with a comprehensive offering of automotive parts, diagnostics, and services within Europe

HELLA at a Glance – Business Segment Aftermarket

BUSINESS OVERVIEW



Independent Aftermarket (IAM)

- Sale of **own and third-party spare parts** to IAM wholesalers
- **Own sales presence** in >25 countries
- **Strong position** of sales network and brand presence in **European market (#1-3)**



Workshop Equipment

- Premium provider of **workshop solutions, diagnostic tools** and advanced **equipment** to garages
- Offering of **professional services**, e.g. technical data/hotline, trainings & financial services
- **market position: #1**    **#3** 

KEY FINANCIALS

in EUR millions and % of sales

	FY 2016/17	FY 2017/18*	Change
Sales	1,222	647	n.m.
Adj. EBIT	73.0	52.6	n.m.
Adj. EBIT margin	6.0%	8.1%	n.m.
Sales IAM	553	568	+2.7%
Sales Garage Equipment	66	67	+2.6%

STRATEGIC FOCUS

- **Further strengthen IAM product portfolio**
e.g. enhance offering of Electronics/ Electrics and universal lighting products, expand partner network, push roll-out of 3rd party products to additional markets
- **Further enhance workshop products and services**
e.g. set-up new digital offers and software driven business models (remote fleet manager, workshop broker platform), develop calibration solutions for complex cars

*excludes Wholesale business (9 months). Closing September 3, 2018 for FTZ and INTERTEAM

In Special Applications HELLA incorporates the extensive technological expertise in lighting and electronics

HELLA at a Glance – Business Segment Special Applications

BUSINESS OVERVIEW

- Development, production and sale of **lighting and electronics products for special vehicle manufacturers**
- **“Fast follower” of technological innovations in automotive segment** along megatrends LED, energy efficiency and safety
- Application of know-how through **own research and development resources** and **dedicated production footprint**
- **Strong market position in lighting product** areas based on long-standing experience, in particular in Europe
- Focusing on **a variety of attractive target groups**

TARGET GROUPS



KEY FINANCIALS

in EUR millions and % of sales

	FY 2016/17	FY 2017/18	Change
Sales	385	430	+11.6%
EBIT	19.7	48.0	+143.7%
EBIT margin	5.1%	11.2%	+6.1% points

STRATEGIC FOCUS

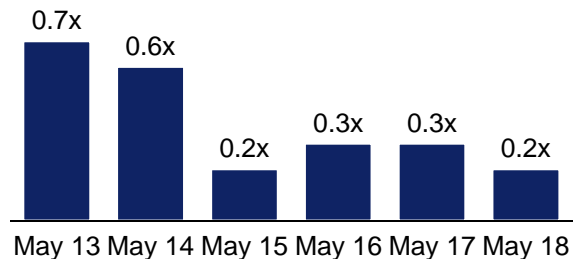
- **Drive further LEDfication**
e.g. build-up competences in intelligent lighting solutions, push Visiotech technology, broaden innovative roadmap (LED matrix beam, Shapeline), increase number of vehicle specific lighting projects
- **Boost growth of Electrics / Electronics business**
e.g. extend electronics scope (focus on sensors and actuators), foster cooperation and M&A opportunities
- **Penetrate growing customer segments**
e.g. drive growth in segments mining, power sports, and marine, push solutions for e-cars and small cars, explore further growth potential of truck business

High financial stability ensures long-term growth perspective and provides freedom for entrepreneurship

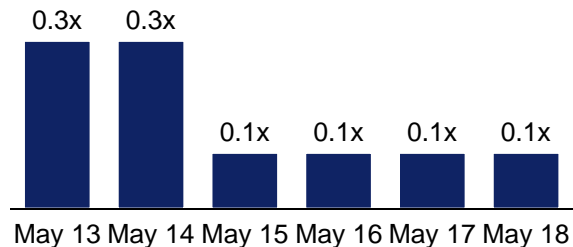
HELLA at a Glance – Financial Stability

Solid capital structure

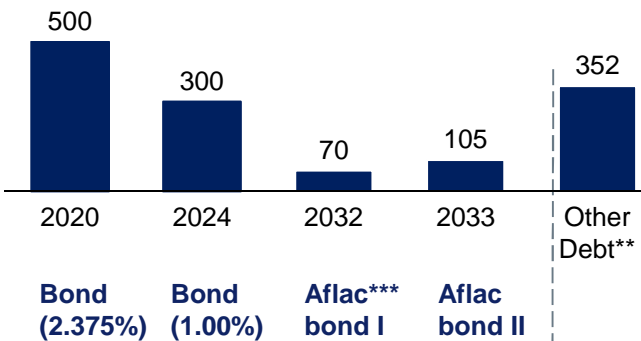
Leverage (Net debt / EBITDA)



Gearing (Net debt / Equity)



Debt and maturity profile*, in millions EUR



Additional Revolving Credit (2022) of EUR 450m with 10 core banks as back-up facility

Strategic flexibility

HELLA has a stable and solid financial fundament which forms the basis for its future strategic plans

- Prudent financial policy throughout the cycle with leverage < 1.0x
- Financing of long-term growth strategy secured
- Well balanced debt portfolio
- New issuing (senior, unsecured / bearer debt) for attractive conditions
- Mid term target: Leverage < 1.0x

- Capital-market-oriented capital structure with investment grade rating
- **Good liquidity profile** and consistent liquidity management
- **EUR 117m dividends** (1.05EUR/share) paid October 2018
- **Equity ratio at 41.9% and cash & assets at 1,021 mill. EUR**

* As of August, 2018; Euro Bond I: 2,375%, Euro Bond II: 1,00%; Aflac bonds hedged values ** Mostly long term debt; starting with Aug 2018 lease liabilities according to IFRS 16 *** Abbreviation for "American Family Life Insurance Company"



