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Angela Merkel names Airbus A380

Federal Chancellor Dr. Angela Merkel has visited the Lufthansa Group. The visit to the Lufthansa Technik facility in Frankfurt was occasioned by the opening of the airline’s new traffic control center. An exchange with apprentices as well as the naming ceremony of an Airbus A380 followed.

Dr. Angela Merkel began her visit to the Frankfurt facility by officially opening the new traffic control center (Integrated Operations Control Center – IOCC). The facility unites traffic control with the coordination of ground operations at Lufthansa’s home hub in Frankfurt. A total of 160 employees per shift supervise and control flights, passenger flow and ground events day and night.

The highlight of Federal Chancellor Angela Merkel’s visit was the naming of a Lufthansa Airbus A380. During a festive ceremony the Federal Chancellor named the A380 “Deutschland”. It is the 14th such aircraft in Lufthansa’s fleet and is registered under the tailsign D-AIMN. The Chancellor poured champagne on the fuselage of the aircraft and spoke a few ceremonial words to mark the occasion. This was followed by the Federal Chancellor and Carsten Spohr, Chairman of the Executive Board and CEO of the Lufthansa Group, signing the naming certificate. The next day the freshly named A380 “Deutschland” took off to San Francisco.

Dr. Merkel also met apprentices training in various occupations at a Lufthansa Technik training aircraft in a hangar. With approximately 37,000 employees, the Lufthansa Group is the largest employer in the state of Hesse; year after year young people receive training in more than 30 occupations. In the summer of 2015 alone 250 apprentices started their training with various Lufthansa Group companies.
New apprenticeship trade

**SAEI signs MOU**

Joint component MRO services

Lufthansa Technik and Saudia Aerospace Engineering Industries (SAEI), the Aircraft Maintenance arm of Saudi Arabian Airlines (Saudia), have signed an agreement to enter into a strategic partnership. Lufthansa Technik will support SAEI with Aircraft Component Maintenance for Saudia’s A320 and A330 fleet and will use SAEI as a subcontractor for those parts SAEI already holds capabilities. The partners also intend to jointly market their mutual capacities to third party customers in the region with commercial or military aircraft.

Nader Khalawi, Chief Executive Officer of SAEI, said: “Our strategic partnership with Lufthansa Technik supports our growth plans especially that SAEI has announced the launch of the largest MRO facility in the Middle East. We are pleased to extend our cooperation with Lufthansa Technik, a trustful, dependable and innovative partner, on components support for our current and future Airbus and Boeing fleet.”

**Line maintenance for Wizz Air**

Lufthansa Technik Budapest

The Hungarian airline Wizz Air has contracted Lufthansa Technik Budapest to provide line maintenance services for its fleet at the Budapest and Debrecen locations. The agreement includes Wizz Air’s eight Airbus A320 family aircraft stationed in Budapest. Lufthansa Technik Budapest will carry out the maintenance at the two Hungarian stations and also take on full responsibility for managing the Wizz Air hangar at the airport in the Hungarian capital.

Wizz Air Chief Executive Officer József Váradi said: “Line maintenance services are a key part of Wizz Air operations and Lufthansa Technik Budapest has played a large role in making sure we maintain our stellar operational record. They perform consistently at the level that meets our high standards for reliability and quality and they continue to manage the increased workload resulting from our growth while maintaining a competitive price. That allows us to keep our fares low and attractive to our customers in the region.”

**Broadband for VIP aircraft**

**VIP & Executive Jet Solutions**

Starting in early 2016, Lufthansa Technik will install Ka-band satellite communication technology on board of several VIP aircraft. The new technology will enable VIP passengers to use the full spectrum of aircraft cabin applications. The Ka-band technology is the answer to the continuously increasing demands on high-performance in-flight connectivity and outperforms current technologies by speed, bandwidth and coverage. Based on the VIP customers’ aircraft types, Lufthansa Technik will hold STCs (Supplemental Type Certificates) for the Airbus A330/A340 family and the Boeing 737. Lufthansa Technik’s aircraft base maintenance division will install the Ka-band technology on the Lufthansa A320 family fleet in summer 2016 and will hold the STC for this aircraft type, too.

Future customers will profit from Lufthansa Technik’s existing STCs, as engineering lead-times and engineering costs will be reduced, because antenna type and installation position on the aircraft will be the same. Lufthansa Technik will integrate all systems and components into the VIP aircraft.

**New apprenticeship trade**

**Electronics Technician for Devices and Systems**

Lufthansa Technik will for the first time offer twelve apprenticeship vacancies as “Electronics Technician for Devices and Systems” for the 2016 training year in Hamburg. With this move, the company is acknowledging the increasing significance of electronics for commercial aircraft. The new profession supplements the large number of apprenticeship vacancies for avionic technicians offered traditionally by Lufthansa Technik.

“While traditional avionic technicians are primarily deployed directly in aircraft maintenance and overhaul operations, the new profession is more geared toward the requirements of specialized workshops for maintaining the highest quality systems and components,” says Barbara Koerner, Head of Central Training Management at Lufthansa Technik.

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Radome repair for Air Arabia

Airframe Related Components // Lufthansa Technik and low-cost carrier Air Arabia, based in Sharjah, UAE, have signed an Airframe Related Components (ARC®) contract for radome repair. The contract runs over a period of three years and covers radome maintenance for Air Arabia’s A320 fleet. In addition to the repair services, Lufthansa Technik will support Air Arabia with spare unit support. The repair work will be done at Lufthansa Technik’s facility in Dubai (Lufthansa Technik Middle East Services). Richard Haas, Director Sales Middle East & Africa, from Lufthansa Technik, said: “We feel honored by the trust which our partners from Air Arabia have set in us and we are looking forward to welcoming Air Arabia as a customer.” //

Engine overhaul for Jetstar Pacific

V2500 engine maintenance contract // Lufthansa Technik and the low-cost carrier Jetstar Pacific, headquartered in Ho Chi Minh City, Vietnam, have signed a comprehensive engine maintenance agreement. Under the terms of the contract, Lufthansa Technik will overhaul the V2500 engines in Jetstar Pacific’s fleet of Airbus A320 aircraft. Le Hong Ha, Chief Executive Officer of Jetstar Pacific, says: “This cooperation with Lufthansa Technik, our trusted partner, will offer further support for our fleet development. Jetstar Pacific not only provides daily low-fare flights, its technical management also aims to achieve a cost efficiency oriented towards international standards.”

