

**2015 Air and Space Conference  
Reinventing the Aerospace Nation  
Keynote Address By Air Force Secretary  
Deborah Lee James  
14 September 2015**

My goodness. Good morning, everybody. Wasn't that an inspiring video? That gives me chills every time I've seen that video.

[Applause] We are truly all honored to be standing on the shoulders of those giants who came before us. I can't tell you how pleased my husband, Frank, and I are to be able to spend the next few days with you here at AFA, to speak with many of you about the future of our Air Force. But before I begin let me just add my note of thanks to Scott Van Cleef and the entire AFA team for bringing us together and for putting together this fantastic conference. Things like this don't come together overnight and by magic. A lot of people have put a lot of hard work into this from AFA as well as from the Gaylord and from across our Air Force. So thank you, Chairman Van Cleef, and thank you to AFA. [Applause]

The AFA has very fine judgment in many areas, but no finer judgment have they made lately than the judgment to hire their new President, our Vice Chief of Staff just recently retired, Larry Spencer. So we're so glad to see you, Larry.

[Applause] We miss you a lot, we miss Ora even more by the way, but you left us in good hands. But it's great to see you in

your new capacity.

I also want to give a shout out to the best team any Secretary of the Air Force could ever hope to have. So many of them are here in attendance, beginning with the best Chief of Staff I could have ever hoped to have had at my side, and that is of course our Chief of Staff General Mark Welsh. So good to see you this morning, Chief. [Applause] And of course, Betty, always wonderful to be with you; look forward to sharing the next couple of days together. Chief Cody, where are you? I lost track of you -- there you are. So Chief and Athena, so great to be with you as well. We also have many of our top uniform leaders, we have our top civilian leaders in attendance. We are all here in droves because AFA and the work that you do is so important to us.

I also want to recognize we have nine Pacific Air Chiefs who are in attendance with us today. So we have major bilateral discussions going on. So we're grateful for your partnership and for your spending the time with us. We also have 10 students from the Turkish Air Force Air War College who are with us today and who will be with us over the next several days. Of course what fantastic Air Force Association National Award Winners. They were just eye watering this morning that we all had a chance to honor. So congratulations once again to all of you. And then our 12 outstanding Airman of the Year present,

and if you are, would you please stand up? [Applause] We're going to have plenty of time to be fussing over you over the next several days, but I wanted to just begin the fussing here this morning. So welcome to all of you as well and thank you.

Today we have come together with a common purpose, to explore ways to expand, advance, and ultimately to reinvent the aerospace nation. Now when I say aerospace nation I'm not referring to a specific country, rather what I'm referring to is a community of air minded people around the globe who engage in and with and through air, space, and cyberspace to create ultimately a better world for all of us.

Now last month I had the unbelievable opportunity to look down upon the earth from more than 70,000 feet above the earth through the canopy of a U2. As the spherical blue unfolded beneath me I couldn't help but think about some of the early aviation pioneers and the expansive growth and achievements of the aerospace nation. Humans have always, always sought to slip the surly bonds of earth. From the wax wings of Icarus to Davinci's 15th century ornithopter sketches, to Sir George Cayley's plans for a glider, the dream of flight has remained tantalizingly close for centuries, but seemingly for so long unattainable. Unattainable that is until these couple of brothers name Orville and Wilbur, with the assistance of their sister, Katharine, truly made the impossible possible.

And to understand why I'm now calling for us to work together to reinvent the aerospace nation let's just take a few minutes now and step back in time beginning with that December date in 1903 at Kitty Hawk, North Carolina. And then I also want to just briefly touch upon a few highlights that you saw in that most inspiring video. Now the moment the Wright Flyer finally lifted off from Kitty Hawk the Wrights became the prominent members of the aerospace nation. Their achievement was certainly no overnight success, however, rather it was the result of years of work and failures and rebounds and collaboration. A few years after the Wright brothers, by the World War I era, militaries on both sides of the Atlantic started to eye the airplane as an instrument for warfare and began building their own aircraft. If World War I ignited the fires of innovation -- and there's no doubt in my mind that it did -- I think it was truly Lindberg's Atlantic crossing coupled with aerial demonstrations and contests that were taking place at that time, this is what really built an inferno. And the excitement carried into every American household, workplace, and factory.

