

## Healthcare

### HEALTHCARE

#### Key figures

| € million                            | 2016  | 2015  | Change    |       |
|--------------------------------------|-------|-------|-----------|-------|
|                                      |       |       | € million | in %  |
| Net sales                            | 6,855 | 6,934 | -79       | -1.1% |
| Operating result (EBIT)              | 1,593 | 1,097 | 497       | 45.3% |
| Margin (% of net sales) <sup>1</sup> | 23.2% | 15.8% |           |       |
| EBITDA                               | 2,425 | 1,970 | 454       | 23.0% |
| Margin (% of net sales) <sup>1</sup> | 35.4% | 28.4% |           |       |
| EBITDA pre exceptionals              | 2,128 | 2,002 | 126       | 6.3%  |
| Margin (% of net sales) <sup>1</sup> | 31.0% | 28.9% |           |       |
| Business free cash flow              | 1,648 | 1,581 | 67        | 4.2%  |

#### Development of net sales and results of operations

In 2016, the Healthcare business sector generated organic sales growth of 4.6%. Negative exchange rate effects of -4.6% and a negative portfolio effect of -1.1% led to an overall decline in net sales of -1.1% to € 6,855 million (2015: € 6,934 million). Nearly all the franchises contributed to the business sector's organic growth. In particular, products to treat infertility (Gonal-f®), thyroid disorders (Euthyrox®), growth disorders (Saizen®), and the strategic core brand Neurobion® from the Consumer Health business performed well in 2016. Erbitux®, the business sector's second-largest product in terms of sales, also generated slight organic sales growth. Only Rebit®, the top-selling drug within Healthcare, sustained a slight organic decline. The negative exchange rate

effects were mainly due to the development of Latin American currencies. However, the decline in the value of the British pound against the euro also contributed slightly to the exchange rate effects. The negative portfolio effect was attributable to the return of the rights to Kuvan® to BioMarin Pharmaceutical, Inc., USA, at the beginning of 2016.

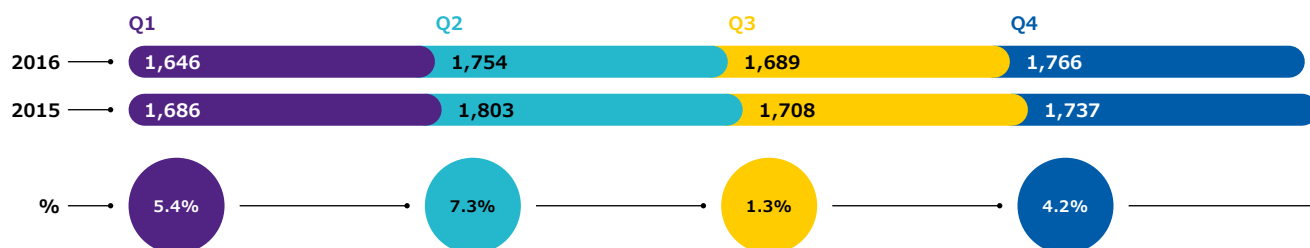
Commission income, which is also included in net sales, rose to € 178 million in 2016 (2015: € 103 million). The increase was driven in particular by profit-sharing from the co-commercialization of Xalkori® with Pfizer, Inc., USA. The agreement reached with Bristol-Myers Squibb Company, USA, in 2013 on the co-promotion of Glucophage® in China continued to have a positive effect on commission income.

The development of sales in the individual quarters as well as the respective organic growth rates in 2016 are presented in the following overview:

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### Net sales and organic growth by quarter<sup>1</sup>

€ million/organic growth in %

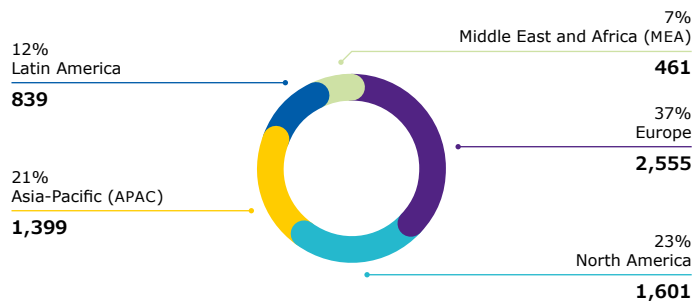


<sup>1</sup>Quarterly breakdown unaudited.

