

SAFETY FIRST: RESTORING BOEING'S STATUS AS A GREAT AMERICAN MANUFACTURER

HEARING

BEFORE THE

**COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION
UNITED STATES SENATE**

ONE HUNDRED NINETEENTH CONGRESS

FIRST SESSION

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED NINETEENTH CONGRESS

FIRST SESSION

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SAFETY FIRST: RESTORING BOEING'S STATUS AS A GREAT AMERICAN MANUFACTURER

WEDNESDAY, APRIL 2, 2025

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Committee met, pursuant to notice, at 10:07 a.m., in room SD-G50, Dirksen Senate Office Building, Hon. Ted Cruz, Chairman of the Committee, presiding.

Present: Senators Cruz [presiding], Wicker, Fischer, Moran, Sullivan, Blackburn, Young, Schmitt, Moreno, Sheehy, Cantwell, Klobuchar, Markey, Baldwin, Duckworth, Rosen, Luján, Hickenlooper, and Blunt Rochester.

OPENING STATEMENT OF HON. TED CRUZ, U.S. SENATOR FROM TEXAS

The CHAIRMAN. Good Morning. The Senate Committee on Commerce, Science, and Transportation will come to order. Before we discuss today's hearing, I want to touch on a separate aviation matter.

Last week, this committee held a hearing on the January 29th DCA mid-air collision. Brigadier General Matthew Braman, the Director of the Office of Army Aviation, appeared on behalf of the Army. At the hearing, both Ranking Member Cantwell and I requested an Army memo outlining its standard operating procedures for when Army helicopters could forego broadcasting their locations and altitudes while flying near DCA airport.

The Army had earlier refused to provide the memo to my staff despite being allowed to do so by the independent crash investigator, the NTSB. Given the opportunity to be transparent, the Army again refused to commit to providing the memo, which is entitled, "Automatic Dependent Broadcast Surveillance, or ADS-B Out Off Operations in the National Airspace".

So Ranking Member Cantwell and I followed the hearing with a joint letter explicitly requesting the unredacted memo. Now, for the third time, we made clear to the General that he had 24 hours to provide that memo or there would be real consequences. It has now been five days since the hearing, and the Army has still not provided the memo.

It begs the question, what doesn't the Army want Congress or the American people to know about why it was flying partially blind to the other aircraft and to the air traffic controllers near DCA? This is not acceptable. I fully expect that, should the Army

continue to refuse to provide the internal memo, this committee will exercise its full authorities to compel its production.

Events that have transpired since the January crash underscore the precarious situation in the Nation's airspace. Just last Friday, after the hearing, three flights were cleared for takeoff at DCA while a military flyover was approaching Arlington National Cemetery. The U.S. Air Force T-38 came within just half of a nautical mile of lateral separation and as close as 200 feet of vertical separation from a Delta aircraft departing DCA for Minneapolis.

The Delta Flight's TCAS sounded a resolution advisory, alerting the pilots to a traffic collision and directing them to continue upwards to avoid a collision. This is far too close—seconds away from yet another disaster. The air traffic center that controls airspace around DC notified DCA about the flyover. That should have led to halted traffic.

This serious communication breakdown is just the latest in a string of missteps that signal that the air traffic organization is under extreme stress. It is my expectation that all Federal actors when involved in any incident in the national airspace will be forthcoming when this committee conducts its oversight to ensure flying remains the safest mode of transportation.

And I want to be explicit to the Army. Every one of us here supports a strong national defense, but the Army does not have at its option ignoring the U.S. Senate. And if there is another accident, if another Black Hawk helicopter strikes another passenger jet and murders 67 people because the Army refused to change its policy of turning off ADS-B Out, and rather than act proactively to protect people's lives the Army chose to protect its bureaucratic ass, those deaths will be on the Army's hands. None of us want that to happen. The responsible decision for the Army to make is to provide that memo to this committee today. And again, if the Army continues to stonewall, they will face a subpoena from this committee.

That brings us to today's hearing. It is essential for members of this committee to hear directly from Boeing about its manufacturing challenges. I am glad the CEO Kelly Ortberg is here today and here voluntarily. Mr. Ortberg, welcome, and thank you for testifying. For over a century, Boeing has been building aircraft in America, beginning with the Boeing Model 1, C plane in 1916. William Boeing built a company that became a household name. As the first World War broke out, the Boeing Airplane Company began building aircraft for the U.S. Navy. By 1919, Boeing's first aircraft designed for commercial purposes took flight. Throughout its storied history, Boeing aircraft had been synonymous with excellence, quality, and safety in flight.

That was until October 2018 when a 737 MAX 8 aircraft operated by Lion Air crashed into the Java Sea killing 189 people. Five months later, Ethiopian Flight 302 would crash just after takeoff, killing 157 passengers and crew—346 souls gone in an instant. Family members of those killed have since become tireless advocates for aviation safety. I welcome those family members who are in attendance today, and convey my continued condolences for your loss, and express my gratitude for your leadership.

Thank you for turning your grief into advocacy. The MAX 8s were grounded soon after the second crash for more than 18 months in the U.S., as Boeing worked with the FAA on a software fix to prevent the technological breakdown that contributed to both crashes. I was among the very first Senators to publicly call for grounding the plane just days after the second crash. When the MAX returned to the air in late 2020, many hoped the worst was behind Boeing. But then on January 5, 2024, Alaska Airlines Flight 1282 departed Portland International Airport on route to Ontario, California.

Approximately 10 minutes into the flight, the mid cabin exit door plug, a section of the fuselage built to seal off unused emergency exits, fell off the plane, leading to rapid depressurization of the cabin. Oxygen masks dropped and belongings were sucked out of the gaping hole. The National Transportation Safety Board's review found that Boeing failed to include at least three of the four bolts needed to properly secure the door plug to the fuselage.

Thankfully and miraculously, no lives were lost, but the incident produced fresh doubt about Boeing's ability to safely build planes. Repeated worries about production issues at Boeing and its sub-contractors has led many to question the company's ability to design and manufacture a safe aircraft. Efforts to cut corners in production or to move the next production phase before necessary parts arrive have led to unacceptable failures. Insufficient oversight of third party suppliers and lack of sufficient internal auditing procedures created an unsustainable lack of safety culture at Boeing.

Since the Alaska Airlines 1282 incident, Boeing says it is working hard to address those concerns, including by developing a plan under FAA oversight for renewed safety and quality in production processes. It recently adapted its Speak Up Program to allow employees to confidently and anonymously submit a concern when something seems to be going wrong.

While the culture will not change overnight, Boeing must continue its work with the FAA to bring safety and quality back fully to its production processes. The FAA has been evaluating key performance indicators, or KPIs, to track Boeing's progress on key metrics.

From discussions with the FAA and Boeing, I am told the company is progressing well and is on track to simplify needlessly complex processes, identify points of weakness, reduce deficiencies, and ultimately improve safety. But these conversations alone will not be the proper reassurance.

This committee today wants to hear what specific and concrete actions Boeing has taken to fix the problems. How is Boeing progressing in its KPIs? What changes has it implemented to ensure a strong safety culture? And how has Boeing adapted its quality management system?

We want to hear these answers, not just from the company's CEOs, but from the company's managers, engineers, and machinists. I know the workers of Boeing desperately want their company to succeed too. So to those at Boeing facilities who are watching, consider my door open to hearing directly from you how you believe Boeing is turning a corner and fixing what went wrong.

President Trump is taking great strides to bring back American manufacturing. I very much hope that Boeing is part of that renaissance. I want Boeing to remain a beacon of American excellence in manufacturing. Our country is better off economically, our aviation system is safer, and our Nation is stronger when Boeing is stronger.

I now turn to Ranking Member Cantwell for her opening statement.

VOICE. Mr. Chairman, can I have a moment please. Did you receive—

The CHAIRMAN. The Committee will come to order. The Committee will come to order, and you will be removed if you disrupt the proceedings again.

**STATEMENT OF HON. MARIA CANTWELL,
U.S. SENATOR FROM WASHINGTON**

Senator CANTWELL. Mr. Chairman, first before we begin the point of today's hearing, I too want to join you in our request to asking the Department of Defense to give us information regarding the ADB-S issue and the near—the recent near collision, but obviously the tragic accident that happened with a CRJ and a Black Hawk helicopter.

The fact that the military asked for an exemption, and in the granting of that exemption with the FAA, made it seem as if that was going to be a rare exemption used only infrequently, to later only find out that it had issued a statement to Congresswoman from the D.C. area, Eleanor Holmes Norton, that it was basically turning off ADB-S 100 percent of the time. And I think that our FAA Acting Administrator shed some light on this, but certainly not enough.

And I agree with you, we need to have the answers. Information that has been presented to the National Transportation Safety Board, that information has to inform us as to this interaction between transportation corridors that are vital to protect for the public safety, and what the Department of Defense is using the D.C. airspace for today, and what are those safeguards. So I will work with you to get the answers that we need from the Air Force. Thank you for holding this important hearing. Welcome, Mr. Ortberg. Thank you for being here.

I also want to acknowledge the families that are here. As the Chairman said, you have been playing a critical role in aviation safety. People like Nadia Milleron, or Javier de Luis who was an active member of the expert panel, have channeled their unimaginable grief into very positive, purposeful actions for the flying public. And I want to also acknowledge the brave whistleblowers who come forward at great personal risk to themselves to speak about the truth on quality and safety that are so important and so instrumental.

I know, Mr. Ortberg, the families are very worried about the company's renegotiation of a plea agreement and the corporate monitoring, and maybe we will have a chance to talk about that today. We are here today though, Mr. Ortberg, to see if Boeing and your new leadership are making the fundamental changes that we

would like to see to return the trust in the Boeing Company to that iconic manufacturer.

I think that for many decades, as the Chairman mentioned, thank you for mentioning all of that history that includes much success in the State of Washington, the company was the pinnacle of manufacturing success. But we shouldn't forget that that success is also critical to our national security, to our economy.

The company employs over 67,000 people in the state of Washington. I think the whole supply chain is well over 130,000 people. And contributes \$79 billion to the American economy. Boeing remains the largest exporter, and I can assure you I believe in more exports, and I would like to see a brighter future for Boeing.

And recently met with the University of Washington, and Mr. Ortberg, in many parts of our aviation supply chain, to understand how a tech hub could take us in a manufacturing production to a higher rate of production. This I believe is so important. I think that what we are trying to understand is getting rid of safety inspectors is no tradeoff, when in reality aviation innovation can help us with both quality and safety.

However, the company must address these manufacturing quality issues. As the Chairman mentioned, the two 737 MAX jet crashes killing 346 people, and the Alaska door plug that happened last year. We know the economic impacts of this. Obviously the MAX, because of a shortcut in safety, cost \$35 billion to the company. The door incident and the financial costs to that are just not even good business.

But we owe it to the families today to make sure that we are implementing the changes that are necessary to make sure that we are the leaders in aviation safety. I believe that starts with a robust safety management system, and that is what our OD—that is what our expert panel found, a requirement from our safety bill to listen to NASA and to other industry leaders about what would help us in our safety culture. And they basically said that these were the important elements of a mandatory safety management system.

So today, Mr. Ortberg, I will be asking you about that. And I know that the reputation of the company in the past has been about instituting safety, but in 2020 when we passed the aviation safety bill, the law put the FAA back in charge of approving ODA unit members and restricting the FAA from delegating critical tasks relating to critical design features. And I will want to ask you about that today.

And how, if the company had a safety management system, yet we still saw the problems of the door plug and other issues. So these issues about inspector staffing models, service difficulty reports, whistleblower retaliation are all issues I hope we address today at this hearing.

This country needs a strong FAA to do its oversight job. The Boeing organizational design authorization that is expiring soon will need to be reauthorized—will need to be pushed through by the FAA. The last Federal Aviation Administration, Boeing Aviation Safety Oversight Office Leader, Ian Won, decided to give an extension for 3 years hoping that Boeing would make and show progress on that oversight authority before issuing a longer ODA. So we

would love to hear about that today, whether the standards laid out in Ian Won's oversight are being met at the Boeing company.

The FAA needs to continue to play that strong oversight role, and the FAA needs to keep pace with technology. If the FAA—and I think NASA could be playing a larger role here in helping on technology. But the Inspector—the Department of Transportation's Inspector General identified 16 weaknesses in the FAA's oversight of Boeing's quality management. Concluding that the FAA was, "not effective at identifying and resolving production issues." And this was despite conducting over 300 audits at Boeing in a three-year period of time. And yet the FAA wasn't able to detect these critical manufacturing deficits.

The issue of the Verification Optimization Program that was to literally—basically replace quality inspectors with mechanic self-inspection I think was the wrong approach. And the airworthiness standards for both the MAX 7 and MAX 10, instead of the design fixes, there were many issues that the Inspector General found were shortcomings. So we as a nation want to be the leader in aviation, we have to be the leader in aviation safety. Mr. Ortberg, you need to channel Bill Boeing. You need to change the safety culture at Boeing, and we are glad you did that by starting your tenure in Seattle.

That matters, and that oversight matters in helping us resume the leadership position in aviation. So I look forward to your testimony this morning, those critical steps that the company is taking to restore the safety culture and the manufacturing excellence so our country can again be the leader in aviation and aviation safety. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Ranking Member Cantwell. Joining us today now is Mr. Kelly Ortberg, the President and Chief Executive Officer of the Boeing Company. Mr. Ortberg joined Boeing in this role in August 2024, bringing with him over 35 years of experience in the aerospace industry. Mr. Ortberg, you are recognized for your opening statement.

**STATEMENT OF KELLY ORTBERG, PRESIDENT AND CHIEF
EXECUTIVE OFFICER, THE BOEING COMPANY**

Mr. ORTBERG. Thank you, Chairman Cruz, Ranking Member Cantwell, and members of the Committee for inviting me to testify and your willingness to work with us as we make fundamental changes to our company to restore trust and return the Boeing Company to the American manufacturer it used to be. Since joining Boeing over six months ago, I have appreciated the opportunity to hear from many of you, and I am committed to continue to work transparently with our regulators and with Congress.

Last month, on March 10, marked the sixth anniversary of the tragic loss of passengers and crew members on Ethiopian Airlines Flight 302. I know many victims' family members, as well as those from Lion Air Flight 610, are here today, and I want to extend my personal condolences for the painful loss of their loved ones on our aircraft and offer my pledge to make the necessary changes so this never happens again.

Boeing made serious missteps in recent years, and it is unacceptable. In response, we have made sweeping changes to the people,

processes, and overall structure of our company. While there is still work ahead, these profound changes are underpinned by deep commitment from all of us to the safety of our products and services. This commitment to aviation goes well beyond Boeing. We play a crucial role in the U.S. economy and the national security, as evidenced by the U.S. Air Force's recent selection of Boeing to build the world's first sixth generation fighter jet, the F-47. As the Nation's largest exporter, Boeing has helped support nearly 1.8 million American jobs and contribute \$84 billion annually to the U.S. economy. It all depends on us getting this right.

I appreciate the opportunity today to provide the Committee with an update on the actions we are taking to strengthen our commitment to safety focused, quality driven culture, the results we are seeing, and ongoing work we are doing, which is fundamental to our leadership in aerospace.

