Eighth Annual National Security Conference
Creative Disruption: Strategy, Technology, and the Future Defense Industry

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BEN FITZGERALD: Okay. Welcome. My name is Ben FitzGerald. I run the Technology and National Security Program here at CNAS. I apologize if I seem a little distracted during this conversation. We aren’t allowed to have cell phones up here because of signals interference. So I’ve been kitted out with this new thing called a watch. And I’ve been trying to figure out the functionality. Apparently, the only thing it does is tell the time, which seems very inefficient. So I’m going to keep figuring that out as we talk.

The Technology and National Security Program at CNAS explores the relationship between technology, strategy, and business. We’re particularly interested in the pace and the location of innovation and the impact of that on national security.

Given that that is our research agenda, we were very, very excited when we had the opportunity to undertake the project we’re going to be discussing today, which is called creative disruption. Now, you can pick up physical copies of the report at the back or you can download them on your device – not apparently on your watch, but we’ll make do. (Laughter.)

We’re not going to go line by line through the report here. We’re going to talk about some broader topics. But, in summary, the projects and the report looked at a number of critical trends, particularly the rapid diffusion of technology globally, the shift in the locus of innovation, moving from the military industrial complex that Eisenhower talked about or warned us about and moving into a more purely commercial environments. And really we sort of highlighted the predictable disruption that occurs when those trends run into a largely unchanging government approach to military technology. And our core argument is that we need – that we can no longer ride on the coattails of the strategic brilliance of the Cold War offset strategy and that we need to establish a new paradigm.

So, today, we’re going to explore that problem space and unpack those challenges. We’re very fortunate to have the co-chairs of the task force, the Honorable William Lynn and Admiral James Stavridis. You can read their storied careers in your guides that you have in your hands.

From my perspective as the guy sort of doing the day-to-day running of the project, I benefited significantly from Bill’s ability to talk strategically from the perspective of a very senior leadership position in the Pentagon and also a very senior leadership position running an international defense business. And Admiral Stavridis was really able to help us identify and parse critical global trends and understand the strategic implications of that.

So with that in mind, I’m just going to jump in and start asking some questions and we can just do some back and forth here. I’m interested if we could start out by trying to sort of separate the signal and the noise in the strategic environment. What are the key challenges and opportunities that you guys see are facing the U.S., its allies, and its industry in this strategy technology business paradigm?

Bill, do you have a particular thought that you would like to –
WILLIAM LYNN: Sure. I think Ben – first, Ben, thank you for organizing and making Jim and I and the rest of the group look good with the product that you produced.

I think the key is your point – signal and noise. As you look at industrial structure, I think the key thing to do is to separate, are we – is this in the normal just pulling and hauling of pressures and counter-pressures and developments that incrementally change the nature of the industry and the structure or are at a point of fundamental shift.

And I think the argument – and I think Jim agrees and is in the study is that we’re more at that fundamental tipping point – that this is more like the last couple of points than it is the normal time. By the last couple of changes, I mean, the industry fundamentally changed in the U.S. at World War Two. We went from a shipyard arsenal system into a commercially-based system, largely in commercial conglomerate, to the major conglomerates – Ford, General Motors, eventually IBM, General Electric had defense divisions. And that’s how the U.S. maintains its industrial advantage. That lasted until the end of the Cold War and then we moved from a period of conglomerates – as we consolidated, we moved to a series of large specialists, Lockheed, Northrop, Raytheon, and so on.

I think things are shifting again. As the budget is coming down, as we’re seeing more and more commercial technologies come into defense, the industry is globalizing, those changes are gathering to force another fundamental shift. And I think the key in both industry and government is to recognize the nature of that change and to try and manage it. So that’s I think the signal that we’re seeing amid all this noise.

MR. FITZGERALD: Interesting. Admiral, your perspective?

ADMIRAL JAMES STAVRIDIS: Let me pick up on Bill’s comment. First of all, again, Ben, thank you. It’s been a wonderful experience working with you and the CNAS team.

I think other things are globalizing as well. Violent extremism is globalizing, religious internecine conflict. We see 500,000 people, refugees, moving out of Mosul, Iraq, in what is essentially a Sunni-Shia religious war. That’s globalizing and that’s of deep concern.

I’m also very, very worried about what I call convergence, which is the idea that weapons of mass destruction can potentially move not on traditional ballistic missile paths, but on narcotics routes in and amongst refugees in these vast movements that come all around the globe.

