



MERCK KGAA, DARMSTADT, GERMANY

J.P. MORGAN 35TH ANNUAL HEALTHCARE CONFERENCE

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Agenda

- 01** Strategic roadmap
- 02** Healthcare – Funding for success
- 03** Life Science – Focusing on profitable growth
- 04** Performance Materials – Strength and innovation
- 05** Conclusion & Outlook



01

STRATEGIC ROADMAP

Group

Portfolio of three high-tech businesses



Healthcare

Leading in specialty
pharma markets

- Biologics and small-molecule **prescription medicines** against cancer, multiple sclerosis, infertility
- **Research** focus: Oncology, Immunology & Immuno-Oncology
- **Over-the-counter** products for everyday health protection



Life Science

Leading life science
company

- Innovative **tools, laboratory supplies** and **services** for biotech research & production
- Products that make **biotech production, academic research** and industrial **testing** easier, faster and more successful



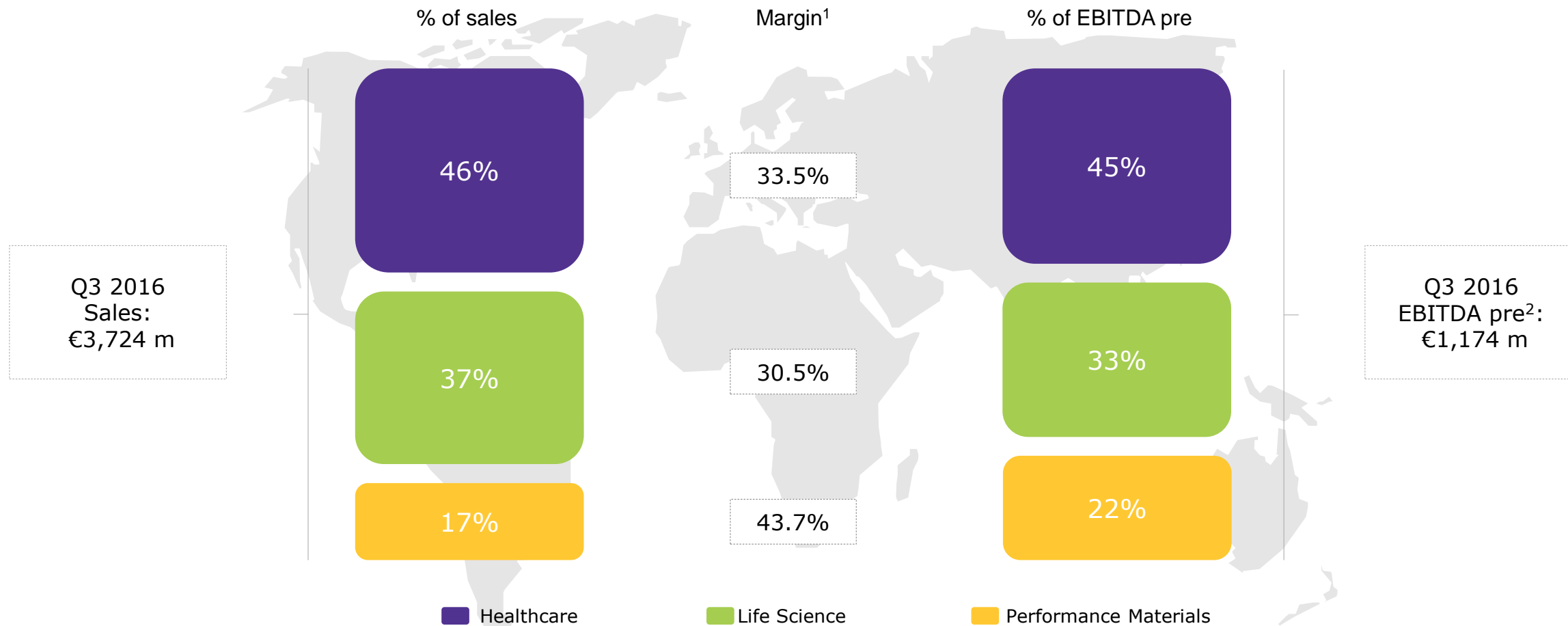
Performance
Materials

Market leader in
specialty materials

- Innovative display materials, like **liquid crystals and OLEDs**
- **Effect pigments** and **functional materials** for coatings and cosmetics
- **High-tech materials** for the electronics industry