Then came the post war years, 1920-1940, and sustained growth and sustained excitement took place, spurred on by civilian pioneers like Amelia Earhart, and the government's expansion of air mail services, and continued international

interest. Growing steadily, the aerospace nation really came of age during and immediately following World War II, and some have even called this the Golden Age of Aviation.

Then by the year 1947 this young Air Force captain came along by the name of Chuck Yeager and he broke the sound barrier. And at that point the aerospace nation started attracting new members at what I would call a supersonic rate. And certainly anyone who is around my age, give or take a few years, can tell you exactly where they were on the evening of July 20, 1969. Personally, I was at home in Rumson, New Jersey with my mom and we were watching television, literally captivated by those grainy black and white images of Neil Armstrong and the Apollo 11 crew who were making a new kind of aerospace history.

Now I could keep going on and on and on, but I think you get the picture. Now let's flash forward to where we are today. American industry, and particularly the aerospace industry is a very, very important -- I would argue the cornerstone of the U.S. economy, and we rely on ingredients that have delivered results for decades, international partnerships, pioneering discovery, and innovation. So in a certain sense there's nothing new about this corps, we've been doing it a good long while. But here is what is new, we now live in an age where an individual at a keyboard can deliver air power effects

through cyberspace, where the global commons and global commerce depends on our capabilities that are delivered from space, and where remotely piloted aircraft are breaking new ground in an environment that was once dominated solely by individuals in cockpits. And speaking of those cockpits by the way, make no mistake, those cockpits, whether they're bombers or fighters or the mobility aircraft, or whether they're the launch control centers which you might say are the cockpits of the ICBM force, all these cockpits are still vitally important and will remain critical for us in the future.

So, so far all of this sounds pretty good you might say, so what is the issue. Well, here's the issue. Although the United States as part of the aerospace nation has demonstrated unprecedented leadership and successes, we have our fair share of challenges, no doubt about it. Some have even said that the idea of an aerospace nation in the U.S. may be waning from our collective consciousness. Our closest competitors, some of whom don't mean us well, are closing technological gaps around the world and our comparative advantages in some cases are dwindling. Government money is certainly very, very tight these days. And a brand new graduate out of college may well set their sights more on a job in the Silicon Valley than they would looking to work for the U.S. government or for a large aerospace firm. Moreover doing

business with government is time consuming, it's expensive, it can be risky, it can be frustrating. This arrangement that we have discourages innovation in some cases, particularly when it comes to small businesses, small groups and individuals who might otherwise participate in the aerospace nation but choose not to because the barriers just seem too high. Now there is no question in my mind that we have the raw material in air, space and cyberspace to rival the advances of the 1920s and the 1930s in the aerospace nation. We have the technology, we have the knowhow, we have the talent to take the next great leap, to bring on a new Golden Age of Aerospace. The only question in my mind is can we muster the wherewithal to overcome the challenges and to capitalize on the vast and numerous advances that are being made in every sector of society. Will we do it? And I say, I say you are damn right that we will do it, and there is no group of people who are better to lead the way than the United States of America and our total force American airmen.

A reinvented aerospace nation as I said earlier must overcome cumbersome government bureaucracy; we need to speed up acquisition process, invest in our people, and innovate collaboratively to integrate our war fighting domains, air, space, and cyberspace in new ways. We have to be able to adapt faster than our adversaries in all that we do. And this is what we mean by strategic agility. Strategic agility you'll recall

is a concept that we introduced about a year ago in our new strategic framework, a call to the future. Now recall that when we issued a call to the future last summer we told you at that time it was part one of what would ultimately be a trilogy rolling out over the following year. Part one, the call to the future, covered the "why" we need to make changes in our Air Force. Part two, which was our strategic master plan, covered the "what". It laid out, in some degree of detail, our goals and objectives to guide the development and resourcing and a talent master plan for the Force over the next 20 years. Well, this week we will be publishing part three, which will be the "how" we will do it. The Air Force Future Operating Concept, which is our new document that we're rolling out, will lay out how we intend to leverage what we call "operational agility" in the future as a way to suitably and swiftly adapt to any situation or enemy action. Integrated multi domain operations, cyber, space, and air will be central to this future operating concept.

