

## **NORTHROP GRUMMAN CHAIRMAN AND CEO WES BUSH DISCUSSES THE U.S. DEFENSE PROGRAM TODAY**

**Wes Bush**  
**Chairman, Chief Executive Officer, and President**  
**Northrop Grumman Corporation**

**April 17, 2014**

### **Excerpts from Mr. Bush's Remarks**

*[Excerpts are edited for brevity; for Mr. Bush's complete remarks, see text below.]*

**How are you handling declining defense budgets?** Everybody likes to chase growth. It's far more important to stay focused on what we do well. That really has been driving our thinking over the last few years: maintain our focus and make sure we're doing the right things to create value for all our stakeholders, clearly our customers and our shareholders, but also for our employees as we go through a bit of a downturn. So I would say focus is really the driving thought.

**Should the defense budget be coming down?** The entirety of the budget cutting that's occurred has been on the back of the discretionary budget, which is a minority of the total spending if you look at the total spending in the United States. So I don't think we have it in the right place yet, and to ask our customer community to continue to deal with the fullness of the threat environment, which is what they're being asked to do but with far less resources, I don't think we've got that quite right.

**Do the President or the Secretary of Defense seek your advice on defense spending?** Within the Department, the Secretary of Defense – both our current Secretary of Defense and the last several Secretaries of Defense -- have been very open to interacting with industry. They've created what I think is actually one of the best partnerships between government and industry with respect to national security, that I've seen over the duration of my career in this industry. I think there is a really good partnership there.

**What percent of Northrop Grumman sales is to the U.S. government and what percent is overseas?** About 86 percent of our sales last year were U.S. federal government, but our international business is growing rather quickly. Last year we were about 10 percent international. We expect that to grow this year. And in part that is growing because the Administration, and those in the Department of Defense that are involved in setting the strategy for how we support our allies, are taking, I think, the right approach to encouraging a broader view of what we should be exporting to our allies. So that's creating a nice opportunity for us to better support our allies around the globe, and we're stepping up to that and making our company more global.

**Do you have to get Pentagon approval for overseas sales?** There's actually quite an approval process. Certainly our customer, our direct customer, needs to be very supportive of that. So the Pentagon of course needs to be strategically aligned with that capability being provided to an ally, but the State Department also has a voice in this process, as does Congress. So there has to be an alignment across the political spectrum to make those things happen.

**What can you say about your new [unclassified] programs?** We're clearly very proud of our unmanned systems capability. In fact, we just won the Collier Award for a product that we demonstrated last year. For the first time ever we landed an unmanned aircraft on the deck of an

aircraft carrier, which was quite an accomplishment. And you can see it on YouTube if you haven't seen it before, to see how this aircraft landed very precisely, very accurately on the deck of the aircraft carrier. And of course it's able to take off of the deck of the aircraft carrier as well. So it's an example of a class of technology that I think really is in its infancy, that has an opportunity to grow dramatically as we look at the future.

**Do you spend one or two days a week meeting with the Pentagon people?** I personally, but also, I would say, more broadly, our leadership team spends a lot of time in the Pentagon, spends a lot of time in the offices of the other parts of the national security community, as well as the other parts of the federal government. You know, it is a team effort when it comes to national security, and we need to be actively engaged across the board.

**Who is winning the cyberwarfare game -- are the Chinese or others ahead of us?** We're clearly very involved in cybersecurity. It's one of the cornerstone technologies in our company. It's something that we'd been involved in long before the term "cybersecurity" became a popular term. And our involvement of course came about through our work with the federal government and the need to protect the networks of the federal government.

I am very concerned about this particular area, in several dimensions. First, it is an area where, when you look around the globe, the status of the threat profile is pretty advanced. And I won't name countries or, you know, go into the fine details of that, but it is asymmetric. It takes a fairly small investment on the part of an adversary to put at risk large investments that we have as a country.

So we have to be very vigilant about this, and I'm pleased to see that even, again, in this year's President's budget proposal to Congress, that there is a large investment on the national security side for cyberdefense and cyberprotection.

My biggest concern, though, as we look forward is, we really aren't yet to a place where we're thinking about the broader society impacts of cyber and business stepping up to really deal with that level of issue and that level of threat.

There are some constraints out there that are holding businesses back in many respects. Part of it is knowledge and communication. But quite frankly, another aspect of it is legislation. And one of the things that I think is in front of us as a country is to get over this hurdle on legislation so that we can do the things we need to do to be more effective in securing the cyberinfrastructure of the country....

Change your password often. [Laughs.] [Laughter.]

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DAVID RUBENSTEIN: Good morning and welcome, members and guests of The Economic Club of Washington. I'm David Rubenstein, president of the Club, and welcome to this breakfast at the Renaissance Washington, DC, Downtown Hotel. This is our 10th event of our 27th season, and our special guest is Wes Bush, who is the chairman, CEO, and president of Northrop Grumman.

