



Horses for courses

Bernie Baldwin looks at how regional airlines and low-fare carriers come to their decisions on which equipment they should use.

Over this decade there has been an abundance of new aircraft types coming to the market, either as clean sheet designs or major upgrades. Which aircraft an airline chooses depends on a range of parameters, mostly defined by the carrier itself based on the business model it decides to follow, but obviously also including the demographics of each and every route it flies.

“Done properly, there are a whole host of inputs which impact aircraft selection,” observes John Mowry, managing director (New York), Alton Aviation Consultancy. “An airline will, properly, be looking at a bottom-up cost – what it costs to operate the aircraft and then what is the revenue it can generate from operating that aircraft. Naturally, that varies depending on the particular aircraft type.

“If you start out on the revenue side and the variables there, they’re going to be looking at the demand at different prices, how much of that demand is coming for an economy fare and how much is coming for a business class,” Mowry continues. “They wouldn’t just be looking at it as an average for a year, they would be looking at seasonality effects as well – to project out what sort of revenue can be generated.”

DIFFERENT DYNAMICS

Enda Clarke, the consultancy’s managing director (based in Dublin), uses charter carriers as a good comparison to a scheduled carrier to explain how fleet planning thought processes differ. “Airlines exist on their reputation and the equipment they choose is very much part and parcel of that,” he remarks. “Charters are selected

more for package holidays and not so much about the passenger experience. It’s more about getting to your destination as cheaply as possible. So you see a different dynamic between those two market segments [where aircraft choice is concerned].”

As noted, the business decision of whether to be a full-service carrier (FSC) or a low-fare airline (LFA) or maybe a hybrid – somewhere in between where you offer a certain amount of value, but you may have fully unbundled services too – affects fleet decisions. And if they are going to use a low-cost business model, it could be in the ‘pure’ sense like Spirit or Wizz Air, or perhaps be a JetBlue-like model, where more than one aircraft type is used.

“Well, the desire for fleet simplification and the scale of the airline will oft times determine whether or not they are going to use multiple types of equipment in the seat,” Mowry comments.

As with most decision making at airlines nowadays, IT applications are available to assist fleet planners in their assessments. “They’re going to have systems which track costs and revenues for route profitability type of analysis,” Mowry explains. “An airline will often be optimising their existing mix of fleet and network based on route profitability.

“The systems will vary,” he continues. “Some airlines will run maybe a Lufthansa

Operators have in the past decade seen the re-engining of workhorses like the A320 and B737 families, as well as new and upgraded types become available such as Embraer E2s, Sukhoi SSJ-100s and Airbus A220s, the latter embraced whole-heartedly by airBaltic.

Systems application, others may be running Sabre. In service, some of those types of tools are used continually to optimise. But when it comes to making the decision, a lot is still done using basic Excel spreadsheets.”

Clarke picks up on his colleague’s point. “When we are working within airlines with sophisticated financial models within Excel, they take in all the parameters around the operating costs of different aircraft models – the maintenance costs, the introductory costs of bringing those aircraft into your fleet and so on. That will differ depending on whether you have the same aircraft type or whether you’re bringing a brand new aircraft type into the fleet.”

PROFITABILITY PARAMETERS

According to Adrian Young, a senior aviation consultant at To70, the Netherlands-based aviation consultancy, the first and most important principle in the fleet planning process is determining how to be profitable on the range of routes that an operator serves. “A broad set of parameters will be used to make this analysis,” he notes, concurring with Alton Aviation’s view.

“The analysis is, in part, related to the costs made by the operator itself and, in part, by comparison with its competitors. A non-exclusive list of parameters would include: the average fare price on the route; the direct operating costs for the route; the number of seats that are offered against the demand on the route; the frequency of the service; and the costs,” Young elaborates. “The operator will be reviewing the costs of each possible aeroplane type that can be used against the above – and other – costs.”

Just occasionally, depending on where in the world they are based, airlines have to consider the facilities at the airports to which they fly. Boarding and disembarking procedures at different airports can involve the use of jetbridges or using air stairs with passengers having to walk to the terminal or be bussed from remote stands. At very small airports, regional airlines may need aircraft types with built-in air stairs.