Robin Johansson, Director Sales South East Asia and Australia/Pacific Lufthansa Technik, says: “Vietnam is a very cost-sensitive market. We are pleased to welcome Jetstar Pacific as a new customer for engine overhauls. The fact that Jetstar Pacific selected Lufthansa Technik is additional proof that our engine MRO product delivers the best ratio between quality, performance and price.” //

Conversion project for Eurowings

Airbus A330 fleet // Lufthansa Technik has performed the second cabin conversion of an Airbus A330 for customer Eurowings on behalf of the leasing company GECAS. In the frame of a comprehensive contract, a total of seven aircraft will be converted by the Hamburg specialists. The conversion program for Eurowings’ Airbus twin jet comprises the installation of a completely new cabin: seats, galleys and IFE system are all exchanged; including the installation of a Satcom antenna on top of the fuselage. The A330s destined for conversion arrive at the Lufthansa Technik facilities in Hamburg after a transition check, during which they also receive their Eurowings livery.

Lufthansa Technik’s qualification as development organization plays an important role in this project when it comes to solving problems quickly without resorting to external support. As an example: Some spare parts difficult to source on the market can simply be manufactured in-house. Lufthansa Technik expects to deliver the last aircraft by mid-2017. //

Extended support for Thomas Cook

Wheels and brakes support // Lufthansa Technik will provide wheels and brakes support for Thomas Cook Group Airlines. The agreement covers both the Airbus and Boeing fleets of the four airlines of Thomas Cook Group, one of the world’s leading travel groups. The corresponding contract covers 15 Boeing 757, 16 Boeing 767, nine Airbus A330 and 53 A320-family aircraft, complementing the existing Total Component Support (TCS®) contract for the Airbus fleets of Thomas Cook Group Airlines from February 2015.

Lufthansa Technik has already provided wheels and brakes services for Condor Flugdienst, one of the four Thomas Cook Group Airlines, since 1998. With the new contract Thomas Cook Group Airlines has extended these services to its whole fleet. //
Even closer to the customer – the restructuring of sales at Lufthansa Technik began with this goal. And with success: meanwhile the reorganization of the entire sales organization into three large Corporate Sales Areas – EUMEA (Europe, Middle East and Africa), Americas and Asia Pacific – has been concluded.

Closer to the customer

With its expanded sales teams and local production capacities, the new constellation enables Lufthansa Technik, the world’s leading manufacturer-independent MRO provider, to respond even more finely tuned to the regional, local, and individual requirements of its customers. Connection talked to the three Senior Vice Presidents Corporate Sales about the special strengths of Lufthansa Technik in each of their areas of responsibility.

The three Senior Vice Presidents Corporate Sales (from left to right): Gerald Steinhoff (Asia Pacific), Robert Gaag (EUMEA) and Frank Berweger (Americas).
What are the most important features of your sales region?
Robert Gaag: Europe is dominated on the one hand by a few large airline groups, such as our sister companies in Lufthansa Group, and on the other by strong low-cost carriers with high market shares, such as Ryanair and Easyjet. All of them are very sophisticated when it comes to MRO sourcing. So there is substantial pressure on all MRO suppliers in general to deliver value for money or cost savings in general to their customers.

The Middle East is also dominated by a few large network operators based on the Arabian peninsula with similar worldwide market strategies and big fleets of new-generation aircraft types. Many of those operators are interested in building up their own in-house MRO capabilities. In contrast, market demand in Africa is more diversified, ranging from cooperation models for larger operators to specific support packages for smaller fleets.

What are the particular challenges of this region?
In Europe, Lufthansa Technik is well positioned with a strong current market position that we would like to defend in the years to come. Beyond the huge geographical distances and diverse nationalities, the main challenges for the other parts of the region – the Middle East and Africa – are geopolitical developments and economical constraints. Many of the region’s countries have customs barriers and complicated business processes that we have to understand and adapt to.

What are the special strengths of Lufthansa Technik in this region?
Lufthansa Technik is a powerhouse in Europe with many production sites and strong connections to the airline industry, backed of course by our special relationship to the Lufthansa Group airlines. But our core strengths in all our markets are our full product range across all modern aircraft types, the depth of our in-house production, our regional market know-how and our local representation.

How did your sales region develop in 2015?
We had a very strong year in 2015, with a solid growth rate in excess of 10 percent. We concluded many long-term contracts, and that will secure business for Lufthansa Technik in the near future.

What important topics will you focus on in 2016?
We intend to work especially on strengthening our regional production network, participating in the growth of emerging markets, supporting the introduction of new aircraft types, increasing growth through local partnerships, and stabilizing and increasing market share where possible.

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What are the most important features of your sales region?

Frank Berweger: The American market is largely consolidated, and just a small number of airlines dominate the demand for MRO services. In addition, big legacy carriers have their own in-house MRO capabilities. The North American market is not growing very strongly, but there will be an extensive fleet rollover during the next few years when aircraft with latest-generation technology – such as the 787, A350, A320neo or Boeing 737MAX – replace older types.

We definitely want to make the most of the chance to participate in the new business that will result from this rollover.

What are the particular challenges of this region?

North America is characterized by the strong presence of OEMs located here, such as GE, Pratt & Whitney, Honeywell, UTAS and naturally Boeing. Besides competing with the OEMs, our biggest challenge in this environment is to convince the big airlines that it makes economic sense for them to outsource large parts of their MRO business to Lufthansa Technik, despite their in-house capabilities.

What are the special strengths of Lufthansa Technik in the Americas?

Basically we benefit from our quality image, our extensive experience and recognized expertise in the MRO business, and from our “airline genes”. And we are continually expanding our presence in the Americas. In addition to the brand-new heavy maintenance facility we have opened successfully in Puerto Rico this year, we are working on further expanding our capabilities for landing gear, Airframe Related Components (ARC*), mobile engine services (Airline Support Teams – AST*) and components. This enlarged footprint should enable us to offer customers the local solutions they prefer and improve our turnaround times.

How did your sales region develop in 2015?

We grew profitably and above market average and were able to conclude new long-term contracts with a total volume of nearly one billion U.S. dollars. Another element in our positive development is that we won new customers, for instance UPS for component services.

What important topics will you focus on in 2016?

We plan to increase our business volume in the Americas significantly over the coming years, and that is an exciting challenge. We are working intensively on achieving the greatest possible customer proximity. It is our goal to penetrate the American MRO market even more proactively and in depth, thereby making full use of our upgraded local sales structures and processes. And we plan to offer our customers in North and South America even more local MRO solutions in the future. This could well happen through entering into cooperations with OEMs.

More than ever, our customers expect speed and simplicity in working with Lufthansa Technik, and we need to meet this challenge every day on every level.
What are the most important features of your sales region?

Gerald Steinhoff: For the aviation industry, Asia is not only the largest growth region in the world, it is also extremely challenging. In our view, market growth in the region will continue to be determined by the large legacy carriers, but we see an increasing market share of low-cost carriers as well. But only around 30 percent of the MRO market is freely accessible. The rest is tied up primarily by the airlines’ in-house capacities and a very high OEM affinity. So for both groups of potential customers we need customer-oriented approaches, that sometimes go beyond a normal MRO contract. And last but not least: Asia is the most important market for new aircraft types, especially the A350 – and therefore Asia is the area where we will shape the MRO market for the future.

What are the particular challenges of this region?

