MAXimum performer

New 737 MAX will build upon a legacy of accomplishment and success

By Mike Barber

When Pete Parsons left one of the first meetings of the small group developing the foundation for the 737 MAX program recently, his enthusiasm was immense.

"It's impressive, the best I've seen," Parsons, director for Program Management Best Practices and Program Management functional excellence for Commercial Airplanes, said of his encounter.

"Clear communications, high level of collaboration. The leadership are people with vast experience who are open to lessons learned and to using those lessons learned, and willing to use program management best practices," Parsons said, excited at the possibilities ahead.

Reaching into his experience as a former U.S. Navy officer, Parsons cited one more attribute: "Battle-hardened. They've been there."

The team that wowed Parsons is an acorn now. But it's about to grow into a mighty oak, laying the groundwork for a successful program to re-engine the best-selling Next-Generation 737 into the even more efficient and competitive 737 MAX.

As details materialize and the 737 MAX begins to take shape, the newest variant of the world's best-selling airplane looks very familiar. And that's exactly the point.

"We're going to make this the simplest re-engine possible," said Jim Albaugh, president and chief executive officer. "We're only going to touch the part of the airplane impacted by the engine and a couple of other improvements."

The MAX is based on years of improvements to the Next-Generation 737 to meet customer needs and growing market demand.

When the program was launched in late summer, Nicole Piasecki, vice president of Business Development & Strategic Integration, described the MAX as the optimization of "everything we and our customers have learned about designing, building, maintaining and operating the world's best single-aisle airplane."

The 737 MAX will deliver maximum efficiency, maximum reliability and, with the Boeing Sky Interior, will continue to offer maximum passenger comfort, she said.

And it promises to deliver maximum profitability for its operators.

The efficient and lower-weight design of the 737, which requires less thrust than other single-aisle airplanes, will be a boost to operators.

In November, Boeing announced the selection of a 68-inch (1.7-meter) engine fan.

"Weight and thrust have a significant effect on fuel efficiency and operating costs," said John Hamilton, vice president of 737 Engineering and chief project engineer. "With airlines facing rising fuel costs and weight-based costs equating to nearly 30 percent of an airline's operating costs, the optimized 68-inch fan design will offer a smaller, lighter and more fuel-efficient engine to ensure we maintain the current advantage we have over the competition."

The MAX will have 10–12 percent lower fuel burn than current 737s, according to Albaugh and other executives.

The MAX will deliver the big fuel savings that airlines will need to successfully compete in the future. Hamilton estimates that the MAX will provide airlines a 7 percent advantage in operating costs over future competing airplanes as a result of optimized engines, more efficient structural design and lower maintenance requirements.

Boeing has received more than 700 order commitments to date from nine customers, up from 496 airplanes ordered from five customers when the program launched.

