Mobile Engine Services

Keeping your engines flying

Bundling value-adding products, we keep our customers’ engines on wing as long as possible.

Corporate Sales

Connecting our customers

Lufthansa Technik’s three Vice Presidents Corporate Sales highlight the special strengths of the MRO provider.

Digital Fleet Solutions

From monitoring to management

Engine Health Management is a new app on the AVIATAR platform.

Customer portrait

A foothold in South Africa

Technical support for Comair is handled as a close partnership.
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Corporate Sales
• Interviews: 6
  Connecting our customers
• Gerald Steinhoff, Asia Pacific: 7
  “We live in the Asian market”
• Frank Berweger, Americas: 8
  “Customers are at the heart of what we do”
• Robert Gaag, EMEA: 10
  “Creating truly smarter maintenance”

Lufthansa Technik Group
• Lufthansa Technik Sofia: 11
  Ten years of keeping customers flying
• Lufthansa Technik Middle East: 17
  Growing for engine support and more

Engine Services
• Mobile Engine Services: 14
  Keeping your engines flying

Original Equipment Innovation
• »nice Touch« IFE and CMS: 18
  With the touch of a finger

Innovation and technology
• Lufthansa Technik Intercoat: 26
  Automated process enhances efficiency

Digital Fleet Solutions
• Engine Health Management: 20
  From monitoring to management

Customer portrait
• Support for Comair Limited: 22
  A foothold in South Africa
• Interview with Comair CEO Erik Venter: “A much more advanced approach to maintenance”

Categories
• News 3 – 5
• Personalities 13
• Events 27
• Products and services 28
• Contacts 30

A foothold in South Africa
Technical support for Comair Limited’s 737 fleet is handled as part of a close partnership.

With the touch of a finger
The »nice Touch« system for Bombardier Global 7500 jets sets new standards.

Keeping your engines flying
Mobile Engine Services is a new offer, keeping customers’ engines on wing as long as possible.

Connecting our customers
Lufthansa Technik’s three Vice Presidents Corporate Sales highlight the special strengths of the company.
A new hangar by 2020

Lufthansa Technik Philippines plans to open a new hangar, allowing for growth of both its base and line maintenance business.

Construction will begin in early 2019, and the start of operations is envisioned for early 2020. With the additional capacity, Lufthansa Technik Philippines will be able to better capture new business opportunities and have more flexibility when it comes to long-term perspectives.

The new hangar will allow for an expansion of line maintenance with an additional narrowbody bay, and for base maintenance to capture new Airbus A330 and Boeing 777 market opportunities. Once operational, the company is prepared to increase its yearly base maintenance capacity by around 290,000 manhours. The completion of the project will also enable Lufthansa Technik Philippines to better maintain its current A320 base maintenance requirements, to complement its existing A380 contracts and to sustain the growth of its modification business with an additional widebody bay. Today Lufthansa Technik Philippines maintains and overhulls not only the entire fleet of Philippine Airlines but commercial aircraft belonging to 30 other Asian and international airlines as well. Here the maintenance, repair and overhaul (MRO) company concentrates especially on the rapidly growing market of the A330/A340 aircraft family as well as for A380s. Lufthansa Technik Philippines has about 20 approvals from aviation authorities including the US Federal Aviation Administration (FAA), the European Aviation Safety Agency (EASA) and numerous other national civil aviation authorities.

Expanded cooperation with UTC Aerospace

PW1100G // UTC Aerospace Systems and Lufthansa Technik have signed a component service contract for the maintenance and support of accessories for the Pratt & Whitney PW1100G engine of the A320neo. Under this agreement, Lufthansa Technik will develop repair capabilities for certain UTC Aerospace Systems GTF engine accessories. UTC Aerospace Systems will provide GTF engine accessory parts and certain repair services to Lufthansa Technik. The cooperation will enable both companies to offer improved aftermarket services at reduced operating costs.

“We are very pleased to expand our relationship with Lufthansa Technik,” said Tim White, President, Electric, Environmental & Engine Systems, UTC Aerospace Systems.

“This is a great opportunity for two companies to leverage each other’s knowledge, expertise and technology and work together to develop improved solutions that enhance the overall customer experience.”

“We are excited to continue our relationship with UTC Aerospace Systems,” said Dr. Johannes Bussmann, CEO of Lufthansa Technik. “Our customers will benefit greatly as we combine Lufthansa Technik’s maintenance, repair and overhaul capabilities with the design knowledge of UTC Aerospace Systems.”
1,000 Rolls-Royce engines overhauled

N3 Engine Overhaul Services // A Rolls-Royce Trent 900 engine powering an Airbus A380 of Korean operator Asiana Airlines is the 1,000th aircraft engine that has undergone maintenance in the shops of N3 Engine Overhaul Services (N3) in Arnstadt, Germany. The joint venture of Lufthansa Technik and Rolls-Royce has been in operation for eleven years and currently employs over 700 people. “This is another significant milestone of our German-British success story,” says Nicole Fehr, Director and General Manager. “With this experience and over 40 international airline customers we are now an inherent and mature partner within the global Trent MRO network.” The capacity of the modern plant with its own test facility is between 150 to 200 engines per year. Besides the repair and overhaul experts for Trent 500, Trent 700, Trent 900 and most recently the XWB, N3 also continues to grow its engine component repair capabilities. //

Award for outstanding training quality

Lufthansa Technical Training // Lufthansa Technik has won an award from the business magazine Capital for outstanding training quality. The company received a perfect score of five stars, putting it among the finest training companies in Germany. Lufthansa Technik also won a leading place in the “dual-study training” category. This year, more than 700 companies took part in the study, which was sponsored by Capital, the “Ausbildung.de” talent platform and the employer branding agency TERRITORY EMBRACE. The goal is to identify success factors for training and dual-study training programs in Germany. Candidates were judged according to the following criteria: support for trainees, learning in the company, innovative teaching methods, company commitment and chances for success. “The award is more than just confirmation of our work. It also shows that Lufthansa Technik is an attractive training organization for ambitious young people,” says Kristin Bakonyi, Manager HR Marketing for Apprentices & Young Talent Programs at Lufthansa Technik in Hamburg. //

Digital Fleet Solutions // Wizz Air and Lufthansa Technik have signed a ten-year AVIATAR agreement to provide the airline with innovative digital fleet solutions. Key element in the partnership approach is to improve the efficiency of Wizz Air’s technical operations by using AVIATAR’s modular solutions in the areas of predictive and preventive maintenance and reliability management. Christian Ambiehl, Wizz Air’s Head of Maintenance, said: “We have selected AVIATAR after a detailed analysis of the offerings available. The open and modular architecture of AVIATAR together with the strategic decision of our long-term partner Lufthansa Technik to neutrally offer access even to its competitors, makes it a unique platform. Competition and access to new markets have been key to Wizz Air’s success in the past 14 years and our digital vision requires a neutral platform, which enables us to cooperate digitally with our MRO and technical operations partners within our growing route network.” AVIATAR allows operators and other participants in the MRO market to collaborate on an open and neutral platform. It is an OEM-spanning platform, independent of Lufthansa Technik or any MRO service contracts, serving as a central and connecting hub for digital products and services for the aviation industry. //

TCS® for Eastar Jet’s 737 MAX fleet

Total Component Support // Korean low-cost carrier Eastar Jet has contracted Lufthansa Technik to supply components for its new fleet of Boeing 737 MAX aircraft. With currently six aircraft on order, Eastar Jet has received its first two 737 MAX at the end of 2018, with the remaining four aircraft following in mid-2019. Similar to the support Lufthansa Technik provides for the airline’s Boeing 737NG fleet, the new Total Component Support (TCS®) agreement includes component maintenance as well as spare parts leasing through a component pool at Eastar Jet’s headquarters at Gimpo International Airport in Seoul. Likewise the airline will be granted access to the corresponding spare parts pools of Lufthansa Technik. “Lufthansa Technik has met our expectations concerning the support provided on the Boeing 737NG,” said Daniel Yim, General Manager of the purchasing team from Eastar Jet. “Therefore we are looking forward to the expanded component supply for our Boeing 737 MAX fleet aimed at achieving the same results.” //

Stay up to date!