First of all it is the increasing competition in the market. More and more MRO facilities and capabilities are built up and nearly every international MRO has a clear focus on Asia Pacific. Moreover, many projects are not pure sales topics. Instead, customers want know-how transfers and active support, particularly in this region, up to and including partnerships. In view of the increasing competition in, for example, aircraft overhauls, our local presence is especially meaningful. And finally Asia Pacific is a market in which substantial political influence frequently plays a role and the airlines have very diverse decision-making processes. So I see a special significance in close personal networks in the industry as well as in the political environment. A strong marketing approach supports us to communicate our strengths to the market as well. Personal challenges for us as a sales team are the huge geographical distances between our different customers and countries: Flight times can be up to eighteen hours.

What are the special strengths of Lufthansa Technik in Asia?

Our reputation as Lufthansa Technik is very good, in particular our competence, size and quality, but we are still perceived as expensive, far away, and inflexible. However, our local presence – “We are part of Asia” – is increasing significantly. We have four production sites – Lufthansa Technik Philippines, Lufthansa Technik Shenzhen, Lufthansa Technik Services India and Airfoil Services – and can thus offer nearly all our products in Asia. And with the development of our local sales organization with local decision-makers and our increasing numbers of fulfillment staff our customer proximity is increasing strongly. Last but not least, we are increasingly able to exploit synergies in our Lufthansa Group by working closer and closer together.

How did your sales region develop in 2015?

We are continuing to grow and are very strong, for instance, in contracts for engine maintenance and component support. I see fierce competition for all tenders, especially the ones for new aircraft types. But we are well prepared and I am convinced that we will be able to set a strong footprint in these fields as well, e.g. the A350.

What important topics will you focus on in 2016?

Our main focus lies on the customer, on the market. We want to mesh our work more and more with our customers and be close to the market despite the diversity in customers and countries. This approach will be supported by growing production sites. We intend to grow strongly, for instance in component repair and composite services in Shenzhen. We want to keep Lufthansa Technik Philippines at full capacity – even with extended hangars and capacities. In order to maximize our effectiveness as a team, we will also grow and develop our leadership team for Asia and pull the sales team even closer together. At the same time, we are keeping an eye on the rest of the world and setting up a close alignment with our other two sales areas in EUMEA and the Americas. We simply have to live our role as a sales team and focus all our strength in developing our area.
Using a tablet computer instead of paper documentation improves data quality and increases the efficiency of the entire maintenance process.
Less paper – improved quality

In order to avoid the tons of paper generated every year by the documentation of aircraft maintenance, Lufthansa Technik has launched the program “paperless maintenance”. Electronically documenting maintenance operations directly at the aircraft results in improved data quality, increased transparency and synergies with the customers.

Reliable aircraft maintenance is invariably linked with comprehensive documentation of all maintenance steps. As a result, MRO companies accumulate several tons of paper documentation every year. In the framework of its “paperless maintenance” program, Lufthansa Technik is therefore focusing on doing away with pencil and paper. In the future all aircraft maintenance documentation is to be created electronically in the “Maintenance Log” application. Acting as the basis for the planned paperless maintenance and allowing the use of a variety of different mobile terminal types, it is used for recording and outputting the data for the aircraft mechanics.

Electronic Ground Log

The electronic Ground Log (eGL) will be the first documentation type to be used within “Maintenance Log”. At the same time it will replace the formerly paper-based Ground Log Book (GLB). Lufthansa Technik piloted the new procedure at the Berlin-Schönefeld location, with the other German line maintenance stations set to follow during the coming months. Additional documentation types, such as the electronic job card (eJobcard) or the electronic technical log book (eTLB), should follow gradually.

The current standard practice in aircraft maintenance involves inspecting a faulty component on site and then transferring the necessary data to the paper-based Ground Log Book at documentation consoles. The mechanic then transcribes numerous details and creates references to applicable aircraft documentation. For ordering a new component, time is needed to walk to the computers in the hangars and the data then has to be entered again in the online order form, even though it has already been documented.

Eliminating redundancy

Using mobile terminals, the Maintenance Log/eGL will allow maintenance staff to enter the data in the future just once, ideally directly at the location where the relevant component is being installed or removed. Eliminating duplicate data input means that transmission errors and data inconsistencies are avoided. Function and role-specific menu guidance and special documentation aids in the form of auto-fill and subsequently also auto-correction and auto-completion further help the mechanics to enter the data quickly and without errors.

Real-time data access

Thanks to mobile terminals that are used widely in the production area, all information is available in real-time, meaning that all employees involved in the maintenance process can immediately access the specific information that is relevant for them from any location. Simplified search functions and transparent menu guidance help employees to quickly access the required data. Paperless maintenance therefore not only helps to save paper and thereby environmental resources as well as time and money, but also expedites the provision and transmission of all information and increases the quality of data input.

Synergies with customers

Documenting data electronically means that some work processes can even be eliminated completely or become more streamlined, clearer and less susceptible to errors. The resulting high level of transparency benefits the MRO operation and can be passed on almost completely to customers and operators using appropriate B2B interfaces. Because many customers are increasingly working with electronic systems, which can be synchronized in the future with Lufthansa Technik systems, paperless maintenance will also create more trust. Moreover, it will promote the exchange of knowledge and create synergies in the joint endeavors by Lufthansa Technik and its customers to increase aircraft availability. The first two layovers with the paperless system went absolutely flawlessly – indicating that Lufthansa Technik has indeed ushered in the era of paperless maintenance.

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Big effort for new cabins

80 aircraft in just two and a half years: As part of a gigantic program, Lufthansa Technik’s business unit Aircraft Modification outfitted Lufthansa’s entire long-haul fleet with a new cabin.

The handover of the last aircraft to the customer Lufthansa in Malta in October 2015, four days ahead of schedule, marked the brilliant finale of the largest retrofitting program in the history of the airline. The “InterKont Retrofit” program “was completed on time, within budget and with superior quality”, remarked Klaus Fröse, Head of Operations and Hub Frankfurt of Lufthansa Passenger Airlines, at the closing ceremony for the project. An achievement honored by the customer with the Quality Award 2015.

Nine aircraft simultaneously

It took Lufthansa Technik just two and a half years to complete the retrofit of Lufthansa’s 80 long-haul aircraft with a new and modern cabin, a new inflight entertainment system and FlyNet® broadband internet. A total of 1.4 million man-hours were spent working on the new interiors. In the process, 35,200 new seats were fitted in the aircraft cabins – 600 in first class, 7,000 in business class and 27,600 in economy class. A Supplemental Type Certificate (STC) for the new cabin was obtained for each of the five sub-fleets – Airbus A330-300, -600, A340-300 and A380-800 as well as Boeing 747-400. Altogether, Lufthansa Technik Engineering produced around 350,000 documents for this retrofit project. In order to manage the immense program, the work was done simultaneously on nine aircraft at eight different sites. In addition to Lufthansa Technik facilities in Hamburg, Frankfurt, Malta and Manila, partner locations in Bordeaux, Zürich, Xiamen and Singapore were involved. An international team handled the organization and coordination of the various sites and tasks. The material supply during the program proved to be a particular challenge in the process. The seats and material for the new cabin, including the inflight entertainment system, would fill 1,300 shipping containers – and everything had to be at the right place at the right time. In addition, project managers from Lufthansa Technik worked closely with suppliers to monitor prompt delivery of the new cabin elements and systems.

