

Center for Strategic and International Studies

Assessing the Third Offset Strategy: Progress and Prospects for Defense Innovation

Keynote Address: The Path to the Innovative Future of Defense

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JOHN J. HAMRE: OK, folks, I'm sorry. We've been just a little bit delayed because of the traffic. And I could give you a 30-minute introduction or I could give you a 30-second introduction. I'll just say I've known Secretary Carter now for probably 30 years. I've marveled at his abilities. There's no one that's better positioned, I think, to leave the department right now, especially on the question we're exploring today. He's doing wonderful work across the board and just came back from a very grueling trip. And so I'll just tell you right now, he's not going to take questions from the floor. But I do have questions on your behalf. And if I don't cover them, yell at me later, OK? With your warm applause, would you please welcome the Secretary of Defense Ash Carter? (Applause.)

SECRETARY ASHTON CARTER: Thanks, John, for that introduction. And more importantly – where did John go – for your many years of service, many years of friendship to me. Wonderful service to our country over so many years and leadership of this great institution. I also want to thank CSIS for hosting this important conference.

And I'm going to commend my Deputy Secretary of Defense Bob, General Paul Selva. Guys, thanks for holding the fort down last week – (laughs) – for their leadership and hard work in leading the technology investment thrust we call the Third Offset Strategy. I'll speak about that, but of course in this speech I want to speak innovation in all its dimensions, which technological innovation is a piece – and a very important piece – because being more innovative in every way we can is critical to the future success of our military and our defense department.

Today we have the finest fighting force the world has ever known. There's no other military that's stronger, more capable, more experienced, or frankly more innovative. That's why our military edge is second to none. And it's a fact every American ought to be proud of. But it's also a fact that our military's excellence isn't a birthright. It's not guaranteed. And we can't take it for granted in the 21st century. We have to earn it again and again. And that's what this is all about, innovating to stay the best.

And I want to talk to you today about how we're doing that in some different areas – our technology, our operations, our organization, and above all our people. And right now, it's imperative that we do so, because we live in a relentlessly changing and fiercely competitive world. There's a faster pace of change which sets up a fierce competition between the present and the future. Competition with other nations, not only with us but also with each other, and competition with terrorists and other malefactors for whom we're the game to beat, if they can, even if only in one place and at one time.

Technology is one example of such change and competition that many of us have long been familiar with. When I began my own career in physics decades ago, most technology of consequence originated in America. And much of that was sponsored by government, especially the Department of Defense. Today we're still major sponsors, but much more technology is commercial. The technology base is global and other countries have been trying to catch up with the breakthroughs that for the last several decades made our military more advanced than any other.

And much of the frontier innovation is commercial, leading to additional sources of competitive dynamism outside our five walls. Against this background, your Defense Department is confronting a world security environment that's also dramatically different from the last generation, and even the generation before that. Indeed, the U.S. military is at this moment addressing five major unique rapidly evolving challenges.

We're countering the prospect of Russian aggression and coercion, especially in Europe. We're managing historic change in the Asia Pacific, the single most consequential region for America's future. We're strengthening our deterrent and defense forces in the face of North Korea's continued nuclear and missile provocations. We're checking Iranian aggression and malign influence in the Gulf, the protecting our friends and allies in the Middle East. And we're accelerating the certain and lasting defeat of ISIL, destroying it in its parent tumor in Iraq and Syria, and everywhere else it metastasizes around the world, even as we help protect our homeland and our people. And at the same time as all of this, we're prepping to contend with an uncertain future, ensuring that we continue to be ready for challenges we may not anticipate today.

We don't have the luxury of choosing between these challenges. We have to do them all. And as the world changes and complexity increases, we'll have to change too – how to invest, how we fight, how we operate as an organization, and how we attract and nourish talent. As we do, we have to be able to move fast, because the advantages we expect to derive from each innovative cycle today will not last as long as they used to. All the commercial and global change that's occurred across the technology landscape has made repeated and rapid cycles necessary, and made high-end tech a lot more accessible to competitors.