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### Net sales by region – 2016

€ million/% of net sales of the business sector



In North America, the second-largest region in terms of sales, organic growth of 11.1% led to net sales of € 1,601 million (2015: € 1,430 million). This development was mainly driven by the double-digit organic growth of Gonal-f®, a hormone used in the treatment of infertility, due to the favorable competitive situation that we benefited from throughout 2016. Organic and currency-related sales growth of Rebif® as well as organic sales growth of Saizen® continued to have a positive effect on the performance of sales in this region. North America's contribution to net sales of the Healthcare business sector thus increased to 23% (2015: 21%).

In the Asia-Pacific region, organic sales growth of 9.4% was recorded in 2016. This development was mainly attributable to higher sales of Gonal-f® and Euthyrox®, higher commission income from the co-promotion of Glucophage® with Bristol-Myers Squibb in China, as well as the growth of the Consumer Health business. In 2016, this region's share of the business sector's net sales further increased to 21% (2015: 19%).

Europe, which remained the Healthcare business sector's largest region accounting for 37% of net sales (2015: 39%), registered an organic sales decline of –2.5%. Consequently, net sales totaled € 2,555 million (2015: € 2,729 million). The organic decline was driven in particular by the continued difficult competitive situation for both Rebif® and Erbitux®. Furthermore, negative exchange rate effects of –1.6% and a portfolio effect of –2.3% resulted in an overall decline in net sales of –6.4%.

Sales in Latin America amounted to € 839 million in 2016 and were thus below the previous year's level (2015: € 1,022 million). Positive organic growth of 7.7% could not offset the negative foreign exchange impact of –25.5%. Organic growth was generated by all franchises, in particular with Rebif®, Erbitux® and Euthyrox®, as well as in the Consumer Health business with the strategic brand Neurobion®. Overall, Asia-Pacific's contribution to the net sales of the Healthcare business sector declined to 12% (2015: 15%).

In 2016, the Middle East and Africa region achieved organic sales growth of 5.5%, with net sales totaling € 461 million (2015: € 450 million). Double-digit organic growth in particular with Rebif®, Erbitux®, Concor®, and Euthyrox® compensated for the organic decline in sales of Glucophage® and negative exchange rate effects of –1.8%.

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### Net sales components by region – 2016