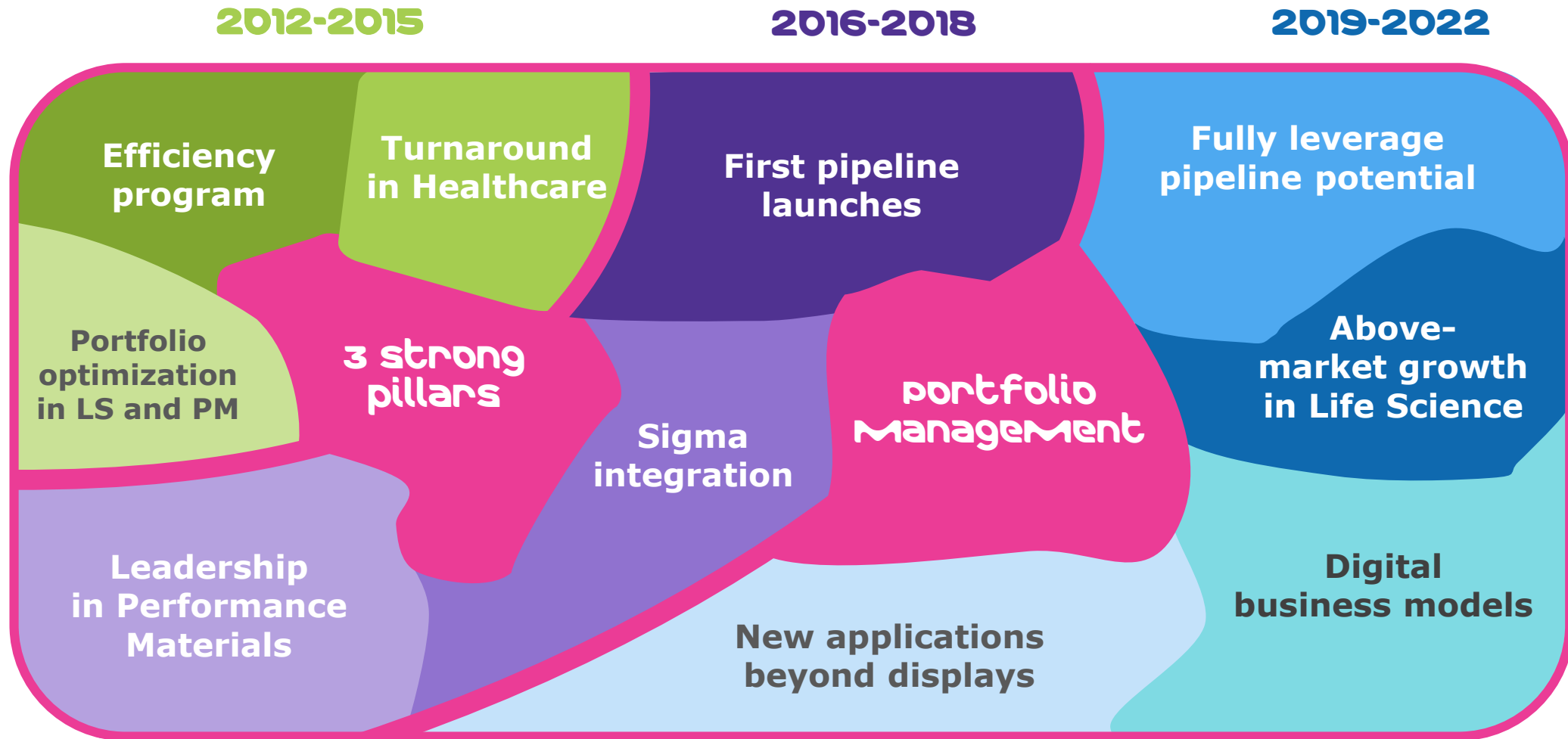
Group

Strong businesses with attractive margins



¹EBITDA pre margin in % of net sales; ²Including Corporate/Others (-€97 m)

Group Strategic roadmap 2016-2022



Group

Clear set of priority goals to be realized by 2018



Healthcare

- Maximize growth of existing franchises
- Deliver pipeline: one product launch or indication p.a. from 2017



Life science

- Focus on seamless integration and deliver cost synergies
- Leverage strategic capabilities for value creation