Northrop Grumman, as many of you may know, is based in Falls Church, Virginia, and it's a company that is the fourth-largest aerospace defense contractor in the United States. It's a company with about a \$26 billion market cap and revenues approaching about \$25 billion and more than 65,000 employees. And when our guest became the CEO, in January of 2010, the

stock was at a certain level. It's now up 116 percent since he became the CEO, so – very good. [Applause.]

Wes grew up in various places in the United States, but went to high school in West Virginia. He went to undergraduate MIT, got a degree in electrical engineering, then got a master's degree in electrical engineering and then joined the Aerospace Corporation, which is an entity that was affiliated with the U.S. government, and then later went to TRW, where he rose up quickly and ultimately ran their aeronautical systems division, which was based in England. And then TRW was acquired by and then he ultimately became a senior official at Northrop. And at Northrop he rose up and ultimately became the CFO, the COO and, ultimately, the president and now CEO as well, and now also, as of July of 2011, the chairman of the board, also.

At the company he has done a great many things that we'll talk about today to change the culture of the organization, but he's also, of course, increased the stock price, as I mentioned.

He's very involved in a lot of philanthropic organizations, including Conservation International, where he's a member of the board, and he's done a lot to increase the sustainability culture of Northrop. And he's very active in the outdoors-related areas and also was associated with and chairman of the board of the Aeronautical Industry Association last year.

So Wes, thank you very much for coming.

WES BUSH: Thank you, David. Thanks for having me.

MR. RUBENSTEIN: So you've now been running this company for about five years. So how can somebody who's running a company for five years – as important as this company – look so young? [Laughter.] And do you sell vitamins as well other things? [Laughter.]

MR. BUSH: Well, I'll tell you, I feel fortunate to be able to work with so many talented and smart folks in our company and in the national security community, and I think that makes us all feel young and keep energized in what we're doing. It's just a remarkable community to have the opportunity to work in.

MR. RUBENSTEIN: OK. So right now we're facing an era where we're ending some wars and the defense budget is likely to come down. So how will Northrop Grumman and other companies like you deal with the fact that defense budgets are coming down? Do you see your sales and your earnings coming down? How do you expect to handle this?

MR. BUSH: Yeah, we are in another one of our cycles, and our industry is clearly cyclical. And we've been through this before, of course. And we're actually now several years into the current decline in the department's spending, and more broadly, national-security spending.

I will tell just my perspective and experience in our industry. Everybody likes to chase growth. I think it's far more important to stay focused on what we do well. And that really has been driving our thinking over the last few years: maintain our focus and make sure that we're

doing the right things to create value for all of our stakeholders, clearly our customers and our shareholders, but also for our employees as we go through a bit of a downturn. So I would say focus is really the driving thought.

MR. RUBENSTEIN: So do you think the defense budget of the United States should be coming down? You know, some people say that because of sequestration, we will be cutting too much out of defense budget. What's your view on that?

MR. BUSH: I think we are in a very different time today than we were back in the '90s, when the defense budgets came down. You know, in the '90s we were just coming off of the Cold War. There was a perspective, and you can look back and ask if the right policy was put in place at that time, but nevertheless, there was a perspective that because we were coming out of the Cold War the threat profile had declined, and because there was less threat, we should make less of an investment in national security. And those two things kind of went together. There was some logic to it.

We're in a very different place today. I really haven't met anyone, either in Congress or, clearly, in the national security environment, who would say that today the threat profile to our country and to our allies is less than it was just a few years ago, and yet we are struggling to deal with a deficit environment. So we all know that defense and national security have a role to play in dealing with that environment. But where we've come over the last few years has, I think, been unbalanced.

The entirety of the budget cutting that's occurred has been on the back of the discretionary budget, which is a minority of the total spending if you look at the total spending in the United States. So I don't think we have it in the right place yet, and to ask our customer community to continue to deal with the fullness of the threat environment, which is what they're being asked to do but with far less resources, I don't think we've got that quite right.

MR. RUBENSTEIN: So if that's your view, do you talk to Members of Congress from time to time and say maybe they should increase defense spending? Do you lobby a fair bit or not?

MR. BUSH: Our industry has been, I think, quite vocal on this topic, that we really believe that the nation needs to have an alignment between strategy and investment, and that we're not aligned yet today. And so yes, there is quite a bit of work that we all do in terms of making that perspective known and to really support what our customer community has been saying in that regard as well.

MR. RUBENSTEIN: So do you meet with the President and the Secretary of Defense on these subjects as well, and does he, the President, seek your advice on this issue?

MR. BUSH: Well, I will tell you that within the Department, the Secretary of Defense -- both our current Secretary of Defense and the last several Secretaries of Defense -- have been very open to interacting with industry. They've created what I think is actually one of the best partnerships between government and industry with respect to national security, that I've seen over the duration of my career in this industry. I think there is a really good partnership there.