For over a year, we have been working with the FAA on implementing recommendations from the ACSA Section 103 Expert Review Panel, which this committee was instrumental in creating. Boeing is implementing a robust safety management system, a framework built on proven aviation industry best practices, to proactively identify and manage safety risks that may impact our commercial and defense products.

We submitted our plan to the FAA ahead of schedule, and we have a strategy to fully implement well ahead of the required deadline. Under the close oversight of the Department of Transportation and FAA leadership, we are implementing our safety and control—and quality plans, and directly addressing the findings from the FAA's special audit with a focus on four major work areas, including reducing defects, enhancing employee training, simplifying processes and procedures, and elevating our safety and quality culture.

Many aspects of this plan came from our employees, who generated over 26,000 improvement ideas, which we continue to evaluate and implement in support of strengthening our safety and quality. The impact of our efforts are already evident to our airline customers, based on their feedback about the improved quality of our aircraft.

Culture is perhaps the most predominant change we are making as a company. We are aligning our culture and our incentives with the values everyone expects from Boeing, safety, quality, and integrity. This starts with our leadership, including me spending more time listening and learning from our employees, working to restore trust, and holding leadership accountable.

I moved to Seattle because I believe our leadership needs to get closer to the people designing and building the aircraft. As part of Boeing's future, we took actions in recent months to improve our financial position and completed contract negotiations with our union production workforce in Washington and Oregon.

We also expect to finalize the acquisition of Spirit AeroSystems later this year, which is key to delivering for our commercial and defense customers and will help improve our overall quality and performance. I have confidence in our plan because I believe in the dedication of more than 160,000 employees, 85 percent of whom are

based in the U.S., and our nearly 10,000 suppliers across the country.

No one is more committed to our company turnaround than our team. Working together, we are focused on connecting the world, protecting our freedoms, and supporting our economy. And in closing, I want to reiterate my thanks to Chairman Cruz, Ranking Member Cantwell, and members of the Committee, and I look forward to taking your questions. Thank you.

[The prepared statement of Mr. Ortberg follows:]

PREPARED STATEMENT OF ROBERT K. ORTBERG, PRESIDENT AND CHIEF EXECUTIVE OFFICER, THE BOEING COMPANY

Thank you, Chairman Cruz, Ranking Member Cantwell, and Members of the Committee, for inviting me to testify and for your willingness to work with us as we make fundamental changes to our company to restore trust and return The Boeing Company to the iconic American manufacturer it used to be.

Since joining Boeing over six months ago, I have appreciated the opportunity to hear from many of you, and I am committed to continuing to work transparently with our regulators and Congress.

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This commitment to aviation safety goes well beyond Boeing. We play a crucial role in the U.S. economy and national security, as evidenced by the U.S. Air Force's recent selection of Boeing to build the world's first sixth-generation fighter jet—the F-47. As the Nation's largest exporter, Boeing has helped support 1.8 million American jobs and contributes \$84 billion annually to the U.S. economy. It all depends on us getting this right.

I appreciate the opportunity today to provide the Committee with an update on the actions we have taken, the results we are seeing, and the ongoing work we are doing to strengthen our safety and quality, which are fundamental to our leadership in aerospace.

For over a year, we have been working with the FAA on implementing recommendations from the Aircraft Certification, Safety, and Accountability Act of 2020 Section 103 expert review panel, which this Committee was instrumental in creating.

Boeing is implementing a robust Safety Management System, a framework built on proven aviation industry best practices, to proactively identify and manage safety risks that may impact our commercial and defense products. We submitted our plan to the FAA ahead of schedule and have a strategy to fully implement well ahead of the required deadline.

Under the close oversight of the Department of Transportation and FAA leadership, we are implementing our Safety and Quality plan and directly addressing the findings from the FAA's special audit with a focus on four major work areas, including reduction of defects, enhancing employee training, simplifying processes and procedures, and elevating our safety and quality culture. Many aspects of this plan came from our employees, who generated over 26,000 improvement ideas, which we continue to evaluate and implement in support of strengthening safety and quality. The impact of our efforts is already evident to our airline customers based on their feedback about the improved quality of our aircraft.

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lieve our leadership needs to get closer to the people designing and building our aircraft.

As part of securing Boeing's future, we took actions in recent months to improve our financial position and completed contract negotiations with our unionized production workforce in Washington and Oregon. We also expect to finalize the acquisition of Spirit AeroSystems later this year, which is key to delivering for our commercial and defense customers and will help improve overall performance and quality.

Looking forward, Boeing continues to invest in innovation and manufacturing to remain competitive globally. This includes investments in advanced combat aircraft manufacturing, maintenance facilities and parts, commercial manufacturing, and new product development, all of which will power the Nation's economy.

I have confidence in our plan because I believe in the dedication of our more than 160,000 employees—85 percent of whom are based in the U.S.—and our nearly 10,000 suppliers across the country. From Texas to Washington, Missouri to California, Arizona to South Carolina, and Kansas to Pennsylvania, these are hard-working men and women building our products.

No one is more committed to turning our company around than our team. Working together, we are focused on connecting the world, protecting our freedoms, and supporting our economy.

In closing, I want to reiterate my thanks to Chairman Cruz, Ranking Member Cantwell, and Members of the Committee. I look forward to taking your questions.

The CHAIRMAN. Thank you, Mr. Ortberg. Let me start with just a simple question, which is, can travelers trust Boeing? 346 people died in the two 737 MAX 8 crashes. We are extremely fortunate that no one died in the door plug incident. Since 2018, Boeing's mistakes have caused many people to question whether Boeing is still capable of making safe aircraft.

Mr. Ortberg, what can you say here to the millions who will board a Boeing plane this year, to the millions who will put their children on the plane? I and I suspect every member of this panel fly Boeing planes every single week. What can you say to the flying public as to why they should trust that a Boeing plane is safe?

Mr. ORTBERG. Senator, the Boeing aircraft 737 MAX airplanes, you know, take off and land every 2 seconds of the day—safely take off and land every 2 seconds of the day. I am not denying the horrible incidents that you have outlined. We need to take immediate action, and we are taking action to make sure those accidents never happen again.

My family flies on those aircraft as well, and it is critically important that we rebuild trust. And the only way we are going to do that is by building high quality airplanes, having the metrics out of our quality system that show that we are making improvements. And I want everybody to know the entire Boeing team is absolutely committed to building the highest quality aircraft in the world.

Air traffic is the safest mode of transportation, and we need to continue that and continue to find and learn if there is incidences so that these don't turn into tragic accidents in the future.

The CHAIRMAN. As I mentioned, the NTSB's investigation of the Alaska Airlines door plug incident revealed that it was caused by manufacturing errors at Boeing. Mr. Ortberg, you joined Boeing more than 7 months after the door plug incident. What went wrong with the door plug, and what specifically has Boeing done to correct this safety lapse?

Mr. ORTBERG. Senator, first of all, it is unacceptable that an aircraft left our factory without that door plug properly installed. And let me just make that perfectly clear, that can never—never hap-

pen again. One of the things that is currently in NTSB investigation, as you are aware on that. We are not waiting for the NTSB to finish their investigation. We have taken immediate action. One of the first actions was to work with our airline customers and the FAA to go inspect all the aircraft out in the field.

And we have done that and ensured that there are no other incidences of a door plug not being installed properly in the field. The second thing that we did is we found that the proper paperwork was not completed when the door plug was removed in our factory. We have gone through extensive retraining of our workforce to make sure they understand that that violated our policy and that they have to complete the proper paperwork.

We have got—we have eliminated, reduced the number of people who can actually do the modifications for the door plug, so that in the future we have fewer people that are allowed to even touch and remove the door plugs. In addition, one of the contributing factors is we identified that the door plug needed to be removed in order to do some repairs on the aircraft that were a result of defects in the fuselage.

Those defects come from our fuselage supplier from Spirit AeroSystems in Wichita. The airplane moved down our factory line too far after we identified those defects, which contributed to the risk that we—the risk of the door plug not being properly installed. So we have made changes to our process, pushed all those defects back up to Spirit AeroSystems so we are not bringing those into our factories.

And so far, sir, we have seen a 56 percent reduction in defects coming out of Spirit. So that is going to help us significantly. We have also implemented a move ready safety process so the airplane cannot move down the production floor if equipment is not installed, or rework has not been accomplished.

If the aircraft has equipment not installed, we go through a safety risk assessment and look at the risk of moving the aircraft. And we have done that 800 times. And I can tell you, of the 800 times, 200 times we have not moved the aircraft. We have held the aircraft because moving it would incur risk to the production system.

And we have also seen a 50 percent reduction in work that has traveled down the factory floor. We continue to work in improving those numbers. Those are one of the KPI indicators that we are using with the FAA. So we have made drastic changes to our internal process to ensure that this will never happen again.

The CHAIRMAN. OK. Final question. I am sure you are aware that whistleblowers and others, including Ethiopian authorities, have suggested manufacturing errors, particularly with electrical wiring, contributed to the MAX crashes.

Mr. Ortberg, is this an issue you have discussed with Boeing employees since joining the company? And if so, what is your opinion on whether there were also manufacturing defects that may have led to the sensor defect?

Mr. ORTBERG. Senator Cruz, obviously that happened before I joined the Boeing Company. My understanding was that the cause of the crash was the MCAS design, and those designs changed—the MCAS has been redesigned and design changes have been incorporated in all aircraft. I am not aware of any electrical wiring

issues associated with that, but I would be glad to look into that and get back with you.

The CHAIRMAN. So, just to be clear, your testimony as you have not had conversations with Boeing employees about whether there were electrical issues that also contributed to that crash?

Mr. ORTBERG. Not specifically, no.

The CHAIRMAN. OK. Thank you. Ranking Member Cantwell.

Senator CANTWELL. Thank you, Mr. Chairman. Mr. Ortberg, thank you for the change in tone from the top at Boeing about the safety culture and the focus that you outlined in your testimony, those four principles. I wanted to drill down on the safety management system.

It has been a voluntary compliance but our law—well, really actually in the implementation of the 2015 settlement agreement, it was required to implement a safety management system, and then since we have passed legislation for a mandatory safety management system. You mentioned the expert panel.

I think they were very critical of the SMS structure that existed at Boeing under that voluntary structure. So how is it that this is going to change, and will you commit today to a fully functioning safety management system that meets the FAA standards?

Mr. ORTBERG. Senator, you are right, we have been operating under a voluntary SMS for approximately the last 4 years. And I think the Alaska door accident was a cathartic moment for all of us to step back and look at what happened and how could this happen within the safety management system.

We had the expert panel. We also brought in outside consultants. The FAA did a comprehensive audit of our systems, and we found significant gaps in many of the processes that we used to implement our safety management system. Those gaps are all a part of our safety and quality plan that we are working with the FAA to improve the overall performance.

I am absolutely committed to a mandatory safety management system. I appreciate your leadership there. And we are working to get that done. Actually, I would like to have that in place by October of this year. We have submitted our draft to the FAA, and we are absolutely committed to moving to a mandatory SMS.

Senator CANTWELL. Thank you. Thank you for that commitment. The expert panel couldn't be—have been more specific about this particular recommendation, and I think the industry writ large also thinks it is the gold standard. So certainly appreciate that. Now, when it comes to the ODA, FAA oversight and the delegation of authority, this is not—I think the person in charge of this at Boeing has recently been let go or put on leave.

So you can tell me how you plan to bolster this position within the company. But when you look at the issues like the MAX anti-icing system issue and the 737 rudder actuator, and these are issues that have been, you know, the subject of, you know, much investigation. In one instance with my colleague who is not here yet, she and I joined a letter asking, you know, for this issue to be addressed and not delayed.

So, I think the Committee is getting a big sense that the NTSB makes recommendations, the FAA kind of ignores them, and then it takes a long time for them to be addressed.

And what we are trying to understand is in the ODA process, what structure and oversight—before we hear from the FAA on this point, what do you think about these incidents not being addressed in the oversight process, you know, like the anti-icing system and the rudder issue?

Mr. ORTBERG. Senator, we have taken a look at the IG report which has several recommendations, a series of recommendations to the FAA. Many of those recommendations require support from the Boeing Company to provide information and data. So I can assure you they will get full support to ensure that they have access to all the information they need.

Now, on a higher level, the ODA, as you know, is a delegation that the FAA provides to us to do some work that a typical FAA inspector would do. The—I think the ODA is an important element of the success of the aerospace industry.

We—the people that are ODAs in our organization operate independently. They operate on behalf of the FAA. They have direct line of communication with the FAA. And we have made—as a part of the feedback, we have made changes to our ODA organization structure to ensure that they are not feeling pressure from management to do things that are not proper, and I think that has been effective.

We put an ombudsman in place for the ODAs so they have someone to go to if they see something that they don't like, or they are feeling any kind of pressure, they can go to the ombudsman. I think that is helping. And we also survey them to look—to continue to ask them do they feel undue pressure from management or undue oversight from management to do their jobs.

Senator CANTWELL. I see that my time is expiring but I just want to get in this point. You are committing to fix those flaws that I just mentioned. And you—we can come back to this maybe in a second round, but what are you doing to fix the design and manufacturing defects so that they are not submitted to begin with to the FAA?

And so, I think as we have to think about our oversight of FAA and the role they play. We are trying to understand what isn't working in this process. That both at the manufacturing level, we have these defects, and then yet they get, you know, checked off on a list, oh yes, that is in compliance. And so, we are—I don't know if you have a quick answer to that but.

Mr. ORTBERG. Senator, we are working, I mentioned the fuselage improvements. We have got over a thousand applications where we are working with our supply chain to improve the number of defects. I think a main component of that is we have to get to root cause. We can't just fix the defects. We have to get to root cause and make sure the defects go away.

So we have enhanced our focus on root cause analysis and ensuring that we are understanding where these defects are being generated and that we are stopping the defect generation so that we are not dealing with them. That is the fundamental improvement that I think we will see.

Senator CANTWELL. And then making sure that the attention is focused not by a business person who is saying we have to go fast.

Mr. ORTBERG. Yes. Look, I have—I want to be clear. I have not provided financial guidance to Wall Street for the performance of the company. I have not provided guidance on how many aircraft we are going to deliver. We—I have gone and gotten financial coverage so that we can allow our production system to heal. I am not pressuring the team to go fast. I am pressuring the team to do it right.

Senator CANTWELL. Thank you.

Mr. ORTBERG. That is the most important thing we can do at this point.

Senator CANTWELL. I agree. Thank you so much, Mr. Chairman. Thank you.

The CHAIRMAN. Thank you. Senator Fischer.

**STATEMENT OF HON. DEB FISCHER,
U.S. SENATOR FROM NEBRASKA**

Senator FISCHER. Thank you, Mr. Chairman. First, I want to thank the family members who are here today representing and advocating for their loved ones who lost their lives on Ethiopian Airlines Flight 302 and Lion Air Flight 610.

And I want to offer you all my condolences. This committee has a responsibility to work with the airline industry and FAA to ensure tragedies like these do not happen again. Mr. Ortberg, I appreciated the opportunity to connect with you earlier this week and to discuss your ongoing efforts to enact much needed reforms at Boeing.