Now let me give you just one future-looking scenario to illustrate what I'm talking about. Imagine some years in the future a sprawling mega city of 12 million residents in a remote corner of the globe and it is struck by a massive earthquake. Within just a few hours air launched small satellites are sent into orbit from the back of an Air Force mobility transport,

sliding into orbit over the disaster area these low cost space vehicles immediately tap into the broader space-based architecture, giving first responders access to global communications and near real-time images of the devastated city. A usable air field is then identified with the newly established overhead ISR and an Air Force air traffic control team already en route to the region is vectored onto it. By the next day the flights begin flowing in, and included in the earliest shipments are dozens of small UAVs which are sent airborne by a small launch and recovery team, which by now is on station. Controlled remotely via a responsive satellite network the UAVs then fan out to place broad area wireless internet and cutting edge sensors in the hands of rescue crews. The rescuers can now see places that they could not access and can deliver supplies to areas that they cannot reach.

Now as all of this is going on our ISR and cyber mission teams uncover a cell of violent extremists who are planning to attack one of our rescue crews and take some of the aid workers hostage. But thanks to the cyber team located in San Antonio, Texas, we relay to the theater operations center the surveillance of the wireless router at a nearby town and we locate the leader of this terrorist cell. So the op center then immediately re-tasks armed UAVs to pursue and target this leadership cell and, boom, it's all over for those bad guys.

Now some may say this is science fiction, I say scenarios like this are precisely how our Air Force needs to work in the future, blending cyber and space and air in new and creative ways. So stay tuned and you can read more about this later in the week through our Future Operating Concept. Very, very important for our future.

Equally important for the future is to continue focusing on our top three priorities, which as you know are taking care of people, number one, number two, striking the right balance between our readiness needs of today and our important modernization needs for tomorrow. We have to get both of these right, it's not an either/or proposition. And of course in everything that we do we need to make every dollar count.

So let me briefly touch upon these three areas, and beginning with people. To remain the best Air Force on the planet we have to be strategically agile in how we recruit, retain, reward, and develop our people. We need them in the right job at the right time, and we need to draw from the best of America's diversity in terms of experience, gender, race, ethnicity, background, and training. We need airmen like Lieutenant Colonel Christine Mau, our first female F35 pilot, and Captain Kari Armstrong, the first female F-15E weapons systems officer to graduate from our weapons school. We need to

leverage airman, like Captain Donald Sims, the senior duty officer in the Air Force's cyberspace operations center. We need airmen like some of whom you met today, Second Lieutenant Emily Gill, First Lieutenant Victoria Fort, and First Lieutenant James Moore, all of whom are missile crew commanders at Minot Air Force Base, North Dakota. Lieutenants Gill, Moore, and Fort are defending this nation every day through strategic deterrents. We need airmen like Technical Sergeant [Manuel Quinones Figueroa], one of our ground control station maintenance expeditors as the 432nd Aircraft Communications Maintenance Squadron at Creech Air Force Base. Not only does Sergeant Figueroa teach others to maintain communications networks for our RPA enterprise, but he and his 30 person team have secured 100 percent mission capable ready, not to mention the fact that his spouse, Lauren, is one of the squadron's key spouses, helping to take care of our airmen. And of course throughout all of this we need to maintain always our core value of integrity first, service before self, and excellence in all we do. These will continue to be our guideposts along the way.