Customer Newsletter // Lufthansa Technik’s online customer newsletter Connection Flash supplements our popular bi-monthly Lufthansa Technik Group Magazine Connection with first-hand news on innovative technologies and developments, new services and offers, and future events. //
**Reverser services for Asiana Airlines**

**Lufthansa Technik Shenzhen**

Asiana Airlines has signed a five-year agreement for the technical support of V2500 thrust reversers with Lufthansa Technik Shenzhen. Under the terms of the agreement, the Lufthansa Technik subsidiary will support Asiana Airlines in developing in-house capabilities for the V2500 thrust reverser and related components by providing technical training, tools and equipment as well as on-site support. The aim is to establish a flexible and mutually beneficial cooperation based on the respective expertise and needs of both companies and to deepen their relationships. With the quality standards and experience of Lufthansa Technik Shenzhen, Asiana Airlines will take a significant step towards building its own repair capabilities. “This joint approach allows us to build innovative repair services that cover more than the V2500 thrust reverser, with benefits such as increased aircraft availability and a close relationship with a world-class MRO service provider,” said an Asiana representative on behalf of Chang Young-Il, Executive Vice President Maintenance & Engineering at Asiana Airlines.

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**Engine wash for SIA Engineering Company**

Cyclean® // Lufthansa Technik has signed its first Cyclean® Engine Wash contract with SIA Engineering Company Limited (SIAEC), a cooperation set to last for five years. With this contract, SIAEC will now clean the engines of its major customers in the Singapore Airlines Group with Cyclean® Engine Wash at the Singapore-Changi Airport. Shortening conventional engine washing time by up to 80 percent, Cyclean® Engine Wash is performed as part of maintenance work, in transit between two flights or overnight. Foo Kean Shuh, Senior Vice President of Line Maintenance and Cabin Services of SIAEC, says: “Cyclean® Engine Wash from Lufthansa Technik is a product that has been proven to effectively and efficiently wash many types of engines, enabling SIAEC to create higher levels of productivity and operating efficiency. We are pleased to be able to offer this service to our airline customers, which will improve the performance of their engines.”

“We are delighted about the long-term partnership with SIAEC and look forward to further expanding our presence in Southeast Asia in the future,” says Gerald Steinhoff, Senior Vice President Corporate Sales Asia Pacific at Lufthansa Technik.

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**A321LR support for Arkia**

**Total Technical Support //** Arkia Israeli Airlines has signed a comprehensive technical services contract with Lufthansa Technik. Within the framework of a ten-year agreement, Lufthansa Technik will support the airline with Total Technical Support (TTS®) including Technical Operations Management (TOM) for Arkia’s three Airbus A321LR aircraft. The first aircraft delivered from the OEM to Arkia will be the first aircraft of the A321neo type to feature the long-range configuration. “Arkia has been modernizing its entire fleet, moving to a full jet fleet for its regional and international routes,” says Nir Dagan, President and CEO of Arkia. “We were looking for the best support for our new fleet and we are happy and proud to rely on Lufthansa Technik’s experience and expertise to support the new era of Arkia. I feel this combination of the latest aircraft models with the best support in the market are the basis for Arkia’s development.”

“This contract is a milestone for us, as it is our first major contract with Arkia. We are very much honored and proud that we were selected by Arkia to support the A321LR fleet with our TOM services,” says Georgios Ouzounidis, Senior Director Corporate Sales Europe at Lufthansa Technik.

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**New warehouse in Rome**

**Logistic services //** At the end of October, Lufthansa Technik Logistik Services opened a new warehouse at Rome’s Fiumicino International Airport for the Italian airline Alitalia. In collaboration with Lufthansa Technik Milan, which is acting as a local partner, the new warehouse offers space for around 800 components on an area of 350 square meters. The warehouse is operated by Lufthansa Technik Milan and a selected external service provider. Logistics processes and IT systems are provided by Lufthansa Technik Logistik Services. Eight employees are already on site and operate the warehouse around the clock, all year round.

Aside from daily warehousing, additional services will also be provided for Alitalia at the new warehouse location. One example is the retrieval of an item within just six minutes. Furthermore, transport to ten different transfer stations is guaranteed, including direct transport to the aircraft.

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**A321LR support for Arkia**

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**Engine wash for SIA Engineering Company**

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**Reverser services for Asiana Airlines**

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**New warehouse in Rome**

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**Logistic services //**
Connecting our customers

Better than any other MRO provider, Lufthansa Technik brings together airlines and fosters a manufacturer-independent discussion. Lufthansa Technik’s three Vice Presidents Corporate Sales highlight the special strengths of the company in each of their areas of responsibility.
How would you currently describe the most important features of the Asia Pacific market?
Gerald Steinhoff: At about seven percent, the growth rate of the MRO market in Asia is unbroken in outpacing other regions. The Chinese market is a major force in this trend with a rate of about ten percent, especially with China’s major airlines, which also have significant growth objectives for their fleets. Asia remains a dynamic market where new airlines are taking to the skies and new MROs are being set up – just look at the national programs at U-Tapao in Thailand and in Malaysia.

How is Lufthansa Technik positioned in terms of this steady market growth?
What has really paid off for our customers and for us is the development of strong local company structures that extend far beyond sales. We now have decision-makers on site as well as local managers for our product sales, bid management and even human resources. We live in the Asian market, feel right at home in the culture and have developed a strong understanding of it. We increasingly use local employees wherever we can. The influential and complex Chinese market, which is very meaningful to me personally, is a good example of how well we have developed and structured networks of partnerships – with airlines, manufacturers, and especially with COMAC and the CASC.

What value does this add to the business in the region?
We have become faster in our teamwork and in our internal collaboration, and we have made improvements in terms of transparency. Today we can also discuss solutions at an earlier stage and make faster decisions.

Which aircraft types have been particular success stories for Lufthansa Technik in Asia Pacific?
We are the market leader for the A350 in Asia. In particular I’d like to mention the 2018 component support contract for the fleet of A350s belonging to Air China, the first operator of this aircraft type in mainland China.
I’m also very pleased about the first comprehensive engine wash contract with SIA Engineering Company Limited. With this contract, SIAEC will now clean the engine types of its major customers under Singapore Airlines Group with our highly efficient Cyclean® Engine Wash at Singapore-Changi Airport.

**What role does digitalization play in Asia?**

One of the aspects of digitalization that airlines in my region are especially interested in is preventive maintenance; that is, knowing at an early stage which resources will be needed after a landing in order to exchange a certain component. On the other hand, airlines are also very interested in the optimal use of a component's service life on board the aircraft. The main objective is not to replace a part too early, but at the same time to prevent a failure during operations.