In our prior conversation, we discussed some of the more challenging aspects of implementing Boeing's safety and quality plan. Specifically, you acknowledged the company's culture as being the most difficult. While I can appreciate the difficulty in reforming longstanding cultural challenges to a corporation as large as yours, and while I agree that it needs to be addressed, that is a long-term change, and it does not necessarily produce immediate results.

So in the interim, as you look to instill confidence with the flying public, what challenges and success has Boeing had in enacting that safety and quality plan and meeting the six key performance indicators that are outlined in that plan?

Mr. ORTBERG. Yes, so as you mentioned Senator, the safety and quality plan has a series of tasks to improve our safety and quality, but we also have metrics that we are using to actually measure the—are those tasks actually generating the results that we want. We have—those six metrics have control limits with them, what is acceptable, what is unacceptable. We monitor those on a regular basis. These are metrics that we share with the FAA.

It is on a digital dashboard. They can look at it at any time, and they do. And we look at both trends, how are the—how are those metrics performing day on, day on, day on, and what does the trend look like, but also what does the absolute number look like. So far—and it is early, admittedly early in our production recovery system.

So far, we are seeing the results that we expect. The key metrics are trending in the right direction. They are not all exactly where we want them to be, and we didn't expect that. So we continued to measure that. We do that actually across our fleet of aircraft,

not just on the 737 MAX program. Those metrics will be the basis that we will use for determining are we able to go to a higher production rate.

And if those metrics are not showing production stability, then we won't request moving to a higher production rate. We monitor them regularly and we talk with the FAA monthly about how are we doing with the key performance indicators.

Senator FISCHER. And I appreciate and—the focus on safety. We have to have that. But in our call, I also brought up to you the concern with the production rate, with the timeliness of it. And you told me that Boeing is currently delivering planes 2 years behind schedule, about 2 years behind schedule.

My concern with those delays are the potential for negative consequences for both national security and for commercial operations. How, when you are looking ahead at production rates, how long do you think—and I know it is early in your tenure, but Boeing should be able to deliver planes in a timely fashion while also meeting the high safety and quality assurance expectations from the FAA, from your customers, and from this committee—that this committee expects.

So what steps do you see Boeing taking to reduce the production delays while still adhering to the plans?

Mr. ORTBERG. Well, Senator—

Senator FISCHER. So are those the metrics, the six steps, the metrics that you are seeing, and when do you anticipate—in a good setting, when do you anticipate to be able to offer some confidence to the public on that?

Mr. ORTBERG. Senator, just to be very clear, we won't ramp up production if the performance isn't indicating a stable production system. We will continue to work on getting to a stable system.

So I have not provided a date as to when we are going to get up to a 38 a month rate. I suspect it will be sometime this year. I am hopeful that that is where the production rates or the production stability allows us to go. I will tell you, I have talked to almost all of our airline customers and they know—they are frustrated with us because we are late, as you point out, on aircraft delivery, but they also know that we have got to do this right.

And I can tell you, I have got 100 percent support from them to do it right. I am not going to push to get the aircraft and end up in having additional issues. Get it right. We will be patient with you. And, you know, the good news is, is that our customers have stuck with us, and I expect that they will.

And once we get the production system stable, we will move up in production rate. I don't think we will ever get to where we recover to all those deliveries. I don't think we will ever get to a rate where we are—where people have their airplanes all when they originally ordered them. But I think our customers understand that and they are working with us.

Senator FISCHER. And we want you to be successful. Thank you.

Mr. ORTBERG. Thank you.

The CHAIRMAN. Thank you. Senator Klobuchar.

**STATEMENT OF HON. AMY KLOBUCHAR,
U.S. SENATOR FROM MINNESOTA**

Senator KLOBUCHAR. Thank you much, Chairman. I just want to start by expressing my deepest sympathies and appreciation to those who are here today who lost loved ones. We just lost a Minnesotan, Wendy Joe Schafer, in the tragic mid-air collision in Washington, D.C., and my thoughts are with all of you, and I hope we can make this better.

As Chair Cruz noted in his opening statement, there was a recent close call unrelated to Boeing involving a Delta jet that was filled with Minnesotans, including a member of my staff, that came within 500 feet of a military plane. I actually talked to the DOD over the weekend, Mr. Chairman, and they have assured me this is going to be an immediate FAA investigation. From what I understand, this was not about the airline, and we have to figure out what went wrong here.

So, my questions of you, Mr. Ortberg—thank you for being here. In your testimony, you discussed the efforts to elevate Boeing safety and quality culture and how you have engaged workers in the process, generating 26,000 improvement ideas from employees.

Could you talk about how you have—what work you have done on open communications and how are you ensuring that employees continue to speak out on issues when they see them?

Mr. ORTBERG. Thank you, Senator. The culture change and allowing people to speak up is critically important to me and I think to the success in the long term of the Boeing Company. We have made significant changes in our business processes to get people—as I mentioned, closer to the people building and designing the aircraft.

We have initiated a culture change process within the company, which, again, I believe culture starts with the values and behaviors at the top, the leadership. We need to walk the talk and people need to see that in the organization.

We are putting those values and behaviors into our performance management system so that people are evaluated, and their annual performance is determined based on how they be—how they exhibit those values and behaviors.

We are putting it into our training program so that we are training our leaders. We are also making leadership selection decisions based on how do these people exhibit the behaviors in the company.

Senator KLOBUCHAR. OK, thanks. Go ahead. You have one more thing.

Mr. ORTBERG. My experience is that once people understand what behaviors are acceptable, they tend to align to them. It is when we have a leadership that maybe is not exhibiting those—the behaviors that are on the poster, on the wall, but not exhibiting those—people are smart. They figure out how to understand what they are really being rewarded on.

So we are really working to change that culture, and I think get to a culture where people feel free to speak about issues and communicate across their team so that we can get issues resolved quickly before they turn into bigger issues.

Senator KLOBUCHAR. Thank you. We also have the issue of pipeline of workers. And the *Wall Street Journal* did a report on this

just last year. Senator Moran and I got included in the FAA reauthorization, our bill that created a new grant program to train aircraft manufacturing technical workers. Could you talk about what you have done to make sure that we are getting in more workers, and what we should be doing better on that front?

Mr. ORTBERG. Senator, we spend a lot of activity in early STEM education and supporting STEM related activities to try to get more young students into STEM fields to support the work that we need.

Our workforce is relatively stable right now, which is good. I think we came out of COVID and had significant workforce demand. We have been through that. Our focus right now is on training and ensuring the people that we have brought in are effective and efficient in what they are doing.

Senator KLOBUCHAR. Thank you. Just one last question following the Alaska Airlines Flight 1282, the door blowout, can you walk through what the enhanced oversight, because since then you have been under this enhanced oversight—walk through it very quickly compared to the previous oversight, FAA oversight.

Mr. ORTBERG. So, there is additional formal inspections being done at Boeing. There is more formal inspections being done at Wichita. Every door, whether it is a door plug or an active door, is going through additional inspection to make sure there is no workmanship errors that would require rework at a later date in our production facility.

And as I said, we are seeing very good improvement in the overall quality of the fuselages, and particularly around any door related issues. We have added significant amount of inspection.

Senator KLOBUCHAR. OK. Thank you.

The CHAIRMAN. Thank you. Senator Moran.

STATEMENT OF HON. JERRY MORAN, U.S. SENATOR FROM KANSAS

Senator MORAN. Chairman, thank you. I am told that, with your consent, I get to make an opening statement, and I am grateful for that because I want to follow up on the point that you made in your earlier indication of a failure to hear a return from the Army. And just to highlight the issue and its broad magnitude and consequence, the NTSB report in regard to Flight 5342 originating in Wichita, Kansas, and having its fatal conclusion at Reagan National, now 63 days ago.

NTSB's preliminary report indicates that within the files of the FAA, there were—the indication is that there were 15,000 near misses between a helicopter and a commercial airplane at Reagan National between October 21 and December 24—15,000 near misses.

NTSB also found in the records of the FAA it is possible for a helicopter on Route 4 to have as little as 75 feet of vertical separation from airplanes on approach to Runway 33. That suggests to me there are significant challenges and potential tragedies that take place at Reagan on a consistent basis known but not responded to over a long period of time.

And one of those issues, because of the potential for those near misses and the fact that they are happening on such a frequency—

with such a frequency, is the issue of ADS-B Out for which the Chairman and the Ranking Member are seeking information from the Army as to why at potentially on all occasions ADS-B Out is turned off.

And so, Mr. Chairman, I am grateful for your efforts and your indications of how seriously you take this circumstance and your demand for information. In today's hearing, now to my opportunity to ask questions, this accident that occurred 63 days ago reminds me of the fragility of life and it makes me even more compassionate and concerned for the victims of those who died in previous crashes.

It is a wakeup call and an opportunity to reassess things that are really important in life, and we need to do everything, as we know we need to do, to make certain that those who fly know they are safe because they are safe.

I am going to ask you, Mr. Ortberg, about a number of things related to Wichita and manufacturing there, but I want to highlight my view that before we talk about the economic and job opportunities that occur with your company, that the most important thing for a future of the aviation industry is the public knows they can fly safely because they can.

In the absence of that, there really is no future for the aviation—for the commercial aviation industry. And so, safety undergirds everything that you need to do and that we need to do for a future for your company and a future for the aviation industry in our country. So, I want to ask you specifically about some things in Wichita. You were kind enough, you were gracious enough on your third day on the job to visit Wichita.

You have indicated in your testimony the role of Spirit AeroSystems to the Boeing Company. And I don't know that you said this in your testimony. If you did, I will repeat you, but otherwise, Boeing is in the process of acquiring Spirit AeroSystems.

That is a hugely important company in Kansas, our largest private employer, employing about 12,000 people. And I want to use this opportunity because it will be rare for folks back in Kansas to have the opportunity to ask you about what the future of their jobs are and what the future of many businesses who rely upon work at Spirit. We have hundreds of small businesses who do work for Spirit—I am sorry, who do work for Spirit, but also do work for Boeing.

And so it is not just one company, it is not just Spirit AeroSystems, it is the whole system by which Kansas aerospace and aviation, the air capital of the world, operates. When I first had a conversation with Boeing officials about the potential acquisition of Spirit AeroSystems, one of the things I think that was said to encourage me to be supportive, and this is me putting my own motives into this sentence, but the point was made that—it was indicated that without the acquisition of Spirit AeroSystems, the new generation of any aircraft developed by Boeing would not be—would not involve work in Wichita or work in Kansas. With the acquisition, the statement was made, that the work could be more likely occur. So you are going to build a new aircraft one of these days, and what is the plan for where that work will take place?

Mr. ORTBERG. Senator, we will. We are an airplane company. We will do a new airplane. That is not in the near future given the financial performance and the challenges that we have.

Obviously we are studying that, and we have to determine what the final design of that aircraft would be to determine where we are going to manufacture certain components. Let me just assure you that Spirit AeroSystems and the work we do in Kansas is critically important.

We are spending a significant amount of our capital to acquire that company, and we are not going to do that and move work out of Kansas. The work that we are doing there is going to stay there. In fact, I am very hopeful that once we get the acquisition closed, we will find opportunities to do actually even more work.

And again, it is critical that we return—ramp up our production because as you know, all those fuselages are built by Spirit AeroSystems. So every time we can move to a higher production rate, it is going to create jobs and opportunities for us in Wichita.

Senator MORAN. What is the reason that the acquisition of Spirit, makes sense, is necessary for the purposes of Boeing building a safer aircraft and having a process in place that works better than what we saw with the door plugs?

Mr. ORTBERG. Senator, we really believe that focus—that being able to focus the organization and integrate it within our commercial production system as one integrated organization will help us be more efficient and will help improve the overall quality and performance of the fuselages that we are getting from Spirit.

Now, as you know, it is not just 737 fuselages. We also have defense related activity, and I am also excited about the opportunities to couple that with our defense business to grow the work that we are doing there.

There is great people in Wichita. You and I had an opportunity to go meet with them. There is a great development of the workforce going on for future employees in Wichita. It is a great opportunity for us to exploit that workforce and build more products in Wichita.

Senator MORAN. Mr. Ortberg, you surprised me by bringing up the topic of defense work. I was going to forego that this morning because on every occasion you and I have had that conversation because I insisted on it.

You have voluntarily brought it up, and I am appreciative of that. It causes me to then ask this question. First of all, congratulations to Boeing on its successful Air Force contract with the F-47 NGAD. What can I expect in regard to work in Kansas that would help fulfill that contract?

Mr. ORTBERG. Senator, I can't answer that right now. I am headed to—after this hearing, I am headed to St. Louis to talk with my team. There is clear security classifications that I need to understand exactly what that answer is. I will get back with you on that if you will.

Senator MORAN. I look forward to having that conversation again. Thank you very much.

Mr. ORTBERG. Thank you.

The CHAIRMAN. Thank you. Senator Duckworth.

**STATEMENT OF HON. TAMMY DUCKWORTH,
U.S. SENATOR FROM ILLINOIS**

Senator DUCKWORTH. Thank you, Mr. Chairman. Again, thank you, Mr. Ortberg, for a meeting with me a couple weeks ago.

On a January earnings call—and this is to touch on some of the questions you have been asked, but I think it is important to clarify. On a January earnings call, you told investors that you wanted to get through the production cap of 38 jets per month and ultimately reach a production of 42 per month by some time this year.

When I asked you about this, and as I have listened to you answer some of my colleagues here this morning, I am encouraged. When you told me that this was not an expectation that you were setting for Wall Street and that your priority was to ensure production quality, not a particular increase in a production rate.

Can you assure this committee that you have not set a 737 MAX production goal for this year, and that neither Boeing's directors nor its other senior management are under pressure to reach a particular production rate by the end of this year?

Mr. ORTBERG. Senator, we have an internal plan. We have to have an internal plan to allocate our financial resources. So we have an internal plan that has an assumption on the number of aircraft, but we have not committed that plan externally. Normally airplane manufacturers put out a number of aircraft that they will deliver, and then they march to that throughout the year. We are not doing that.

We are not putting out the—either the financial component or the number of aircraft we will produce. I have said what I have said here today, which is I do hope that we move from 38—move above 38 per month this year, sometime later this year.

When that happens is when these KPIs indicate we are ready to do that. And obviously we have to have the FAA oversight, and the FAA essentially makes the decision as to whether they approve our ability to move beyond that rate.

Senator DUCKWORTH. In light of that internal plan, can you assure this committee that neither you, yourself, nor any other Board member or senior manager at Boeing has a financial incentive tied to an increase in production rate?

Mr. ORTBERG. We have—Senator, we have an incentive plan that is based on the overall performance of the company. If we produce higher airplanes, that will result in higher performance. So it is indirectly, but we don't have a specific number tied to that. And nor have I communicated a specific number to the employees in the company. So, the employees are not marching to a particular airplane production rate.

Senator DUCKWORTH. But if the production rate increases, there is financial incentives for yourself and other Board members and senior managers?