Think about it, while the Cold War arms race was characterized by the inexorable, but steady, accumulation of strength, with the leaders simply having more, bigger, or better weapons, today's era of military competition is characterized by the additional variables of speed and agility, such that leading the race now frequently depends on who can out-innovate faster than everyone else, and even change the game. In the area of investment, it's no longer just a matter of what we buy. Now more than ever it also matters how we buy things, how quickly we buy things, whom we buy them from, and how rapidly and creatively we can adapt them and use them in different and innovative ways. All this to stay ahead of future threats and future enemies technologically.

That's why I've been so intent as secretary of defense not only to plant the seeds for a number of different technologies that we think will be determinative in giving us a warfighting advantage for the future – more on those in a moment – but also to be more innovative and agile in all aspects of DOD: in our operations, in our organization, and in the talent management of our all-volunteer forces.

In each of these four areas, I, along with the chairman and vice chairman of the Joint Chiefs, the service chiefs, all our excellent combatant commanders, and the Defense Department's civilian leadership, have had a lot of help. We've had help from Washington think tanks like CSIS, from our defense labs and industry partners, and also from many innovative Americans who understand the innovation imperative and who aren't in our community now, but

understand the need for our mission of national security and want to help. And all of us have been pushing the Pentagon to think outside our five-sided box and invest aggressively in innovation.

And I want to focus on that in the rest of my remarks: the clear strategic imperative we have to innovate in each area, how we've been innovating so far, and how we need to innovate going forward. Given the topic of this particular conference, I'll start with technology.

The strategic imperative to innovate technologically is well-known to those who have been paying attention, like many of you here at CSIS. Nations like Russia and China are trying to close the technology gap with the United States. And as I noted, high-end military technology is diffused, sometimes becoming available to countries like North Korea and Iran, as well as non-state actors. And at the same time, our own reliance on technological systems like satellites and the internet has grown, creating vulnerabilities that our adversaries are eager to exploit.

To stay ahead of these threats and to stay the best, we're pushing the envelope with research and development in new technologies like data science, biotech, cyber defense, electronic warfare, robotics, undersea warfare, autonomy, artificial intelligence, machine learning, and much, much more. And I'll repeat yet again, since it keeps coming up, that when it comes to using autonomy in our weapons systems, we will always have a human being in decision-making about the use of force.

We're making some serious investments here. Just to remind you, the latest budget we've proposed – a budget I strongly encourage Congress to pass when they return to Washington next month - will invest \$72 billion in research and development in the next year alone. That's more than double what Apple, Intel and Google spent last year combined. This budget marked a strategic turning point for the Department of Defense, with our Third Offset Strategy driving a wide range of new, innovative technological investments in order to advance and sharpen our military edge.

We're making these investments because we aren't yet exactly certain what or where this offset is going to come from. It could be one area of technology or several. Remember, previous offset strategies were generational successes, reflections of the security environment of their eras, and were only recognized as such after the fact.

Today, speed and agility are key. And because of the world we live in, the next offset will not look like the previous ones. And it may not even end up being what we might consider a traditional offset strategy at all. That's why we're seeding these investments in lots of different technologies, so we can see which ones germinate, how they develop, what they produce, and how we can use them most effectively.

And in addition to these critical investments, it's important to note how DOD is innovating technologically – how we're innovating technologically: by creating technologies from within, by bringing in technology from without, and by repurposing technologies and capabilities we already have, because different entities are focused on each. Within the Defense Department, we have dozens of DOD labs and engineering centers across the country, each one

home to great technological innovators, both civilian and military, who work closely with very innovative defense – the very innovative defense industry that’s long supported us and kept us on the cutting edge. And they’re continuing to do so today across a wide range of critical technologies.

For example, our Navy labs were developing and prototyping undersea drones in multiple sizes and with diverse payloads, which is important since, among other reasons, unmanned undersea vehicles can operate in shallow waters where manned submarines cannot.

Also, our Army labs are working on gun-based missile defenses, which can help defeat incoming missile raids at much lower cost per round than more-expensive interceptors, imposing higher costs on the attacker.

And our Air Force labs are pioneering applications for neuromorphic computing – that is, hardware, software and systems inspired by the working mechanisms of the human brain – which offers the prospect of overcoming the limitations of current computing architectures and enabling information superiority in air, space and cyberspace.

As I said, America’s innovative defense industry is a key partner in this, because, remember, we don’t build anything in the Pentagon. That’s not the American way. The Soviet Union tried that, and it didn’t work out very well for them.