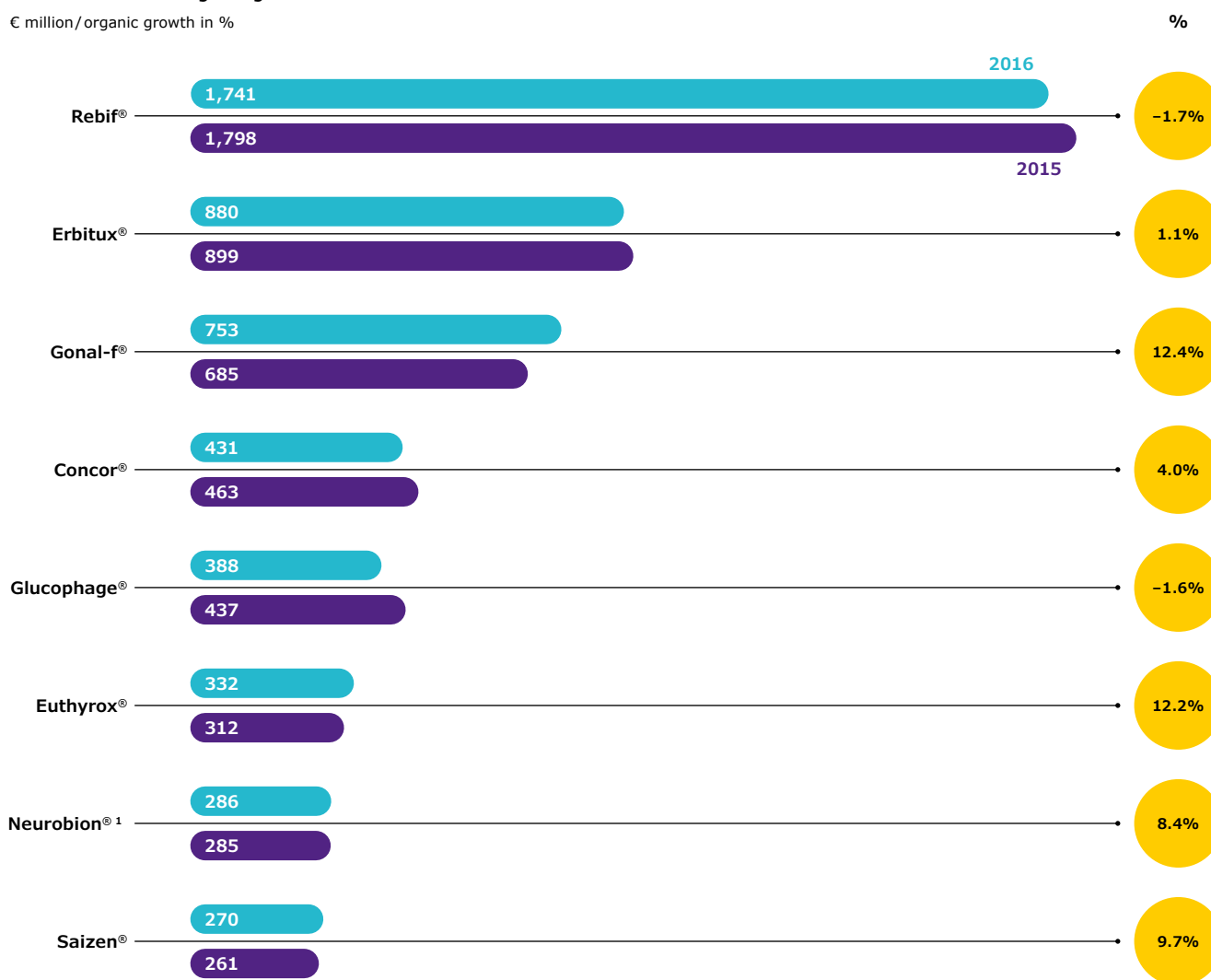
| € million/change in %        | Net sales    | Organic growth | Exchange rate effects | Acquisitions/divestments | Total change |
|------------------------------|--------------|----------------|-----------------------|--------------------------|--------------|
| Europe                       | 2,555        | -2.5%          | -1.6%                 | -2.3%                    | -6.4%        |
| North America                | 1,601        | 11.1%          | 0.8%                  | -                        | 11.9%        |
| Asia-Pacific (APAC)          | 1,399        | 9.4%           | -1.2%                 | -0.8%                    | 7.4%         |
| Latin America                | 839          | 7.7%           | -25.5%                | -0.1%                    | -17.9%       |
| Middle East and Africa (MEA) | 461          | 5.5%           | -1.8%                 | -1.2%                    | 2.4%         |
| <b>Healthcare</b>            | <b>6,855</b> | <b>4.6%</b>    | <b>-4.6%</b>          | <b>-1.1%</b>             | <b>-1.1%</b> |

Net sales and organic growth rates of the key products developed in 2016 as follows:

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### Product sales and organic growth

€ million/organic growth in %



<sup>1</sup> Previous year's figure has been adjusted.

Sales of the drug Rebif®, which is used to treat relapsing forms of multiple sclerosis, only sustained a slight organic sales decline of -1.7% in 2016 despite continued competitive pressure from oral formulations. Including negative exchange rate effects of -1.5%, sales totaled € 1,741 million (2015: € 1,798 million).

The North America region, which generated 61% of Rebif® sales (2015: 58%) and is the largest market for this product, delivered organic growth of 2.1%. This was primarily due to favorable price developments in the United States in 2016, which slightly offset the decline in volumes.

In Europe, which accounts for 30% of sales (2015: 34%) and is the Healthcare business sector's second largest region, sales saw a significant organic decline of -12.2% to € 524 million (2015: € 605 million). This development was due in particular to the difficult competitive situation and the associated decline in volumes.

Together, the remaining regions Latin America, Middle East and Africa, and Asia-Pacific generated € 145 million (2015: € 151 million) in Rebif® sales, equivalent to a 9% share (2015: 8%).

In 2016, sales of the oncology drug Erbitux® totaled € 880 million (2015: € 899 million). Organic growth of 1.1% was fully canceled out by negative foreign exchange effects of -3.2%.

In Europe, which accounted for 54% of Erbitux® sales (2015: 55%) and is thus the top-selling region for this product, sales decreased organically by -3.4%. The organic decline was mainly attributable to the challenging competitive situation as well as mandatory price reductions in several countries. Including negative foreign exchange effects of -1.9%, sales in Europe declined to € 470 million (2015: € 496 million).

