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# In search of the new jet age

## Where does the turboprop now fit in a market being redefined around the new breed of regional jet?

TIME WAS WHEN the regional-aircraft industry was focused on who would win the battle to build a family of 70- to 120-seat jet-powered aircraft. Strategists toiled to demonstrate how such a family would sit beneath the fleets of the majors. Much has changed since then.

Now, the focus has clearly shifted down to the 50- to 70-seat regional jet, and possibly even further to 30 seats, raising the equally tricky strategic question of where that leaves the range of turboprops which now occupy the niche.

The debate has been bubbling under for a while, but has heated up over the last year for at least a couple of good reasons. It has been helped in part by the overdue bout of industrial restructuring which has begun to give a little more order to what has been a woefully fragmented market.

The year began with the official launch of the Aero International (Regional) venture, bringing together British Aerospace and ATR partners Alenia and Aerospaiale. A couple of months later, Daimler-Benz Aerospace (DASA) began its retreat from an over-ambitious expansion with the ending of support for Fokker and the subsequent sale of Dornier to Fairchild.

As a result, the battle between Fokker and BAe Avro centring on the 100-seat regional-jet market has faded, to be replaced with a broader contest between the growing AI(R) and Bombardier groups.

Perhaps more importantly, the success of the 50-seat regional jet has become difficult to ignore. Since its debut at the end of 1992, Bombardier has clocked up close to 200 sales for its 50-seat Canadair Regional Jet (CRJ). In 1996, the performance visibly stepped up a gear, with Bombardier taking in 60 new aircraft orders and 73 options. The outlook for 1997 is looking as strong, with another 37 aircraft ordered in the opening months.

Embraer has followed suit with another 60 orders over the year for its EMB-145, deliveries of which began towards the end of the year. The Brazilian manufacturer is optimistic that it can convert more of the 200 options and letters of intent which it still holds from the

early days of the programme.

On a rough calculation, that means that the orders for the 50-seat regional jet were three times the number received by the six turboprop types still in the 40- to 70-seat market. The regional-jet sales had already nudged ahead in 1995, but, in 1996, there was a landslide.

The rush is on to launch more. Bombardier has already introduced the 70-seat CRJ Series 700, with three firm orders from Brit'Air and says that it has another 28 "conditional" orders in hand.

AI(R) is working up a case for launching a 58-seat and 70-seat AIR JET family, with the hope of a launch some time around mid-year, provided that it can convince the joint-venture partners that they can make money on the \$1-1.2 billion project. Embraer is still toying with the possibility of new versions above or below the EMB-145.

Fairchild Dornier's progress towards putting turboprops on the 328 could stir up the debate still further, taking the fight down to the 30-seat sector. Engines have been selected and a first flight is



Next stop the 30-seat regional jet?

being targeted for the start of 1998.

All of which begs the question of where the turboprop goes from here — a topic of more than academic interest to Bombardier and AI(R), given their continuing commitment to the Dash 8 and ATR ranges. Perhaps, unsurprisingly, their strategic forecasts suggest that there will be room for both.

Experience from the first four years of CRJ operations gives some comfort. Bombardier's analysis suggests that around only 11% have been used as direct turboprop replacements, with another 17% to "supplement" existing turboprop operations. The largest portion has been used on new routes and to replace or supplement the existing jet-aircraft services, with a

type more suited to the economics of regional operations. AI(R)'s analysis is even more optimistic, suggesting that only 20% of the new regional jets have strayed directly on to turboprop territory.

The manufacturers are also at pains to point out the difference in route length which exists between the types. Around half of turboprops are operated on routes of 370km (200nm), about the average length for a regional airline, and perhaps only 20% stray upwards of 550km. The regional jets have averaged sector lengths of 710km.

AI(R) adds that issues of economics should help to keep the difference alive in the minds of airline customers. Chief executive Patrick Gavin argues that today's 50-seat jets tend to operate on longer, higher-yield, routes with little competition, but that is likely to change as new entrants begin to mount a challenge. That will put the focus on costs and frequencies.

He adds that the issue of fuel costs, which was hardly raised a year ago, has also become more critical following the 30% hike in oil prices. A rise of 10¢ per gallon of fuel would cost a 50-seat regional jet an extra \$55,000 a year more than an ATR 42-500, he reckons.

New sales of larger turboprops are expected anyway to centre increasingly on developing air markets, such as Asia, which provides healthy growth rates and the prospect of young carriers which would naturally look to turboprops as their first step up in seat size.

Based on such factors, the manufacturers' long-term forecasts are reasonably upbeat on the future of the turboprop. The consensus ▶

### REGIONAL-JET ORDERS, DELIVERIES AND BACKLOG 1996

Group/type	Seats	Deliveries	Orders	1996			1995					
				Cancelled	Net orders	Backlog	Deliveries	Orders	Cancelled	Net orders	Backlog	
<b>AI(R)/AVRO</b>												
RJ	70-120	26	21	9	12	32	21	50	13	37	46	
<b>Bombardier</b>												
CRJ	50	52	60	2	58	49	41	38	0	38	43	
<b>Embraer</b>												
EMB-145	50	4	63	18	45	59	0	5	0	5	18	
<b>Fokker</b>												
Fokker 70	79	13	6	na	na	4	26	31	0	31	44	
Fokker 100	100	4	0	na	na	0	15	16	0	16	16	
<b>Total</b>		17	6	na	na	4	41	47	0	47	60	
<b>TOTAL</b>		99	150	29	115	144	103	140	13	127	167	

NOTES: CRJ orders and deliveries exclude aircraft for business aviation applications - backlog estimated. Fokker backlog and order figures for 1996 include only those cash deals agreed by the bankruptcy administrators.