

# A380

## Airbus tosses the dice



Few corporations the size of Airbus Industrie have experienced a year as troubled as 2006 was for this major EADS company. Three delivery schedule delays for the A380 in 16 months, three Airbus CEOs in four months, billions of dollars lost in efforts to keep customers on board and the program advancing, thousands of layoffs announced, canceled freighter orders: All these events contributed to what the company's 2006 annual report called "A Difficult Year."

That financial statement reported a \$3.32-billion loss on the A380, with another \$1 billion attributed to the A400M and A350—programs also impacted by the A380's problems—in addition to nearly \$1 billion in negative impact from higher-than-expected R&D costs largely related to the A380.

### Conflicting signals

It was an odd juxtaposition for Airbus, as 2006 could be seen as an otherwise banner year—nearly \$33.5 billion in gross revenues and a record 434 aircraft delivered.

However, it also was the first year since 2000 that Airbus fell behind Boeing in new aircraft orders. While many factors contributed to that, even Airbus officials say a top priority is to restore confidence among customers and suppliers "by delivering on promises."

In short, the greatest loss of all for Airbus

in the past few years has been that of credibility.

Airbus is forecasting another delivery record this year, with up to 450 new aircraft. Whether launch customer Singapore Airlines will see among them its first A380 remains an open question, although Airbus staunchly insists there will be no more delays. However, similar assurances were given when the first delay was announced, and the second, and third.

Indeed, the A380 order book barely held its own in 2006, with only the conversion of eight passenger options by Qantas and nine by Singapore offsetting the cancellation of 10 freighters by FedEx (which immediately replaced them with 15 new Boeing 777 freighters).

"We made the decision to purchase the new Boeing freighters after Airbus notified us that there were going to be significant delays," a FedEx statement explained. "Global demand for air cargo and express continues to grow, and we needed the aircraft to fill our customers' needs. The availability and delivery timing of this aircraft [the 777], coupled with its attractive payload range and economics, make this choice the best decision for FedEx."

It was a view that would continue to haunt Airbus, following a year in which the 17 option conversions, down from 20 new orders in 2005, put the A380 alongside every other Airbus class in reporting fewer orders for 2006 than the previous year.

by J.R. Wilson  
Contributing writer

*For Airbus, 2006 was a year of enormous losses resulting from difficulties with the superjumbo A380. Yet in other ways it was a banner year for the company, with a record number of aircraft deliveries and nearly \$33.5 billion in gross revenues. Arguments about the A380 and its ability to compete against Boeing's aircraft are intense, with experts on both sides convinced that what opponents see as drawbacks are actually advantages.*

### **Credibility and confidence**

The conversion of 10 other freighter orders (five each by ILFC and Emirates) cut the total A380 freighter tally by two-thirds for 2006. When UPS then canceled its 10 freighters, Airbus was left with none.

The UPS explanation went straight to the heart of Airbus' customer confidence and credibility debacle.

"Our original order was supposed to be delivered from 2009 through 2012. When they announced delays to the freighter program in October 2006, they gave us a new date of May 2010....Based on what we knew, working closely with Airbus, we didn't feel that May date was realistic," says UPS spokesman Mark Giuffre. "Just a few days before we made the announcement of the intent to cancel, they presented us with a revised delivery schedule that showed...about a three-year delay. While we felt that was more realistic, we signed an agreement that would give us a chance to reevaluate the order.

"A few days later, [Airbus president Louis] Gallois was quoted as saying they were moving resources away from the freighter program to support the passenger version and laying off 10,000 people....At that point, we really lost confidence that they were serious about or would be able to meet the schedule they presented to us....So we announced we would can-

cel officially at the first available date in our contract, which will be sometime later this year."

The A380's remaining passenger customers also voiced doubts, with Virgin Atlantic delaying orders and Thai Airways threatening cancellation. But as both Boeing and Airbus agree, there is a strong market for widebody jumbos as passenger numbers continue to rise. Given that both are already at production capacity, any decision on an order placed years ago as part of a long-term plan is much more difficult for a passenger airline than a cargo carrier.



*“There is no question of any future delay; we’ve had enough of that. I’m not concerned at all in that respect and neither are the airlines.”*

**Richard Carcaillet,**  
A380 product marketing manager

Emirates CEO Sheik Ahmad bin Saeed Al Maktou—the A380’s largest customer—voiced the frustration echoed by others: “We are determined to claim compensation. We’ve been badly hurt by this delay. After the first delay, we had the option of canceling the deal, but we didn’t—maybe because the results would have been worse.”