So all of that is diffusing, much as Bill makes the excellent point about the industry. So that’s kind of the challenge – I think the uber-challenge. What are the opportunities? And I think there’s good news. And it’s this exquisite network of allies, partners, and friends that the United States enjoys. And we ought to try and think a little how that fits into this globalization because that’s a real opportunity upside for us.
MR. FITZGERALD: And so when we look through some of those trends and those trenches, a lot of those are driven by technology, especially commercial technology. The United States Army is increasingly talking about conflict and the increased rate of human interaction.

From your perspective, Admiral, how do you see these increasing commercial technologies that have a lot of positive benefits from a war-fighting or from a military strategic perspective? What are the effects?

ADM. STAVRIDIS: Well, it’s obviously extremely exciting to see the acceleration of technology and we all continue to be very excited by work at places like DARPA. But let’s face it, when you try and create a transmission belt that goes from these nimble swift commercial technologies and everything from big data to unmanned vehicles, getting that transmission belt so that those technologies end up useful and in the hands of operators is extremely challenging. And so kind of what’s in the middle, and it’s the defense industry. So I think we’ve got work to do in creating a transmission belt or finding ways that we can more quickly move those technologies. Maybe Bill could address how that works.

MR. FITZGERALD: Yeah, I’d be fascinated to hear your thoughts on that.

MR. LYNN: Sure. Well, I mean, I think your fundamental premise is right. There’s more commercial technology content in defense than there has been in the past couple of decades. There’s a commercialization of defense in that you’ve just seen even in the last four or five years, I think, the commercial content of defense acquisitions has risen from about 10 percent to about 30 percent.

I think you’re also seeing at the same time and are related is the defense companies are investing less as a percentage of their revenue than they used to. So you’re seeing both the technologies themselves, whether it’s IT-based or bio-based or nano-based, are more originating in the commercial industry than they were before. And we’re seeing, relatedly, the defense industry investing somewhat less. So to maintain our technological edge, what you’re going to have to see is the defense sector is going to have to become more of an importer than we’ve been in the past.

In the past, we’ve been – the balance has been more towards export. We developed, you know, GPS, even the Internet, you know started with ARPANET. Now, I – and so the model was to develop things internally and then push them out. We still need to do that in some cases, but in many more cases we’re going to have to pull commercial technologies in and militarize them and operationalize them. And I think we need to develop an industrial structure that’s able to do that and we need the Defense Department to lower the barriers to entry to allow those commercial technologies to move into the defense sector.

MR. FITZGERALD: So I think that that makes complete sense and we can see that there are a number of benefits associated with using commercial technology, but when we think about this from a war-fighting perspective, how does one military force generate advantage over another
military force if we’re all drawing from similar technology bases? Admiral, from a war-fighting perspective, how do you see that working out?

ADM. STAVRIDIS: Well, the first foremost is by investment in people. In other words, two opponents that have the same technology, if you have the better people, you’ll succeed. And so that gets into human resource management and incentivization of the right kind of people and retaining them and continue, especially in this era of the all-volunteer force, critically important. So I’d put people kind of at the top of my list.

I think a second way is through intelligence. So again, if two sets of opponents have roughly comparable equipment and kit, the one that has better intelligence and information, I think has obviously a significant advantage. And then thirdly – this could be considered part of the kit, but I think is a bit separate – is cyber and the ability to use cyber tools. So I think there are three that I’d deploy as ideas.

MR. FITZGERALD: Interesting. Bill, from your perspective, either from a Pentagon or from a defense industry perspective?

MR. LYNN: Well, I think I’d actually, Ben, fight the premise of your question that we should accept a level playing field in terms of the technology and industrial base. I mean, a major – maybe the core advantage the U.S. has had in security for over a century has been the strength of its technological and industrial base. We’ve been able to overwhelm opponents with the superiority of our technology, the ability to mobilize our industry. I don’t think we should think about giving that up.

MR. FITZGERALD: No.

MR. LYNN: I think things are changing, if that’s what you’re saying, and I think we need to adapt to those changes, but we should adapt to those changes in a way that maintains that superiority. Together with our allies, I think we do still have access and control of most of the world’s great technologies. I think it’s a matter of ensuring that the structure allows us to use those technologies in a way that maintains our military superiority.

MR. FITZGERALD: So we can’t have a one-size-fits-all approach.

MR. LYNN: Yes. And we basically shouldn’t accept the level playing field.

MR. FITZGERALD: Absolutely, absolutely.

MR. LYNN: We should maintain our advantage.

