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Reduced Fleets, Raised Revenue

Many traditional airlines are re-fleeting to gain the operating efficiencies of fewer aircraft types and effectively compete in markets served by their low-cost counterparts.

■ By Vijay Bathija and Peter Berdy | *Ascend* Contributors

During the past several years, many traditional airlines have tried to adapt their business by borrowing pages from the low-cost carrier handbook. In an attempt to lower costs, some major network carriers have simplified their business including reducing their fleet types. Although, for the most part, they have not shrunk down to a single fleet type like many low-cost carriers, by reducing their fleets from numerous types to a handful has brought several benefits, including:

- Higher utilization (considering that an extra hour of utilization does not cost any more in terms of aircraft ownership — leasing or financing — higher utilization typically produces incrementally lower average costs and helps move a carrier toward higher profitability);
- Increased efficiencies in aircraft rotation (fewer aircraft types mean that when aircraft come to a particular hub or focus airport, they can be swapped easily, which results in higher utilization);
- Reduced requirement to invest in spare airplanes, since each spare can cover more operational problems;
- Increased volume discounts due to purchasing more of the same parts and supplies;
- Less training for flight crews and eliminating requirements for multiple type ratings for pilots;
- Reduced training for mechanics and ground support personnel;
- Reduced inventory of spare parts, which would otherwise be required to support multiple fleet types;
- Fewer maintenance personnel;
- Less training of ground, ramp and technical support personnel;
- Faster maintenance repairs and recovery from mechanical problems since mechanics and field personnel are likely to encounter similar problems and solutions on a repetitive basis.

Continuing to reshape itself into a more efficient operation requires careful evaluation of an airline's most expensive investment — its fleet. A common thread among LCCs is fleet simplicity, with some carriers using merely one type of aircraft to serve their entire network; albeit many may have multiple sub-fleets within a single fleet type.

Even sub-fleets with their different components and configurations create additional demands on an airline — scheduling for specific missions, a requirement for different spare parts, maintenance, personnel and training — which can lead to increases in delays and cancellations as well as add costs.

As traditional airlines are pressured to provide low-cost services, particularly in domestic markets, they should look to use the same basic criteria as LCCs when selecting fleet types, which include selecting aircraft that:

- Provide low-cost service to the short- and medium-haul markets they serve,
- Deliver reliable, high-frequency schedules,
- Enable quick-turnaround to minimize ground time,
- Provide operational flexibility,
- Facilitate and standardize training and support,
- Support high-fleet utilization.

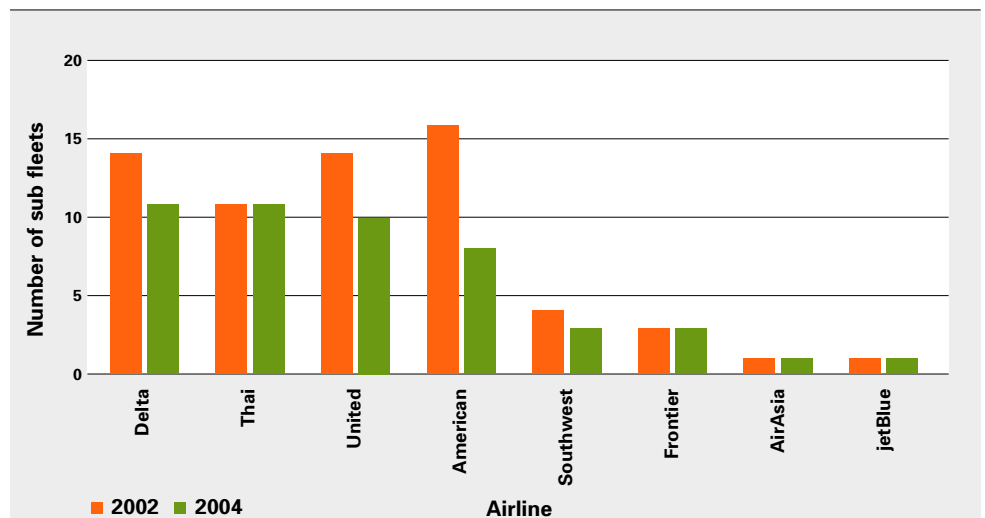
Today, low-cost carriers are even able to offer additional amenities such as leather seats and satellite television and radio, partly because they have lower costs from simplified fleets and the related efficient operations. With savings from more efficient operations, LCCs have been able to attract passengers through better amenities.

