



2021, A year of record growth and Margin expansion

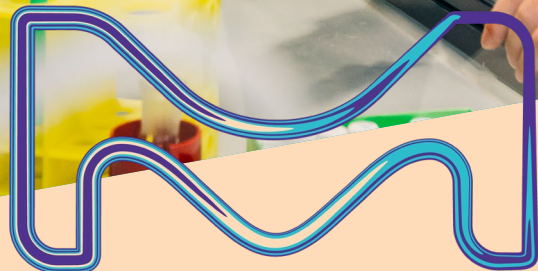
Group FY 2021 results

Presentation for the media

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March 3, 2022



Merck KGaA
Darmstadt, Germany

Disclaimer

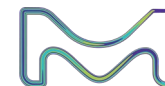
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Agenda

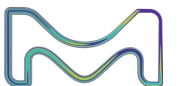
01 Executive summary

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03 Financial overview

04 ESG update

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01

EXECUTIVE SUMMARY

Highlights 2021



Operations

Life Science:

- Record growth (+21% org.) driven by strong core business (~12pp.) and COVID-19 demand (~9pp)
- Largest sales contribution to group (org. +€1.6 bn)
- Process Solutions main driver; all business units grow well above mid-term guidance

Healthcare:

- +8.5% org. growth (+€565 m) vs. impacted comps
- +144% org. growth in Bavencio[®] and +33% org. Mavenclad[®] ramp up amid muted high efficacy market
- Fertility recovery drives growth in established portfolio despite China VBP impact

Electronics:

- Semiconductor Solutions growing +15% org. contributing ~ €280 m org. growth to the group
- Above mid-term guidance org. growth of +8% (+€259 m)



Financials

FY organic sales: growth of +13.8%

FY organic EBITDA pre: growing +27.0%
(+18.1% org. incl. 2020 reversal of Biogen provision)

Guidance delivered:

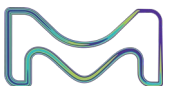
Net sales: €19.7 bn

EBITDA pre: €6.1 bn

EPS pre: €8.72

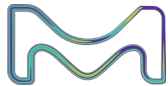
Net financial debt to EBITDA pre:

Declines further to 1.4 on December 31, 2021



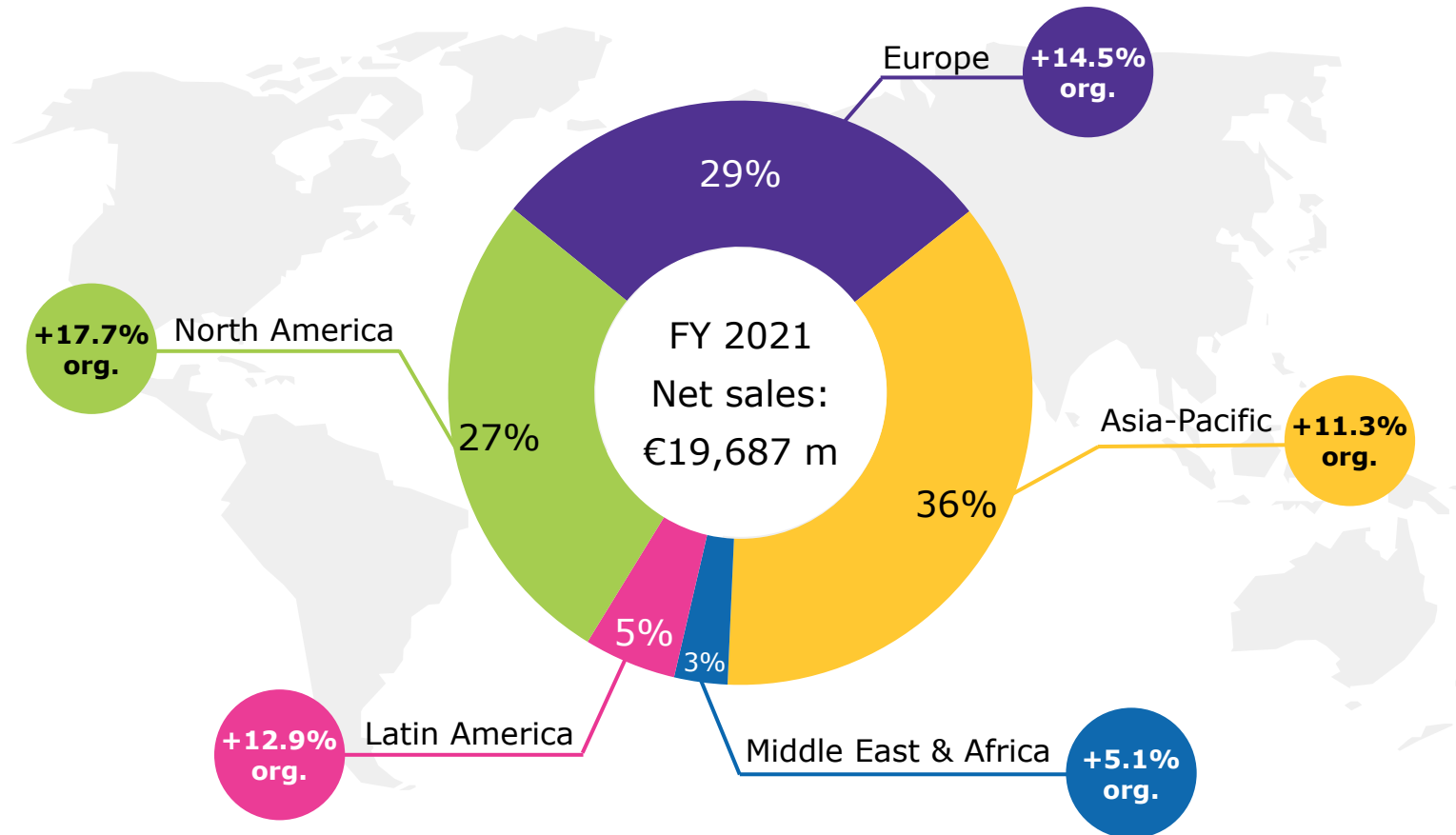
Guidance delivered

	2021 Guidance	2021 Results	
net sales	€19.3 – 19.85 bn	€19.7 bn	✓
EBITDA pre	€6.00 – 6.30 bn	€6.10 bn	✓
EPS pre	€8.50 – 9.00	€8.72	✓



Strong Life Science continues to be primary growth driver across all regions

Regional breakdown of net sales [€m]

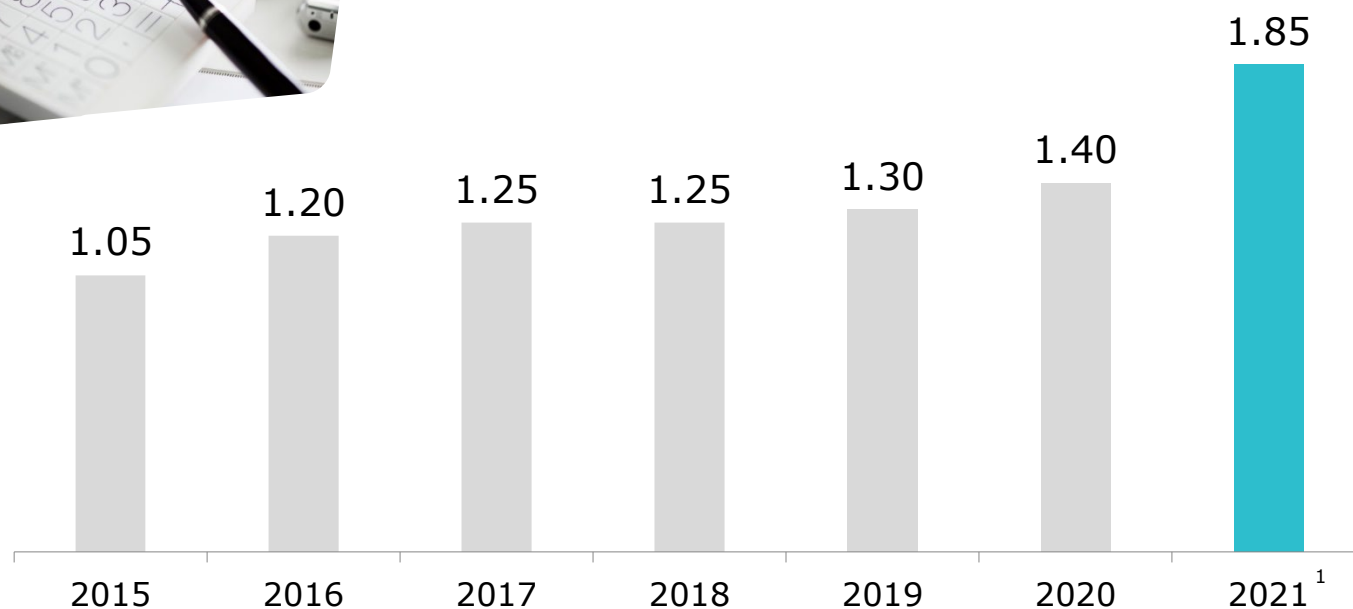


Regional organic development

- APAC: Process & Semiconductor Solutions, drive +11% growth
- Europe: Process Solutions and Research Solutions remain primary growth drivers, Fertility and recent Healthcare launches also contributing
- North America: Process Solutions, Research Solutions, and Bavencio® top three growth drivers, further supported by Fertility & Semiconductor Solutions
- LATAM growth driven primarily by CM&E, Applied Solutions and Fertility
- Fertility continues driving ME&A growth

Strong company performance drives all time high payment to shareholders

Dividend¹ development 2015 - 2021



2021 dividend

- Dividend of €1.85 (+32% YoY) per share proposed¹ for 2021
- Payout ratio of 21.2% of EPS pre in 2021; aiming for 20% to 25%
- Dividend yield² of 0.8%

¹Final decision is subject to Annual General Meeting approval

²Calculated with 2021 year-end share price of €227.00 per share.