MR. FITZGERALD: So then, speaking of advantage, from a U.S. and allied perspective, where do we not have advantage right now? Where are we vulnerable? Are there specific risks that you guys see that you worry about? Bill?
MR. LYNN: Well, Jim mentioned cyber. I, you know, I think we have advantages in cyber in terms of our information technology is equal or superior I think to others, but we’re also more dependent on it than anyone else. And so that in itself is a vulnerability. So I think that we need to maintain our advantage in information technology, but we need to be able to protect, not just that advantage, but to protect our systems from asymmetrical attacks that people that get underneath those systems with cyberattacks, rather than just direct attacks. I think that’s a fundamental asymmetrical vulnerability we face.

ADM. STAVRIDIS: I agree. I would add that we’re not particularly good at things like language, culture, understanding of historical context. Those are areas where others seem to do better than we do. And Department of Defense, two and a half million people, only 8 percent speak a second language. We devote almost nothing to really understanding culture, history, literature. All of these things provide context for us. So I think we could do better and it gets back to the point I was making earlier about investing in people. And that’s the kind of investment that I think can be helpful over the long haul.

MR. FITZGERALD: I think the convergence point is interesting as well. Increasingly we can’t look at technology by itself. It’s the relationship between all of these things and how they come together at any one point. If we think about prior war-fighting regimes, Bill, you’re talking about sort of the industrial era of warfare. We’ve spoken about the Cold War era, where we could see the, you know, a blitzkrieg of multiple types of platforms coming together or in the offset strategy, where we had a regime of stealth, precision, C4ISR. Actually, for those of you who are interested in war-fighting regimes, watch the Paul Scharre’s presentation a little bit later. We shall talk about a robotics heavy regime. It’s going to blow your minds. It’s going to be amazing. (Laughter.)

When we think about those sort of regimes, what do you think – a lot of them were characterized by big bets on technology, sort of formed the pillar of what we were doing. What do you think those next big bets should be or are we entering an era where we can’t afford to make big bets in that way, that we need to be more diverse in our approach to the technology. Bill, what are your thoughts on this?

MR. LYNN: Well, I mean, in the conversation we’ve named some of them. It’s – you know, obviously, if I was really good, I’d be with, you know, Denis Bovin on Wall Street and investing in this. (Laughter.) But the – you know, obviously cyber, you know, all the vehicles are moving towards unmanned, you know, bio, nano-technology, probably it’s maybe a step further away, directed energy. Those are clearly, you know, going to shape the future.

I think there we – and Jim would be more expert at this than I – but it’s not just the technology, but it’s how you use it. I mean, the French had more tanks in 1940 than the Germans. They just didn’t know how to use them. They didn’t have the blitzkrieg. They didn’t know how to combine them with radios. They didn’t have the doctrine. So I think as we look at technologies, it’s not just the technology, it’s how do we put them into an operational concept, into a doctrine, and to be able to use those militarily.
MR. FITZGERALD: You’re speaking my language here. Admiral?

ADM. STAVRIDIS: I would add to the very good list that Bill just ticked off Special Forces. I think, again, it’s the people investment. It’s creating operators who were extremely capable individually. And then to Bill’s point about how you use it, I think the synergies between cyber, unmanned, Special Forces – that triad – I think are really worth exploring. And guess who’s exploring pretty well right now in Ukraine, is Putin’s military.

But we don’t understand those synergies in this kind of emerging triangle of cyber, unmanned, and Special Forces and how they can fit together.

MR. FITZGERALD: It’s interesting. So speaking of synergies and things coming together, especially in that part of the world, as a former supplied allied commander of Europe, what are your thoughts about the changes to our alliance environment or interoperability or all those sort of issues associated with the kind of changes that we’re seeing in the technology environment?

ADM. STAVRIDIS: Well, first of all, if we look at the United States and we think about what are our strengths, we have, as we’re learning, a great deal of strength in the energy dimension. We have the higher education system that’s the envy of the world. We’re a magnet for immigration. We have, still, very strong innovation. Our demographics are good. We’ve got lots of advantages.

One that I always put on that list is this, as I said before, this exquisite network of allies, partners, and friends, which are slightly different things. But if you look and you start with NATO, here are 28 countries with 52 percent of the world’s GDP. Let me say that again: 28 countries, 52 percent of the world’s GDP. And as is widely known, the United States spends, let’s say, $500 billion on defense very roughly.