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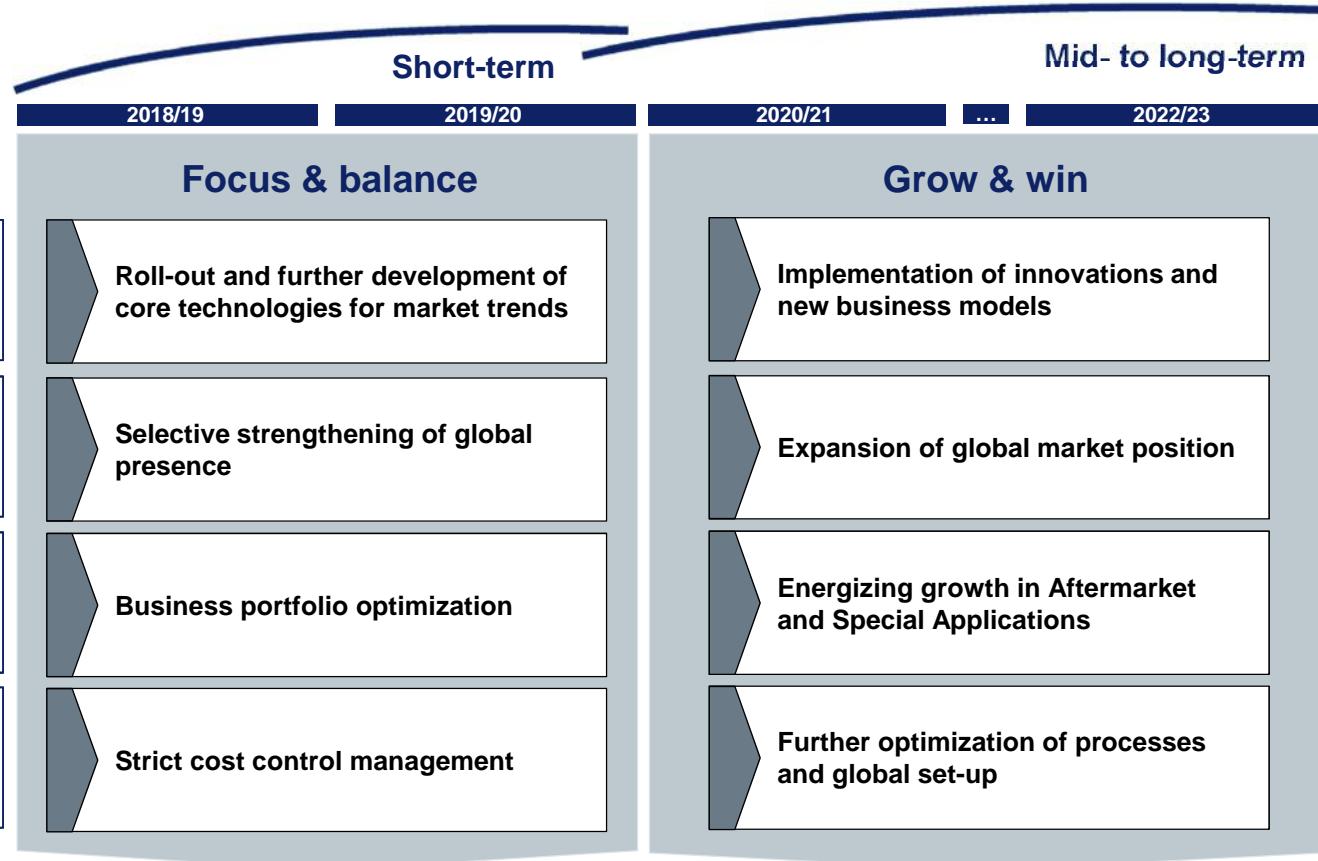
HELLA's strategic pillars are valid, but to cope with current market challenges HELLA has to adapt its behavior

HELLA Strategic Perspective







STRATEGIC FOUNDATION PILLARS

- A** Technology Leadership
- B** Market Leadership
- C** Resilient Portfolio
- D** Operational Excellence



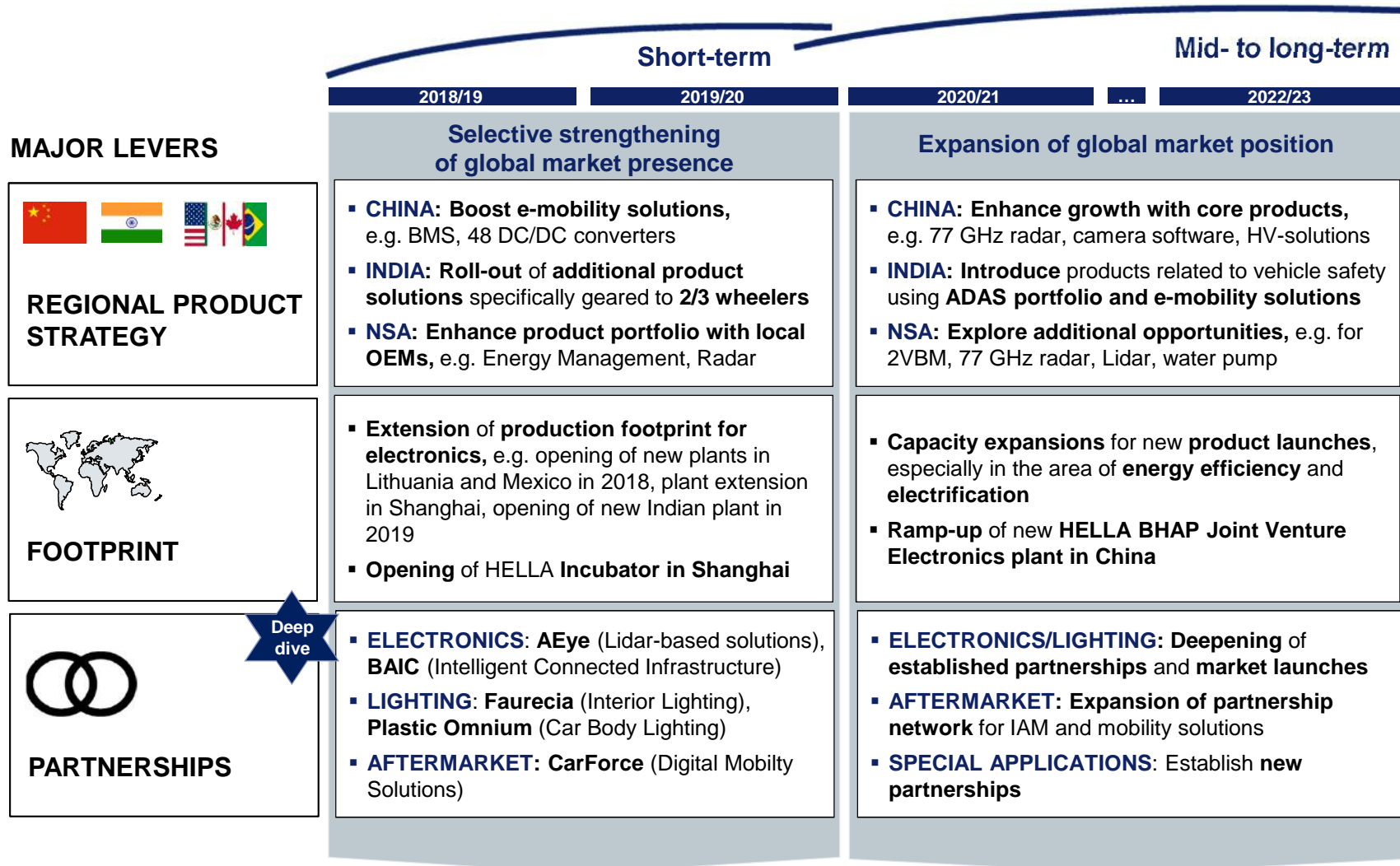
HELLA continues to invest in major market trends to expand innovation leadership and benefit from industry transformation

