



Backgrounder

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When the Going Gets Tough, Boeing Mobilizes Resources, Talent

Whether developing new technology, bringing a new product to market, achieving a scientific breakthrough or solving a major technical issue, Boeing employees bring their know-how, skill and experience to the task at hand. For nearly 100 years, Boeing and its people have been responsible for some of history's most stunning and world-changing aerospace and scientific achievements. The company's success and reputation lie in the expertise and creativity of its employees and the resources at its disposal.

At Boeing Commercial Airplanes, all eyes are on the big picture: developing the world's safest, most advanced commercial aviation products. And when the company needs to focus, it does so with passion, diligence and precision.

The 787 Dreamliner is a case in point. The airplane is as significant a development as any Boeing defense, space and commercial airplane product in history – including the airplane that started the jet age, the Boeing 707, and the first jumbo jet, the Boeing 747. The innovations and advancements that make the 787 so efficient and so comfortable for passengers set the stage for and ushered in the second century of powered flight.

The 787 design, manufacturing and supply teams spent years applying a rigorous and disciplined approach to ensure the Dreamliner set new standards in performance, efficiency and safety. The Boeing team conducted the most comprehensive testing and certification efforts in history on this program.

New airplane programs are complex, and there will always be room for improvement and lessons to be learned, in areas spanning from development and manufacturing to in-service experience. The demands of in-service operations always surface issues that need to be addressed, and Boeing responds promptly. In January 2013, the Dreamliner experienced two incidents (one in the U.S. and the other in Japan) involving the main and auxiliary power unit (APU) battery that has led to customer, regulatory and investigative action. Boeing is marshaling its vast resources to understand the cause of these events.

The team is drawing from the more than 170,000 Boeing employees from around the world, its suppliers, and when needed, external experts in specialized fields. Boeing maintains an internal database of experts that can be searched by subject to locate specialized skills to help solve a problem or improve a system. The team has been given the resources and mandate to find answers, develop a solution, get the airplanes back in service. The effort to resolve recent 787 issues will not only improve the airplane, but also expand the company's base of understanding and experience on which it can rely in future endeavors.

When the events occurred, the 787 engineering team began a detailed analysis of messages sent from the airplane to the company's 24-hour monitoring center in Everett, Wash. As details emerged, experts from around the company convened to review relevant systems.

In the earliest hours, program teams mobilized to provide support on a number of fronts. Crews were immediately dispatched to the site of the events in the U.S. and Japan to support the investigations as requested by authorities. As the teams better understand the situation and the investigation narrows, additional teams of experts will be asked to assist.

It's what we do...

Boeing employees are no strangers to solving tough technical problems and achieving scientific breakthroughs. Throughout its history, Boeing has stepped up and demonstrated it has the breadth and depth to tackle issues, deliver on commitments and satisfy customers. The company's history confirms that collaboration drives excellence and results. A few examples worth noting:

- **Manufacturing:** During World War II, Boeing not only pioneered new technologies and production methods, but also social change, reaching out to new communities – the physically challenged, elderly, women and others to fill the demand for workers driven by its commitments to the war effort
- **B-17:** With its last bit of money, the Boeing team boldly proposed a four-engine airplane for the U.S. military that became the symbol of American air power and inspired a manufacturing philosophy that enabled the company to produce 360 airplanes per month
- **B-29:** Amid the mounting pressures of war, Boeing teams ramped up production of the new bomber, delivering 160 per month – up from two per month just 18 months earlier
- **707:** The Boeing team “bet the company” on a shared vision that the future of commercial aviation was in jet airplanes, and made that future a reality
- **727:** Cash strapped and facing daunting competition, Boeing teams pioneered new technologies and brought to market the first airplane to break 1,000 orders
- **The Apollo Program:** Enabled by a team who would not permit the mission to fail, the U.S. put a man on the moon
- **747:** The Queen of the Skies – the world's first jumbo jet – was a revolutionary step forward for aviation technology -- one that required Boeing to surmount tough technical challenges
- **Next-Generation 737:** Although based on a proven success, the new 737 experienced and overcame technical challenges of its own

Boeing company leaders have demanded commitment, excellence and innovation, insisting that the company can do the impossible if employees work together.

Former Boeing President Mal Stamper once said, “Our industry has never been a place for the timid or the skeptic. Leadership in this dynamic industry has required a fertile imagination to peer beyond the horizon. It has demanded leadership by example, and the faith to act on possibility. Langley and Chanute, Wilbur and Orville Wright, Glen Curtiss and Jack Northrop, Don Douglas and Bill Boeing: All led aircraft technology inexorably forward because they had faith in their dreams and confidence in themselves and their associates...In this industry we still believe in doing the difficult and confronting the impossible.”

That philosophy endures today.

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