Today, with more technological innovation happening in the commercial sector, we need to be able to identify and do business with companies outside our traditional defense orbit, as well as those within, and welcome them into our defense technology community. That’s why last year I created our Defense Innovation Unit Experimental, or DIUx, to help build bridges with startups and other commercial technology firms located in innovation ecosystems across the United States, and help us more quickly adopt technologies that can help our troops accomplish their missions.

DIUx opened its doors last August with a West Coast office in Silicon Valley. And since then we iterated and launched DIUx 2.0 in May, and opened a DIUx East Coast office in Boston, and established an outpost in Austin, Texas.

One important area where DIUx recently solicited proposals is in microsatellites and advanced analytics, leveraging the revolution in commercial space and machine learning to transform how we use space-based tools and advanced data processing to provide critical situational awareness to forces around the world. And it also adds resilience, by the way, to our national space architecture.

Meanwhile, under the guidance of the Strategic Capabilities Office, or SCO, we’re also changing and adapting how we use existing platforms and technologies already in our inventory, giving them new roles and game-changing capabilities to confound potential opponents. As some of you know, I created SCO in 2012, when I was deputy secretary of defense – putting Will Roper, by the way, in charge of it.

(As an aside.) Will.

I lifted the veil on several of its projects that we're investing in, such as the Arsenal Plane, a new anti-ship capability for the SM-6 missile, and swarming drones on the sea and in the air. In fact, this technology took a large step forward just this week. You'll be hearing more about that in the months to come.

A prominent theme of SCO's work is spearheading creative and unexpected new ways to use our existing missiles and advanced munitions across varied domains. One example of this I want to highlight, and something that we haven't talked about publicly before today, is SCO's project to develop a cross-domain capability for the Army Tactical Missile System, or ATACMS. By integrating an existing seeker onto the front of the missile, they're enabling it to hit moving targets both at sea as well as – as well as on land. With this capability, what was previously an Army surface-to-surface missile system can project power from coastal locations up to 300 kilometers into the maritime domain.

Going forward, as these and other investments yield new weapons systems and warfighting capabilities in the coming years – some of them much sooner than you might think – they'll need to be demonstrated so that they're effective in deterring future conflict. And it will be important to ensure that they're allowed to run their course. We have to protect the most promising, and integrate those concepts and ideas into our programs, rather than let them be uprooted just because they're new, which is always a tendency in tight budgets.

Of course, how we use technology is just as important as the technology itself, it not more, which is why we're also investing aggressively in operational innovation. Our plans and operations must account not only for the evolving challenges we face from our competitors, but also the opportunities afforded by new capabilities as they come online. So technological and operational innovation must go hand-in-glove.

Here the strategic imperative is rooted in the fact that while we've spent the last 15 years innovating expertly – and I'm very proud of it – in how we kill terrorists and counter insurgencies, we did so to some extent at the expense of our expertise in full spectrum war fighting. Other nations have gotten good at that over the years, and in some cases they've been devising new methods to try to counter our advantages and preempt us from being able to respond, not just by developing high-tech weapons, but also by crafting operational approaches but also by crafting operational approaches such as hybrid warfare techniques.

But these reasons, we've been reinvigorating our training across the services to return to full-spectrum readiness and we've been rethinking how we operate to find new advantages against potential adversaries, including by changing and adapting how we fight with friends and allies. For example, in Europe we've been working with our NATO allies to adapt and write a new playbook for our strong and balanced strategic approach to Russia, one that takes the lessons of history and leverages our alliances, strengths, in new networked ways to counter new challenges like cyber and hybrid warfare, to integrate conventional and nuclear deterrence, and to adjust our posture and presence so we can be more agile and responsive.

In the Asia Pacific, we've been modernizing our alliances, strengthening new partnerships, and helping to build a principled and inclusive regional security network. This rubber meets the road in how we're revising our actual plans for potential operations themselves. Now, we're always updating our plans and developing new operational concepts to account for any changes in potential adversary threats and capabilities.