A Technology Leadership

MAJOR MARKET TRENDS	Short-term		Mid- to long-term	
	2018/19	2019/20	2020/21	2022/23
AUTONOMOUS DRIVING 	Roll-out and further development of core technologies		Implementation of innovations and new business models	
	Strengthen position as component supplier with a complete portfolio in the area of sensing <ul style="list-style-type: none"> Roll-out of 24 GHz and 77 GHz radar components Realize camera software potential (focus on Levels 1-3) Complete product portfolio, e.g. SHAKE, LiDAR 		Expand component strategy with system approach <ul style="list-style-type: none"> Become subsystem supplier for specific AD functions linking camera software and radar Offer specific functions as software product “on demand” Develop new lighting functionalities for AD scenarios 	
	Focus and strengthen business with components for different powertrain concepts <ul style="list-style-type: none"> Drive global product roll-out for ICE and hybrids, e.g. DC/DC converters, Intelligent Battery Sensors Roll out specific solutions for fully electrified vehicles, e.g. battery management systems 		Enlarge product portfolio with new solutions addressing all stages of electrification <ul style="list-style-type: none"> Push subsystems for Mild Hybrids, e.g. Dual Voltage Battery Management, PowerPack 48V, On Board Charger Extend business model for Electrical Power Steering, e.g. shift to fail operational ECUs 	
	Roll-out digital product solutions <ul style="list-style-type: none"> Push market penetration of HD Matrix LED headlamp technologies Introduce new digital diagnostic services for workshops, e.g. digital multifunctional glasses 		Offer new digital business models <ul style="list-style-type: none"> Further leverage digital innovations from HELLA incubator network and ventures ecosystem Introduce new mobility solutions for the Aftermarket, e.g. business models for fleet management and insurances 	
EFFICIENCY & ELECTRIFICATION 	Push market penetration of lighting-based styling features <ul style="list-style-type: none"> Introduce customizable interior lighting concepts with RGB LED modules of the second generation Further roll-out of multi-lense-array solutions for light projections, e.g. welcome scenarios 		Advance business with comprehensive interior and car body lighting solutions <ul style="list-style-type: none"> Accelerate interior lighting solutions for a personalized cockpit environment Drive holistic integration of lighting technologies into the vehicle exterior 	
	CONNECTIONITY & DIGITALIZATION 			
INDIVIDUALIZATION 				










HELLA strengthens its leading position by tailored market strategies and expansion of its global network

B Market Leadership



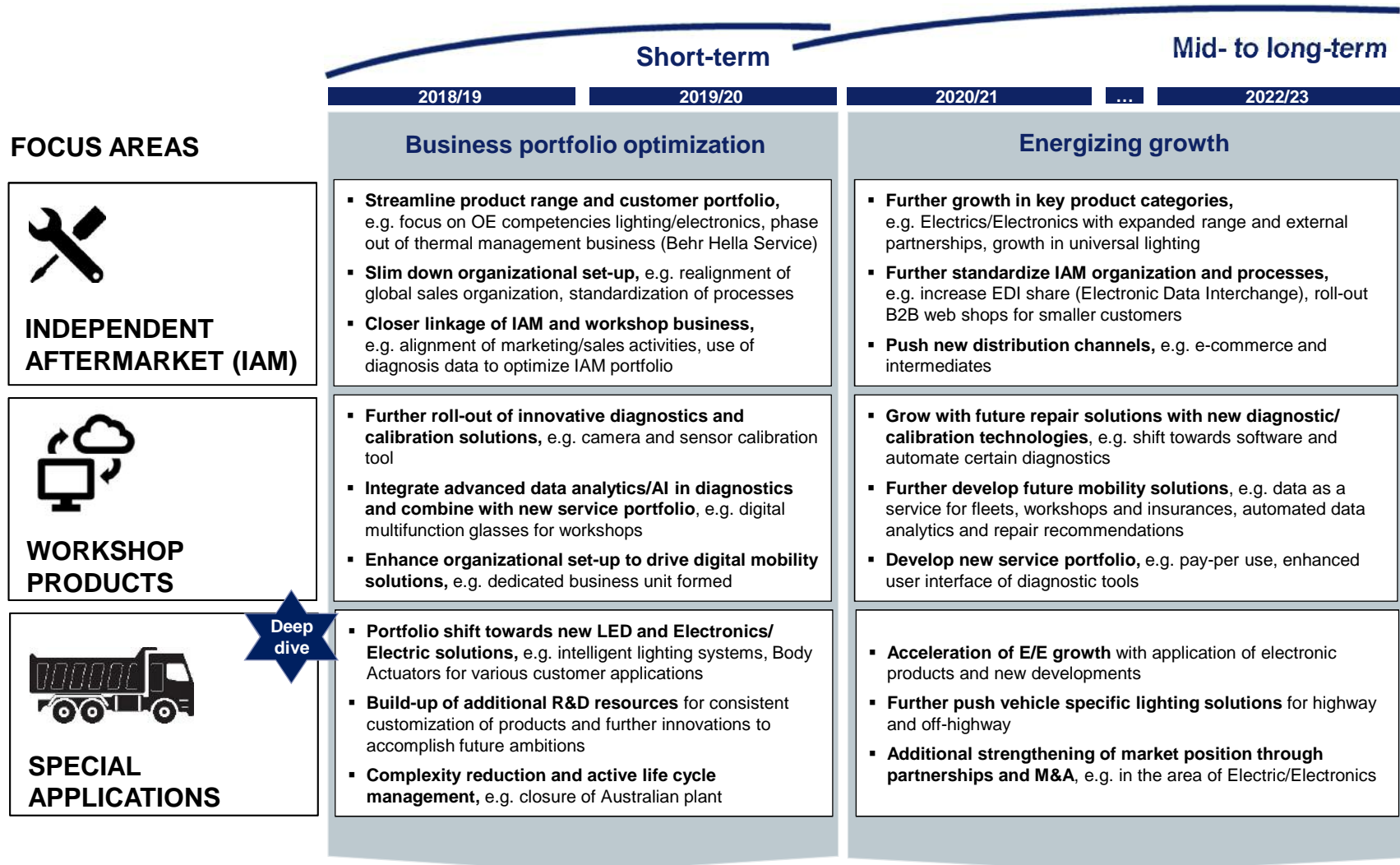
HELLA is establishing additional open partnerships to further enhance innovation speed and efficiency and capture growth chances