Airbus was forced to add even more to the billions of dollars in penalties and price cuts on other aircraft it already was using to keep the rest of its A380 order book intact. Thai, for example, got a discount of over 10% on eight new A330s, reportedly only part of its compensation for the delay.

These and other escalating costs, plus delayed income from postponed deliveries, forced Airbus to find ways to cut overall expenditures by \$6.6 billion through 2010 and \$2.6 billion a year after that. That led to the announcements UPS cited in pulling the plug on its A380 order.

But laying off roughly 18% of its workforce



*The L-1011 survived, for a time, only because of a bailout by the U.S. government.*

### **Order book**

*As of May 10, Airbus reported 160 firm orders and commitments, all for the passenger version of the A380, from 14 customers.*

- Air France: 10*
- China Southern Airlines: 5*
- Emirates: 47*
- Etihad Airways: 4*
- International Lease Finance: 10*
- Kingfisher Airlines: 5*
- Korean Air Lines: 5*
- Lufthansa: 15*
- Malaysia Airlines: 6*
- Qantas Airways: 20*
- Qatar Airways: 2*
- Singapore Airlines: 19*
- Thai Airways International: 6*
- Virgin Atlantic Airways: 6*

over four years, and possibly downgrading or closing some of its 16 facilities, brought a swift reaction from Europe’s powerful unions. Work slowdowns and strikes further undermined customer confidence. It also turned both Airbus and EADS into a hot potato for European politicians, especially in France, which still owns 15% of EADS.

### **Assessing the causes**

While Gallois blamed a weak U.S. dollar for the cutbacks, he also admitted the A380 delays had been the “trigger” and that the company “was not efficient enough.” Gallois had replaced Christian Streiff only months after Streiff replaced former CEO Gustav Humbert, whose own resignation was accompanied by those of A380 program manager Charles Campion and EADS co-chief executive Noel Forgeard, whom Gallois had replaced in that role in July.

Indeed, some observers cite the EADS corporate structure as part of the problem. Gallois, the former CEO of Aerospatiale, must share authority at parent company EADS with fellow co-CEO Tom Enders and two cochairmen who represent the company’s French and German shareholders.

One of the A380’s harshest critics, Richard Aboulafia of The Teal Group, believes Humbert and Forgeard pushed the A380 into a role of undeserved dominance at Airbus, but foresees more trouble due to the EADS structure. “With Louis Gallois and Tom Enders, you have two honest and competent guys disagreeing...because of divergent—and perhaps irreconcilable—national goals,” notes Aboulafia.

With demonstration flights and a dual FAA/EASA certification attesting to the aircraft’s “technical integrity,” as Gallois put it, 2006 should have seen a surge in A380 orders. Instead, the stage was set for what some see as the ghost of the Lockheed L-1011—a technically worthy aircraft that survived only because of a bailout by the U.S. government, and only long enough to keep the rival McDonnell Douglas DC-10 from making a profit. That in turn set the stage for McDonnell Douglas’ eventual takeover by Boeing and its replacement as the world’s top defense contractor by Lockheed, which had long since shed its commercial aviation sector.

“There is an analogy to Airbus and Lockheed, but there are also huge differences,” Aboulafia says. “The L-1011 may have been a losing battle, but at least the market was good. Which certainly is not the case here. Also, our definition of scaling has changed radically—500 planes was big then; today it’s nothing.”

### The view from Boeing

Another difference is that Boeing, having held the top jumbo spot for four decades, opted not to compete with the A380 in the superjumbo arena—a decision the company believes has been more than validated, according to Randy Baseler, vice president of marketing at Boeing Commercial Airplanes.

“In the early 1990s, Airbus and Boeing forecasts for these very large aircraft were about the same. As we went through the liberalization of the '90s, and new aircraft with more range and size came along, airlines started accommodating growth more with greater frequencies and nonstops.” After that, says Baseler, “we changed our forecast for these large airplanes dramatically, from about 900 to around 300. Airbus never changed their view; last year’s forecast for the A380 called for 1,263 compared to 325 from Boeing.”

The companies’ priorities became equally diverse, with Airbus putting most of its effort into the A380 and Boeing concentrating on a number of smaller widebodies.

“Through 2003, there were those in the industry who felt Boeing was giving up a major market,” Baseler says. “But in more recent years, I think people are recognizing our strategy is the more correct, especially since, in the wide-body category, we have held about 70% of the market—and 90% of the freighter market in that category since the A380 launched.”

