

**Remarks at the Air Force Innovation Forum  
Secretary of the Air Force Deborah Lee James  
Boston, Massachusetts  
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SECRETARY JAMES: To our honored guests, the industry partners who are here today, to our Airmen, who I also see in the audience, it just a pleasure for me to be able to come before you and speak today, and thank you to the Commonwealth for hosting this important event and the partnership that we have with MITRE as well.

It is fantastic just as a general proposition to be back in Boston. I have, first of all, many proud memories of my time here first and foremost as a mom. I have two grown children, both of whom spent time here in Boston. I have a 30 year old daughter who used to work for Bane, which of course is headquartered here in Boston, and I have a 31 year old son who is a graduate of the Kennedy Schools.

So, consequently, over the years, I have had plenty of opportunities to come to Boston and to park my car [Boston accent] [Laughter]. Except now when I come to Boston as the Secretary of the Air Force, they actually save me a parking space. [Laughter]

There certainly has been a lot going on here, as the Governor noted, Secretary Carter was recently up here and he announced the new Manufacturing Innovation Institute focused on revolutionary fibers and textiles, and I suspect if I were a betting woman, there could be more announcements coming in the months ahead. Frankly, I'm not one bit surprised, not one bit, because Boston is simply blessed to have a highly skilled and very, very well educated workforce, as well as academic and high tech industry resources right here that can be tapped into to help.

For example, the Cambridge Innovation Center. I hear tell this is the place where the coolest start-ups in town are born. Is that true? Are you with me on that one? [Applause]

So, a great deal of innovation going on here, but you know what, I witnessed a very similar spirit of innovation and entrepreneurship when, as you know, I was here back in August. I visited Mitre, I visited Lincoln Labs, and of course, I spent time with our Airmen at Hanscom Air Force Base, and saw firsthand, learned firsthand, about how they are conducting their high tech acquisition research and development mission, which of course, are critical, absolutely essential for us to be able to fight the fights of today, as well as prepare for the future.

Now, just briefly, what I have been up to throughout the day in Boston. Earlier today, I was very privileged to be back at Harvard where we had a signing ceremony. President Faust and I were able to welcome the return of Air Force ROTC to Harvard, back on campus, and that was just a wonderful event.

I then had a chance to go to the Kennedy School and speak to some of those students about strategic leadership, and of course, today, we are here, and we are all about innovation.

You might say, well, hold on, innovation and strategic leadership, strategic thinking, that may seem different, but I would tell you no, not so much, because you see both of these topics share a very important common theme, and that theme is diversity, which is the first topic that I really want to discuss with you today.

You see, I see diversity as an element of criticality in delivering our mission. Recruiting and retaining a highly skilled and diverse workforce who can operate in an increasingly uncertain geopolitical landscape that will allow us to meet the challenges of today and prepare for the ones tomorrow.

By the way, similar message with respect to our industry partnerships. We need to broaden our horizon and broaden our partnerships to include non-traditional companies to ensure that we can access the kind of cutting edge technology and ideas, and by the way, that leads me

to my second topic, I want to talk now about some specific ideas about how we in the U.S. Air Force are trying to make ourselves a more easy partner to work with.

By the way, fantastic de-briefs from the six individuals who stood up and shared from the brainstorming sessions. I think you are going to see that I'm going to talk about some of those same themes that you reported to us earlier on.

Now, just by way of background, I think you all will agree with me that the world is changing at dizzying speed, and rapid changes present us with great opportunities, there is no question about it.

So, for example, the Internet. The Internet has been a great equalizer across the globe, giving people access to news and information like we had never dreamed about a few decades ago. That is an example of a fantastic opportunity that rapid change is going to provide.

Rapid change, ladies and gentlemen, also presents some pretty serious threats, disruptive technologies and destructive weapons that must only be possessed by advanced nations are now in the hands of new players, or they could fall in the hands of the new players, players like terrorist organizations and non-state actors.

In addition, let's not forget, we have China and Russia who are full speed ahead with their military modernization programs, and they are developing advanced capabilities, like anti-air, counter space, and cyber warfare capabilities.