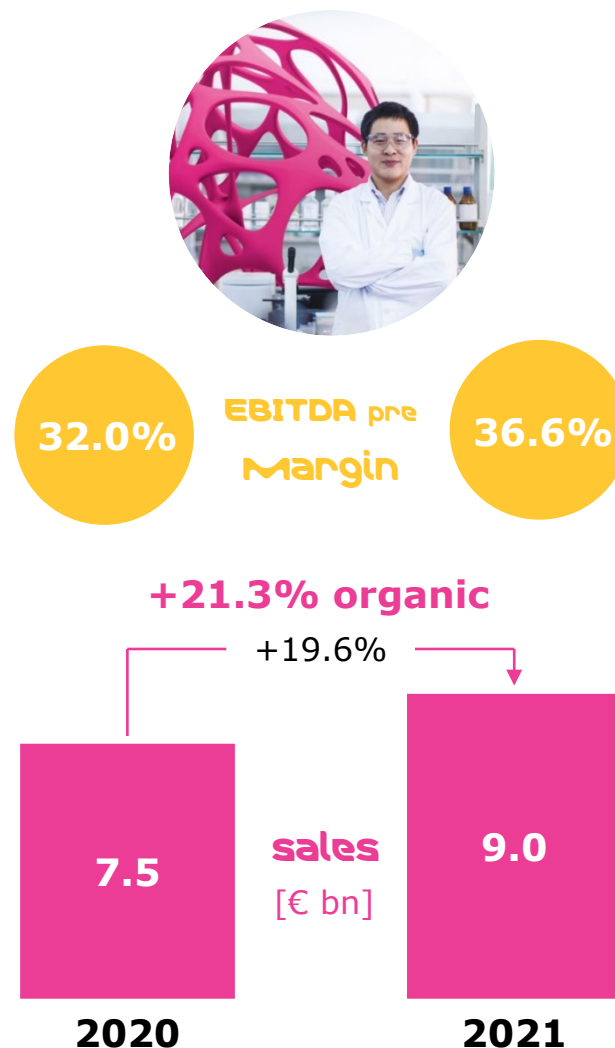
02

strategic Review

Life Science: +12% org. growth from core business driven by strong industry position, further supported by +9% org. growth from COVID-19

Business performance

- Successfully delivering record sales (+21% org.) and EBITDA pre (+38% org.) with Process Solutions as key driver
- Strong core business drives majority of growth in 2021 (+12% org.), supported by double-digit performance in all businesses
- Additional business from COVID-19, almost tripling y-o-y to total sales of €1.15 bn, growth leveling out in H2 as anticipated
- Strong EBITDA pre growth and exceptional margin level reflect favorable mix, positive pricing, and operating leverage
- Margin further normalizing in H2 with planned strategic investments ramping up



Sector focus

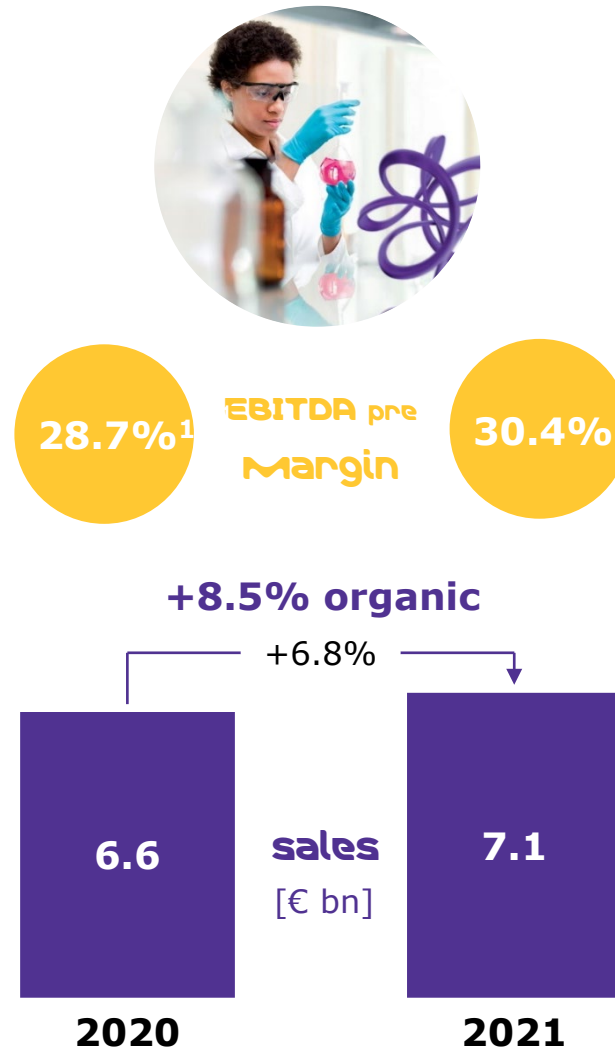
- Continuous **focus on key growth trends** as leading diversified life science player
- **Strengthening the core**
 - Significant capacity and regional network expansion to enable growth of key portfolios
 - Driving productivity to maximize output from existing assets amid surging demand
 - Go-to-market optimization including upgraded e-commerce platform and collaboration centers
- **Expanding in high growth segments**
 - Organic & inorganic scale up to become leading multimodality CDMO (mAbs, ADCs, hp-APIs, viral vectors, mRNA); Amptec & Exelead¹ M&A
 - Increasing focus on innovation and digital to complement holistic offering (e.g. AI, Bio4C)
 - Driving growth in emerging regions, esp. China



Healthcare: +8.5% org. growth driven by recent launches, complemented by strong Fertility recovery

