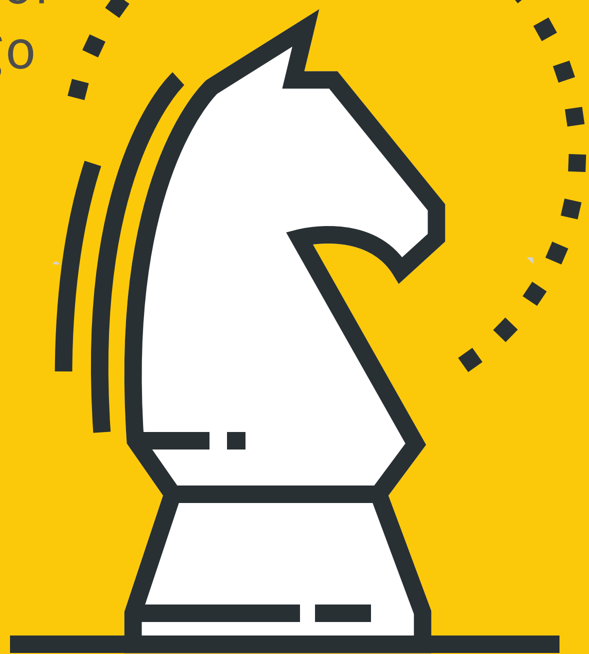
Industry sales continue at all-time high at 40 bn. €

Growth by 2,000 new highly qualified jobs

Three-quarters of industry sales go to exports

10% of industry turnover is invested in research and development



ALL-TIME HIGH

Industry continues on course for success

2018

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May 2019

Industry Figures

of the German Aerospace Industry

BDLI
German Aerospace Industries Association

in **2018**

the aerospace industry in Germany can look back on good development. The growth trend of recent years has continued. Industry sales in the 2018 financial year were EUR 40 billion again, equaling the all-time high of the previous year. Sales invoiced in US dollars increased; due to exchange rate changes, industry sales in euros remained constant.

The total number of employees has seen an increase to 111,500 directly employed in the aerospace industry (previous year's figure: 109,500) – a new high. Thus, the industry created 2,000 new jobs for highly qualified employees in the past financial year.

CIVIL AVIATION continues to be the largest segment in the industry. Globally rising order and delivery figures led to an increase in production and productivity. As a result, sales in civil aviation were EUR 29.2 billion, as they were in 2017. A good 78,500 people – around 2,000 more than in the previous year – were working in the civil aviation segment.

In MILITARY AVIATION, the number of sales and employees in 2018 was comparable to those in 2017: sales amounted to around EUR 7.7 billion (previous year: EUR 7.8 billion); 23,700 employees were working in this sector (previous year: 24,000).

In the SPACE SEGMENT, too, sales and number of employees were comparable with the 2017 financial year: the number of employees slightly rose from 9,000 to 9,300, and sales amounted to EUR 2.9 billion (previous year: EUR 3 billion).

The EXPORT SHARE rose slightly from 74% to 76%, measured according to sales in the industry as a whole.

Industry spending on RESEARCH AND DEVELOPMENT remains at a very high level. They comprised a volume of almost EUR 4 billion in 2018; this figure corresponds to 10% of the industry's sales.

BDLI president Klaus Richter explains: „Another record year lies behind us. The German aerospace industry was able to continue its successful course in 2018. We have created 2,000 new highly qualified jobs, mainly because we are so successful on the world market.

The position of our industry as a key one for Germany has been confirmed – economically, strategically and as a driver of jobs and innovation. With more than 7,500 Airbus commercial aircraft on order, Airbus' production, particularly in the single-aisle segment, will be running at full capacity for years to come. This is unparalleled in German industry. Every sixth civil aircraft delivered worldwide comes from Germany. This benefits the entire business location of Germany with its richly multilevel supplier industry. At the same time, the entire industry is working at a high pace to make flying even more efficient and, above all, more environmentally friendly. The objective is low-emission flying.“

Richter emphasizes the leading role of the German aerospace industry as a partner in international cooperation, and with a view to the military aerospace industry he points out: „Different national regulations on arms exports are a substantial danger for trend-setting projects. This is where politics comes in: bi- and multinational coordination is needed so that we do not endanger Germany's leading role. Germany must remain able to cooperate and maintain its credibility as a reliable partner.“

for a competitive and future-proof aerosapce location

CIVIL AVIATION

The civil aviation sector also developed well last year. An increasing global demand for mobility and the replacement of older aircraft with high kerosene consumption by the latest low-noise, fuel-efficient aircraft generation continue to be key growth drivers. In the future, enhanced connectivity and artificial intelligence will also play important roles in the next generation of aircraft. Sales in euros remained at the high level of the previous year at EUR 29.2 billion due to a weaker dollar. Civil aviation remains by far the largest sector of the national aerospace industry, with a 73% share of total industry sales and 78,500 employees. The number of employees has thus increased by 3%. However, some dark clouds hang over the forecasts for civil aviation. Global trade disputes, Brexit, fluctuations in oil prices – these are all risks that may affect business.