We've seen that exhibited through our 12 outstanding Airman of the Year award recipients, and they certainly reflect these value. And we'll see it later on this week at AFA when we'll be very pleased to welcome Airman Spencer Stone, who has certainly personified these values in extremely heroic fashion

when he stopped evil on a French train three weeks ago. Airman Stone will be joining us later this week, both here at AFA and he will be also participating in different events around Washington. Specifically he will be awarded the Airman's Medal which is the highest non combat award for bravery that we in Air Force can bestow. That part was already known. The other part, which I can share with you all today is in addition to that Airman Stone will also be awarded the Purple Heart in recognition of the wounds that he received during that action.

[Applause]

Secretary of Defense Ashton Carter will actually preside over this award ceremony for Spencer Stone as well as for Army National Guard Specialist Alek Skarlatos later this week, who will also be honored. And by the way, stay tuned because our Secretary of Defense will also be coming here to AFA and spend some time with us as well. Now before I leave the issue of Spencer Stone, in case you missed it, let me assure you -- because I watched Jimmy Kimmel the other night -- Spencer Stone will not have any difficulty getting here to Washington because he was just awarded a brand new camaro. So he's got a sweet new ride to get him here to Washington, D.C. [Laughter]

Now in addition to recruiting, retaining, and developing, we have to give our people the best tools and equipment, both now and in the future. And that brings me to

priority number two, which is striking the right balance between readiness and modernization. You're already well aware that for over 25 years we've been flying combat missions and we now have the oldest fleet in our history with more responsibilities than ever before to our nation, to our joint partners, and certainly to our airmen. We're simultaneously trying to procure new aircraft while fighting relentlessly in a half dozen different places around the world, while at the same time struggling to try to recapture higher levels of readiness for a high end fight. Now these are very tall but very important orders and we've got to get it done, and we've got to get it done correctly, and it doesn't happen for free. So I want to once again take this opportunity to call on Congress to permanently lift sequestration. We have to send sequestration to the bone yard once and for all. [Applause] And we really need our Congress to pass a full up appropriate and authorization bill by October the 1st, or as soon thereafter as possible. This talk around Washington recently about a long-term continuing resolution being a possibility on the table, let me tell you is a really, really bad deal for our Air Force. It's even worse if you can believe it than sequestration would be. It would provide even less money than sequestration, it would not allow us to have any new starts, it would affect every part of our Air Force. It would interfere with our ability to modestly upsize

as we feel strongly we need to do, it would interfere with our modernization efforts. And I am certain, I am certain it would once again hit readiness. So we need the Congress to join with us and be more agile and complete its work on our full up appropriation and authorization bills.

We in the Air Force also need to work closely with the aerospace nation to discover and implement new and innovative ways to steward our tax payer dollars, which of course brings me to priority number three, and that's make every dollar count. Forging a close partnership with the very industry that provides us with our capabilities is more important now than ever. We're trying to step it up when it comes to dialogue, we're trying to make our relationships even stronger, because we think this will help us in the future keep our programs more on budget and more on schedule. Now I've mentioned a couple of times strategic agility. When it comes to acquisitions, as far as I'm concerned speed should be in the future a fundamental metric. Will we be able to respond faster than the threat, keep up with the pace of technology, keep up with the operational innovations of our remarkable airmen. Well, if we're going to do that we've got to speed it up. Now we in the Air Force have made good progress in employing many of the principles of Secretary Carter's and now Secretary Kendall's better buying power. So our costs as a general proposition are trending downward, the number of Nunn-

McCurdy's is down, and we're meeting our key performance parameters for our major programs at a rate above 90 percent, which is really good. And don't take my word for it, take a look at the Acquisition Technology and Logistics Acquisition Performance Report because all the statistics I just mentioned to you are in this report. But it's still not good enough. We have to continue to find new and improved ways to save tax payer dollars. Now we in the Air Force have tried to be very open to new ideas and innovative thinking. And in the case of acquisition we aren't shy when it comes to experimenting with different ideas. And in a way that's a lot of what bending the cost curve has been all about, is trying some new approaches.