**What is the customer feedback for AVIATAR?**

AVIATAR is a great platform. It's simply unique. At MRO Asia-Pacific, our customers confirmed that we are ahead of the market and other providers with this product. Still, we have also noticed concerns about data ownership among our customers in the region. What convinces them is the argument that we want to have an independent platform and have no intention of taking data from them and then selling it back to them. We at Lufthansa Technik are the only ones who can guarantee this.

**What special function does Lufthansa Technik offer its customers?**

One special aspect of our role is that we are better able than any other provider to bring together airlines and foster a manufacturer-independent discussion. We hear this over and over again at such places as conferences and workshops like the A350 community, which met twice in Hong Kong. AVIATAR makes a positive contribution here, too. It provides a platform for exchanges. Real transparency is created by sharing solutions and information. That's our primary interest.

"Customers are at the heart of what we do"

Local capacity growth, digitalization and customer orientation are the most important issues right now for [Frank Berweger, Vice President Corporate Sales Americas](mailto:). He describes how Lufthansa Technik operates in the North and South American markets and how it is expanding its offer to airlines.

**What are the main features of the market in the Americas?**

Frank Berweger: When we talk about the markets in the Americas, we have to distinguish between north and south. North America is a very mature market that is currently making a gradual transition from old to new aircraft types. In South America, we see higher growth rates than in the north in spite of economic and political problems. Existing and new low-cost carriers are playing an ever more important role there. What both continents have in common is that their competitive situations are changing, particularly with regard to aircraft manufacturers: Boeing is more heavily represented in North America and Airbus in South America.

**How is Lufthansa Technik positioned to deal with these developments?**

We are well positioned in both regions and are growing much faster than the market, with an average growth rate of eleven percent annually. We are meeting the airlines' needs with our services, especially those for new aircraft types such as the A320neo, 737 MAX and 787. We signed several contracts here in 2018, including full technical support for WestJet's fleet of 787s, component supply for Air Canada's 737 MAX aircraft and component supply for the new A320neo fleet of Avianca Brazil as part of a larger agreement. We win over customers – and I don't mean just low-cost carriers – with our large service portfolio,
our single-source support packages and our attractive, market-driven products. We are getting very positive customer feedback, for instance for our Mobile Engine Services with our repair stations in Tulsa and Montreal (see page 14). We are also well represented in airframe maintenance. Lufthansa Technik Puerto Rico now has five overhaul lines running and is completely booked at the moment.

**How is Lufthansa Technik responding to the strong demand in the region?**

One of our major challenges right now is to continue expanding capacities in all areas in line with market growth and in response to our customers’ requirements. This also includes partnerships with engine and component manufacturers, so that we can offer our customers cost-efficient, innovative repairs for new technologies. We are already partnering with manufacturers such as Pratt & Whitney, GE, Parker and Honeywell. And we’re concluding new agreements – including the one last year with the FADEC Alliance for components used in LEAP engines. We intend to continue growing and plan, in particular, to offer more local capacities for airlines in the region – capacities for both technical services and customer service through local contacts.

**How can you reach customers in the Americas even better?**

Our motto is “customer centricity” – we put customers at the heart of what we do. This effort includes asking questions proactively, reacting quickly, communicating frequently and providing solutions rapidly. We already have a large number of local contact partners in the regions and will add more of them in the future. It is very important to have a local presence, speak the language and have a cultural sense of the market and mentality – particularly in the different countries of Latin America. With the help of our competitive cost structures and the innovative ideas that develop from Lufthansa Technik’s engineering know-how, we will continue to be there for our customers and provide them with attractive services.

**You need qualified employees in order to expand your capacities – how would you describe the job market in the aviation industry?**

Finding employees is an increasing challenge for both us and our customers. Using our global experience, we offer to master this challenge together with our customers before it becomes a major obstacle to their success. We have our own good answers. To be more attractive as an employer, we offer a training program that includes early practical experience based on European models. We took this approach when we expanded Lufthansa Technik Puerto Rico. We also work closely with local schools.

**What role does digitalization play for airlines in the Americas, and what has been the reaction to the digital MRO platform AVIATAR?**

Digitalization was one of our focal points in 2018, and that will be the case this year as well. In 2018, WestJet became the first North American airline customer of AVIATAR for their new, data-heavy 787s, and I am very confident that there will be more soon. Both North and South American airlines have a steadily growing interest in our digital MRO platform. Triggered by the vision of AVIATAR – launched at MRO Americas 2017 and technologically rooted in the open source communities of Silicon Valley – many airlines have now established digital and analytics teams. These could become perfect partners for co-creation or potential users of AVIATAR’s Software Development Kit.

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“Creating truly smarter maintenance”

Robert Gaag, Vice President Corporate Sales EMEA, explains Lufthansa Technik’s approach to the MRO market in Europe, the Middle East and Africa – an effort that focuses strongly on increasing the technical reliability of its customers’ fleets.

How would you describe the most important features of the EMEA region right now?

Robert Gaag: Within EMEA you have to differentiate. In Europe, we continue to see moderate growth of about four percent. The MRO market in the Middle East and Africa is growing faster than Europe, even though this growth started at a much lower level. In Europe, we are the “MRO Power House” with a large market share. We are also well positioned for the future in a variety of services for new aircraft types, such as the A320neo, 737 MAX and 787. In the Middle East and Africa, we are currently establishing our market position first, with selective activities in local shops, joint ventures or cooperation partners.

What opportunities does Lufthansa Technik have in the Middle East and Africa?

Our target here is to create activity clusters with partners in strong aviation growth centers. One good example of this is our commitment in South Africa with Comair (see page 22), which forms a type of nucleus to offer similar services to the nearby market. In terms of fleet size, I believe the Middle East is going through a consolidation phase at the moment. But the MRO market is still growing at above-average rates due to the aging of the fleet. With long-term contracts secured, we have for example significantly expanded the facilities and services of Lufthansa Technik Middle East in Dubai (see page 17).

How is Lufthansa Technik positioned in the region in terms of its core products, component and engine services?

We realize that we are reaching the capacity limit of our component workshops in Hamburg; we are looking for ways to expand capacities for high-technology component repairs. The focus is clearly on new fleets and new technologies. With the development of predictors and even prescriptors (i.e. prediction including maintenance actions) using the enormous amount of data generated on board each flight, AVIATAR will be a powerful differentiator of intelligent MRO services. As far as engine services go, we will be focusing first on improving the turnaround times and the on-time delivery of our shops. Last year was characterized by a noticeable bottleneck in the supply chain of parts manufacturers and by our entry into new engine types, like the PW1100 and LEAP. With the continuation of the global expansion of our Mobile Engine Services, we are truly helping our customers’ mobility over the long term (see page 14). When the first GEnx engine arrives in the shop in spring 2019, our XEOS joint venture in Poland will gradually go into operation.

What is the current situation in aircraft maintenance?

Our base maintenance network in Europe is pretty much complete; we run it at full capacity with the on-time delivery of our shops. Last year was characterized by a noticeable bottleneck in the supply chain of parts manufacturers and by our entry into new engine types, like the PW1100 and LEAP. With the continuation of the global expansion of our Mobile Engine Services, we are truly helping our customers’ mobility over the long term (see page 14). When the first GEnx engine arrives in the shop in spring 2019, our XEOS joint venture in Poland will gradually go into operation.