But we've also updated our core contingency plans to make sure they apply innovation to our operational approaches, including ways to overcome emerging threats, such as cyberattacks, antisatellite weapons, and anti-access/area denial systems. And at the same time as we innovate in our plans to counter these conventional threats, we're also ensure that, with respect to potential confrontations with nuclear powers, we continue to sustain America's nuclear deterrent as we recapitalize our nuclear triad and infrastructure.

Overall, we're building in modularity that gives our chain of command's most senior decision makers a greater variety of choices. We're making sure planners take into account how to prevail if they have to execute their plan at the same time another contingency is taking place, so they don't fall into a trap of presuming the one they're planning for would be the only thing we'd be doing in the world at that time.

We're injecting agility and flexibility into our processes because the world, it's challenges, and our potential opponents aren't monolithic, and we may just – we have to be dynamic to stay ahead of them. And we're prioritizing transregional and trans-functional integration in our plans, which is an imperative considering that conflict doesn't segment anymore and the challenges we face today are less likely than ever before to confine themselves to neat regional or functional boundaries.

This was one of the Goldwater-Nichols reforms I proposed here at CSIS nearly seven months ago. And it will be coordinated on my behalf by our chairman of the Joint Chiefs of Staff, General Joe Dunford, whom, by the way, we're very fortunate to have in his job. Recommending him to President Obama was one of the best decisions I've made as secretary of defense. The result of this is that we've revised all of our war plans to ensure we have the agility and ability to win the fights we're in, the wars that could happen today, and the wars that could happen in the future. And while I can't say more, and if any audience can appreciate why, a CSIS audience can, I'll tell you that I'm very proud of this evolving family of plans.

Now, innovation and technology in operations are necessary for us, but they're not sufficient, because at the pace today's world demands, we can only succeed in these by being an agile organization that nurtures innovation in all its forms. So we're also investing in innovative organizational structures and practices. The strategic imperative here is that DOD must be an organization that better fosters innovative thinking and ideas that can help us to stay ahead of our competitors. The Defense Department is one of the largest organizations in the world. And as many of you know well, we can be pretty bureaucratic and slow moving, where it's easy to default to the status quo of continuing to do things the same way we've always done them. But we can't afford that in today's security environment. We need to be a place where thinking differently is welcomed and fostered, not where good ideas go to die just because they happen to be new.

Over the last few years, I've created a number of entities to help signify and drive innovation throughout DOD, including SCO, DIUx, and the Defense Digital Service. And I most recently created the Defense Innovation Board to advise me and future leadership on how we can keep growing more competitively. As you know, the Defense Innovation Board is one of several advisory boards that report to me, each with a distinctive mission and membership chosen for a distinctive kind of expertise. The Defense Science Board, of which I was long a member, is comprised of scientists and technologists with deep expertise in weapons systems and defense R&D. The Defense Policy Board on which I also served – and which, by the way, we're grateful that John Hamre chairs – has a membership with exceptional foreign and defense policymaking experience.

The Defense Business Board, to name another, has members who understand DOD's vast business enterprise and practices. The Defense Innovation Board has a different membership and a different role. Its members were chosen for their record of innovation outside of the Defense Department and for their ability to suggest innovative approaches that have worked in their leadership experience, and that might be applicable to us.

The Innovation Board is chaired by Google Alphabet's Eric Schmidt. And its membership represents a cross-section of America's most innovative industries, organizations, and people – people like Amazon's Jeff Bezos, LinkedIn's Reid Hoffman, Code for America's Jennifer Pahlka, astrophysicist Neil deGrasse Tyson, Mike McQuade from United Technologies, and retired Admiral Bill McRaven, now chancellor of the University of Texas. And I've charged them and the rest of the board to help keep DOD imbued with a culture of innovation, to support innovators themselves, the people in our defense enterprise who are willing to try new things, fail fast, and iterate, and to make sure we're always doing everything we can to stay ahead of our competitors.

At the outset, I gave them the very specific task of identify innovative private sector prices that might be of use to use in DOD. Along the lines of our Hack the Pentagon pilot program, which invited hackers to help us find vulnerabilities in our networks and report them to us, similar to the bug bounties that several of America's major companies already routinely conduct. While this approach to crowdsourcing cybersecurity is fairly widespread in the private sector, our use of it in the Pentagon was the first time in the entire federal government. And it was so successful we're now expanding it to other parts of DOD. This is the perfect example of the kind of recommendations I am looking for from the Innovation Board, things that are out there and that might be useful to us.

