

Life Science

LIFE SCIENCE

Key figures

€ million	2018	2017	Change	
			€ million	in %
Net sales	6,185	5,882	304	5.2%
Operating result (EBIT) ¹	1,036	834	202	24.2%
Margin (% of net sales) ¹	16.7%	14.2%		
EBITDA ¹	1,755	1,580	175	11.1%
Margin (% of net sales) ¹	28.4%	26.9%		
EBITDA pre ¹	1,840	1,786	54	3.0%
Margin (% of net sales) ¹	29.8%	30.4%		
Business free cash flow ¹	1,393	1,402	-9	-0.7%

¹ Not defined by International Financial Reporting Standards (IFRSs).

DEVELOPMENT OF NET SALES AND RESULTS OF OPERATIONS

In 2018, Life Science posted organic sales growth of 8.8%, partially offset by negative foreign exchange effects of -3.6%. Net sales rose overall by 5.2% to € 6,185 million (2017: € 5,882 million).

All three business units of the business sector contributed favorably to the organic sales growth of Life Science. Process Solutions generated double-digit organic sales growth of 14.8%, attributable

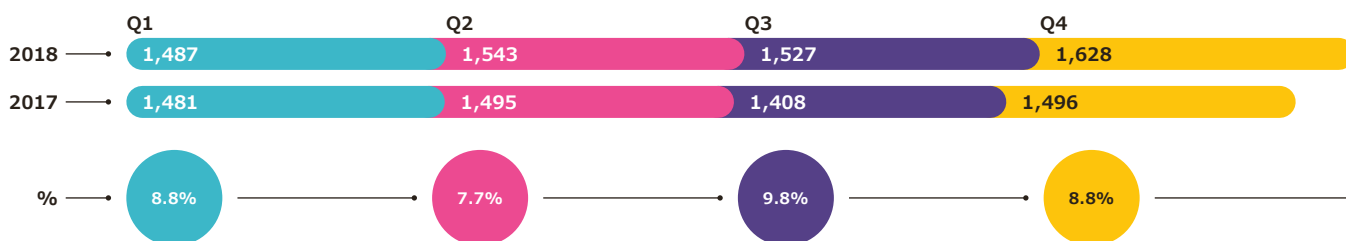
to high demand across the portfolio and was thus again the business sector's main growth driver in 2018. Applied Solutions continued to perform very well, posting organic growth of 6.3% and the Research Solutions business unit reported an organic sales increase of 4.1%.

The development of sales in the individual quarters in comparison with 2017 as well as the respective organic growth rates are presented in the following graph:

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Net sales and organic growth¹ by quarter²

€ million/organic growth in %



¹ Not defined by International Financial Reporting Standards (IFRSs).

² Quarterly breakdown unaudited.

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Net sales by business unit¹

€ million	2018	Share	Organic growth ²	Exchange rate effects	Acquisitions/divestments	Total change	2017	Share
Process Solutions	2,487	40%	14.8%	-3.5%	-	11.3%	2,234	38%
Research Solutions	2,048	33%	4.1%	-3.6%	-	0.5%	2,038	35%
Applied Solutions	1,650	27%	6.3%	-3.8%	-	2.5%	1,609	27%
Life Science	6,185	100%	8.8%	-3.6%	-	5.2%	5,882	100%

¹Previous year's figures have been adjusted due to an internal realignment.

²Not defined by International Financial Reporting Standards (IFRSs).

The Process Solutions business unit, which markets products and services for the entire pharmaceutical production value chain, generated double-digit growth of 14.8% and net sales of € 2,487 million (2017: € 2,234 million) in 2018. This means that Process Solutions accounted for 40% (2017: 38%) of Life Science net sales. All business areas of Process Solutions contributed to this strong performance. The key driver was the BioProcessing business unit, particularly in the Asia-Pacific and North America regions.

