



## Our Safety Journey

We implemented a series of meaningful changes to strengthen our safety practices and culture and bring lasting improvements to aerospace safety. It is a journey of continuous improvement and we are dedicated to making daily progress and holding ourselves accountable to the highest standards. **Learn more about our journey by reading the Chief Aerospace Safety Officer Report below.**

# Strengthening Engineering



A strong engineering foundation enables Boeing to design, develop, build and maintain its products with safety, quality and integrity. In September 2019, Boeing realigned its 50,000 engineers into a single **integrated organization**, reporting to the company's Chief Engineer. The realignment strengthens engineering expertise and promotes continued companywide focus on customer, business unit and operational priorities. The realignment results in an even greater emphasis on safety as it increases transparency, collaboration and accountability across all engineering designs and decisions.

A crucial enabler for delivering engineering excellence has been the implementation of **Design Practices**. Introduced in 2020, Design Practices give the company a standard method to capture, protect, maintain, integrate, and share critical technical and engineering knowledge and lessons learned. This effort supports achieving exceptional levels of safety and quality in Boeing products and services. Design Practices are maintained, managed and accessed within a company-wide repository. As of early April 2022, 1,172 Design Practices have been developed, reviewed and approved for implementation.

Building on Design Practices, Boeing also initiated Design Enhancement projects at the end of 2021 to augment the Design Practices system, increasing technical rigor in **Technical Design Reviews** to ensure product requirements are met. These reviews are, in part, a transparent dialogue with experts—engineers reviewing engineering work and leveraging the extensive knowledge across the company to reduce risks and errors early in the design process.

Boeing is also strengthening its **Organization Designation Authorization** (ODA). This U.S. Federal Aviation Administration (FAA) program authorizes certain approved Boeing personnel to act as representatives of the FAA for certain purposes. Boeing employees selected as ODA unit members perform a critical role on behalf of the FAA in aircraft certification and safety assurance. Prospective unit members participate in a comprehensive, multi-year training and mentoring program to ensure they meet all of the FAA expectations. Boeing's efforts to continue to strengthen its certification capability are focused both broadly across Engineering and also with ODA personnel. With direction from and in coordination with the FAA, the company is working to improve the ODA oversight, its administration, and to further improve the unit member appointment process and skills development. Across Engineering, the company has implemented organizational changes to ensure that leaders with deep regulatory knowledge are in position to provide advocacy for and support to ODA unit members.

# Enhanced Oversight Mechanisms



**Michael P. Delaney**

Boeing Chief Aerospace Safety Officer

Boeing has made fundamental changes to enhance oversight of safety processes and procedures, and strengthen accountability, transparency and collaboration across the company.

In August 2019, Boeing's Board of Directors established an **Aerospace Safety Committee** (ASC) to increase the effectiveness of its oversight of safety in all aspects of operations, including engineering, design, development, manufacturing, production, maintenance and delivery of products and services. The ASC is comprised of independent directors with relevant knowledge and experience. Learn more about their responsibilities [here](#).

The Board of Directors also amended the company's **Corporate Governance Principles** to include safety-related experience as one of the criteria it will consider in choosing future directors. Additionally, the Board brought on new independent directors who have deep safety, engineering and manufacturing experience.

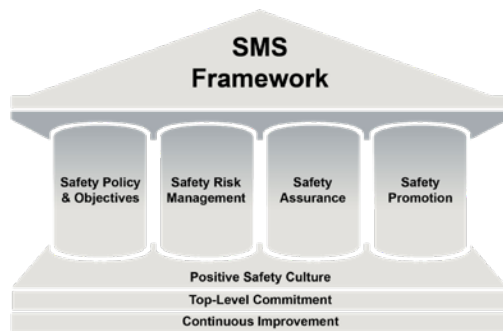
In January 2021, Boeing established the **Chief Aerospace Safety Office** (CASO), appointing Michael P. Delaney Chief Aerospace Safety Officer. Delaney is responsible for strengthening the safety practices and culture at Boeing and developing the company's comprehensive global aerospace safety strategy. Serving on the Executive Council, Delaney reports regularly to the Aerospace Safety Committee and the Board of Directors.

CASO is specifically designed to be separate from the day-to-day business operations and maintains a higher-level focus on safety in order to drive end-to-end accountability throughout the safety ecosystem. Within CASO is the **Product & Services Safety** organization which consolidates and strengthens the reporting of, and accountability for, safety issues.

**Safety Reviews** of all safety and potential safety reports are conducted weekly to increase transparency and ensure visibility of safety-related issues. Presidents of all business units, Boeing's chief engineer, functional and program leaders, and members of the FAA attend these reviews. These reviews increase transparency and ensure safety reports from all levels of the company are reviewed by senior management.

In 2022, Boeing is establishing an **ODA Ombudsperson** Program which will provide ODA unit members with an additional channel to raise work-related concerns. Reporting to the company's Chief Aerospace Safety Officer, the ombudsperson will serve as a neutral third party to advise and assist ODA unit members with any concerns.