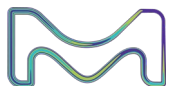
Business performance

- Strongest organic growth in past 5 years
- Oncology up +28% org. mainly driven by Bavencio® mUC 1L and supported by strong Erbitux performance
- Mavenclad® drives slight Neurology & Immunology franchise growth, despite continued Rebif® decline and suppressed dynamic high-efficacy market
- Established portfolio up +3% org. as Fertility recovery more than offsets Rebif®; around flat CM&E business with fading China VBP impact (as of Q4)
- Sales growth, Bavencio® milestones and stringent cost management drive +17% EBITDA pre growth and margin expansion¹



Sector focus

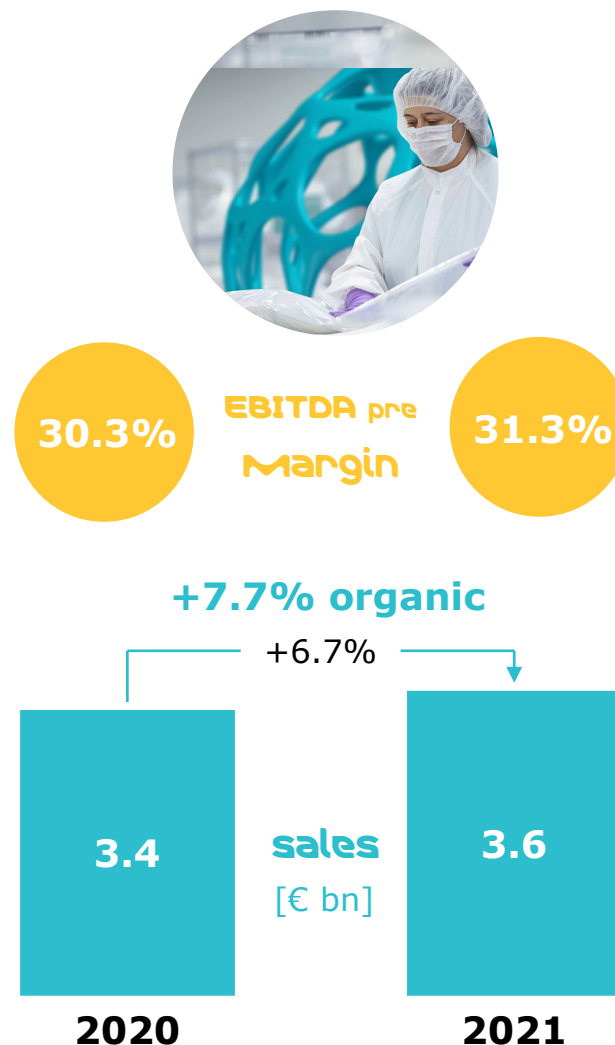
- **Well positioned** in a dynamic environment, **focused leadership in R&D**
- **Pipeline with transformative potential**
 - Novel mechanisms with potential to redefine SoC in MS, Lupus and several cancer types
 - 14 clinical development programs underway
 - Evobrutinib and Xevinapant PhIII assets with first-in-class opportunities
- **Recent Launches**
 - Significant opportunity to drive further growth of Bavencio® in mUC 1L
 - Mavenclad® holding or gaining share in most markets amid muted high-efficacy market
- **Established Portfolio**
 - Resilient CM&E business across diversified geographies; strengthened Fertility leadership & China resume growth



Electronics: Shifting to accelerated growth ambitions

Business performance

- Strong organic sales growth of +8% delivers on “Bright Future” turn-around commitment
- Semiconductor Solutions growth accelerating above mid-term guidance well into double-digits, with additional support from DS&S project business
- Display Solutions rate of decline nearly halves to -6% org. vs. COVID-19-impacted LY; OLED increasingly compensates decline
- Surface Solutions with double-digit organic growth amid market recovery
- Margin expansion to 31% supported by Versum synergies, despite raw materials & logistic headwinds in H2



Sector focus

- Successful “Bright Future” transformation; **€85 m Versum cost synergies** 2022 target already **delivered in 2021**
- **Ready for growth** with “Level Up” program
- **Fueling accelerated growth ambitions**
 - Aiming to invest more than €2 bn capex from 2021 to 2025, primarily to support capacity expansion of Semi customers
 - Driving profitable innovation & partnerships accelerating use of Big Data, AI & IoT
 - Strengthening manufacturing sites and opening new facilities to continue localizing footprint close to customers
 - Supporting node transitions and accelerating customer innovations in leading edge technologies



03

Financial Overview

FY 2021: Overview

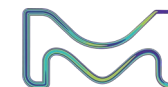
Key figures

[€m]				(Excl. Biogen provision reversal)	
	FY 2020	FY 2021	Δ	FY 2020	Δ
Net sales	17,534	19,687	12.3%		
EBITDA pre	5,201	6,103	17.3%	4,836	26.2%
Margin (in % of net sales)	29.7%	31.0%	1.3pp	27.6%	3.4 pp
EPS pre	6.70	8.72	30.1%	6.07	43.7%
Operating cash flow	3,477	4,616	32.7%		
[€m]					
	Dec. 31, 2020	Dec. 31, 2021	Δ		
Net financial debt	-10,758	-8,753	-18.6%		
Working capital	3,938	4,207	6.8%		
Employees	58,096	60,335	3.85%		