Now, of course, not everything in the private sector will make sense for us, because we're always mindful that the military isn't a company. It's dedicated to the profession of arms. And so for important reasons, we're not always going to be able to do everything the same way others do. That doesn't mean we can't look ourselves in the mirror and look around the country for new ideas and lessons we can learn, ways we can operate more effectively. The Defense Innovation Board held its first public meeting earlier this month and made some preliminary recommendations to me and the public about some innovative practices that might make sense for us to adopt. And today I want to tell you about several that I've decided we're going to do.

First, we're going to increase our focus on recruiting talented computer scientists and software engineers into our force, both military and civilian. We'll do this through targeted recruiting initiatives ranging from our Reserve officer training corps to our civilian Scholarship for Service program, that's intended to help build the next generation of DOD science and technology leaders, all with the goal of making computer science a core competency of the department.

Second, we're going to invest more broadly in machine learning through targeted challenges and prize competitions, and not through a new brick and mortar institution, but rather through a virtual center of excellent model that establishes stretch goals and incentivize academic and private sector researchers to achieve them.

Since this is an area where both academy and commercial technology companies have been making significant strides, I've asked DIUx to pilot this approach by sponsoring an initial prize challenge focused on computer vision and machine learning.

And third, we're going to create a DOD chief innovation officer who will act as a senior adviser to the secretary of defense and will serve as a spearhead for innovation activities, including, but not limited to those suggested by the Defense Innovation Board, such as building software platforms and human networks to enable workforce-driven innovation across DOD at scale, sponsoring innovation contests and tournaments and providing training and education that promotes new ideas and approaches to collaboration, creativity and critical thinking.

Many different organizations have recently embraced this position and also started to regularly run these kind of innovation tournaments and competitions, including tech companies like IBM, Intel and Google, and it's time we did as well to help incentivize our people to come up with innovative ideas and approaches and be recognized for them.

Going forward, I'm confident that the logic behind everything I'm talking about today will be self-evident to future defense leadership, as will the value of these efforts. But they also need to have the momentum and institutional foundation to keep going under their own steam and to continue to thrive. We must ensure that we keep leading the way and keep disrupting, challenging and inspiring all of us to change for the better.

And this brings me finally to how we're innovating in terms of our people and in the talent management of our all-volunteer force. While it's the last area of innovation I'm going to discuss today, it's also the most important because the fact is our people are the source of every innovative thing we've ever done, are doing or will do. Indeed, much more than our technology, operations and organization, our people are the key to us having the finest fighting force in our uniform military and our DOD civilian workforce and in the defense industry that supports us. And that means we need to compete for good people as far into the future as we can.

Now, the good news is there is lots of opportunity here, as well as new techniques and technologies and talent management, such as the kind of advanced data analytics that underpin companies like LinkedIn.

But there are also challenges we face in terms of the limitations of our current technology in the human resources and as generations in labor markets change. Even so, as our force – so even as our force of today is outstanding, we must ensure that we continue to attract and retain the most talented young men and women that America has to offer in future generations of defense.

And that's why we've been taking step after step to build what I call the Force of the Future. I've announced four different links so far to the Force of the Future. The first focused on building and increasing on-ramps and off-ramps for technical talent to flow in both directions, creating the Defense Digital Service, expanding the Secretary of Defense Corporate Fellows Program, and more. This will let more of America's brightest minds contribute to our mission of national defense, even if only for a time or project. And it will also allow more of DOD and the defense industry's innovative military and civilian technologists, of which there are many, to engage in new ways with our country's larger innovative ecosystem, especially the parts they may have no experience with or even hesitations about, working with defense.

Next, the Force of the Future's second link focused on increasing retention among our ranks through increased support to our military families. It's often said that when you recruit a service member, you retain a family. After all, it's no secret that military life is difficult and can be especially tough on our military families. And let me remind you that our force is largely a married one with 70 percent of officers and 50 percent of enlisted who are married.

And we can't change the fundamentals of military service, but we can make some changes to make life easier for our married people and increase the possibility that they'll want to stay at that critical moment when they're trying to reconcile military life and family life. That's why we expanded maternity and paternity leave, why we extended child care hours on bases and why we're giving more families the possibility of some geographic flexibility in return for additional service commitments.