B Market Leadership – Latest partnerships

FIELD OF COOPERATION	HELLA CONTRIBUTION	PARTNER CONTRIBUTION	SCOPE OF PARTNERSHIP
INTERIOR LIGHTING	 <ul style="list-style-type: none"> Innovative products and proven expertise in the field of interior lighting, e.g. (dynamic) interior lighting solutions to support drivers safety and comfort 	 <ul style="list-style-type: none"> Innovative solutions for the cars interiors Expertise as a complete system integrator for vehicles 	 <ul style="list-style-type: none"> Interior lighting solutions for a comprehensive personalized cockpit environment (“cockpit of the future”) Joint development with special focus on surface-lighting and dynamic-lighting First results demonstrated at Paris Motor Show 2018
CAR BODY LIGHTING	 <ul style="list-style-type: none"> Advanced know-how with respect to light-based styling features and functionalities for the car body exterior 	 <ul style="list-style-type: none"> Competence regarding design, development, and assembly of front and rear exterior body systems Special know-how in plastics processing 	 <ul style="list-style-type: none"> Holistic, innovative integration of lighting technologies into the vehicle exterior, especially for the front and rear areas Bundling of dedicated development resources at one site planned
LIDAR	 <ul style="list-style-type: none"> Automotive experience Know-how in embedded software Image processing expertise Industrialization capabilities 	 <ul style="list-style-type: none"> iDAR™ technology, new form of intelligent data collection that fuses LIDAR with a low-light HD camera and embedded AI to intelligently capture data at the sensor level 	 <ul style="list-style-type: none"> Customized sensing and perception solutions for ADAS and Automated Driving based on LIDAR sensor and iDAR™ system development First results demonstrated at CES 2019

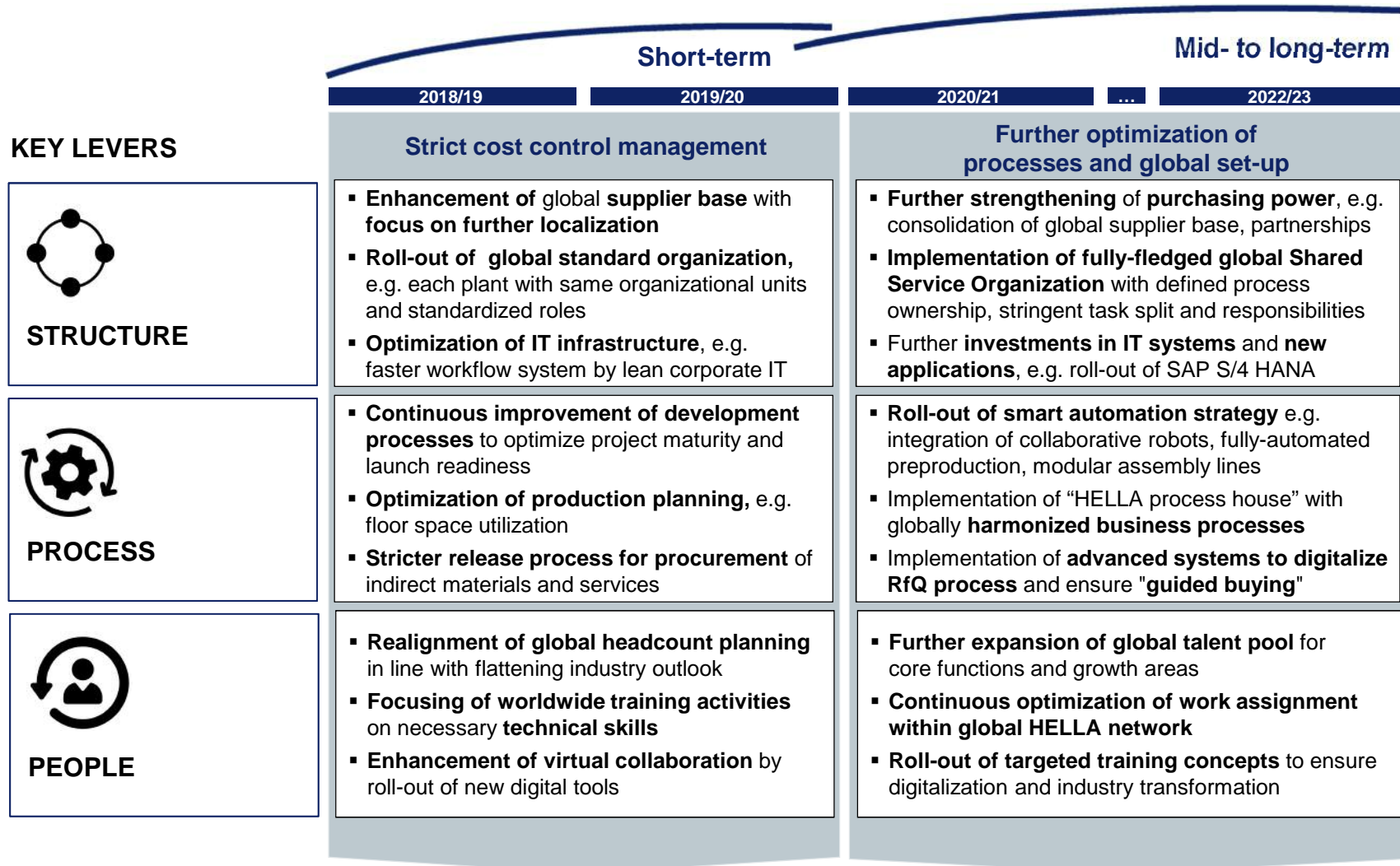
HELLA shapes its Aftermarket and Special Applications business to ensure further growth

