

## AEROSPACE – A GROWING INDUSTRY

### STRATEGIC INDUSTRY OF THE FUTURE

Global air traffic is growing by 5% each year. The main factors driving this growth are the worldwide demand for mobility and the replacement of older generation aircraft with high fuel consumption. One billion people are already flying today, while six billion people have never flown. This ratio will change over time: in the next two decades our industry expects a demand for more than 30,000 wide-body aircraft globally. This corresponds to a value of \$ 5 trillion – more than the annual economic output of Germany.

The growing importance of networking at all levels of society, but also new challenges in view of the volatile security situation, the urgent environmental issues or a solution concerning the migration issue will lead to an even greater demand for modern aerospace applications.

The economic and strategic importance of the aerospace industry for an export-oriented economy in an increasingly globalized world can therefore hardly be overestimated.

### OPPORTUNITIES AND CHALLENGES

Despite this positive outlook, it is important to master big challenges brought on by stiff competition in the world market, because our industry is of the highest strategic relevance for established as well as for emerging industrial nations. In the US, for example, much more public funds are made available for the aerospace industry, while in China the entire industry is seen as a task of the state. Germany and Europe must work for equal opportunities to ensure that the domestic industry is not disadvantaged too much.

To avoid putting our international competitiveness at risk, a high-wage country such as Germany should do everything to avoid putting further burdens on our industry. Since we are mainly producing for export – the export ratio in the aviation industry is over 70% – such burdens have a greater impact on us than on other industries that have a large domestic market in Germany. And qualified personnel and competitive working conditions must of course be ensured.

In the coming years, therefore, our industry must make important decisions regarding the course we should take. Globalization, innovation and technology are the decisive forces in the 21st century. We can only produce competitive products and continue our success story if we embrace the harmonious interaction between these three forces.

### ABOUT BDLI

The German Aerospace Industry Association (BDLI) is the primary interest representation of companies active in the aerospace sector in Germany. As the voice of German aerospace, BDLI engages in dialogue with political institutions, authorities, trade associations and governments at home and abroad. Representing more than 230 companies, it offers a wide array of member services, and it is the trademark owner and co-organiser of the ILA Berlin Air Show.

As the voice of the industry, we encourage our members to engage in dialogue with political institutions, authorities, trade associations and governmental bodies. As trademark owner and co-organiser of one of the world's leading aviation events, the ILA Berlin Air Show provides members with a high-profile international platform that showcases the best in the industry.

BDLI belongs to Germany's most important trade group, the Federation of German Industries (Bundesverband der Deutschen Industrie – BDI). At the European level, we are members of the umbrella organisation ASD, the AeroSpace and Defence Industries Association of Europe.

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## KEY FIGURES OF THE GERMAN AEROSPACE INDUSTRY

2015

**BDLI** 

## THE GERMAN AEROSPACE INDUSTRY 2015

Overall, the German aerospace industry performed very well in the past business year 2015. Sales growth for the entire industry amounted to 8%, with total sales reaching an all-time high of Euro 34.7 billion (previous year: Euro 32.1 billion). Overall employment rose slightly by 1%, with 106,800 workers being directly employed in the aerospace industry (previous year: 105,700). This number marks the highest level of employment ever.

The share of exports, in relation to the sales of the entire industry, was 70%. This industry's investments in research and development are still very high with Euro 4.2 billion overall; this number represents a share of 12% of total industry sales. The forward-looking and targeted support and funding of the federal government has actively contributed to the positive development.

### AEROSPACE INDUSTRY CONTINUES TO GROW IN 2015

The German aerospace industry also continued to grow in 2015. This is true for the system manufacturers, but especially for our capable, specialized SMEs. This overall positive development is owed to innovation and entrepreneurial foresight and the qualification and commitment of our employees.

### CIVIL AVIATION

The development in civil aviation was again very good last year. The global demand for mobility and the replacement of older generations of aircraft marked by high fuel consumption are the key engines for growth. The positive development of the dollar exchange rate also favored this excellent development. Compared to the previous year, sales rose by 11% to Euro 25.3 billion (previous year: Euro 23 billion). With a 73% share of total industry sales, the civil aviation sector is further strengthening its position as the largest sector in the German aerospace industry. The 75,000 workers in this segment represent another small increase in personnel of about 1%.

### THE CIVIL AVIATION SUPPLY INDUSTRY

The civil aviation supply industry grew by 8.5% in 2015, so that its total sales rose to Euro 10.6 billion (previous year: Euro 9.83 billion). The German supply industry is participating in the ramp-up of civil aircraft programs. The growth in sales of about 800 million euros is also due to the fact that this industry, which mainly consists of small and medium-sized businesses, increasingly wins contracts for programs of non-European aircraft manufacturers.

Today our industry is involved with components in each of the 1,700 passenger aircraft delivered worldwide. Our businesses only achieve their worldwide success in a highly competitive international market by proving themselves on the basis of their strong market position in technology, quality and reliability.