MR. RUBENSTEIN: So talk about your customer base. Right now Northrop Grumman has sales of roughly \$25 billion or so annually. What percentage of that is really to the U.S. government, what percentage is to U.S. companies, and what percentage is overseas?

MR. BUSH: We today are predominantly focused on the U.S. federal government. About 86 percent of our sales last year were U.S. federal government, but our international business is growing rather quickly. Last year we were about 10 percent international. We expect that to grow this year. And in part that is growing because the Administration, and those in the Department of Defense that are involved in setting the strategy for how we support our allies, are taking, I think, the right approach to encouraging a broader view of what we should be exporting to our allies. So that's creating a nice opportunity for us to better support our allies around the globe, and we're stepping up to that and making our company more global.

MR. RUBENSTEIN: So if you, let's say, go to, let's say, a European country, an ally presumably, and you say, I'd like you to buy my products, and they say, I would like to buy them, you have to get the Pentagon to approve that, is that right? You can't just sell them.

MR. BUSH: There's actually quite an approval process. Certainly our customer, our direct customer, needs to be very supportive of that. So the Pentagon of course needs to be strategically aligned with that capability being provided to an ally, but the State Department also has a voice in this process, as does Congress. So there has to be an alignment across the political spectrum to make those things happen.

MR. RUBENSTEIN: Now, a number of years ago you built one of the most famous bombers of all time. It's called the B-2 bomber. And originally I think there was supposed to be about 130 of them built.

MR. BUSH: Yeah.

MR. RUBENSTEIN: But only about 20-some were built. So they were about a billion dollars a copy. What happened to the B-2 bomber? Is it being used? And is it effective today? And is it worth the money we spent for it?

MR. BUSH: Now, the B-2 bomber is clearly a very, very critical part of the nation's force structure today. They are deployed and utilized as needed and have a very high availability rate and we're very proud of that. We're very, very proud of the program and what it's contributed to national security. I think, as you know, there is a program that the Air Force is pursuing today for the next generation of Long-Range Strike. I think that is a really important program for our country and certainly a program that we as a company intend to support fully.

MR. RUBENSTEIN: So this is a B-3?

MR. BUSH: You might call it a B-3, but it's – it will be a next step.

MR. RUBENSTEIN: Well, if you did the B-2, you have experience. Won't they just automatically give you the B-3? [Laughter.] It doesn't work that way?

MR. BUSH: It's a competitive environment. [Laughter.]

MR. RUBENSTEIN: OK. So today a lot of your programs are ones you can't talk about.

MR. BUSH: That's true.

MR. RUBENSTEIN: So what can you talk about in those programs? [Laughter.] I mean, can you tell us of any great, like, products you have that are spying on other people that – [laughter] – you know, is there anything you can tell us that we could learn that we don't know about before, any of these great programs? We won't tell anybody. [Laughter.]

MR. BUSH: Well, not really, but I can tell you some of the things that we're most proud of right now.

MR. RUBENSTEIN: OK.

MR. BUSH: We're clearly very proud of our unmanned systems capability. In fact, we just won the Collier Award for a product that we demonstrated last year. For the first time ever we landed an unmanned aircraft on the deck of an aircraft carrier, which was quite an accomplishment. And you can see it on YouTube if you haven't seen it before, to see how this aircraft landed very precisely, very accurately on the deck of the aircraft carrier. And of course it's able to take off of the deck of the aircraft carrier as well. So it's an example of a class of technology that I think really is in its infancy, that has an opportunity to grow dramatically as we look at the future.

MR. RUBENSTEIN: Well, President Bush 43 landed on an aircraft carrier once.

MR. BUSH: He did.

MR. RUBENSTEIN: And was your landing better than his or not? [Laughter.]

MR. BUSH: Well, we didn't miss the wire, so – [laughter].

MR. RUBENSTEIN: OK. So you don't like the word "drone" – or do you like the word "drone"? Many of your unmanned things could be called drones, but why do you use that word?

MR. BUSH: It's a popular terminology. We think it is a poor reflection of the class of technology that really goes into making these systems work. Our unmanned systems are truly robotic. So it is not simply a remotely piloted vehicle, you know, where there's someone sitting on the ground with a joy stick actually flying the aircraft. Our aircraft fly themselves. So the class of technology that's in there embodies a full range of aerodynamic technology as well as the computer science and the autonomy technology that goes into making something truly robotic.

MR. RUBENSTEIN: And today we have, you know, a lot of troops that are coming home, and presumably they don't want to be redeployed, and we probably will shrink the number of men and women in our armed forces. Do you think that that's a danger or do you think we can do so many things with electronics now that we don't need as many men and women as we've had in combat troops?

