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AIRBUS CUSTOMER SERVICES – INNOVATION IN SERVICES

Airbus Customer Services' prime role is to help its customers operate their Airbus fleet safely, profitably and satisfy their passengers. A team of roughly 4,000 people cover all areas of support from technical aspects and spare parts, to crew and personnel training and aircraft upgrades. Hundreds of technical specialists provide around-the-clock advice and assistance to Airbus customers 24 hours a day, seven days a week. Additionally, there are more than 240 customer support representatives positioned around the world in more than 160 cities close to the airlines they serve, and an international network of support centres (Toulouse, Washington D.C. and Beijing), training centres and spares' facilities.

Recently adding to these, in 2014 Airbus commenced operations of its new subsidiary in Malaysia named "Airbus Customer Services Sdn Bhd". The new entity will increase proximity to Airbus' customers located in the South-East Asian region, supporting the region's high fleet growth. This new operation in Malaysia represents an expansion of Airbus' global network of customer support centres providing 24/7 specialised major aircraft engineering and repair services.

As airlines' needs have evolved throughout the years to adapt their operations to new markets, Airbus has mirrored its Customer Services organisation to the airlines' in Maintenance & Engineering, Flight Operations, Training and Material management. It has also adapted its support to the new generation of aircraft while taking advantage of the benefits brought by new technologies. Examples of recent innovations in Airbus support include:-

AirN@v – Major 'firsts' in technical data for civil aviation are now incorporated in the advanced technical data consultation tool 'AirN@v'. These innovations include: Use of Virtual Reality clips in the A380 Aircraft Maintenance Manual, 3D models of aircraft parts, direct interfaces between technical manuals and aircraft systems; and dynamic wiring to generate selected wiring graphics and descriptions.

AIRTAC – To minimise AOG time for trouble-shooting or repairs, AIRTAC, a state-of-the-art call centre operates 24 hours, 365 days a year with dedicated specialist engineers and fitted with the most innovative technology. AIRTAC is part of a wider call centres approach that provides all Airbus operators with a global 24/7 assistance for all AOG matters. In the scope of the dedicated A380 support, AIRTAC is able to provide real-time analysis and recommendations to customers even before they request it or before the aircraft lands, through satellite and ground communication networks linking the aircraft, the airline, Airbus and suppliers. It helps also improving engineering efficiency by quickly identifying recurrent events and minimizing the time to develop and implement the technical fix.

Customer portal and forums – To provide operators around the world with easy access to the latest information and to help them reduce their costs, Airbus offers its customers a fully personalised internet-based support environment. A secure portal (www.airbusworld.com) gives them access to a comprehensive selection of tools that includes on-line technical documentation, mechanical drawings, warranty claims, the new service order centre, e-

Airbus Press Office
1, Rond-point Maurice Bellonte
31707 Blagnac Cedex, France

Phone +33 (0)5 61 93 10 00
Fax +33(0)5 61 93 38 36
E-mail media@airbus.com

Training as well as an on-line forum with the customers for an interactive identification and resolution, between airlines and Airbus, of in-service aircraft problems (FAIR).

Airbus is also spreading its support capabilities to cope with its ever increasing number of customers worldwide, in particular in the following areas:

Material, Logistics and Suppliers support the complete life cycle for all Airbus aircraft regardless of the aircraft's age with a full portfolio of flexible value adding services and tailored support modules according to customer needs. This allows Airbus customers to concentrate on their core business - the safe and cost effective operation of their aircraft. Knowing that keeping customers' fleet in the air is essential to customers' success Airbus is dedicated to delivering the right part, at the right place, at the right time and at the right cost.

Providing state of the art Material Planning, assuring worldwide material availability, offering innovative Logistics and Inventory Management Services and allowing the customers to rely on Airbus to get the best from its suppliers are part of a modular service portfolio offered by Airbus that helps operators to achieve higher utilisation times.

