

Speech – "Standing up for Safety"

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UK Aviation Club

Remarks As Delivered

Good afternoon. It's an honor and a privilege to be here in London at The Aviation Club UK. I want to especially thank Karl [Brunjes (Chairman of the Club)] for that thoughtful introduction, but moreover, for your very kind invitation to speak to such a distinguished group of aerospace advocates and professionals. I am grateful to be with you and very much appreciate it.

This is certainly an interesting time to be in London. It's an interesting time to be anywhere internationally given the outbreak and spread of a new corona virus. As we all know, the very connectedness that makes our industry so vital to the global economy also puts us on the front lines for protecting our citizens from the spread of infectious diseases.

We in the FAA are working with the aviation industry and our government partners, including the Centers for Disease Control and Prevention, or CDC, to support international efforts to prevent the further spread of this virus. In coordination with the CDC, we have developed detailed health guidance related to infectious diseases for airline flight crews, cleaning and cargo personnel, and air medical transport.

Like the UK, our goal in the U.S. is to prevent a sustained spread of the virus within our borders by being proactive and strategic in our response—but tactical as necessary—as we combat the threat.

Our fates are tightly coupled when it comes to aviation and global travel, particularly over the busy Atlantic corridors. A quarter of all trans-Atlantic air traffic travels between the U.S. and the UK, and a whopping 80% of all trans-Atlantic air traffic traverses UK-controlled airspace.

This is why in addition to being partners when crises like the coronavirus erupt, we must also support each other in times of geopolitical change. Now that the UK has officially left the EU, I'm pleased to note that our governments have worked together very closely to ensure, as

much as possible, continued harmonization and integration of our aviation systems during the transition period and going forward. I am here to tell you we will continue to do that. We are here for you.

Please know that the U.S. continues to place extremely high value on our vital relationship with the UK and your highly-developed and far-flung aviation system. Our systems, as you know, are more interconnected and intertwined than ever. And the world depends on your turbofan engine, aviation parts, aircraft modifications and repair businesses, as well as your flag carriers and international airlines.

I don't need to tell this group that having an uninterrupted, efficient, safe and modernized air transportation system is crucial to the economic health of the world. In a couple of days the international aviation system will get me to my next appointment, the Singapore air show. I am most thankful for that.

And while an occasional delay, annoying seatmate or lost bag can sometimes make us question why we left our homes, we rarely, if ever, question whether or not we'll get to our destination safely. That feeling of assurance does not come by happenstance—it comes from the hard work of making safety our most important core value.

But we have no other choice. Without safety as a foundation, we cannot have a vibrant aviation industry in any country, much less between countries. As it is, our international air transportation network is a tightly woven fabric that is dependent on all of us making safety our most important core value.

When that fabric becomes frayed or unravels, disaster is likely to follow. And like the aviation system itself, the human costs can be global. We have to look no further than the tragic Lion Air and Ethiopian Airlines Boeing 737 MAX crashes to understand this. Onboard Ethiopian Airlines Flight ET302 were citizens from 35 countries, including seven from the UK.

On behalf of everyone at the FAA, I would like to, once again, extend our deepest sympathy and condolences to the families of the victims of both accidents. I am committed to honoring the memory of those who lost their lives, by working tirelessly—each and every day of my tenure—to ensure the highest possible margin of safety in the global aviation system. Everyone at the FAA is aligned with me on this point.

For the MAX, I have been steadfast in saying that our return-to-service decision will be based solely on our assessment of the sufficiency of Boeing's proposed software updates and pilot training that address the known issues for grounding the aircraft.

We are not delegating anything. I've delivered this message directly and in person to the former and the current CEO of Boeing. When we finally make the decision to return this aircraft to service, it will be the most scrutinized aircraft in history. I am not going to sign off on this aircraft until I fly it myself.

As the FAA works to restore confidence in the U.S. and the global aviation system, we're motivated by the words of wisdom from one of the UK's most famous statesmen, Sir Winston Churchill. "Courage is what it takes to stand up and speak. It's also what it takes to sit down and listen."

I'll start with the latter half of the quote—having the courage to listen. We at the FAA have welcomed the scrutiny and feedback on how we can improve our processes. There have been multiple independent reviews launched to look at the 737 MAX and the FAA's certification and delegation processes.

The first to be completed was one we commissioned—asking nine other authorities, including EASA, to join us in a Joint Authorities Technical Review to assess the Boeing 737 MAX flight control system certification. Their recommendations in part focused on the increasing complexity of aircraft systems, particularly automated systems, and the interactions between systems and the pilots. Never before had 10 authorities come together to conduct a review of this sort.

We also welcomed the seven recommendations issued by the NTSB in September. Broadly speaking, the NTSB asked us to address concerns about how pilots handle multiple alerts and indications, in our design safety assessments.