MR. BUSH: I mean, if you look at the national security strategy, I see it has having two fundamental underpinnings. First and foremost, we have the best-trained service men and women around the world. That is the core of the underpinning of our national security strategy. But secondly, we equip those men and women with the very best technology. And our strategy fundamentally relies on technological superiority. So I look at what we're doing with unmanned and some of the other things that are going on in the technology arena really as a way of supporting our service men and women.

Your question about force structure and size of structure, you know, naturally after we've been involved in conflicts, there's always a need to take the force structure down, and the Department is working its way through that today, but I really don't see the evolution of the technology as a, you know, complete replacement for people in any sense. There needs to be constantly the right mix, the right balance, of human talent and technology for us to really execute our strategy, a strategy that served us well.

MR. RUBENSTEIN: And today the equipment that you design and your competitors design is pretty complicated. It's not like a videogame. And so are the people that come into the military, are they really able to operate these things as efficiently as designed?

MR. BUSH: You know, it's interesting. The digital natives among us, those younger folks that are constantly both coming into industry and coming into the military, I would never underestimate their ability to deal with technology. It's just phenomenal what can be done.

In fact, we observed this collectively as a nation as we deployed many young people into theater over this last number of years. They invented what to do with many of these technologies in theater. They came up with new ideas. Our service men and women, actually using these technologies that had been provided to them, used them in new and different ways that had not been thought of as they were being developed. So I'm constantly impressed with what our service men and women can do.

MR. RUBENSTEIN: So your background and what your company does involves something that might be called spy satellites. Some people might not call it that but let's say it's called spy satellites. Are you surprised – I was – that with all the spy satellites around the world they can't find the Malaysian Airlines – I mean, why wouldn't some spy satellite have seen something go in there? Did that surprise you?

MR. BUSH: Well, it's like most things. You've got to be looking at what you want to observe when you need to observe it. So I would certainly say that this has turned out to be a very challenging problem, from a technology perspective, finding the aircraft. So we all hope that it gets solved soon.

MR. RUBENSTEIN: Well, all of us have seen Google Earth and we've seen, you know –

MR. BUSH: It's amazing, isn't it?

MR. RUBENSTEIN: You can you look at your house or something.

MR. BUSH: Yes.

MR. RUBENSTEIN: Our spy satellites – do they have better resolution than Google Earth or not? [Laughter.]

MR. BUSH: You'll have to ask other folks about that one. [Laughter.]

MR. RUBENSTEIN: Right. OK, so you are working your way up the company, and did you ever expect to be in the aerospace defense industry when you were at MIT, or is that what you always wanted to do?

MR. BUSH: I always had my eye on the space industry.

MR. RUBENSTEIN: OK.

MR. BUSH: Yeah, I've really been a part of that in my mindset and thinking since I was very young and aspired to be an engineer in the space industry and –

MR. RUBENSTEIN: So did you want to be an astronaut or you didn't want to do that?

MR. BUSH: I think we all wanted to be an astronaut at some point in our lives, yeah. [Laughter.]

MR. RUBENSTEIN: Well, I probably didn't, but you know – [laughter] – I don't think I would have qualified, but OK. [Laughter.] The Tang, that food that they'd have served us was obvious – [laughter] – I wouldn't have liked the food, but OK.

So you rise up and you're rising, you know, meteorically up the company, and then you become on – I guess January 1 of 2010 you become the CEO, and the first day you say, I'm moving the headquarters from Los Angeles to Washington.

MR. BUSH: Yeah.

MR. RUBENSTEIN: Was that a surprise to people? Would they have given you the job if they'd known you were going to do that? [Laughter.]

MR. BUSH: [Laughs.] I'm sure there would have been a number of folks that would have thought twice about that, but I will tell you we've had great support within our company.



Certainly our board and our employees have been very supportive. And the transition here to Washington has gone extraordinarily well.

The reason for it was fairly obvious. We needed to be closer to our customer community. Being in California was great in terms of the legacy of the company, and we continue to have a very large footprint in California. We have an amazing technology set of organizations there, huge installed capital infrastructure in California. But we needed our senior team to be closer to our customer community, and that has worked out very, very well. So –

MR. RUBENSTEIN: So do you spend one or two days a week meeting with the Pentagon people to talk about why your products are good or something like that? Is that what you do?

MR. BUSH: I personally, but also, I would say, more broadly, our leadership team spends a lot of time in the Pentagon, spends a lot of time in the offices of the other parts of the national security community, as well as the other parts of the federal government. You know, it is a team effort when it comes to national security, and we need to be actively engaged across the board.

MR. RUBENSTEIN: Let's talk about cyberwarfare for a moment. I presume that your company has something to do with it, but you can't say. But do you think that we are winning the cyber warfare game, or are the Chinese or others ahead of us? How would you rate us compared to other countries?

MR. BUSH: Well, we're clearly very involved in cybersecurity. It's one of the cornerstone technologies in our company. It's something that we'd been involved in long before the term "cybersecurity" became a popular term. And our involvement of course came about through our work with the federal government and the need to protect the networks of the federal government.