Mr. ORTBERG. Our annual incentive plan has sales, profit, the normal financial measures, and obviously the more airplanes we deliver, the higher those numbers would be.

Senator DUCKWORTH. OK. I want to go to the Delegation Of Inspection Authority, a discussion that has already happened already today. In October, the DOT's Inspector General found FAA's oversight of Boeing production was not effective.

The FAA's oversight was so bad that the IG issued six separate recommendations to the FAA to fix its process. There were many terrible findings in the report, but one of the most shocking was that shortly before the door plug blowout, individuals within the FAA wanted to delegate airplane airworthiness inspection authority back to Boeing.

Even worse, these individuals at FAA wanted to do this without any criteria by which to assess whether Boeing could be trusted to properly carry out these inspections. It isn't just unacceptable, it is a total dereliction of duty on the part of the FAA.

Prior to the 737 MAX crashes and production problems with the 787, FAA allowed Boeing to self-inspect their aircraft to ensure they conform to the FAA approved type design. However, in the wake of the MAX crashes, we learned that Boeing had abused its authority. Boeing had knowingly and repeatedly produced 737 MAX aircraft with non-functioning angle of attack disagree alerts in blatant violation of the plane's approved type design.

And I believe strongly that FAA must not delegate inspection authority back to Boeing until at a minimum FAA fixes its own ineffective oversight of Boeing's productions. Mr. Ortberg, will you commit to not seeking and not accepting delegation of airworthiness inspection authority from the FAA until the FAA has implemented all 16 recommendations from the October Inspector General report?

Mr. ORTBERG. Senator Duckworth, what I can commit to is that we are working transparently with the FAA, and we will support by providing them whatever information they need from the Boeing Company to address the IG report. Those recommendations were specific to the FAA, so I would have to defer to them in terms of their plans relative to implementing those recommendations.

Senator DUCKWORTH. That is not what I am asking you. It is up to the FAA to determine if the delegation is permissible, but it will be up to Boeing to decide whether to accept that delegation of that responsibility.

You are trying to restore Boeing's reputation. I don't see how it would help that effort for Boeing to return to inspecting its own airplanes for Federal compliance while the FAA's oversight process is still broken. That would just look like Boeing is taking advantage of a hobbled regulator.

Will you commit to not seeking and not accepting re-delegation until FAA fixes its oversight by implementing all of the IG inspector's recommendations?

Mr. ORTBERG. Senator, again, we have to work very closely with the FAA. They are our regulator. They provide the oversight and direction. And so, I can't commit to that. We—

Senator DUCKWORTH. Why not? If they came to you right now and say, we want to give you inspection authority back today, would you accept it?

Mr. ORTBERG. Only if that made sense relative to—in performing the task and the overall safety of the aircraft. We would not sacrifice safety of the aircraft by asking for delegation.

Senator DUCKWORTH. I am asking you to not—to commit to not accepting it until the process has been fixed. So you would accept it back?

Mr. ORTBERG. Senator, we—delegation is a very important part of our business process and how we interact with the FAA. So, we have to continue to go forward with delegation. We are committed to make improvements where improvements—needs have been identified.

Senator DUCKWORTH. But you have a track record of abusing that self-inspecting authority. And you have already said that you and senior managers and Board members would make more money if you can put more aircraft out.

I think that it is not appropriate at this time for you to accept that delegation of authority should it be offered to you by the FAA, before the FAA has met all 16 of the IG's recommendations on how to fix the inspection system.

The CHAIRMAN. Thank you. Senator Blackburn.

**STATEMENT OF HON. MARSHA BLACKBURN,
U.S. SENATOR FROM TENNESSEE**

Senator BLACKBURN. Thank you, Mr. Chairman. Mr. Ortberg, thank you for being with us today. I think that listening to this today, it made me think of Secretary Duffy's remarks that it was time for you all to have some tough love.

And I agree with that, and I appreciate the conversation around how dedicated you are to addressing a comprehensive safety plan. That is important. And I want to talk with you about what you are doing to improve your company's culture and that work culture.

This is a very important part of any business. It appears that your company's work culture has been frayed. So very quickly, what are you personally doing to change this work culture at Boeing?

Mr. ORTBERG. Senator, the first thing I am doing is leading by example and getting our people closer to the people doing the design and the production of the airplane. So, tomorrow I will be in St. Louis with the people that are manufacturing military airplanes on the floor.

Next week I will be in Everett, Washington with our wide body team talking to union members about the difficulties that they are having in manufacturing the aircraft and what we need to do to help them be successful.

So that is the first step in changing the culture, is getting people to recognize that leadership's role is to help the organization be successful, not to make themselves successful. So, we have got a lot of activity underway to do that. We have made—

Senator BLACKBURN. How are your employees responding to that?

Mr. ORTBERG. Very positively, very positively. We just did an all employee survey, which is a means that I am going to use to measure the culture change, and we have that survey structured so I can look at any place in the organization—

Senator BLACKBURN. OK. Then let me do this. I want to ask you about whistleblowers.

Mr. ORTBERG. OK.

Senator BLACKBURN. Because we have heard from some of the Boeing whistleblowers. And I know you are familiar with their

names, but you don't have a good record of protecting and supporting whistleblowers.

And some of the stories around these whistleblowers has been very upsetting to people like me who have worked through my public service to protect whistleblowers. I think that they are essential. So talk to me about what you are doing to change that policy to support and not to ostracize or isolate whistleblowers?

Mr. ORTBERG. Senator, the company has an anti-retaliation policy. It is unacceptable for anybody to retaliate against whether it is a whistleblower or anybody bringing up a quality issue. And I have made that perfectly clear in all of our—all employee meetings, all employee sessions.

In fact, I have told employees if they have an issue, send me a note. I will address it. And some have sent me a note. I have met with the whistleblower—one of the whistleblowers.

My door is open to discuss with any of the whistleblowers what they are seeing and make sure that there is no retaliation in the organization. But this is a part of the culture change within the company, is we need——

Senator BLACKBURN. Not to interrupt, but I want to ask you, are you stepping back to some of those whistleblowers who have experienced a less than positive relationship? Are you righting those wrongs?

Mr. ORTBERG. Senator, in many cases, the whistleblowers that I am aware of, those activities happened a long time ago.

Senator BLACKBURN. Know that.

Mr. ORTBERG. Some of those are still with the company and I have met with one of the whistleblowers with the company. So, I know that in the past all the retaliation claims have been thoroughly investigated. And if there is retaliation, there has been corrective action taken.

Senator BLACKBURN. OK. Let me move on, COMAC. I think we are all concerned about COMAC and the Chinese Communist Party. And the CEO of Ryanair recently said they were opening—opened to buying planes from COMAC.

We are all concerned about competition that would come from China and the Chinese Communist Party. So what steps are you taking to innovate and to make certain that you are competing and outcompeting our foreign competitors?

Mr. ORTBERG. Senator, COMAC is a competitor. We also have a much bigger competitor in Europe that we compete with on a regular basis in all of our markets. We have to stay competitive.

We have to invest in the future of our company. We are investing in new versions of the MAX aircraft. We are investing in the new largest wide body airplane, dual engine airplane in the history with our 777X program.

And all those airplane investments are about staying ahead of the competition and making sure that we can compete in a global market.

Senator BLACKBURN. Got it. Thank you.

Senator MORAN. Senator Luján is recognized.

**STATEMENT OF HON. BEN RAY LUJÁN,
U.S. SENATOR FROM NEW MEXICO**

Senator LUJÁN. Thank you, Mr. Chairman. Thank you for this hearing as well. Mr. Ortberg, thank you for being here today. I am going to follow up with something that Senator Blackburn asked. What specific steps has Boeing taken to strengthen whistleblower protections that ensure employees feel safe reporting potential safety issues?

Mr. ORTBERG. So, we have a speak up system, which is an anonymous ability to speak up about something that is going on.

We have a Chief Compliance Officer who is independent from the organization, reviews those speak ups, and I have a monthly meeting with that Chief Compliance Officer to make sure that we—if people are bringing things up anonymously, that their anonymity is retained.

Look, our policy, as I said, we have a clear anti-retaliation policy and if we see any retaliation, then we address that immediately with disciplinary action up to including dismissal.

Senator LUJÁN. Appreciate that. Representatives from Boeing's Machinist Union, SPEEA, the Society of Professional Engineering Employees in Aerospace, have emphasized the importance of employees feeling empowered to speak openly about those safety concerns. Mr. Ortberg, will you commit to having union representatives directly involved in Boeing safety discussions and decision-making processes going forward?

Mr. ORTBERG. Yes, Senator, we have made actually some new changes in that regard. As a part of our recent IAM negotiation, we set up to where the IAM, the union actually has an annual meeting with our safety committee of our Board so that they can actually go completely around the management and talk directly to our Board of Directors about any safety issues that they see.

I also have a regular meeting with the union leadership on all sorts of issues, including any safety related issues. And of course, this speak up system I have talked about is certainly open to all of our union members, as well as non-union employees.

Senator LUJÁN. So it sounds like that is something you will commit to, and you already have.

Mr. ORTBERG. Yes, yes. We are doing that, and I certainly want to have an environment where if there is a safety—I don't care who it is in the organization, if there is a safety related issue, that that is communicated and acted upon immediately. And that is the environment we are trying to make.

Senator LUJÁN. I appreciate that. Later today, President Trump plans to announce reciprocal tariffs against a number of countries. Few details are known beyond this. If the Trump Administration moves forward with proposed tariffs, what impact would this have on Boeing's operations, particularly your suppliers and workforce in states like New Mexico?

Mr. ORTBERG. Well, Senator, a little bit of the answer to that is it depends on what the tariffs are. And I obviously don't know that, so I will be watching this afternoon as that is announced. That is important to us.

But I will say that 80 percent of the airplanes we deliver, the commercial airplanes we deliver, are outside of the United States.

So free trade is very important to us. And 80 percent of the content of those airplanes, it comes out of the United States.

So we really are the ideal kind of an export company where we are outselling internationally, it is creating U.S. jobs, long term, high value U.S. jobs. So it is important that we continue to have access to that market and that we don't get in a situation where certain markets become closed to us.

Senator LUJÁN. Appreciate that. Where does Boeing see the most significant growth opportunities over the next decade? And how will Boeing ensure that its safety and quality management practices keep pace with your ambitions?

Mr. ORTBERG. The—we have nearly half a trillion dollars in current backlog. That is airplanes that have been ordered. Our biggest opportunity in the next 5 years is perform—is to deliver high quality. Get our safety quality plan in place.

We do have a couple new variants that as I talked about, that we need to get through certification and into the market. But I am confident that the Boeing Company can thrive if we get our safety and quality plan done right, and we will.

Senator LUJÁN. I appreciate that, sir. I am not going to ask you who named the F-47. I will leave that to someone else.

Mr. ORTBERG. OK.

Senator LUJÁN. With that, Mr. Chairman, I yield back.

Senator MORAN. Thank you, Senator Luján. We will begin a second round of questions, and I recognize the Ranking Member, Senator Cantwell.

Senator CANTWELL. Thank you so much. That is a trivia question if we are—oh, he was a test pilot from your state. Is that what you are saying? OK.

[Laughter.]

Senator CANTWELL. OK. Well, we want to return to, “if it ain't Boeing, we ain't going”. That is where we want to go. That is where we want to go. This question is on ODA and compliance. I just want to point out that in the 2020 Act that we passed in the aftermath of the MAX crashes, we mandated that you cannot delegate certification tasks related to critical functions.

So we basically have said you can't delegate. And so, the—I understand my colleague's question, but and it is an important one, but in reality, we decided as a committee, we are not allowing the delegation of critical functions anymore because the MCAS system was a critical change and it was something the FAA missed, in addition to the company mentioning it missing it.

The FAA didn't understand. And we don't think that we—we believe in redundancy in a lot of different areas and redundancy in this case of the FAA doing its job and understanding what is being proposed. So those critical features can't be delegated—can't be delegated. And so, the FAA has to do its job.

And so, I think in the next—the next time we get—well, we have a nominee now for an FAA Administrator. These will be very relevant questions for them on their strategy. But we will be asking them how they are going to have the workforce, the technological expertise, and all of that to stay at pace and then to make an ODA system work, but we are not allowing them to take critical fea-

tures, critical safety features, we are not allowing them to delegate that.

So, anyway, that will be an interesting point. Now, I do think the question I have on the compliance administrator, you guys have a Boeing problem solving method. I know that the person who was in charge of that has just been recently either laid off or changed. What are you doing to make sure that that position—why the change? What are you doing to make sure that who you have in this job is standing up for these root cause analysis issues that you mentioned?

Mr. ORTBERG. Senator, we will go through an elaborate interview process and ensure that we select the best talent to do that job. That is critical—a critical component of that job is to be able to provide that overall independence. And we recognize that, and we will fill it with the appropriate person when—after we get through the interview process.

Senator CANTWELL. And do you think that you are in alignment with SPEEA and machinists on what the feedback process is in the company? I asked the former FAA Administrator whether he believed that the FAA should have oversight into those issues being brought up. So you have mentioned speak up a couple of times.

Mr. ORTBERG. Yes—

Senator CANTWELL. And I am just not familiar where you are in your conversations with SPEEA and machinists. Whether they are satisfied—what do we have to do to make sure that they feel like they—that they have a voice without intimidation?

Mr. ORTBERG. Yes. I think we are making progress, Senator, in that area. We do survey to make sure we understand what is the current situation. We have seen three times the number of speak ups in the last year over the prior year. So that gives you an indication that people are feeling comfortable to use the system.

We still have culture work to do. I think that there is—there probably are people in the organization who say I am not sure I feel comfortable about utilizing the system, and we continue to work on that to make sure that everybody feels comfortable utilizing it. But we are seeing improvements. We also have improved the system, so it is easier to use, and I think that is helping as well.

Senator CANTWELL. Well, I think—going back to the expert panel report, they were saying that “the processes on SMS are not,” I am quoting now, “structured in a way that ensure all employees understand their role. And the procedures and training are complex and in a constant state of change, creating employee confusion especially among different work sites and employee groups.”

So I think this—getting this employee input, and then what would you say about the FAA having some insight into that? Listen, this committee is—you know, we have—we were having a very big discussion with both FAA and NTSB on trend reports. The NTSB is identifying a lot of trends, and we are saying, well, why FAA aren't you paying attention to the trend reports? In fact, we also mandated a requirement that they publish a trend report every year so that we can see what the NTSB thinks are those trend reports.

So, are you committed to the FAA having some insight into that process, whatever it becomes, where the machinists and SPEEA members can speak up and the FAA can have some insight into that?

Mr. ORTBERG. Yes, Senator. We are absolutely committed to that. And I have talked to the FAA. I have talked to Chairman Homendy from the NTSB, to make sure they know that we will be transparent and provide them the information to allow them to do that. I think Chair Homendy has publicly said she believes the next accident is lying in the data and that we need to do a better job of analyzing the data.

We have stepped up our in-service data collection process for our airplanes in service so we can do just that. Start doing more data analytics on what we are seeing, identify trends before they become incidences. And I think what she says is absolutely right, and we need to be transparent, the industry needs to be transparent on this data.