In the Asia-Pacific region, which accounted for a 32% (2015: 29%) share of net sales, Erbitux® sales increased to € 280 million (2015: 265 million). Here, both organic growth of 2.8% and currency tailwinds of 2.8% had a positive effect on the development of sales.

In Latin America, sales declined to € 73 million (2015: € 87 million) despite double-digit organic growth of 14.5%. This was due to negative foreign exchange effects of -30.4%, which were predominantly attributable to the development of the Argentinian peso against the euro.

The Middle East and Africa region generated double-digit organic growth of 13.2%, with sales amounting to € 56 million (2015: € 50 million).

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### Product sales and organic growth of Rebif® and Erbitux® by region – 2016

|                     | Total | Europe | North America | Asia-Pacific (APAC) | Latin America | Middle East and Africa (MEA) |
|---------------------|-------|--------|---------------|---------------------|---------------|------------------------------|
| Rebif®              |       |        |               |                     |               |                              |
| € million           | 1,741 | 524    | 1,071         | 14                  | 64            | 67                           |
| Organic growth in % | -1.7% | -12.2% | 2.1%          | -11.7%              | 20.2%         | 15.3%                        |
| % of sales          | 100%  | 30%    | 61%           | 1%                  | 4%            | 4%                           |
| Erbitux®            |       |        |               |                     |               |                              |
| € million           | 880   | 470    | -             | 280                 | 73            | 56                           |
| Organic growth in % | 1.1%  | -3.4%  | -             | 2.8%                | 14.5%         | 13.2%                        |
| % of sales          | 100%  | 54%    | -             | 32%                 | 8%            | 6%                           |

In 2016, the Healthcare business sector generated organic sales growth of 12.4% with Gonal-f®, the leading recombinant hormone used in the treatment of infertility. Taking negative foreign exchange effects of -2.5% into account, sales of this product rose to € 753 million (2015: € 685 million). This development was mainly driven by organic growth of 47.7% in North America, as a consequence of the continued favorable competitive situation from which we benefited throughout 2016. Likewise, sales rose organically in the Asia-Pacific region by 9.6%, which more than offset the -3.5% organic decline in sales in Europe. The other products in the Fertility portfolio also developed positively.

Sales by the Endocrinology franchise, which mainly consists of products to treat growth disorders, amounted to € 404 million and were thus lower than the previous year's level (2015: € 461 million). This decrease in sales was primarily due to the return of the rights to Kuvan® to BioMarin Pharmaceutical, which was reflected in the portfolio effect of -15.8% and canceled out organic growth of 6.7%. The growth hormone Saizen®, which is the top-selling product in the franchise, delivered organic growth of 9.7%, resulting in net sales of € 270 million (2015: € 261 million).

Sales by the General Medicine franchise (including CardioMetabolic Care), which commercializes products to treat cardiovascular diseases and diabetes, among other things, declined to € 1,720 million (2015: € 1,791 million<sup>1</sup>). Organic growth of 4.2% was canceled out by negative foreign exchange effects of -7.9%. In particular Euthyrox®, a drug to treat thyroid disorders, showed solid performance with organic growth of 12.2%. Including currency headwinds of -5.9%, this led to sales of € 332 million (2015: € 312 million), which were mainly driven by performance in the Chinese market. Product sales of Glucophage® fell owing to an organic decline of -1.6% and negative exchange rate effects of -9.4%. However, commission income for Glucophage® rose, amounting

to € 106 million (2015: € 86 million), which corresponded to an organic increase of 24.3% and was also driven by performance in China. Concor® delivered organic growth of 4.0% in 2016. Currency headwinds of -10.9% were responsible for the year-on-year decline in sales to € 431 million (2015: € 463 million).

The Consumer Health business with over-the-counter pharmaceuticals posted organic sales growth of 3.4% in 2016. Owing to negative exchange rate effects, net sales declined to € 860 million (2015: € 905 million<sup>1</sup>). In particular, the strategic brand Neurobion® contributed to organic growth.