I am very concerned about this particular area, in several dimensions. First, it is an area where, when you look around the globe, the status of the threat profile is pretty advanced. And I won't name countries or, you know, go into the fine details of that, but it is asymmetric. It takes a fairly small investment on the part of an adversary to put at risk large investments that we have as a country.

So we have to be very vigilant about this, and I'm pleased to see that even, again, in this year's President's budget proposal to Congress, that there is a large investment on the national security side for cyberdefense and cyberprotection.

My biggest concern, though, as we look forward is, we really aren't yet to a place where we're thinking about the broader society impacts of cyber and business stepping up to really deal with that level of issue and that level of threat.

There are some constraints out there that are holding businesses back in many respects. Part of it is knowledge and communication. But quite frankly, another aspect of it is legislation. And one of the things that I think is in front of us as a country is to get over this hurdle on

legislation so that we can do the things we need to do to be more effective in securing the cyberinfrastructure of the country.

MR. RUBENSTEIN: Well, there were reports that our government was able to tap into the computers of Google or Facebook or Microsoft or things like that. Was that a surprise to you? Or you can't say?

MR. BUSH: I wouldn't comment on what may or may not be happening, you know, with respect to other companies. But I would simply say that, you know, with the world being so networked together, that our country's ability to really have a presence in cyberspace and do the things that we need to do for the longtime security of our nation and our allies is really, really important.

MR. RUBENSTEIN: So as the CEO of your company, presumably people overseas want to see what's on your computer.

MR. BUSH: [Laughs.]

MR. RUBENSTEIN: So how do you make sure that your mobile device and your computer you might use at home is not going to be invaded by some foreign country? What do you do?

MR. BUSH: Well, we all spend a fair amount of time and energy on our companies' cybersecurity. Our company and other companies in our industry have made large investments in that arena. And we know that that is constantly changing. The threat environment that we're dealing with is constantly changing. So it's just a constant battle, just as it is for the Department of Defense and most of the federal agencies.

MR. RUBENSTEIN: But you must have some special way of doing – is there anything you can tell us that we can do on our little computers comparable to what you do to keep yourself from being invaded by some foreign power?

MR. BUSH: Change your password often. [Laughs.] [Laughter.]

MR. RUBENSTEIN: OK. So today there are, let's say, five very large aerospace/defense companies in the United States, you might say.

MR. BUSH: Yeah.

MR. RUBENSTEIN: And over the last couple years the Pentagon has not encouraged anybody to make acquisitions of each other. They want to have, I guess, what we have now, but there were many more defense companies in previous years.

MR. BUSH: There were.

MR. RUBENSTEIN: Now they've consolidated down. But do you think, as a result of the defense cutbacks we're likely to see, there will be more consolidation among the large defense companies? And do you think the Pentagon should allow that to happen?

MR. BUSH: No, your observation is an important one. The large defense primes that are out there today – and Northrop Grumman is one – were built through large-scale M&A. And it really was a necessity that we go through that, really, over the course of the 1990s and the early part of the last decade. There simply wasn't the level of budget to support the industrial infrastructure that existed at that time, and so consolidation was genuinely a necessity to enable our industry collectively to do the tough things we needed to do, to scale the infrastructure so that we could more efficiently and effectively support our customer community. And during that period of time, the customer community was very, very supportive of it. Those things wouldn't have happened without customer support.

I would say over the last decade the customer community has been more focused on ensuring competition, and that has dominated a lot of the thinking. As we go forward, it's kind of difficult to speculate what world events or other things might shape the thinking and whether that might change, but I would say today the focus was on ensuring competition.

MR. RUBENSTEIN: But at one time your company was going to merge with Lockheed Martin.

MR. BUSH: Yes, many years ago.

MR. RUBENSTEIN: And do you think that could be allowed in the future?

MR. BUSH: I wouldn't speculate and, you know, I don't see anything like that on the near-term horizon in terms of not just our company but our industry.

But the world continues to change around us. You know, if history tells us anything, things continue to change, and we all need to understand what that means and be thinking forward on it.

MR. RUBENSTEIN: Right. Sometimes you divest things, and you divested your shipbuilding business. And since it was divested, it's done extremely well on its own.

MR. BUSH: Yes. Yes.

MR. RUBENSTEIN: So some people have criticized you, saying, why couldn't you manage it as well as its being managed now? [Laughter.]

MR. BUSH: [Laughs.]

MR. RUBENSTEIN: You must have read that criticism.

MR. BUSH: I did. [Laughter.] I was amused by it.

MR. RUBENSTEIN: So why did you spin off your shipbuilding business?

MR. BUSH: Well, first let me say we are incredibly proud – and it's called HII, Huntington Ingalls Industries. The shipbuilding business was one that was a part of that aggregation that occurred in the late '90s and the early part of the last decade and started out with a lot of logic to it as to why it would make sense for a company like ours to own shipbuilding.