Firm configuration is scheduled for 2013, with first flight

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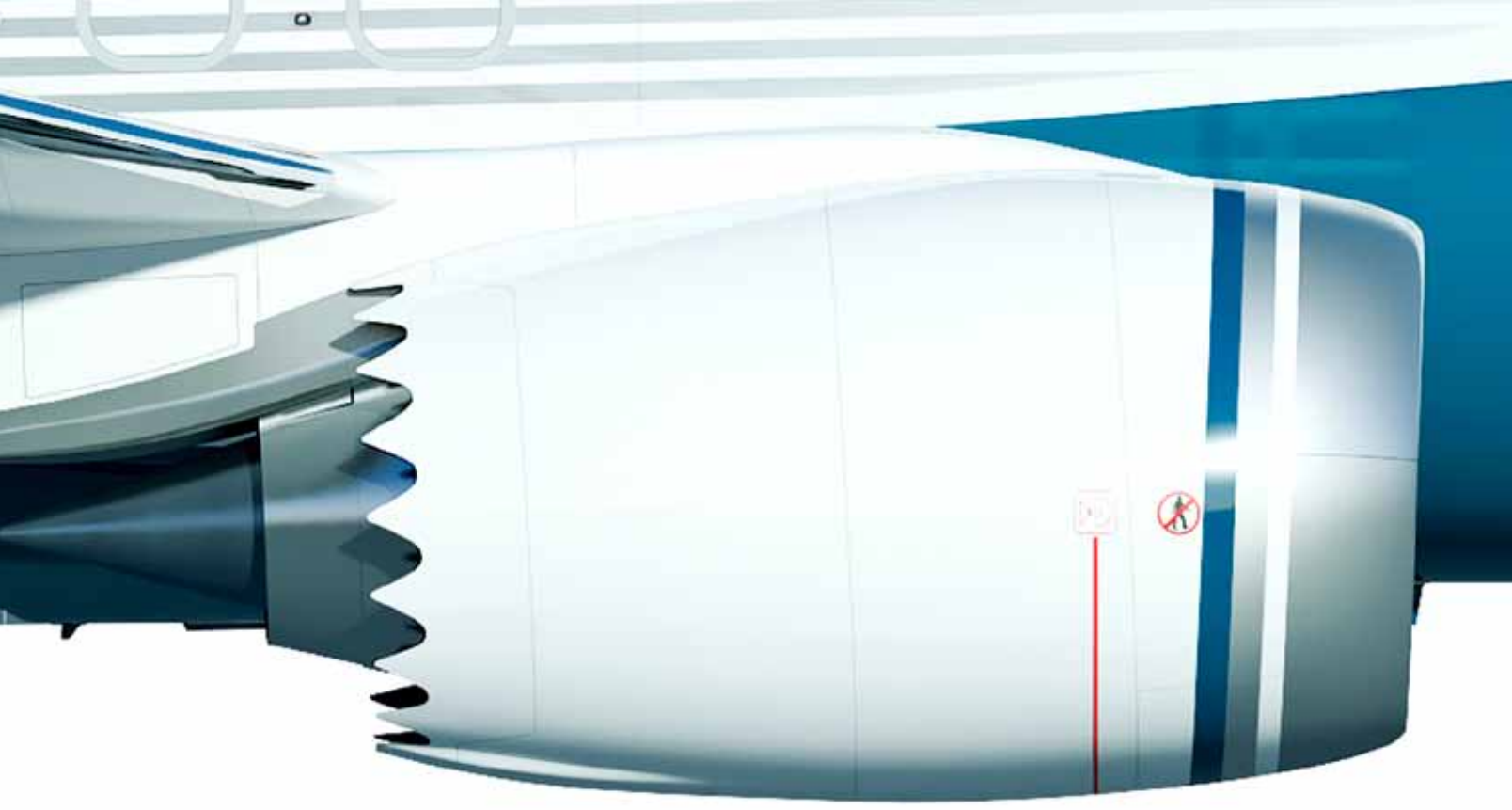
– Jim Albaugh, president and CEO of Boeing Commercial Airplanes

PHOTO ILLUSTRATION: A redesigned tail cone to reduce drag and improve fuel efficiency is one of the more noticeable changes to the MAX. BOEING



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scheduled in 2016. Customer deliveries would begin in 2017.

Meanwhile, the 737 MAX workforce is about to grow.

"We're standing on the shoulders of the Commercial Airplanes Product Development team and the 737 program team," said Bob Feldmann.

He knows.

Feldmann, as vice president and general manager, leads the 737 MAX program. "We call it our MAX working-together team."

When Albaugh tapped Feldmann for the post from Boeing Defense, Space & Security, he also moved Michael Teal from the 747-8 program to join the MAX as vice president, chief project engineer and deputy program manager.

"We got a running start on the MAX program because Product Development had been working on 737 re-engine studies and efforts to design a new small airplane," Teal said. "So there was already a substantial body of work and a coordinated team that had been working toward the MAX for a couple of years."

Feldman added that the 737 program team has brought to the MAX "a tremendous level of experience around this world-class aircraft and production system."

In naming Feldmann and Teal to the top MAX posts, Commercial Airplanes acquired two senior leaders with recent experience in program management and engineering. Feldmann previously led the Surveillance and Engagement division within Boeing Military Aircraft, a unit of Defense, Space & Security that includes the P-8 Poseidon, a U.S. Navy maritime patrol aircraft based on the Next-Generation 737 platform.

Teal spent six years on the 747-8 program, where he was chief project engineer and instrumental in the airplane's configuration, integration, performance, safety, testing and certification.

In addition to product development and the 737 program, that group is successfully integrating others' expertise into the mix, such as Commercial Airplanes' Marketing and Sales, as well as adding customer input.

"Getting there," Feldmann said, "takes a deliberate and disciplined approach that leverages best practices and the enterprise gated process for program development. On top of that, we get huge value from the working-together relationships that have been established."

Using another of his Navy terms, Parsons talks about the "full speed ahead" cadence that the program members have adopted.

"Their quick start is no accident ," Parsons said. "No doubt that the collaboration of the Commercial Airplanes teams is the catalyst behind MAX performance." ■

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PHOTO ILLUSTRATION: The MAX, which improves on the already efficient Next-Generation 737 with an additional 10–12 percent fuel burn reduction, features new LEAP-1B engines developed by CFM. BOEING