

Center for Strategic and International Studies

TRANSCRIPT
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**“Discussion with the Secretaries of the U.S. Military
Departments”**

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FEATURING
Ryan D. McCarthy,
Secretary of the Army

Barbara M. Barret,
Secretary of the Air Force

Thomas B. Modly,
Acting Secretary of the Navy

CSIS EXPERTS
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John J. Hamre: Good morning, everybody. Welcome. My name is John Hamre, president here at CSIS. And the reason we're kind of rushing is we only have an hour, and we've got such wonderful opportunities to listen to these three secretaries. I'm going to be very short.

We do always start with a little safety announcement. I'm responsible for your safety today. They've got some guys with guns backstage that will take care of them. So don't worry about them. I'll take care of you. If we hear anything, follow my instructions. We'll take these exits that are right behind us, go down to the street. We'll go over to National Geographic and I'll take everybody in to see the great new show on Jane Goodall, The Evolution of Jane Goodall. We've never had anything happen, but I want you to be ready.

You all know who these people are, so I don't need to introduce them. But you do need to know the absolutely critical role that they play. They are running giant organizations. And they have to manage today, tomorrow, and 20 years into the future. It's constantly in their calculus of how do they posture and shape these remarkable institutions, not just so that they can do the job today, but they can do the job in 20 years. And each one of them is working on critical dimensions of that as we speak. So think about this unique role that they play. There are no other people other than the secretary. Nobody else in the department really has this kind of responsibility. And we're so fortunate to have them here today.

Kath Hicks is going to lead an initial conversation. We'll bring you into it a little later on through your questions. You'll write them down on cards. But enjoy this session. This is going to be very important. Welcome, with your very warm applause, our three secretaries. (Applause.)

Kathleen H. Hicks: Thank you, John. And thanks to everyone who's joining us both here, in the audience, and online today. I know we have a big online crowd. We have cards in your chairs. And the way we're going to do this session is we'll have a discussion up here on stage for about two-thirds of the time. We'll leave plenty of time for you to pass up your cards. There'll be people who come around. As you write a question, just hold it up some and we'll come by to pick it up from you.

So first and most importantly, who's going to have the best football season come fall? (Laughter.) Wow, no one.

Thomas B. Modly: It's been – it's been proven already, I think, so. (Laughter.)

Kathleen H. Hicks: Ok. So two years ago we had a National Defense Strategy out. We hear a lot of talk still from the department and in general from the community about the NDS. And you've also had just, of course, submitted the president's budget – the last budget of this presidential term. So I would love to just go down the line and hear a little bit from each of you about the pathway your service has taken from that strategy coming out to today, and how you feel you have developed your

service and helped lead your service to contribute to the joint war fight in line with the strategy. And, Secretary McCarthy, why don't we start with you?

Ryan D. McCarthy: Thanks, Kath. And for you and John, thanks for having us today. It's a great opportunity for us. You always give us a lot of advice in the Army whenever we need your help. So, again, appreciate this opportunity.

For us, we have the challenge of managing the current condition where 60 percent of the combatant commander's requirements worldwide, 180,000 people deploy in 140 countries. So the current conditions make it very difficult and limit your trade space. That said, we conducted the most complex restructuring of the Army in over 45 years, created a four-star modernization organization, collapsed the stakeholders of the modernization continuum under one roof. So we've reduced the span time of decision making. We've moved over \$45 billion across the FYDP against our modernization priorities. So by the middle of this FYDP you'll see roughly a 50/50 mix between the investment in new capabilities and legacy platforms.

So we've put our money where our mouth is. We've tried to organize against the problem. The challenge we still face is just the breathtaking demand that we face worldwide. We've increased our emergency deployment readiness exercise program, as well as our defender's series exercise. We take a CONUS-based unit and send them to the Pacific as well as the European theaters. So we've increased the rotational deployments to areas of the world where we have a particular competition in play, if you will, against near-peer competitors. So we're trying to strike that balance between current demand and the National Defense Strategy. And I think we're doing pretty well.

Kathleen H. Hicks: Secretary Barrett.

Barbara M. Barrett: Our budget is really targeted to modernize and strengthen our people. So we're going to modernize by divesting to invest, to connect every shooter to every sensor, every sensor to every shooter, as well as we're really looking to strengthen the role of our people. All of that situational awareness is really important to a pilot. We pay a lot of attention to the fact that right now building – standing up a new Space Force is a big part of what we will be caring for in our budget. It's not a massive part of the budget, but it's a massive part of what our budget is focused on enabling.

Kathleen H. Hicks: Good. Secretary Modly.

Thomas B. Modly: Well, I think for us I guess the underlying principle of everything we're trying to do is to increase the agility of our forces and our people. And that is really because of increasingly complex security environment. Things are getting far more complicated, far less predictable. And so we need to invest in those capabilities, and those skills, and those – that human capital that can adjust to that.

So I sort of bucket it into three broad categories, which I call gray house, gray matter and gray zones. And the gray house is really that overarching force structure that we need to have as a Navy. We have a mandate from the president, as well as from the Congress, to grow our fleet to 355 ships or more. Personally, I think it's more. And so we have to determine how we're going to do that. Is it going to be the same mix that we've been talking about for the last several years, or is there some new mix that makes sense, given this more complicated environment?

The gray-matter piece really deals with the people and developing the intellectual agility and the ethical excellence of our people. So we put a lot of money and emphasis on our education. Our Education for Seapower study are implementing a lot of broad reforms across our educational institutions to link them back into the warfighting community so that we can have a learning organization that's constantly iterating the challenges, understanding our competitors, our adversaries, and then adjusting our force structure and how we address them through that intellectual development.