So today I'd like to describe a new experiment that we have in mind. To repeat, our ultimate goal in acquisitions should be to deliver capability to the war fighter more rapidly, but unfortunately today it takes too long to develop and field our systems. Now we had some pretty smart people under bending the cost curve take a look at why this is so, and of course there's no single reason why this has happened; however, it did become clear to us that if we were to establish incentives to speed things up perhaps this could advance the ball for us. So today I'm announcing a new experiment, we're going to call it "should schedule" in conjunction with a few potential pilot programs. I'm going to give you a few details of this, but

before I do let me first just remind you all about something called "should cost". When a program is established, by law we must have an independent cost estimate. And when we hit key milestones along the way we need to fully fund to the cost estimate. Now under the "should cost" approach we challenge our program offices and we challenge our industry partners to beat the independent cost estimate once the program is underway. Program offices and industry then employ a multitude of techniques to drive the cost down. After the savings are actually realized and validated, the funding is then available to us that we can pump it back into that program and portfolio. So in one recent example we now have hundreds more air to air and air to ground weapons that have become available for today's fight because we were able to buy them back into our inventory through should cost savings out of our weapons portfolio. In other words, we saved in those accounts and we were able to plow those savings back into buying more. So this leads me now back into the new idea which is the "should schedule" concept. Whereas the previous incentive focused on cost, now we'd like to target delivery time. We asked ourselves can we develop a structure that challenges us and our industry partners to deliver faster than the schedule determined as part of the independent cost estimate. Well, I say you're damn right we can do this, why can't we do it, and we will do it. If we can

collectively beat the historical developmental schedules and reward the behavior in government and industry that speeds things up we have a real change to make a difference.

So today I'm announcing that we're examining some of our smaller programs. We're going to start small and look to go big if this works out, but some of our smaller programs are under consideration for "should schedule". Things like the Bomber Armament Tester (BAT), the MS-177 electro-optical sensor, the Enhanced GPS/INS Modernization program, and the Advanced Precision Kill Weapon System. These are all potential "should schedule" pilots that we are going to work on the details and see what we can do. Established programs will have an engineering, manufacturing, and development phase under this experiment based on historical data, just like they always do. But here's what will be new, we'll hold a competitive EMD where we reward and incentivize speed to ramp. In other words, if an industry partner can propose a solution that credibly offers a way to accelerate successful EMD, then that company would have a competitive advantage for the award. Now keep in mind an accelerated EMD plan would need to survive a detailed scrub by independent engineers, and like "should cost" we will only adjust to the faster schedule after it is realized and independently validated. And finally I do want to note that we won't allow this to become a reason or us to go sole source on

an item. We will structure the acquisition strategies to ensure the appropriate level of competition and to take advantage of early opportunities for technical maturation and risk reduction activities to bring multiple industry teams up to a reasonable design level. So that's a little bit about this new approach we're going to try, "should schedule". Just another example of trying to make every dollar count.

So, ladies and gentlemen, in summary I would just say to you all that we have certainly many challenges as we look to reinvent the aerospace nation, but I see way, way, way more opportunities than challenges. We won't get this done overnight, this effort will take time, but it starts today, it starts here and now, it starts with all of your help. General Welsh and I extend an invitation to each and every one of you who has an idea about advancing aerospace to make our world better. We invite all of you to think, particularly those of you in industry, about the "should schedule" idea, and we invite all of you to advance the goals of strategic and operational agility. And most importantly of all, please keep taking care of our airmen.

We know the Air Force doesn't have all the answers and that's why we're here. We want to hear from all of you. So I would challenge all of you over the next several days to discard existing paradigms. I would challenge all of you over the next

several days and beyond to cultivate innovation and creativity.  
I challenge you say you're damn right that we can get this done,  
and together we will create the next century of air power.  
Together we will reinvent the aerospace nation.

Thank you all very much. Have a fantastic AFA  
Conference and most of all thank you for what you do for our Air  
Force and for our nation. [Applause]