



Speech – "Rising to Meet the Challenge"

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Remarks as Delivered

Good morning, Paul, and thanks for that kind introduction. It's good to be here in Asheville—although I suppose it's good to be anywhere that's not D.C.

I joke about that, but it's actually true, and not just because D.C. is a fishbowl. It's good to get outside the beltway because it's important to meet with the folks on the front lines. I've always believed that safety is not the product of a PowerPoint or a report. Safety is what happens when the people in the field—all of us together—make it the basis for what we say and do, how we act.

Normally I wouldn't do this, but here's today's takeaway...which will come as no surprise to many of you: safety is a shared responsibility. Each one of us has a role. It's not only the pilot or the mechanic or the inspector—it's all of us. If we're not pulling in the same direction, safety is at a standstill. And there's little disagreement amongst all of us: safety has got to be at the top of the list, the top priority in everything we do.

The recent groundings of the 737 and the Cirrus have brought safety to the forefront. As I speak to you today, the Boeing 737 Max remains grounded as the investigations continue.

But we are still left with an unspeakable tragedy, and with it, a push to do something. As is often the case with human suffering, there's a real pull to take immediate action. But as we know, that's not always the best way to address the actual cause of the problem. With respect to the 737 Max, the FAA waited until we had data that linked the Lion Air and Ethiopian Airlines accidents before we grounded the U.S. fleet. And when we had the data, we acted within a few hours.

The facts are these: It took five years to certify the 737 Max. Boeing applied for certification in January 2012. The certification was completed in March 2017. During those five years, FAA safety engineers and test pilots put in 110,000 hours of work, and they flew or supported 297 test flights.

That said, the 737 Max won't fly in the U.S. again until our safety analysis says it's safe to do so.

Turning to the Cirrus 50, when we issued the emergency Airworthiness Directive, it was prompted by reports of a systemic problem with AOA sensors. Accidents didn't trigger the decision to ground the Cirrus 50, data did — that's how the system is supposed to work. Cirrus has developed an FAA-approved corrective action. It also revised emergency procedures in the flight manual.

These aren't the same AOA sensors used on the 737, and the situations are unrelated, but I note that this isn't about taking action, it's about taking correct action at the appropriate time. We have one agenda and one agenda only: safety.

I joked before about getting out of D.C. to see what's happening in the field. At the FAA, I get to see quite a bit of the National Airspace System — like general aviation operations.

General aviation aircraft comprise a majority of the U.S. civil aviation fleet. And as important as the commercial and military sectors are, the GA community also performs a variety of critical functions. Personal transportation, flight instruction, law enforcement, agricultural operations, humanitarian relief...the list is extensive. It's an impressive resume, and the data tell us GA safety is on the upswing. Working with the GA community, we set the goal of reducing the fatal accident rate to no more than 1.0 fatal accident per 100,000 flight hours by FY 2018.

When we need somebody to step up, GA always does. The preliminary data show we—you—exceeded that goal. The actual FY 2018 result may be closer 0.84.

I know the Insurance industry knows this fact quite well, so I know you recognize that's a huge success. To accomplish our safety improvement goals, the FAA and industry work collaboratively through the General Aviation Joint Steering Committee—the GAJSC.

The GAJSC will analyze data from accidents and incidents to identify risks and develop safety enhancements to mitigate those risks. The GAJSC was formed in the likeness of the CAST. As most of you would no doubt surmise, the GAJSC identified loss of control in-flight as the leading cause in fatal GA accidents.

The group has also analyzed and developed mitigations for non-fuel related engine failures. The GAJSC will soon finish its Controlled Flight into Terrain analysis. There's actually good news here: CFIT accidents have declined. You'll hear a lot

more from Pete about technology driven innovations in cockpit displays in a moment, but they have played a vital role helping to reduce CFIT. The team is evaluating additional steps we can take to further reduce this risk because we all know CFIT events have a low survivability rate.

The GAJSC partnership works. It really works. Since 2012, the GAJSC's three working groups have identified root causes associated with both loss of control and engine failure accidents. From this work, 40 safety enhancements have been adopted, aimed at addressing these causal factors. Another 10 CFIT related safety enhancements will begin to be decided on by the GAJSC this month.

I'd like to give credit where credit's due. The insurance community has had representatives on the GAJSC, the Safety Analysis Team of the GAJSC and its working groups. I'm hoping that Jim Anderson, the senior VP at Starr Aviation, is here. Are you here, Jim? Thanks for serving as a representative.

GA's involvement goes well beyond the GAJSC. This audience is no stranger to the Aviation Safety Information Analysis and Sharing program—ASIAS. The ASIAS team consists of aviation industry and the FAA working together to collect and analyze data, actively searching for systemic risks.