Senator CANTWELL. Thank you for that. I see my time is expired to go to the next round, but I just—that is a change. What you just said is a big change. Is it not? The in-service—the in-service data analytics.

Mr. ORTBERG. Yes. Senator, it is a massive change that we have been making in the company. We have talked a lot about manufacturing changes, how we build the airplane, how we design the airplane, but it is also super important that we pay attention to how the airplane is being operated, how it is being maintained.

And we have the ability to collect a lot of that information from our customers and look for trends, use artificial intelligence algorithms to help us sort through that data, and find trends, and then go address those trends. And those trends could result in changes to the airplane or changes to the training or changes to the maintenance processes. Whatever the corrective action, it is important that we do that.

Senator CANTWELL. Well, I actually believe that you could do a better job at analyzing that information faster and in getting that to your engineers that give them data to think about things.

And so, I think that is an important—that is a very important change. And I also—just as my colleague was asking about trade, I am not going to ask you about that, but I would just point out that the world demand for airplanes is 40,000 planes over, I think, the next 10 years. So the race is on.

Mr. ORTBERG. Yes.

Senator CANTWELL. So I really appreciate you getting the safety right. Thank you.

Senator MORAN. Senator Markey.

**STATEMENT OF HON. EDWARD MARKEY,
U.S. SENATOR FROM MASSACHUSETTS**

Senator MARKEY. Thank you, Mr. Chairman, very much. I first want to offer my deepest condolences to the families of the victims of the Boeing crashes who are here today. Thank you for being here, and we are going to remember your family members every day that we are working on these issues.

Your courage in fighting for a safer aviation system is inspiring and it is going to make our committee accountable to you to make sure that we do the work that you want to see put in place for every family that flies in our country and around the globe. So I am very grateful for your incredible work on these issues and thank you for being here.

Mr. Ortberg, thank you for being here today and your work over the past several months to improve Boeing's safety culture and improve lines of communication with workers. I want to discuss that safety culture and the importance of labor representation in key engineering decisions.

So, I want to get straight to the point. Mr. Ortberg, does Boeing currently have a single representative of workers on its Board of Directors?

Mr. ORTBERG. No, sir.

Senator MARKEY. Do you agree that it is a problem that the engineers and aerospace professionals responsible for designing and manufacturing the planes are excluded from Boardroom decision-making?

Mr. ORTBERG. Senator, as I mentioned, we have a process where we do have the union membership come and meet with our aerospace safety committee of our Board of Directors on an annual basis to discuss with the Board any issues that they see, whether it is safety related or any other related issues. They also have access to me and the management of the organization.

Senator MARKEY. Yes. Well, again, I think that all of the communication should be much more frequent and direct. And that is why the Board of Directors is such a focal point because obviously you and the other executives have to deal with the Board of Directors on an ongoing basis.

In Boeing's 2025 proxy statement, it identifies seven directors with expertise in safety. So let's take a closer look at those directors with suppose safety expertise. One Board member with "safety expertise" was up until her retirement yesterday the CEO of Duke Energy and was previously a senior partner at Arthur Anderson, the accounting firm indicted following the Enron scandal.

And another Board member with "safety expertise" is the CEO of a biopharma company who previously served on the Board of Directors of Norfolk Southern and spent nearly two decades at Morgan Stanley. Mr. Ortberg, in your view, do those Board members have "safety expertise"?

Mr. ORTBERG. Senator, those Board members provide a very, very good input on safety. Now, the safety is not aerospace safety, I grant it, but for us to be able to learn on how pharma treats safety, it is very interesting to have Board members who can provide different perspectives on how they treat safety in their different industries.

Clearly, the energy industry, how they treat safety is very important to their business. And so, we view having a diverse set of inputs into that. It helps us think through and benchmark what are other people doing in this area to see if there is better ways for us to do it.

Senator MARKEY. In my opinion, using that as the criteria, Duke Energy or biopharma, makes every person in America a safety ex-

pert. They could bring the perspective of their industry into your Boardroom. And I just think that that is absolutely not accurate. That there has to be a particular expertise about the aerodynamics that are at the heart of your industry, and that is a very, very specialized kind of safety knowledge.

So there is no way that these Board members should qualify as safety experts any more than any other industry should. And I recognize that Boeing has added a couple of individuals with real expertise and experience flying planes and overseeing important organizations over the past few years, but Boeing's Board still includes numerous financial professionals and no representatives from its workforce.

You know, financial engineering and real engineering, never the twain shall meet. Just two different concepts altogether. So let me address this from a different perspective. The FAA has delegated authority to Boeing to conduct certain safety and compliance oversight on its design and manufacturing processes. In return for that delegation, the public should be confident that Boeing is prioritizing safety at all levels of the organization.

But without representation of workers on its Board of Directors, Boeing is still flying blind because you don't have the workers there, on the Board, giving the insights that the Board should hear about whatever safety defects are potentially going to rise. And again, the Board should not be shielded from hearing this directly.

So, Mr. Ortberg, do you agree that companies like Boeing that have been delegated, you have been delegated the oversight authority by the FAA—you are given essentially a take home exam. That you shouldn't include representatives of the workers on the Board of Directors to make sure that you are hearing their voices on an ongoing basis?

Mr. ORTBERG. Senator, at every Board meeting we have an aerospace safety committee meeting that goes through all safety related issues. That input comes from anywhere in the company, including our labor workforce. So I do believe that the message is coming through. I think the message is analyzed, and the Board takes it very, very seriously.

Senator MARKEY. Well, from my perspective, that is not enough. That the Board members themselves should be hearing from a worker with expertise in safety issues so they are hearing it directly in every Board meeting what the concern is that workers may have. And I think it is a fair trade to be honest with you.

Boeing receives some authority to self-regulate while creating structures on its Board to ensure that it is prioritizing safety and not profits. And that is why today I am introducing the Safety Stocks at the Top Act, which will require major aerospace manufacturers that have been delegated regulatory oversight from the FAA to include multiple labor representatives and safety experts on their Board of Directors.

Safety must start at the top, and the top is Boeing's Board of Directors. Safety must be in the room, expertise must be in the room, and I am looking forward to working with my colleagues to ensure that that kind of representation is on the Board. And I thank you, Mr. Chairman. I thank you, Mr. Chairman, for your indulgence.

Senator MORAN. Senator Markey, thank you. Senator Rosen.

**STATEMENT OF HON. JACKY ROSEN,
U.S. SENATOR FROM NEVADA**

Senator ROSEN. Thank you. I really appreciate that. And I want to thank the Chair and Ranking Member for holding this really important hearing today. And last year, this committee held a hearing to discuss the findings and recommendations issued by the Organization Designation Authorization, ODA—the expert review panel.

In that hearing, I asked a question about how the ODA report found that input from Boeing's pilots were neither consistently nor directly delivered to the highest levels of decisionmakers in the organization. I believe it is essential to make sure that pilots have a seat, not just in the cockpit, but at the table so that we ensure their expertise guides and enhances airline safety.

It is why I am glad to see that in the summary of its new safety and quality plan, Boeing has committed to elevating human factors and strengthening the role of pilots in the design process. So, Mr. Ortberg, how has the role of pilots in the Boeing design process changed since the ODA review?

What are you doing differently now, and what will Boeing ensure, and how will you, excuse me, ensure that there is meaningful and consistent input from pilots integrated and prioritized into the design process?

Mr. ORTBERG. Senator, first of all, I agree with the premise of your discussion. We really do need to have very strong input from the pilots in both the design and the operation of the aircraft. And we have changed our organization.

We have added a human factors chief engineer, which is a pilot who spends time understanding the interaction between the pilot and the aircraft in all the design aspects of the airplane but also the operational aspects, looking at our manuals, looking at our fault trees to make sure that from a pilot perspective how will that be—how will that interaction with the aircraft happen. And I think this is an area that will help improve our overall safety going forward.

Senator ROSEN. Thank you. I do agree because at the end of the day, the pilot, that crew—that emergency might happen. It happens like this, and there has to be a way that that integration works. So, thank you.

I want to talk also a little bit about retaliation and its impact on safety because the ODA expert panel report we reviewed last year found instances where Boeing supervisors worked on annual assessments and self-audits or investigative processes which could present conflicts of interest. It could erode independence or even compromise Boeing's commitment to a non-retaliatory and impartial environment for its workforce.

Throughout the report, those folks interviewed gave examples of the consequences of raising concerns about potential interference and retaliation for managers and supervisors. It is not acceptable. Not acceptable.

So again, do you have confidence that Boeing is now taking the necessary steps to implement systems that provide workers with multiple channels for raising concerns? Because this is really important that they are addressed without fear of retaliation.

As well as creating a culture of encouraging and incentivizing safety at every level. And it is just so important that each piece of the puzzle, if somebody has a concern, that they are able to raise it without fear of retaliation. I can't stress this enough because as you know, lives are on the line—many people sit in your planes.

Mr. ORTBERG. Yes, Senator. First of all, I agree with what you said. I think it is absolutely critical that we have an environment—we did take the feedback from the report, and we have changed our organization structure to address that specific issue. So we provided more independence for the ODAs so they don't have a situation where someone's providing a performance review that could provide—apply pressure to them.

So I think we have sincerely addressed the concerns that were outlined in the report. And as I said before, we have added an ombudsman as well to the ODA and that gives them someone to go talk to if they see something or if they are concerned about bringing up an issue.

And we think that has been having a good effect as well. So, I believe we are addressing those issues, but we will continue to monitor it. And if we have to make more changes, we will do that because I absolutely agree with you. People need to be free to make the right decisions without any kind of overpressure from management.

Senator ROSEN. Thank you. I have one—I have just one question. It is very brief. If you could be brief about it. You talk about your rebuilding your human factors expertise. Not everything can be done by AI and artificial intelligence, or machines and all of that. We still need to be engaged. So how is the process of rebuilding this capability, the human factors, going at Boeing?

Mr. ORTBERG. So, we just stood up this organization, and it is an organization that is filled with pilots. We have also developed what we call ECAPs, which are actually cockpits that they can go fly. They fly designs.

We have potential design implementation. They go fly those to look and understand what the pilot implication is early in the design phase so that they can drive human factors related requirements into the design and we don't have to deal with it later on after the design is done.

So I do think we are making really good changes to get more of that upfront in the design development process. And we are filling this with world class people who are very expert at flying aircraft.

Senator ROSEN. Yes. Thank you. I yield back.

Senator MORAN. Thank you, Senator. Senator Blunt Rochester.

**STATEMENT OF HON. LISA BLUNT ROCHESTER,
U.S. SENATOR FROM DELAWARE**

Senator BLUNT ROCHESTER. Thank you, Mr. Chairman. And really appreciate the convening of this hearing. On behalf of the families who are before us, as a Senator who represents individuals who perished in the most recent flight in Washington, D.C., this hearing about aviation safety is critical to all Americans and in our ability to have confidence in flying.

And so, Mr. Ortberg, thank you so much for taking the time to speak with me prior to the hearing as well. I want to focus my

questions on workforce. And I served in the state of Delaware as Head of State Personnel, and so, I understand the challenges and the importance of hiring, firing, and retention culture, as you have talked about. The fact that we have an aging population in this country and that really impacts retirements and our workforce planning and succession planning.

Boeing's workforce, its engineers, its machinists, safety inspectors are the backbone of the company's ability to manufacture safe and reliable aircraft. However, recent safety concerns and production delays, coupled with over 4,000 layoffs in November and December 2024, suggest that Boeing's workforce may not be adequately supported, trained, or staffed to meet the company's own quality and safety commitments. And from my understanding, if I were to order an airplane today, it could take more than a decade for it to be delivered, which suggests major challenges in the production pipeline.

Challenges that might stem from workforce shortages or training gaps. Can you talk to me a little bit about workforce planning? Describe how current or projected workforce shortages are affecting the company's ability to safe—to maintain its safety and production standards.

Mr. ORTBERG. Senator, one great thing we have is that our mission is awesome, and people want to work for the Boeing Company. So we really don't have a challenge attracting people who want to work for the Boeing Company. I think where our challenge is more making sure that we can train them.

You know, the kids of today are more digital than mechanical. And so, that means a different set of training curriculum for when we bring them into the company. Our retention is quite high. For all the challenges we have had, that has been—that is actually good. So, you know, my focus right now on our employees is engagement, better communication, and you know, helping train them to do their jobs more effectively.

And I think if we continue to do that, our mission will remain awesome. We will be able to recruit who we need to, to make the company successful.

Senator BLUNT ROCHESTER. So just to be clear, there are no areas where you are seeing workforce shortages or challenges? As a State Personnel Director, we were challenged with, again, people leaving, that talent, that brain drain. You don't see that in any area, particularly in safety positions?

Mr. ORTBERG. You know, I saw that much more five or so years ago than what I see today. I mean, I am sure there is a pocket within the company where we need some additional resources, but in the main, I don't see any major resource gaps for us to execute our plans.

Senator BLUNT ROCHESTER. It would be helpful as a follow up, if you could go back and just share with us if there are any particular areas, especially since I am also on the Committee that works on labor. And so, looking at education and labor, and making sure that there is a real pipeline, is really important to us.

The FAA and the NTSB rely on Boeing to maintain strict, internal safety reviews. However, every company has employees that

make difficult workforce decisions such as retiring and seeking other employment.

So again, just ensuring that your new hires are even trained. Can you talk a little bit about how you are adequately training new hires to prepare them to uphold your safety commitments?

Mr. ORTBERG. Senator, this has been a big part of our safety and quality plan with the FAA is additional training. We have added additional 550 hours of curriculum to our training because—we found some gaps in what we were training. On average, we have—increased the training program by about 20 hours, from say around 120 hours to 140 hours. So we are increasing the training.

We are also adding competency evaluations for our employees before they get onto an airplane and start doing work to make sure they are competent in the work that they have to do. If they aren't—if they don't pass the competency, they go back through additional training to make sure that they are trained to do the actual work that they are doing. We have also kind of changed how we are training.

We found that in a lot of cases we were training people in a lab and that didn't replicate the actual environment that they—once they go out and build the airplane. So we have brought actual airplane parts, tried to replicate much more of the actual work they are going to eventually do, in their training program.

Senator BLUNT ROCHESTER. I would just close with, as I shared with you, we have some of my constituents that work at Ridley Park. They take great pride in their work. They have been fortunate to have good leadership, union leadership as well that have advocated for fair wages and safe working conditions.

And I would love to follow up on your relationship with labor unions, and particularly with increased automation and global competition. Just the concrete steps that you have taken to protect and sustain union jobs for the long term.

Senator SCHMITT. Thank you, Senator. Senator Young.

**STATEMENT OF HON. TODD YOUNG,
U.S. SENATOR FROM INDIANA**

Senator YOUNG. Thank you, Mr. Chairman. Mr. Ortberg, great to have you here today. I appreciated the phone call we had just days ago, and want to learn more, in coming days, weeks, and months as it relates to your new strategy for improvement. But you have done a good job answering questions today.

There is, as we discussed, there has been a public loss of trust due to systemic issues that have put lives at risk at your company. I get the sense from our conversation and also your answers to questions today that you realize this, you are committed to changing this, and we are here to the extent we can be constructive in that effort, either critically or supportively in making sure you succeed.