The results of operations developed as follows:

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### Results of operations

| € million  | 2016          | in %          | 2015          | in %          | Change       |                 |
|--|---------------|---------------|---------------|---------------|--------------|-----------------|
|  |               |               |               |               | € million    | in %            |
| <b>Net sales</b>   | <b>6,855</b>  | <b>100.0%</b> | <b>6,934</b>  | <b>100.0%</b> | <b>-79</b>   | <b>-1.1%</b>    |
| Cost of sales  | -1,377        | -20.1%        | -1,442        | -20.8%        | 66           | -4.6%           |
| <i>(of which: amortization of intangible assets)<sup>2</sup></i>               | <i>(-1)</i>   |               | <i>(-1)</i>   |               | <i>(-)</i>   | <i>(-1.6%)</i>  |
| <b>Gross profit</b>  | <b>5,478</b>  | <b>79.9%</b>  | <b>5,491</b>  | <b>79.2%</b>  | <b>-13</b>   | <b>-0.2%</b>    |
| Marketing and selling expenses   | -2,587        | -37.7%        | -2,801        | -40.4%        | 214          | -7.6%           |
| <i>(of which: amortization of intangible assets)<sup>2</sup></i>               | <i>(-565)</i> |               | <i>(-566)</i> |               | <i>(-)</i>   | <i>(-0.1%)</i>  |
| Administration expenses  | -270          | -3.9%         | -259          | -3.7%         | -10          | 4.0%            |
| Research and development costs   | -1,496        | -21.8%        | -1,310        | -18.9%        | -186         | 14.2%           |
| <i>(of which: amortization of intangible assets)<sup>2</sup></i>               | <i>(-1)</i>   |               | <i>(-1)</i>   |               | <i>(-)</i>   | <i>(1.4%)</i>   |
| Other operating expenses and income  | 468           | 6.8%          | -24           | -0.3%         | 492          | >100.0%         |
| <b>Operating result (EBIT)</b>   | <b>1,593</b>  | <b>23.2%</b>  | <b>1,097</b>  | <b>15.8%</b>  | <b>497</b>   | <b>45.3%</b>    |
| Depreciation/amortization/impairment losses/<br>reversals of impairment losses | 831           | 12.1%         | 874           | 12.6%         | -42          | -4.9%           |
| <i>(of which: exceptionals)</i>  | <i>(71)</i>   |               | <i>(90)</i>   |               | <i>(-19)</i> | <i>(-21.0%)</i> |
| <b>EBITDA</b>  | <b>2,425</b>  | <b>35.4%</b>  | <b>1,970</b>  | <b>28.4%</b>  | <b>454</b>   | <b>23.0%</b>    |
| Restructuring costs  | 12            |               | 30            |               | -18          | -59.7%          |
| Integration costs/IT costs   | 18            |               | 1             |               | 17           | >100.0%         |
| Gains/losses on the divestment of businesses                                   | -330          |               | -             |               | -330         | -               |
| Acquisition-related exceptionals   | -             |               | -             |               | -            | -               |
| Other exceptionals   | 3             |               | -             |               | 3            | -               |
| <b>EBITDA pre exceptionals</b>   | <b>2,128</b>  | <b>31.0%</b>  | <b>2,002</b>  | <b>28.9%</b>  | <b>126</b>   | <b>6.3%</b>     |

<sup>2</sup>Excluding amortization of internally generated or separately acquired software.

In 2016, the gross profit of the Healthcare business sector amounted to € 5,478 million (2015: € 5,491 million), thus remaining stable at the previous year's level despite the slight decline in sales. The resulting gross margin increased slightly to 79.9% (2015: 79.2%).

Marketing and selling expenses decreased to € 2,587 million (2015: € 2,801 million), which was primarily due to the termination of the co-promotion agreement with Pfizer for Rebif® in the United States at the end of 2015.

<sup>1</sup>The previous year's figures have been adjusted due to product transfers from Biopharma to Consumer Health in India and Latin America as of January 1, 2016.

The ratio of research and development spending to net sales rose to 21.8% (2015: 18.9%), reflecting higher R&D costs of € 1,496 million in 2016 (2015: € 1,310 million). The increase was due to projects in clinical development, in particular in immuno-oncology among other things as part of the avelumab program. In addition, work on early-stage projects was intensified. The release of provisions for the follow-on costs of discontinued R&D projects had a positive effect. In 2016, provisions amounting to € 57 million were released. These were originally set up in connection with the termination of clinical development projects in previous years, for example evofosfamide.