The new Premium Economy Class was also completed parallel to this modification program. Within just one year, 101 aircraft were outfitted with new seats – practically one aircraft every three days.

With these cabin retrofitting programs, Lufthansa Technik has made a significant contribution toward the airline’s service offensive aimed at offering its travel guests “the best Lufthansa of all time”. Klaus Fröse summed it up this way: “A big thank you to everyone involved for their tireless dedication, constructive cooperation, courage to embrace the challenge, and for accomplishing an excellent product.”

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Also in October 2015, the last A330 equipped with the new Premium Economy Class was handed over to the customer Lufthansa. In practically one year to the day, 101 Lufthansa aircraft were fitted with the new Premium Economy Class. In doing so, there were only three-day layovers. They were in part carried out parallel to the major modification program of the Lufthansa long-haul fleet. Premium Economy had to be approved for each of the seven aircraft types in this retrofitting project, meaning that Lufthansa Technik Engineering had to produce the extensive documentation needed for verification of the STC every two months. The first retrofitting of a brand new Boeing 747-8 took place in September 2014 in Frankfurt. In the peak phase, the Lufthansa Premium Economy Class was installed simultaneously in four sub-fleets on six retrofitting tracks at five different sites – Hamburg, Frankfurt, Manila, Malta and Düsseldorf. In the process, material management handled the prompt delivery of the approx. 3,600 new seats, among other things.
“Make crazy ideas fly”

On the occasion of the completion of the modification program for Lufthansa’s long-haul fleet, Connection spoke with Dr. Michael Zeisig, Director Aircraft Modification at Lufthansa Technik, about major projects, current trends for aircraft cabins and collaboration with manufacturers.

How was Lufthansa Technik able to manage a modification project as extensive as this one for Lufthansa?

Dr. Michael Zeisig: The Aircraft Modification unit can only carry out a project of this magnitude working in collaboration with the entire Lufthansa Technik Group and with partners. We have a large network of production sites – none of the competition can offer anything like it. Added to that is our experience in project management and material supply as well as our established contact with suppliers. In addition, we have the necessary capacities in engineering and can provide competent assigning and monitoring of suppliers in this field.

What were some of the particular challenges of this project?

Originally, the retrofit program for Lufthansa’s long-haul fleet was designed to cover a period of five years. Due to the delayed development of the IFE system and the introduction of new aircraft already outfitted with the new cabins, the timeframe was shortened to two and a half years. As a result, time became the most critical challenge along with material quantities. There are always uncertainties that you do not see at the beginning and for which a solution needs to be found quickly, particularly with regard to approval layovers. The complexity involved in such a cabin retrofit program cannot be underestimated.

How is the Aircraft Modification unit positioned and what scope of services does it offer?

The core of Aircraft Modification is design engineering and certification involving some 60 engineers, with project managers and material and logistics experts in addition to that. The overhaul network of the Lufthansa Technik Group and its worldwide locations are at our disposal for project implementation. We offer modifications for the cockpit and cabins of all aircraft types – that means from front to back, practically anything located within the fuselage and to some extent even beyond that. We live by the mottos “Make crazy ideas fly” and “Minimize time to market”. In doing so, there are actually no boundaries. We can turn ideas into reality in the shortest amount of time.

What benefits can Lufthansa Technik offer customers in the field of aircraft modification compared to the competition?

We offer the entire chain of services that are needed to make a “crazy idea fly” and, in doing so, close the gap between manufacturers and the airlines. We have the know-how and experience to get innovations approved quickly, without running a risk with regard to length of layovers. In doing so, we offer an all-round carefree package comprising engineering, material supply and worldwide production locations – and can thereby present a united front with respect to suppliers. Together, these benefits guarantee a smooth flow for retrofitting projects.
Does Lufthansa Technik take on smaller modification projects in addition to the large ones?
The projects for the sub-fleets of the “Inter-Kont Retrofit” program were just five out of a total of more than 60 larger and smaller modification projects implemented by us in that period. So, yes, we also handle substantially smaller projects. Due to the high level of engineering complexity in modifications, however, we are particularly interested in programs with at least five aircraft – they allow us to optimally demonstrate the benefits we offer.

What are some of the current trends and developments in aircraft cabins?
In the Europe, Middle East and Africa (EUMEA) region, connectivity remains an important topic; we also focus on modern seats that allow a higher seating capacity per aircraft with the same or improved comfort. And once we have the plane on the ground to work on, we will often install new lighting systems and Internet on board right away. One of our big hits right now are the Center Ceiling Stowages that provide more space for hand luggage, especially for aircraft with a high seat density on board.

In the U.S., connectivity systems are being upgraded to state-of-the-art technology and the sometimes outdated cabins for continental connections are being modernized. And for long-haul aircraft, full-flat seats in the upper classes and Premium Economy features are a major topic.

Looking into the near future – what is coming up next for Lufthansa Technik’s Aircraft Modification?
Now that we have completed several major retrofit projects for the Lufthansa Group, we would like to apply what we have learned more intensively to other customers. Travel guests expect a modern cabin and the latest technological amenities – and innovation cycles are growing ever shorter. There is thus a large market for cabin retrofitting, and that is where we want to become more visible.

In the course of our projects, we have also learned that synergies between cockpit and cabin OEMs and us as an integrator for their innovative products can be generated. We therefore want to offer innovative products for aircraft cabins in partnership with manufacturers.

In this connection, we are already working with Inmarsat on a connectivity solution and with Panasonic on FlyNet® for the global A380 fleet. It is all based on our motto: You have a crazy idea – we will make it fly.

The design engineering for cabin and structure modifications develops solutions for mandatory changes, new monument integrations and structural provisions.

www.lufthansa-technik.com/modification
Integrated base maintenance

It all started with a challenge: Norwegian was looking for a way to extend the annual base maintenance interval for its 737-800 fleet to two years. Thanks to its in-house expertise, the Norwegian engineering department had developed a concept for a maintenance schedule that included the transfer of certain tasks to line maintenance. Consultation with Lufthansa Technik’s base maintenance planning department inspired confidence that the new program would work, ultimately leading to an integrated base maintenance program.