Comments

- Sales up +12%, driven by strong growth across all sectors, particularly Life Science
- 340 bps uplift in underlying EBITDA pre margin¹ fueled by strong Life Science performance and operating leverage
- EPS pre growth of +44%¹ mainly driven by EBIT pre contribution, further supported by better financial result
- Operating cash flow up +33% supporting strong net debt reduction of €2 bn
- Sound working capital management ensures growth significantly below sales
- Headcount mainly driven by Life Science

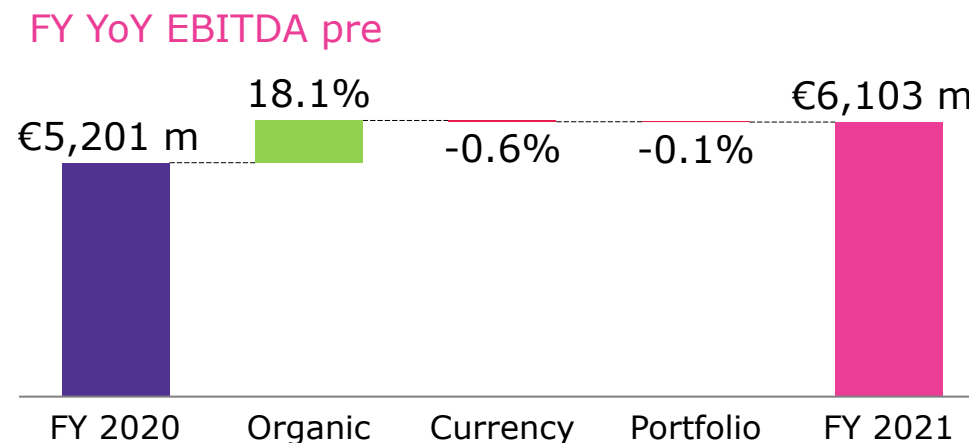
¹Excluding €365 m Biogen Provision Release



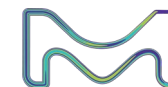
FY 2021: +14% org. growth mainly driven by double-digit growth of Life Science, supported by strong Healthcare and Electronics performance

FY YoY Net Sales	Organic	Currency	Portfolio	Total
Life Science	21.3%	-1.6%	0.0%	19.6%
Healthcare	8.5%	-1.4%	-0.3%	6.8%
Electronics	7.7%	-0.9%	0.0%	6.7%
Group	13.8%	-1.4%	-0.1%	12.3%

- Life Science: Record growth across all business units; +31% org. in Process Solutions driven by strong core business and COVID-19 demand; Research and Applied grow +15% org. and +9% org.
- Healthcare: Recent launches up +60% org. on top of growing established portfolio (+3% org.) supported by Fertility recovery; driving strong +8.5% org. growth in the sector
- Electronics: Double digit growth of Semiconductor Solutions (+15% org.) and Surface recovery (+13% org.) more than offset Display decline (-6% org.), driving +8% org. growth overall



- EBITDA pre up +18% org. (+27% org. excl. 2020 Biogen provision reversal), ahead of sales
- Life Science operating leverage main driver for margin expansion, supported by stringent cost management across the enterprise
- Slight negative FX effects driven primarily by USD, JPY & TRY, partly offset by positive effects from CNY



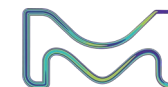
FY 2021: Reported figures – comps impacted by Biogen provision reversal

Reported results

[€m]	FY 2020	FY 2021	Δ
EBIT	2,985	4,179	40.0%
Financial result	-354	-255	-28.1%
Profit before tax	2,630	3,924	49.2%
Income tax	-637	-859	34.9%
<i>Effective tax rate (%)</i>	24.2%	21.9%	-2.3pp
Net income	1,987	3,055	53.7%
EPS (€)	4.57	7.03	53.8%

Comments

- EBIT growth of +40% mainly driven by leveraged business growth, understated by €365 m for Biogen provision reversal in 2020
- Improved financial result reflects lower interest expenses driven by continuous deleveraging
- Lower effective tax rate due to favorable country mix, primarily in Life Science
- Net income and EPS reflect EBIT growth and improved financial result



FY Life Science: Largest group contributor with +21.3% org. sales growth driven by all three business units

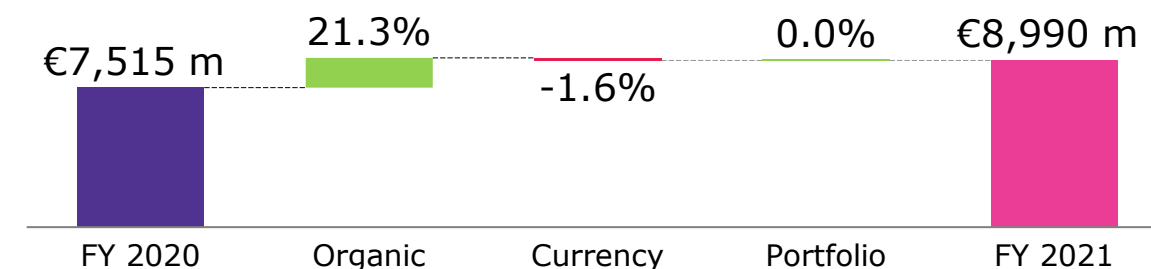
Life Science P&L

[€m]	IFRS		Pre adjustments	
	FY 2020	FY 2021	FY 2020	FY 2021
Net sales	7,515	8,990	7,515	8,990
M&S*	-1,995	-2,119	-1,992	-2,114
Admin	-354	-352	-322	-331
R&D	-313	-351	-312	-349
EBIT	1,599	2,479	1,619	2,519
EBITDA	2,387	3,257	-	-
EBITDA pre	2,405	3,286	2,405	3,286
(in % of net Sales)	32.0%	36.6%	32.0%	36.6%