Performance Materials

- Drive innovation and technology leadership across all businesses
- Innovate in applications also beyond displays

Group

- Deleverage to <2x net debt / EBITDA pre in 2018
- No large acquisitions (>€500 m) for the next 2 years (unless financed by divestments)
- Dividend policy reflects sustainable earnings trend

Healthcare

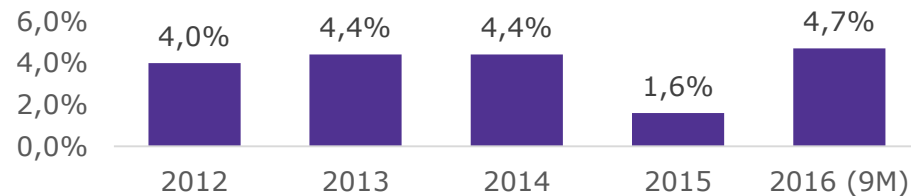
Solid performance of
core business and
remarkable **pipeline
progress**



Healthcare

Sustained performance of in-market portfolio secures long-term growth

Historic organic sales growth development



Average organic growth of ~+4% for >20 consecutive quarters

9M 2016 organic sales growth and qualitative guidance until 2018



-2%

rebif®: Decline in line with IFN market



+3%

oncology: Stable sales

Consumer Health

+3%

CH: Mid single-digit growth



+17%

fertility: Mid single-digit growth



+3%

GM: Mid to high single-digit growth



-1%

Endocrinology: Low single-digit growth

Commitment to at least stable organic sales until 2018

Healthcare

Increasing R&D productivity with focus on potentially transformative assets

phase I		phase II		phase III	registration
BTK-i (hematological tumors)	Avelumab (mono/combinations)	atacept (SLE)	tepotinib (HCC/NSCLC)	Avelumab (mono/combinations)	Avelumab (MCC)
DNA-PK-i (solid tumors)	M7824/TGF-b trap (basket trial)	BTK-i (RA)		MSB11022 Biosimilar (chronic plaque psoriasis)	Cladribine Tablets (RRMS)
anti IL-17 (psoriasis)	NHS-IL 12 (solid tumors)	sprifermin (OA)			
■ Oncology	■ Immuno-Oncology	■ Immunology		■ Biosimilars	■ Neurodegenerative disease

Avelumab

- 30 clinical programs ongoing (>4,000 patients in >15 tumor types)
- Eight phase III trials ongoing
- For MCC, decision by FDA expected in Q2/2017 (EMA: later in 2017)

TGF-b trap

- Enrolling in phase Ib cohorts (>10 indications)
- Interim data expected by mid 2017

Cladribine Tablets

- Decision by EMA expected in Q3 2017

BTK inhibitor

- Ongoing trials in Immunology and Oncology (different molecules)
- Additional immunology phase II trials to be started in Q1 2017

2017 Milestones:

- Two potential launches
- Major trial updates

Life Science

Market leading
performance during
integration



Overview: a balanced portfolio of three growing businesses

Customer segments by business unit

RESEARCH solutions

- Academic & government institutions
- Biopharma R&D
- Contract Research org.

PROCESS solutions

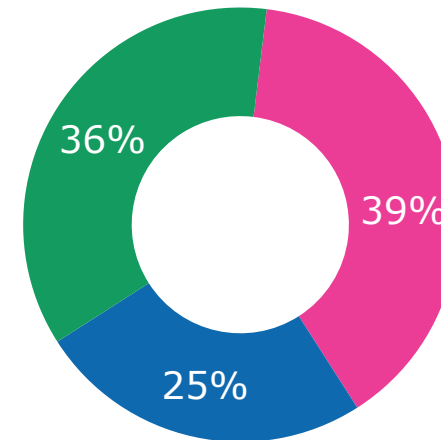
- Pharmaceutical companies
- Small biotech
- Contract manufacturing organizations

APPLIED solutions

- Diagnostic manufacturers
- Clinical testing labs
- Food & Beverage manufacturers