Tailored performance

The main features of the TBS™ contract are a slot guarantee and a precisely tailored performance package. For example, one of Norwegian’s requirements was that all of its aircraft should be overhauled by Lufthansa Technik Budapest during the winter season. As Budapest is a high frequency destination of the airline, unprofitable ferry flights are completely avoided, increasing the efficiency of the package. In turn Lufthansa Technik supports Norwegian’s Line Maintenance division during the demanding summer operation by assigning engineers to Norwegian’s Scandinavian stations. Of course, Norwegian has access to Lufthansa Technik’s entire base maintenance network of facilities for any additional or unplanned base maintenance needs. In addition further synergies could be exploited, e.g. by using the ground time to perform minor works on the CFM56-7B engines, if required, as Lufthansa Technik has been exclusively contracted by the airline to perform the MRO on its CFM56-7B engines.

Wheels and brakes solution

Lufthansa Technik has also been given responsibility for the wheels and brakes of Norwegian’s entire fleet, including the Boeing 787 Dreamliners equipped with carbon brakes. Messier-Bugatti-Dowty, supplier of 787 wheels, named Lufthansa Technik a Recommended Repair Center.

Norwegian expands cooperation

The Norwegian Group is having its Boeing 737-800 fleet overhauled in the framework of a long-standing Total Base Maintenance Support (TBS™) contract. Some 155 layovers were successfully completed by end of March last year.
Lufthansa Technik Connection 1.2016

(RRC) for 787 wheels and brakes. The corresponding contract for Boeing 787 support has now also been extended and the volume doubled. Norwegian currently has eight 787-800 aircraft in operation, which are under contract at Lufthansa Technik since 2013. The airline will also operate the Dreamliner’s -900 version from 2016, joining the fleet at a rate of two aircraft per year, with eleven aircraft in total, further growing.

The Wheels and Brakes Services product is based on a philosophy that draws heavily on Lufthansa Technik’s Total Component Support (TCS®) concept. As aircraft wheels can weigh up to 300 kg and are rather bulky, logistics is a major challenge. The main hubs in Scandinavia, United Kingdom and Spain are roughly 1,300 kilometers away from the shop in the case of Norwegian Air Shuttle. In order to ensure that transportation proceeds without a hitch, Lufthansa Technik Logistik Services has established an efficient logistics concept, demonstrating that the Wheels and Brakes product works even across continents.

The extension of the contract is an indication of the performance level of the flexible maintenance and overhaul concept developed in cooperation with Lufthansa Technik and a clear sign of Norwegian Air Shuttle’s continuing trust in the MRO provider. Lufthansa Technik is looking forward to providing first-rate services and further expanding the business relationship.

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At the signing ceremony: Representatives of the Norwegian Group and the team of Lufthansa Technik.
Lufthansa Technik has adapted its MORE product (Management of Component Overhaul and Repair) to today’s changing market requirements of aircraft leasing companies.

Air layovers and transitions frequently turn up unpleasant surprises. A large number of components has to be tested, repaired or overhauled. If the aircraft will be operated in a different region after the layover, that region’s aviation regulations may require component modifications to meet local standards. In sum, a layover often results in rapid, unpredictable increases in the organization of repairs, the risk of exceeding layover time, and the associated costs. These problems are especially critical for aircraft lessors, and this is why they benefit from MORE: irrespective of whether the layover takes place at Lufthansa Technik or in another facility, the customer receives guaranteed availability of components within the layover.

Utmost flexibility in services

Thomas Orlowski, Product Manager MORE Services, has observed a change in market requirements over the last ten years: “A decade ago, speed was everything, and our business consisted largely of fixed total package contracts that completely eliminated the time and cost risks of transition checks for the lessor. Today, the picture has changed. Customers frequently require fast reactivation of parked aircraft. So a modular system for material support is the best choice for lessors, with detailed time and material pricing provided precisely according to the individual requirements of each customer.”

Due to its modular design providing customers unrestricted choice of services, MORE offers lessors the utmost flexibility in material services. Depending on their priorities – lowest possible cost or fast aircraft reactivation, for instance – MORE can be purchased as an individual product or as part of an ALTS® (Aircraft Leasing and Trading Support) contract. MORE offers the flexibility of a small team, but with excellent resources. In a recent case, for example, a customer wanted to recover his aircraft from an environment stricken with difficulties. The aircraft itself was in a very bad shape, as it had served as parts donor for the rest of the fleet. Lufthansa Technik managed to establish an independent warehouse directly on the apron of the airport and handled the following component acquisition and installation process including customs clearing without a hitch. In combination with the necessary CAMO activities, Lufthansa Technik was able to demonstrate outstanding performance.

MORE is unique on the market because it offers the whole range of material services for lessors, not just for layovers performed by Lufthansa Technik, but also to external MRO providers. Coordination with other Lufthansa Technik Services such as Airline Support Teams (AST®), CAMO and logistics is an integrated part of the solution. These features have made MORE the product of choice for lessors looking for the optimum in component support during aircraft transitions or layovers.

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www.lufthansa-technik.com/component-more

Management of Component Overhaul and Repair - MORE capabilities

- AOG repairs, smart repairs
- AOG supply of rotables and C&E
- Closed loop repairs
- Fabrication of structural parts with long lead times
- Modification campaigns
- Material services for on-site engine change
- Component engineering
  - Hard-time & life-limited parts records/traceability (build-up of lost/destroyed records)
  - Modification advice, OEM inquiries
  - OEM warranty/FOC modification material
  - Reestablishment of ETOPS hardware
  - Coordination with CAMO services
- Recertification to authority requirements
- Sourcing of hard-to-find material
- On-site material manager
- Logistic services
- Coordination/support of other Lufthansa Technik services (e.g. AST®, Material Storage)
Lufthansa Technik’s new seating concept, chair™, has passed all 16g and 9g certification tests for forward and aft facing installations. This certification allows owners, operators, and designers to choose from thousands of possible chair™ configurations to match the need of a particular cabin environment.

Chair™ certification testing completed

Lufthansa Technik presented its revolutionary chair™ seating concept a year ago, dedicated to VIP and business jet as well as commercial aircraft. The chair™ enables designers of aircraft interiors to adapt chair structure and functionality to the specific purposes and requirements of customers. The seating concept runs the gamut from basic office chairs to lounge and dining chairs and beds, with considerable savings in space and weight. Having passed the recent certification tests, the genuine Lufthansa Technik innovation is now available for customers.

The chair™ is based on an innovative pedestal design upon which a baseline core skeleton or structure is mounted. The certified pedestal and structure is intentionally left incomplete, allowing designers to create a chair to meet the particular needs of a particular cabin – dining room, video lounge, office, bedroom, etc. Thus not only the height, width, and depth, but also the overall “look-and-feel” can be configured, the shape, upholstery, and padding can be selected to allow for an uncompromised interior design.

An innovative certification process allows the Lufthansa Technik experts to validate changes to the chair without comprehensive re-testing. As the testing process was designed and passed to maximum dynamic load cases, changes can be classified as minor deviations under the umbrella of an existing ETSO/TSO. The corresponding ETSO (European Technical Standard Orders)/TSO (Technical Standard Orders) certificate is in process and will be issued over the next few months. All chair™ seats are made in Germany in cooperation with premium automotive supplier Dräxlmaier.