Traditional network carriers have also tried to simplify their fleet to some extent, but either by choice or chance, have only partially succeeded, and continue to operate with complex fleets.

What Fueled Complexity?

Because the airline industry is a complicated, highly capital-intensive business, almost all carriers that have been around for many years have complexities that have been added over time. These complexities developed from vari-

Shrinking Sub Fleets



Following the lead of low-cost carriers such as AirAsia and jetBlue, many of today's traditional airlines are reducing their fleet types to lower costs and gain efficiencies in areas such as crew training.



ous sources, such as:

- Mergers that resulted in acquiring different fleet types from partners,
- Gradual introduction of new aircraft that created a larger mix than necessary,
- New technology, such as winglets that addressed specific requirements of a particular aircraft type,
- Weight upgrades for specific missions, such as airplanes to serve high altitude airports or for use with over-water segments,
- Acquiring used planes from other airlines, resulting in different interior configurations or differences in specifications including weight and performance,
- Labor requirements, such as crew seats for longer missions that were not required for all aircraft,
- Work rules that resulted in a cascading effect of moving pilots from the smallest to largest plane when a new fleet type was introduced,
- Onerous return conditions that forced airlines to keep airplanes for a longer period than desired.

Despite the reasons for added complexity, it leads to increased costs. However, taking strategic steps toward proper fleet planning can significantly reduce costs. In recent years, many airlines addressed the need to streamline their fleets and reduce the number of sub-fleet types. Newer carriers have an inherent advantage because they have the ability to take a simplistic approach when planning their fleets, and many of the issues causing complexity for more mature airlines don't exist with the newcomers.

Varying Capacity by Market

An airline needs to determine its ideal fleet requirements based on its network strategy with consideration for commonality, market requirements, aircraft characteristics and its long-term strategy. However, as LCCs have entered the mainstream segment, they have shown that a different fleet does not need to be fitted to every single market to vary total capacity. One way to vary capacity is by the number of flight frequencies operated per day or week.

For example, 375, 500 or 625 seats can be supplied in a market flown with 125-seat aircraft by scheduling three, four or five frequencies. Southwest Airlines, which mostly operates Boeing 737-700s with 137 seats, serves some of the largest domestic U.S. markets. The average market size for Southwest is 2,500 passengers per week. Of its markets, 80 percent have a weekly market size greater than 1,000 passengers. Smaller planes allow flexibility for Southwest, even while serving large markets.

Simplifying the fleet doesn't necessarily mean reducing down to only a single type of aircraft. JetBlue has demonstrated that creative planning can help airlines increase from one fleet type to two without adding too much complexity. When jetBlue ordered smaller Embraer regional jet aircraft to complement its fleet of Airbus A320s, it ensured that crewmembers would not be required



Photo courtesy of Boeing



Photo courtesy of Airbus

Under the traditional low-cost carrier model pioneered by Southwest Airlines, carriers typically use a single fleet type to minimize costs associated with training and maintenance. Although airlines such as jetBlue have added a second fleet type to reach additional markets, the fleet remains relatively simple compared to many network carriers.

to move from one aircraft type to another. For example, if a pilot of a larger aircraft leaves the airline, he or she is generally replaced by a pilot of a smaller aircraft. This results in double training costs — additional training for this pilot as well as for the new pilot of the smaller aircraft. By isolating its fleet types, jetBlue should continue to reap the benefits of fleet simplicity even when utilizing two fleet types. By not basing salary on aircraft type, there's reduced incentive to move from one plane type to another, minimizing costly retraining.