And the last thing I call gray zones. And it's not really the traditional thought. When people think about gray zones, they think about, you know, little green men running around the Ukraine. It's not what I'm talking about. I'm talking about all the stuff that happens behind the scenes in the Navy and the Department of the Navy that makes those other things possible. It's the business systems. It's the business management. It's our IT systems, these things that people don't think about or they take for granted. And when they take them for granted, they end up being sub-optimized. So the key element for us in that third piece is really the digital modernization effort of the force.

Kathleen H. Hicks: So Secretary McCarthy pointed to some of the challenges that the Army's working through. Secretary Modly, you have put forward this stem-to-stern memo and also indicated there's a new force-structure assessment to be done, as you just reflected here. Could you talk a little bit – and I'll come down the line and give you, Secretary McCarthy, a second shot at that same type of question, which is about the challenges, the barriers that are in front of you that you're most looking at in this coming year to try to get to where you need to go.

Thomas B. Modly: Sure. So, you know, we're facing in our budget several competing pressures. One is this mandate to grow the fleet to a larger fleet. The second piece of that is that we have a readiness hole that we're still digging ourselves out of. And that developed over a long period of time, and we really need to invest in that.

And then the third piece is, as we look at the budget projections going forward, it's relatively flat for us. So we have to figure out a way – I mean, we look and see what that future force looks like. We've just done a new integrated force-structure assessment. It's got – it's a little bit of a different mix than we've been talking about before.

We're going to iterate that with the secretary of defense and others to determine what the right path is. But there are some north stars in that structure that said

we have to start going – moving out in certain directions. That’s going to challenge our topline considerations. And what I’ve told the department is that we need to look internally first at ourselves to see where we can find savings within the way we traditionally do things to help fund that before we can ask for anything more from the taxpayer

So that’s the process that we’re going through. That’s what the stem-to-stern review is. And it’s actually a staggeringly low number relative to our top line. The top line is over \$200 billion a year. If we can free up 5, 6 percent of that, we can start moving down the path to getting to a 355-plus-ship Navy in the next 10 years. But we have to do a lot of soul-searching ourselves to figure out how we get there.

Kathleen H. Hicks: Secretary Barrett, what are the risks you’re finding most confounding to confront right now or the challenges that you’re looking at?

Barbara M. Barrett: You know, modernization is really going to take a toll for all of us.

(The lights are dimmed momentarily.)

Kathleen H. Hicks: Someone just leaned against –

Barbara M. Barrett: Power outages are a challenge.

Kathleen H. Hicks: Somebody leaned against the lights, yeah. (Laughs.) Yeah, it’s an intimate gathering. (Laughter.)

Barbara M. Barrett: We haven’t been moving enough. It’s motion-activated lights. Is that it? (Laughs.)

So we’re working especially hard to look for ways of process reform, building faster, better processes. Our acquisitions process has been too cumbersome, too slow. We need to find ways of doing that faster. We need to minimize risk. But, at the same time, we are looking to divest of old equipment, invest in more modern, more capable and more lethal equipment, and, with all of that, building our space capabilities. And that is a transformation of how we have been doing it and moving into new capabilities in a domain that has previously not been perceived as a warfighting threat.

So significant risks. We will be taking risks that – measured, calculated risks, and building for a longer-term strong future.

Kathleen H. Hicks: As you endure the psychological warfare effects of the lights shifting – (laughter) – your thoughts, Secretary McCarthy.

Ryan D. McCarthy: So you’ve highlighted the comments I had at the beginning of when 60 percent of the requirements for combatant commanders are looking for the U.S. Army capabilities, readiness is our number-one priority and it will be there for as long as I have this job, and you would not have been able to have the first of the 82nd

deploy cold start, no notice, on New Year's Eve literally coming out of New Year's Eve parties and be boots on the ground in the Middle East the next day.

And that we are very proud of that to be able to dynamically employ that quickly forces and to have that deterrence locked and loaded within less than 24 hours is amazing. It's because of the investment in the leadership of in particular Mark Milley and Jim McConville that they've had in this execution and training plan.

So 60 percent of the balance sheet is fixed – MILPERS and O&M – and we're going to have to stay that way because you got to meet those national objectives every day in the form of deterrence worldwide and, plus, combat operations in places like Afghanistan. So when you have 40 percent or less of your budget to be able to modernize the force, the challenge is that striking that balance between the new capabilities and divestiture, and divestiture is tough. You're going to cut legacy systems that have been the formations for decades and it's when do you bring that off and will you be able to then flesh out the new capabilities over time. There's components you got to deal with, the Congress and industry and others. So that's going to be the challenge in front of the Army in the future.

Kathleen H. Hicks: Yeah, and I'm glad you brought up those other stakeholders, particular Congress, but, as you say also, industry and others. How have those conversations been going in terms of the – looking ahead to the future and all the services are dealing with areas where there may be very good arguments for divestment where there is strong congressional interest otherwise? And I open that up because it's true across the services. How are you approaching those conversations and how receptive have members been to it?

Barbara M. Barrett: Sometimes it's a bit of a challenge because many of the things that we need to invest in are not visible. They're not tangible.

Kathleen H. Hicks: It's not a production line already or something.

Barbara M. Barrett: Exactly. It may not be associated with a constituency yet. Things like connectivity, those are invisible and harder to identify with. Similarly, space. It's ubiquitous but it's invisible and, therefore, a lot of people don't appreciate how very engaged each of us are now with space.