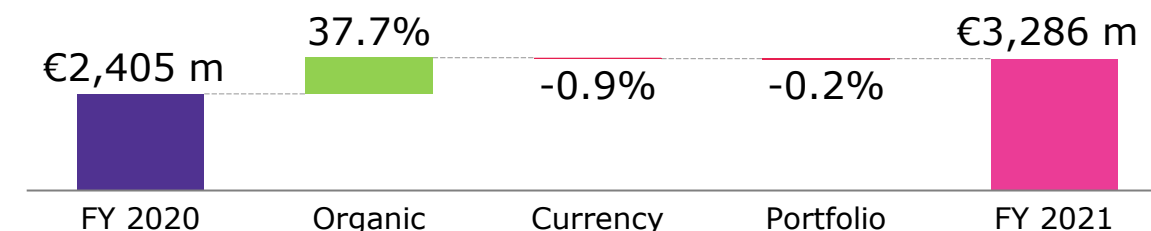
Comments

- +31% organic growth of Process Solutions with close to mid-teens growth in the core business and significant COVID-19 contributions; bioprocessing and formulation portfolios are the key drivers
- Research Solutions growing +15% org. due to strong core business and supported by additional growth opportunities from COVID in H1
- Applied Solutions growing +9% org. with robust performance across all business lines and customers segments

Net sales bridge



EBITDA pre bridge



- M&S as a % of sales down from 27% to 24% due to strong operating leverage; absolute increase mainly driven by logistics cost
- Increased R&D costs primarily due to investments in strategic projects
- Outstanding operating leverage and favorable product mix lead to exceptional EBITDA pre margin level of 36.6%



FY Healthcare: 8.5% org. growth driven by recent launches and Fertility recovery; underlying EBITDA pre growing +17% organically

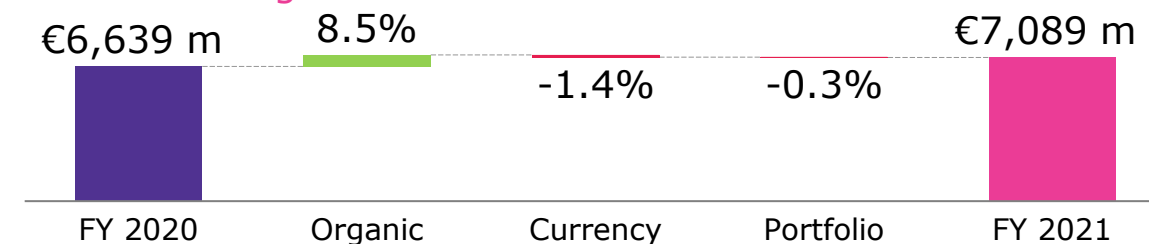
Healthcare P&L

[€m]	IFRS		Pre	
	FY 2020	FY 2021	FY 2020	FY 2021
Net sales	6,639	7,089	6,639	7,089
M&S*	-1,664	-1,600	-1,617	-1,593
Admin	-320	-313	-313	-302
R&D	-1,640	-1,712	-1,616	-1,707
EBIT	1,804	1,823	1,889	1,836
EBITDA	2,184	2,146	-	-
EBITDA pre	2,267	2,153	2,267	2,153
(in % of net sales)	34.1%	30.4%	34.1%	30.4%

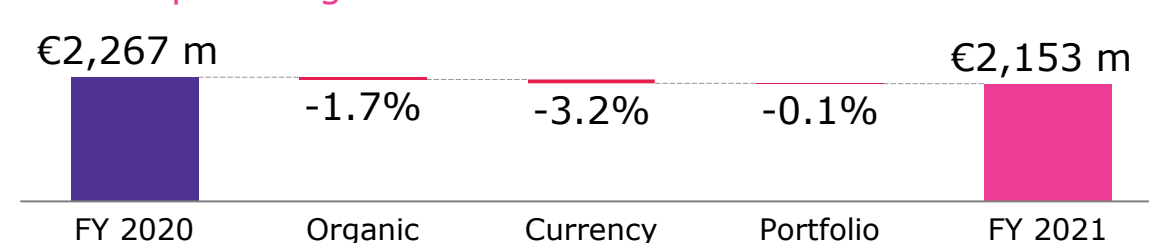
Comments

- Sales of Bavencio® more than double, growing +144% org. driven by ramp-up in the U.S., EU and Japan. Erbitux® up +12% organically, boosted by ~€60 m Eli Lilly supply agreement
- Mavenclad® growing +33% organically, offsetting Rebif® decline despite a suppressed dynamic market driving slight org. growth in N&I overall
- Established portfolio growing +3% org., as +26% org. growth in Fertility from a strong recovery more than offsets CM&E VBP impact