Airport facilities can play into an airline’s fleet considerations with varying boarding and disembarking procedures.

“Very few aeroplanes with more than 50–70 seats are wholly self-handling. Where the Dash 8s, Saabs and ATRs are, the larger regional jets are not,” Young notes. “The B737 is available with a built-in air stair. Ryanair operated them at one point. This allows the operator to seek reduced handling costs. However, the system is heavy and costs fuel, so it is not popular.”

Returning to the aircraft now on offer, the airline industry has seen the re-engining of its workhorses – the A320 and B737 families – as well as new and significantly upgraded types in the 70-150 seat market (E-Jets E2, A220-100/300, MRJ70/90 and SSJ100) available for selection during this decade. Those thinking of long-haul, low-fare services have had the Boeing 787 family, Airbus A350 family and the A330neo pair to consider.

Finally, the turboprop market has seen increased capacity on the ATR 72 (certified for up to 80 seats) and the Bombardier Q400 (certified for up to 90 seats).

INCREASED COMPLEXITY

Mowry assesses how these developments have changed the thinking of airlines when they come to choose a new fleet. “They’ve definitely had a positive impact, as with new technologies come greater opportunities. But the formula becomes a significant level of complexity greater,” he explains.

“We’ve seen strategies with airlines choosing end-of-line A320ceo, brand new,

straight off the production line from Airbus. The same with lessors looking at end-of-line aircraft because of their reliability, while others have taken the plunge with new-engined aircraft and are having to suffer the consequences of the teething problems that are being experienced right across the industry on the B787, down to the A320neo, which may also occur with the B737 MAX and whichever new type comes into the equation in the future. So, as I said, it makes the whole thing a lot more complex for airlines,” Mowry comments.

“In certain respects, with new technologies you are crystal ball-gazing. You’re relying on what the OEMs are saying in terms of fuel performance and efficiencies, whereas you have proven data available with in-service aircraft,” he adds. “If you look at entries-into-service (EIS) recently, I think the GE-powered B787 hasn’t been without challenge but far less than the Rolls-Royce Trent-powered B787. So some of the more advanced technologies are that bit harder to get right.”

HEART OF THE MARKET

The Alton Aviation executive has been observing where markets are favouring certain types – or not. “The heart of the market is still that 150-200 seat class – the B737 and A320 core of the market. The CFM LEAP engine has probably had a little bit better EIS than the Pratt & Whitney GTF, and so I think there are some interesting





order dynamics there. My perception is that new orders for A320neos powered by GTFs have slowed a little bit," he reports.

"Candidly, I don't think any of the smaller aircraft have sold particularly well so far. The Embraer E2 family and the A220 [former C Series] – ultimately I think both programmes will probably be OK, but the market size is much, much smaller than for large single-aisle aircraft," Mowry continues. "The MRJ has its own challenges, particularly with respect to scope clauses. As for the Superjet, one of the big issues is

OEM support, both on the airframe side and on the engine side."

To70's Young highlights the fact that the re-engined options are driven by costs and explains the dilemma for fleet planners. "The age of an aeroplane and its expected service life versus the costs will influence the owner's decision. A re-engined type will also have a higher resale value, making it more attractive over an older, unmodified, tail of the same type. A similar set of deliberations applies to the option of introducing or improving winglets," he indicates.

An airline's fleet choice may depend on the operating model and whether they are a traditional low-fare carrier, or provide more of a hybrid service such as JetBlue.

Mowry returns to how strongly a fleet choice depends on the airline itself, this time in what it is already operating. "We've done work for airlines where we have recommended something based upon the market conditions and the availability of the aircraft that they should be taking – mid-life, proven technology narrow-body aircraft," he says. "With a different type of operator, maybe they should be looking at new aircraft. This will depend upon their financing strategy, whether they want to lease the aircraft, whether they are going to own these for 25 years or whether they are going to re-fleet in five or six years' time.

"So all those dynamics are taken into account. And they're very much not a one-size-fits-all solution," Mowry concludes. ■



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