

German Aerospace Industry: Charged with Innovation



Mr. Volker Thum
Managing Director, BDLI

Germany, with its wide range of high-tech and innovative products, is an excellent strategic partner for businesses around the world – especially in the Aerospace Industry.

One out of every six new passenger aircraft produced globally is being delivered in Germany to airlines based in various countries. Moreover, every new aircraft built anywhere in the world contains German technology, which highlights the technological advances and therefore the success of the country's supplier industry. BDLI, the German Aerospace Industries Association, represents more than 230 companies and its members have around 20% share of the global value in the civil aviation industry.

Mr. Volker Thum, BDLI Managing Director, speaks to 'Aeromag' on the latest trends in Aerospace, cooperation with India, German participation in the forthcoming Dubai Air Show and other events as well as development of UAVs, among other topics related to the Industry

What would German companies be showcasing as their highlights at the Dubai Air Show to be held during November 2017 from among the broad spectrum of their products and solutions?

Germany is at the cutting edge of aerospace technology. One out of every six new passenger aircraft produced globally is being delivered in Germany to airlines from around the world. Moreover, every new aircraft built anywhere in the world contains German technology, which highlights the technological advances and therefore the success of our supplier industry. Similarly, our country is home to leading manufacturers in satellite technology, military aviation, engines and helicopters. In short, thanks to innovation, Germany is one of the leading aerospace nations in the world.

It might therefore not be a surprise that the strapline of the BDLI-initiated German Pavilion at stand 616 at the Dubai Air Show is 'Innovation made in Germany'. The exhibiting companies will showcase the innovative products and services that give Germany a competitive advantage. They represent a sector which serves as a technology-driver and pioneer for a lot of industries worldwide.

The cooperation between German aerospace and defence companies and the countries in the Middle East has been growing steadily. Could you share with us some details on the latest agreements signed?

The strong German presence at the Dubai Air Show demonstrates the strength and strategic objective of the German aerospace industry as regards the rapidly growing aerospace and defence market in the Middle East. Germany, with its wide range of high-tech and innovative products, is an excellent strategic partner for businesses in the Middle East and worldwide. Possibly the most important partnership is between Airbus and the region's airlines. For instance, the A380,



which is partly built in Germany, is the flagship of Emirates' fleet and other airlines.

Just a few weeks ago, Airbus entered a memorandum of understanding with Dubai Land Department to provide geospatial solutions, which will enhance the promotion of properties in the emirate. Under the terms of the agreement, the two will explore the development of a solution consisting of a high definition virtual 3D navigation experience and improve the property valuation model. The aviation company's geospatial solutions are used to develop 3D models of major cities with a high level of accuracy.

BDLI, the German Aerospace Industries Association, represents more than 230 companies, while SIATI (Society of Indian Aerospace Technologies and Industries) is the premier Aerospace Industries Association of India. Both associations have interacted, cooperated and entered into memorandums of understanding to have joint ventures aimed at co-production by European companies and Indian industries. With ties between India and Germany becoming stronger, what programmes are you planning to make the cooperation between the two associations grow further?

Germany is India's main trading partner in the EU, and economic relations between our two countries have intensified markedly in recent years. This is especially true of the aerospace industry. Our sector has a long-standing and successful partnership with India and recognised the great potential of the Indian aerospace sector very early on. The history between Indian and German aerospace and therefore between SIATI

and BDLI is long-standing and successful, reflecting the economic development of the two countries: In 2008, for instance, India was partner country at the International Aerospace Exhibition ILA in Berlin. At ILA 2012, just to name another example of fruitful cooperation, SIATI was part of the official airshow programme and organised a seminar on 'Indian Aerospace, Defence and Security', along with 'Aeromag' and the BDLI.

We would be delighted to welcome our sister organisation at ILA Berlin 2018, together with our partners from the Indian aerospace industry.

At the International Paris Air Show 2017, Germany was the third largest exhibiting nation after the host, France, and USA. In Paris, several BDLI members had their stands under the BDLI joint pavilion while many others had individual displays. Could you tell us about some of the important deals struck at the Air Show?

The BDLI members have around 20% share of the global value in the civil aviation industry and German technology is to be found on board of every aircraft built anywhere in the world. This way, all deals made during the Paris Air Show 2017 are also deals for German suppliers.

Providing strong evidence that the commercial aircraft market remains healthy, Airbus announced \$39.7 billion worth of new business during this year's Le Bourget. The company won commitments for a total of 326 aircraft, including firm orders for 144 aircraft worth \$18.5 billion and MoUs for 182 aircraft worth \$21.2 billion.

The space industry has experienced some important deals. Contracts were signed concerning various aspects of Ariane 5 and Ariane 6. Another important milestone was the contract for eight additional satellites to complete the Galileo constellation that will be signed

with OHB and ESA on behalf of the European Commission.

As co-organiser of ILA Berlin Air Show, BDLI provides members with a high-profile platform that displays the best in the industry. What theme would BDLI be highlighting at the forthcoming Berlin event?