As time went on, that logic proved to not necessarily be the case. You know, it really did not turn out that by owning shipbuilding, that that was a convenient way for us to apply our other capabilities onto ships. In fact, oftentimes our customer community really wanted to separate those two things.

It also became more clear over time that the inherent business model in shipbuilding was different than the model that we were using to create value in the rest of the Northrop Grumman enterprise, and it was our assessment – and I think time has proven it to be true – that these two businesses would fare better separated, as opposed to being together. So that was the action we took, on the premise that they would do well. And so I'm just absolutely delighted with how this has turned out.

MR. RUBENSTEIN: Now you're in the aerospace/defense business, and as you pointed out, probably the revenues coming from the customer are going to go down a bit.

MR. BUSH: Yeah.

MR. RUBENSTEIN: So have you considered getting out of that business a bit and getting into other businesses or expanding beyond the aerospace/defense business?

MR. BUSH: You know, I think that is oftentimes what companies will do, because people love to chase growth, and I think it's a mistake. I really do. Part of the learning that many of us went through in the '90s was that it is actually difficult for defense companies to suddenly paint themselves as a commercial company and try and pursue things in that direction. We're pretty good at partnering. So where we develop technologies and capabilities that might make sense to be applied in the commercial arena, finding the right partners is often a good business strategy. But I think it's more important that we stay focused; that we use the capital that we're able to generate in our business, to create value through investing in ourselves and of course, where it makes sense, to return some cash to shareholders. And that's really been the approach that we've been using over the last number of years. I think it's working well for us, and we are determined to keep that focus.

MR. RUBENSTEIN: Now, as I pointed out earlier, you do have a big interest in conservation and the environment. And where did that spring from?

MR. BUSH: Yeah. I think it really came from growing up and enjoying the outdoors. My dad was someone who still loves the outdoors, and I have two brothers. He constantly took the three of us out and went camping and hiking and the rest of it, and, you know, you're oftentimes a product of how you grow up, and I certainly am.

MR. RUBENSTEIN: So you've tried to make your company more sustainable in terms of its products and so forth.

MR. BUSH: Yes, absolutely.

MR. RUBENSTEIN: Can you describe how you take an aerospace defense company and make it sustainable?

MR. BUSH: Yeah, you know, it's often kind of a quizzical look that I get when I start talking about environmental sustainability, and, don't you make weapons? [Laughter.] I think we all have a responsibility in this regard. If we think about any of our enterprises, whether we're in the defense business or any other business, I think we have a social responsibility – a long-term responsibility to think about sustainability and to do the best that we can with the resources we have at our disposal to think about what our companies are doing both in the near-term and the long-term.

So we've taken on what you might say are sort of the traditional things, but actually, I think, very important things. We've worked hard on our greenhouse gas emissions. We set a goal about five years ago to take out 25 percent of our emission intensity, and we actually achieved that in about three years. So our team really rallied around this and focused on it. We're working hard on reducing our solid waste, and also working hard on reducing our water utilization.

I will tell you, one of the things that has been, to me, the most satisfying about this is not getting other organizations to say, hey, isn't that great? You know, Northrop Grumman is doing something good. What's been most satisfying to me about this has been to see how our employees have rallied around getting this done. It has unleashed an energy and a pride in our company that I quite honestly thought might be there, but did not expect at the level that I've seen it, and our ability to make progress as rapidly as we have is really a credit to our employees, who see this as something important.

MR. RUBENSTEIN: And today, if the President of the United States called you and said, you've done a great job at running an aerospace defense company; why don't you come in and be Secretary of Defense, would you go into the government? You've never served in government, I think. Many people who run aerospace defense companies have served in government at one level or another. Do you have any great burning desire to go into government? I guess not, if you haven't done it yet. [Laughter.] But being Secretary of Defense, would you ever consider that?

MR. BUSH: I will tell you that I am completely, 100 percent focused on doing what I'm doing today, because number one, I love what I'm doing, but secondly, I feel that I'm actually able to make a difference for our country. And working with the team that I work with, and working with the community – the defense community that I work with – I admire folks who step up and take on public service. I always admire it, and I appreciate when people do it, and everyone gets

to a certain place in life where I think they think about those things differently, but I will tell you, I am completely focused on running our company.

MR. RUBENSTEIN: All right. Well, then, suppose the President called you up and said, I have a problem in Ukraine, and do you have any products or services I could use that could help me? [Laughter.] What would be your advice to the President about what he should do in Ukraine? Do you have any advice for him?

MR. BUSH: I really would stay out of providing advice on that front. I would simply say I think it's important for our national security capability to be capable of supporting the President at all times in everything that we're doing, and I am very worried that the vector that we're on, from a budgetary perspective, is one that will undermine the President's ability over the long-term – whoever is President at any particular point in time – to really do what needs to be done. So I think we've got an issue there that needs attention.