C Resilient Portfolio



HELLA strengthens its global competitiveness by continuously advancing its corporate set-up and processes

D Operational Excellence









HELLA Presentation German Conference April 2019

Outline

- HELLA Financial Results FY 2017/18
- HELLA at a Glance
- HELLA Strategy
- HELLA's View on Automotive Market Trends

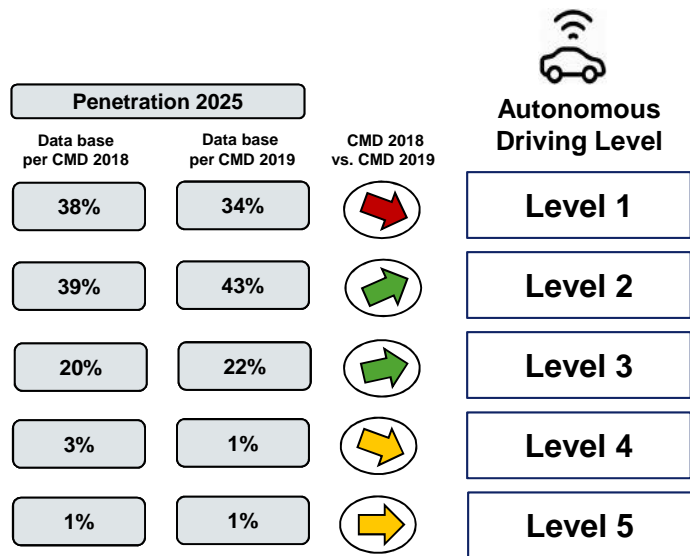
To benefit from latest market developments, HELLA has incorporated their major implications into its strategic action plan

HELLA's view on Automotive Market Trends

 AUTONOMOUS DRIVING (AD)	 EFFICIENCY & ELECTRIFICATION	 CONNECTIVITY & DIGITALIZATION	 INDIVIDUALIZATION
<ul style="list-style-type: none"> ▪ Trend is gaining speed, especially L1-3 (pushed by safety regulations) ▪ Penetration L4-5 moved further away ▪ Increasing number of partnerships for L4-5 ▪ Higher willingness of consumers to pay for AD features 	<ul style="list-style-type: none"> ▪ Trend with high dynamics ▪ Accelerated penetration of electrified vehicles due to incentives and regulatory push ▪ Especially increasing demand for 48 Volt solutions ▪ Strong growth in China 	<ul style="list-style-type: none"> ▪ Increasing importance of software: Increase in functionalities with car value shift from hardware to software ▪ 75% of vehicles with internet by 2020 ▪ Digital related revenues to triple until 2030 in Aftermarket 	<ul style="list-style-type: none"> ▪ Stronger focus of OEMs and consumers on vehicle design features and personalization ▪ Increasing demand for passenger related applications and functionalities ▪ Introduction of functions on demand
<p>Major implication</p> <ul style="list-style-type: none"> ➤ Strong components portfolio core ➤ Increasing relevance of system competence and partnerships 	<p>Major implication</p> <ul style="list-style-type: none"> ➤ Substantial growth opportunities for HELLA (worldwide, but especially in China) 	<p>Major implication</p> <ul style="list-style-type: none"> ➤ New business opportunities e.g. cloud-based solutions, domain computer, digital aftermarket solutions 	<p>Major implication</p> <ul style="list-style-type: none"> ➤ Additional growth opportunities for HELLA especially in the field of interior and car body lighting

HELLA is already benefiting from trend towards Autonomous Driving by focusing on solutions for L1-L3 requirements

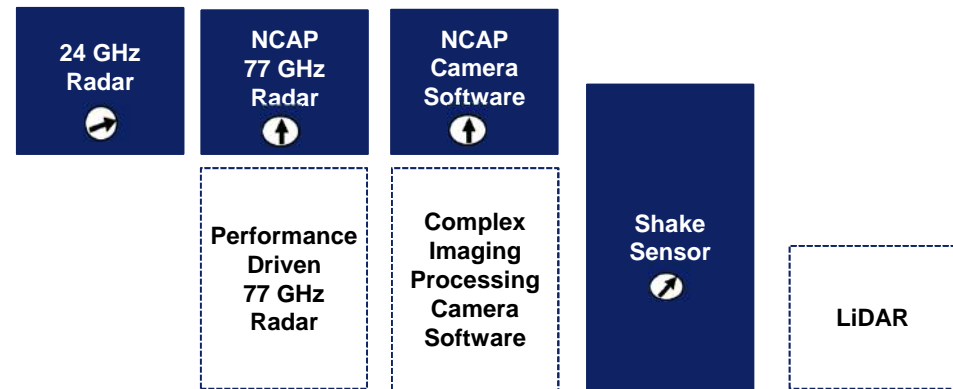
Autonomous Driving – Overview



HELLA Offering

CAGR ↑ >25% ↗ >10-25% ↘ <10%

Established product proposition | Product Roadmap



MARKET Development

- **Strong ADAS penetration** especially penetration of lower levels (L2 and L3) increasing
- **ADAS sensors demand increasing globally**, especially camera, radar and lidar with strong growth
- **Estimated penetration of L4 and L5 moved further away**, penetration starting notably in 2030

