

BUSINESS

Superfast Business Jet Moves Ahead

Aerion lining up customers for \$120 million plane that can cross the Atlantic in 4½ hours



A mock-up of the Aerion AS2 jet interior shown to prospective customers. *PHOTO: AERION*

By **DOUG CAMERON** and **ROBERT WALL**

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Just how valuable is two hours and change to hurried corporate executives or the ultrarich? Aerospace executive Doug Nichols reckons the answer could be pushing \$120 million.

The former Boeing Co. executive spent seven years developing a supersonic business jet that aims to fill the void created when the Concorde quit flying in 2003. He is targeting those who absolutely need to fly from London to New York in 4½ hours rather than seven.

Aerion Corp., where Mr. Nichols is chief executive, has the most advanced of several similar projects. It recently secured orders for its planned 12-passenger AS2 jet. For the \$120 million price, a buyer can go 4,750 nautical miles at up to 1.5 times the speed of

sound.

Before it can achieve its goals of first flight in 2021 and service two years later, Aerion needs to overcome long-held skepticism among business-jet financiers and plane makers about the viability of supersonic jets and convince prospective buyers and regulators of their merits.

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Aerion estimates the AS2 will cost \$4 billion to develop, produce and certify, requiring new financing after it dropped a plan to license its technology to another plane maker. Its timeline to first service also is so aggressive, it would challenge even more experienced manufacturers.

The biggest hurdle remains a ban on commercial jets flying at supersonic speeds over the continental U.S. Other countries also require ultrafast planes to spend as much time as possible over the ocean to avoid the distinctive boom when they exceed the speed of sound.

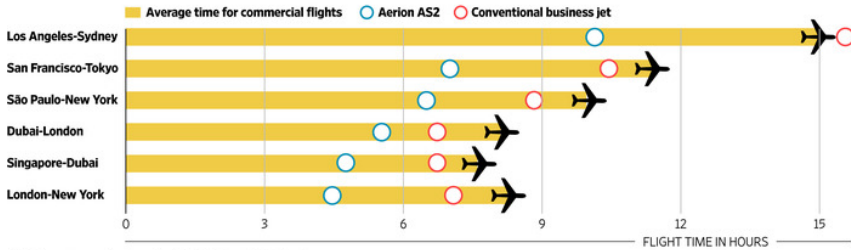
“The straightest route is not necessarily the fastest route,” said Mr. Nichols of the flight plans the AS2 would have to take to skirt the U.S. and Canadian coasts and link London and New York while shaving 2½ hours over a conventional business jet flying a more direct route at close to the speed of sound.

Aerion has followed a similar, deviated path. The closely held company was created in 2002 by private-equity billionaire Robert Bass, an aerospace enthusiast who plowed funds from his Oak Hill investment firm into the venture. Its first concept plane was launched in 2007 and claimed 50 orders, but was canceled two years later as the financial crisis crushed sales of new business jets, a downturn the industry is still trying to escape.

Dassault Aviation SA and the Gulfstream unit of General Dynamics Corp. are

Faster By Design

A supersonic business jet could save more than two hours on some of the most heavily-traveled routes.



Note: Assumes conventional speed up to Mach 0.95 and typical routings.
Sources: Aerion; airlines (scheduled flights)

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researching the supersonic market, but neither is expected to try to introduce models for years. Aerion’s rivals remain skeptical of the supersonic market, which they said was limited to trans-Atlantic crossing. “A business jet in that space doesn’t make

sense,” said an executive at one plane maker.

Still, the Aerion AS2 last month secured its first orders, with fractional jet specialist Flexjet LLC signing up for 20 of the planes, albeit with refundable deposits.

“The aircraft is very mission specific,” said Kenn Ricci, who as chairman of Flexjet has ordered dozens of conventional business jets from Gulfstream, Bombardier Inc. and Embraer SA .

Mr. Ricci said Flexjet spent a year studying the AS2 as an add-on to its evolving fleet, eyeing well-heeled and time-poor passengers on popular business-jet routes such as from London to New York or Dubai, or between the Persian Gulf city and Chinese cities. While the AS2 would cost 35% more to operate than a conventional jet, potential clients aren’t price sensitive.

Aerodynamic laws require that supersonic planes be long and thin, and the existing AS2 is 170-foot long and has a maximum takeoff weight of 121,000 pounds, limiting its use at popular close-in airports such as Teterboro in New Jersey, a favorite gateway for Wall Street’s highfliers.

Aerion said the AS2 would be able to cross the Atlantic from Teterboro, albeit with a smaller fuel load that would restrict how many passengers it could carry.

Mr.

‘We are not pursuing any relaxation of sonic boom regulations in the U.S.’

—Doug Nichols, Aerion CEO

Nichols said that despite such limitations and the challenge of sonic booms, it would be

a viable addition for customers even for transcontinental U.S. travel by maximizing flying at high subsonic speeds.

“We are not pursuing any relaxation of sonic boom regulations in the U.S.,” he said, though in other countries with less onerous rules, the company hopes to be able to fly at supersonic speeds over land. Its technology would ensure the boom doesn’t reach the ground and contravene regulations, he said.

Aerion isn’t alone. Boston-based Spike Aerospace Inc. has been touting its proposed S-512 jet at trade shows. The \$100 million jet could be ready by 2022, said Chief Executive Vik Kachoria, with a top cruising speed of 1.6 times the speed of sound and a range of around 5,580 nautical miles.

Mr. Kachoria said the key to unlocking the market is to minimize noise. The company, which initially designed the S-512 to fly at top speeds only over water, refined the concept to permit overland flights with only minimal noise impact. The plane’s noise should be limited to around 65 decibels, about the same as a normal conversation, he said.

Broadening the customer base by opening more markets would help. The market for supersonic business jets is likely between 300 and 350 aircraft over between 15 and 20 years, estimates Michel Merluzeau, vice president for aerospace strategy at researcher Frost & Sullivan.

Mr. Nichols, who forecast a market of 600 planes over two decades, is scouting for a production site in the U.S. For now, he is relying on Mr. Bass for funds, much as a new generation of space rockets have been funded by Elon Musk at Space Exploration Technologies Corp., known as SpaceX, and Amazon.com founder Jeff Bezos.

“[Bass] funding may have been a godsend in getting the program going,” said Richard Aboulafia at aerospace consultant Teal Group, but building, testing and certifying the jet will cost much more.

“That’s many billions that have to come from someone else,” he said.

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