### A different take

Of course, Richard Carcaillet, the A380 product marketing director in Toulouse, France, has a decidedly different take on the market. He also has a remarkably “best face” view of the A380 order book, and of what some consider a bellwether decision by major Airbus (and A380 launch) customer Lufthansa to become the first major airline to order the passenger version of the 747-8. However, those 20 aircraft are going into a fleet where Airbus outnumbers Boeing two to one. Lufthansa also remains one of the A380’s most vocal advocates.

“Those still sitting on the fence are customers who will have to consider their move once their competitors have the A380,” says Carcaillet. “I can well understand a wait-and-see attitude at this point—people want to see this aircraft flying to the home bases of major airlines. But we are not offering production slots before 2011-12, because of the delays, so there is no availability in any case.

“As to Lufthansa, it’s not really a head-to-head competition. Lufthansa explained it was not a comment on the A380 but on capacity re-

quirements of the A380 at one end and the A350 at another, and needing something in between on certain routes.”

Indeed, everywhere that Boeing sees a stumbling block for a superjumbo, Carcaillet sees opportunity.

“With Tokyo-Paris, Singapore-London and others, you have multiple flights within a few hours of each other. So the A380 frees up slots for growth on other routes and is a good step for airline profitability, not just to grow in frequency. If you imagine no increase in average aircraft size around the world, then you will need more runways, more terminal gates, eventually more terminals. Remember, it is not only the first new design in large aircraft in more than 30 years, but takes the lid off potential growth. And with each addition of customer or aircraft, you will see new destinations on the map of world airports.”

### Same data, opposite conclusions

Boeing’s Baseler sees a different scenario entirely: “Airbus is caught in the early 1990s and has not moved on to how airlines have changed their networks and how cities have grown.



Routes no longer connect with just one big hub. Hong Kong connects to a lot of cities and airports. If an airline now flies Hong Kong to Manchester, it will be hard to convince passengers they are better off flying Hong Kong to London, then another short flight to Manchester.”

Before the announcement of layoffs, Carcaillet also felt certain the A380 would move swiftly to its full production capacity of four aircraft per month.

“We expect to hit maximum production in 2010,” he forecast, adding he also believes the



*In March, an A380 was flown to New York's JFK International Airport on a "proving flight."*

"break-even" point for the program will come more quickly than the 420 aircraft EADS is now predicting—a number nearly twice as high as Airbus management touted during A380 development. "That figure is based on provisions that are conservative risk analysis and worst-case scenarios—very, very prudent."

The A380 seems to attract polar opposite views, even when recognized industry authorities look at the same data. For Teal Group's Aboulafia, it is an overweight aircraft hampered by outdated technologies, targeting a minor niche market that could never cover what it is costing Airbus.

But Philip Lawrence, director of the Aerospace Research Centre at the University of the West of England, disagrees thoroughly. He sees the seeds of the A380 in Airbus' long-held belief that Boeing's success was built on its "monopoly product"—the 747—and a perception that it was highly profitable and never discounted.

"That's a basic rule: Larger aircraft are more profitable per unit—and part of a wider theory about the future of air transportation. Airbus has long believed the market will continue to grow at a fast rate—5.5-6% per annum—and between the big hubs you need a larger aircraft," he says. "If you look at the demand coming out of Asia, particularly China, they want to come to the major cities in the West...not the point-

to-point travel that has developed in the States. And that needs something bigger."

As expected, Boeing says Airbus has completely misread every aspect.

"They were so fixated on building the biggest aircraft and beating Boeing, they failed to follow what the market was telling them," Baseler argues. "Their structural weight on the A380 is so heavy because they built a large wing and big body to stretch it to 700 seats, which would be a very efficient airplane. The problem is, there is no market there."

"They just wanted to believe what they had in their market scenario because, from the very beginning, Airbus had three objectives: Have a full market line, have 50% of the market, and make money. Part of a full market line was a large aircraft, and they mistakenly thought we made most of our money from the 747, and that if they could knock us out there they could compete more strongly in all segments. And they have not changed that scenario even though the market has moved on."

### Subtler factors

Lawrence believes the divide between Airbus and its customers predates the A380 delays.