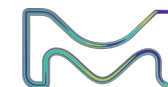
Net sales bridge



EBITDA pre bridge



- Ongoing rigorous cost management drives absolute M&S decrease despite higher level of activities vs. 2020
- Increase in R&D primarily driven by Bintrafusp termination provision set up in Q3 2021
- EBITDA pre impacted by Biogen provision reversal; underlying EBITDA pre growth of +17.1%¹ driven by sales growth and stringent cost management



FY Electronics: organic top-line growth of +8% driven by strong Semiconductor Solutions performance & Surface Solutions recovery

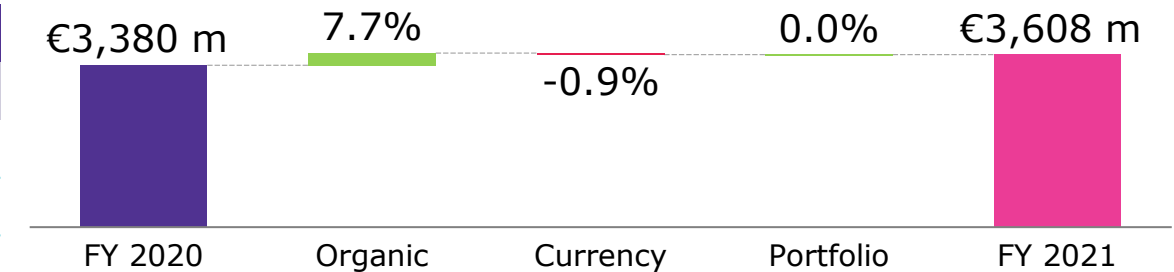
Electronics P&L

[€m]	IFRS		Pre adjustments	
	FY 2020	FY 2021	FY 2020	FY 2021
Net sales	3,380	3,608	3,380	3,608
M&S*	-539	-573	-530	-569
Admin	-162	-138	-144	-122
R&D	-274	-278	-272	-277
EBIT	240	509	463	600
EBITDA	925	1,070	-	-
EBITDA pre	1,024	1,128	1,024	1,128
(in % of net Sales)	30.3%	31.3%	30.3%	31.3%

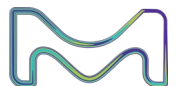
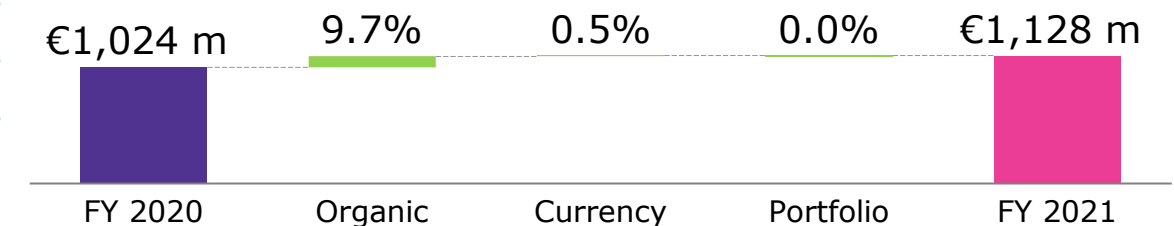
Comments

- Semiconductor Solutions: growing +15% org.; strong underlying demand for materials with double digit organic growth, further supported by DS&S project business
- Display Solutions: high OLED growth partially compensates LC decline with overall -6% org. growth in the business unit
- Surface Solutions: +13% org. growth mainly driven by market recovery after pandemic impact on automotive and cosmetic end markets in 2020
- M&S at a flat 16% of sales; logistic costs main driver for absolute increase in cost line
- R&D flat in % of sales; absolute increase mainly driven by investments in Semiconductor Solutions
- EBITDA pre growing faster than sales at +9.7% org. despite first raw materials and logistics price pressures in H2