How does the AVIATAR digital platform benefit European airlines in particular?

The clear target is to improve our customers’ technical dispatch reliability: no disruptions, no surprises. European Flight Compensation Regulation 261/2004 is creating a tremendous cost pressure in the event of delays. A platform such as AVIATAR will be an extremely valuable tool in the future. It creates an integrated view of the customer fleet with the help of predictors, reliability management, health management, etc. maybe beyond just technical applications. Along these lines, we will be able to expand the paperless maintenance system that we already use for the Lufthansa fleet to other customers.

Where do you think the digitalization of technical operations will create added value in the long run?

I see two important areas in particular where AVIATAR will create good connections. First, it will help tech ops managers and troubleshooters improve transparency about the specific status of each aircraft in their fleets and to avoid disruptions in their operations. Second, with a connected digital platform like AVIATAR, the tech ops manager will be able to use his IT system to simply approve automatically generated maintenance actions, such as predicted component or premature oil changes. As a result, the manager will have a better grip on the technical dispatch reliability of his fleet. All in all, we are creating truly smarter maintenance. ☺️

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Ten years of keeping customers flying

Celebrating its tenth anniversary, Lufthansa Technik Sofia can look back at having rapidly developed into a major pillar of the Lufthansa Technik base maintenance network – and one of the biggest MRO facilities in Eastern Europe.

The first airplane rolled into the hangar of the then newly established Lufthansa Technik Sofia facility in October 2008. That date could not be more symbolic, because ten years later, the Bulgarian company once again opened a new hangar – this time the biggest clear span hangar on the Balkan Peninsula. About 900 aircraft overhauls, many service portfolio and facility expansions, a growing staff base and the take-over of more responsibilities within the base maintenance network lie between these two milestones. The new hangar with its three additional overhaul lines is a clear visual manifestation of the rapid development and success that Lufthansa Technik Sofia has achieved in just one decade.

From two to eight overhaul bays

Lufthansa Technik Sofia began operations modestly, with two base maintenance lines for Airbus A320 and Boeing 737 aircraft. In 2011, three additional base maintenance lines were added to the facilities. Since then, the company has also performed line
maintenance services for Airbus A320, Boeing 737 and Embraer 190 aircraft in Sofia and at newly established line maintenance stations at Varna and Burgas airports. Today, Lufthansa Technik Sofia offers its 60 customers a wide range of services: pre-flight, daily and weekly checks as well as A-, B-, C-, IL- and D-checks, complemented by additional services such as aircraft painting, special interior work and AOG support.

Eight narrowbody aircraft can be accommodated and worked on in parallel at the expanded facilities. Perfectly located to serve customers in Europe, the Middle East and North Africa, this MRO company represents an excellent basis for a highly-competitive price-performance ratio.

Central functions for the network

During its development, Lufthansa Technik Sofia also established a leading role within the Lufthansa Technik base maintenance network. These days, it hosts multiple central service departments to support the other facilities in Budapest, Malta, Shannon, Puerto Rico and the Philippines. These include planning and engineering, material management, information management and logistics for managing aircraft layovers around the world. At the same time, Sofia has become the location of choice for off-shore administrative services for the Lufthansa Technik Group. In an approach intended to innovate and to broaden the service portfolio in base maintenance even further, the overhaul division set up six project teams in Sofia which work together closely with central departments at the Group’s headquarters in Hamburg.

In this fast-paced progression, the tenth anniversary offered a welcome opportunity to pause for a moment and celebrate these successes with the motto “Ten years of keeping you flying”. The Lufthansa Technik Sofia site was transformed into a “little Munich”. In a traditional tent, with German bratwurst, beer and authentic Schuhplattler, a Bavarian dance, the employees and guests looked back on the past ten years and into a bustling future. The day after the anniversary celebrations, the company happily went back to work again and welcomed the first aircraft in the brand new west wing building. The expansion of the facility has led to an increase in the number of production lines, making it possible to accommodate eight aircraft in parallel. These are perfect conditions for the start into a high season with numerous projects for various customers that will keep the Bulgarian MRO company as busy as ever.

A good opportunity to celebrate with Bavarian traditions: In only ten years, Lufthansa Technik Sofia developed into a major pillar of the Lufthansa Technik overhaul network.

Facts & Figures

+ Founded in 2007
+ Joint venture of Lufthansa Technik and the Bulgarian Airways Group
+ 50,000 m² facility
+ Eight overhaul bays
+ More than 1,100 employees
+ Base and line maintenance services for Airbus A320 family, Boeing 737CL/NG and Embraer E190 (only line maintenance)
+ More than 60 airline customers
+ More than 900 aircraft overhauls in the last ten years

www.lufthansa-technik.com/lufthansa-technik-sofia

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Farewell to Dr. Thomas Stueger

At the end of 2018, Dr. Thomas Stueger, Chief Executive Technical Operations, Logistics & IT and a member of the Executive Board of Lufthansa Technik since November 2004, retired after 25 years with Lufthansa Technik.

On the occasion of his official farewell to retirement, Dr. Stueger expressed his gratitude for having been able to help develop Lufthansa Technik into a company that is undisputedly the world leader in its field. He wished the company to continue on its successful path with competence and self-confidence: “I wish Lufthansa Technik that it will continue to internationalize and still retains its genes of a small and medium-sized enterprise. Likewise, that it remains a company that not only promotes the talents and competencies of all its employees, but also challenges them, thus providing a platform for personal development as well. And of course I wish us all a successful future with our Lufthansa Technik.”

Asked about his ideas for the future, he said: “I am looking forward to being more in control of my own time again, but also to a change of context beyond the aviation industry and to one or two surprises. Where exactly this will lead me, I don’t want to commit myself to today. But it won’t be really quiet for sure.”

Dr. Thomas Stueger studied Industrial Engineering at the Technical University of Graz. Working as a research assistant at the university, he was awarded a doctorate in engineering in 1988. Dr. Stueger joined Lufthansa Technik in Hamburg in 1989 as a project manager in Materials Management. In 1991 he became head of the Systems project. In 1994 he was appointed Head of Information Systems. Between 1997 and 2000 Dr. Stueger headed up the Aircraft Component Services division. In February 2000 he was appointed Head of Aircraft Maintenance at Lufthansa Technik in Frankfurt and became a member of the Executive Board of Lufthansa Technik in 2004.

Bernhard Krueger-Sprengel has taken over the responsibility as head of Technical Fleet Management of Lufthansa German Airlines as of January 2019. Bernhard Krueger-Sprengel joined Lufthansa in 1990 as a project manager in Aircraft Maintenance in Frankfurt. After serving in numerous responsible management positions – among others he was responsible for the technical operation of Boeing 747 and the Airbus A330 fleet – he became President and CEO of Lufthansa Technik Philippines in 2007. In autumn 2012 he took over responsibility as Senior Vice President for Engine Services at Lufthansa Technik from Dr. Johannes Bussmann, a position he filled until his latest promotion. A successor to Bernhard Krueger-Sprengel in this latest function had not been appointed by the editorial deadline of this issue of Connection.