In 2018, the German engine industry continued to benefit from the sustained positive industry environment. The medium- to long-term production plans for new engines are established and have been coordinated with the worldwide aircraft manufacturers, and the aircraft fleet in service ensures enormous growth in the maintenance business. This is accompanied by significant investments in MRO capacities – in Germany and worldwide. Engine manufacturers are focusing their attention on the ramp-up of new engine models such as the geared turbofan, the Pearl and the Trent XWB. Engine manufacturers are also continuing to invest heavily in the continuous optimization of established engines in parallel with the development of revolutionary engine designs such as electro-hybrid engines to further reduce fuel consumption and emissions. This is a great opportunity for future technological leadership for Europe. This is the only way for the industry to meet the increasing demands of growing mobility needs in the face of the industry's self-commitment to limiting emissions and increasing environmental awareness.

Airbus Helicopters continued to expand its leading position in 2018 and, at 52%, is well ahead of the competition in the civil and parapublic market. The helicopter market is gradually recovering, but the downturn has not yet been overcome.

Various German cities and regions joined the European Smart Cities Initiative in 2018. The operation of so-called air taxis will also be investigated. Ingolstadt and Airbus have entered into a partnership for this purpose. The CityAirbus, an autonomous-flying electric vehicle developed for such tasks with vertical takeoff and landing capabilities, recently made liftoff for the first time.

With a view to the future, Reiner Winkler, vice president of aviation and member of the BDLI board, points out: „Decisive factors for the expansion of the success story of the aerospace industry ‚made in Germany' are the implementation of technologies and competencies in new, trend-setting programs. In order for innovations to successfully lead to cutting-edge technology products, both ambitious research funding and targeted measures to maintain competitiveness are needed."

Winkler particularly emphasizes the achievements of the German supplier industry: „Our medium-sized suppliers are continuing on their road to success. Due to their quality, reliability and technological performance, they are sought-after partners for the major manufacturers on the world market. These hidden champions are becoming more and more truly global players whose value chains are largely located in Germany. This success is the result of consistent support and promotion by the federal government and the federal states. Companies, employees and taxpayers all benefit from funding instruments such as the Federal Aviation Research Program, because every euro invested pays off fivefold.“

MILITARY AVIATION

Vice president of defense and security Dirk Hoke, member of the BDLI board, explains the situation of the military aviation industry: „The situation remains tense. One of the reasons for this is the changing global security-policy environment, which could not be more complex and multifaceted. Germany urgently needs to play a stronger role in close cooperation with our partners in Europe and NATO. This includes, in particular, common rules for export. It is also necessary for Germany to raise its financial commitment in order to be able to fulfill its international obligations.“

In addition to the European MALE RPAS and TLVS programs, the joint development and procurement of the Future Combat Air System (FCAS) as a European joint project is essential. Hoke emphasizes: „FCAS contributes sustainably to the maintenance and expansion of technological competence in Germany. Future technologies such as artificial intelligence, flying in swarms – manned and unmanned – and cross-platform networking are at the forefront here." Hoke also underlined the importance of these projects for the entire German supplier landscape, from small companies to system suppliers.

SPACE

Marco Fuchs, chairman of the BDLI Aviation Forum and vice president of the BDLI, comments on the situation of the German space industry: „In an age of increasing commercialization of space flight, the German space industry maintained its high level in the past financial year. After four more FOC satellites of the Galileo navigation system were launched in mid-July 2018, this system has been fully operational since the beginning of 2019 and is available on all modern devices such as mobile phones. With the Ariane 6 launch vehicle currently under development, the German space industry is also developing a sustainable product for the worldwide launch of satellites."

To ensure the continued successful development of Germany as a location for spaceflight, Fuchs looks at the implications of the ESA Council at Ministerial Level to be held at the end of November: „This year, too, we will be setting the main course for our space industry. The already announced increase in ESA's contribution to around EUR 850 million per year is an important first step. However, with the aim of continuously supporting new programs, we also need a significant additional increase to at least EUR 1 billion per year. This will provide our companies – from system manufacturers to medium-sized companies – with the necessary flexibility.“

Germany is one of the largest contributors to the European Space Agency (ESA) and, along with France, is one of the leading European space nations. This is a result of the federal government's successful space policy in recent decades.