"In 2003, everything was going well for Airbus, and its reputation was on a huge high. One of the first things that soured that was the experience of customers with the A340-500 and 600, which created some negative attitudes that spilled over into a lack of customer confidence in other potential Airbus products," he says. "If you then have problems delivering the A380...that also is not good for confidence. So I don't think the concept was wrong, but the production and delivery schedules were ambitious, and they were not able to meet them."

However, Lawrence believes that there are other factors favoring the A380.

"I'm not convinced aircraft fleet planning is the science some people think it is. I think there are some irrational factors," he says. "If the A380 goes into service it will become a flagship, and people will talk about their experiences in flying in it. And I think it will get momentum and become an aircraft airlines have to have—much in the way of the 747, which had a very difficult beginning."

### Point, counterpoint

"Being a flagship and status symbol isn't enough alone, of course—it has to work economically as well, and I think the A380 will be fine in that respect," says Lawrence. "We keep reading about how crowded the skies are and the congestion around airports. Can you just

*"Our decisions were driven by the size of the market—Airbus seeing a very large market [in the A380 class], Boeing a very small market—so we decided Airbus could have that very large market and we would concentrate on the under-500-seat segment."*

**Randy Baseler, vice president, marketing, Boeing Commercial Airplanes**

keep increasing the number of aircraft? Three A380s are the same as four 747-400s or seven or eight 787s. It's not the right aircraft for every airport, but for the big international hubs and routes with enormous growth—such as London-Dubai and San Francisco-Beijing—you can productively use the aircraft. And I can't see why it couldn't go to Atlanta and other U.S. hubs as well."

But Aboulafia finds that the weakest argument of all for the A380.

"If you look at the congestion numbers, the change to an aircraft the size of the A380 is insignificant. Even if you converted every fleet, it wouldn't impact the growing number of other aircraft—but it would worsen the passenger surge problem for the airports," he argues. "And now British Airways CEO Willie Walsh says the A380 actually manages to restrict capacity at Heathrow due to its behavioral capacity [requiring greater separation of aircraft landing because of wake turbulence created by the super-jumbo]. If that is true, the problem is much, much worse."

Another major argument is over which airframer is producing the most technologically advanced aircraft. Airbus dismisses the 747—including the new -8—as a 40-year-old aircraft that cannot compete with a built-from-scratch new platform such as the A380.

"Many people in industry consider this the very last 747 and the A380 the beginning of its class, with the ability to increase its size," says Carcaillet. "So we bring real capacity steps [that] the airlines have always told us they see in the future."

Boeing counters that the age of a model series name has nothing to do with the technology in a new version, or with how it will fare in the future.

Aboulafia even turns the argument back on Airbus. "Most of the real advances have been in propulsion, and avionics and the latest generation is a notch ahead of what is on the A380," he says. "If it weren't for composites, the A380's best bet would be to stretch, but that isn't easy when you start with a largely metal aircraft, as they discovered with the A350. So the long-term prospects for the A380 have worsened due to technological change—at Airbus, ironically—and market preferences."

### The critical element

Even Lawrence, the A380's staunchest supporter, says, "The critical thing for this program now is to get the aircraft to the launch customers on the schedule that now stands, and that they have positive in-service experience. If

*"We had been asking for some time what is causing the delays and, just as important, for a more realistic time frame of when we could expect the aircraft."*

**UPS spokesman Mark Giuffre, days after the cargoliner canceled its A380 freighter order**

that happens, the program will be a huge success; if they don't, all bets are off.

"My gut feeling, as an analyst, is that it will be okay, but it is in Airbus' hands. If they have another delay, it will be surprising if they don't start to lose customers. It would be an extremely unwelcome disaster that would make recovery very difficult. I wouldn't say fatal, but they have to make sure that doesn't happen."

### A hard road ahead

Even if they do meet those goals, Aboulafia stands by his original assessment—and prediction of a dark period ahead for Airbus.

"The A380 is a poorly thought-out distraction that embodied more hubris than commercial planning.....The best thing one can say is



*Some customers turned to the Boeing 777 when the A380 delays began.*

that, at least in terms of direction, Airbus is on its way back. But it will take a very long time to recover," he predicts.

"Airbus isn't going to fail—the question is, can it get back to parity with Boeing? The most likely scenario is by 2011 Airbus is building about 40 widebodies a year, and Boeing is building six or seven times that. That's a tough environment for Airbus to find the cash for new product development, which leaves them spending a decade in the wilderness trying to get back to equality. It will be a very tough fight. And that's the real takeaway on the A380—not its relevance to competitiveness and quality, but the huge toll it is taking on Airbus' future prospects." **A**