So, the bottom line here is our military technology and the superiority of that technology is being challenged today in ways that we didn't dream of and that we hadn't experienced before. It is happening quickly and it is happening in all of our domains. That is to say sea, land, airspace, and cyberspace, where we are encountering this phenomena.

So, we simply can't sit back and take our military technological superiority for granted

because if we do, that could put at risk our future security.

Now, to tackle these problems and challenges, we must build, in my opinion, the most innovative, skillful team possible, having smart people both in uniform in the military but as well on the civilian side who can tackle these problems from varying angles, coming at problems from diverse backgrounds, experiences, and demographics. That is how we can count on having our future innovation and problem solving skills.

Our Airmen time and time again have faced our problems. They have come up against overwhelming odds, and our Service has literally been founded on innovation. It is part of our DNA. We know how to do it, and it is where our Airmen thrive.

I just want to give you one example. We developed the GPS, global positioning system, back in the 1970s, and the original idea was to meet military requirements to get through to the desert and bombers in flight with an accurate fix on their positions.

Well, let's flash forward. Today, our Air Force Space Command procures and launches GPS satellites and performs telemetry, tracking, and control of the orbit constellation, which distributes not only the signals that enable our military to perform, but also signals that are free of charge to anyone across the globe with a GPS receiver.

You and I both know, GPS receivers are in so many non-military devices nowadays, and so much of what we have come to understand as our own way of life, from the financial system to the transportation system, depends on precision timing, precision navigation.

The Smartphone in your pocket, the watch on your wrist, are probably good examples of how we are using GPS. It is estimated that we have 3.2 billion GPS equipped devices on the planet. Did I mention that the U.S. Air Force is doing all this for free? [Laughter] [Applause]. Thank you.

We are dedicated to innovation, trust me on this one. I could give many examples. We take it seriously, but we can't innovate in the future without diversity.

So, that's why we are focused on it in the Department. We are focused on it on the uniform side and we are focused on it on the civilian side, and additionally, we want additional people to join our ranks who have a STEM background, science, technology, engineering and math, as well as cyber.

So, a series of initiatives that have been put in place by the U.S. Air Force, and in some cases, Secretary Carter has taken the lead, which on balance, are designed to recruit and retain and expand opportunities for different types of people.

I will just give you one. Very recently, the Secretary of Defense decreed that all of the positions that previously had been closed to women in the military shall henceforth open up. For the Air Force, that is upwards of 4,000 positions which will now be opened for qualified women to compete for, and for the other military services, it is upwards of 200,000 positions, which henceforth shall be opened up.

By the way, these are tough jobs. They are not for everybody. They are physically demanding, and they are mentally demanding. There are high standards here which are going to remain high, but again, the standards from now on will be the same for men and for women.

On the STEM and cyber side, we established recently in the last few years dedicated recruiters to specifically assist in hiring for specialized occupations, including cyber, STEM, and acquisition, and they are now able and are using expedited hiring authorities to bring in technical talent more quickly, which of course, avoids some of the more traditional and onerous hiring processes.

Since October 2014, we have been able to use these new processes to bring in just over

1,600 new employees, and we plan to do more.

Now, similar to these examples, we believe that by doing a better job of engaging non-defense industry partners, we can benefit from, once again, diversity of thought, which is generated, let's face it, by the vast majority of American industry.

So, this forum is the first of what I hope is going to be many venues where we can hopefully get together and spark an ongoing dialogue across the country with non-defense industry, people that help us in the Air Force to improve our business practices and access better America's intellectual capital.

In a world where companies like Apple and Microsoft quickly bring forward new capabilities and that they iterate, make improvements, on a near continuous basis, unfortunately, we in the Government still do five year plans for acquiring such capabilities. Five years, if we are lucky. Longer than that in many cases. That is simply not good enough.

We started an initiative that we call "Bending the Cost Curve," and this is designed to be a complimentary series of initiatives to the big OSD program that some of you may have heard of called "Better Buying Power."