Harald Gloy, formerly Vice President Component Services of Lufthansa Technik, was appointed to the Executive Board of Lufthansa Cargo with responsibility for Operations. The 46-year-old industrial engineer thereby succeeds Soeren Stark, who has led Operations since April 2016 and has joined the Executive Board of Lufthansa Technik on 1 January 2019 with responsibility for the areas Fleet Services, Base Maintenance, Components, Logistics, IT and Quality Management. Harald Gloy graduated as an engineer having studied Industrial Engineering at the TU Berlin and Arizona State University. After some early roles with Lufthansa Technik Logistik, he began his career with Lufthansa Technik in Business Development in 2003 and headed up the Aircraft Overhaul and Modification unit in Hamburg from 2006 onwards. Following various management roles in Component Maintenance Services and Engine Services, he has led the Component Services division at Lufthansa Technik since 2014.

Julia Brix has joined the Hamburg sales team of Lufthansa Technik as Corporate Key Account Manager. With a bachelor’s degree in Business Administration she joined Lufthansa Technik in 2012 and gained business experience in various finance and controlling positions throughout the company in Hamburg and the United States. For the last three and a half years Julia Brix was heading the Business Development and Process Management team of Mobile Engine Services, developing a new network of production facilities around the globe tailored to customer needs.

Colleen Wilson has joined the Lufthansa Technik sales team as Director Corporate Sales for North America. She has a bachelor’s degree in psychology from the University of South Florida and will graduate with an Executive MBA from the University of Florida in April 2019. Colleen Wilson has over six years of sales and purchasing experience in the aviation industry. For the past two years she has been a Surplus Trading Manager for Lufthansa Technik Component Services in Miami Lakes, specializing in procurement and acquisitions of component material. Prior to that she worked with an aircraft surplus provider, managing acquisitions and surplus fulfillment contracts for customers Lufthansa Technik, MTU Maintenance Canada and American Airlines.
The idea behind the product Mobile Engine Services is straightforward: Classic overhaul events are avoided or postponed through the use of surgical repair solutions with minimum workscope that can be carried out directly at the customer’s location or in a regional repair station. Compared with a regular shop visit, this approach reduces costs by limiting the scope of repairs, and generates other savings as a result of a significantly shorter turnaround time and decreased transportation costs. To keep aircraft flying and enhance engine performance, Mobile Engine Services integrates three of Lufthansa Technik’s unique, value-adding services under one roof: Repair stations provide surgical repair solutions without costly overhauls in a major engine shop. The Airline Support Team (AST® Engines) offers quick on-wing or on-site solutions. Finally, Cyclean® Engine Wash enables engine washing to be performed in just one hour.

Keeping your engines flying

Bundling a triad of value-adding products, Mobile Engine Services is an offer from Lufthansa Technik with a single goal in mind: to keep customers mobile, that is, to keep their engines on wing as long as possible by avoiding or postponing regular shop visits.

Your regional workshops

The Lufthansa Technik Group currently has four repair stations around the world. In addition to Frankfurt, they are located in Tulsa at BizJet, in Montreal and at Lufthansa
Engine Services

Technik Shenzhen. Under a planned expansion, more repair stations will be added to the network in the near future. At the same time, the Cyclean® network, which consists of more than 20 engine wash service stations on four continents, ideally complements repair services. After being washed, engines demonstrate clear and measurable improvements in terms of fuel consumption and EGT margin.

Tulsa is currently going through a dynamic expansion phase. Last year alone, its workforce was expanded by 50 percent to 165 employees. A remodeled hangar will go into operation in 2019, and the company’s capacity for work on V2500 engines will be expanded from four lines to six.

Along with its capacity expansion, Tulsa will see the introduction of a new engine type. The addition of the CFM56 series is in preparation and is scheduled to be completed toward the middle of the year. First in the series will be the CFM56-5B, initially with three lines.

All these measures will effectively expand the Tulsa facility’s capacity by 125 percent. To make the most of it, more than 100 engine mechanics will be hired to work exclusively at the Tulsa repair station and for AST® events. To ensure that they are properly trained, Lufthansa Technik, the City of Tulsa and the State of Oklahoma have created a training program that is similar to the German training concept. Participants will earn their licenses as airframe and powerplant mechanics (A&P) in a combination of theoretical instruction and practical training at operations such as BizJet. The first graduates of this program have already been integrated into the company, and naturally serve as a key pillar in the company’s growth program.

The scope of a repair station event is flexible and based on the customer’s requirements, but the goal is always the same: to fix the technical defect in an engine on time. The turnaround time can extend to 30 days when, for instance, a high-pressure compressor module swap is scheduled. Yet in Tulsa, extensive tasks such as these can be handled without any problems. The test cell available there also offers one key benefit: Many customers in North America want a test run even after small events so that they can be absolutely sure about the quality of the installed engine. Of course, a repaired engine can be delivered without a test as well. Currently the Tulsa test stand is being upgraded for CFM56-5B engine types. In 2019, the repair station in Montreal, which specializes in CFM56 engines, will also be developed further and move into facilities with increased capacity.

The engine rescue brigade

Lufthansa Technik wants the Airline Support Team service that is part of Mobile Engine Services to earn the same excellent reputation in the Americas that these mobile repair experts have enjoyed elsewhere for years. In the United States, mobile technician teams for on-wing or on-site repairs are not yet very familiar, but Lufthansa Technik is already capable of sending a team of mechanics from Tulsa to the customer’s aircraft within 24 hours. AST® offers
innovative services ranging from troubleshooting to scheduled maintenance and from inspection to quick module changes. Conveniently, the expert teams bring all the required material, equipment and tools with them.

The Lufthansa Technik developed engine wash system Cyclean®, which is available as a leased or service product, is becoming an increasingly important element of Mobile Engine Services. In North America the world’s most advanced engine washing system is available as a service at seven locations: Atlanta, Los Angeles, Ontario, San Francisco, Las Vegas and Montreal – Orlando became the seventh site in December 2018. The systems are extremely mobile, a feature that enables the equipment from Atlanta to be used, for instance, in Florida. The biggest operational strength of Cyclean® is that a test run after the washing process is only rarely required. This results in substantial savings of time and money and enables engine washing during a normal turnaround directly at the gate. Cyclean® has proven itself and become an instrument that is used routinely to improve engine performance. It can also be used for all new engine types, including the LEAP and GTF (PW1100 and PW1500), for which engine washing has already been successfully performed. The results have shown that the new engines respond particularly well to the process. In addition to the reduced fuel flow, EGT margin improvements of up to 18 degrees – and even up to 23 degrees for LEAP and GTF engines – were achieved. The continuously growing Cyclean® network is aiming to expand in 2019: Three new locations are scheduled to be built on the East Coast of the Americas.

**Local power worldwide**

Mobile Engine Services offered by Lufthansa Technik around the world form a high-quality product triad that serves as a guarantee of maximum performance for the new generation of engines. Drawing on its decades of airline experience, Lufthansa Technik has developed a service spectrum that can help technical engine problems in the shortest amount of time and with maximum efficiency. The regular use of the Cyclean® engine wash system by itself is an effective way to ensure efficiency and long service life. With this portfolio, Mobile Engine Services provides assistance that is perfectly designed to meet customers’ needs, not just in the Americas, but around the world.

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Performing an engine repair on wing: The Airline Support Team (AST®) services of Lufthansa Technik have gained an undisputed reputation for speed and quality of work.
Lufthansa Technik Middle East has significantly expanded its facilities and services. The hangar and workshop space at the main facility in the Aviation District at Dubai South was doubled from 2,500 to 5,000 square meters – only one year after the opening of the location. “It was quite a challenging project,” says Ziad Al Hazmi, CEO of Lufthansa Technik Middle East. “In only three months, we expanded the facility and got it operational. We got a lot of support from the Lufthansa Technik network and also from different government agencies and authorities.”