After that, the third link to the Force of the Future focused on how we can make some common sense improvements to military talent management, particularly for our officer corps. In some cases, our current system proves too rigid. It can limit the ability of our services to achieve the right force mix they need, especially at a time when we're seeking to promote a wider range of experience, perspective and training to strengthen the overall effectiveness of the force. That's why we want to give the military services the authority to do things, like expand lateral entry for more specialties and adjust lineal numbers based on superior performance.

And most recently, link number four to the Force of the Future made clear that this is not only about our military, but also about our civilian workforce. When people talk about DOD civilians, they're talking about over 700,000 talented Americans serving across the country and around the world. More than 85 percent of them live outside of the D.C. area. They fix aircraft, they operate shipyards and ranges and more. They do critical jobs, and without them DOD wouldn't function. So, the goal here is the same as with our military personnel, to make sure our future civilian workforce is just as great as the one we have today, in several ways, by directly hiring civilian employees from college campuses, by creating a new two-way civilian talent

exchange program with the private sector, by expanding our Scholarship for Service program in mission-critical science, technology, engineering and mathematics fields, and more.

Also, in addition to each of these links, over the last year we opened up all combat positions to women and lifted DOD's ban on transgender service members so that we can now draw on 100 percent of America's population for our all-volunteer force, focusing purely on a person's willingness and ability to serve our country and contribute to our mission and giving everyone the full and equal opportunity to do so.

Going forward, there will still be much more work to do and you'll soon be hearing from me more about the Force of the Future. But these links span the spectrum of our opportunities, our challenges in the lifetime of a member of our all-volunteer force, recruitment, retention, development, transition, and also our valuable civilian workforce. And for the first time in a long time, DOD's Personnel and Readiness Office has a real, proactive agenda, a concrete action plan to guide its efforts so that they're doing more than just being reactive belatedly to issues that crop us.

And based on support for these efforts that I'm seeing in the military services and across our department, I'm confident that the implementation of all these initiatives will continue moving forward and ensure that the Force of the Future is as great as the force of today.

I've described today a lot of ways the Department of Defense is changing and will continue to change in the future, but I want to close by reminding all of you, all of DOD and all of America that as we sit here this morning, our country's strengths are undeniable. We have the best military, of course, spanning our people, our investments, our dedication to the mission and the public support we receive from the American people. But there's much more than that. Our economy is growing, we have world-class schools and universities. We uphold the right values, which is one reason why we have an unrivaled network of friends and allies.

Meanwhile, the operational experience of our force, hard-earned, is second-to-none. And we have the greatest innovative culture on the planet. And we've brought that innovative culture to bear in service of others, that is, to defend our country and help make a better world for our children, it's long been America's open military secret and we remain dedicated to doing so and it can be so.

We have a legacy of innovating, but that in itself is not enough. That's why we're moving aggressively toward a more innovative future and why everything I've talked about today is intended to ensure exactly that. Going forward, our success will depend on whether we can keep it up. Like its predecessors, the next wave of innovation and advantage will be a generational success and it's only just beginning. We probably don't even know yet the names of the people who will make it a reality. And more likely than not, it won't be by me or anyone from my generation. Instead, it'll be the generation that comes after.

It will be junior officers and DOD civilians fresh out of graduate school, some of them here today, perhaps, who decide to spend a year outside of the department – at Google or somewhere else – work with an expert in data science or machine learning. It'll be the software

engineers and bio-scientists who get to know our mission by working with one of our DIUx outposts, and then choose to do a tour of duty in the Defense Digital Service or working in one of our DOD labs. It'll be the enlisted soldiers, sailors, airmen, and Marines who come up with new operational concepts for overcoming potential adversaries using advanced technologies that may not even exist yet, or defeating a terrorist group we haven't heard of.

They are the ones – they are the ones who will end up reinventing and changing anew how we will deter, fight, and win wars in the future. Our job is to get them the foundation, the right kind of Pentagon to help them succeed, one that's more agile and innovative than ever before. As long as we do, they will ensure – like those who came before them – that our military remains the finest fighting force the world has ever known. Thank you. (Applause.)