The Research Solutions business unit, which provides products and services to support life science work in pharmaceutical, biotechnology and academic research laboratories, recorded a moderate organic sales increase of 4.1% in 2018. Strong performance by both Lab & Specialty Chemicals and Reagents & Kits in particular led to the growth in net sales of Research Solutions, which increased to

€ 2,048 million (2017: € 2,038 million), representing 33% (2017: 35%) of the business sector's net sales. In regional terms, Asia-Pacific was the strongest growth driver for Research Solutions in 2018.

The Applied Solutions business unit generated strong organic sales growth of 6.3% with its broad range of products for researchers as well as scientific and industrial laboratories. Net sales increased to € 1,650 million (2017: € 1,609 million). Accordingly, the business unit contributed 27% (2017: 27%) to net sales of the Life Science business sector. The sales performance of Applied Solutions was driven by all business fields, and primarily by the North America and Asia-Pacific regions.

Net sales of the business sector by region developed as follows:

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Net sales by region

€ million	2018	Share	Organic growth ¹	Exchange rate effects	Acquisitions/divestments	Total change	2017	Share
Europe	2,136	35%	6.4%	-0.8%	-	5.6%	2,022	34%
North America	2,173	35%	8.4%	-4.6%	-	3.8%	2,093	35%
Asia-Pacific (APAC)	1,532	25%	13.6%	-3.8%	-	9.8%	1,395	24%
Latin America	256	4%	10.5%	-16.5%	-	-6.0%	273	5%
Middle East and Africa (MEA)	88	1%	-8.7%	-1.7%	-	-10.4%	98	2%
Life Science	6,185	100%	8.8%	-3.6%	-	5.2%	5,882	100%

¹Not defined by International Financial Reporting Standards (IFRSs).

The results of operations of the Life Science business sector developed as follows:

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Results of operations

€ million	2018	in %	2017	in %	Change	
					€ million	in %
Net sales	6,185	100.0%	5,882	100.0%	304	5.2%
Cost of sales	-2,723	-44.0%	-2,588	-44.0%	-135	5.2%
Gross profit	3,463	56.0%	3,294	56.0%	169	5.1%
Marketing and selling expenses	-1,775	-28.7%	-1,734	-29.5%	-41	2.4%
Administration expenses	-282	-4.6%	-261	-4.4%	-22	8.3%
Research and development costs	-249	-4.0%	-241	-4.1%	-8	3.4%
Remaining operating expenses and income	-121	-2.0%	-224	-3.8%	104	-46.2%
Operating result (EBIT)¹	1,036	16.7%	834	14.2%	202	24.2%
Depreciation/amortization/impairment losses/ reversals of impairment losses	719	11.6%	746	12.7%	-27	-3.6%
<i>(of which: adjustments)</i>	<i>(23)</i>		<i>(3)</i>		<i>(20)</i>	<i>(>100%)</i>
EBITDA¹	1,755	28.4%	1,580	26.9%	175	11.1%
Restructuring expenses	3		5		-2	-45.0%
Integration expenses/IT expenses	86		114		-29	-25.0%
Gains (-)/losses (+) on the divestment of businesses	-8		1		-9	>100%
Acquisition-related adjustments	2		63		-61	-97.2%
Other adjustments	3		22		-19	-86.5%
EBITDA pre¹	1,840	29.8%	1,786	30.4%	54	3.0%

¹ Not defined by International Financial Reporting Standards (IFRSs).

Gross profit increased by 5.1% to € 3,463 million (2017: € 3,294 million). Despite currency headwinds, the strong increase was driven by organic growth in sales across all business units. Marketing and selling expenses increased by 2.4% to € 1,775 million (2017: € 1,734 million), while R&D expenses increased by 3.4% to € 249 million (2017: € 241 million). The decline in other operating expenses and income of -46.2% to € -121 million (2017: € -224 million) was the result of lower acquisition-related adjustments and a fall in adjustments for integration expenses/IT expenses that were included in