The benefit of chair™ is not only an artistic interpretation, it also permits a variety of design options which in the past were simply not possible. The chair™ family concept will save space, optimize weight, and create a more ergonomic interior, thus paving the way for seating solutions for the future.

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Lufthansa Technik’s chair™ is a true revolution in aircraft passenger seating. To achieve the highest level of comfort and convenience, Lufthansa Technik has bundled its exceptional expertise and ideas with the creativity of a highly renowned aircraft interior designer. The result: a space-saving, modern, lightweight, and individually adaptable seating solution.
The rank of the participants left no doubt about the importance of the event: The presence of Puerto Rico Governor Alejandro García Padilla, Vinai Thummalapally, Executive Director of SelectUSA, Dr. Peter Wittig, the German Ambassador to the United States, and Simone Menne, member of the Executive Board of Deutsche Lufthansa AG, emphasized the significance of the opening of Lufthansa Technik Puerto Rico – a strategic milestone for the aerospace location Puerto Rico and Lufthansa Technik alike.

Successful investment

In their speeches the partners expressed their extraordinary satisfaction about the optimal realization of the project, with the groundbreaking ceremony just one year ago. “Growing and diversifying our Island’s economy are a priority to restore economic stability, and successful investments like Lufthansa Technik’s are a testament to Puerto Rico’s competitive advantages,” said Governor García Padilla.

“Congratulations to the teams from Puerto Rico and Lufthansa Technik who worked so hard to make this facility a reality,” said Vinai Thummalapally, Executive Director of SelectUSA. “This investment is creating new jobs with valuable training and opportunities for growth.” SelectUSA, a U.S. Department of Commerce effort to support business investment in the United States, partnered with Puerto Rico in the process to establish Lufthansa Technik’s operations in the Island.

“The foundation and implementation of Lufthansa Technik Puerto Rico is a prime example for a successful business development project,” said Dr. Johannes Bussmann, Chairman of the Executive Board of Lufthansa Technik. He added: “In the few weeks since starting operations, Lufthansa Technik Puerto Rico has already proven its high value for the further development of Lufthansa Technik’s business in the Americas. This is a perfect example for what a highly motivated team can achieve. In particular, I want to thank Elmar Lutter and his colleagues for the fantastic work that they have delivered.”

737 overhaul from 2017

Currently Lufthansa Technik Puerto Rico employs more than 200 people at Rafael Hernández International Airport in Aguadilla. In the full-fledged configuration, 400 employees will work on five overhaul lines. From
2017 on, the company will also offer overhaul services for the Boeing 737 family.

Coinciding with the festive occasion, the first A320 from JetBlue Airways, second launching customer of Lufthansa Technik Puerto Rico, arrived and the second overhaul line was opened – once again on time. “As the largest airline in Puerto Rico, we are honored to share this milestone with Lufthansa Technik. With nearly one third of our network now located in Latin America and the Caribbean, it makes good business sense for us to work with a heavy maintenance business partner in the region,” said Jeffrey Martin, Executive Vice President, operations, JetBlue. “By supporting Lufthansa Technik’s expansion in Aguadilla, we are not only making an investment in our heavy maintenance plans, we’re helping to ensure jobs which will lead to economic growth in the area.”

Since July 21, 2015, Lufthansa Technik Puerto Rico is working on Airbus narrow-body aircraft from launching customer Spirit Airlines, with ten aircraft overhauled in October. “We are pleased to be Lufthansa Technik’s first customer in Puerto Rico,” said Spirit CEO Ben Baldanza. “We’ve had a long history with them as they have provided excellent support on our Airbus fleet through inventory, parts repairs, reliability engineering support and now, heavy maintenance support. We’re excited about this new chapter expanding in Puerto Rico.”

Performance on track

Expecting somewhat longer turnaround times at the beginning, Lufthansa Technik Puerto Rico has an agreement with both customers concerning ramp-up. Meanwhile the goal of a reduced TAT for Spirit has been achieved, with the performance for JetBlue following suit. Thomas Frercksen, Lufthansa Technik Manager Strategy & Business Development Base Maintenance, is optimistic: “The internal Key Performance Indicators are on track. And both bays are demonstrating a performance exactly according to the ramp-up plan.”

Successful performance yields growth: A second line for customer Spirit Airlines has already been contracted, and based on talks with other potential customers Thomas Frercksen is optimistic that Lufthansa Technik Puerto Rico will grow fast. The fifth bay is expected to become operational no later than at the end of 2017. This development underlines that Lufthansa Technik Puerto Rico is an important pillar in Lufthansa Technik’s aircraft overhaul network and provides optimal service at reasonable costs.

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A350 APU capability established

Lufthansa Technik has been granted the official approval to perform repairs and overhauls of the HGT1700, the Auxiliary Power Unit of the Airbus A350. Furthermore, a spare APU is available.

For more than two decades, Lufthansa Technik has provided technical services for a whole range of modern Auxiliary Power Units (APU) to countless international customers. The acquired extraordinary competence rests not only on APU technology, but also on an engine MRO competence of unrivalled breadth, including the approval to develop proprietary repairs. The continuously driven improvement cycle is thus one of the most outstanding strengths of Lufthansa Technik and a highly beneficial advantage for every customer.

As manufacturer Honeywell has chosen Lufthansa Technik as its partner for the repair and overhaul of the HGT1700 APU, Lufthansa Technik will be the official warranty station and the only provider of repair and maintenance services for the engine for the coming years. At the same time, Lufthansa Technik is expanding the capabilities of its Technical Competence Center, offering 24/7 troubleshooting support and establishing a global APU and component pool.

Fast and cost-efficient overhauls

The initial capability build-up in Hamburg was completed in August 2015 with the successful audit of the German Federal Aviation Office (LBA). Providing line maintenance services for A350 customers, Lufthansa Technik is continuously building experience. All aspects of the APU condition are electronically monitored through the Aircraft Condition Monitoring System (ACMS), helping to reduce the maintenance effort. Combining OEM (Original Equipment Manufacturer) and MRO competencies will result in improved repairs and higher reliability, with Lufthansa Technik integrating the feedback from the field into its maintenance and overhaul processes. The cooperation between Honeywell and Lufthansa Technik provides customers with fast and highly cost-efficient APU overhauls and repairs, adding another important element to Lufthansa Technik’s comprehensive A350 performance portfolio.

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Targeting fluids

Routine or emergency – **Lufthansa Technik’s Laboratory Services** in Frankfurt examines all on-board fluids quickly and reliably on site.

A variety of fluids can be found on board of aircraft in various systems. Regardless of whether hydraulic fluid, oil, fuel or drinking water – regular checks are necessary to ensure that these fluids and their systems are ready for use, a task for the experts of Lufthansa Technik’s Laboratory Services in Frankfurt.