So the two key investments that we'll be making that are maybe a bit out of the past patterns will be space and technology linkages and both of those are harder to sell because there aren't tires to kick. So that's a challenge that we face.

Thomas B. Modly: And the defense industry likes predictability and stability, and we understand all that and I think that – but all of us are moving into an era where things are going to become less predictable. And so we have to work with industry to be able to adapt with us as we – as we – as we change.

As mentioned, our force structure – we look forward in terms of the types of ships we think we're going to need 10, 15 years from now. They don't even

exist right now, and it takes a long time to develop them, research them, make sure that they actually work. We have to get after that right now.

So although we may be shifting some capabilities around, there are still going to be tremendous opportunities for industry to participate. We can't do it without them. So it's just establishing that dialogue. I think in some – to some degree, we would all like to move faster, I think, and the industry would like (to do this?). We put a lot of constraints on ourselves in terms of how we can actually do that. But it's just an absolute mandate for us that we have to figure out how to work with them and work with them more quickly to iterate as we move forward.

Ryan D. McCarthy: To reinforce one of the points Tom made of just the predictability. We're in our third year of a transformation and modernization enterprise and we've been consistent with our priorities and we've put our money where our mouth is, and that's the only way you're going to get an executive to make a bet to put that investment from their own IRAD dollars to change to tooling on a production line and make a go for a new capability.

So robust communication and conviction behind your budget proposals, because to the – you know, the point – the underlying theme here is you got to have the will to look at Congress in the face and tell a member where they make a product in their district that we don't need it anymore but here's the opportunity that's going to exist for that manufacturer if they play. But they – you know, so it becomes a trust issue that you got to build with the committees of jurisdictions first and then the rest of the Congress. But it's that consistency over time.

Thomas B. Modly: There's a great example, if you don't mind me interrupting –

Kathleen H. Hicks: Please. Of course.

Thomas B. Modly: – that we're all working on together, and that's in the hypersonic space, where it's pretty obvious. We're investing in this capability. We're doing it together. We're developing this technology. But moving that technology to production capacity is a big, big leap, and industry is going to have to – we're going to have to send some very strong signals to industry that that's the direction we're headed or else, you know, if I were in their shoes and I'm controlling other people's capital, I'd want to have a little bit better sense that that's the direction we're headed in. So we're trying to send those signals. But a lot of this technology's really new, so we have to make sure that it works before we jump too far into it.

Kathleen H. Hicks: Yeah. The topline. Secretary Esper has indicated/hinted/implied that there would be a desire for DOD – this is shocking to know – there would be a desire from DOD for there to be a higher topline at the end of this budget deal that the FY '21 topline is constrained by. So presumably he means going into FY '22 and a second Trump administration, or even a new administration, might want more topline.

But the pressures and the history aren't terribly supportive of that. As one of my colleagues at Heritage has pointed out, even in the Reagan administration there

was an effort – strong effort to constrain defense spending in the second term. And the debates going on right now on the Democratic side seem to be indicating, you know, stable or less versus more.

So let me just assume for the moment that plan A is get more topline. And my question is, is there a plan B? And are you allowing or ensuring that your teams are thinking through what those backup approaches might be? Secretary Modly, can I start with you?

Thomas B. Modly: I'm not moving out with any assumption that there's going to be an increase in topline. I just think that's too presumptuous. And that's one of the reasons why we're doing the Stem-to-Stern Review, to see how we can fund this internally.

But like I said, you know, we have a pretty big mandate to grow the fleet by 30, 40 percent from where it is today. And at some point those math – those elements of math are not going to match up.

Kathleen H. Hicks: Right.

Thomas B. Modly: So we support Secretary Esper's request for that.

But if there's one thing that's consistent over the last 40 years, it's that this – the Navy's percent of the overall GDP has gone down consistently as a percent of GDP, as has the entire defense budget. The entire budget's being squeezed out by things that are not defense-related. And if you look at the statistics, you can see that. It's clearly not defense that's putting pressure on the topline of our overall budget.

So we have to think – we have to learn – we have to learn better how to work within the means that we have, be more innovative, look at how we can – and the Navy, as a great example, we have concentrated in our fleet a lot more cost on a fewer number of platforms. So if you look at the fleet that we built under the Reagan administration to 600 ships, in real dollars the average cost of that fleet was about a billion dollars per ship. Our average cost today in real dollars is about \$2 billion a ship. We have to reverse that trend. We have to get more distributed, lighter, more lightly manned type ships as well, and that's what our force structure is about.

Kathleen H. Hicks: Right. Secretary McCarthy?

Ryan D. McCarthy: I echo Tom's sentiment there as well, that this fiscal environment is tough. We've done – we're on a third year of our Night Court exercise, so the investment and divestiture of legacy capabilities. Being ruthless in prioritization is the only way you're going to get there, and increasing your buying power. But it's – there's a lot of things that we're doing better. We have a Commanders Accountability and Execution Review. We've reduced the obligations by billions of dollars. So making every dollar count within the balance sheet, improving your buying power can help you mitigate the risk of not getting the fiscal increase that Secretary Esper laid out over at Johns Hopkins.

So, tough environment. And again, the challenge the Army will face in the out years will be the modernization bow wave that's coming with the growth of end strength, and the two big variables on our budget. And it's really going to hit us no later than '23.

Kathleen H. Hicks: Secretary Barrett?

Barbara M. Barrett: My colleagues have said it well, but we face the same changes and challenges. We don't anticipate a topline growth, though we certainly have ways that we could use it.

