

Ending Case for Part Two

BOEING BETS THE COMPANY

The Boeing Company, a well-known U.S.-based manufacturer of commercial and military aircraft, faced a dilemma in 2004. Long the leader of the global airframe manufacturing industry, Boeing had been slowly losing market share since the 1990s to the European-based Airbus Industrie—now incorporated as the European Aeronautic & Space Company (EADS). In December 2001, the EADS board of directors had committed the corporation to an objective it had never before achieved—taking from Boeing the leadership of the commercial aviation industry by building the largest commercial jet plane in the world, the Airbus 380. The A380 would carry 481 passengers in a normal multiple-class seating configuration compared to the 416 passengers carried by Boeing's 747—400 in a similar seating configuration. The A380 would not only fly 621 miles farther than the 747, but it would cost airlines 15%–20% less per passenger to operate. With orders for 50 A380 aircraft in hand, the EADS board announced that the new plane would be ready for delivery during 2006. The proposed A380 program decimated the sales of Boeing's jumbo jet. Since 2000, airlines had ordered only 10 Boeing 747s configured for passengers.

Boeing was clearly a company in difficulty in 2004. Distracted by the 1996 acquisitions of McDonnell Douglas and Rockwell Aerospace, Boeing's top management had spent the next few years strengthening the corporation's historically weak position in aerospace and defense and had allowed its traditional competency in commercial aviation to deteriorate. Boeing, once the manufacturing marvel of the world, was now spending 10%–20% more than EADS (Airbus) to build a plane. The prices it asked for its planes were thus also higher. As a result, Boeing's estimated market share of the commercial market slid from nearly 70% in 1996 to less than half that by the end of 2003. EADS claimed to have delivered 300 aircraft to Boeing's 285 and to have won 56% of the 396 orders placed by airlines in 2003—quite an improvement from 1994, when EADS controlled only one-fifth of the market! This was quite an

accomplishment, given that the A380 was so large that the modifications needed to accommodate it at airports would cost \$80 to \$100 million.

Even though defense sales now accounted for more than half of the company's revenues, Boeing's CEO realized that he needed to quickly act to regain Boeing's leadership of the commercial part of the industry. In December 2003, the board approved the strategic decision to promote a new commercial airplane, the Boeing 787, for sale to airlines. The 787 was a midrange aircraft, not a jumbo jet such as the A380. The 787 would carry between 220 and 250 passengers but consume 20% less fuel and be 10% cheaper to operate than its competitor, EADS' current midrange plane, the smaller wide-body A330-200. It was to be made from a graphite/epoxy resin instead of aluminum. It was designed to fly faster, higher, farther, cleaner, more quietly, and more efficiently than any other medium-sized jet. This was the first time since approving the 777 jet in 1990 that the company had launched an all-new plane program. Development costs were estimated at \$8 billion over five years. Depending on the results of these sales efforts, the board would decide sometime during 2004 to either begin or cancel the 787 construction program. If approved, the planes could be delivered in 2008—two years after the delivery of the A380.

The Boeing 787 decision was based on a completely different set of assumptions from those used by the EADS board to approve the A380. EADS top management believed that the commercial market wanted even larger jumbo jets to travel long international routes. Airports in Asia, the Middle East, and Europe were becoming heavily congested. In these locations, the "hub-and-spoke" method of creating major airline hubs was flourishing. Using larger planes was a way of dealing with that congestion by flying more passengers per plane out of these hubs. EADS management believed that over the next 20 years, airlines and freight carriers would need a minimum of 1,500 more aircraft at least as big as the B747. EADS management had concluded that the key to controlling the future commercial market was by using larger, more expensive planes. The A380 was a very large bet on that future scenario. The A380 program would cost EADS almost \$13 billion before the first plane was delivered.

In contrast, Boeing's management believed in a very different future scenario. Noting the success of Southwest and JetBlue, among other airlines in North America, it concluded that no more than 320 extra-large planes would be

sold in the future as the airline industry moved away from hub-and-spoke networks toward more direct flights between smaller airports. The fragmentation of the airline industry, with its emphasis on competing through lower costs was the primary rationale for Boeing's fuel-efficient 787. A secondary reason was to deal with increasing passenger complaints about shrinking legroom and seat room on current planes flown by cost-conscious airlines. The 787 was designed with larger windows, seats, lavatories, and overhead bins. The plane was being designed in both short- and long-range versions. Boeing's management predicted a market for 2,000 to 3,000 such planes. Additional support for the midrange plane came from some industry analysts who predicted that the huge A380 would give new meaning to the term "cattle class." To reach necessary economies of scale, the A380 would likely devote a large portion of both of its decks to economy class, with passengers sitting three or four across, the same configuration as most of Boeing's 747s.

Boeing's strategy to regain industry leadership with its proposed 787 airplane meant that the company would have to increase its manufacturing efficiency in order to keep the price low. To significantly cut costs, management would be forced to implement a series of new programs:

- Outsource approximately 70% of manufacturing. Could it find suppliers who could consistently make the high-quality parts needed by Boeing?

- Reduce final assembly time to three days (compared to 20 for its 737 plane) by having suppliers build completed plane sections. Could this many suppliers meet Boeing's exacting deadlines?
- Use new, lightweight composite materials in place of aluminum to reduce inspection time. Would the plane be as dependable and as easy to maintain as Boeing's aluminum airplanes?
- Resolve poor relations with labor unions caused by downsizing and outsourcing. The machinists' union would have to be given a greater voice in specifying manufacturing procedures. Would Boeing's middle managers be willing to share power with an antagonistic union?

Which vision of the future was correct? The long-term fortunes of both Boeing and EADS depended on two contrasting strategic decisions, based on two very different assessments of the market. If EADS was correct, the market would continue to demand ever-larger airplanes. If Boeing was correct, the current wave of jumbo jets had crested, and a new wave of fuel-saving midrange jets would soon replace them. Which company's strategy had the best chance of succeeding?