Input is also coming in from the Technical Advisory Board, or TAB, we created. Work also continues on the Department of Transportation's Inspector General audit of the 737 MAX certification, as well as various congressional investigations.

Finally, about three weeks ago, we received the final report from the Secretary of Transportation's Special Committee on aircraft certification. Of interest, the committee recommended that we advance the use of Safety Management Systems, or SMS, throughout all sectors of the aviation industry. I'll discuss SMS more later.

As you can see, we're sitting down and listening. We've received a great deal of valuable input to date, and more will be forthcoming. I firmly believe that willingness to accept critique is a sign of humility and transparency. It is also a strength.

I have seen this firsthand as I've met our regulatory counterparts around the world. They appreciate and value U.S. leadership. They understand that, by working together, we will all be better and raise the bar on global aviation safety.

The first half of Churchill's quote – having the courage to stand up and speak out—sums up what you will see from the FAA as we engage even more fully in promoting and developing aviation safety around the world.

The grounding of the Boeing 737 MAX airplane placed a spotlight on safety and our approach to oversight of those we regulate. For the MAX, as with all aircraft, we made use of a thorough certification process that has consistently produced safe aviation products.

But that process and the regulations that we use in certification programs are not static, however. Any process must be continually improved. We are continuously evolving, and that means we are constantly evaluating the safety bar and raising it.

The accidents also put a spotlight on global pilot training standards as well as maintenance practices. We will continue to advocate for improvements in those areas, as the operational processes are a critical part of our aviation safety system.

The public has the expectation that FAA-certified aircraft are reliable and safe, and that is a completely reasonable expectation. That means we can never be comfortable resting on our safety record and current processes and standards.

Going forward beyond the MAX, we are ready to stand up and speak out on key themes that are emerging regarding aircraft certification and operations processes not only in the U.S., but around the world. I am committed to addressing each of these areas:

- We must move toward a more holistic versus transactional, item-by-item approach to certification, with coordinated and flexible information flow throughout the oversight process;
- We must integrate human factors more effectively throughout the design process, particularly as aircraft become more automated and systems more complex;
- We must promote an environment of Just Culture and Safety Management Systems not only for operators, but for manufacturers and suppliers, regulators, air navigation service providers, and all industries involved in the aerospace system. I'll speak more about this later.

By collaborating with other authorities around the world, we will work to ensure we meet the public's expectations of the highest possible levels of safety globally.

There has been speculation in the press about our relationship with international regulators, particularly EASA, following the MAX crashes. Let me just say our working relationship remains strong, at all levels, and we agree far more than we disagree as we work together to return the aircraft to service. We, as regulators, must support each other during these difficult times and keep safety at the forefront.

We are also prepared to be leaders for the environmental well-being of the planet. I mentioned earlier my upcoming flight to Singapore. No matter what long haul aircraft I take, it will be more fuel efficient than an economy car on a per seat basis, thanks to technology and innovation in design and manufacturing of virtually all modern aerospace components.

Just as an aside, how long do you think it would take if you had to drive an economy car from London to Singapore? Canadians Ray and Marianne Hyland and their three kids tried it in 2018—it took nine months. The trip was widely covered in the press and was quite the adventure.

You could also do the trip in about two months on the container ship, Antoine de Saint Exupery, but you'd have to book it well in advance—there are only two cabins on the ship. Again, it would certainly be an adventure, but that's still a bit long for most of us business travelers, in my humble opinion.

In all seriousness though, the story illustrates the stark contrast between modern jet travel and every other form of conveyance. Our air transportation system is not just for passenger convenience though, it's essential to the way our world operates. Aviation connects us; it makes our world smaller.

And aviation is increasingly fuel efficient, thanks to the spirit of innovation that has always dominated the industry along with a commitment to manage our carbon footprint. Our industry must have the courage to stand up and speak out about our efforts.

As for environmental responsibility, we in the U.S. support the ICAO Carbon Offsetting and Reduction Scheme for International Aviation, or CORSIA, as the preferred alternative to a patchwork of regional or country-based carbon taxes and charges.

I'll be honest, we continue to be concerned about European proposals for environment-related fees and taxes that could undermine and weaken CORSIA.

Another area where the U.S. has been a leader is in the sustainable aviation fuel movement. U.S. airlines and business aviation have been early adopters of these fuels, which can provide as much as an 80% reduction in greenhouse gas emissions. We will have the production potential for 250 million gallons per year of these fuels in the next few years.

These are not theoretical gains. Our New York-based carrier, JetBlue has stated that it plans to go carbon-neutral for all its domestic U.S. flights by July 2020, in part by using sustainable fuels. United Airlines has also been flying out of Los Angeles International Airport using a sustainable fuel blend since 2016.