We face two-thirds of the nuclear triad modernization, and that's coming. We have all of the expenses that would go with increased capability in space. At the same time, we too are implementing reforms. I think the acquisition reform taking not just money but time out of the process to the extent possible – improving efficiencies, cutting time. Our acquisition team has the Century project taking already over 100 years out of acquisitions procedures and targeting 200 years of aggregate time in the acquisition process. Looking at reforms that will help improve efficiencies but, at the same time, with the expenses of the technology that we buy, the air and space business is an especially technology-dependent process. And that is a growing part of the economy, a growing part of defense, and a higher expense.

Kathleen H. Hicks: Is there a hope, Secretary Barrett, that there can be some joint approaches, joint solutions? And so I think of JADC-2, where the Air Force is in the lead. Are there efficiencies to be had there? Some folks, I think, would probably be a little jaundiced from past experiences with joint programs. Should we be hopeful?

Barbara M. Barrett: Absolutely. These things can't be done just individually – in the individual services. We must be cooperating, and we are. JADC-2, building connections, connecting each shooter with each sensor, but also in artificial intelligence, in JAIC, in the Joint Artificial Intelligence Center, working on hypersonics. We're all involved in that. So much of the advancing technology is very much a joint effort. And if we did it individually, we would be finding duplication and inefficiencies that we wouldn't – that we cannot afford.

Kathleen H. Hicks: So, Secretary Modly, on that point, as Space Force stands up here, what's the Navy plan, migratory or otherwise, towards Space Force?

Thomas B. Modly: Well, we're working with secretary of the Air Force and their team in terms of which resources will transition over into the Space Force. But we're – Barbara said it well – I mean, we're completely dependent on each other. And particularly when you look out in the Pacific theater – I mean, it's a lot of water. It's a lot of space that we have to have awareness on. And our ships can't operate without their dependence or interdependence on the space domain. So we're working very, very closely with the Air Force on that.

Kathleen H. Hicks: Same true on the Army side, in terms of space – Space Force?

Ryan D. McCarthy: Absolutely. If you – we're the largest consumer of space in the department. And it really comes down to the operating concept of how you're going to fight in the future. For us to be able to mitigate a hypersonics threat, you're going to need a low earth orbit satellite architecture, much wider arrays, and the ability to queue targets very quickly to mitigate a threat. So it – you know, there's a technical aspect to joint command and control, but there's a warfighting one. And it's changing from the pro-style offense to the spread, creating multiple dilemmas for your opponent. So a lot of this is going to be done – you know, our business lane, if you will, in the department. But the tank, led by General Milley who's really going to have to drive the outcome of how we're going to change the way we do business in the future.

Kathleen H. Hicks: Yeah. And Secretary Esper has directed this creation of the joint concept – joint warfighting concept for the end of the year, with all the chiefs signing on. What's the role for the service secretary in that discussion? And if I can just flesh that a little, so as you all look at man, train, and equip, and building out the funding for the force over the future, part of this too is ensuring that you have a healthy service, innovative culture, et cetera. So maybe that's a better way to put it. What's the piece that, as secretary, you're thinking through about ensuring that you can bring forward, in your case, an Army that's as innovative as possible to add to that warfighting concept?

Ryan D. McCarthy: A lot of it's the behaviors. We eat lunch together, breakfast, all the time. We meet all the time. It's the way we've kind of set up – if you look at the hypersonics effort, it's joint interest not a joint program, like a big joint program office, with a coin and a seal and all that stuff. What we do is we share information and we look at the test regime, and we share the data. They meet together constantly. But the mechanism of that weapon system, how it's going to be used and deployed by the various services is going to be different because the domains are different. But there are ways to get economies of scale in a buy, and the way we will learn in that process we can help each other.

So it's a lot of how we've established a lot of these efforts is not had been, you know, the traditional approach. A lot of it is the relationship-driven nature of it. So – and then just from the perspective of the job, working together to finance these efforts, working together to explain the incredibly important nature of these strategic programs, and getting the buy-in from industry and the Hill.

Kathleen H. Hicks: Secretary Barrett, you mentioned acquisition reform a few times, and it's certainly a theme that's come through. One of the big issues I think many of us are looking at is this – the valley of death if you will, the movement from having these new approaches – whether it's in hypersonic systems or other areas, space, cyber, et cetera – where we're prototyping, we're looking at fielding, but then there is this procurement challenge. Is this part of what you're describing as the acquisition challenge, or are you thinking of some other major set of challenges you face?

Barbara M. Barrett: This and others.

Kathleen H. Hicks: OK.

Barbara M. Barrett: We have counterpart examples. The KC-46 is a process that started in the early 2000s, and it's nearly 20 years later and we're looking for a fully functioning aircraft. The Valkyrie was a project that started two-and-a-half years ago to go from initial design to flight. So we've got bookend examples on how it has been done and how we will hope to see a lot more done.

So we've got new ways. They're working. It's being effective. The team of service secretaries meets regularly, as Ryan indicated, and we meet regularly with the secretary of defense as well as the deputy secretary of defense. So we really are sharing lessons learned and moving forward to implement those in our shared knowledge.

Kathleen H. Hicks: Very good. And just a reminder if you have cards to please put them up to get picked up.

The other piece, Secretary Modly, that's coming through very strongly in all the data that we see, and certainly in the things we've heard coming out of the department, is of course the rising personnel costs, a piece of which is personnel directly and other pieces of which are indirect if you will – compensation issues and benefits. How are you thinking – given the fiscal challenge you're describing, these are coming – crashing together. Personnel is taking up more and more of the percent of DOD budget. How are we going to approach that problem?