Relatedly, AI automation and data analytics, I keep hearing have the potential to revolutionize production not just in the aerospace industry but also seemingly every other facet of life and certainly manufacturing.

I would like to understand what concrete steps Boeing is taking to ensure that these tools, of the digital economy, aren't just in

place, but are going to make a measurable difference in preventing defects, predicting failures, restoring public confidence in your aircraft? Has Boeing integrated AI or automation to detect defects before planes are delivered to customers? And if so, how effective has it been so far?

Mr. ORTBERG. Senator, we use generally large language models. We are using those large language models right now to enhance our assembly instructions and our documentation, to make sure that it is clear, it is more concise, and that will help with the overall safety and quality of the aircraft.

I know we are doing data analytics as well using AI algorithms. I am not an expert on that, so I can't give you too much details, but certainly can look into that and get back with you. But I assure you our team is looking at how to utilize AI to do the data analytics to find trends, and predict trends, and improve the overall performance of the aircraft.

Senator YOUNG. That is great. I know it will be important to your customers, to the broader public, and to your employees moving forward. You have 8,000 direct and indirect jobs that your company supports just in the state of Indiana alone.

I want to thank you for that. Almost a, you know, half billion dollars of economic impact on our state. In light of these new tools like AI and automation, can you speak to steps that Boeing is taking to ensure that the employees are adequately trained and prepared for this future of aerospace, which we all anticipate bringing more safety to the operations and things we manufacture as well?

Mr. ORTBERG. Yes, so within our engineering organization in the company sits expertise in AI, and we have our own internal AI algorithms. So we are not using external algorithms and data. And we have a training program where we train new engineers on how to utilize—how to utilize these AI tools in their everyday tasks.

So, you know, it is almost like how do you design a circuit card? You have to have training—and people have these tools, and they are available to our engineers, and they utilize them on a day in, day out basis.

Senator YOUNG. If there are things that we can be doing here at the Federal level of Government to change existing workforce training programs, to better prepare even our young people for these jobs of tomorrow, which increasingly seem here today, so that the changes in the technology and therefore the workforce skill needs are changing so quickly.

But we want to keep up the best we can, so please don't hesitate to work with members of this committee on optimizing those programs or replacing them if necessary. How is Boeing leveraging data analytics to track patterns and maintenance issues to prevent future failures? Is that something you could speak to?

Mr. ORTBERG. Yes. We have a program we call our cost program, which is a program with our airline customers where they report data to us. And we have a large base of airline customers. Not everyone reports, but most of them do. And that allows us to analyze events, look for trends, follow up on safety issues with the airlines.

It has been very effective on—I mentioned earlier, we are stepping up our efforts in those analytics to look for more trends, using AI tools to sort through the data to see if there are trends or things

that we can't see with the human eye, and ensure that we are identifying those before they turn into an incident.

Senator YOUNG. Thank you, sir. Chairman.

**STATEMENT OF HON. ERIC SCHMITT,
U.S. SENATOR FROM MISSOURI**

Senator SCHMITT. Thank you. I will now call on myself. Thank you, Senator. Good to see you, Mr. Ortberg and really enjoyed our visit. And we had certainly something to celebrate when we were able to talk. We can talk a little bit more about that, but I did—one of the things I found fascinating about our conversation as it relates to this hearing probably more specifically is the culture shift, right.

That the transition from different divisions and maybe some different silos to sort of more of a team oriented spirit. Could you just talk a little bit more about what that looks like practically, as you guys have made some internal decisions about that?

Mr. ORTBERG. Yes. So culture is very important, and I think in some cases we are too isolated. Our people stay in their swim lanes or their organizational lanes, and everything we do is team-based in the Boeing Company, large teams. And so, to be most effective, we need people working across the organizational boundaries and feeling comfortable to do that.

And so, we are off on a big effort to change the culture of the company. And that starts with values and behaviors, and how we reward people, and how we evaluate people, and how we select people. And we are implementing those. This is going to be a big year for us in the overall culture change.

I will tell you one thing that excites me is that the employees of the company are the ones who really want to see the company culture change. They recognize that we need to be better in how we work together.

So I think we have got the case for change really nailed. We are just going to have to go do the hard work of making sure we walk the talk and get the right people in the right positions.

Senator SCHMITT. And you guys work with—obviously you work with a lot of vendors and suppliers across the country. So, in light of this hearing, what are some of the things that you are doing to ensure the highest quality, and safety, and all of those sorts of things?

Mr. ORTBERG. Yes. So as a part of our safety and quality plan, that also includes our supply chain. And one of the major efforts is reducing the number of defects we are bringing into our factory from our supply chain and reducing the number of notice of escapes that we get.

This is where a vendor would call us up and say, hey, I sent you something, but now I found something wrong with it. It escaped their factory. And major activities to reduce those. One is stronger first article inspection and doing first article inspection when we actually move a product even within a company. So if it moves from one location to another, one factory to another, reevaluating the first article to make sure that something didn't happen in that transition.

We have 1,000 activities underway, or 1,000 vendor engagements underway right now, to improve the overall performance and safety, and the quality of the deliveries from our supply chain. And we are seeing better performance. I mentioned earlier the fuselages that we get from Spirit AeroSystems.

We have seen a 56 percent reduction in the number of defects that we are having to do repair on, in our factory facilities. And we got more work to do there, but I do think getting to root cause and getting these defects out of our supply chain is just as important as getting them out of our Boeing production system.

Senator SCHMITT. Well, switching gears just a little bit to something that obviously hits home. I also serve on the Armed Services committee, and you know, the next generation air defense or dominance, the program was—you know, whether or not the Administration was going to move forward, was paused in the previous Administration, and then the selection of what that next-gen fighter was going to look like.

We got some very—we got some clarity about 10 days ago, and I just, I couldn't be more thrilled. You know, of course, St. Louis is the sort of the hub of the operations on the military side and we are building the F-47.

There are thousands of jobs. I know everyone is very excited about that, not just for our country, but in Missouri. Could you just talk a little bit about that program and how you see that playing into this architecture of our national defense?

Mr. ORTBERG. Well, first of all, this contract award was very, very important to the Boeing Company. In fact, I am going to St. Louis tonight to go congratulate the team on this very large win. And we are honored to be given this opportunity. Our fighter business in St. Louis is historically legacy fighters, the F-15, F-18.

As you know, the F-18 is reaching toward the end of its life. So this is an important program for us to continue our fighter franchise in St. Louis. And we will, you know, create jobs and opportunities for a long time coming. So we are very pleased to have that.

Senator SCHMITT. It is generational. We are happy about that as well and look forward to working with you on that and so many other issues. Mr. Chairman.

The CHAIRMAN. Thank you, Senator Schmitt. Mr. Ortberg, the FAA has played an integral role in solidifying a safe approach to production adjustments at Boeing, following the Alaska Airlines Flight 1282 incident.

As Boeing continues to monitor its KPIs and begins to increase production as appropriate, it will likely grow more autonomous in its internal oversight. As Boeing regains autonomy and eventually increases production caps, how will Boeing guarantee safety without enhanced FAA oversight?

Mr. ORTBERG. Senator, I am not aware of increased autonomy that will come as we increase production rates. We are going to continue to provide transparency to the FAA on all the key performance indicators. We will go through a series of production increases. So the first one cap is at 38, but we will go through the same process for every subsequent rate increase. And if the KPIs aren't showing that we are meeting the performance, then we won't move forward with a rate increase.

So, I think this is a good practice. I think what we have in place—it is data-driven. It is not subjective. We have agreed with our regulator on what things we need to be measuring. If we find we need to adjust that, we will, do that. But I think getting to a data-driven process I think helps them also have insight and prioritize where they should focus.

If our key indicators in one area are not good, that allows them to say, OK, we need to put more oversight in that particular area because there is instability in the production system. So, again, I think the—I think the system we have in place, the plan we have in place will be effective, not just in the near term but for the long term.

The CHAIRMAN. Since you have become the Chief Executive Officer at Boeing, there have been significant changes on the Board and in the leadership. As the leadership changes, this affects the culture at Boeing. What personnel changes have been made at Boeing and how have these impacted the safety culture of the company?

Mr. ORTBERG. Well, in my opening remarks, Senator, I made the comment, we have made massive organizational, and people changes. And if you go back to the door plug timeframe, just to time-frame of the changes, we have got a new Chairman of our Board. We have got a new CEO. We have got a new head of our Boeing commercial airplanes. We have new people in many of the program management roles.

And so, we are changing. As we are changing the culture, we are also changing people to make sure they are focused on safety and quality as the foundation of the company. And so far, I would say the results are showing good results.

We will continue to have to refine either promoting different people or bringing some additional people from the outside to help us on our journey, but I think the progress we have made so far looks like we are getting the results we want.

The CHAIRMAN. Ranking Member Cantwell.

Senator CANTWELL. Thank you, Mr. Chairman. I just wanted to ask a couple of follow ups on the—just the broader subjects. But one, is the company concerned about a corporate monitor in the DOJ discussions of the settlement with the families of the victims? Are you concerned about that? Do you have a problem with that?

Mr. ORTBERG. No, Senator. As you—I am sure you are very aware, we had an agreement with the DOJ. We reached an agreement, which did include a corporate monitor. That agreement was not accepted by the courts.

And so, we are in the process right now of going back with the DOJ and coming up with an alternate agreement. Look, I want this resolved as fast as anybody. We are still in those discussions and hopefully, you know, hopefully we will have new agreement here soon.

Senator CANTWELL. Do you have a problem with the corporate monitor?

Mr. ORTBERG. Senator, I don't want to prejudge what the outcome of those discussions is going to be. I don't personally have a problem, no.

Senator CANTWELL. OK. On the, I mentioned in my statement, thermoplastics. Do you see this thermoplastics as a really—a game changing manufacturing technology focus? Is it really what people are saying? Is it really something that we as a nation have to get focused on? By that, I mean our skilling of a workforce, test bedding technology, being ready for the next big aviation change?

Mr. ORTBERG. Yes, Senator. First of all, I appreciate your leadership in this particular area and the hub work that you have done in Washington is very helpful——

Senator CANTWELL. For the supply chain. We just lifted that up a little bit, yes.

Mr. ORTBERG. Yes. No, I think thermoplastics offer a huge advantage for the future, and probably more to streamline the production of the aircraft. And so, I think it is an important—one of those major important technology areas we should be investing in, and I think that it is going to find its way into many applications in the future aircraft environment.

Senator CANTWELL. But do you see it as something that we, if we neglect, that we could fall behind in as a nation juxtaposed to other countries? And I mentioned earlier the demand for 40,000 planes worldwide. I mean, that is an unbelievable—if we are somewhere—in the Nation it is about 2 million. I think we have come up with this number, 2 million impacted workers in aviation in general.

But if you think about what 40 million—I mean, 40,000 plane represents, it is a huge demand increase. But if getting a big part of that means doing the right investments and innovation, and we have always looked at this and said get the safety right. Focus on the innovation. Don't cut the safety person who is just doing this inspection on these critical parts. Go get the innovation right.

So, is it really that big of an innovation sea change, I guess is the question, juxtaposed to that demand? Or could we wake up in 5 years and find ourselves way behind?

Mr. ORTBERG. Senator, I think in general we are a little behind. I think Europe has invested probably more than we have general in this particular area. I don't think we are behind in a way that we can't recover.

I do think it is an area that we need to continue to have overall focus, not just as the Boeing Company, but you know, in terms of new technology evolution within the country. And I think thermoplastics isn't an area that—is an area that can differentiate in a lot of different product applications. So, I support your efforts for sure.

Senator CANTWELL. Yes. Well, and I am just, again, on the workforce side, this is a big opportunity for a lot of jobs in the United States. Is it not?

Mr. ORTBERG. Yes.

Senator CANTWELL. Are you continuing to grow?

Mr. ORTBERG. Yes, I think so. I think what you will see is thermoplastics will replace typical metal applications. And as you know, how to do that is a totally different manufacturing process. So, we will have to learn how to do that.

We will have to train a whole different kind of application, a different workforce to utilize thermoplastics. And so, you know, I think we are on that journey, but we have got a lot of work to do.

Senator CANTWELL. Thank you. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Ortberg. Thank you for your testimony here today. Senators will have until the close of business on Wednesday, April 9 to submit questions for the record.

The witness will have until the close of business Wednesday, April 23 to respond to those questions. This concludes today's hearing. The Committee stands adjourned.

[Whereupon, at 12:13 p.m., the hearing was adjourned.]

A P P E N D I X

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. JOHN THUNE TO KELLY ORTBERG

Question. Former Federal Aviation Administration (FAA) Administrator Michael Whitaker capped production of 737 MAX planes at 38 aircraft per month after the Alaska Airlines door plug incident in January of 2024. Boeing is currently producing under that production cap rate of 38 737 MAX planes per month. The FAA's cap was justifiably intended to reorient the company toward a focus on quality and safety. However, Boeing's failure to meet the FAA-imposed production cap and subsequent delay in delivering aircraft to major airlines impacts flight safety and availability across the country, including in my home state of South Dakota.

Please detail the specific steps Boeing is taking get back on schedule and safely increase production of the 737 MAX.

Answer. To meet our commitments to our customers, Boeing is working to ensure stability across our production system and within our supply chain so that we can safely increase 737 production. A critical step to ensuring this stability is Boeing's implementation of its safety and quality plan, under the close oversight of the FAA. Boeing developed this plan based on feedback from the FAA, employees, customers, and independent experts. The plan focuses on four major work areas: reducing defects, enhancing employee training, simplifying processes and procedures, and elevating our safety and quality culture.

The plan also sets forth measures—known as key performance indicators (“KPIs”)—to continuously monitor and manage the health of our production system. Each KPI has defined criteria that help identify areas of potential risk to our operations and trigger corrective action through our Safety Management System (“SMS”). These metrics have helped Boeing conduct more targeted safety risk assessments in priority areas and maintain production health.

The KPIs are important criteria that we use to measure the stability of our production system, which is necessary to increase the 737 production rate beyond 38 airplanes per month. If the KPIs are not showing production stability, then we will not request to move to a higher production rate. Boeing closely monitors the KPIs, shares them with the FAA, and regularly discusses them with the FAA. It is important that we do this right rather than fast to ensure that we are not increasing the production rate before the production system is ready. That said, the KPIs are generally trending in the right direction, and we are encouraged with the progress we are making.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JERRY MORAN TO KELLY ORTBERG

Question 1. It's clear Boeing has taken steps individually, and at the direction of the FAA, to conduct safety audits, identify Key Performance Indicators (KPIs), minimize traveled work, and employ other process changes to address systemic issues.

a. How are you measuring sustained progress on the production line in Wichita and in Renton, Everett, and other Boeing facilities?

Answer. Boeing is implementing a comprehensive plan to improve safety and quality across our production system and within our supply chain, under the close oversight of the FAA. Boeing developed this plan based on feedback from the FAA, employees, customers, and independent experts. The plan focuses on four major work areas: reducing defects, enhancing employee training, simplifying processes and procedures, and elevating our safety and quality culture.