The changes in other operating income and expenses mainly reflect items eliminated in the calculation of EBITDA pre exceptionals. Other operating expenses and income included, among other

things, the impairment loss on the co-commercialization right for Xalkori® (€ 71 million) as well as the gain from returning the rights to Kuvan® to BioMarin Pharmaceutical (€ 330 million) and the divestment of a minority shareholding (€ 30 million). In addition, royalty and license income for Avonex® and Plegridy® (both Biogen Inc.) reported under other operating income rose by € 47 million in comparison with 2015 owing to a patent granted at the end of June 2016 in the United States.

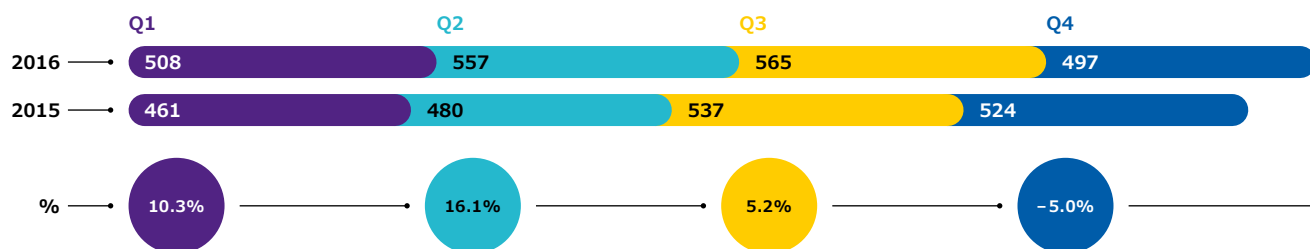
Overall, Healthcare generated an increase in EBITDA pre exceptionals to € 2,128 million (2015: € 2,002 million). The resulting EBITDA margin pre exceptionals was 31.0% (2015: 28.9%).

The development of EBITDA pre exceptionals in the individual quarters in comparison with 2015 is presented in the following overview:

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### EBITDA pre exceptionals and change by quarter<sup>1</sup>

€ million/change in %



<sup>1</sup>Quarterly breakdown unaudited.

### Development of business free cash flow

In 2016, business free cash flow of the Healthcare business sector amounted to € 1,648 million (2015: € 1,581 million). The increase in this key figure was primarily due to the rise in EBITDA pre exceptionals. Higher capital spending, driven in particular by investments at the Darmstadt site, reduced business free cash flow.

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### Business free cash flow

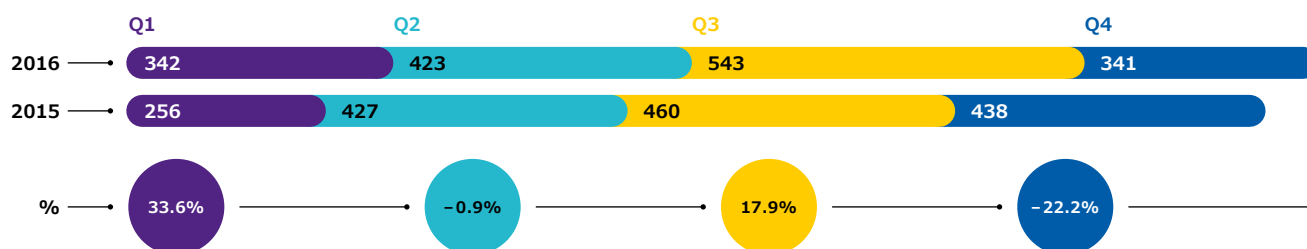
| € million  | 2016         | 2015         | Change    |             |
|--|--------------|--------------|-----------|-------------|
|  |              |              | € million | in %        |
| EBITDA pre exceptionals  | 2,128        | 2,002        | 126       | 6.3%        |
| Investments in property, plant and equipment, software as well as advance payments for intangible assets | - 348        | - 289        | - 59      | 20.4%       |
| Changes in inventories   | - 38         | - 27         | - 11      | 40.5%       |
| Changes in trade accounts receivable as well as receivables from royalties and licenses                  | - 94         | - 105        | 11        | -10.2%      |
| <b>Business free cash flow</b>   | <b>1,648</b> | <b>1,581</b> | <b>67</b> | <b>4.2%</b> |

The development of business free cash flow in the individual quarters in comparison with 2015 is presented in the following overview:

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### Business free cash flow and change by quarter<sup>1</sup>

€ million/change in %



<sup>1</sup> Quarterly breakdown unaudited.