

Business Development of Bioprocess Solutions

Exceptionally strong sales growth and jump in profitability

Dynamic development of core business; additional pandemic-related momentum and positive development of acquisitions

Strong gains across all product categories and regions

Division sales
€2,727.0m
In constant FX: +54.7%

Order intake
€3,483.5m
In constant FX: +57.6%

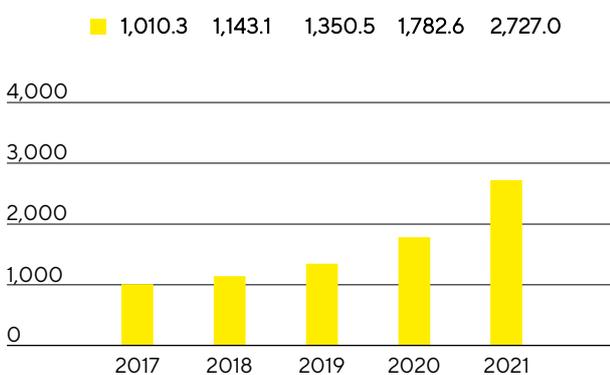
Underlying EBITDA margin
36.2%
+3.9 percentage points



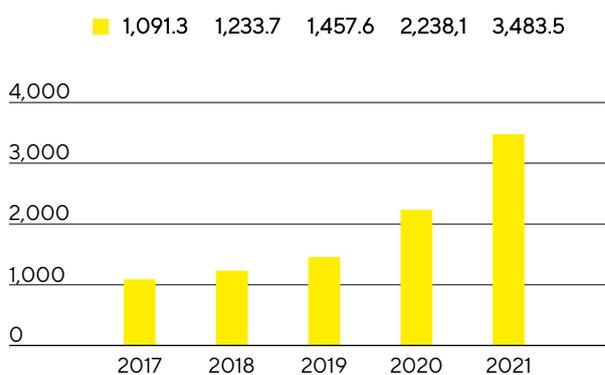
Sales Revenue and Order Intake

In the reporting year, the Bioprocess Solutions Division grew at an exceptionally strong rate by 54.7% to €2,727.0 million in constant currencies (reported: +53.0%) after it had already expanded by more than a third in the previous year. As a result, the division's performance exceeded the forecast that had projected sales growth of 22% to 28% at the beginning of the reporting year and had been raised in July 2021 to a sales increase of 50%. In particular, business with manufacturers of biopharmaceutical medications performed very well across all product areas and regions. Beyond this, pandemic-related demand, essentially due to coronavirus vaccine production ramped up and extended by some customers, added close to 20 percentage points to sales expansion. The major part of this growth was achieved organically, supported by production capacities expanded at several sites and by overall stable, yet strained supply chains. The most recent acquisitions also saw positive development, contributing close to 5 percentage points to revenue growth.

Sales Revenue 2017 to 2021
€ in millions



Order Intake 2017 to 2021
€ in millions



Sales Revenue and Order Intake

€ in millions	2021	2020	in % reported	in % cc
Sales revenue	2,727.0	1,782.6	53.0	54.7
Order intake	3,483.5	2,238.1	55.6	57.6

In 2021, the Bioprocess Solutions Division increased its sales revenues in all business geographies. EMEA, the region generating the highest share of around 41% to total revenue, saw an especially steep increase, with sales soaring 61.8% to €1,130.5 million, bolstered by particularly robust business with vaccine manufacturers. Accounting for around 34% of division sales, the Americas region reported growth of 45.1% to €913.1 million. The Asia|Pacific region also showed very strong growth, with sales up 57.7% to €683.5 million, contributing a share of 25% to division revenue.

Order intake developed even more strongly than sales revenue, surging by 57.6% in constant currencies (reported: +55.6%) to €3,483.5 million, with pandemic effects accounting for around 15 percentage points and acquisitions for 7 percentage points. While order intake was significantly above sales revenue up into the third quarter, also because some customers in the current situation placed their orders further in advance than usual, the ratio of order intake to sales revenue normalized during the second half of the year and was at the level of the company's long-term average toward the end of the year.

Sales by Region

€ in millions	2021	2020	in % reported	in % cc
EMEA	1,130.5	698.5	61.9	61.8
Americas	913.1	651.3	40.2	45.1
Asia Pacific	683.5	432.9	57.9	57.7

Overproportionate Increase in Earnings

Underlying EBITDA of the Bioprocess Solutions Division increased at a significantly overproportionate rate in relation to sales revenue, growing by 71.3% to €986.3 million. The division's respective margin rose year over year to 36.2% (previous year: 32.3%) and thus slightly exceeded the forecast that had projected around 33% at the beginning of the year and had last been updated in July 2021 to around 36.0%. Besides being attributed to economics of scale, the increase in profitability is also due to a cost base that rose only slowly in some areas. This trend subsided due to the intensified buildup of the workforce in the second half of the reporting year, as well as to rising costs in logistics and purchasing. Currency effects as well as the most recent acquisitions did not have any material impact on the development of the division's earnings margin.