Thomas B. Modly: Well, I think we always want to ensure that our servicemembers and their families are extremely well taken care of. So the costs of doing that, not just for us in the department, it's rising generally in society.

Kathleen H. Hicks: Right.

Thomas B. Modly: So it's hard for us to buck that trend. It is what it is.

I think what we have to think about – you know, we're sort of a platform-centric service, both us and the Marine Corps – is, how do we reduce the number of people we have in that distributed maritime force that we have? How do we – how do we get lethality out there without having to have 300 people on a ship to deliver it? And those are the types of things that we're thinking about.

It requires – and it also requires, I think, an increase in sort of the level of capability and skill of the people that we have in the force. And that's why we're investing so much in education, because you're going to ask these people to do a lot more and to be a lot more adaptable in the jobs that they have that we're asking them to do. It's sort of the philosophy behind the whole Frigate Program that we're doing right now. That's going to be a fairly lightly-manned ship but with a lot of capability on it.

And when you go and talk to some of the manufacturers that are building this ship and you look at some of the ones that have been developed and you ask them – I had a great example of a ship, and I won't mention which manufacturer it was, but I went into the ship and they showed me a state room with four bunks in it, and its own shower and bathroom facility. And you know, I was in the Navy, you know, back in the Cold War. And I said, wow, this is a really nice state room for officers. They said, no, no, this is our – this is where our enlisted people live. And I said, well, why did you design the ship like that? And they said, we designed the ship like this for the type of people we wanted to recruit to man it.

And that's really what we have to think about. There are going to be more lightly manned, but with probably more highly-skilled people who have lots of opportunities to do things in other places. So we have to be able to attract those people. That is a big, big part of our challenge. But you know, we definitely don't want to put – we don't want to short-shrift our sailors and Marines or their families.

Kathleen H. Hicks: Secretary McCarthy, obviously, personnel costs mean – are particularly impactful on the Army, and you all have in the '21 budget request slightly decreased what you had previously been seeing as your growth line for the active force, but it's still ticking up. Can you just talk through how you're thinking about the cost elements of that? And you've alluded already to trying to get this balance right across readiness structure and modernization, and the Army in the past typically gives up the most of those in modernization. Where are you now?

Ryan D. McCarthy: We missed in our recruitment target two years ago substantially, and a lot of that had to do with our messaging, our disposition of recruiting stations worldwide, and just how – our fundamental approach, coupled with 3 ½ percent unemployment. So it made – it was like a perfect storm. Made adjustments in marketing. Made adjustments in our approach. Got back to the cities. Engaging with civic leaders. We're back on track.

But what we see is that the slowing is much of knowing you're going to be able to hit your target, have that modest growth year over year, so you continue to thicken the formation, because we have one-to-one dwell, BOG-dwell, and in some MOSs less than that. And it's putting enormous strain on our people. We've been deployed every single day since October 7th, 2001. And it's just not going to stop, combat in particular.

So when you look at it, we have to keep doing the force until we can get a better BOG-to-dwell ratio, because it becomes a huge retention issue for us. But as I stated earlier, we're on a collision course in the out years, by the '23 timeframe. And I think that that's where there's going to be some very hard choices in front of us. Do we have to stop? Do we have to adjust? Do we get more top line? Can we find more buying power? That's why our night-court effort will continue in perpetuity.

Kathleen H. Hicks: I just want to ask each of you to reflect a little bit on – because there's so much

conversation right now on technology. And I'm not one who thinks that technology is the center of the innovation ecosystem. I think the people are. But let's talk for a moment on the technology side. What is the area where you see your service investing in that's giving you the most – it's just most interesting or insightful for our audience to hear, could generate some real game changers?

Secretary Barrett, why don't I start with you?

Barbara M. Barrett: You know, air and space are all about people, talent, technology. So it's exactly what we do. Yet it's smart people designing new capabilities. When I think about it, I think about the GPS system. And you think, in the history of mankind, has there been a technology that has been as influential, has changed as radically as many people's lives as GPS?

That entire system – everybody has used it already today. But that entire system for the world is operated by seven people sitting at consoles in Colorado Springs. A total working staff of 40 people, seven on a shift, staff that department. It's talented people operating a system that geniuses put together and serving the American public, the global public, including our warfighters.

So we get extraordinary value out of thoughtful innovation. And the value isn't just for the warfighters, but it is especially pivotal to our way of life. So the talent is a different kind of talent – so the innovators, the people putting ideas together and making good things happen. And then the operators may be fewer than what would be expected for the value, for the output.

We face the pilot shortages. Pilot shortages I've watched for the past 40 years. Pilot shortages – in the time of a good economy, there's a pilot shortage. And as the economy turns south, pilot shortages go away. We need to – we are increasingly using autonomous vehicles. There are technological revisions that are happening that change a lot of that.

But one of the things that's happening right now is that the Space Force has been an extraordinary magnet for young people to want to be a part of the military. Many young people have said I didn't want to be a part of the military, but I want to be a part of the Space Force.

So the applications, the online tapping to be a part of the Space Force, has been significant. We've found that that is not affecting just the space Force at candidates, but it's affecting the Air Force as well. And I wouldn't be surprised that the Navy and the Army also are getting a resurgence of attention and attraction because the Space Force is bringing positive attention to the military.

Kathleen H. Hicks: So on the technology piece of that, is the takeaway that it's sometimes the least expected? Because the GPS example is an excellent example, of course, of an enabling technology that just fundamentally changed the way everything is done. Is that where you think we are underappreciating, if you will, in the outside community where the next big-move opportunities are?

