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The State of the Global Airspace

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Good morning. It's a pleasure to be here today. Vinnie told me this would be a good group and I must tell you I'm truly impressed with the work that you are doing. Your dedication and hard work represent the true grit that is leading the global transformation of air travel.

I understand that past meetings have been in Rome, Paris and Amsterdam. It's fitting that your first meeting in the United States is in Chicago, which has such a rich aviation history starting well before the first flight of the Wright Brothers in 1903. Chicago native Octave Chanute designed and flew gliders on the dunes outside of the city, providing inspiration to the Wright Brothers. Chanute also organized a highly successful International Conference on Aerial Navigation at the World's Columbian Exposition in Chicago in 1893.

I could go on and on about Chicago's aviation history ─ Ameila Earhart hailed from Chicago, and significantly for this crowd, the legendary 1944 Chicago Convention on Civil Aviation established some of the most important agreements in aviation history, including the framework for bilateral agreements and the establishment of ICAO.

However, I've been asked to give a more forward-leaning talk on the state of the global airspace. Let's first look at how our industry is doing in these difficult economic times. It goes without saying that we are facing some serious headwinds. But, there are indications that the turbulence has stabilized.

I'm now with the Aerospace Industries Association in Washington, DC, a trade association representing nearly 300 manufacturers of civil, military and spacecraft. We keep a close eye on the economics of our members on an on-going basis.

Our analysis of the aerospace industry is that we are in a better than average position to ride out the economic storm. Our year-end figures for 2008 reflected increases in sales, exports and other important indicators. Sales growth is expected to continue through 2009, although at a much slower rate than we have seen in recent years.

Manufacturers of general aviation aircraft have been particularly hard hit, both by the economy and unintended consequences from the characterization of business jets as a symbol of corporate excess.

The damage to that part of our industry is mind-wrenching. In March, business jet flights fell by 30 percent compared to the same time last year, production lines have slowed, and some cases stopped, and every manufacturer has been forced to lay off a significant portion of its workforce as have FBOs, charter operators, and flight departments.

And these are good salt-of-the-earth jobs that are being undermined in every state in the union, especially unfortunate in today's economy when the focus is to create, not eliminate jobs.

I think we all need to help spread the message about how business aviation benefits the economy, and how it responds to emergencies on a moment's notice.

On the commercial transport side of the industry, we are caught in a downdraft but have quite a bit of cushion. On the one side, we have falling demand and reduced capacity, as well as the tight credit market. On the other side, global airframer backlogs still stand at a little over 7,000 aircraft altogether. The backlog is well-diversified in terms of models, geography and customer application.

The FAA recently concluded that U.S. mainline carrier domestic enplanements are likely to decrease 8.8 percent this year. But the forecast expects that they will bounce back and increase 1.9 percent in 2010. So the civil aviation manufacturing industry – as they say ─ is bending, but not breaking under the strain of the economy.

The global look for the airlines is a bit more pessimistic. The International Air Transport Association predicts that this year will be one of the toughest years that the airline industry has ever faced. Air cargo traffic fell an additional 23 percent in January after a significant decline in the fourth quarter of 2008.

The long-term forecast for civil aviation now remains up but with a more gradual glideslope. In this year's forecast, the FAA projected that the U.S. commercial aviation industry will carry its billionth passenger in 2021 – pushed back from 2015 that we were predicting only a few years ago.

However, you could say that today's economy actually does have a silver lining for aviation. It gives us all the chance to take an extra breath or two as we move forward on reshaping the global airspace knowing that traffic will continue to grow and that the billionth passenger will walk down the ramp.

And for that to happen, we need three things: 1, a transformed air space -- NextGen ─ or SESAR in the case of Europe; 2, economic recovery that will allow the airlines to purchase new equipment to fly in that airspace; ─ and 3, a system that can handle more capacity but with a reduced carbon footprint.

We've talked about the economics. Let's turn to NextGen.

You should all take great pride that NextGen implementation has already begun and there have recently been a number of important steps forward.

President Bush signed an executive order last December mandating accelerated implementation of NextGen. Now in this new administration, President Obama has done a masterful job of selecting the right officials to move us forward. Secretary of Transportation Ray LaHood has let this industry know that the administration is committed to NextGen. And Randy Babbitt, the FAA administrator nominee, has already had a significant hand in advancing NextGen work.

Today, as Vinnie well knows, we have 11 ADS-B ground stations installed, commissioned and in regular use in South Florida with all 793 stations on schedule to be installed across the country by 2014.

Continuous Descent Arrivals, Required Navigation Procedures and Area Navigation Departures and Arrivals – CDAs, RNP and RNAV – are being designed, built and flown throughout the country. And we are beginning to see the tremendous environmental and efficiency benefits of NextGen.

But there's an issue, what many of us call the 'long pole in the tent.' Aircraft are not required to be equipped with the ADS-B avionics to take full advantage of NextGen's benefits until 2020. So we potentially have this seven-year period during which we have half of the puzzle in place.