MR. RUBENSTEIN: So can you give us a look in the future – in other words, sometimes, you're developing, in your Skunk Works or equivalent product areas, new products that are going to be the future. So are there any great things in the future that we can see in five or 10 years that are coming out of companies like yours that are going to make our life better?

MR. BUSH: Yeah. You know, I would say that part of the excitement of the defense industry is exactly that, that we are constantly working on the leading edge of technology. In our company, we have about 65,000 employees, and a little more than half of them are degreed scientists, engineers, mathematicians. So this is a very technologically sophisticated enterprise. And the lifeblood of an enterprise such as this is that technology flow and that investment that both we make in our enterprise from a technology perspective and that our customer community makes in us. So we are constantly innovating what's next, and we're also constantly careful to protect what's next, because if we're going to have technological superiority, we're not just going to open the cupboard and let everybody see what's there.

But the message that we have when we get out and recruit – you know, it might be interesting to go to work for some of the big names that are seen as commercial technology companies – but for young folks who really want to work at the leading of technology, it's our industry. It has been for a long time, and we're determined to continue to make it that way.

MR. RUBENSTEIN: And so at a school like MIT, where you went, and comparable schools, a lot of the very talented engineers are people that had come to this country from another country. They come over from China or India or other places in the world, and they get a degree here. Are you able to hire these individuals, if they're not American citizens, for your type of company? And how do you deal with that issue?

MR. BUSH: Yeah, we are able to hire some foreign nationals, but not many. It is a challenge, and I think, broadly, it's a challenge not just for our defense industry, where the clearance issues sometimes become more complicated. I think it's a challenge for all of our industry, that we are educating so many bright people in our country that we aren't able to keep in our country. So I'm a strong proponent of getting on with it with immigration reform, and enabling us to take

advantage of the amazing educational enterprise that we have in our country to help continue to grow our economy.

MR. RUBENSTEIN: Right. What do you see as the biggest single challenge for your company going forward? Is it the defense budget, or are there other things that you worry about the most? What is the biggest problem you see?

MR. BUSH: The biggest challenge I see over the long term is talent. You know, our enterprise runs on the brilliance of the people who work in it, both in terms of folks in our company and in terms of folks in the Defense Department and the other elements of the national security enterprises, and it is a tough battle for talent out there today. I think there is sometimes a misperception that because the economy has been a little bit tough for a few years, that it's easy to hire people that you need. And when it comes to getting the best, they have a lot of opportunities, particularly when it comes to getting the best out of American universities, which I think continue to be among the very best educational enterprises on the globe. So talent, over the long term, I think is "the" challenge.

MR. RUBENSTEIN: So you're losing these engineers to Google, Facebook, or hedge funds or private equity funds? Who are you losing these people to?

MR. BUSH: It's not so much about losing to; it's about getting them when we're out there recruiting. And quite frankly – I think many folks have studied and understood what's happening from a STEM [science, technology, engineering, and mathematics] education perspective. We're not graduating, as a nation, enough STEM- qualified graduates to support the demands that we have today. And hopefully as our economy starts to tick up over the next few years that demand will continue to grow, and we've got to get more through our pipeline.

MR. RUBENSTEIN: So you went to high school in West Virginia.

MR. BUSH: I did.

MR. RUBENSTEIN: You went to MIT. Were you intimidated when you got there and thought, wow, there are a lot of brilliant people, or did you think they weren't as smart as you thought they were going to be? [Laughter.]

MR. BUSH: I think anyone who walks in the door at MIT and isn't intimidated isn't awake. [Laughter.] It's a fascinating environment, an environment that I absolutely loved – lots of incredibly smart people and lots of folks who are just naturally talented at asking tough questions. So I really enjoyed it.

MR. RUBENSTEIN: So as you've become more prominent in the business world, have they come after you at MIT for donations or something, or – [laughter].

MR. BUSH: We all do what we can to help, particularly – [laughter] – particularly when it comes to education. You know, from my perspective, the opportunity we have as a country to

continue to stay ahead relies fundamentally on our ability to keep higher education – we need to work on K-through-12 as well – we’ve got to keep higher education at the forefront.

MR. RUBENSTEIN: So when you deal with Members of Congress and you try to explain your programs to them, do they really understand what you’re talking about? Do they have a sophistication to understand what you’re talking about or they really don’t quite get it, do you think?

MR. BUSH: You know, I think there is always a mix. You know, those who serve on the committees that are focused on higher issues I find invest the time and energy and have the natural curiosity about, you know, what’s going on from a committee perspective that they really do understand it. There’s always a ramp-up when new Members of Congress come in, and we’ve had quite a few new Members come in over the last few years. It takes a while for any person, no matter how smart you are, to get your arms around the complexities of what goes on from a national security perspective.