ILA Berlin has become synonymous with Innovation and Leadership in Aerospace. In 2018, we will be taking again a close look at topics that are highly significant for the future of our truly global sector. We are lucky to have a closely-knit research network in Germany that spans companies, research institutes, universities and startups that work in all of these cutting-edge fields. These include sustainability, 3D printing, vertical take-off and landing, unmanned systems, which will be showcased at the UAV Base, the FutureLab, the ISC (International Supplier Center) and the Career Center.

ILA is a highly significant gathering for the industry, politicians and high-ranking military officers. We are inviting the aerospace industry of the Middle East to showcase its portfolio in Berlin in coming April. The Middle Eastern aerospace and defence market is one of the fastest growing in the world. It offers real business opportunities which we hope to develop with ever stronger ties between our industries.

The Government of India is promoting the 'Make in India' programme, which also involves inviting foreign companies to manufacture in India. How have aerospace industries in Germany, which are successful globally due to their innovations and creation of cutting-edge technologies, responded to the programme?

German aerospace companies support

Prime Minister Narendra Modi's 'Make in India' call and are ready to manufacture in India, for India and the world. This initiative opens up investment opportunities for German companies and help Indian industries become globally competitive. For instance, Airbus Defence and Space has submitted to produce the C 295 in India, along with Tata Advanced Materials. At the same time, Airbus works with over 45 Indian suppliers, both publicly and privately owned. In 2015, Airbus exceeded the \$500 million annual procurement mark from Indian suppliers. This facts show the very positive response from German companies to the 'Make in India' programme.

Airbus has around 70% share in the fleet of the airlines in India, which is witnessing a stupendous growth in the aviation sector. Could you tell us about the measures taken to continue this dominance in future?

First, India's economy must be integrated in the international value chain. In addition, our engagement in India must be strengthened. This applies to original equipment manufacturers like Airbus, as well as to suppliers and small and medium-sized companies. In order to reinforce the engagement in India and to contribute to more export successes in India, the German Federal Ministry for Economics and Energy promotes the market exploration within the framework

of a delegation trip to Bengaluru and Chennai, in October 2017. In the long-run, we can imagine new business models and cooperations along the supply chain and regarding the lifecycle of an aircraft.

German companies are very strong on R&D, making huge investments and coming up with innovative solutions and products benefiting the entire spectrum of industries. Some German firms have already engaged in tie-ups with Indian companies for R&D. Could you give us some details? What future prospects do you see for further advancements on this front?

Germany is one of the world's leading aerospace nations. Every year the nation's companies invest billions in new technologies and R&D; in 2016, the industry investment in R&D has amounted to EUR 4 billion. This number represents a share of 11% of total industry sales; we invest twice as much in the future as other industries. For instance, MTU enabled the resounding success of Airbus A320NEO within the framework of its significant technology partnership with Pratt & Whitey in order to accomplish the turbofan engine.

The investment in India are substantial as well; in 2016, German companies exported goods worth almost EUR 10 billion. Indeed, the ties between German and Indian companies are becoming

even stronger, particularly in engineering; suppliers of aircraft cabin equipment, engineering services providers and others have established tie-ups, which will be certainly developed further. For this purpose, the BDLI will participate in the market exploration in October 2017.

Coming back to Germany, tell us about areas the aerospace firms would be focusing on in future. Give us some details regarding the projects involving the development of UAVs too.

UAVs represent one of the biggest technological advances in aerospace and will shape how we think about air mobility in the future. This segment of the market is very dynamic and, in Germany, there is a thriving start-up scene with many creative ideas of how to bring technology and applications closer together. BDLI members are also looking to harness the full potential of unmanned systems, both for civilian and military purposes.

The industrial leadership becomes clear when looking at areas such as high-performance automatic flight control systems, advanced modular payload concepts and sense and avoid technologies. Other German innovations are adaptive structures, broadband data transmission systems and the overall desire to achieve a reduction in aviation's environmental footprint.

High Demand for Space at ILA Berlin 2018

ILA Berlin's new concept as a marketing platform for innovations and technical developments in the global aerospace market has led to high demand. As a result, the German Aerospace Industries Association (BDLI) and Messe Berlin GmbH have registered keen interest from the domestic and international aerospace industry. ILA Berlin stands for 'Innovation and Leadership in Aerospace'. To be held from April 25 to 29, 2018 at Berlin ExpoCenter Airport, the focus will be on the future at the exhibition, the

conference events and at the aircraft displays on the ground and in the air. Key display sections at ILA Berlin 2018 will include Aviation, Space, Defence & Security as well as Suppliers, featuring the International Suppliers Center (ISC). The 'Special Features' displays will include the ILA Future Lab, the UAV Base, the ILA HeliLounge and the ILA CareerCenter.

Sustainable aviation will be a major focus of the fair in 2018. German aerospace firms invest 11 % of total revenue in research and development (R&D) – a higher share by percentage

than any other sector. Some of the leading new developments in technology include:

Industry 4.0: Until now, developing energy efficient aircraft has been both extremely costly and time-consuming. Now, with Industry 4.0, the aviation industry aims to dramatically reduce production times and costs: Designs for future aircraft models can be developed virtually, thus allowing concepts to be optimized at an early stage in the process.

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