The obvious solution is to provide equipage incentives for operators to shrink that seven-year gap and reap the benefits of NextGen as soon as possible. As you know, the interactive nature of ADS-B technology means that we must reach a critical mass of operator equipage to realize the system's full potential for all of us.

Industry came together to request grants for NextGen-enabling avionics equipment in the recent stimulus or recovery package. Unfortunately, we weren't persuasive enough with that request.

It remains a little bit puzzling that the administration's rightful focus on investing recovery act funds in infrastructure – missed what I would call a very logical and excellent opportunity ─ to use some of that money to improve aviation infrastructure with "shovel-ready" improvements to our fifty-year-old air traffic control system.

However, we continue to believe these incentives make sense and have had some good indicators that the administration may take a second look at this request.

Another issue that we need to sort out in Washington in order to see NextGen implementation take hold is resolving the issue of FAA funding. We need to establish a solid funding regime through long-term FAA authorization and an increase in the annual General Fund contribution.

While the recent omnibus bill increased the allocation of the General Fund to the FAA from 18 to 24.6 percent, that was done to pay the bills and make up for decreasing trust fund levels. We believe that a General Fund contribution of well above 25 percent is needed until NextGen is fully implemented.

The lack of stable FAA funding through the reauthorization has a definite effect on NextGen programs, and maybe some of you in this room have first-hand experience with that. Critical new development and application programs are prohibited under short-term funding resolutions. Not resolving FAA, and therefore NextGen funding, can have a disastrous domino effect on near-, mid- and long-term efforts. We have to be able to provide cutting-edge transportation services on a schedule that is not constantly sabotaged by funding battles.

That is the picture as I see it in the United States when it comes shaping the global airspace. In Europe, we all know that SESAR is actively moving forward as well.

While both are based on satellite navigation and ADS-B, there are differences in the way the EU is approaching SESAR, including plans to incentivize and fund early equipage. The EU mandate is to require ADS-B use by 2015, five years before NextGen is fully online.

There are other differences as well. SESAR is an industry-led initiative, while NextGen is much more a U.S. government-led enterprise. There is some irony in this for me since I had a hand in the architecture and governance of the U.S. system and now sit with industry, at times champing at the bit to have a larger role in guiding NextGen's development. But for those who study how major systems develop and how transformational changes occur, this is one to watch as we see how the two models play out.

But most importantly, we all need to ensure that all air transportation system advancements around the world are seamlessly interoperable. Again, an industry that knows no borders cannot operate in a world where navigation and surveillance technological specifications are different from country to country.

NextGen and SESAR, are the world leaders in ADS-B. We have a great opportunity with ICAO to set the standards and prove the value and effectiveness of seamless interoperability. Not surprisingly, ICAO must play a large role in making this a global reality by coordinating advanced air transportation system efforts around the world. At this point in the game, the spirit of innovation probably lies more in human organization than technology!

Finally, let's turn to the other important element in shaping the global airspace for the future ─ reducing our carbon footprint.

Failure to reduce emissions has the greatest potential to hamper aviation's growth in the future.

Even though aviation contributes less than three percent of emissions worldwide and our track record on the environment is remarkably good, we all have a shared concern and responsibility to do better when it comes to climate change.

Aircraft entering the fleet today are 70 percent more fuel-efficient than those built 40 years ago on a per-seat-mile basis. I can't think of any industry, especially in transportation, that even comes close to that. New jet engines are more fuel efficient, on a per-passenger-mile basis, than all but the most fuel-efficient automobiles.

The technologies of NextGen and SESAR all have an efficiency-boosting, emissions-reducing component. Complementing that are the advancements being made by our manufacturers.

New commercial jetliners being developed around the world will deliver significant environmental gains. Airbus, Boeing, Bombardier, Embraer and Mitsubishi are all developing new aircraft that offer greater efficiency.

Engine makers are also looking at the next leap forward. Pratt & Whitney's PurePower PW1000G with geared turbofan technology is expected to increase efficiency by 12 percent.

GE Aviation and Snecma are working on open rotor technology, and Rolls-Royce has taken the lead on the Environmentally Friendly Engine program in the UK.

Biofuels also are pushing the envelope. There are several programs involving airframers, engine makers and airlines that have powered jet engines with biofuels, and the results are nothing shy of amazing. If you told me in 1999 that in ten years 747s would be flying on fuel blends made from coconut and jatropha seeds, I would have said, "sure" and thought you crazy. Well, we now know that it's not crazy at all.

The story doesn't end there. Composite materials will make up almost all of the fuselage, wings and tail of the new Boeing 787, and its Airbus competitor has followed suit. The lighter, stronger material will result in substantial efficiency gains.

So there we have it. The current economic situation and certain recovery are probably around the corner quicker than we would think, and we have the wherewithal to use the technology and all the operational benefits of NextGen to address our environmental responsibilities as well.

Will the billionth passenger that walks down the ramp at a U.S. airport in 2021 be annoyed at having spent hours in the terminal waiting for a flight delayed by weather in another part of the country ─ or be thinking about how smooth the trip has been and geez, wouldn't it be nice to take another trip soon? My prediction ─ you got it, it's the latter.