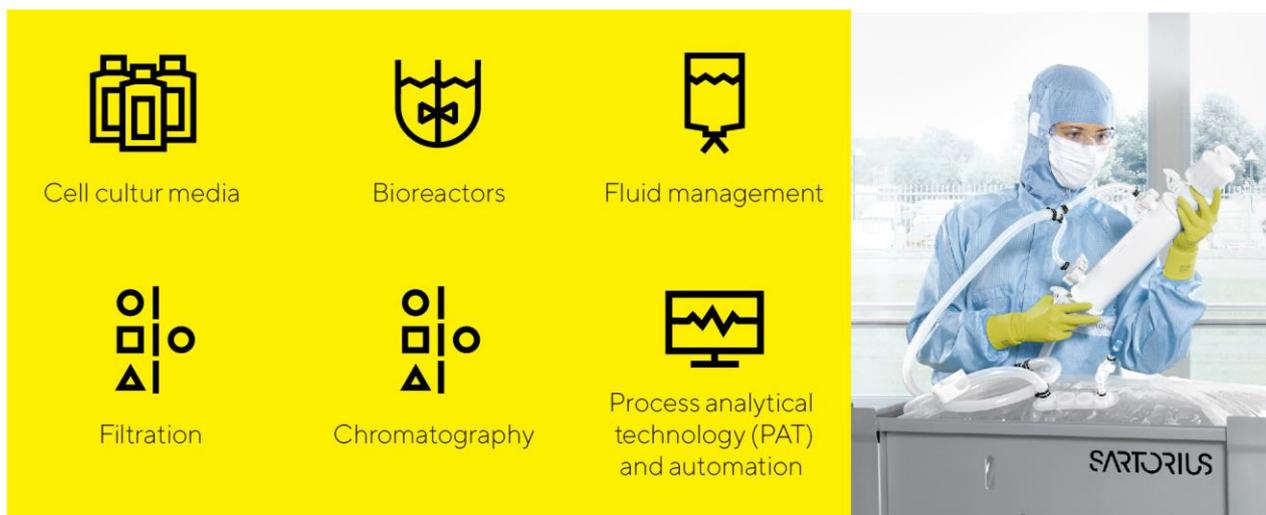
Underlying EBITDA and EBITDA Margin

	2021	2020
Underlying EBITDA in millions of €	986.3	575.9
Underlying EBITDA margin in %	36.2	32.3

In the year under review, the Bioprocess Solutions Division recorded extraordinary items of -€32.1 million relative to -€36.2 million a year earlier. These items predominantly consisted of expenses in connection with the most recent acquisitions as well as for various cross-divisional projects and rebranding.

Products and Sales

The Bioprocess Solutions Division markets products and services for the entire added-value chain in biopharmaceutical production and preceding process development. The division's portfolio includes cell lines, cell culture media, bioreactors, a wide range of products for separation, purification and concentration, and products and systems for storage and transportation of intermediate and finished biological products.



Sartorius expanded the product portfolio of its Bioprocess Solutions Division for manufacturing cell and gene therapeutics by two acquisitions:

- CellGenix produces critically essential cell culture components, such as growth factors, cytokines and media in GMP quality, for manufacturing cell and gene therapy products
- The cell culture specialist Xell develops and produces media and feed supplements for cell cultures, especially for manufacturing viral vectors that are used in gene therapeutics and vaccines

Beyond these acquisitions, the Bioprocess Solutions Division has been collaborating with Waters Corporation since the reporting year. As part of this collaboration, a Waters bioprocess analyzer based on mass spectroscopy will be combined with the Sartorius multi-parallel bioreactor system, enabling specific analytical steps during drug discovery and cell line development to be performed directly in the production environment, i.e., at-line measurements, so these steps do not have to be outsourced to external laboratories for sample testing, the usual procedure until now. This solution greatly accelerates the timeline for process development for the benefit of users.

In addition, Sartorius launched on the market new software versions for design of experiments (DoE) and for multivariate data analysis, which accelerate development and optimization of processes and enhance evaluation of complex datasets generated across the biopharmaceutical production process, respectively.

Sales Activities

The Bioprocess Solutions Division markets its product portfolio directly. Sales activities for key accounts are coordinated and supported by global key account management.

In the reporting year, many direct customer contacts were enabled through the use of digital communication tools, even after pandemic-mandated travel and distancing restrictions were eased. Videoconferencing and augmented reality continue to be increasingly used for direct interaction, such as for product demonstration, training and commissioning. To strengthen the sales organization, the division is concentrating on expanding its international presence, especially by more recruitment. A further focus is on the ongoing enhancement of sales effectiveness, for example, by specialized training for employees.

Product Development

Development activities at Sartorius essentially focus on technology areas such as membranes, which are the core component of our filter products; various technology platforms such as single-use containers for fluid management in biopharmaceutical processes and sensors; and control technologies for processes such as fermentation and cell cultivation. Additional focal areas entail developments in materials and components that include plastics, elastomers and intelligent polymers; expanded data analysis; and cell line development.

Our largest site for product development is in Göttingen, Germany. Further key activities take place in France, Germany, India, the USA, the U.K., and Sweden, as well as in Israel and Slovenia.

Production and Supply Chain Management

Bioprocess Solutions has a very well-developed global production network that was expanded at many sites in the reporting year. The largest production facilities are located in Germany, France and Puerto Rico. Beyond these locations, this division also manufactures in the U.K., Switzerland, Tunisia, India, the United States, China, Israel, and in Slovenia. Additional sites in Germany have been added by the most recent acquisitions.

Despite the restrictions in worldwide logistics as a result of the coronavirus pandemic, the company's supply chains proved to be strained, yet mostly stable. A few preliminary products, raw materials, components and services took longer to deliver or their availability was temporarily limited. This was reflected in some cases by correspondingly extended delivery times for our own products.

Sartorius expanded its production in all regions due to high demand in its core business and to additional customer needs related to coronavirus vaccines and Covid-19 therapeutics. On top of this, the company increasingly hired additional production staff and has been manufacturing at a few sites around the clock seven days a week.

Sartorius started up operations at a new Customer Interaction Center (CIC) in China for biopharmaceutical customers. The CIC enables customers to test complex systems at our site first before these are delivered to and set up at their plant facilities. A significantly expanded application, validation and service center was opened at the company site in Shanghai, and a customer test laboratory in Havant, U.K. Production facilities were also expanded in Israel and Slovenia.