The ASIAS team includes 88 business/corporate members. There are 12 flight training universities and institutions as well as additional light GA operators who participate in ASIAS. These groups have contributed more than 1 million flight hours of digital flight data to ASIAS.

That's what partnership does. I truly believe that data sharing is the way forward to advance safety. You are all off to a very good start. We need to build on your success by expanding participation.

You've been right there with the commercial and military sectors in helping us to put a safety culture in place. The safety culture has literally transformed what this audience would have labeled "uninsurable" and made it insurable. The safety culture has a ripple effect—through aviation, through society. Safety spurs efficiency—and efficiency bolsters the bottom line.

It stands to reason: what's more efficient is more profitable, more affordable. And with affordability comes the potential for expansion: more aircraft, more routes, more destinations. That strengthens the economy. Safety is the domino that sets a lot of things in motion, and they're all the right things. That's why safety needs to be the first step.

As you know, the safety culture demands that safety be infused into all of our processes from top to bottom—in a continuous loop. When you think about where aviation has gone in a little more than a century, it's hard to argue the point. We've

gone from barnstorming to a safety record that is the envy of all modes of transportation. The automotive industry has asked us for insights.

Even the energy and health care industries have come to us to ask the question, “How did you achieve this level of safety?” I’ll tell you this much: we didn’t do it alone. I think the answer is that government doesn’t have all the answers. That’s what the Part 23 rewrite was all about. We set the desired performance standard... we, the regulators, ensure the standard is met and kept. But we leave the business of how that standard is met (and, quite often, exceeded), up to the operators, manufacturers, and maintainers. We removed the prescriptive requirements that had been at the heart of Part 23—and we replaced them with end-state criteria.

My colleague Dr. Mike Romanowski will talk about part 23 in more depth after me, but, for far too long, aviation moseyed along with very little change in basic design. But thanks to the innovators that are among us, that changed, and it changed for the better. The question for FAA quickly became, “How can we keep up with this and maintain safety?”

Performance based regulations are the answer.

And I think we’d be naive not to consider that performance-based safety regulations are capable of leading to safety levels beyond what FAA requires. The onus is on the manufacturer to demonstrate compliance with FAA design standards. The manufacturer does the testing and collects the data.

This is the heart of performance-based regulation. The company decides how to comply with the performance standards. The government does not enter the picture with a specific fix in mind. And because of that, there’s always the possibility that the designer’s performance solution raises the bar even higher than what Uncle Sam had in mind. By exceeding government requirements, the performance based regulations might very well be changing how we consider risk in the aviation industry itself.

I’d like to come full circle now in a way that you’re probably not expecting. None of this will matter much if we don’t have workforce in place to make it happen. This isn’t complex science: how do we attract new talent? How do we make sure we select the right people for the job? Those questions are by no means new, and they’re certainly not exclusive to our industry.

The numbers tell quite a story. Four decades after deregulation, we’re closing in on a billion passengers, domestic and international. IATA says that passengers will double by 2036. One forecast says we will need 117,000 more pilots—in North America alone. It’s also said we’ll need three-quarters of a million new technicians over the next 20 years.

At the same time, the number of private pilots holding active airmen certificates has decreased by about a third in the last decade. Looking through the same lens, commercial pilots decreased 21 percent. The military isn't the source it used to be, because it doesn't turn out as many pilots as it used to. College programs don't have enough instructors—because they're taking jobs with the airlines. The scenario for mechanics and technicians is no better.

The suggestions about how to solve this run the gamut. There were recommendations to increase pay and improve working conditions to attract more people to the profession. Other experts suggest subsidizing and overseeing pilot training in ab initio programs.

For its part, industry is addressing funding options and improvements to make loans more accessible for pilot training. And a number of carriers are actively engaging their local communities so that the next generation is aware of and interested in aviation as a profession.

At the FAA, overcoming this challenge and bringing new, well trained, people into the aviation system is a high priority for me. We are working internally to double down on our STEM outreach efforts. We're increasing our partnerships with industry, academia and other government agencies.

We must ensure that we are able to fill critical aviation jobs in the future with people who have the right skills to keep our system operating at the highest levels of safety.

Wherever you stand on this, one thing is for sure. Unless and until each one of us takes an active and personal stand on getting kids interested in STEM, we will find the pipeline can and will run dry. We're in a battle with Silicon Valley for talent, and we're losing. Smart kids aren't sitting around waiting for us to intrigue them.

This is not the time for this industry to sit on its hands. This is a time—the time—for each of us to engage kids and schools at all levels. Start with primary grades. That's where it started with me. Success or failure sits squarely on our own shoulders. We need to make the workforce of tomorrow a priority, and we need to do it today.

Thank you.

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