Our European allies, much maligned and they should spend more, but they spend somewhere between $250 and $300 billion a year on defense. Not all of it’s spent perfectly, to our view, but that’s $900 billion in defense. And then, if we add Japan, Australia, South Korea, other allies, and then we start adding in friends, that is a huge, huge amount of resources.

So the question is, back to Bill’s point, it’s not just how much you have in the bank. It’s how you deploy the cash. And so are we buying the right things? Are we talking to our allies about rationalization between what we buy, what the Danes buy, what the French buy, what the Australians buy, what the Japanese buy, et cetera? I think that is an area that is well worth exploring. And I think it also gets into the defense sector, which Bill is probably more qualified than I to talk.

MR. FITZGERALD: Absolutely. And the key point here is never underestimate the Australians. We’ll surprise you every time.

ADM. STAVRIDIS: Yeah. Ben is Australian, by the way, and you also have the best beard I have seen in recent history.
MR. FITZGERALD: It’s a tribute to Ned Kelly. (Laughter.) So I was actually going to introduce myself as Zach Galifianakis earlier, but – (laughter) – but I decided against it.

So at the same time as we look at the opportunities for collaboration, but we’re seeing a significant downward pressure on defense budget domestically and internationally. What does that mean for the international collaboration either between nations or between defense industry actors?

MR. LYNN: Well, to build on what Jim was saying is that obviously there is pressure, not just in the United States, downward pressure, but – and probably even more so in Europe. And there – we are worried that that downward pressure is going to create gaps between our capabilities and the European, our allies capabilities, and we’re not going to be able to network and work together and have the same level of technology. And I think that’s the right worry.

I’m not sure sometimes that we don’t focus too much on the absolute levels of defense spending. As Jim said, there’s an awful lot of spending on our side out there. The question is are we spending it on the right things. And sort of the other path with NATO and our allies is to try and focus more of the spending on common goods, rather than the individual priorities of nations.

That’s another challenge politically, just to, you know, spending more on defense is a political challenge because of other priorities. Nevertheless, I think that’s probably the most surmountable political challenge and it’s probably where we’re going to get more payoff is as if we can develop those collaborative capabilities, if we can have more joint programs, if we can distribute the military labor in a more sensible fashion across those 28 nations, I think that’s going to have a payoff, even at the same spending levels.

MR. FITZGERALD: Yeah, interesting. So if we think about new approaches – and so invariably, with any project or discussion about defense industry, we come back to this issue of reform, which is critically important and always threatens to put me into a micro-sleep when we get into the details. But regardless, we can’t do a number of the things we want without reform. So what are your views on what’s required, what’s realistic, what should we be hoping for?

Bill, from your perspective, and then, Admiral, from yours.

MR. LYNN: Well, you know, when you talk about reform, you start with DOD, and I mentioned already that I think one of the keys is lowering barriers to entry in terms of defense acquisition. Now, we’ve been talking about defense acquisition reform in a – I think it goes back to the Revolutionary War, when – (laughter) – they originally tried to build frigates in one shipyard and ended up in seven different yards with seven different designs, so this is not a new problem. It’s a – and it’s an overwhelming challenge and you just have to chip away at it. I think the contribution here should be we shouldn’t just be looking at improving performance on cost and improving performance on schedule. We need also to lower the barriers to entry.

On the industry side, I think we’re going to have to – defense industry’s embarked now on a relatively short-term strategy of moving cash back to shareholders, and that’s protecting share
prices. It’s not a long-term strategy, though, in terms of protecting the industry towards the future. And I think you’re starting now to see some companies start to raise their investment levels. And I think that’s going to be critical if we’re going to maintain that structure going forward. So I think that’s a reform we need on the industry side.

MR. FITZGERALD: Interesting. And this is a fascinating point that we covered – actually, I should qualify what fascinating is or isn’t in these – (inaudible) – but as we were looking at this, we saw the very high share prices for a number of defense industry actors right now. As we unpacked it, and Bill really helped us understand this, it’s actually due to short-term decision making about cash, rather than long-term investments. So we’re potentially walking up to a precipice, wherein, when the – (inaudible) – hits, we won’t have cash on hand. We won’t be able to get – we won’t have liquidity to make good investments. And we will have essentially mortgaged our future. Which I think was something that I hadn’t understood prior to starting this project and is an important issue for us to understand.

But regardless, Admiral, I’d be interested in your thoughts.

ADM. STAVRIDIS: Bill, I think, really hit it on defense reform. And I’ll just say I think it probably goes back to the Peloponnesian wars when the Greeks were trying to figure out where to get their bronze swords made.