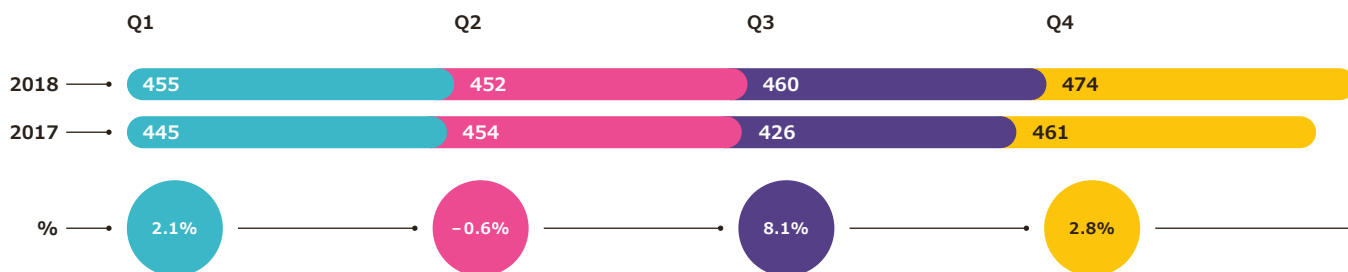
this item. In comparison with 2017, the operating result (EBIT) of Life Science rose by € 202 million to € 1,036 million (2017: € 834 million). After eliminating depreciation and amortization as well as adjustments, EBITDA pre – the key indicator to assess the earning power – increased by 3.0% to € 1,840 million (2017: € 1,786 million). EBITDA pre improved by 7.0% over the prior year in organic terms, whereas negative foreign exchange rate effects depressed this key indicator by -3.9%.

The development of EBITDA pre in the individual quarters in comparison with 2017 is presented in the following overview:

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EBITDA pre¹ and change by quarter²

€ million/change in %



¹Not defined by International Financial Reporting Standards (IFRSs).

²Quarterly breakdown unaudited.

DEVELOPMENT OF BUSINESS FREE CASH FLOW

In 2018, the business free cash flow of the Life Science business sector remained stable at the previous year's level at € 1,393 million (2017: € 1,402 million). Essentially, the inventory build-up to support sales growth was offset by higher EBITDA pre and lower investments.

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Business free cash flow¹

€ million	2018	2017	Change	
			€ million	in %
EBITDA pre ¹	1,840	1,786	54	3.0%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	-315	-371	56	-15.1%
Changes in inventories	-116	28	-144	>100.0%
Changes in trade accounts receivable as well as receivables from royalties and licenses	-17	-41	24	-59.3%
Business free cash flow¹	1,393	1,402	-9	-0.7%

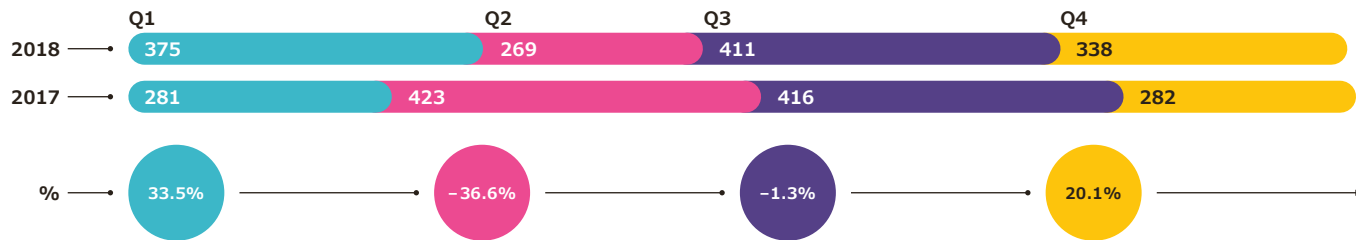
¹Not defined by International Financial Reporting Standards (IFRSs).

The development of business free cash flow items in the individual quarters in comparison with 2017 is presented in the following overview:

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Business free cash flow¹ and change by quarter²

€ million/change in %



¹ Not defined by International Financial Reporting Standards (IFRSs).

² Quarterly breakdown unaudited.