The plan also sets forth six measures—known as key performance indicators (“KPIs”)—to continuously monitor and manage the health of our production system. These KPIs, which are listed below, are important criteria that we use to measure the sustained progress of our production system, including our supply chain. The KPIs are:

- *Employee proficiency*, which measures the share of employees currently staffed who are deemed proficient in core skills.
- *Notice of Escape (NoE) rework hours*, which measures time performing rework due to non-conforming work from Boeing Fabrication and suppliers.
- *Supplier shortages*, which measures shortages per day from Boeing Fabrication and suppliers.
- *Rework hours per airplane*, which measures time spent performing rework in Final Assembly.
- *Travelers at factory rollout*, which measures unfinished jobs traveling from Final Assembly.
- *Ticketing performance*, which measures quality escapes per ticketed airplane prior to delivery.

Each KPI has defined criteria that help identify areas of potential risk to our operations and trigger corrective action through our Safety Management System (“SMS”). These metrics have helped Boeing conduct more targeted safety risk assessments in priority areas and maintain production health. The KPIs are geared to monitoring three main areas essential to production system health: employee staffing and proficiency (KPI #1 in the list below), the performance and stability of Boeing’s and its suppliers’ production systems (KPIs #2, 3, and 4); and the quality of Boeing’s production system output (KPIs #5 and 6).

Question 2. You indicate six metrics outlining your Safety and Quality Plan with the FAA.

a. Are you anticipating shifts in the parameters for these metrics as you receive feedback from the FAA, your airline customers, but also Boeing employees?

Answer. Boeing worked with the FAA to select the six KPIs identified in our comprehensive safety and quality plan. The KPIs have been established and operationalized across Boeing Commercial Airplane (“BCA”) programs and will be continuously assessed for potential modification based on implementation experience.

b. What gives you confidence that the issues that predicated the door-plug incident—fuselage defects upon arrival, improper reinstallation, lack of documentation of the process, etc.—have been resolved and result in safe airplanes to operate and fly in?

Answer. In the wake of the Alaska Airlines Flight 1282 accident, Boeing took action to ensure the safety of our fleet and production operations for all of our airplanes. The NTSB has reported that a door plug was removed from the Alaska Airlines Flight 1282 accident airplane for rework and was improperly reinstalled, and that required records for the rework were not created, which is contrary to Boeing’s policy. Following the accident, in Boeing factories, we revised build plans to ensure the security of all door plugs and added inspections to validate proper installation. More broadly, to ensure compliance with removal requirements, we mandated new removal training, tightened restrictions on who can initiate a removal, and clarified our policy. We have also taken broader actions to significantly reduce defects at our fuselage supplier. Boeing has confidence in the actions it has taken—and continues to take—based on the results we are seeing. For example, as of March 2025, we have seen a 58 percent reduction in defects per 737 fuselage from Spirit. We also have confidence in our actions because we believe in the dedication of our employees and suppliers.

c. How has communication changed between supervisors and scheduled assembly and maintenance employees?

Answer. Boeing is committed to effectively engaging and communicating with all employees to strengthen our culture of safety, quality, and compliance. As part of our comprehensive safety and quality plan, we have taken actions to enhance manager communication with front-line personnel, since it is critical that we listen to and learn from our employees.

Following the Alaska Airlines Flight 1282 accident, we held quality stand downs across every major BCA facility. More than 70,000 employees participated in these events, which paused operations for a full workday to focus on safety, quality, and compliance issues. The quality stand downs generated over 26,000 improvement ideas from our employees. The centerpiece of the events were breakout sessions at which front-line personnel and managers participated in structured conversations and activities to identify underlying quality challenges and reinforce the importance of core values. We have transitioned from these stand down events to holding quarterly manager-led safety and quality events across BCA to maintain focus on these issues and facilitate communication between managers and front-line personnel.

In addition, based on employee feedback, we have implemented Employee Involvement Teams (“EITs”) across BCA, to bring teammates from different work disciplines together to raise and solve issues, ask questions, and offer assistance. EITs convene manufacturing personnel, front-line leaders, and supporting personnel for weekly problem-solving sessions, during which members review, track, and resolve employee-generated ideas for improving the production system. We are continuing to enhance EITs to further facilitate manager communication with front-line personnel.

More broadly, Boeing is actively working to change our culture to, among other things, improve communications between managers and their employees. To help facilitate this culture change, we recently used extensive employee feedback from an all-employee survey and a culture working group of employees to redefine Boeing’s values and behaviors. These values and behaviors will be core to our culture change, as they will redefine how we work with one another every day, how we manage performance, and how we develop our people. These values include having a focus on our people. For our managers, that involves effectively communicating with their teams, listening to them, and making improvements for them. Success will mean creating a cohesive culture where the new values and behaviors are deeply embedded in our daily operations and everyone is held accountable to living them every day. This includes making measurable improvements in manager engagement with employees and employee sentiment.

Question 3. Last fall, Boeing machinists voted to approve a contract offer that ended a bruising eight-week strike in Washington-state and California.

a. Can you speak to how Spirit’s continued operations and nimbleness during that eight-week period allowed for a stronger ramp in production following the conclusion of the strike?

b. Will the surplus of 737 MAX fuselages coming from Wichita during the strike and Spirit’s current readiness assist Boeing’s ability to meet its production goals for the year?

Answer. Spirit is Boeing’s largest supplier, building significant structures and components for all Boeing commercial airplane models, including fuselages for the 737. We are excited about the plan to reintegrate Spirit into Boeing. As one company, our world-class engineers and mechanics can work more seamlessly together to design, build, and deliver safe, high-quality airplanes to our customers. Boeing’s planned acquisition of Spirit will enable us to further strengthen safety, quality, and stability. During the International Association of Machinists (“IAM”) 751 strike last year, we were fortunate that Spirit was able to build up an inventory of 737 fuselages. In addition, the Spirit team did a great job of improving the overall quality and production flow of 737 fuselages, which they have continued to do. As a result, 737 fuselages were not a constraint on Boeing’s ability to re-start production after we completed our contract negotiations with the IAM. And, currently, Boeing does not view fuselages as a constraint on 737 production.

Question 4. Steady competition in the aviation and aerospace industry results in a healthy supply chain.

a. How are you utilizing the changes you have outlined this morning to influence your ability to compete for next-generation aircraft design?

Answer. Boeing is an airplane company and at the right time in the future we need to develop a new airplane. We have a lot of work to do before then. But the changes we are making now to address the challenges of today will help set the foundation to enable Boeing to develop a new airplane. These changes include stabilizing our business, improving execution on our airplane development programs, evaluating our product portfolio to ensure we are focused on what will keep us growing and competitive in the long term, and restoring our balance sheet so that we do have a path to the next commercial aircraft.

Question 5. On March 6th, a *Seattle Times* report highlighted a then-recent dialogue you held with employees in St. Louis and joined by employees virtually. Some quoted in the article indicate, “The only thing that matters to us is what we see on the factory floor”. During the hearing, we discussed some changes that have been made on the factory floor.

a. Though, are there particular actions you are taking to make certain you meet the expectations set by your workforce?

b. We have also discussed what sustained progress looks like on the factory floor for strong production numbers, but what does sustained progress mean to your employees?

Answer. Boeing is taking action to meet our workforce’s expectations by, among other things, changing our culture. Working together to fix Boeing’s culture will

take time, but it is perhaps the most important change we need to make as a company. Restoring the values that were foundational to Boeing's storied history and setting expectations for behavior will move us forward. Change must start at the top and includes getting Boeing's leaders back to the factory floor, into our engineering labs, and connected to other places where our people work every day. Boeing's leaders must understand and remove the challenges our teams face to make it easier for them to do their jobs. For our teammates, we need to restore our trust in one another and break down the barriers that prevent us from working together across the company.

To help facilitate this culture change, we launched a culture working group of Boeing employees focused on sharing ideas and perspectives from across the company. In addition, we conducted a confidential all-employee survey focused on improving our workplace and culture, which the vast majority of Boeing employees took. Employee feedback from this survey and culture working group were recently used to redefine Boeing's values and behaviors. The redefined values and behaviors will be used to help guide Boeing's culture change efforts and will provide a baseline for measuring progress over the years. They will be built into every step of the employee experience, including performance management and leadership development. Success will mean creating a cohesive culture where the new values and behaviors are deeply embedded in our daily operations and everyone is held accountable to living them every day. This includes making measurable improvements in manager engagement with employees and employee sentiment. There is nothing more important than creating a culture where we're all working together. While it will take time and a concerted effort, when we get it right, our culture will lead to our future success.

Question 6. You recently hosted Secretary Duffy and FAA Acting Administrator Rocheleau at Boeing's 737 and 777 production facilities in Washington state. After their visit, they committed to maintaining the FAA cap on 737 MAX production—leaving it to Boeing to provide the confidence that lifting the cap will not negatively impact safety or quality.

a. What do you need to see in Boeing's MAX production to deliver to Secretary Duffy, Acting Administrator Rocheleau, and the American people the confidence needed to consider any changes in the current production cap?

Answer. Boeing is working to ensure stability across our production system and within our supply chain so that we can safely increase 737 production. A critical step to ensuring this stability is Boeing's implementation of its safety and quality plan, under the close oversight of the FAA. As discussed above, the plan also sets forth KPIs to continuously monitor and manage the health of our production system. The KPIs are important criteria that we use to measure the stability of our production system, which is necessary to increase the 737 production rate beyond 38 airplanes per month. If the KPIs are not showing production stability, then we will not request to move to a higher production rate. Boeing closely monitors the KPIs, shares them with the FAA, and regularly discusses them with the FAA. It is important that we do this right rather than fast to ensure that we are not increasing the production rate before the production system is ready. That said, the KPIs are generally trending in the right direction, and we are encouraged with the progress we are making.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARIA CANTWELL TO
KELLY ORTBERG

Quality Inspection Changes—Verification Optimization

The FAA approved changes to Boeing's quality inspection process—known as Verification Optimization—to allow Boeing to forgo regular inspections by trained quality inspectors based on a risk assessment process.

Instead of keeping quality personnel responsible for determining whether or not a job performed on the assembly line or a part complies with FAA regulations, mechanics are now responsible for making this decision, which means they have to inspect and sign off on their own work.

Question 1. How are these changes to quality inspections ensuring that your airplanes comply with FAA-approved designs?

Answer. Boeing is committed to quality, and inspections are an important part of checking our work to ensure that we produce and deliver conforming aircraft to our customers. To that end, we have increased the number of quality inspections on the 737 program in recent years. These inspections are conducted throughout every airplane's build process, including during final assembly, in wings, and during

pre-flight. Although the number of inspectors fluctuates with production rate, we have also increased the number of quality inspectors on the 737 program in recent years.

Beginning in 2018 and concluding in 2021, Boeing implemented an initiative called Verification Optimization to reduce visual inspections by relying more heavily on technology and precision manufacturing to maintain quality. While some inspectors were redeployed elsewhere in the factory, we entered into an agreement with the International Association of Machinists (“IAM”) that no union jobs would be lost. Boeing discontinued Verification Optimization in 2021 and added inspections back into the process. Some of the added inspections were ones that had been removed, and some were new—the net result is that there are now more inspections than there were before Verification Optimization began.

Boeing’s inspection processes are conducted by properly trained personnel under appropriate controls and oversight.

Question 2. How are inspection requirements being met on the production line if mechanics are not trained in quality assurance as much as quality inspectors, but yet still have to inspect and sign off on their own work?

Answer. Please see the response to Question 1.

ADS-B In Equipage

In 2008, the NTSB told FAA that it should mandate ADS-B In, not just ADS-B Out, in aircraft operating in controlled airspace. NTSB said at the time that “equipage of aircraft with ADS-B In capability will provide an immediate and substantial contribution to safety, especially during operations in and around airports.” But fifteen years later, commercial aircraft are still not required to have ADS-B In.

Question 1. Do you believe that ADS-B In would strengthen safety for commercial airlines operating in complex airspace near busy airports?

Answer. There are certain Automatic Dependent Surveillance-Broadcast (“ADS-B”) In applications that can help enhance safety for aircraft operating in high-density or complex airspace. ADS-B Out generally refers to the automatic broadcast by an aircraft of its GPS location, altitude, velocities, and other data to ground stations and other aircraft. ADS-B In generally refers to applications that leverage ADS-B Out data to provide capabilities and benefits for flight crews and/or air traffic control. There is no single ADS-B In application. Instead, there are multiple ADS-B In applications—some developed and others being researched. The capabilities and benefits of ADS-B In applications vary from application to application. The benefits of ADS-B In applications can include safety enhancements, improved situational awareness, and/or increased operational efficiency.

Question 2. What are the options that Boeing can provide to help airline customers ensure ADS-B In can be easily installed on Boeing aircraft?

Answer. The research, development, and deployment of ADS-B In applications depends on the efforts and coordination of multiple aviation stakeholders, including the FAA, avionics suppliers, and aircraft manufacturers. Through the years, Boeing has played an active role in the research, development, and deployment of ADS-B In applications. Currently, certain ADS-B In applications are available for some of our aircraft. We continue to research additional ADS-B In applications, work with avionics suppliers to mature requirements for ADS-B In applications, and study the potential deployment of ADS-B In applications on additional aircraft.

Regulatory Compliance—Aircraft Certification

Since the certification of the 737 MAX, FAA and others have identified numerous safety issues with the airplane’s design that do not meet FAA’s airworthiness standards. One example is the engine anti-ice system for which Boeing sought an exemption. I joined Sen. Duckworth in stating that it wasn’t the time to talk about exemptions—it was time to fix this safety problem as soon as possible.

Question 1. The FAA Reauthorization Law, enacted last May, requires aviation manufacturers to certify that their aviation product designs are compliant when they submit data to FAA for approval. What is Boeing doing to comply with this requirement?

Answer. The FAA’s regulations require an applicant for a type certificate or for approval of a major change in type design to show compliance with all applicable requirements, provide the FAA the means by which such compliance has been shown, and certify it has complied with the applicable requirements.

To comply with these regulations, under the authority of the Boeing Chief Program Engineer for each airplane model, Boeing certifies to the FAA that each product design requiring the submittal of data to the FAA for approval has complied with the applicable airworthiness standards. For each individual data submittal,

Boeing also requires the engineer responsible for the design data to attest that the submitted data is complete, accurate, and demonstrates compliance to the applicable airworthiness standards. Further, the Boeing Organization Designation Authorization (“ODA”) Procedures manual, which the FAA approves, emphasizes that Boeing, as the applicant, is responsible for a complete and accurate showing of compliance for every change to type design.

Boeing is currently working with the FAA as it implements all of the new requirements created by the FAA Reauthorization Act of 2024. We will continue to follow the lead of the FAA as they work through the law’s statutory changes.

Question 2. What systematic changes are you making to improve Boeing’s compliance with FAA airworthiness and certification standards?