Sales split and growth rates*

Research Solutions
Low single digit growth

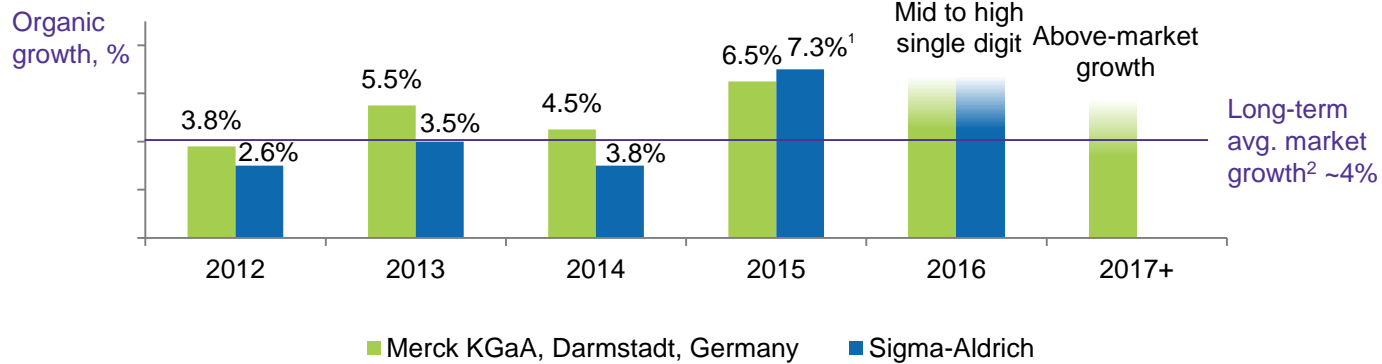


Process Solutions
High single digit growth

Applied Solutions
Mid single digit growth

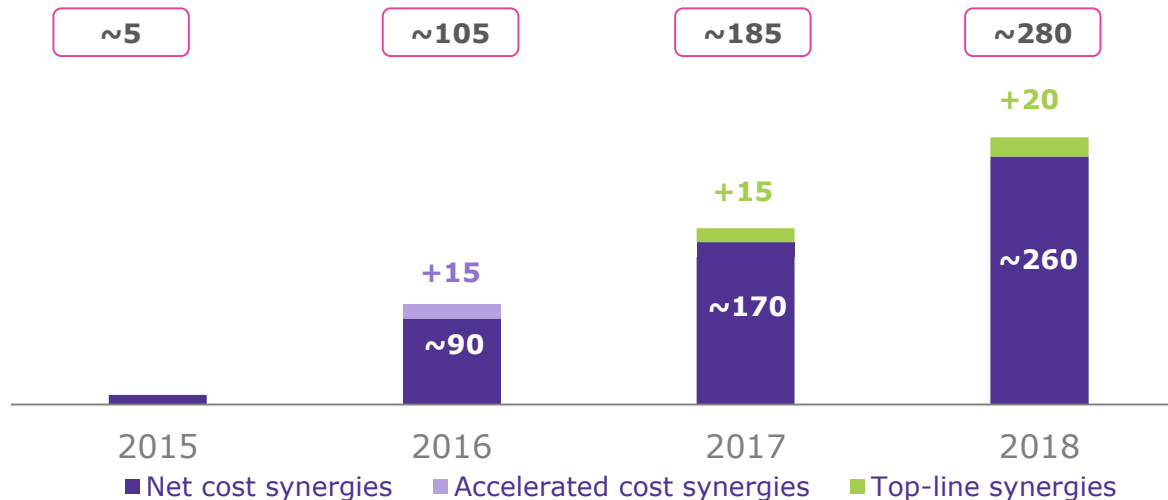
Life Science

Above-market growth to be enhanced by top-line synergies



Outperform Life Science market

- Exposure to biopharma production
- Attractive growth platforms (e.g. gene editing)
- Broad product offering on e-Commerce platform



Upgraded synergy program













- Cost synergies realized faster
- Topline synergies added (e.g. best in class e-Commerce)

Four-pillar strategy and innovation power strengthen our **earnings** profile



Performance Materials

The four pillars are set for future profitable growth

Business unit	% sales	Products	Mid-term growth trend
 Display Materials		<ul style="list-style-type: none"> Liquid crystals (LC) and photoresists for TVs, smartphones and tablet computers Other display and non-display applications (e.g. LC Windows) 	
 Integrated Circuit Materials		<ul style="list-style-type: none"> Dielectrics, colloidal silica, lithography materials, yield enhancers, edge-bead removers Polyimide raw materials and printing materials 	
 Pigments and Functional Materials		<ul style="list-style-type: none"> Effect pigments and functional materials for coatings, plastics, printing and cosmetics Functional materials for cosmetics & special applications 	
 Advanced Technologies		<ul style="list-style-type: none"> Organic and inorganic light emitting diodes Functional materials for electronics and energy solutions 	