Barbara M. Barrett: I think we really have been underappreciating space overall. We went from a time when it was motivational to every – the Sputnik era, where every young person was motivated by it, to more recently it's been a shrug. But I think now it's come – because of Space Force – it has come into its own again. People haven't used – haven't understood how much they use it, but now they do. I think at first the Space Force was a mockery. But now when people are quite coming around to the point where the NDAA, 288 votes in favor, bipartisan and bicameral, great support for something that's stood up as Space Force.

Space is invisible to most of us, most of the time, but it's ubiquitous. Everybody is using it. We can't live without it. And only when we stop and think about it do we realize both how important it is and how fragile it is. And therefore, a space domain is an important place for us to be paying attention to defending.

Kathleen H. Hicks: Secretary McCarthy, same question. Where is a technology trend that's exciting for the Army?

Ryan D. McCarthy: Long-range precision fires. And it's our number-one priority. We have well over \$10 billion across the FYDP invested. Again, it's a place where our organizations are partnering very well. And if you – if you look at the investments made by near-peer competitors on anti-access/area denial capabilities, one way to reverse that is putting investments against it that can change the geometry in certain areas of the world, like the South China Sea, like Northern and Eastern Europe, that having these capabilities creates the standoff needed to maneuver and it helps envelope the battlespace in places where if you can't get a ship in there, if you can't get an airplane in there, but you can take out of those SAM sites, now you bring them back in. So it's a way for us to complement each other's capabilities, but also mitigate vast investments that have been made by our competitors.

Kathleen H. Hicks: Secretary Modly.

Thomas B. Modly: So I think – you know, I echo what Ryan said. And I think, you know, every day I get introduced to something else amazing that the Navy is working on from a technical standpoint in the warfighting realm. But I'll focus on one that people probably think is boring, which is the digital modernization of the back office. Because my perspective is that we are at least 15 years behind where the private sector is on this. And there are huge opportunities with respect to improving our networks and improving how we do business through the better use technology, our ability to understand where things are in our inventory system.

You know, so another very mundane topic is the audit. And we go through the audit. And everyone, you know, feels like it's an infringement on their jobs. But I'll give you a great example. Last year we went out, first year we did the audit, we found a warehouse down in Florida with \$150 million in aircraft parts in it. We didn't know we had the parts. We didn't know we had the warehouse. And we find this place. And we enter all those parts into the inventory system. Within a week, there's \$20 million of requisite on parts that were in that warehouse for aircraft that were down for parts that we didn't know we had.

There is a huge opportunity for us in the digital modernization side of our business operations to fix that, to improve readiness, to improve the speed at which we can do things, educational content delivery – which is, I think, critical to the innovation and the agility that we want from our people to be really enabled by this. So I'm very excited about that, and it's something that I've been pushing.

Kathleen H. Hicks: So I'm going to go to the audience questions. And the first links to this last question, which is about the – your perspectives – each of your perspectives on the health and quality of the industrial base, and if there are specific areas of challenge what should we be doing differently to get there? And maybe I'll start with you, Secretary Modly. I'm sorry, you just picked up a glass of water. (Laughs.)

Thomas B. Modly: It's OK.

Kathleen H. Hicks: It was unkind of me. But do you mind –

Thomas B. Modly: That's OK. I was trying to think of what to say. I knew you were coming at me. (Laughter.) Well, I think we have a – I think we have an amazing industrial base in the United States. I think the challenge we have is – that we have, particularly in the heavily capital-intensive things that we buy – is we don't have enough competition, frankly. That's the challenge that we have. So it is – it is what it is. I mean, there's one company in the United States that can build an aircraft carrier. We need aircraft carriers, so we have to work with them. And they've been very good partners with us. But it creates challenge.

And the more competition you have, the more ideas you get, the more you can drive costs down. So that's a concern that I have, is that the competitive field is not as broad as I think I would like it to be. Anyone could take a look at a chart over the last 20 years and see that there just aren't as many competitors out there providing different and new ideas. So that is a challenge. I think they're incredibly capable. I think they're incredibly responsive. Like, all these technological things that I've talked about, the amazing things that I see, I'm seeing it in the industrial base. It's amazing.

But we don't move fast enough for them, I don't think. I don't think we give them necessarily the greatest signals about what we want to do in the future. And they will migrate to the places that give them the best return on capital. So we have to work very hard to maintain that balance and ensure that we have a healthy industrial base. I think from the Navy's perspective, we'll have a – I would say, probably a healthier industrial base 10 years from now because of the diversity of the things that we're going to be acquiring to broaden and make this fleet different than it is today.

Kathleen H. Hicks: And supply chain security, can you just talk about that? And I'll ask the other two to as well.

Thomas B. Modly: Yeah. It's a big concern. It's a very big concern for us. And it's not so much at the top-tier suppliers but it's the second- and third-tier suppliers that have a lot of vulnerabilities that we've discovered. The Navy did a study on this about a year or so ago. We've implemented a lot of changes to address this. But it's big investments for small companies to create the type of security that we need. So we also need to work with them, and the primes, to come up with a better way to protect information. Our adversaries are coming at us through that channel. And they're able to fish their way right up that channel. And they may find a piece of information that's not classified in and of itself, or that important in and of itself. But when they start piecing it together with all the other stuff they find, it matters. And it erodes our competitive advantage.

Kathleen H. Hicks: Secretary Barrett, your thoughts on industrial base issues and supply chain as well.