Answer. Boeing has implemented important measures to improve the compliance of engineering data with FAA airworthiness and certification standards. These improvements have focused on raising engineering knowledge of key design and regulatory requirements, clarifying and standardizing procedures for developing design data submitted to the FAA, and ensuring ODA unit members maintain independence in the performance of their FAA authorized functions. The improvement measures include:

- Enhancing our engineering workforce training curriculum covering the FAA’s type certification procedures and airworthiness standards, since knowledge of this information is foundational to ensuring product design compliance.
- Increasing technical excellence in our engineering designs and compliance with certification requirements through documentation and use of curated design practices that capture key engineering knowledge, lessons learned, and best practices drawn from Boeing’s long history of aerospace design innovation.
- Using independent Technical Design Reviews led by domain experts to identify risks and issues earlier in the design process and help ensure first-pass engineering quality.
- Clarifying and strengthening procedures to create and validate design safety assessments, and standardizing and documenting engineering guidance for applying robust system engineering principles, such as development assurance.
- Establishing enterprise-wide Functional Chief Engineers dedicated to ensuring technical excellence. Most recently this includes the appointment of a Human Factors Functional Chief Engineer, who is a senior engineering leader dedicated to ensuring excellence within the practice of human factors across Boeing.
- Strengthening the ODA system by completing the re-organization of ODA engineering unit members to give them an independent reporting structure aligned with their functional engineering organizations.

Safety Reporting Systems and ASAP Reporting

A key component of an effective SMS is an effective employee safety reporting system and voluntary reporting culture, in which frontline workers feel that their safety concerns will be heard and meaningfully addressed, without fear of retaliation.

The ODA Expert Review Panel recommended that Boeing implement an Aviation Safety Action Program (ASAP) at all production sites. ASAP is a tri-party agreement for the FAA, Boeing, and a union representing Boeing employees to jointly review filed safety reports and address problems early.

ASAPs would leverage Boeing’s current employee reporting system—known as Speak Up—while providing important transparency for FAA on what concerns are raised.

While the Machinists, Boeing, and the FAA have a tri-party agreement for the Everett and Renton production lines, modeled after ASAP, it took years of advocacy by the Machinists to get there. And now, public reporting highlights that, in trying to reach an ASAP agreement for Puget Sound facilities with the engineering union SPEEA, Boeing would like to control the flow of information that reaches the FAA.

Question 1. Is controlling the flow of information part of an effective reporting system? Is it part of a healthy safety culture? Why or why not?

Answer. Boeing is focused on fostering a healthy safety culture by empowering and encouraging all employees to speak up if they have safety or quality concerns. We have a reporting system called Speak Up that provides every employee with the opportunity to anonymously or confidentially report safety and quality concerns related to Boeing products and services. Retaliation against those who do so is strictly prohibited and Boeing has strong policies against such conduct that we consistently communicate to our employees.

In 2024, the FAA issued a 14 C.F.R. Part 5 Safety Management System (“SMS”) rule that requires Boeing to have “[a] confidential employee reporting system in

which employees can report hazards, issues, concerns, occurrences, incidents, as well as propose solutions and safety improvements, without concern of reprisal for reporting.” 14 C.F.R. § 5.71(a)(7). Boeing has implemented this requirement through Speak Up. With respect to the flow of information, the FAA’s SMS rule requires Boeing to submit an anonymized summary of its confidential employee reports to the FAA once every six months. 14 C.F.R. § 5.71(c). Boeing is working on implementing this requirement.

Question 2. Do you consider it to be important for FAA to have visibility into a filed ASAP report? If yes, why? If no, why not?

Answer. As described above, through the implementation of the FAA’s SMS rule, the FAA will have visibility into anonymized Speak Up reports. In addition, the FAA currently has visibility into certain Speak Up reports under a tri-party agreement between Boeing, the FAA, and the International Association of Machinists (“IAM”) 751 in Washington state. Under this agreement, which is modeled after the Aviation Safety Action Program (“ASAP”), the FAA sits on an event review committee (“ERC”) that jointly reviews certain product safety-related issues reported through Speak Up by IAM 751-represented employees.

Question 3. What are you doing to implement the ODA Expert Review Panel’s recommendation to set up an ASAP at all Boeing production sites?

Answer. Boeing supported the Aircraft Certification, Safety & Accountability Act Section 103 Organization Designation Authorization (“ODA”) Expert Panel’s review and acknowledges the importance of its work. Under the FAA’s oversight, we have been working to make changes in response to the panel’s recommendations and we will continue that critical work. As described above, Boeing, the FAA, and IAM 751 in Washington state currently have a tri-party agreement, which is modeled after ASAP. Like the expert panel, we recognize the value of this program. We are evaluating its progress and considering deploying similar programs more broadly. For example, we have had discussions with the Society of Professional Engineering Employees in Aerospace (“SPEEA”) about adopting an ASAP-like tri-party agreement that would continue to strengthen safety, quality, and compliance.

Question 4. What steps have you taken since the Alaska 1282 accident to ensure Boeing’s Speak Up system does not filter out legitimate complaints and concerns?

Answer. As described above, Boeing empowers and encourages all employees to speak up if they have safety or quality concerns. Boeing understands the importance of carefully reviewing the reports submitted to our Speak Up system. Accordingly, once a report is received in Speak Up, a cross-functional enterprise triage team reviews the report to determine the nature of the issue raised and the appropriate investigative path for its disposition. Since the Alaska Airlines Flight 1282 accident, Boeing has taken important steps to simplify and enhance the Speak Up system process. Boeing increased promotion of how to report, the benefits of reporting, and the confidentiality protections for those who report, resulting in a substantial increase in the number of reports to Speak Up. Increased reporting is a sign of progress toward a robust reporting culture. In addition, Boeing improved the Speak Up reporting interface to make it more user-friendly and increased transparency about the status and resolution of reports. As a result, employees who confidentially submit Speak Up reports receive e-mail notifications about the status of their reports and can check the status of their reports on a personalized dashboard.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. LISA BLUNT ROCHESTER TO
KELLY ORTBERG

Safety Inspectors

Question 1. Given the concerns raised about Boeing’s Organization Designation Authorization (ODA) program contributing to past safety incidents, what specific measures has Boeing implemented to ensure its self-inspection processes are rigorous and transparent?

Answer. Organization Designation Authorization (“ODA”) is an FAA program that authorizes certain approved Boeing personnel to act as representatives of the FAA for certain purposes. These ODA personnel only act on behalf of the FAA when delegated by the FAA to do so. Boeing employees selected as ODA unit members perform a critical role on behalf of the FAA in aircraft certification and safety assurance. In recent years, under FAA oversight, Boeing has implemented important measures to strengthen our ODA program and improve independence so that ODA unit members can perform their delegated duties free from interference. These measures include:

- Restructuring the management and reporting structure of our ODA engineering unit members to give them greater independence.
- Adding ODA unit member capacity and improving the future ODA pipeline to address retirements and to meet current needs.
- Establishing a dedicated ODA ombudsperson, who serves as a neutral third party to advise and assist ODA unit members with concerns, including related to independence.
- Implementing an annual assessment of the effectiveness of the Boeing ODA Administration team's oversight of the ODA program with the goal of improving support to the ODA unit.
- Updating the ODA unit member interference reporting process and associated training.
- Creating and disseminating design practices and participating in technical design reviews to ensure that our historical best practices are applied to design changes through detailed technical reviews by engineers and independent expert reviewers.

Safety Culture and Employee Reporting

Question 1. Reports have indicated that Boeing's safety management system (SMS) may confuse employees, potentially hindering effective safety reporting. What steps is Boeing taking to simplify and clarify safety protocols to encourage proactive reporting and address safety concerns raised by employees?

Answer. Over the last year, simplification has been a focus area for Boeing and has resulted in changes to both our reporting system processes and other important Safety Management System ("SMS") processes. Boeing is focused on fostering a healthy safety culture by empowering and encouraging all employees to speak up if they have safety or quality concerns. We have a reporting system called Speak Up that provides every employee with the opportunity to anonymously or confidentially report safety and quality concerns related to Boeing products and services. Retaliation against those who do is strictly prohibited and Boeing has strong policies against such conduct that we consistently communicate to our employees.

Since the Alaska Airlines Flight 1282 accident, Boeing has taken important steps to simplify and enhance the Speak Up system process. Boeing increased promotion of how to report, the benefits of reporting, and the confidentiality protections for those who report, resulting in a substantial increase in the number of reports to Speak Up. Increased reporting is a sign of progress toward a robust reporting culture. In addition, Boeing improved the Speak Up reporting interface to make it more user-friendly and increased transparency about the status and resolution of reports. As a result, employees who confidentially submit Speak Up reports receive e-mail notifications about the status of their reports and can check the status of their reports on a personalized dashboard.

Workforce Challenges/Inspectors

Question 1. Boeing has faced notable challenges in recruiting and retaining qualified safety inspectors, particularly following significant workforce reductions during the COVID-19 pandemic. This loss of experienced personnel has been linked to subsequent quality control issues. Additionally, the FAA has encountered difficulties in maintaining adequate staffing for effective oversight of Boeing's operations. Given these challenges, what specific strategies is Boeing implementing to attract, train, and retain a skilled safety inspector workforce to uphold the highest safety standards in manufacturing and quality control?

Answer. Boeing is committed to attracting, training, and retaining a talented workforce, including quality inspectors and mechanics, to produce safe, high-quality airplanes. Boeing offers employees a wide range of competitive benefits, including market-leading health and retirement plans, paid time off, and programs that support employees, their families, and communities. For example, in November 2024, we completed union contract negotiations with the International Association of Machinists ("IAM") in Washington state and Oregon that included a thirty-eight percent general wage increase over four years. Boeing also supports the performance, development, and professional growth of our workforce, including by providing meaningful work assignments, generous tuition assistance, leadership development opportunities, and virtual and in-person learning resources.

As part of Boeing's comprehensive safety and quality plan, we are enhancing training and development of our quality inspectors and mechanics. Often new employees join us with varying experience levels. As a result, we are investing in comprehensive training programs to improve their baseline expertise. Our goal is to en-

sure all employees have the necessary knowledge and skills to perform their roles effectively. For example:

- We have overhauled our foundational training, lengthening its duration to better equip new employees, and enhanced on-the-job training.
- We have added hundreds of hours of new curriculum to training programs.
- We have deployed workplace coaches and peer trainers and established skills enhancement centers on the production floor.
- We have implemented proficiency assessments for many quality inspectors and mechanics, ensuring their understanding of drawings and specifications.

In addition, as part of our safety and quality plan, we are simplifying the plans and processes that our quality inspectors and mechanics use to perform their jobs. For example, we are consolidating and clarifying procedures and eliminating overlaps and confusion in build plans and work instructions to make them more accessible and understandable to our employees, particularly those with less experience.

Question 2. How is Boeing collaborating with the FAA to ensure that both organizations have the necessary personnel to maintain rigorous safety oversight now and in the future? Can you also provide general projections on the number of safety inspectors required to meet future needs?

Answer. Under the FAA's close oversight, Boeing is implementing our comprehensive safety and quality plan. One of the plan's major work areas is enhancing employee training, which will help ensure that Boeing has the necessary personnel to maintain safety and quality in our production system now and in the future. To that end, Boeing worked with the FAA to select a KPI that focuses on employee proficiency. This KPI measures the share of employees currently staffed who are deemed proficient in core skills. Each KPI, including the employee proficiency KPI, has defined criteria that help identify areas of potential risk to our operations and trigger corrective action through our Safety Management System ("SMS"). Boeing closely monitors these KPIs, shares them with the FAA, and regularly discusses them with the FAA.

With respect to FAA Aviation Safety Inspectors, in September 2025, then-FAA Administrator Michael Whitaker told Congress the following about the number of FAA Aviation Safety Inspectors at Boeing production and supplier facilities: "The total target to answer your direct question is 55 by the end of the year. We're at 46 right now, and we expect to hit the 55. Basically, it's 13 in any of the three big Boeing facilities and 16 in various supplier facilities." Our understanding is that there are currently more than 50 FAA Aviation Safety Inspectors resident in Boeing production and supplier facilities. However, the FAA would be the best source for a definitive answer on current FAA Aviation Safety Inspector staffing levels and future needs.

Long-Term Safety Improvement Plans

Question 1. Beyond immediate corrective actions, what long-term strategies does Boeing have in place to institutionalize a culture of safety, ensure continuous improvement in safety practices, and prevent future lapses in safety oversight?

Answer. In the wake of the Alaska Airlines Flight 1282 accident, Boeing took immediate corrective actions to ensure the safety of our fleet and production operations for all of our airplanes. Then, we gathered feedback from the FAA, employees, customers, and independent experts to develop a comprehensive plan to improve safety and quality across our production system and within our supply chain. The plan contains both short-term and long-term strategies. It focuses on four major work areas: reducing defects, enhancing employee training, simplifying processes and procedures, and elevating our safety and quality culture. We are implementing this plan under the close oversight of the FAA. Boeing is committed to this plan and to continuous improvement.

Among other things, the plan sets forth six measures—known as key performance indicators ("KPIs")—to continuously monitor and manage the health of our production system. These KPIs are part of our long-term strategy to strengthen safety and quality. Each KPI has defined criteria that help identify areas of potential risk to our operations and trigger corrective action through our Safety Management System ("SMS"). These metrics have helped Boeing conduct more targeted safety risk assessments in priority areas and maintain production health.

As part of the plan, we are also focused on elevating our safety and quality culture. This includes providing our workforce with the long-term infrastructure and support needed for continuous improvement, reporting issues, and solving problems. For example:

- We have enhanced and further promoted the use of our confidential employee reporting system—Speak Up—to report safety and quality concerns.
- We have implemented Employee Involvement Teams across Boeing Commercial Airplanes (“BCA”) to bring teammates from different work disciplines together on a weekly basis to raise and solve issues, ask questions, and offer assistance.
- We have conducted mandatory product safety and quality training for all employees.
- We are conducting quarterly manager-led safety and quality events across BCA to maintain our long-term focus on safety and quality.

Working together to fix Boeing’s culture will take time, but it is perhaps the most important change we need to make as a company. Restoring the values that were foundational to Boeing’s storied history and setting expectations for behavior will move us forward. Change must start at the top and includes getting Boeing’s leaders back to the factory floor, into our engineering labs, and connected to other places where our people work every day. Boeing’s leaders must understand and remove the challenges our teams face to make it easier for them to do their jobs. For our teammates, we need to restore our trust in one another and break down the barriers that prevent us from working together across the company.

To help facilitate this culture change, we launched a culture working group of Boeing employees focused on sharing ideas and perspectives from across the company. In addition, we conducted a confidential all-employee survey focused on improving our workplace and culture, which the vast majority of Boeing employees took. Employee feedback from this survey and culture working group were recently used to redefine Boeing’s values and behaviors. The redefined values and behaviors will be used to help guide Boeing’s culture change efforts and will provide a baseline for measuring progress over the years. They will be built into every step of the employee experience, including performance management and leadership development. Success will mean creating a cohesive culture where the new values and behaviors are deeply embedded in our daily operations and everyone is held accountable to living them every day. This includes making measurable improvements in manager engagement with employees and employee sentiment. There is nothing more important than creating a culture where we’re all working together. While it will take time and a concerted effort, when we get it right, our culture will lead to our future success.