MR. FITZGERALD: The wrong sandals for the runners of Marathon.

ADM. STAVRIDIS: Yeah, exactly. But I do think, as the operator on the podium, there’s real hunger, again, for this transmission belt. Your operators know the world. They see these new technologies exploding, and yet, it’s this chimera that’s just always just beyond your reach. I’m Greek American, so I’m allowed to use the myth of Tantalus. And Tantalus was the guy who was tied to the tree. He was punished by the gods. And they would put these wonderful juicy apples in front of him and wind would blow them just out of his reach.

That’s sometimes how the operators feel when they see these exciting technologies bubbling and it’s when is it going to get here? Well, it’s got to get through this transmission belt.

So I’ll simply convey the frustration from the operational end of this thing. And I recognize it’s been worked on and we continue to work on it. And studies like this, I think, help because the put the question forward again.

MR. FITZGERALD: You may also have inadvertently just named the next key drone that the United States invests in. (Laughter.)

(Cross talk.)

MR. FITZGERALD: – trademark that and see what – (inaudible) – persistent standoff ISR or something.
ADM. STAVRIDIS: Exactly.

MR. FITZGERALD: So as – sorry – the – I try to use my powers for good, not for evil. (Laughter.) As we think about this issue of big things, I completely agree. We’re always hoping for the next big thing. Of that’s – it doesn’t arrive. But if we’re thinking about them, what should we be thinking about in terms of the next big thing. What are we missing? Is it something that is just completely off our radar? Bill, from your – sorry, Admiral, if you’ve got something in the shoot, you should definitely shoot it.

ADM. STAVRIDIS: I do. And it’s bio. It’s biology. Bill’s mentioned that in a kind of a fleeting way. But I would really stop and hit pause and think about bio as follows. We’re clearly in the age of information. We’re very excited about it. Our new iPhone 6S is coming out. I think we’re actually passing through the age of information in the sense that it’s becoming ubiquitous. It’s like the air we breathe. The next big thing is not information, in my view. It’s biology. And over the 10 to 20-year future, the changes in human life expectancy, human performance enhancement – you know, think Wolverine. It’s really not as crazy as you begin to think. Sleep cycles, strength, fusion of the body with technologies for information. Biomass, energy from biomass, synthetic crop.

The changes that are coming broadly, sociologically, I think are profound, little appreciated, ill understood. And they have ripple effect into the world of security and defense. So I think thinking about that coherently early days, it would make some sense.

MR. FITZGERALD: I think that’s fascinating. The key for me – the bellwether of where things are going for all this sort of stuff is science fiction, let’s call it literature. And I just read my first – and most of those books exist in the world of physics. I just read my first bio-related one, which is called “The Windup Girl.” If any of you sci-fi geeks are out there looking for something to read, that’s my key recommendation from this panel.

Bill, from your perspective, what are the big things that we should be thinking about, that we’re not?

MR. LYNN: Let me take a little bit different tack than Jim took. And this is almost the last big thing, but it hasn’t happened and I think we’ve almost driven past it and we shouldn’t. And I think that’s the vulnerability of our critical infrastructure to cyberattack. I think since it hasn’t happened, people assume it’s not going to. And I think it just it’s developing, not very quickly, but it’s developing such that the – we still have our power infrastructure, our economic infrastructure, our, you know, the financial networks are deeply vulnerable, I think, to cyberattacks and cyberattacks from a number of sources. It would worry me less if it was just major nation-states. Because there the deterrent model applies. Unless we’re in a conflict, a very serious conflict, very, very unlikely major nation-states going to undertake that kind of attack vis-à-vis the response we’d make. But rogue states, Iran, North Korea, are developing these kinds of capabilities, much less ability to deter that, because we’re already doing most of the things that we would use to deter them.
And then, terrorist groups, they haven’t gone down this path, but there’s no reason they couldn’t. So I think over, you know, the next decade the worry we ought to have is how do we protect that critical infrastructure from a relatively devastating attack in terms of loss of light and also in terms of our economy or economy wellbeing. I think there’s a fundamental vulnerability there and I don’t think we’re treating it as a fundamental vulnerability.

MR. FITZGERALD: I couldn’t agree more. And we’ve got some folks – I’m looking at you, Richard Bejtlich – in the room who can talk to those issues in detail. I do sometimes wonder from a North Korean perspective what a sophisticated cyberattack would look like. I think it would be like a distributed denial of service on our fax machines or something that like – (laughter) – and the new technology –

ADM. STAVRIDIS: Your watch would stop.