MR. HAMRE: First of all, my apologies. A lot of you have been standing for almost two hours. So we'll get this done with quick, and the secretary had to leave. But those of you who have been standing, you're going to get the coffee first, OK, so I won't apologize for that.

Secretary, thank you. And thank you for your remarkable service. This has been a challenging time. And we're so lucky to have you there. We have very little time, but let me just ask first – I remember after 9/11 companies all over America came to town and said: We want to help. We'll do anything. How can we help? And many of them left pretty disappointed. Why have we failed as a government to bring onboard interesting ideas in the private sector?

SEC. CARTER: Well, it's a good question. And it – the answer is, to many of them we seem slow. We seem ponderous. We seem bureaucratic. That's not as true as it may – as it seems to them. But the reality is we have to reach their way. This has to be a two-way – that's why I'm so intent upon this outreach to the technology industry. Snowden made it worse. And so we have to build a relationship, build a familiarity, build a trust.

Remember, a lot of these people have no experience of us, John. They didn't serve. Nobody in their family served. There's no uncle, father, coach, mom, guidance counselor – no one in their lives who told them about the feeling that it gives you to be part of the noblest mission a young person can devote themselves. Nobody's given them that feeling yet. And these are people who want to make a difference. They're innovative and they're talented. They want to make a difference.

And when they – when they can match our mission to that personal aspiration of theirs, that's where the magic is made. I remember when I started my own life I was a physicist. And I kind of fell into this in the following way: I got an opportunity – it was supposed to be one year. (Laughs.) And what I found was this, I found that I actually could make a contribution, where I happened to know what I knew. I didn't know a whole lot about defense as a whole, but I knew what I knew. And I could see that without that piece the right decision wouldn't have been made or the program wouldn't have moved forward.

And secondly, I had the great thrill of going home every night knowing that I had been part of something bigger than myself and making this part – a small part, but – of this majestic mission. Taking those two things that you can make a difference and that's it's a huge thing to

make a difference in, that's magic for any young people. And the more Americans we can get to feel that magic who don't have it in their personal background, the better. That allows us to tap into all of this. And that's what we're trying to do, and we need to reach their way.

MR. HAMRE: So, you know, when CEOs come to town and they meet with you, and obviously there's a mutual respect and a desire to have impact, and a real commitment the people want to do it. But then they bump up against the acquisition system. They bump up against the bureaucracy mechanically those things.

SEC. CARTER: They do indeed. That's true.

MR. HAMRE: How do we get at that problem? Because it seems to me that we're making people work with us on our terms.

SEC. CARTER: Yes. Now, that's exactly right. We got to work systematically to lower those barriers to entry so that the people who win business aren't only the people who know how to play the game, they're the best people. And that's on us. Now, it is the taxpayers' money. So I always say, you know, we'll never make decisions quite like people who are spending their own money or company money. It is the taxpayers' money, and the taxpayer expects everything to be done to their standards, and they deserve that. At the same time, that's not an excuse for doing everything in this ponderous kind of way.

So I got to give it to our leadership here. We have worked very systematically looking at our problems: rapidity of decision, volume of paperwork, willingness to take risk, all these things that are fundamental to being innovative, and finding ways that we can reduce that. And you know, the way you do that is you start out – you know, we have, for example, a new contracting vehicle that we've spearheaded through DIUx, which allows us to disperse R&D funds much more agily in small amounts.

Now, we had to go through the hoops and make that legal, but it's possible. If you hide behind the legendary FAR and say that's why I can't innovate, it's not an excuse. FAR in general has lots of workarounds in it, and we can ask for more workarounds. So I'm asking our people: be creative. And I don't want to hear from innovators that they really wanted to, they really thought they could make a contribution – those two ingredients of magic – and they were frustrated just by the mechanics of how we do things.

We can't have – so I need – that's one of the reasons why I'm just driving on us, and all of us are driving on us, to put our heads up out of our foxhole, look up, look around. How do other people do that? How much, as government, can we appropriately adopt? And there's a lot.

MR. HAMRE: And then, if I might, we've had companies that are asked to design a product, use their own technology, and then the government says, you know, we're going to test that for two years, now we're going to take your data and compete it.

SEC. CARTER: Yeah. Yeah, yeah, yeah.