Customers place their spare part orders either online via AirbusSpares (at http://spares.airbus.com) or they contact the 24/7 Customer Order Desk (COD), the single point of contact for all spares orders and inquiries orders. On a global stores area of 66,000 square metres material, logistics and suppliers stocks about 3.4 million parts and 140,000 tools, representing more than 120,000 and 20,000 different part numbers. These parts are stocked at the spares centres in Hamburg and regional in Washington, Beijing and Dubai with satellite stores in Frankfurt and Singapore. With this global stores network Airbus coordinates the worldwide support of all Airbus aircraft with spare parts, tools and modification kits.

Training – Airbus training centres in Toulouse, Miami, Hamburg, Beijing and Bangalore offer a broad range of customised, interactive courses with constantly updated programmes and equipment to train flight and cabin crews as well as maintenance personnel. These include highly-efficient courses such as the new Airbus Pilot Transition (APT) course which incorporates the latest Maintenance/Flight Training device, to name one of them. Airbus developed an A320 Family to A380 Cross-Crew-Qualification (CCQ) course, plus a new concept practical and operationally-orientated maintenance training course known as Airbus Competence Training for maintenance (ACT), as well as maintenance training courses for familiarisation with new technologies introduced on the A380.
In addition to normal operations, operators are frequently faced with the need to perform technical flights (following aircraft maintenance visits, after major repairs, after painting, etc.). Flight crew's knowledge, skills and attitude required for these technical flights go beyond the ones expected from a 'standard' airline pilot and for which they have been trained. To support Airbus customers in this need of enhanced safety and quality, Airbus offers a Technical Flight Familiarisation course for its Fly-By-Wire aircraft.

Airbus customer services develops a panel of services for operators in order to complement the traditional support. The aim is to maximize customer satisfaction and aircraft value on fleet life cycle. This includes:

Integrated maintenance services – Airbus Flight Hour Services (FHS)
Because one size does not fit all and Airbus recognises that each customer has specific needs, Airbus has developed a range of services called "Airbus Flight Hour Services" from which customers can choose a customised solution. This approach enables Airbus to tailor the products and services its customers individually need in line with their outsourcing policy. These services are designed to increase aircraft availability, significantly reduce operating costs and enhance the quality of operations.

While Airbus FHS helps minimise aircraft on-ground time by providing even faster and simpler access to pooled spare parts and maintenance services at predictable rates, Airbus FHS Tailored Support Package (TSP) is a comprehensive package that comprises maintenance, engineering, airframe maintenance and component support. With FHS/TSPs Airbus thus provides a customised service solution that really fits each customer's organisation, in line with its outsourcing policy.

Material Management
Airbus Managed Inventory - (AMI)
Anticipating the increasing trend to outsource part of the maintenance operations, Airbus engages in managing the entire supply chain of its customers by delivering customer integrated services such as Airbus Managed Inventory (AMI). AMI automatically replenishes high usage, expandable parts of the customer's inventory by automating the replenishment process and managing material procurement on a standard routine basis, if required on a consignment basis. It reduces significantly the cost of Airbus material ordering, whilst optimizing inventory levels and cash flow. AMI can be fully customized to the customers' maintenance needs, such as on a part number, scope and service level. This allows customers to achieve the optimum balance between cost and material availability, while being adaptable to their fleet development.

Airbus will further move to proactive parts provision, by linking the supply chain with the aircraft needs (e.g. linking to the aircraft health monitoring system) and to joint planning and forecasting with its customers to ensure aircraft availability at optimized supply chain cost.

Satair Subsidiary: In January 2014, Airbus and Satair opened their first joint parts support and distribution facility, "Satair Airbus Singapore Centre" (SASC), located at the Seletar Aerospace Park in Singapore. The 16,700 square meter facility will serve customers in the Asia-Pacific region, consolidating the supply chain operations of both Airbus and Satair.