In direct proximity to flight operations at Frankfurt airport – the laboratory facility is just a few meters to the apron – the team can perform all routine fluid examinations for airlines and MRO businesses. As an integral part of MRO services and in close contact with line maintenance operations, Laboratory Services unit offers solutions for all relevant on-board fluid examination issues.

Routine examinations

Hydraulic fluids and engine oil have to fulfill different requirements, depending on their area of application. Chemical and physical parameters describe their condition and the condition of the systems in which they are used. Chemical changes, for example following overheating or contamination by a non-system fluid, can significantly influence the fluid properties and the performance of the related aircraft system.

Furthermore, microbiological tests of fuel samples from passenger aircraft are performed by the lab in Frankfurt. Metabolic products of microbes in fuel can lead to corrosion in the tank and the tank lines.

“Routine examinations as prescribed by manufacturers have to be performed regularly. All these routine test procedures can be accomplished in-house by us,” says Dr. Björn Seibold, Team Lead of the Laboratory Services division in Frankfurt.

Know-how and consulting

The experts of the Frankfurt lab also support customers with their know-how in non-routine cases. Based on their experience and the evaluation of analytical data they can give advice on corrective actions if problems occur. “This means that the maintenance and engineering departments of our customers have a competent partner on site in case of need,” says Dr. Björn Seibold. Thanks to the high level of automation in the lab, the highly qualified staff and the excellent work quality all tests can be processed precisely and reliably, even within a few hours in special cases (AOG).

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“We speak the language of the MRO business”

As Manager Aircraft Type Training for Lufthansa Technical Training (LTT), Peter Thomas coordinates the training and further education programs for type ratings for maintenance technicians.
Peter Thomas is still as fascinated by the world of aviation as he was at the beginning of his career. “I knew then exactly: Aircraft Engineer – that’s my thing!” he says as he recalls his training as an aircraft mechanic with the German Armed Forces. “The technical complexity of flying always impressed me.” After eight years spent as a mechanic with Lufthansa in Frankfurt, he found himself in Lufthansa’s technical training academy at the beginning of the nineties – the forerunner to the present Lufthansa Technical Training.

“I always enjoyed working with people and helping them learn,” explains Peter Thomas. Thousands of aircraft mechanics and avionic technicians have meanwhile received their type rating under his instruction and responsibility. The manager has been employed by the Lufthansa Group since 1984 and has worked in the training division for more than 20 years. In his role as a licensed mechanic Thomas supervised the launch of the Airbus A320 and A340 types at Lufthansa. As a manager responsible for training, he is now working with the new Airbus A320neo, CSeries and A350, among other aircraft. “A new aircraft type is always a challenge for us. Questions relating to customer staff requirements and market development also influence our capacity planning,” explains the 52-year-old. “Moreover, our trainers themselves must naturally likewise be trained in the new aircraft types.”

**Action-oriented training**

The launch of the Airbus A350 is at the top of the priority list at present – a comprehensive and long-term undertaking. “A large number of requirements have to be brought together: the official regulations, the requirements of our customers and our own modifications for the training,” says Peter Thomas. “Our primary goal is to offer contemporary, action-oriented training.”

The manager appraises the training staff as Lufthansa Technical Training’s greatest asset. The instructors come from maintenance and therefore offer a wealth of practical experience. “Our trainers can convey in class what is important in practice as well as any tips and tricks that might be relevant. It is extremely important that we and our trainers speak the language of the MRO business,” underlines Peter Thomas.

**Daily contact with the trainers**

Lufthansa Technical Training combines complex theoretical and practical training situations, including simulator and run-up training. The teaching methods are well received: “It’s really great when the participants give us positive feedback when they go home after six to eight weeks. For example, the fact that somebody can sign off an aircraft following one of our training programs makes me proud,” says Peter Thomas. As a supervisor he seeks daily contact with his trainer teams. His day therefore begins early. Thomas is in his Frankfurt office by around 7 a.m. so he can make use of the hour before training commences. What still has to be organized? Is everything in order in the classrooms? Is somebody absent due to illness? Once the seminars commence he continues to work on administrative tasks and schedules.

Peter Thomas still remembers very well what it is like to stand in front of young mechanics or avionic technicians as a trainer, since he conducted training himself up until 2004. He even filled in on occasion up to a couple of years ago if an instructor was absent due to illness. He no longer has time now for this in his management role – much to his regret.

**Cooperation is becoming increasingly important**

The training manager sees the bigger picture when he looks to the future – interaction and communication with other training companies is becoming increasingly important. “Cooperation with Austrian Technical Training and Swiss Aviation Training is growing in importance all the time,” adds Thomas. “We want to build a platform on which the training companies in the Group can cooperate closely together and find and implement best practices.” Peter Thomas is certain that attention will focus even more intensively in the future on the most profitable aircraft types, such as the A320 family, the A350 and the Boeing 777 for example. The new short-haul jet from Bombardier is also included in these ranks. Lufthansa Technical Training is the Authorized Training Provider for the CSeries and maintains an instructor team of 14 people at the ready for this task.

Would he follow the same career path again if given the opportunity? The answer is brief and concise: “Absolutely!”

Peter Thomas

"Our primary goal is to offer contemporary, action-oriented training."

**Our primary goal is to offer contemporary, action-oriented training.**

Peter Thomas

**"Our primary goal is to offer contemporary, action-oriented training."**

Peter Thomas
Completion project for Royal Jet

Lufthansa Technik and Royal Jet, the Middle East’s foremost private charter company, have signed an agreement for the completion of **two Boeing 737-700 BBJ** aircraft.

The business jets will be completed at Lufthansa Technik’s VIP & Executive Jet Solutions site in Hamburg. The aircraft will be redelivered in Q3 and Q4 of this year. The cabin interior of both aircraft was done by the New York-based designer Edése Doret who is known for his elegant yet innovative designs. Both cabins will be very modern with a spectacular interior design. The VIP interior comprises a private master bedroom together with a fully equipped master bathroom as well as a large lounge area, business and economy class areas. Both aircraft will be equipped with the latest telecommunication and entertainment technology to meet the needs of the exclusive customer base of Royal Jet. Each aircraft will comfortably accommodate 34 guests.

“Royal Jet is the benchmark for private charter companies in the region. It is our aim to be the benchmark for global operators offering VIP chartered services,” said Captain Patrick Gordon, Interim President and Chief Executive Officer of Royal Jet. Lufthansa Technik's Senior Vice President VIP & Executive Jet Solutions, Walter Heerdt, explained: “We are very proud that we have been selected by Royal Jet and given the chance to materialize the spectacular design of Edése Doret.”

Royal Jet is currently operating six BBJs and therefore already considered as the world's largest independent BBJ operator. After completion the Abu Dhabi-based charter operator will add those two aircraft to the existing fleet and Royal Jets customers will soon be able to experience this very exclusive product.