## MILITARY AVIATION

Sales in the military aviation industry rose by 3% to Euro 6.8 billion (previous year: Euro 6.6 billion) and account for 20% of total industry sales. The number of employees increased by 1% to 23,000. After the last few years, which were marked by a decline in sales and employment in this strategically important segment of the industry, the figures in the military aviation industry have stabilized in the last fiscal year. The situation at our roughly 100 member companies in this segment remains tense. Expiring major programs and a lack of development programs jeopardize the development and system capabilities we established in recent decades, which also entails a threat to our competitive position and capability to cooperate internationally. In light of this, we expressly welcome the military aviation strategy of the Federal Ministry of Defence announced in January 2016. It is an important commitment to the military aviation industry in Germany and provides our companies with the much needed clear framework for action and long-term planning security.

### SPACE INDUSTRY

The innovative key technology sector that is the space industry can again look back to a successful business year 2015. Sales remained at Euro 2.5 billion, which accounts for 7% of industry sales. The number of employees also stayed constant at 8,500. After the successes of the German and European space industry last year, our industry also faces major challenges in 2016. It is particularly important to jointly tackle the new challenges posed by the changing global aerospace landscape. US competitors and new players increasingly lead to discussions about the commercialization of space flight in Germany and Europe under the slogan „New Space“. The space industry makes decisive contributions to the solution of global social challenges. „New Space“ opens up an additional new field of activity and new opportunities in this regard. However, space flight is and will always be a responsibility of the state! Therefore, the German aerospace industry particularly counts on the continuation of the strong German involvement in recent years at the next ESA Council meeting at ministerial level in December 2016 and a consistent advancement of the decisions taken in 2014.

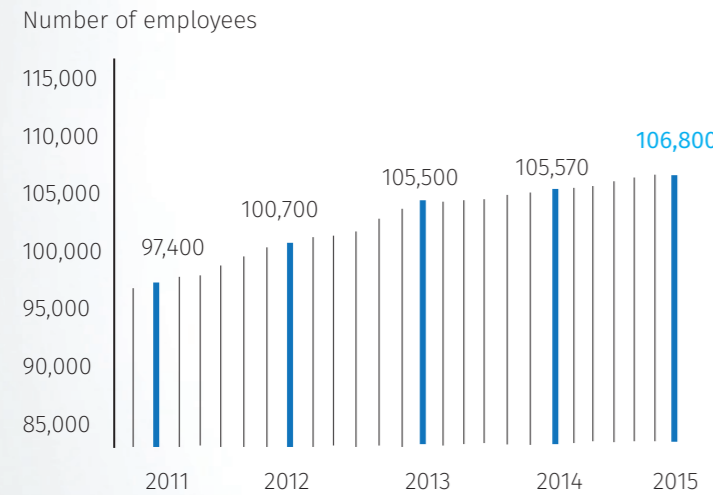
106,800  
2014 | 105,700 | 1%

€  
34.7 bln Euro  
2014 | 32.1 bln Euro | 8%

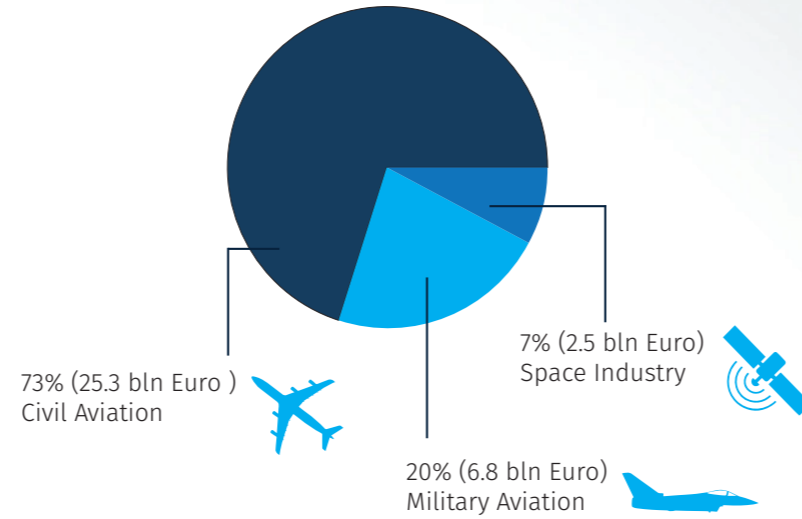
4.2 bln Euro  
2014 | 4.3 bln Euro | -0.8%

