

Arrival at Gate 7

The 787-9 Dreamliner achieves an important program milestone **By Kathrine Beck and Scott Lefebber**

The newest version of Boeing's 787 Dreamliner, the 787-9, recently passed through an important Boeing checkpoint—Gate 7.

But you won't find this "gate," or the next one the plane must go through, at any Boeing site or airport.

Rather, the gates refer to a process that helps Boeing make the right decisions during every step in the development cycle of a new product. What's known as "firm configuration" is the official name for the seventh gate.

Firm configuration is a significant program milestone in the development of a new Boeing airplane. It means the architecture and capabilities of the airplane are locked in. And on June 30, the 787-9 program reached that milestone.

The 787-9 is the second member of the 787 family, a stretched version with a range of more than 8,000 nautical miles (14,800 kilometers). At 206 feet (63 meters), the 787-9 is 20 feet (6 meters) longer than the 787-8. With this added space, the 787-9 can accommodate 40 additional passengers.

But stretching the airplane involved more than adding two fuselage sections. It required making design changes throughout the airplane—changes that were personally approved by about 500 people in engineering, manufacturing and management.

Starting nearly a year before the airplane's scheduled arrival at Gate 7, the 787-9 team conducted monthly readiness reviews. These reviews involved key technical leaders from across Boeing, as well as independent reviewers.

In the past, according to Brad Zaback, 787-9 Airplane Level Integration Team leader, the first review would begin as a development team approached a gate, and often there were unresolved issues. On the 787-9 program, monthly reviews of the gated process meant risks and issues were addressed earlier. By the time a gate was reached—on schedule to the day for every gate—the major issues already had been resolved.

"There is a lot more rigor, discipline and accountability put into the process," said Phontel Shami, 787 Business Operations senior manager. "This discipline has helped us achieve advanced levels of development maturity in many areas on this airplane."

Boeing set out in late 2008 to establish a companywide gated process to make it easier for decision-makers to manage product development across business units. It also allowed for the development of a rigorous process based on best practices.

"Process discipline has been and will continue to be the overarching theme for 787-9 development," said Mark Jenks, vice president of 787-9 development. "Use of the enterprise gated process is the cornerstone of this focus on process discipline."

The gated process is part of the Development Program Excellence initiative, one of the four companywide growth and productivity initiatives. The initiative focuses on ensuring the success of Boeing's development programs. Representatives of the initiative, led by its vice president, Patrick Goggin, attended the 787-9 reviews.

With firm configuration complete, the 787-9 team now begins the detailed design work on the new airplane as it approaches Gate 8—Critical Design Review. ■

kathrine.k.beck@boeing.com
scott.s.lefeber@boeing.com

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GRAPHIC: The 787-9 will be 20 feet (6 meters) longer than the 787-8 and will carry about 40 more passengers, depending on an airline's configuration.

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