HELLA Position & Strategy

Strong growth perspective with established products and product roadmap

- **HELLA as key supplier of ADAS**, pushing front camera software, radar portfolio e.g. **24 Ghz** and **77Ghz** low cost and supplement **SHAKE sensor**
- Develop **new products** together with **partners** like **AEye** for **LiDAR** to offer new use cases
- **Allocate resources** to **complex Image Processing** and **77 Ghz** performance radar to continuously enhance products and offer **L3+ functionalities**

* Based on global LVP, source: Strategy Analytics November 2017, 2018; HELLA analysis



HELLA's 77 GHz radar family approach covers almost all market needs for assisted and automated driving

Autonomous Driving – Key supplier for ADAS: radar sensors

AUTONOMOUS DRIVING



EXAMPLE:

MODULAR PLATFORM APPROACH FOR 77 GHZ RADAR

MARKET SITUATION

- **24 GHz radar is common technology** for standard assistance functions
- **77 GHz radar** is satisfying requirements for **Assisted and Automated Driving**
- **Replacement of 24 GHz radar by cost effective 77 GHz "System on Chip"** solutions has already **started**
- **Highest volume growth driven by NCAP and level 2/3 functionalities** in price driven market for standard corner radars
- **Mid/high performance solutions** needed for **higher automation levels (L3+)** based on cost competitive, modular, scalable sensors and system designs

HELLA APPROACH

- **Further roll-out of successful 24 GHz radars**
- **Offering 77 GHz radar platform as component or system business** from HELLA sales channels or with cooperation partner ZF
 - **Modular platform** (focus on different interfaces)
 - **Scalable sensor solutions** (processor performance & antenna set-up)
 - Maximize **synergies** (focus on reuse of SW components)
 - **Flexible software deployment** (decentralized or centralized functions)



77 GHz radar product family



➤ **Unique Selling Proposition** with performance driven **150m corner range radar sensor**

KEY ACHIEVEMENTS

- **Key supplier for 24 GHz radar** with more than 20 million sensors on the market; **booked business will more than triple HELLA's volume**
- **77 GHz radar platform under development:** successful business acquisition for **passenger cars** (premium & volume) and **Truck**
- **Pre-development phase for next generation technologies** (e.g. "Antenna on Chip") and **parking Application** with Premium OEM

HELLA offers scalable camera software platform for NCAP and advanced ADAS functionalities

Autonomous Driving – Key supplier for ADAS: camera software

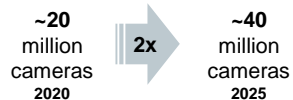
AUTONOMOUS DRIVING



**EXAMPLE:
FRONT CAMERA SOFTWARE**

MARKET SITUATION

- Transition to **Automated Driving increases penetration rates of cameras**¹



- Especially **growth in NCAP market accelerating**, pushing **front camera market size** to¹

~3.5bn US\$ in 2025

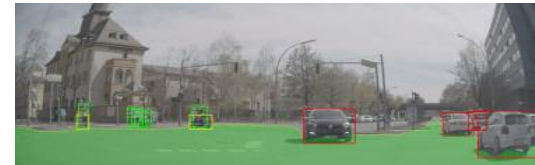
- OEMs push vehicle intelligence and sensor demand** in Europe and NSA, **governmental push in China** for ICV and intelligent infrastructure
- OEM customers require camera software to offer L3+ scalability**

HELLA APPROACH

- Flexible, scalable approach** from cost optimized (NCAP) to complex image processing functions (L3)
- Differentiated customer approach** depending on level, customer freedom of choice for vision and SOC IP and creating own USP
- Attractive **price per function** model
- Increasing function portfolio:**



AI based vulnerable road user and automatic emergency braking in low cost NCAP camera



AI based wide Field of View L2/L3 camera perception on ultra-low power System On Chip (SoC)

KEY ACHIEVEMENTS

- Camera software series launch for NCAP market** with major European OEM
- Successful acquisition of series orders**, e.g. L2+ camera software with European OEM, L1 camera for Chinese OEM, testing services for Korean Tier1
- NCAP software offering available on platforms of 4 semiconductor partners**
- Successful demonstration of new AI based L2/L3 perception function** on ultra low-power SoC and Camera-lidar integration on AEye next generation lidar **at CES2019**

¹) Strategy Analytics

HELLA is energizing its long-term profitable growth path by offering attractive products for all stages of electrification

Efficiency & Electrification – Overview

Number of manufactured vehicles*

CAGR 2017-2022		
Data base per CMD 2018	Data base per CMD 2019	CMD 2018 vs. CMD 2019
-2%	-3%	
+71%	+76%	
+26%	+24%	
+36%	+42%	

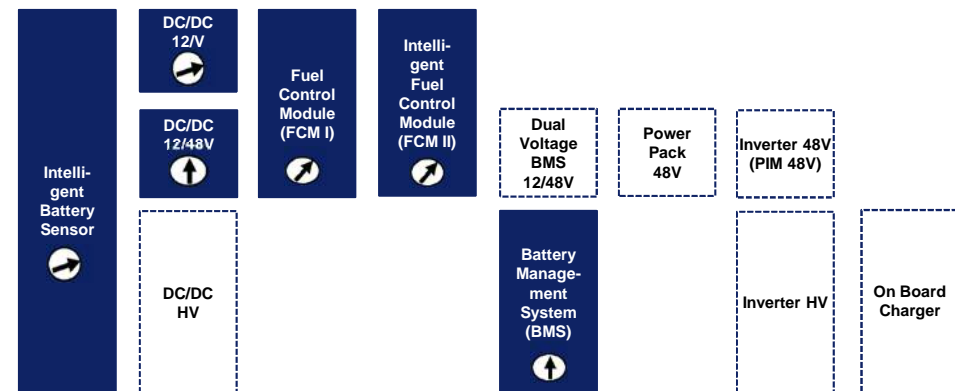


Efficiency & Electrification

- Internal Combustion Engine (ICE)
- 48V Mild Hybrid (MHV)
- Full- (FHEV) & Plug-in Hybrid (PHEV)
- Battery Electric Vehicle (BEV)