MR. FITZGERALD: Yeah, yeah, exactly. I don’t think it connects to a network even to check that it’s the right time. It’s really quite bizarre. (Laughter.) But circling back and just thinking about this conversation that we’ve had, if we take everything in summary or in sum, what are going to be the – what’s the difference between strategic success and strategic failure? We’ve talked about it’s not just – when we talk about technology, we can’t consider it in isolation. It’s that whole context. If we factor that in, what’s the difference between being successful and failing?

Bill?

MR. LYNN: Well, I mean, I think being successful here is going to be, as I started, is to recognize that we’re at a fundamental change point in terms of our industrial structure that we’re becoming more commercial in terms of the source of our technology. We’re becoming more global in terms of the industrial base. And the budget pressures are going to lead to more consolidation. Those things are going to change the structure of the industry.

The question is whether industry and government are going to manage that change. If we have, you know, at the end of the Cold War, with the last suppers we did in World War II, with the creation of really the first defense industrial base, I think we have a similar challenge now to manage that change that will protect our technological advantages.

MR. FITZGERALD: It’s a great point.

MR. LYNN: That’s strategic success.

ADM. STAVRIDIS: Yeah, I would say we know what strategic failure looks like. It’s called the 20th century. Think back 100 years ago, if this panel were going on, in Europe, 1914, you see the march toward war. Harland Ullman’s writing a book about this. And there is an unpackaging that occurs from 1914 through the end of the Second World War in which you can almost pick a number, 60 million people probably are killed. That is strategic failure of a profound kind.
So why did that happen? I would argue it happened in large part because we tried to rely on creating walls for our security. We had the Schlieffen Plan, the Maginot Line, the Iron Curtain, the Bamboo Curtain, the Berlin Wall, the DMZ, et cetera. We tried to build these walls.

Twenty-first century security will be based not on walls, but on bridges. And I think that our conversation today kind of reflects that. It’s how we can find points of collaboration with allies, partners, and friends. It’s how defense can collaborate with the private sector as well as in national defense with the private sector, the industrial base. And it’s private sector and commercial with the government in cyber, I think. These are examples. So building these kind of bridges I think are our best chance at security and that would be success in the 21st century.

MR. FITZGERALD: So those are great answers. If we apply that to the context of the United States and its allies, what’s the outlook over the next 15 years? Are you guys feeling positive or not?

ADM. STAVRIDIS: I feel positive strategically over the long throw. I think we’re going to see some tactically dark moments as we are, for example, in Syria today, which is a disaster approaching epic proportion. Again, I mentioned Iraq and Mosul, very alarming, the Russian activities in Ukraine are very worrisome; North Korea, young untested leader who already has nuclear weapons; Iran on a march toward – et cetera. So there are a lot of significant tactical challenges out there. But strategically, I’m cautiously optimistic for the reasons we’ve talked about today.

MR. FITZGERALD: Bill, from your perspective.

MR. LYNN: I agree with Jim that structurally things are quite sound. We’re in a strong position in Asia with the alliances we have. We’re even, you know, tentatively managing our way through the relationship with China. In Europe, we have a very strong alliance. It continues to be strong. We have challenges with Russia in the Ukraine, but, as I said, I think the structure is strong. I agree with Jim that the challenge isn’t the frailty of the structure. The challenge is going to be the severity of the tactical problems, whether it’s Ukraine or North Korea or –

ADM. STAVRIDIS: Cyber.

MR. LYNN: – cyber, Middle East, Syria. But the structure is sound. It’s going to be how do we manage the very significant challenges within that structure.

MR. FITZGERALD: So I think that’s a great point for us to wrap up this part of the conversation and then we have a chance to ask and answer some questions. Just a quick reminder, when I said ask and answer questions, you guys can ask the questions. We’ll answer the questions. And we’re all going to try to avoid monologuing. Okay, so we’ll try that. So let’s just see if we’ve got some questions here.

There’s a question just here, back, second. And I apologize if I missed you. The lights up here are really quite something.
Q: Good morning. My name is Amanda Claypool and I’m a national security intern at the Project on Middle East Democracy. My question’s directed towards the admiral. So you had mentioned we need to invest more in people, particularly in foreign languages and political and cultural development in critical areas. So I actually just recently returned from Jordan where I studied Arabic. And I count myself in a number of recent graduates who were developing these skills and we want to serve our country, but we’re finding a lot of barriers to entry and to actually executing these skills. So I was wondering if you had advice, either for recent graduates in this audience or even hiring managers in how we can meet the supply and the demand. Thank you.