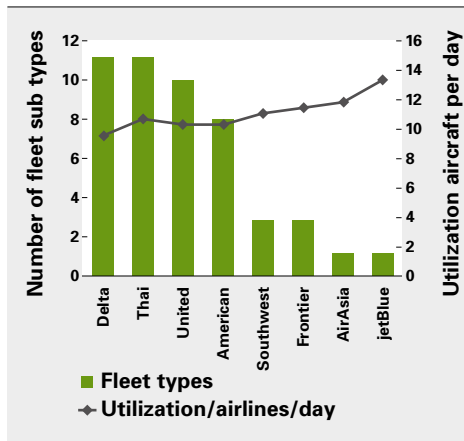
Another important component of a simplified fleet is to examine the tradeoffs between new and used airplanes. New airplanes typically are more attractive to LCCs than used ones for several reasons, including:

- Selection of the exact specifications to fit the airline's requirements;
- Enjoyment of a maintenance "honeymoon" period, where the new fleet requires minimal maintenance attention during its first few years of service;
- The "new car smell," where a new plane can have improved passenger acceptance and likelihood for repeat business;
- Dependability and reliability that comes with new equipment;
- Benefits of technology, including meeting or surpassing regulatory hurdles such as noise regulations, improved fuel performance and longer intervals between major maintenance work;
- Improvement of the morale of employees, who are likely to be proud of their airline taking new planes and may reflect this in their attitude toward customers.

On the other hand, LCCs as well as traditional airlines still consider used airplanes for several reasons, including:

- Lower lease costs,
- New planes may not be available for the carrier's immediate needs,
- Timing and availability of aircraft and replacement parts,
- The airline may already have the fleet type and is seeking more of the same aircraft,
- Airlines may already be familiar with maintenance and operation of the used planes they select.

Number of Aircraft Types and Utilization



The utilization of the aircraft appears to be closely related to the number of fleet types. Utilization has an inverse relationship to number of fleet types — the higher the number of fleet types, the lower the utilization.

Regardless of whether an airline selects new or used aircraft, leases or purchases airplanes, or has more than one fleet type, some effort has been made to simplify its fleet, and many traditional airlines have reduced the number of fleet types they operate because of cost pressures and LCC competition.

Economic and practical benefits of fleet simplicity have forced many carriers to address the issue. Start-up carriers may have an advantage because they can plan in advance to have the type of fleet they want. Many have chosen a single fleet type, gaining the technology benefits associated with new aircraft. Network carriers, especially those with large numbers of airplanes, have to deal with issues that can be resolved only over time. They need to have adequate capital to renew fleet as well as the flexibility to return older airplanes.

Even when a decision to simplify an airline's fleet is made, it may take years to achieve the goal due to capital needs and delivery requirements. However, with adequate planning, a carrier can achieve a simplified fleet.

In an environment where revenues have continued to trend downward and costs are less controllable, fleet simplification can help reduce costs. Carriers focusing on fleet simplification, whether legacy or low cost, will reap benefits of increased productivity of their assets. **E**

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+count it up

370,000 — Additional trans-Atlantic seats available during the summer of 2005 versus the same period the previous year.

75 — Percent quieter (20 decibels less) that today's aircraft are versus those in the 1960s. They are also 70 percent more fuel efficient.

6,500 — Number of additional flights from the North America low-cost sector last summer, representing 1.1 million additional seats versus the same period in 2004.

80 — Percent Europe plans to reduce air transport-related accident rates by 2020 through new technology, operational and regulatory initiatives, and measures to decrease human error.

1936 — Year the Douglas DC-3 transport planes entered airline service in the United States. They became the most widely used airliners in history.

5.9 — Percent growth expected for airfreight companies between 2005 and 2023, generating the need for more than 700 new and 2,400 converted freighters, according to Airbus.