Luxury meets innovation

**Mercedes-Benz Style** and Lufthansa Technik have presented their new VIP cabin design to initial customers at the Dubai Air Show.

Driven by the large interest of the VIP market for a Mercedes-Benz Style VIP Cabin design in the recent months, the two companies have shown the first impressions of a unique conceptual floorplan.

Since the announcement of the cooperation at EBACE in Geneva, Switzerland in May 2015, Mercedes-Benz Style and Lufthansa Technik have been working on the design of an innovative, luxurious and integrated cabin concept. “The joint project team has done a great job. The floorplan visualizes the typical Mercedes-Benz modern luxury combined with Lufthansa Technik’s highest quality design approach. The result is a unique, organic and functional design for a modern VIP Jet. Together with Lufthansa Technik’s latest in-flight communication and entertainment innovations, the new cabin will be ideal for global players wishing to travel in style,” said Walter Heerdt, Senior Vice President VIP & Executive Jet Solutions, Lufthansa Technik. The unique helix structure, a dynamic spiral layout, is the central design theme extending throughout the aircraft from the entrance all the way to the bedroom. This creates new, independent spatial zones without the typical arrangement of seat and wall elements. The VIP aircraft, which could seat 150 passengers in airline configuration, is designed for 16 VIP passengers.
Comprehensive support for TUI airlines

Lufthansa Technik and five European airlines of the Touristik Union International (TUI) based in Hanover, Germany, have concluded comprehensive contracts on the base maintenance and landing gear overhaul of their Boeing 737 NG fleets.

As Europe’s largest tour operator, TUI operates an airline fleet that is organized in five European airlines and constituted as ‘One Aviation’: TUIfly, TUIfly Nordic, Jetairfly, Arkefly and Thomas Airways. Following the signing of a Letter of Intent in June last year, TUI has now concluded comprehensive contracts for maintenance and overhaul with Lufthansa Technik for this consolidated group of airlines.

Improved planning certainty

The contracts signed at the end of last year relate to the 99 Boeing 737 NG aircraft operated by the TUI airlines. A base maintenance contract was one of the contracts agreed for this fleet, covering a period of five years. Overhaul of the aircraft will be performed at Lufthansa Technik in Sofia. Another contract covers this fleet’s landing gears which will be overhauled by Lufthansa Technik Landing Gear Services UK, the Lufthansa Technik center of excellence for 737NG landing gear overhaul. In this case the contract term covers ten years.

The base maintenance contract has a special feature, as described by Olaf Voss, Sales Manager Europe for Lufthansa Technik: “The contract includes a service catalog for so-called menu pricing. These defined prices allow customers to estimate the costs for the routine layover packages quite accurately. The feature therefore represents a major advantage for the customer in terms of planning certainty.” Based on these new contracts, the TUI airlines have secured the support of the leading MRO provider for ensuring smooth flight operation. The contract terms commenced with the 2015/16 winter season.

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Meet us at...

21 – 22 January 2016 | Lima
MRO Latin America
A conference and a showcase form the core of the region’s leading MRO event. Here MRO providers, airlines, OEMs, lessors, and industry experts meet.

3 – 4 February 2016 | Dubai
MRO Middle East
The MRO Middle East is the opportunity for highlighting all aspects of the MRO industry in a region with its rapid growth.

16 – 21 February 2016 | Singapore
Singapore Airshow
Asia’s largest aerospace and defense event ranges among the most renowned air shows in the world.

25 – 26 February 2016 | Moscow
MRO Russia & CIS
MRO Russia & CIS brings together Russian & CIS airline technical and engineering management with MRO providers, component suppliers and manufacturers.

14 – 16 March 2016 | Casablanca
MRO Africa
Representatives of African airlines meet with experts in maintenance issues, and the latest industry trends are presented.

Follow this link to find out more about Lufthansa Technik’s participation and presentations at upcoming fairs and conferences: lufthansa-technik.com/events
Our range of products and services can be tailored for commercial and private fleets of every mix, kind and age.

**Total Support Services**

Total Support Services are the first choice for any customer wanting to enjoy cost-efficient and reliable flight operations and focus on his core business at the same time.

- Total Operational Support (TOS®)
- Total Technical Support (TTS®)
- Total Base Maintenance Support (TBS™)
- Total Component Support (TCS®)
- Total Engine Support (TES®)
- Total Landing Gear Support (TLS™)
- Aircraft Leasing & Trading Support (ALTS®)

**Single Services**

Single services and shop load events such as letter checks, engine overhauls or repairs of single components are at the core of a unique assembly of products and services.

- Aircraft Services
- Component Services
- Engine Services
- Landing Gear Services
- VIP & Executive Jet Solutions

**Special Services**

The world’s leading manufacturer-independent MRO provider offers a product portfolio reaching beyond traditional MRO services from the manual.

- Composite Repairs (ARC®)
- Engine Parts & Accessories Repair (EPAR)
- Maintenance Management Services (MMS)
- Logistics & Training
- AOG Services
- Surface treatment

**Original Equipment Innovation – OEI**

Lufthansa Technik has successfully established a line of cabin products.

- Cabin Management & IFE Systems
- Aircraft & Cabin Equipment
- Connectivity
- Patient Transport Solutions

**eServices**

Lufthansa Technik’s Technical Operations Websuite manage/m® allows operators to manage their technical operations via a web-based system.

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](http://www.lufthansa-technik.com/services)
Boeing

737

Boeing 737
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services:
  - CFM56-3
  - Completion

737 NG

Boeing 737NG
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services:
  - CFM56-7B
  - Completion

747

Boeing 747
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services:
  - JT9D, PW4000, CF6-80C2
  - Completion

757

Boeing 757
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services:
  - RB211-535
  - Completion

767

Boeing 767
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services:
  - PW4000-94, CF6-80C2
  - Completion

777

Boeing 777
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services:
  - GE CF34
  - Completion

777X

Boeing 777X
- in preparation

787

Boeing 787
- Line Maintenance
- Component Services
- Engine Services:
  - CFM6-80C2, PW4000-94

MD-11

Embraer
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services:
  - CF34
  - Legacy, Lineage

Regionals

Q-Series

Bombardier Q400
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services:
  - PW100, PW150

CRJ

Bombardier CRJ
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services: GE CF34

CSeries

Bombardier CSeries
- in preparation

Bombardier CSeries
- in preparation

Airbus Corporate Jets

Boeing Business Jet

Airbus Corporate Jets

Bombardier Q400
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services:
  - PW100, PW150

Bombardier CRJ
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services: GE CF34

Bombardier CSeries
- in preparation

E-Jets

Embraer
- E-Jets 170/175, 190/195
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services: GE CF34

Business Jets

ACJ

BBJ

Bombardier
- Challenger, Learjet, Global Express
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services: CF34

Embraer
- Legacy, Lineage
- Line Maintenance
- Base Maintenance
- Component Services
- Engine Services: CF34
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Let’s talk about solutions

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