Building on both companies' existing presence, SASC has the capacity to almost triple the scope of parts handled. The centre will become the primary spare parts hub for Airbus in the region, providing 24/7 support to airlines and MROs, 365 days a year. The opening consummates the merger of Airbus' former Material and Logistics Management function with Satair – which has now become one common organization: 'Satair Group'.

Upgrade Services
Through its Upgrade Services business unit, Airbus provides aircraft owners and operators with optional modifications of the in-service fleet, in order to help customers maintain the highest residual values of their assets. These modification services include system upgrades (mechanical, structural and avionics) ensuring the aircraft will benefit from recent technologies and can comply with the evolving regulations; and cabin upgrades (interiors, cabin-related

systems) for which Airbus can manage the complete project integration for both simple changes and complex reconfigurations.

For each of these areas, Upgrade Services provides the certified service bulletins and associated kit of parts, revised aircraft documentation and aircraft configuration follow-up. Due to the growing fleet and strong market, Airbus is increasing its design and production capacity in this upgrades area. Notably in 2013, Airbus Upgrade Services launched the Sharklet retrofit programme for in-service A320 Family aircraft.

E-Solutions :

Airbus uses its technological leadership to provide innovative software tools covering Flight Operations and Maintenance & Engineering which contribute to reduced operating costs, improved aircraft availability and enhanced quality of operations. The most recent innovative tools and services which Airbus has developed for its customer operations include:-

~ iPad Solutions: Airbus has launched “FlySmart” with Airbus Electronic Flight Bag (EFB) applications for iPad. This will provide the same software suite being today available on Windows devices and Airbus platforms through “FlySmart” with Airbus packages.
The first iPad applications include the “Ops Library Browser” to display Flight Operations Manual, and both takeoff and landing for computing accurate aircraft performance. With the development of takeoff and landing applications, Airbus is the first on the market to provide EFB performance applications on iPad.
This iPad initiative is a concrete example of Airbus’ dedication to generating customer value by providing flexible innovative solutions.

~ FEMIS (Flight Efficiency Management Information System) for post-flight analysis. It is used to translate flight data into valuable information to identify sources of savings and improve operations’ efficiency. FEMIS can easily process huge amount of recorded data to draw up statistics and check the assumptions’ accuracy and the procedures’ efficiency. For a given flight, FEMIS can also combine the predicted with the recorded data to compare forecasted flight information with actual data. Aircraft Flight Data Recorder provides flight data to FEMIS and flight planning systems provides forecasted data.

~ AIRMAN, a comprehensive suite of Aircraft health monitoring software tools which simplifies and optimises aircraft maintenance; Airman aims at improving information management and supporting decision making while enabling the analysis of maintenance events and avoidance of unscheduled events. In line technological evolution, Airbus has recently launched Airman Web, an on-line solution which includes additional features.

~ ADOC, a state of the art solution that allows airlines to efficiently handle electronic aircraft documentation through customisation, revision management and publication. Many customers benefit today from this cross domain (Flight Ops and Maintenance & Engineering -M&E), multi fleet software solution, which is now available on line, too.

~ Repair Manager, a new on-line tool that improves the management and assessment of structural damage and repairs for all Airbus aircraft, contributing to increase aircraft availability and maximizing aircraft residual values. The operators’ advantages are the lead-time reduction for analysis and reporting, while easing the external and internal visualization using simplified 3D models;

~ AirPl@n, a comprehensive suite of maintenance programme and planning services that are designed to reduce maintenance costs and increase aircraft availability.

In 2013, Airbus and IBM agreed to collaborate to transform Airbus' fleet solution offerings under the brand "Airbus Smarter Fleet Solutions" (ASFS). This will provide airlines and operators with advanced IT services for maintenance, engineering and flight operations. These fleet service offerings will enhance operational efficiencies, help airlines to manage their aircraft more effectively and improve customer service by smarter use of 'big-data'. ASFS will integrate and also further develop Airbus' current portfolio of software products ("e-solutions"). ASFS will also provide tailored fleet data management using an open, modular and flexible platform.

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