I would say oftentimes when we’re talking to Members who are not involved in the national security committees that they are not inherently as fluent in all those issues, and so it takes some dialogue. But I would say across both parts of Congress, both the Senate and the House and both parties, there is a strong interest in national security.

MR. RUBENSTEIN: And do you see any threat that foreign governments and their defense contractors have any chance of overcoming the major defense contractor of the United States in terms of their capabilities? Do you see the American companies still dominating this world for a long time or not?

MR. BUSH: I would say our industry is becoming more of a global security industry. There is a lot of partnering that is going on between companies based in the U.S. and companies based in our allied nations. We are working to expand our footprint internationally. And I think, very appropriately, many of the internationally based defense enterprises are working to expand their footprint here. So I think of our industry as a global security industry, not just a domestic security industry.

MR. RUBENSTEIN: Now, today two other large companies are based in the Washington area in aerospace defense. They are headed by women. That is General Dynamics and Lockheed Martin. So do you feel like you’re part of an affirmative action program – [laughter] – being a male running an aerospace defense company, or do you think it’s not affirmative action that your company is happy to have you as the CEO?

MR. BUSH: [Chuckles.] You know, let me just say, David, I am really proud of the progress of – in our industry in that regard. It wasn’t that long ago that if you had suggested that the defense industry was a good example of diversity you would have gotten a round of laughter, and very appropriate laughter because we were not. We’ve made great progress.

And we not only have some terrific women CEOs in our industry – and they are, they’re absolutely terrific CEOs – we also have outstanding women executives at all levels. In fact, if



you look inside Northrop Grumman, half of the senior executives who report to me are women. And we're a better company because we have improved our diversity and our inclusion. I think we are a better industry because we have been working so hard on diversity and inclusion. Are we perfect? Absolutely not. We've got, still in front of us, a lot of work to do.

I actually give a lot of credit to our customer community. You know, this is an area where the DOD, I would say, before the industry side of it, it really began to think hard about this. DOD was thinking hard about it. And our customer community has worked hard on diversity and inclusion. So we all, collectively, have a long way to go here, but we're making really good progress and I'm proud of how we're doing.

MR. RUBENSTEIN: So you are in your early 50s and you have a long way to go. Do you have any plans to stay for a certain number of years in your current position –

MR. BUSH: [Chuckles.]

MR. RUBENSTEIN: – or do you want to do it for 10 more years, or do you have any plans?

MR. BUSH: You know, I'm having so much fun at what I'm doing I haven't really thought about that from a long-term perspective. You know, as long as the board will have me and I'm having a good time doing what I'm doing, I hope that I can continue to help create value and help support our national security.

MR. RUBENSTEIN: So if you do leave at some point, have you considered the higher calling such as private equity or something like that? [Laughter.]

MR. BUSH: Gosh, I – [laughter].

MR. RUBENSTEIN: No? Not right now. OK.

MR. BUSH: Not right now. [Laughter.]

MR. RUBENSTEIN: Thank you very much for your time.

MR. BUSH: Thank you, David. Thank you very much. [Applause.]

MR. RUBENSTEIN: Let me give you a gift, a copy of the District of Columbia original map.

MR. BUSH: Oh, thank you. Thank you.

MR. RUBENSTEIN: OK? Thank you very much.

MR. BUSH: Thank you. [Applause.]



## WES BUSH

Wes Bush is chairman, chief executive officer, and president of Northrop Grumman Corporation, a leader in global security.

Mr. Bush was named chief executive officer and president in January 2010, and elected to the company's Board of Directors in 2009. He assumed the role of chairman in July 2011.

Mr. Bush previously served as the president and chief operating officer of the company. Before that, he served as the corporate vice president and chief financial officer, and, earlier, as the president of the company's Space Technology sector. Prior to the acquisition of TRW by Northrop Grumman, he had served since 2001 as president and chief executive officer for TRW's UK-based global Aeronautical Systems. Mr. Bush joined TRW in 1987 as a systems engineer, and served in engineering, program management and business development roles in TRW's Space & Electronics business. Prior to joining TRW, he held engineering positions with both the Aerospace Corporation and Comsat Labs.

Mr. Bush earned a bachelor's degree and a master's degree in electrical engineering from the Massachusetts Institute of Technology. He also completed the University of California, Los Angeles' Executive Management Program. Mr. Bush serves on the board of directors of Norfolk Southern Corporation, as well as the boards of several nonprofit organizations, including the Business-Higher Education Forum, Conservation International and the U.S. Naval Academy Foundation. He is past chairman of the Aerospace Industries Association board of governors.

Northrop Grumman is a leading global security company providing innovative systems, products and solutions in unmanned systems, cyber, C4ISR, and logistics and modernization to government and commercial customers worldwide. Please visit [www.northropgrumman.com](http://www.northropgrumman.com) for more information.