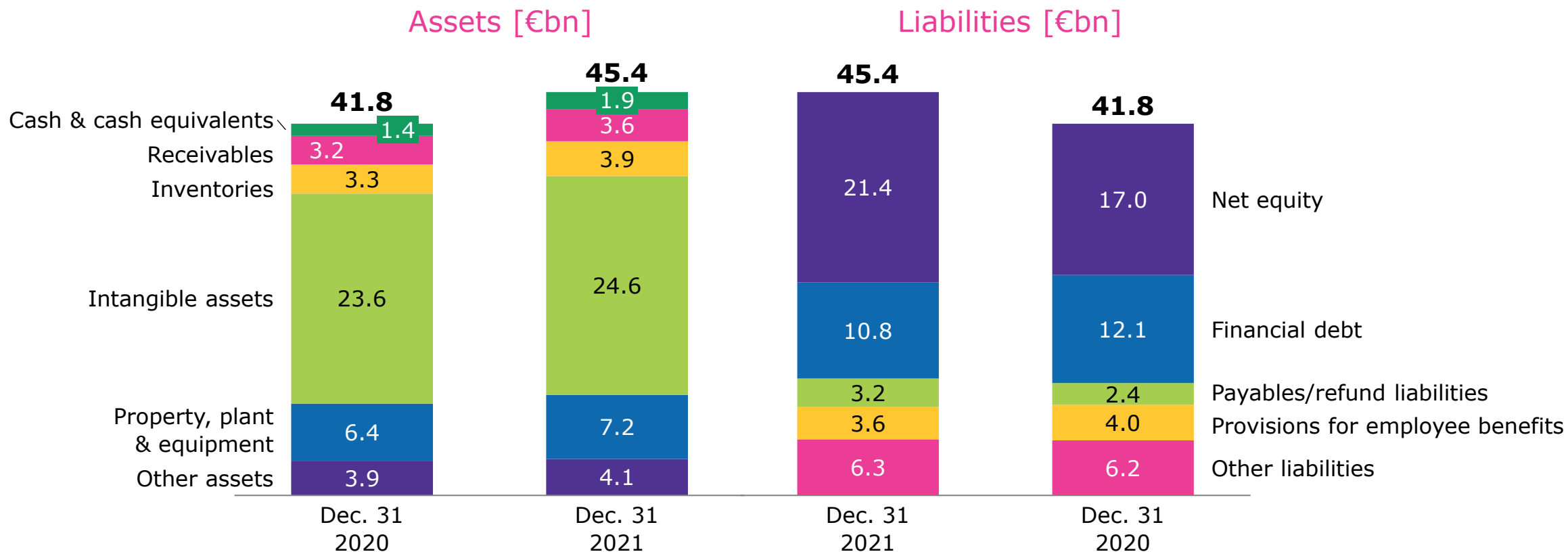
Net sales bridge



EBITDA pre bridge



Balance sheet



- Higher cash level driven by strong operating cash flow
- Receivables & inventories driven by strong sales growth and FX effects
- Increase in intangible assets primarily driven by FX effects
- PP&E reflects ongoing investments supporting growth ambitions
- Lower financial debt reflects deleveraging driven by strong performance
- Reduction in provisions for employee benefits driven by actuarial gains from higher interest rates
- Equity ratio up to 47% (vs. 41% in 2020) driven by retained earnings and translational FX effects



Cash flow statement

Q4 2021 – Cash flow statement

[€m]	Q4 2020	Q4 2021	Δ
Profit after tax	440	807	366
D&A	496	475	-21
Changes in provisions	185	-50	-235
Changes in other assets/liabilities	-48	-192	-144
Other operating activities	-60	16	76
Changes in working capital	275	-11	-285
Operating cash flow	1,288	1,045	-243
Investing cash flow	-98	-352	-254
thereof Capex on PPE	-609	-199	409
Financing cash flow	-1,381	-319	1,062

Cash flow drivers

- +83% growth in profit after tax driven by strong business performance, lower tax rate and improved financial result
- Changes in provisions primarily driven by lower restructuring provisions
- Other assets & liabilities mainly driven by Life Science tax prepayments in U.S.
- Working capital primarily driven by higher inventories to support sales and supply security in Life Science and Electronics
- Lower operating cashflow reflects working capital and tax prepayment
- 2020 investing cash flow suppressed by reversal of Q3 temporary excess cash investment, 2020 PPE elevated by Burlington and Tempe purchases
- LY financing cash flow reflects bank loans and commercial paper repayment



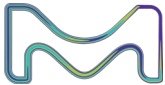
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ESG
update

Improved transparency on sustainability following major standards



LTIP: Long-Term Incentive Plan
GRI: Global Reporting Initiative
TCFD: Task Force on Climate-related Financial Disclosures
SASB: Sustainability Accounting Standards Board
SBTi: Science-based Target initiative









¹Result from SBTi valuation expected in Q2 2022

Delivered on all 2021 goals; optimally positioned to accomplish 2030 ESG ambition

Tasks

Development In place

Results

Analysis of requirements: Strategy, business, regulation, stakeholders		Ongoing due to developing field of ESG stakeholder expectations and new regulations
Build effective data platform for internal steering		Feed in internal & external data, industry benchmarks, modelling projects in 2021
Develop SBV tool ¹ to measure product sustainability value		SBV tool developed and tested in 8 cases by 2021
Develop ESG KPIs for reporting		ESG KPIs developed and evaluated for reporting in 2021
Link ESG ² to Board compensation with 20% sustainability factor from 2022 on		Approved by AGM, qualitatively included, quantitative factor developed in 2021
Further incorporate ESG in R&D, Controlling, M&A and Supply Chain		ESG-Framework M&A/Capex in 2021, progress in supply chain, controlling, R&D
Decide on dedicated investments and initiatives to achieve targets		Business strategies and priorities: decisions & budgeting in 2021

¹Sustainable Business Value: Dive in deeper and read the research article on the [SBV method](#); ²ESG: Environmental, Social, Governance



05

outlook & Guidance

Group

Full-year 2022 guidance

Net sales:

Strong organic growth
Positive FX of 1% to 4% YoY

EBITDA pre:

Strong organic growth
Positive FX of 2% to 5% YoY



Group

2022 business sector guidance¹

Life Science

Net sales

- Strong organic growth
- Strong core business, Process Solutions COVID-19 sales of up to ~€900 m
- Process Solutions as main growth driver

EBITDA pre

- Strong organic growth
- Slight to moderate positive FX

Healthcare

Net sales

- Solid organic growth
- Mainly driven by Mavenclad[®] and Bavencio[®]
- CM&E back to growth post VBP

EBITDA pre

- Moderate to solid organic growth
- Mainly driven by Mavenclad[®] sales
- Solid to strong positive FX

Electronics

Net sales

- Solid to strong organic growth
- Strong contribution by Semiconductor Solutions
- Continuous strong OLED performance

EBITDA pre

- Solid organic growth
- Solid to strong positive FX