CAGR >25% >10-25% <10%

HELLA Offering



MARKET Development

- **Shift within powertrain concepts** with higher dynamics
- **Increasing focus on 48V systems** as bridging technology for OEM's to reach regulated targets
- **Start-stop technologies growing** next 5 years, **pure ICE with sharp decline**, ICEs until 2030 still relevant technology

HELLA Position & Strategy

- **Strong growth perspective with established products and product roadmap**
- Further **roll-out of components** and foster **market** penetration of e.g. DC/DC converters and IBS
- **Leverage Hybrid and Electric Vehicle competence** to benefit from increasing trend for mild-hybrids with further **investments** in new products like Dual Voltage BMS and Power Pack 48V
- **Further resources allocation** to **BMS** and **High voltage** products like Inverter and On Board Charger

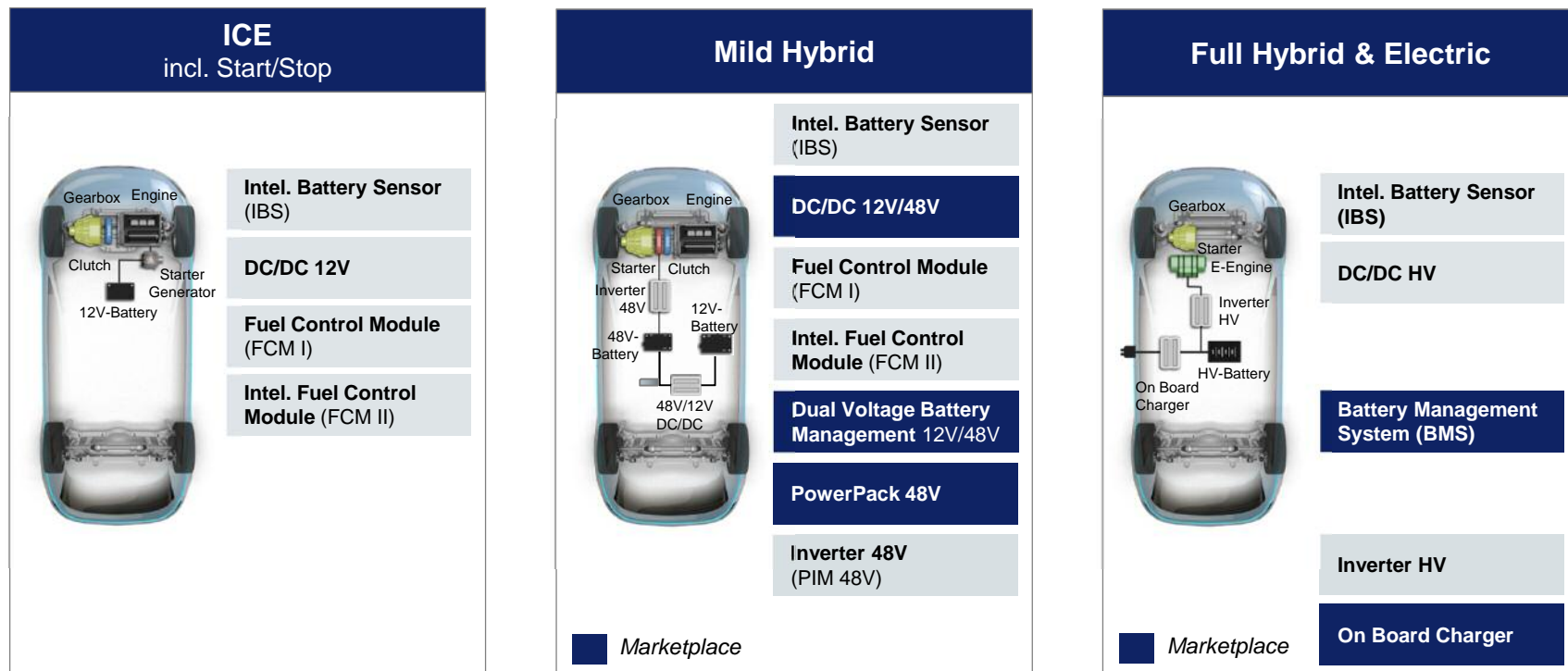
* Based on global LVP, source: IHS Engine Database January 2018, 2019; HELLA analysis



HELLA accompanies customers comprehensively on their way towards E-Mobility

Efficiency & Electrification – Technology and Product Roadmap

DEVELOPMENT STAGES OF ELECTRIFICATION



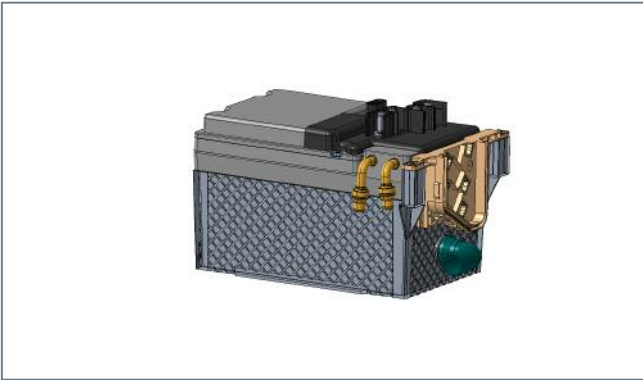
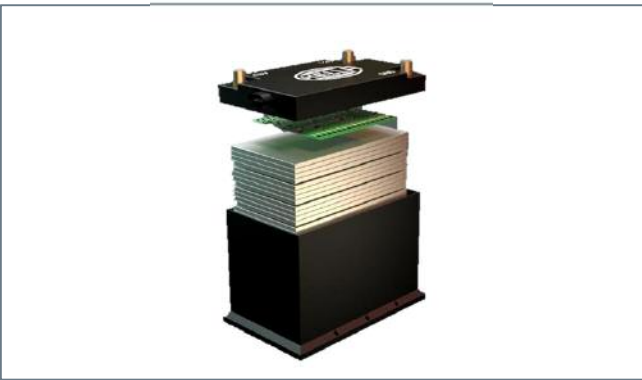
Strategic Direction