Service portfolio expanded

With a passed B-rating audit of the German Federal Aviation Office (LBA), Lufthansa Technik Middle East expanded its portfolio. Lufthansa Technik Middle East can now perform Quick Engine Changes (QEC) on the very large power plants. The service also includes the preparation of the necessary documentation for authorities and further processing, as well as logistics and administrative support along the supply chain.

Certain engine components are directly checked for possible damage in the workshops in Dubai. To offer these new services, the company doubled its work space and installed the appropriate infrastructure, such as cranes. About 20 new engine mechanics were hired and trained.

At the same time, Lufthansa Technik Middle East also increased its capabilities for Airframe Related Components (ARC*) and is investing in 787 composite repair capability, such as the inlet cowls. The facility has also invested into local nacelle and radome spares for 787, 777 and A320 aircraft. Additional local mobile teams can now perform on-wing work for certain repairs on customer sites within the region, significantly reducing costs and turnaround times. In cooperation with DC Aviation, the company also performed a couple of A-checks for customers in Dubai.

Besides its recently expanded facility at Dubai South, Lufthansa Technik Middle East also operates a warehouse at Dubai airport, where more and more parts are stored for local spares support. The company also offers AOG support, landing gear services, engine wash services and a local material support desk. Further evaluation of additional capabilities for the region is ongoing – depending on customer requirements.

Growing for engine support and more

The aviation market in the Gulf region is steadily expanding – and so is Lufthansa Technik Middle East in Dubai. To meet growing customer demands, the company has doubled its facilities and added new services to its portfolio.

Please note: This article has been slightly modified compared to the print version.
With the touch of a finger

In close cooperation with Bombardier, Lufthansa Technik has developed the »nice Touch« in-flight entertainment and cabin management system for its new premier business jet Global 7500 – a truly unique system in terms of design and usability.

If passengers of a Global 7500 want to change the volume of the music or the temperature or the lighting in the cabin, all they have to do is move a finger – and gently stroke it over the touch dial hidden in the side ledge. This then discreetly raises from the fairing and provides instant control of all entertainment and cabin settings.

A unique system for a premier aircraft

“It was important for Bombardier to make the control visible when you need it and hide it away when you don’t – this way, it perfectly fits into the clean design environment of its Global 7500 aircraft,” explained Dave Crossett, Director Channel Development and Product Placement Original Equipment Innovation at Lufthansa Technik. The touch dial is certainly the most striking element of »nice Touch«, but only forms a small part of the latest version of the well-established IFE and cabin management system of Lufthansa Technik. “I can imagine no system that is more unique and has posed us more challenges during development than »nice Touch«,” Dave Crossett stated.

The new Global 7500 is Bombardier’s largest business aircraft. For its new long-range flagship, the aircraft manufacturer wanted a special and user-friendly cabin management system which allows the passenger to intuitively control all IFE and cabin settings. “The Global 7500 jet’s »nice Touch« cabin management system sets a new standard in the industry by further elevating the cabin experience,” said Brad Nolen, Vice President Marketing and Product Strategy at Bombardier Business Aircraft. The system brings cabin connectivity to the next level with two new layers of interaction, creating a multifaceted solution that combines physical and digital interfaces.

The touch dial is one of these interfaces, featuring business aviation’s first application of an OLED (organic light emitting diode) display. »nice Touch« also introduces suite controllers throughout the aircraft’s full-sized living spaces, another first in the industry. These bulkhead-mounted interfaces allow for intuitive and home-like control of the cabin environment. The touch dial and suite controllers are complemented by the »nice Touch« application for iOS and Android devices, providing easy access to all media.

Home-like control of all cabin settings

A curated selection of pre-set lighting schemes offers limitless custom color combinations for the perfect light ambience. The »nice Touch« system delivers available 4K ultra-high definition content on 40-inch monitors at unprecedented speeds. It also stands out with an exceptional audio system. The speakers and sound bars were specifically designed for this aircraft to enable the perfect surround sound. Combined with Ka-band satellite communications, the fastest Internet connectivity for aircraft worldwide, the »nice Touch« system allows passengers to effortlessly surf, stream and watch the content they want as if they were at home.

“With a 10-gigabyte fiber-optic architecture and dual wireless access points for redundancy, the »nice Touch« system provides a reliable way to control all cabin functions so that passengers can easily transition between productivity and relaxation,” said Andrew Muirhead, Vice President Original Equipment Innovation at Lufthansa Technik. “We are a long-term partner of Bombardier, and we are thrilled to bring our knowledge and expertise in building innovative CMS and IFE systems to the highly anticipated Global 7500 aircraft.” And Brad Nolen adds: “Bombardier is renowned for its impeccable design and leading-edge technology – and the »nice Touch« CMS perfectly combines those two elements to bring ultimate comfort and effortless control to the customer’s fingertips.”

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In close cooperation with Bombardier, Lufthansa Technik has developed the »nice Touch« in-flight entertainment and cabin management system for its new premier business jet Global 7500 – a truly unique system in terms of design and usability.
The »nice Touch« IFE and cabin management system offers passengers of the Bombardier Global 7500 jet an intuitive control of the cabin environment.

The Global 7500 jet’s »nice Touch« cabin management system sets a new standard in the industry by further elevating the cabin experience.

Brad Nolen
Lufthansa Technik has launched **Engine Health Management** as an enhanced service and as a new app on the AVIATAR platform. It offers airlines an especially efficient and useful tool to monitor and manage the status of their engine fleets. Intelligent fleet management with this app ensures that material expenditures, costs, and performance are kept in an optimum ratio.

**Engine Health Management** is an essential element of any state-of-the-art fleet management. A top-performing fleet management system that is sustainably efficient for an operator requires automatable maintenance planning for all of the fleet’s engines. It must have an expandable planning capability that takes into account all effective influences and is able to update maintenance planning based on the current status of each engine. It is the job of Engine Health Management to provide information about the status of each engine. Beyond that, Engine Health Management is expected to alert the operator to any unexpected or unusual engine condition so that necessary troubleshooting can be performed before major engine failures and subsequent disruptions of fleet operation can occur. This functionality is offered by Lufthansa Technik through its Engine Health Management service, featuring the support of experienced analysts who review alerts and issue maintenance recommendations when required.

Drawing on a model based on the actual physics of the engine – a “digital twin” – Lufthansa Technik has developed its own diagnostic tool to manage the performance of engines as part of its Engine Health Management service. The relevant data for each engine is consolidated in the dedicated Engine Health Management app accessible through the digital platform AVIATAR, providing the best basis for decision-making.

**A digital engine twin**

The Engine Health Management app allows users to detect even the tiniest technical issues before they lead to major operational failures. It reduces engine maintenance costs by alerting operators to minor problems before they cause costly disruptions. Operators using the service benefit from Lufthansa Technik’s highly competent engine analysts without the burden of their own in-house personnel management. The app gives operators access to their fleet data, providing a single tool for different engine types and helping airlines to maintain and regain their independence from the manufacturers. At the same time, the Engine Health Management service addresses customer needs as directly as possible to maximize contractual cost-effectiveness.
The Engine Health Management app is now also part of AVIATAR, the open and neutral aviation platform for international cooperation developed by Lufthansa Technik. AVIATAR ensures that airlines, component manufacturers, other MRO providers and leasing companies are in control over their data and can use common interfaces based on a “digital twin” despite competition.