MR. LYNN: Go to the Fletcher School.

ADM. STAVRIDS: You stole my line. (Laughter.) Obviously, you should come to the Fletcher School and get a multi-disciplinary – (laughter) – a multi-disciplinary education and then you’ll be highly marketable because 98 percent of our 2012 and 2013 graduates are employed today in these fields. End of commercial. (Laughter.)

You should continue to invest in your skills. And that is languages. It’s also the ability to move and live overseas, take advantage of that. You should also, I think, as it sounds like you are, consider serving your country. And you can do that in the military. You can do that in government, which is a very proud way to serve, in the civil service. You can do that in both domestically and internationally. And that will build your skill sets as well as your résumé.

And then third and finally, I would suggest continuing to do exactly what you’re doing here, which is networking. Come and talk and meet with others who are interested in the big issues of security as you so clearly are. And stay with the language training. I think that’ll stand you in very good stead.

MR. FITZGERALD: Okay, other questions? So, yes.

Q: Hello, David Scruggs, Renaissance Strategic Advisors. This question’s probably more directed at Secretary Lynn. One of the keys that you talk about is both getting more commercial technologies into defense, as well as getting more international technologies into defense. One of the things that’s prohibited that in the past is the U.S. government approach towards intellectual property, which is if we touch it, we own it. And we’re going to tell you want you can do it from now on. Any relief on the future that you see or any words of advice that you see a positive note there?

MR. LYNN: Well, I mean, I think the barriers, as you say, are significant. The ITAR system is significant barrier in terms of both developing technology here and then competing in the global market. I think the Obama administration’s made a very constructive start in terms of reforming that. To complete that reform is going to require a Congress, and that’s a much harder road. President Bush took a significant effort in that and didn’t get much success. I think we’re going to have to, though, keep after that in terms of Congress. And I want to see the administration continue what it’s doing.
At an overall level, I think we are seeing a – I think we will see and are seeing a general shift in the group we talked about. An analogy to the automobile industry: If you looked at the automobile industry 30 years ago, you’d really see a very parochially based industry. It was really almost unpatriotic to drive a European or Asian. And then – but since then, the industry’s globalized. I mean, the largest U.S. automobile export this past year was BMW. BMWs built in the U.S. exported overseas. The industry itself is fundamentally changed. It’s globalized. People don’t really care where the shareholders are based. There’s still a lot of concern certainly where the workers are. But the workers are now globally based, and so it’s easier to sell. It’s easier to share technology.

I think that that offers – it’s not completely parallel, but I think that offers some instruction in terms of a model defense industry might be able to go down.

**MR. FITZGERALD:** You guys are doing great with asking actual questions. This gentleman here. I don’t know – ask some questions and get some people from the back later.

**Q:** I’m Harland Ullman, a very former naval person. Great panel, but I’m biased. A paradox and a question. The 6,000 or 7,000 Americans killed in Iraq and in Afghanistan were killed by AK-47s and improvised explosive devices, technologies that arguably were 80 years old. And I think that remains a big problem in the future. The question, you use Joseph Schumpeter for your title, I think Gordon Moore would have been better as an example because my problem is that I think the term “industrial” is anachronistic. And I think what we have to look towards is a knowledge based or intellectually property based sort of system that focuses on knowledge.

And I think, Jim, what you say about people and intelligence is really the central key, as well as your bridge building rather than your wall building. And I wonder if you would comment about the notion of an intellectual property or knowledge-based system here which can probably provide something for the conveyor belt that you both suggest.

**ADM. STAVRIDIS:** Yeah, let me, if I can, use something I’m learning about now. I made this transition from the military to the business of education. And so often when we talk about intellectual property, we’re talking about how does the widget work. And I think Bill may be better suited to address that than I. I think that the next big wave in education in intellectual property is going to be the distribution of education globally, as in professors at Stanford teaching physics for Coursera or EdX, which are these massive online courses, and having 15,000, 30,000, 45,000 students engaged in it.

Whether or not universities as we understand them today, which still teach the exact same way Socrates did, one teacher, a handful of pupils, 2,000-year-old model – that’s going to change in the next 20 years. And that distribution of intellectual capital around the world, I think, will have profound implications. And we ought to focus on it as a vehicle for creating security, as opposed to being concerned about hiding it like Socrates in the cave.
MR. FITZGERALD: I’d also add that the single most difficult thing in any think tank project is coming up with a title. (Laughter.) Second most difficult thing is cover art. (Laughter.) So other questions, up by the back pillar, we have someone with a hand raised.