Basically, the goal of these initiatives, Bending the Cost Curve, is one of several things, either cut our costs, deliver innovation, or cut the amount of time required to get a new capability to our warfighter, and if we are really lucky, an initiative might hit several of those goals.

Some of the initiatives that we have ongoing, we are trying to adopt more commercial like business practices. We are expanding some of the competition to the traditional defense companies as well as those who are new to doing business with us. Once again, I want to offer a few examples.

The first relates to a system that we have called the "Distributed Common Ground System," the DCGS. What that is all about is a critical communications hub that is providing real time intelligence to our warfighters.

Here comes the problem. The problem is and was it was taking us anywhere from 5 to 8 years every time an upgrade to the system was required or desired, 5 to 8 years. No sooner than you start the upgrade, the whole world changes over the course of the 5 to 8 years. Once again, way, way, too long.

So, to try to attack this, we developed an open architecture framework to field new capabilities more quickly. We used a special authority provided by Congress. It was referenced by Karen, called the "other transaction authority," and actually we used an Army vehicle to do this, and created what I think is a fairly novel business structure around it, we called it the "PlugFest Plus."

Basically, what that was all about was it allowed vendors to come in and test their solutions in a virtual environment, and then the Air Force could determine whether or not to fund a prototype development, and testing out this concept on this system called the DCGS, we were able to shift our average time to field a new capability -- remember I told you between 5 and 8 years -- we were able to get it done in 6 months using the OTA and a contract vehicle.

So, I would say that in fact, that is a thumb's up. That was a successful demonstration project when it comes to speeding things up.

Moreover, as a result of this demonstration project, we now have a number of new companies that didn't used to do business with us that are doing business with us for the first time. Most importantly, we are bringing the technologies and capabilities much more quickly to the warfighter.

So, given the success of that demonstration project, we have decided to make a permanent contract vehicle, so this is new, and the Air Force will own this vehicle, so we will control it. We are calling it the "Open System Acquisition" or OSA, and our target here is to have on average 3 to 4 weeks between proposal receipt and actually awarding the contract to the vendor.

Now, truth in advertising. There is no way we are going to be able to develop a next generation fighter aircraft using this OSA vehicle, so it is not going to work for everything. We do intend to use it for smaller types of technology insertions and enterprise cyber capabilities.

The permanent OSA is actually a consortium, and if you would like to learn more about it, please check out the Web site, [www.transform.af.mil](http://www.transform.af.mil). It is managed by the Consortium for Systems of System Security, and it is pretty easy to use, at least we think so. It is inexpensive to join.

By the way, there is already about 70 companies who have signed up for it, and there is already opportunities that have money attached that are available on our Web site.

Basically, if you are part of this consortium, that means you are pre-vetted and qualified to compete for rapid turnaround prototype projects. Of course, if we do it right, successful prototypes can transition to streamlined production and sustainment opportunities.

So, bottom line, what is in for industry partners like those of you who are assembled here today? Well, for starters, we have what we have a straightforward description of the Air Force's needs, what in Government speak we always call "requirements." By the way, requirements typically can run up to hundreds of pages long. Here, we have tried to reduce to, shorten it up, be more simple and straightforward in our language, for those who don't regularly do business with us, so you can understand that means fewer acronyms, which was definitely



difficult for all of us. We went through withdrawal. [Laughter] We got through it. You know how we love our acronyms.

We also believe there is reduced paperwork here, time, and costs for competition and award. Traditional firms, by the way, can go on the Web site and find innovative non-traditional partners and subs and likewise, non-traditional firms can come on and find more traditional primes that they might want to partner with, because many of those folks know the ropes. Basically, people can find other partnerships by using the vehicle. So, you can think of this as the Match.com of Air Force contracting in the future. [Laughter]

There is also a simplified intellectual property rights' explanation. Once again, typically, intellectual property rights can run 25 pages of Federal acquisition regulations, so to speak, whereas we kind of try to boil it down to 5 pages instead of 25 pages, which is more like commercial best practice.

