

Additive Manufacturing/CAD/CAM/CAE

Whether series production of aircraft components in 3D printing, 3D printing house construction in just three days, blood vessels via 3D printer or on-demand 3D printing of food: The reports about new fields of application and materials for 3D printing are not abating and show its enormous technological and economic potential. Additive manufacturing is an evolutionary process from which companies can no longer escape.

Germany - and in particular the cluster region of Hamburg - show the future opportunities of additive manufacturing in many areas. In 2018, the 3D printing network was founded in the Hamburg metropolitan region with the aim of becoming one of the world's leading locations in this field.

The AHK Baltic States offers you the opportunity to look at outstanding examples and technologies, meet experts and obtain first-hand information on the latest trends and opportunities. We visit:

- The leading research institute in the field of additive manufacturing with a focus on design, processes, manufacturing and digitization, the **Fraunhofer Institute for Additive Manufacturing Technologies**
- the largest European aircraft manufacturer and its production site for the A320 Family and the A380 - **Airbus S.A.S.**
- the engineering company **ConmatiX**, which has grown to become an integrated service provider in the field of additive manufacturing/CAD/CAM/CAE
- the **ZAL - Center for Applied Aviation Research** with its three so-called Centers of Competence (CoC), of which the CoC Aircraft Manufacturing & MRO (Maintenance, Repair, Overhaul) additive manufacturing is a part
- **Lehmann & Voss**, market leader for 3D printing materials for individualized mass production.

You will also meet **Ms. Anna Maria Heidenreich**, consultant of the Hamburg Chamber of Commerce and responsible for the **3D printing network Hamburg** and **Mr. Rudolf Neumüller**, also consultant at the Hamburg Chamber of Commerce and responsible for the **Hamburg 4.0 Competence Centre for SMEs**.

The journey offers an inspiring look at companies that open their doors especially for our group and whose experts are available to answer your questions. Join us on 23 and 24 May 2019 in the metropolis of the Hanseatic City of Hamburg, which offers unique opportunities to experience everything to do with additive manufacturing. Of course, we will also have the opportunity to experience the atmosphere of the Hanseatic City of Hamburg up close.

The programme at a glance:

- Exclusive visit to the **Fraunhofer Institute for Additive Manufacturing Technologies - IAPT**

The Fraunhofer IAPT is one of the leading institutions in the field of additive production with a research focus on design, process, factory and digitization. The focus is on the industrialization of additive technologies to enable completely new and resource-efficient products. Just last year, Bugatti presented a new brake caliper in cooperation with the IAPT: the world's largest 3D printing function component made of titanium. On site you will also have the opportunity to get to know various printing techniques in the fields of aerospace, automotive, polymers, medicine, machinery and tooling.

- Airbus S.A.S

Airbus is the largest European aircraft manufacturer and is recognized worldwide for its quality work and innovative spirit in the aerospace industry. Hamburg is home to numerous Airbus locations: from spare parts centers to development offices, production facilities and final assembly lines. A training centre is also located in Hamburg. Final assembly for the A318, A319 and A321 takes place on two production lines in Hamburg.

During our visit, you will have the opportunity to gain an insight into the production location of the A320 family and A380 aircraft.

Airbus is also intensively involved with the possibilities of 3D production of aircraft parts and was nominated for the German Future Prize for Technology and Innovation in 2015. Here, too, the different production processes of the various components will be explained and presented to you.

- Lehmann&Voss&Co

Lehmann & Voss Co KG is a chemical company that has been selling special chemical and mineral products to industrial customers for 125 years. Founded in 1984 as a trading company in Hamburg, it has developed into a powerful technical sales organisation with its own production facilities and long-standing contacts to mostly foreign suppliers. The company is the market leader for 3D printing materials for individualised mass production. In 2017, LUVOCOM 3F, materials for extrusion-based 3D printing processes such as FFF, was launched on the market.

- ZAL - Center for Applied Aviation Research GmbH

ZAL is the technological research and development network of the civil aviation industry in the Hamburg metropolitan region. It forms the interface between science, industry and the city of Hamburg with the aim of securing and continuously expanding the world's third largest civil aviation location in Hamburg. The focus of ZAL is on the integration and industrialization of aviation technologies. To this end, ZAL networks industry and science, establishes an application-oriented think tank culture and provides its partners with state-of-the-art infrastructures for research and development.

ZAL is divided into three so-called Centers of Competence (CoC), of which the CoC Aircraft Manufacturing & MRO (Maintenance, Repair, Overhaul) additive manufacturing is included. Here, **Airbus Operations GmbH, Lufthansa Technik AG** and the Free and Hanseatic City of Hamburg are the largest shareholders, researching and working together.

- ConmatiX Engineering Solutions GmbH

ConmatiX is an engineering company founded in 2000 that has grown to become an integrated service provider in the field of additive manufacturing/CAD/CAM/CAE. It offers integrated consulting and support for the digitalization of production processes, including CAD, CAM, CAE, and additive manufacturing. This includes consulting and training in the areas of installation and support of machines and technology, as well as adaptation of production processes, machine simulations, research and development and finally NX Open programming. These steps are illustrated on the two on-site printers. Official ConmatiX partners include MS, HP, and SIEMENS.

First, you will visit the plaza of Hamburg's new landmark, the Elbphilharmonie. From the 37m high platform you can take a look at the Norderelbe, but also at the city of Hamburg.

The eventful first day will end with a dinner followed by a night walk through Hamburg's UNESCO World Heritage Site, the unique Speicherstadt of Hamburg, the world's largest connected camp complex.

The participation fee for the two-day business trip, including hotel, meals and travel expenses, is 1,500 euros + VAT.

The price includes the following:

- Flights to Hamburg and transfer
- One night in a single room including breakfast
- All visits by companies and research institutions
- The trip with your own minibus
- Lunch, dinner in restaurant

- as well as the personal support on site by our project manager.

Language: English

Registration: until 22 April 2019

We look forward to your registration and participation in the business trip!