The National Program for Space and Innovation represents an indispensable foundation for all the industrial activities of the German space industry: „National technology and application developments are setting the course for major European and international programs. That's why we need a significant increase to 500 million euros a year," says Fuchs.

THE BDLI

The German Aerospace Industries Association (BDLI), with around 250 members, represents the interests of an industry that has become an essential growth engine of the German economy through international technological leadership and worldwide success. The German aerospace industry, with its 111,500 direct employees, combines almost all strategic key technologies. It currently achieves annual sales of EUR 40 billion.

The major tasks of the BDLI include communication with political institutions, authorities, associations and foreign representatives in Germany, as well as various member services at home and abroad.

The association is the trademark owner of ILA Berlin – the trade fair for „Innovation and Leadership in Aerospace." It will take place from May 13 to 17, 2020, at the Berlin ExpoCenter Airport.

The BDLI is officially accredited to the German Bundestag and performs a number of legally embodied tasks. It is a member of the European umbrella organization AeroSpace, the Defence Industries Association of Europe (ASD) and the Federation of German Industries (BDI).

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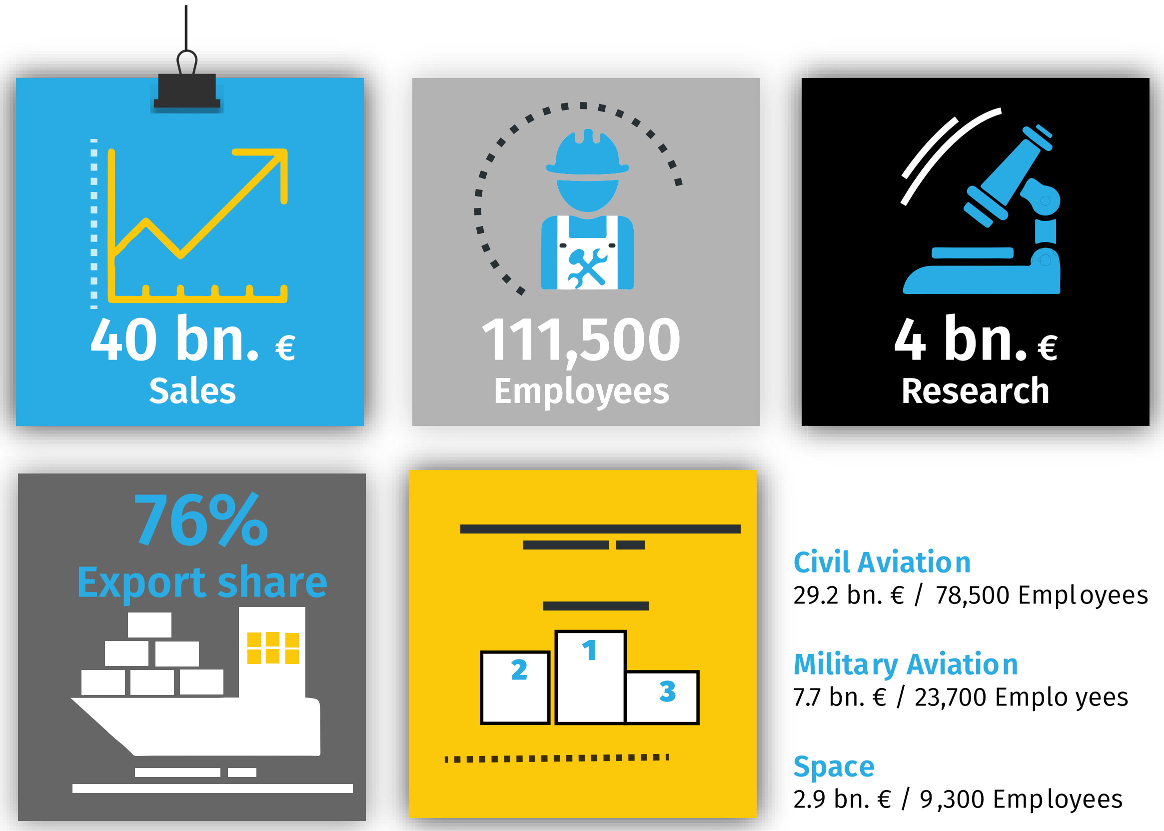

Civil Aviation
29.2 bn. € / 78,500 Employees

Military Aviation
7.7 bn. € / 23,700 Emplo yees

Space
2.9 bn. € / 9,300 Employees