Barbara M. Barrett: I agree completely with what Tom has said. We have the same problems, of course, in the Air Force. I believe in the discipline that competition provides. And in some of what we buy, we don't have adequate competition for there to be the discipline that we'd like to see. On the other hand, there are pockets of exciting new competition in space launch, for instance. We've gone from where that was the exclusive territory of a very few providers, and now we have some new providers that are increasingly capable of being responsible for military lift. And that is a good expansion in an area that was so expensive it would have been perceived that it would have been difficult to have new competition there. But we have it.

Kathleen H. Hicks: Secretary McCarthy.

Ryan D. McCarthy: Definitely the aspect of being able to do business more effectively with the department is always something that hinders the industrial base. And people just go find new customers. From a component standpoint the one thing in particular that concerns me is the semiconductors. We don't really make those in America anymore and they're in everything. So where do you find this capability for components that are going to put into these weapons systems in the future. How could the Department of Defense work with industry to help protect that market? The commercial market is breathtaking. So how can you compete?

And then that gets into the safety of your supply chain. Where are these components made, and who's making them? Ellen Lord's doing a remarkable job here in attacking this issue. But it's something that has gone on for decades. And it's only getting proliferated more around the world.

Kathleen H. Hicks: And this relates to another question we got, which was on the relationship between DOD, or the military more generally, and tech. Can you talk a little bit, Secretary McCarthy, about the efforts you have underway that bridge-build and bring – so many of the solutions of the future are non-hardware solutions. And tech obviously brings a lot to bear on both the hardware and software side. Are you finding receptivity there? Are you reaching out in new ways?

Ryan D. McCarthy: So we put our modernization organization in Austin, Texas. They don't wear uniforms. They work in a high rise. And we have a footprint in an accelerator hub right down the street where, you know, there's techno music and people wearing hoodies. So we're seeing everything we can to embrace the entrepreneurial spirit of the country and get away from flagpoles and tanks out in front of the headquarters buildings. So it's changing the way we operate.

Some of it is the business practices, and embracing the authorities that, in particular, the SASC leadership gave us over the last three or four years, starting with McCain and Reed, and they followed through with Inhofe and Reed's leadership of other transactional authority. And being able to get things on contract quickly, reducing that cash-flow pinch that small business has when they try to engage with the Department of Defense. We're trying to do that. There is – some of it is cultural, and it's us, getting our contracting officers to understand these authorities, and to be able to take the risk to do that. So, you know, I think the Air Force and Navy have had success with this. We're getting some success with this. But it's a big cultural shift for us, and we've jumped in head-first.

Kathleen H. Hicks: Anyone else, a thought on working with tech?

Barbara M. Barrett: Same. I would just say that we really appreciate the congressional authority – the 804 authority. And we're using it heavily and hoping that we are proving the value of authorizing faster action on the part of the government so that we can hire – we can buy things sooner and implement faster.

Kathleen H. Hicks: Very good. Next question is on allies.

Thomas B. Modly: Can I say something about –

Kathleen H. Hicks: Oh, I'm sorry. Yes, of course. Yeah.

Thomas B. Modly: That's OK. We have lunch all the time but this is the first time I've heard about the hoodie uniforms, you know. (Laughter.)

Kathleen H. Hicks: Oh. Yeah. It's an anti-uniform. Yeah.

Thomas B. Modly: I think there's an opportunity to collaborate on that one. So but I would say we – you know, we're trying to overcome this, too. There is a bit of distrust, particularly in high tech, with the military in certain areas and, you know, we're trying to overcome that.

I think it translates to a larger issue that we have where a lot of people in the country, when I go out, don't really know what the Navy does. They don't have – they're not as well connected to the military. And so that's – I think that's on us to get out more and have our people communicate more with the population so they understand what it is that the services do.

Kathleen H. Hicks: Great. The next question is on allies, which is one of the three themes of the

National Defense Strategy, and the question is for all the secretaries. What have you done to realize that vision of leveraging or working with allies and partners? Maybe start with Secretary Barrett.

Barbara M. Barrett: Well, having served as a diplomat for the United States at a couple of posts, I think this is one of the most important elements of our National Defense Strategy. If it's the world against us, we lose. We must have allies and we must have partners. Within the past week I've been in Turkey and Spain, England, and Germany, and we have partners both in NATO and we have bilateral partners that we really count on, we depend upon. They depend upon us, and it's – it brings strength to us and brings opportunity to – that save soldiers' lives. So if we do diplomacy well, we save soldiers' lives and airmen's lives and Marines' lives and sailors' lives as well. So it is a combination. We talked a bit earlier about how foreign policy and defense policy are a bit of an artificial separation –

Kathleen H. Hicks: This was a conversation we were having in the green room. Yeah.

Barbara M. Barrett: Yeah. I think that we really – these are intertwined and we should be working very closely as a State Department, Defense Department advanced mission. So allies and partners urgently important, and the Air Force has been using allies and partners tremendously. Yet, there is a lot more to do.

Kathleen H. Hicks: Secretary McCarthy?

Ryan D. McCarthy: So, you know, I was baptized to just how important relationships are when I, during the invasion of Afghanistan, walked into a hangar in Oman before we were to launch three days later and I see two SAS. So we never go to war alone and, you know, especially allies like Great Britain that are always there for us.

So we have 180,000 people deployed worldwide. We increased our EG (ph) program and our Defender exercise program so then we can have thousands of troops from CONUS-based units to deploy and train alongside our allies in Southeast Asia, Eastern Europe, Africa, South America. So advise and assist is an incredibly important skill set.

