FLYING SUSTAINABLY

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Fleet Management at the Lufthansa Group

Jörg Hennemann, Head of Commercial Fleet Management Lufthansa Group, explains in an interview the strategy behind aircraft purchasing at the Lufthansa Group.

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Aircraft shopping for the Lufthansa Group

Mr Hennemann, what characterizes the Lufthansa Group's fleet?

Our airlines operate a modern and competitive fleet that covers many different market segments. Aircraft of different sizes are deployed. The spectrum ranges from a 76-seat turboprop to the Airbus A380 with more than 500 seats. The Lufthansa Group is a pioneer when it comes to introducing new, environmentally friendly technologies; the latest example is the Airbus A350-900, which counts among the most modern and environmentally friendly long-haul aircraft worldwide.

Jörg Hennemann, Head of Commercial Fleet Management at the Lufthansa Group

Together with your team you are responsible for the fleet's size, composition and assignment for the entire Lufthansa Group. What is especially important in this context?
Fleet planning means designing structures a long time in advance. Currently our focus is on two central themes: we want to further harmonize our Group fleet and strengthen our efficiency. We are proud that the about 190 aircraft we currently have on order will allow us to integrate the most environmental friendly models into our fleet that are available on the market at the moment.

Which role does the topic of sustainability play in this context?
Sustainability plays an important role in all decisions concerning the fleet. And incidentally, we are lucky that ecology and economy go hand in hand in this case. In the area of fuel consumption, for example: this remains the single most important cost driver of an airline. By operating aircraft with low fuel consumption it is not only our costs that fall, but also CO2 emissions. The same is true for noise emissions: new, quieter aircraft mean not only lower airport fees but also a lessening of the burden on people living around airports.

What are your options to further improve the Group fleet's environmental compatibility?
My team and I are active in three areas: firstly – and this is the largest lever – the purchase of efficient aircraft. Secondly, measures on aircraft that increase efficiency or decrease noise. And last but not least, we can influence the manufacturers' development goals related to new aircraft programs.

To which criteria does the Lufthansa Group pay particular attention in planning for and buying new aircraft?
Our decisions concerning the fleet first follow primarily economic decision criteria – only a fleet that can be operated in a sustainably economic way is justifiable from an entrepreneurial perspective. Beyond that, the aircraft needs to fly safely and highly reliably, meet the customers' high expectations concerning the product aboard and, of course, it needs to fit in with the other aircraft in the fleet of the Lufthansa Group. And environmental aspects play an important role – we consider only especially environmentally friendly aircraft a sustainable investment.

Which importance does the topic Research & Development have in selecting new aircraft?
This is an important topic. We are in a constant dialogue with aircraft and engine manufacturers concerning current technology and product developments, to name one example. This means we can contribute our requirements concerning the sustainability of new aircraft programs. In the case of the Boeing 777-9, we are the so-called "launch customer", and have thus taken a role in the front row and been committed for many years to helping develop the specifications of this long-haul aircraft. Another example comes to mind: With the C Series and the A320neo, we have actively supported the introduction of a new generation of especially quiet and fuel-efficient engines manufactured by Pratt & Whitney.

Plus, I don't want to leave it unmentioned that Lufthansa became the first airline worldwide in 2011 to test the use of biofuel under everyday operating conditions.

Which standards and regulations provide orientation concerning the environmental performance of aircraft?
Ordinarily, we take the requirements of the International Civil Aviation Organization (ICAO) as a reference point. In all important areas, such as noise, emissions and CO2 emissions, there are current certification regulations which an aircraft must fulfill. In this context, we pay attention not only to currently applied limits being met, but also future ones. Another important criteria for orientation is different local requirements, such as strict noise limits or emissions-related fees.

Speaking of "Life-Cycle Management": Are optimization measures also applied to the existing fleet to increase the eco-efficiency in flight operations?
Yes, improvements on aircraft in the existing fleet are an integral part of our sustainability strategy. This includes optimizations of engines to reduce fuel consumption, retrofitting aircraft with sharklets, noise-reducing measures, such as vortex generators on the Airbus A320 or specialized linings in the engine air inlets.

What happens to aircraft that leave the fleet?
Some aircraft are flown by other operators after leaving the fleet. But most aircraft that leave our fleet are at the end of their commercial lifespan, while they contain many valuable parts. These aircraft are usually dismantled and usable parts are marketed for further use. The rest of the aircraft is separated by material category for recycling.

When will the first e-aircraft fly for the Lufthansa Group?
At current state of technology the operation of large aircraft with a pure e-propulsion system is not realistic for the foreseeable future. The energy density of batteries is simply too low for this purpose. But we are observing the increased use of electrical systems on board. This trend is set to further increase and help to make aircraft more and more efficient.

New life for old aircraft parts

When the Lufthansa Group withdraws an aircraft from its fleet, it is either sold and then operated by another airline – or recycled. A decommissioned aircraft contains numerous valuable materials and parts. For example, up to 92 percent of a jumbo jet's parts can be overhauled and reused. The components are thoroughly checked, repaired and certified, and then fed back into the component pool.

Dismantling of decommissioned aircraft is the task of Lufthansa Technik Component Services (LTCS) in Tulsa, USA. Since 2012, the subsidiary of Lufthansa Technik has taken apart and recycled 37 aircraft: 30 Boeing 737CLs, five Boeing 747-400s and two Boeing MD11s. At the end of the dismantling process only the fuselage is left, which is recycled as scrap metal.