AVIATAR’s cloud-based infrastructure ensures the highest level of data security in accordance with European data protection requirements for customers’ and partners’ data. A Software Development Kit (SDK) is available to all airlines and potential partners to enable them to develop their own applications.

How Engine Health Management works

All engines of a fleet are continuously monitored by customizable alert rules that trigger as soon as a problem occurs. Experienced analysts review every alert, diagnose the problems and provide specific troubleshooting and maintenance recommendations to the customer. The app provides airlines with direct and customized access to their fleet data, including analysis results such as module efficiency factors – independently and without being limited by manufacturers or engine types. This way, the optimization of the efficiency of entire engine fleets is possible virtually at the push of a button.

The benefits

+ Flexible and up-to-date customer access to engine fleet data
+ High-quality engine health management service provided by Lufthansa Technik experts – including alerts, maintenance recommendations and monthly reports
+ One tool for different engine types – independent of manufacturers
+ Alert rules and limits can be adapted to customer-specific boundary conditions
+ Processes available information such as engine control unit status bits and various gas path measurements
+ Accounts for the health management requirements of future engine types

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Comprehensive technical services, integrated fleet management and the establishment of local maintenance stations: Technical support for the South African carrier **Comair Limited’s 737 fleet** will now be handled by Lufthansa Technik as part of a close partnership.

Preparations are in full swing. In early 2019, Comair Limited will add the first two Boeing 737 MAX aircraft to its fleet – and Lufthansa Technik will provide technical support. At the heart of Lufthansa Technik’s recently signed, wide-ranging agreement with South Africa’s largest private airline is integrated fleet management – known as Technical Operations Management, or TOM – and maintenance services, for which a dedicated line maintenance unit will be set up in South Africa: Lufthansa Technik Maintenance International will establish a permanent presence with various line stations and up to 150 local employees. What is more, by the end of 2020 Lufthansa Technik will provide technical support services for the entire Comair fleet, which will then consist of at least 25 Boeing 737NG and 737 MAX aircraft.

The agreement with Comair also governs extensive engineering services, the provision of consumables and expendables, and an integrated component supply as part of a Total Component Support (TCS*).

“This is the first time we’ve won a contract of this magnitude in this region,” says Robert Gaag, Vice President Corporate Sales EMEA of Lufthansa Technik. “And it’s a welcome opportunity for us to establish an even stronger presence in southern Africa.” Lufthansa Technik has become a member of the Airlines Association of Southern Africa, for example (see page 25), and endeavors to cater to
additional regional airlines at the new line maintenance stations it is establishing. In Johannesburg and Cape Town, establishment of the first two line maintenance stations is progressing smoothly. “We have a lot of experience setting up maintenance stations in different regions of the world, but South Africa is something special for us,” says Ulrich Hollerbach, CEO of Lufthansa Technik Maintenance International.

“It’s a much bigger project than most, since we have to construct the entire organization literally from the ground. Moreover, it is our clear aim to build up local personnel, who wants to join us in this effort and brings the required qualification and motivation on board.”
How would you describe the operations of Comair?

Erik Venter: We are operating flights in South Africa and into the surrounding countries of the Southern African region with 26 aircraft – all of the Boeing 737 type. We have been steadily upgrading our fleet into more modern aircraft over the last six years. The next step in our modernization process is that we are adding the 737 MAX-8 aircraft to our fleet; as the first customer in Africa who placed an order for this aircraft type. This background, among other things, led to the deal with Lufthansa Technik. There was also no other provider in South Africa that offered services for 737 MAX aircraft before.

Why did you choose Lufthansa Technik as your maintenance partner?

We went out with a call for tenders and got a very quick response from Lufthansa Technik with a comprehensive offering how they could support Comair. In addition, we have worked with Lufthansa Technik before, particularly on engine overhauls, and had a very good experience with the quality of work they provide. Lufthansa Technik also has a good reputation globally and a broad global spread of maintenance bases. This gives us confidence that setting up a new maintenance base isn’t such a new thing for them as they have done it many times before around the world. These aspects in particular led us to go ahead with Lufthansa Technik as our maintenance partner.

What other reasons did you have to outsource the maintenance of the Comair fleet to a company overseas?

The other big driver for the partnership with Lufthansa Technik is that the maintenance methodology in South Africa is currently still rather old. The maintenance organizations typically determine when the operator can use the aircraft for commercial purposes. They tell the operator when they will do the maintenance, and the operator has to accommodate it – that of course does not benefit the airlines optimally.

Lufthansa Technik has a much more advanced approach to maintenance. The way they package the maintenance tasks actually means that the airlines can use the aircraft for commercial purposes for much longer periods of time and the maintenance is arranged around it. This is a completely different approach and the way many other countries in the world are already working. With bringing Lufthansa Technik into South Africa, we are taking a big step forward. I’m sure this way of working will soon spread to other airlines in South Africa and become a standard practice.

How will the set-up of the maintenance stations and the service start proceed?

Our first focus is on Johannesburg, where the first station is established. The second focus is on Cape Town and Durban – with the movement of our fleet, we will also set up bases there. Then we will see what the requirements for the smaller stations are to expand the maintenance organization further.

What do you expect from Lufthansa Technik in the fulfillment of the agreement?

The project is really running well. We already completed the manpower planning and the certification for the MAX in South Africa and have the facilities, warehouses and storages provided. The benefits we will see are more efficient maintenance processes with less time our aircraft spend on the ground. We are expecting much better IT and surrounding technologies, which will result in better maintenance, components and logistical planning. Ultimately, the biggest property for an airline is to have its aircraft off the ground as much as possible – and I think we will benefit significantly from that. And we will also have many opportunities to integrate all the other services Lufthansa Technik offers worldwide as we go forward.
With Comair’s support Lufthansa Technik started out by arranging the hangars and offices as well as creating space on the apron. The company then held recruiting events to find suitable employees. “We’ve been working with local employees from day one, and have just a few people from outside the country,” explains Christian Haas, Technical Operations Manager for Comair. “There are a lot of well-trained people in South Africa.” The company hired 20 mechanics, avionics technicians and managers in December 2018 – with more to follow in January 2019.

Close partnership

The team is already in the process of equipping the facility with tools, equipment and vehicles. In addition, the material planners will ensure a reliable supply of components, consumables and expendables. The airports must also issue licenses for vehicles and employees, who can then begin working. Finally and prior to the beginning of operation, the approval of the new maintenance facilities by the South African Civil Aviation Authority (SACAA) shall be granted – just in time for Comair to take delivery of its first Boeing 737 MAX, at the beginning of 2019.

Ulrich Hollerbach feels confident: “We can offer Comair optimal support for its flight operations. After all, the agreement grants us important leeway to optimize aircraft availability by leveraging fleet management and other services.” Erik Venter, Chief Executive Officer of Comair, is also very happy with the partnership: “The benefits we will see are more efficient maintenance processes and our aircraft spending less time on the ground.” (read the full interview on page 24).

