



Airbus' Overstretched Supply Chain: Just How Far Can You Go Before Your Supply Chain Snaps?

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Casebook by Chuck Munson

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with Erika Marsillac and Tom McNamara

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Erika Marsillac[†] and Tom McNamara[‡]

For decades, companies have been doing their best to increase the performance of, and decrease the costs from, their supply chains. As a result, more and more manufacturers are going farther afield to find suppliers who can provide them with necessary parts and materials at the best cost. Global expansion has given rise to intricate networks and complicated supplier relationships that require highly adept managers to coordinate. Because these supply chains are extremely “lean,” there is very little supplier redundancy or margin for error. But when your supply chain is that lean, the cost of getting something wrong or misjudging a delivery date can be catastrophic. So this begs the question, “Just what is the breaking point of a lean supply chain?” Airbus is about to find out as it fast approaches the limits of its supply chain.

The airline industry is, by its very nature, one of boom and bust, but it seems to currently be in a growth phase. One estimate sets the global market value for aircraft (of all types) at \$4.5 trillion by 2031, with many aging jets that are currently in service needing replacement. Airbus sees most of this growth coming from emerging markets such as China and India, where the rising middle class is keen to travel. In anticipation of this market surge, as well as to meet present

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demand forecasts, Airbus is increasing its manufacturing capacity for single-aisle aircraft at its assembly plant in Alabama in order to augment existing capacity at two other plants in France and Germany.

Airbus is facing a problem that many companies would love to have: an order backlog of 4,341 passenger jets. To meet this outstanding demand, the company believes that it must increase production. But coordinating the work of Airbus' estimated 1,500 suppliers is a Herculean task. And getting more out of its already overstretched supply chain looks to be just as challenging.

The weakest link in Airbus' operation appears to be in the production of one of its best-selling planes, the single-aisle A320. The A320 planes are presently being made at a rate of 40 per month, with output expected to rise to 42 per month by the end of 2012. Ideally the company would like to produce 44 planes per month, but there is a problem. Its supply chain just is not up to the task. A related concern is that these supply chain limitations might also hamper technical upgrades to and future versions of existing models.

Compounding this problem is the trend of supplier consolidation. Quite often, the same supplier company provides parts to multiple aircraft manufacturers. If demand suddenly increases, it can be quite difficult to quickly ramp up production. One of the negative side effects of Airbus' formerly relentless drive toward lean was that excess and redundant capacity has largely been removed from its supply chain.

This constraint doesn't reside so much with the larger tier-1 suppliers, but rather further up the supply chain with the tier-2 and tier-3 suppliers. When it comes to quick changes in output and expanding capacity rapidly, "many small companies aren't up for it," says Robin Southwell, CEO of EADS UK. One reason for this is that some key suppliers were unable to make critical and much needed investments due to the financial crisis of 2008. Their ability to react to changes in the marketplace is now suffering as a result.

Airbus, and its nemesis, Boeing, have been encouraging their larger tier-1 suppliers to purchase smaller partners in their respective supply chains. The logic behind this strategy is that the larger companies, by gaining size and scale, would be more able to adapt

themselves to changes in the marketplace and be more reactive, making the overall supply chain more robust.

Airbus is no stranger to problems with its sourcing network. The company, if needed, is willing to provide substantial financing and technical support to remedy problems in its supply chain, including actually purchasing suppliers, as it has done in the past. But Airbus prefers to have suppliers consolidate among themselves. Airbus is presently hoping that the suppliers of the components that go into fuselages and wings (known as aerostructures) will come together in some kind of consolidation action. The aerostructure suppliers are in the airplane market sector that generally has the lowest profitability, so the logic exists for these companies to come together to develop economies of scale and higher efficiencies.

Tight finances and a difficult economic climate should only continue the trend of supplier consolidations and mergers, thus making Airbus' supply chain even more fragile and susceptible to the vagaries of the market.

When it comes to lean, it could very well be a situation of, "Be careful what you ask for!"

Questions

1. What are some current trends among suppliers in the aviation industry?
2. What steps is Airbus willing to take in order to rectify problems in its supply chain and help suppliers?

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