# Safety Management System Implementation



Boeing is implementing an enterprise-wide **Safety Management System (SMS)** that is grounded in a positive safety culture that encourages employees to speak up and report hazards and concerns. Recognized worldwide as an industry best practice, SMS is an integrating framework for managing safety risks.

SMS identifies Boeing's Chief Executive Officer as the **Accountable Executive** who retains the ultimate responsibility, authority and accountability for the safety performance of the company. Together, the Accountable Executive and Boeing's Chief Aerospace Safety Officer independently report to the Aerospace Safety Committee and the Board of Directors.

Boeing's SMS Safety Policy describes its commitment to the safety, quality and compliance of its products and services for those who operate, maintain and fly on Boeing products. It is signed by Boeing leaders, including the CEO as the SMS Accountable Executive. Read more about Boeing's safety policy [here](#).

Boeing's SMS evaluates data from employee reporting, as well as from the design, build and operation of its products to identify and mitigate product safety risks. The Safety Management System helps the company have the right conversations with people at the appropriate levels to address risks before they become issues.

Embedding the SMS into the company's culture and processes involves **training** all employees on the value of an SMS, the approach to risk management and safety assurance, and the importance of a positive safety culture, which is the foundation of this framework.

In 2021, employees completed SMS overview awareness training and completed more detailed training on the Safety Risk Management process by the first quarter of 2022.

In December 2020, the U.S. Federal Aviation Administration (FAA) formally accepted the SMS for Boeing Commercial Airplanes (BCA). In July 2021, the FAA completed an evaluation and determined the BCA SMS is meeting regulatory expectations and operating as intended. Boeing continues to work with the FAA to ensure it is meeting expectations as it further integrates the SMS into Boeing Defense, Space & Security, Boeing Global Services and other parts of the company.

## Investing in a Safer Industry



A critical part of strengthening the safety culture within Boeing and across the broader aerospace industry is collaboration with the common goal of improving the global aviation safety ecosystem. Through its **Global Aerospace Safety Initiative**, Boeing is collaborating with airline customers, regulators, academia and other industry stakeholders to develop and implement comprehensive solutions to enhance aerospace safety. Some of these solutions include:

- **Aligning safety management systems.** As Boeing implements a Safety Management System (SMS) to augment existing safety processes, the company is working with airline operators to connect our respective SMSs to better understand hazards and how best to mitigate operational risks.
- **Enhanced support for customer aircrews and maintainers.** Boeing is enhancing support to airline customers, including sending Boeing pilots to customer locations in order to provide customer aircrews with onsite, face-to-face support and guidance on how to best safely and effectively operate their Boeing airplanes. This support role is modeled on the company's network of Field Service Representatives, which assists airline maintenance teams worldwide.
- **Evolving to competency-based training and assessment.** As airplanes and the technologies within them evolve—and in order to keep raising the already high level of aerospace safety—Boeing is evolving its approach on training customers' pilots and maintainers. Thanks to this data-driven approach, customers' pilots and maintainers will learn not just the essential technical knowledge about how to operate Boeing products safely, but also the skills, attitudes and values to maximize the benefits of this knowledge and deliver even higher levels of safety.
- **Using Advanced Analytics.** Through the use of data science and data analytics, the company is developing the Boeing Safety Intelligence solution that will deliver insights to proactively identify hazards and monitor emerging safety trends. Boeing is studying key system engineering and accident causation models and analyzing the operational data. The approach includes broadening our safety data ecosystem, collaborating with airline operators, industry partners and regulators to ensure diverse perspectives. Learn more about this effort [here](#).

# Fostering Transparency & Openness



As part of the Safety Management System, the company is fostering a **positive safety culture** that is grounded in humility, inclusion and transparency. A positive safety culture enables proactive identification and mitigation of risks in order to prevent accidents, injuries or loss of life. It is an environment where everyone feels comfortable communicating safety issues, learns from errors and successes, and acknowledges that safety is a top priority.

In August 2019, Boeing implemented a confidential reporting channel called **Speak Up**. This internal online platform provides every employee the opportunity to voice safety concerns and offer ideas for improvement. The company celebrates employees who speak up and ensures there is protection from retaliation when concerns are raised. Since its introduction, hundreds of inquiries have been investigated and resolved. Equally important is that many Speak Up submissions have led to improved ways of working.

In May 2021, the company also introduced **Seek, Speak & Listen (SS&L)** habits. These habits are embedded in everything we do to help us create a culture of trust, care and connection by encouraging employees to seek out different perspectives, to speak up with ideas or concerns, and to listen and learn from one another. By practicing these habits, Boeing is building stronger teams and achieving better business outcomes.

To further promote a culture of learning and transparency, Boeing is developing a **digital experience** for employees and stakeholders that will provide an engaging and collaborative forum for discovering and sharing safety information. This highly interactive and persona-based digital experience will include information on the company's safety journey, Safety Management System, safety assurance processes, and collaboration efforts to ensure the safety of the aerospace system.

All of these changes are an important part of the ongoing Boeing safety journey. They are making a difference in how teams work together, how the company makes decisions, how it collaborates with customers and other stakeholders, and how it achieves its commitments to improving safety, quality, integrity and transparency.