Along with CORSIA and sustainable fuels, we are also doing our part for environmental stewardship through our air traffic modernization initiatives.

FAA analysts have calculated that 20 air traffic modernization capabilities already deployed in the U.S. have resulted in about \$6 billion in savings from 2010 through 2018, related to safety, airline operating costs and passenger value of time.

We estimate that airlines reaped about half the overall savings, including about \$1 billion in lower fuel costs. Less fuel burned, as you know, is directly proportional to reduced carbon emissions.

In the U.S. we now have the basic infrastructure for our modernized air traffic management system in place, and we're progressively "operationalizing" our NextGen initiatives, further boosting capacity and efficiency, and making our system more resilient, while reducing fuel burn.

Of course, it goes without saying that our modernized system will also include integration, not segregation, for new entrants into the aerospace system.

And no new entrant is more prolific than the unmanned aircraft, as you have experienced here in the UK, as well. We, at the FAA, have been registering drones for a little more than four

years, and we already have more than 1.5 million on the books, with more than 400,000 listed for commercial use. We've approved two air taxi operators and 27 part 137 UAS operators—which you know as crop dusters.

Our strategy of “operations first,” is allowing us to use the existing regulatory regime, which helps us ensure innovation can drive forward. Said another way, over the last few years, we've shifted from writing rules to getting machines in the air and flying—and taking the lessons learned from the operations approval process to write better rules.

That experience is translated directly over to the flying taxis that are on the horizon. According to my UAS team, we are currently engaged with the builders of more than 15 electric vertical takeoff and landing aircraft projects.

Of course, the FAA has to ensure that these new entrants are safe before they can take part in regular National Airspace System operations, and sometimes that does mean new regulations. The FAA recently issued a notice of proposed rulemaking to require drone operators to provide remote identification for their vehicles.

This is a key enabler for drone traffic management systems that we've been working on with NASA.

We're using a crawl, walk, run analogy as we mature the vehicle technologies and air traffic management procedures to do this, and at this point, I'll note that we're still in the crawling phase for both but making rapid progress.

We're also making rapid progress in our regulatory role in commercial space transportation by paving the way for easier access to low Earth orbit through the National Airspace System. We're doing this by streamlining the rules for commercial launch and re-entry while at the same time protecting national security and public safety.

The idea is, in part, to boost the confidence of private industry to invest in commercial space.

So how do we reconcile all this fast-moving technology with a regulatory agency that wants and needs innovation, but at the same time consistently aspires to be the gold standard for safety globally?

We do it by sticking to our core values of “safety, through integrity, innovation and people.” I see our strategy coalescing around four themes—Big Data, Just Culture, Global Leadership, and People.

Big Data: We must continue leaning into our role as a data-driven, risk-based decision-making oversight organization that prioritizes safety above all else. We do that by breaking down silos between organizations and implementing Safety Management Systems supported by compliance programs.

Just Culture: Several minutes ago, I mentioned that I am committed to developing a Just Culture. Done correctly, a Just Culture will generate the data you need to figure out what's

really happening in your operation. If we know about safety risks and we know where threats are coming from and how errors are occurring, we can mitigate the risks and fix the processes that led to those errors.

As an aside, I know from personal experience that these concepts work. I saw them in action at Delta Air Lines during the 12 years I served as the Senior Vice President of Flight Operations, where I was responsible for the safety and operational performance of the company's global flight operations of more than a million flights a year on six continents.

Global Leadership: We'll lead globally by working with other authorities around the world to ensure we meet the public's expectations of the highest possible levels of safety.

And People: It's now time to show that next generation of aviation leaders what incredible opportunities lie ahead for them in our field, both personally and professionally. It is the people who will innovate and collaborate to take us to the next level of safety, operational excellence and opportunity.

I started this speech by noting how our fates are tightly coupled when it comes to aviation and global travel, and that's not just for the U.S. and UK, but for all countries that reap the rewards, both economically and culturally, of having a strong aviation transportation system.

That's what aviation can provide. However, what it requires from all of us is to have a laser-sharp focus on safety. Aviation's hard lessons and the industry's hard work have paved the way to creating a global aviation system with an enviable safety record. But remember, safety is a journey, not a destination. This is particularly important in an era where technology and innovation are as ubiquitous as ever.

We must build on the lessons learned, and we must never allow ourselves to become complacent. We have to be constantly learning from each other – the regulators and those we regulate—to help each other improve. That's the only way the system is going to continue to improve.

The FAA is prepared to take the lead in this new era of system safety, a task we approach with a spirit of humility and openness.

We have the courage to speak out and lead. We also have the courage to take counsel and listen. I invite others around the world to join us.

Thank you for your time and hospitality today, and for inviting me here to speak with you today. It is an honor and privilege—I look forward to continuing the safety journey with you.

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