MR. HAMRE: You know –

SEC. CARTER: OK, this is the intellectual property.

MR. HAMRE: Yeah.

SEC. CARTER: I happen to have been undersecretary for acquisition, technology and logistics, and I've worked on this very hard.

MR. HAMRE: No, that's why – I didn't want to frame that – yeah.

SEC. CARTER: And you're right, people want protection for their intellectual property. What we want is not to own their intellectual property, but we want – but what we do want is to keep a competitive door open for the future.

And of course, you know, one of the reasons – way you use intellectual property, and I don't blame anybody for that, is to lock in yourself as vendor. And that's not good for us in the long run. So we're trying to balance our need to keep competition going, wave after wave, and the innovator's right not to have their stuff stolen and spread around. And that's a balancing act, but we're – and I – when I started out as AT&L, I don't think we were very good at it. I worked very hard during the time I was there. Frank Kendall's been working hard ever since. Bob helps him. And it's doable. It's doable. But there are competing interests.

But you know, they have the same problem when they're selling into other people as well. I mean, other people don't want to get locked in either. So the more you can have open systems, where they can continue to keep the IP on the part that they plug in but the system's open enough that others can plug their own IP in, we can have our cake and eat it, too. It's just a matter of being smart about it.

MR. HAMRE: I'm mindful, because your staff said they're going to shoot me if I keep you much longer. But let me – let me just –

SEC. CARTER: We wouldn't do that.

MR. HAMRE: (Laughs.) Let me – you want to bring in talent from the private sector, and I do too. I think it would be great. Yet, we – it's hard for us, with our OPM rules, our civil-service rules, to bring in talent that can work in the government. What can we do here?

SEC. CARTER: Well, I described today one of the things I just did in the last few months. And this is a key one, and I didn't really have time to spin it out, so let me answer your question by giving you this example.

And that is to do direct hiring off college campuses. You talk to kids and they say, I wanted to try, and I applied for a government job, and I went to the website, and I filed my – (laughs) – work. And then, you know, final exam time came; no word back. Graduation time came, no word. This is where I wanted to work. It was my first choice. But my parents are

saying you got to go get a job, don't come home. And I didn't have a job, and so I took the job that – from somebody who could offer me a job, which wasn't as meaningful as the one I wanted from the Defense Department. Then I was six months into the job and, lo and behold, you know, up pops an email from the government saying how'd you like an interview. And that just doesn't work for a kid. And today's kids especially, because they don't want to live life – and the way I like to put it is, they don't want to live a career that's an escalator, where you get on the bottom stair and you wait and it takes you up to the top of – and that's the system.

MR. HAMRE: Slowly.

SEC. CARTER: They want a jungle gym, where they can get higher by climbing around. And we need to be part of that. We need to recognize that's the way many people see their lives. And so they need to be able to see us in that – in that context.

And so, you know, OPM to the contrary notwithstanding, again, I think that's – we can't use that as an excuse: OPM, the FAR, and all – I mean, come on. Work around it. Where we need to change the law, I've proposed a number of changes in the law.

MR. HAMRE: Mmm hmm. Yes, sir.

SEC. CARTER: And I think that our committees are receptive to change. You're trying to give them the right ideas so they can write them into law. But there is a lot we can do. And so you just – you just don't take no for an answer. And you can't expect this kid to put up with it. We've got to change the way it's done.

MR. HAMRE: Yeah. You know, we're at the hour I have to let the secretary go. I happen to know from talking to the deputy secretary he has to brief him on a meeting you're going to in 15 minutes.

SEC. CARTER: (Laughs.)

MR. HAMRE: So we're going to get into a spot.

Let me say we're coming up on a transition of government. You know, things fall through the cracks. I think it's up to all of us to sustain momentum on this innovation agenda. This is really the purpose of this conference. We cannot afford to let this agenda fall – slack off.

And, Secretary, we want to thank you for your leadership.

SEC. CARTER: Thank you. Thank you.

MR. HAMRE: Thank the deputy secretary for his leadership.

SEC. CARTER: Paul Selva.

MR. HAMRE: Thank you, everybody, with your applause.

SEC. CARTER: Thank you, and thanks, CSIS. (Applause.)

(END)