We created five security force assistance brigades that are specifically designed to do advise and assist missions and we're regionally aligning them worldwide. We have two of them in Afghanistan today that have deployed to Afghanistan over the last two years. So this is a critical aspect of our whole posture worldwide and we're looking at expeditionary basing concepts in Southeast Asia as well as in Europe so that we can continue to dynamically employ the force, extend the duration of these deployments so they get more repetitions and more time together. But America never fights alone.

Kathleen H. Hicks: Secretary Modly?

Thomas B. Modly: I think it's not an accident that the allies' and partners' emphasis is the number two line of effort in the National Defense Strategy after, you know, restoring readiness, and it's clear, to echo what both Barbara and Ryan said, we can't fight

alone and we won't – we can't fight alone. We won't fight alone. We won't win, and so it's a huge emphasis for us.

I think the Navy, particularly the Navy, plays a very unique role in this because we're out and about all the time with our ships, and I emphasize this to our sailors and Marines when I see them, particularly in overseas locations. I tell them, you know, you're frontline diplomats for the country. In some cases, you're the first American that someone's going to meet and you have a responsibility to create a strong impression. This is how we mitigate unpredictability is having partners and alliances that we can count on. And that is done through relationship-building, and not at the secretary level but at the sailor and Marine level, on the ground, and their families. It's a very, very important role for them. And I emphasize that every time I get around.

I spent a very long trip last year in the Pacific and went to many, many islands that people probably haven't even heard of. And I will say that our adversaries in the region, particularly the Chinese, they are all over these places trying to establish a presence there. But universally, the people that I met there would rather have us be the ones there than the Chinese. So we have to take that seriously. And I think that there's a huge opportunity for us there if we just capture it in terms of mitigating that unpredictability by developing stronger alliances and partnerships.

Kathleen H. Hicks: Great.

Last question is on what I'm going to characterize as high-low mix. And it really gets to some of the themes that have come out in all of the discussion you've put forward here today around the force being out and about, the force being deployed every day. And it is true across all the services.

And so the question for the capabilities development of the future and of today is how you develop a force mix that's both able to deal with, if you will, lower-intensity requirements but that strain capacity and that can create those higher-end warfighting or other capabilities for peer competition.

So Secretary Modly, if I can start with you, because it's clearly right at the heart of where the Navy is trying to think through right now. How are you thinking about that lower end but consistent competition level, if you will, demand and how you're going to attack it in terms of your force structure?

Thomas B. Modly: Well, it requires more presence and it requires presence to secure sea lanes, to give assurances to our partners, to also provide opportunities for us to exercise with our partners, because a lot of these partners that we want in these regimes, they have – it's difficult for them to go out and exercise with a carrier strike group. So it's better for us to have smaller platforms that allow us to have much more constant interaction with them. And that is in a distributed maritime type of strategy. And that's really what's driving a lot of the changes that we're looking at in our force structure.

Kathleen H. Hicks: Do you think we'll see, for example, more unmanned, more sort of quicker-turn commercial-ship approaches? How would we see that manifested?

Thomas B. Modly: Yes. Yes.

Kathleen H. Hicks: OK.

Thomas B. Modly: We're looking at all those things. But clearly autonomous systems or lightly manned systems or minimally manned systems are part of what we're looking at in terms of the future. We have to do a lot of experimentation with that, not just on the technical side but how you actually fight with that. It's a very new way of thinking for us. And so we're going to be very deliberate about this.

And it's also part of the whole cycle of creating this learning organization for the Navy that can constantly iterate that. We're going to put a force structure out here in the next several days that sort of says there are sort of north stars that we're heading towards. But we have to constantly iterate that, because the world is changing. So we're going to have to pull our timelines in and constantly think about what the next force will look like.

Kathleen H. Hicks: Great.

Secretary Barrett.

Barbara M. Barrett: Things like autonomous vehicles, that's not new for the United States Air Force. This is such standard technology that we're retiring early-generation autonomous vehicles, which vehicles have been used so much and so reliably that they now have reached their design capacity.

This is really what the United States Air Force is all about, a mix of manned and unmanned, the employment and lasting employment of unmanned vehicles that then we can improve upon the capability, do new generation, better, more capable, less expensive versions of those things. This isn't anything new for the Air Force. It's long since been employed. And we're just looking at next generation, better lethality, better sensing, better connectedness, and improving for future generations doing improvements upon some of those what have been perceived as new technologies.

Kathleen H. Hicks: And is there an enduring role for fourth-generation aircraft and things that are less capable than our maximal capacity for the Air Force?

Barbara M. Barrett: If fifth generation is defined as low-observable, there is certainly a need for low-observable, but everything isn't – doesn't need to be low-observable. So, yes, there's a role for a mix of fleet types. Just as not everything's an aircraft carrier, not everything needs to be one type of fleet. Both are important and have a place.

Kathleen H. Hicks: Secretary McCarthy.

Ryan D. McCarthy: We'll have to have some type of tiered strategy of how you're going to be able to scale over time. Always the challenge with that is the haves and the have-nots if you did it by division. But clearly, you're going to need the day-one capability versus day 10. So General Murray and Dr. Jette are looking at concept of how would you do this. Some of this is physics, but a lot of it is financial. So it'll be some form of that, and it's the sort of thing that they've got about 18 months to figure it out because if these prototypes are successful we're going to start buying LRIP tranches. So that's – it's the choice that we're all going to have to face.

Kathleen H. Hicks: Well, I want to thank all three of you. Really commend you for your public service, quite sincerely for your public service for the country and for helping to lead the services in a very trying, competitive environment, and for taking the time to share your thoughts in a public venue. Really appreciate it.

Please join me in a round of applause for the secretaries. (Applause.)

(END)