### OVERALL EMPLOYMENT DEVELOPMENT\*

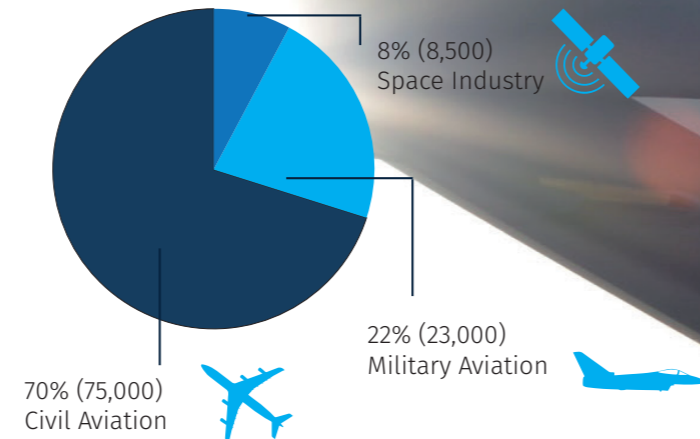
Development of the number of employees working for the German aerospace industry in a 5-year comparison



### SALES BY SECTOR IN PERCENT 2015

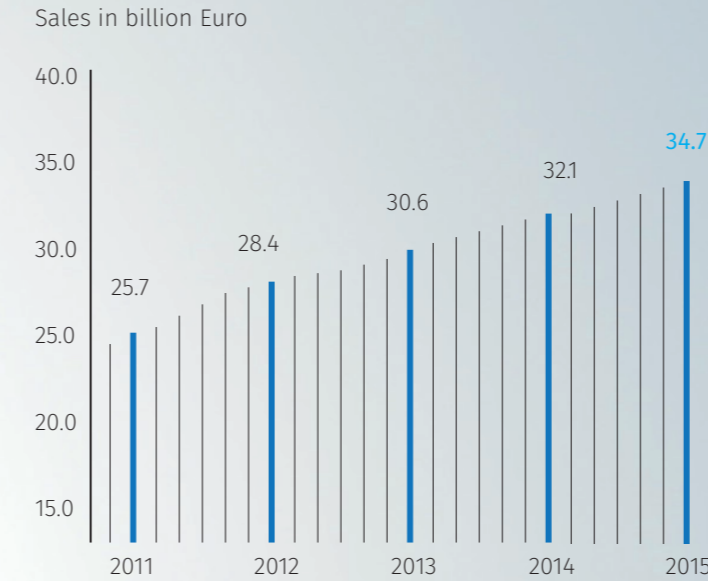


### EMPLOYEES BY SECTOR IN PERCENT 2015



### OVERALL SALES DEVELOPMENT\*

Development of sales generated by the German aerospace industry in a 5-year comparison



70% Export share\*\*

12% Research and Development

### SALES OF THE GERMAN AEROSPACE INDUSTRY BY MANUFACTURER GROUP (IN MILLION EURO)

Aerospace systems (MG 1)*	Engines (MG 2)*	Equipment (MG 3)*	Material technologies & components (MG 4)*	Total	Change
20,693 60%	5,348 15%	7,555 22%	1,069 3%	34,665	8%

### NUMBER OF EMPLOYEES WORKING IN THE GERMAN AEROSPACE INDUSTRY BY MANUFACTURER GROUP

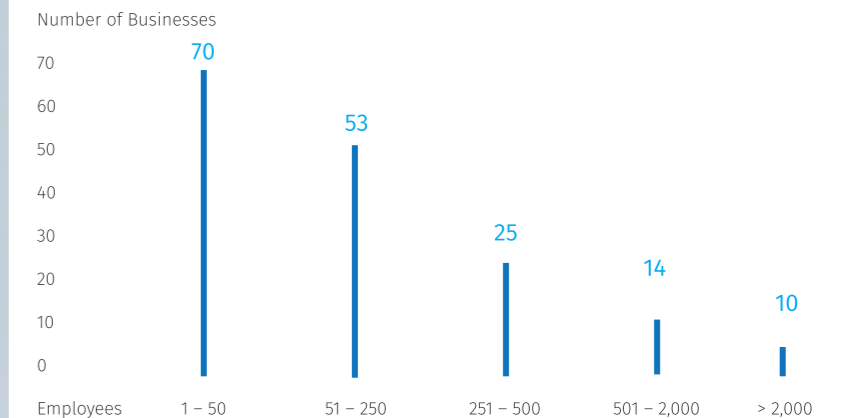
Aerospace systems (MG 1)*	Engines (MG 2)*	Equipment (MG 3)*	Material technologies & components (MG 4)*	Total	Change
54,663 51%	12,687 12%	35,548 33%	3,924 4%	106,822	1%

\*MG = Manufacturer Group

### SALES AND NUMBER OF EMPLOYEES BY SIZE OF BUSINESS

Number of Employees	Sales (million Euro)	Sales (% of total)	Employees (number)	Employees (% of total)
1- 50	685	2%	2,135	2%
51 - 250	2,056	6%	7,925	7%
251 - 500	2,742	8%	11,816	11%
501- 2,000	4,112	12%	15,826	15%
> 2,000	25,069	72%	69,120	65%
Total	34,664	100%	106,822	100%

### BDLI MEMBER ALLOCATION BY SIZE



\* incl. estimate for German aerospace businesses not organized in the BDLI; overall employment development: incl. agency work

\*\*In terms of sales of total industry