Lastly, you will have greater access to Air Force offices that are actually willing to try something new, try a new approach and compare it to the traditional lengthy acquisition process, and that is something that just might be the ticket for some of the non-traditional partners here today.

I also think there is a particular Boston connection. Let me tell you why. Hanscom has three program executive offices. Of course, these offices deal with issues pertaining to communications and battle management, and they right now are mapping out their needs for fiscal year 2017 and beyond.

So, this represents millions of dollars in the years ahead to the local and nationwide acquisition units that they oversee. They have agreed they will use this new OSA consortium vehicle.

In addition, we have a new, what we call "Cyber Cell Campaign Plan," which is designed to drive us toward achieving cyber resiliency in all Air Force missions using what we call "Plug Tests," which by the way is hosted by Hanscom.mil.cloud, and there are several areas where we will use OSA to try to speed up our process.

The first one is called the "Electronic Flight Bag," and here, the Air Force will invest \$1.5 million over the next couple of years to create a more secure mobile device application, as well as protected connections to the Air Force network, helping our air crews maintain situational awareness and display information, even should we get into a consumptive environment.

The second one we call the "Cyber Solution Cell," and here we intend to invest over \$5 million in the next few years, and we will use the Plug Test for a variety of near term cybersecurity requirements designed to better defend our networks.

So, there you have it, between the DCGS example, which was the first one that we piloted, and then the Electronic Flight Bag, and the Cyber Solution Cell Project, we are expecting to spend on the order of about \$7 million over the next few years on just these three initiatives alone.

Again, I'm just giving you a few examples of how we intend to use OSA in the coming months and years. There are more examples out there, and I hope you will check it out and participate.

To help create interest and support your business needs, I am so encouraged and really appreciate being present today, and thank you again, Governor Baker, and Commonwealth and others for the innovation bridge, and I am awfully glad the Air Force has been able to participate in the information sessions that have been going on throughout the day, and a big shout out to

Cameron, who by the way, is the brain trust behind many of the things that I said here today.

So, let me now wrap and conclude with a story, if you are a futurist, this is a story I suspect you are going to like, but I have to apologize in advance, because I am going to sound like I'm geeking out here. [Laughter]

Just imagine a not so distant future where an Air Force F-35 pilot, that is the next generation of aircraft for us, an F-35 pilot is commanding a flight of uninhabited stealth -- she, see how I put that in [Laughter]-- machine combatting teaming, she receives a tasking order to destroy a mobile ballistic missile protection center in enemy territory.

Now, uninhabited, in this case, doesn't mean a drone, what we call an RPA, what all of you would call drones, but rather an uninhabited stealth vehicle is one that operates semi-autonomously and receives commands from a network.

Okay, back to the story. As our pilot continues, she infiltrates enemy territory while receiving continuous updates on the threat, exact locations. Space and cyberspace assets are kicking in big time at this point. They are sending her updates at lightning speeds, and they are using ground and airborne and sensor data.

She then sends her uninhabited wingman deeper into enemy territory to provide high fidelity targeting before releasing her long range semi-autonomous weapons towards the threat.

Simultaneously, our cyber Airmen are using network enabled cyber techniques to disrupt and to jam those enemy radars, and finally, the weapons reach the target, and boom, they're gone. They have destroyed the target. Our pilot validates the destruction through data displayed on her helmet, and she returns safely to home base.

Now, this kind of vision is several years off. We can't quite do this today, at least not everything I said, and we know achieving this vision is not going to be easy. That is exactly why

we need to invest now in technology innovation, concept development, and cultural changes like the ones I described here today to ensure that we get there in the future, and that we protect our future advantage.

Today, we have the greatest Air Force in the world. The greatest Air Force that the world has ever known, precisely because we have innovative Airmen, innovative partners, who are leading us into the future.

I hope that all of you here today will consider joining with us to further protect that future. I thank you all very, very much for your attention. Thanks for all you are doing. Thank you for the fantastic participation today, the energy, and we look forward to working with you in the future. [Applause]

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