- **Intelligent components** for battery sensing and for fuel pump control reduce CO₂ emissions for non-electrified vehicles (e.g. Start/Stop)
- **Solutions for 48V Mild Hybrids** allow advanced driving functions such as recuperating, coasting & boosting
- **Supported by experience in 48V power electronics and High Voltage (HV) BMS**, HELLA faces several attractive business opportunities



HELLA supports OEMs to handle increasing complexities and costs by offering system solutions especially for 48V Mild Hybrids

Efficiency & Electrification – Supplier of innovative subsystems

	PowerPack 48 Volt	Dual-Voltage Battery Management
PRODUCT SOLUTION		
TARGET GROUP	<p>Larger vehicles (middle- and premium class)</p> <p>More power consumers and high power for comfort and performance</p>	<p>Compact class</p> <p>Reduction of weight and volume with minimal change of conventional board system</p>
UNIQUE SELLING PROPOSITION	<p>Modular solution for high power needs in mild hybridization</p> <ul style="list-style-type: none"> ▪ Functional combination of 48V battery and DC/DC converter into a modular device with minimal change of conventional vehicle architecture ▪ Bundling of competence and wide experience for Power Electronics and Battery Management in one single HELLA division 	<p>Power and efficiency of 48V in a “12V package”</p> <ul style="list-style-type: none"> ▪ Functional combination of 48V & 12V battery including power electronics into a single device within the size of a conventional 12V battery ▪ HELLA first and unique to market

HELLA is working on innovative mobility solutions along the digital Aftermarket value chain

Connectivity & Digitalization – Leading diagnostic supplier

CONNECTIVITY & DIGITALIZATION



EXAMPLE:

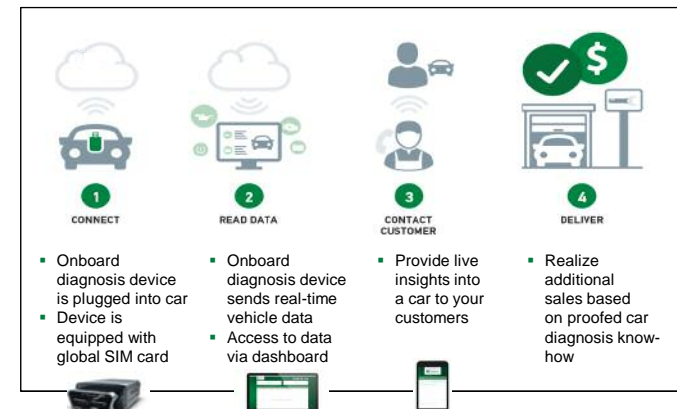
MOBILITY SOLUTIONS WITH DIGITAL SERVICES FOR WORKSHOPS

MARKET SITUATION

- **Share of digital-related revenues expected to triple to almost 20 percent in the global automotive aftermarket until 2030¹**
- **OEMs are increasing invest in car driver retention with connected vehicles**
- **IAM and Intermediates require an open interface into the vehicle**
- **Retrofit dongle solutions available** in a highly fragmented market of telematics suppliers
- **No common standard** (hardware or software) for **dongle retrofit solution** with varying degrees of quality

HELLA APPROACH

- **Create tailor-made maintenance and repair offers reducing waiting times and downtime** by passing vehicle data (e.g. tire pressure, battery condition) on to independent repair shops without prior workshop visit
- **Introduce B2B remote, retrofit onboard diagnosis solution** (with Dongle) based on standardized hardware
- **Utilize existing data** from stationary diagnostics to improve telematics solution
- Build **customer segment specific use cases**, e.g. for fleet companies



KEY ACHIEVEMENTS

- **Leading position for stationary diagnostics and repair services** in DACH
- **Partnership with San Francisco based telematics start-up CarForce** established
- **Pilot solutions** to enable workshops to manage connected cars **already running in EU**
- Launch of **fleet solution** and **driver app** planned for 2019

¹⁾ McKinsey&Company, The changing aftermarket game, Advanced Industries, June 2017



HELLA offers innovative lighting designs and functionalities for the inside and outside of the car

Individualization – Leading supplier for personalized functionalities

INDIVIDUALIZATION 

EXAMPLE: TAILORED CAR BODY AND INTERIOR LIGHTING SOLUTIONS

MARKET SITUATION

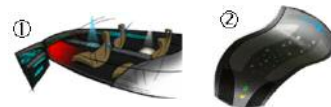
- Increasing **demand for personalization** of vehicle
- Lighting is becoming a key styling element of the vehicle exterior** and is **penetrating** all all car segments
- Interior solutions with **increasing complexity** due to styling demands and functionalities focused on individualization
- Introduction of **functions on demand**, e.g. multicolor illuminations in- and outside
- Both interior and exterior lighting solutions **support sensor** operations for **complex use cases**, e.g. auto pilot

HELLA APPROACH

- Offer **innovative designs** and **functionalities enabling integrated solutions and connectivity** for the **inside** and **outside** (front, end, side) car

INTERIOR OF THE CAR

- Smart light as information carrier**, supporting various driving scenarios and occupant modes¹⁾
- Roof Module** with added functionalities and seamless design²⁾



SIDE OF THE CAR

- Side AV communication and safety**, e.g. Contour illumination¹⁾
- Electric integration** with remote control / smart phone²⁾



FRONT OF THE CAR

- “Light from nowhere”** with semi transparent lenses for metallic appearance and logo animations³⁾
- Front panel interactions** to communicate V2X⁴⁾



KEY ACHIEVEMENTS

- Expansion of customer base for light projections** (with multi lense array solutions), e.g. for welcome scenarios
- First **customer orders** for **illuminated logo/radome**
- Series developments** for **advanced ambient illumination** and **advanced roof module**
- Next generation of grille illumination** available, first customer projects in development
- Strategic partnership** with **Faurecia** for interior and **Plastic Omnium** for exterior solutions



Technology with Vision

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