Yeah, that’s you. There’s a microphone just behind you.

Q: Thank you very much. I want to echo Dean Stavridis’s comments about the Fletcher School as a now gainfully employed – (inaudible) – 2012.

MR. LYNN: You guys need sponsorship here. This is –

Q: We don’t need sponsorship. We’ve got the Fletcher mafia. That’s all the sponsorship you need, really.

MR. FITZGERALD: It’s always orange ties.

Q: I know, right? Anyway, my question is about – you talk a lot about these, what was it, the conveyor – the transmission belts of bringing commercial technology, commercial innovation into the defense world. If you could – if both of you could identify one policy barrier and one conceptual barrier to integrating or to leveraging the commercial knowledge that the Defense Department could use, would like to use, but can’t currently access. Thank you.

ADM. STAVRIDIS: I don’t know how to categorize it as conceptual or policy. I’ll say the political barrier that’s created understandably when nations want to be proprietary about military technology. So other nations around the world are doing some amazing things. Israel springs to mind. It’s very difficult for us to hook up the transmission belt to a non-U.S. entity. I recognize, believe me, all the political challenges with doing that. But I think the more we can open the transmission belt from them, the more likely it is that our transmission belt will continue to run in the other direction. So I’d say opening up more to the international marketplace, both coming and going.

MR. LYNN: I think the single thing I’d identify is the inappropriateness of our acquisition system for developing information technology. Everybody – we’ve had 130-plus studies on acquisition reform. And they’ve been focused on improving the system and that’s good. But the system was designed basically to buy large things, to buy platforms. And it’s imperfect for that, but it was really designed for that, and we can make incremental improvements and improve that.

For information technology – and I used to say when I was in the Department, it takes on average eight or nine years to go from, you know, initial idea to putting something in the field. It took Steve Jobs two years to do that with an iPhone. In the Department, it took me that long to get a budget.

And so that just doesn’t work for information technology with Moore’s Law and all the other forces there. You need just a fundamentally different approach. Now, Frank Kendall and the Department recognize that and are taking that on, but that, in my mind, is the biggest leap that we need to make.
ADM. STAVRIDIS: Can I just maybe broaden Bill’s points slightly and say, in addition to the IT point, I think it’s really an attitude toward innovation broadly. And when I was the commander of Southern Command, before the NATO job, we caught any number of these semi-submersibles that were built in the Colombian jungle. These are submersible craft, twin screw, diesel powered, crew of three, excellent communications, navigation suite, built for $1.2 million in the Colombian jungle. That’s innovation.

We caught one of those and I put it right in front of the headquarters of U.S. Southern Command because I wanted everybody every day driving up to the building to think our opponents are smart. They’re innovators. They have a culture of innovation. And how we inculcate that, I think, is fundamental to how this 21st unspools for the United States.

MR. FITZGERALD: I’m not sure that their accounting systems would be compliant with our defense systems, though. So I’m not sure we’ll be able to collaborate with them.

ADM. STAVRIDIS: It’s a cash and carry business.

MR. FITZGERALD: That’s right. (Laughter.) That’s the only issue.

ADM. STAVRIDIS: You ought to know that. (Laughter.)

MR. FITZGERALD: So I can’t think of a better note to end our conversation. Apologies that we couldn’t get to all of the questions. I would encourage you to take a look at the report that we’ve put together and also check out the CNAS website. We did a number of surveys and we have interviews with a number of the people who participated in the project online.

I’d also encourage you to continue to watch this space. This report raised more issues than it solved problems. And so it behooves us at CNAS to sort of try to make good on some of those recommendation. So what’s for us, to do some more work on what comes after an offset strategy.

In closing, I’d like to thank a number of people. We had a large number of people who participated in this project. They’re all listed in the reports. Many of them are here today. Denis Bovin from our board, I think I saw August Cole and a number of other excellent people who participated. I also really want to thank my extremely talented colleague and co-author Kelley Sayler. You should find her. She’s busy working here instead of just swanning about up on the stage. Have a chat with her. Mike Horowitz, who did our surveys. And especially, I would like to thank these two fine gentlemen here. Thank you very much and thank all of you.

MR. LYNN: Thank you.

ADM. STAVRIDIS: Thank you. (Applause.)

(END)