Well-founded medium-term low to mid single-digit growth profile

Performance Materials

Material and solution provider for future mobility

Organic Solar Cells (OPV) for automotive applications

Liquid crystal windows for switchable sun-roofs

Patinal® materials for AR coatings and hardcoats

Liquid crystals for displays

OLED materials for displays

Materials for free form displays

Interior effect applications

LED phosphors for innovative illumination (interior & exterior)

Polysilazanes and antiscratch additives for coatings

Liquid crystals for light guiding

Innovative structuring and packaging materials for high power LED

Security solutions for anti-counterfeiting

Laser marking pigments for powder coatings and plastics

Effect pigments for exterior coatings

Laser direct structuring for powder coated & plastic components

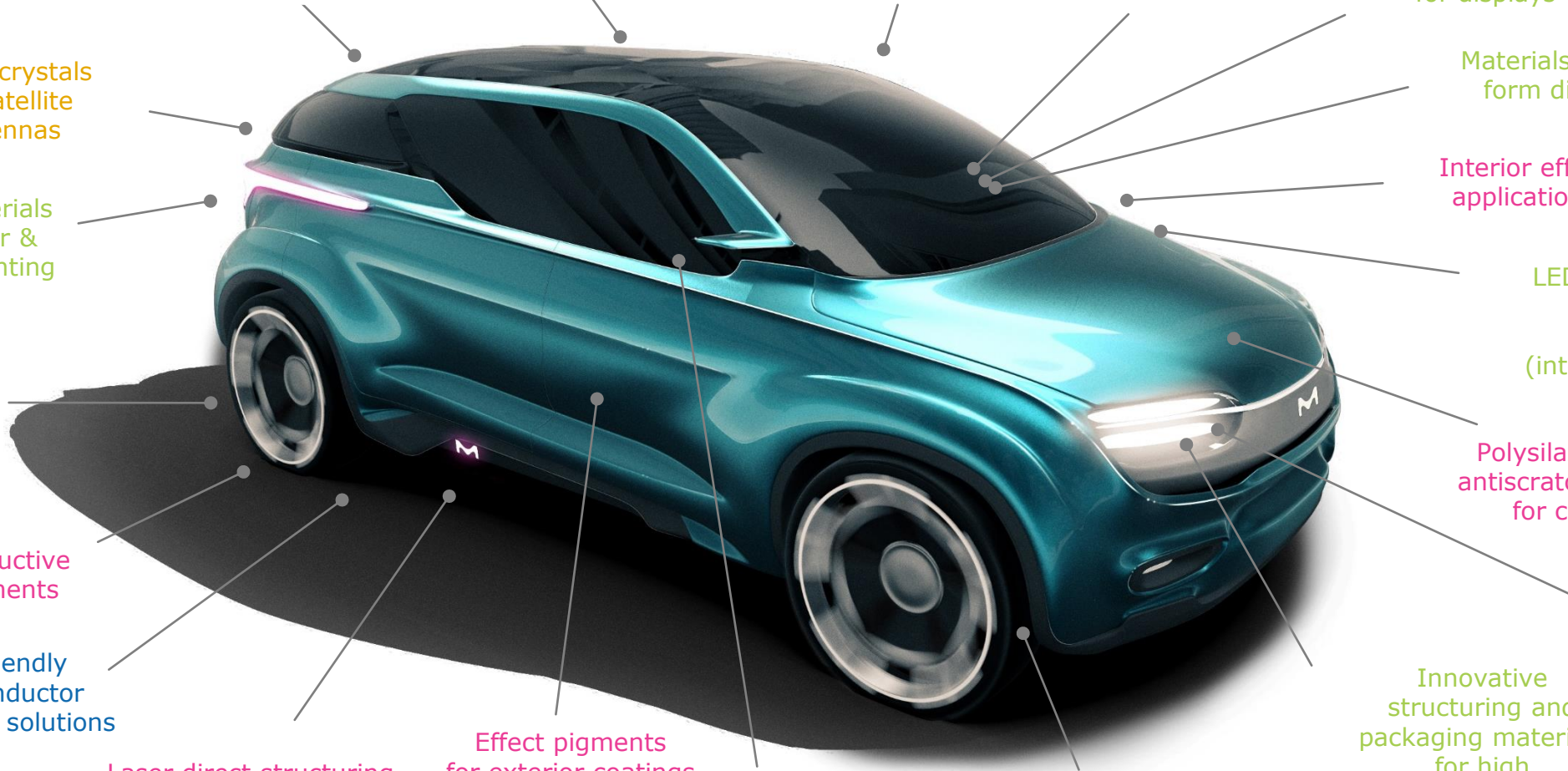
Eco-friendly semiconductor packaging solutions