Plan for the future in the region

The company’s partnership with Comair is a big step for Andreas Liagos, the responsible key account manager for Comair at Lufthansa Technik: “This allows us to further expand our footprint in the region. We’re the first foreign MRO provider establishing line maintenance operations in South Africa, and our new stations can also easily be reached by other airlines based in South Africa and nearby countries.” Lufthansa Technik’s broad spectrum of maintenance services for Boeing, Airbus, Bombardier and Embraer aircraft types partnered with the local expertise will contribute to a more competitive and reliable aircraft operation in this region of the world.”

Closer ties to the region

At the 48th AASA General Assembly, which took place in October 2018 in Livingstone, Zambia, Lufthansa Technik was officially admitted to the non-profit organization.

As an associated member of the Airlines Association of Southern Africa (AASA), Lufthansa Technik can now benefit from the yearly assemblies with representatives of airlines, the aviation industry as well as from politics. Andreas Liagos, key account manager for Comair, who attended the meeting on behalf of Lufthansa Technik, said: “It is a unique opportunity to meet and liaise with all key players of the aviation industry in Southern Africa and moreover to keep track of the needs and developments of the aviation community in this region,” Robert Gaag, Vice President Corporate Sales EMEA of Lufthansa Technik, added: “Lufthansa Technik’s strong presence in South Africa and our aim to better understand the operational needs of the local markets led us to the decision to become an associate member of AASA. With such a membership we anticipate to further strengthen our connection to the Southern African aviation industry and underline our commitment in the region.”
Automated process enhances efficiency

Lufthansa Technik Intercoat has made a revolutionary advancement concerning its epoxy coating process. Considered impossible in the past, engineers managed to develop and implement an automatic application process. This allows to reduce process time and enhances the quality of the repair.

The dedicated coating process for worn and corroded components offered by Lufthansa Technik Intercoat is based on specially formulated epoxy resins. The repair process involves the coating of damaged parts and subsequent machining to specification. This proven process enables the repair and refurbishment of components that would have had to be scrapped in the past. The material that makes this possible is called Interfill®. Specially developed and tested for airworthiness, it gives aircraft components a new life cycle while also improving their operational characteristics.

Up to now, the Interfill® coating was applied manually in several layers with a thickness ranging from 0.05 to 0.5 millimeters. Now Lufthansa Technik Intercoat has accomplished something that was considered impossible for a long time: Engineers and technicians managed to automate a significant part of the coating process. To this end, the component to be repaired is fastened to a rotating fixture. A robot arm applies Interfill® to the component surface through a fine nozzle while the component rotates around its own axis. A special applicator ensures that the ideal amount of resin is applied. To create a perfectly uniform layer the Interfill® material is applied in overlapping layers.

The new application system was developed in-house at Lufthansa Technik Intercoat and built by an external service provider. Michael Ohl, Production Manager at Lufthansa Technik Intercoat, highlights the ensuing advantages: “For one, the system works very precisely. The improved application method also prevents air pockets from forming within the surface. This allows the system to provide consistent, high-quality results while saving a considerable amount of time. We were able to reduce the time required to coat the component and cure the material to one third of the normal processing time.”

Consistent high-quality results

Thanks to the partly automated process, components can be coated in a single working step. A special applicator ensures that the Interfill® material is applied with an even layer thickness. The improved application method prevents air pockets from forming within the surface, which reduces the amount of corrective work that used to
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Aero-Engines Americas
Aero-Engines Americas combines informative, technical presentations and interactive panel discussions focusing on the hottest topics facing the aero-engine industry today and shaping its future.

10 – 12 February 2019 | Dubai
MRO Middle East
MRO Middle East is the region’s leading conference and trade show for commercial aircraft maintenance. Along with the chance to meet and expand business, new trends, technological developments and new products will be featured.

27 – 28 February 2019 | Kigali
Aviation Africa
Featuring over 100 global aviation companies, Aviation Africa is a major trade event for the aerospace and defense industries. Speakers will include air chiefs, leaders from African airlines, civil aviation authorities, business aviation and support industries.

5 – 6 March 2019 | Moscow
MRO Russia & CIS
The most influential event of its kind in Russia, the MRO Russia & CIS brings companies, service providers and suppliers in the industry together in one place.

18 – 20 March 2019 | Johannesburg
MRO Africa
The 28th MRO Africa will once again provide a unique platform for the key players in maintenance, repair and overhaul of commercial aircraft in this rapidly transforming region.

be necessary at times. The innovative system provides consistent, high-quality results and saves a considerable amount of time.

The system, which has been running since September 2018, is currently able to process components of up to 0.5 x 0.5 x 0.5 meters in size and 25 kilograms in weight. Larger and heavier components are still coated manually. Comprehensive tests have resulted in the definition of six components that can be handled by the system. At present, for example, it is being used to coat landing gear bushings.

On the basis of the experience gained, Lufthansa Technik Intercoat is already planning its next step. Andreas Sauer, Managing Director at Lufthansa Technik Intercoat, outlines the future: "As a next step, we are planning a robot system for 2020. Once that system is operational, it will also be possible to coat components with more complex, non-rotation-symmetric coating areas, for example pumps."

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Technician Stefan Rasmussen is preparing to start a coating process.
World of services

Total Support Services
Total Support Services customers enjoy cost-efficient and reliable flight operations and can focus on their core business at the same time.
- Total Operational Support (TOS®)
- Total Technical Support (TTS®)
- Total Base Maintenance Support (TBS®)
- Total Material Operations (TMO®)
- Total Component Support (TCS®)
- Total Engine Support (TES®)
- Total Landing Gear Support (TLS®)
- Aircraft Leasing & Trading Support (ALTS®)

Single Services
Single Services, letter checks, engine overhauls and repairs of single components form a unique range of products and services.
- Aircraft Services
- Component Services
- Engine Services
- Landing Gear Services
- VIP & Special Mission Aircraft Services

Special Services
Lufthansa Technik offers products reaching beyond standard manual MRO services.
- Composite Repairs (ARC®)
- Engine Parts & Accessories Repair (EPAR)
- Maintenance Management Services (MMS)
- Logistics and maintenance training
- AOG services
- Surface treatment

Original Equipment Innovation (OEI)
Lufthansa Technik has successfully established a line of cabin products.
- Cabin management and IFE systems
- Aircraft and cabin equipment
- Connectivity
- Patient transport solutions

Digital Services
Lufthansa Technik provides innovative digital platforms to support technical operations.
- AVIATAR
- manage/m®

Please follow this link for the complete MRO service portfolio and more details about Lufthansa Technik’s solutions for fleets of any size. www.lufthansa-technik.com/services

Design Organization
Across all of its services, Lufthansa Technik supplements its offers with the capabilities as an Approved Design Organization:
- Major changes (STCs) in the areas of structures, systems, cabin and avionics
- Major repairs
- Minor changes and minor repairs
- Flight conditions
**Boeing**

- **737 CL/NG**
- **737 MAX**
- **747**
- **757**
- **767**
- **777**
- **777X**
- **787**
- **MD-11**

**Products and Services**

- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services: CFM56-7B, PW4000-94, GE CF6-80C2, Trent 700, Trent XWB, Trent 900
- Completion

**Regionals**

- **Bombardier Q400**
- **Bombardier CRJ**
- **Bombardier Challenger, Learjet, Global Express**
- **Embraer Legacy, Lineage**

**Business jets**

- **Airbus Corporate Jets**
- **ACJ**
- **BBJ**
- **Bombardier**
- **Embraer**
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*in preparation
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