Conductive pigments

High-tech materials for sensors & other semiconductors

OLED materials for interior & exterior lighting

Liquid crystals for satellite antennas



Merck KGaA
Darmstadt, Germany



05

CONCLUSION & OUTLOOK

Group

We are well on track to deliver on our key milestones for 2018



Group

Net debt reduced by ~€1 bn¹

Strict financial discipline supports rating



Healthcare

Base business growing

Two pipeline compounds in registration



Life Science

Sigma-Aldrich synergies raised

Organic growth above market



Performance Materials

Introduce new technologies

Volatility well managed

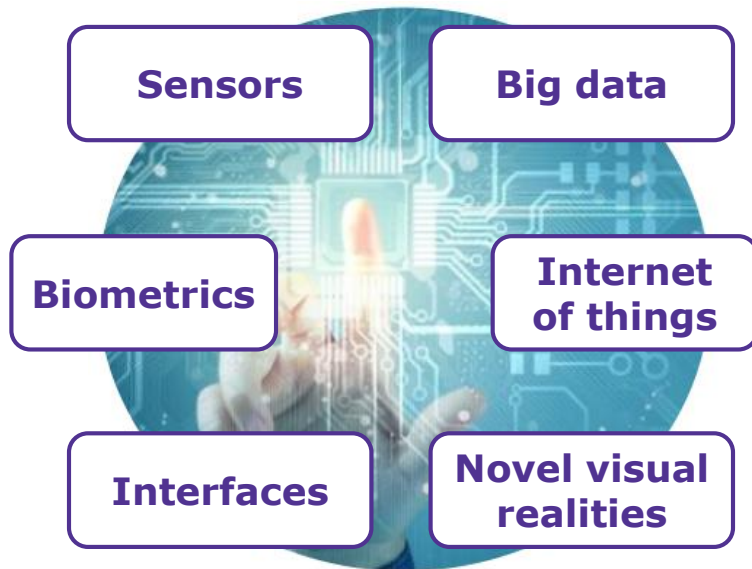
2016

2018

Group

Combining our technological expertise will enable future applications

Future-shaping trends¹



Ongoing innovation projects (selection)



Tangible financial ambition





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APPENDIX

Group Upgrade of full-year 2016 guidance

Group guidance for 2016

▶ **Net sales:** ~ €14.9 – 15.1 bn ◀

▶ **EBITDA pre:** ~ €4,450 – 4,600 m ◀

▶ **EPS pre:** ~ €6.15 – 6.40 ◀



Group 2016 business sector guidance



Healthcare

Net sales

- Solid organic growth
- Organic Rebif decline
- Strong growth in Fertility
- Other franchises growing

EBITDA pre

~ €2,100 – 2,200 m



Life Science

Net sales

- Mid to high single-digit organic growth
- Main driver Process Solutions
- High double-digit contribution from Sigma

EBITDA pre

~ €1,640 – 1,670 m



Performance Materials

Net sales

- Moderate organic decline
- Improving macro signs amid display industry destocking in LC
- Growing demand in all businesses

EBITDA pre

~ €1,100 – 1,150 m

Group

Additional financial guidance 2016

Further financial details

Corporate & Other EBITDA pre	~ -€370 – -400 m
Interest result	~ -€270 – -300 m
Intangibles amortization from Sigma PPA	~ €250 – 300 m p.a.
Underlying tax rate	~ 23% to 25%
Capex on PPE	~ €750 – 800 m
Hedging/USD assumption	2016 & 2017 hedge ratio ~40%-45% at EUR/USD ~ 1.11 to 1.16
2016 Ø EUR/USD assumption	~ 1.09 – 1.12