

# THE ECONOMIC CLUB

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O F W A S H I N G T O N, D. C.

**Dennis A. Muilenburg, President, Chairman, and CEO, the Boeing Company, discusses Boeing's success, leadership, and bicycling.**

**Dennis A. Muilenburg  
President, Chairman, and Chief Executive Officer  
The Boeing Company  
Wednesday, May 9, 2018**

MR. RUBENSTEIN: Why don't we just dig right in to the question that's been on my mind for a while, which is this. You became the CEO in July of 2015.

MR. MUILENBURG: That's correct.

MR. RUBENSTEIN: And this is after a long career at Boeing. You pretty much went there after graduate school. Since you've been the CEO, the market capitalization of the company is up about 100 percent. The stock price is up about 140 percent. Yet, you also ride 120 miles a week on bicycle. [Laughter.] Have you thought about how much higher the stock price would be or the market cap if you didn't spend those – that time on the 120 miles a week on bicycle riding? [Laughter.]

MR. MUILENBURG: Well, I have thought about that. And actually, I ride closer to 140 a week.

MR. RUBENSTEIN: Hundred and forty?

MR. MUILENBURG: Yeah. And with that correlation, I'm thinking I should start riding 200 a week. [Laughter, applause.]

MR. RUBENSTEIN: Wow. OK. All right. Well, so does – so riding bikes. I've done probably 10 miles in my lifetime maybe, something like that. [Laughter.] But so, isn't it dangerous? I mean, they have key man insurance on you. You're an important person. You're riding bikes. You don't worry about cars coming along or anything like that?

MR. MUILENBURG: Well, I ride more than 10,000 miles a year. So, I'm safety conscious. And you know, that's a well-honed skill. And, you know, one of the things we take pride in at our company is our safety record. And I try to apply the same thing when I'm riding. So, I feel very comfortable. But I'm, you know, conscious of the environment, pay attention to what I'm doing. And it's a great way to relax and think. And frankly, I think taking time to exercise and ride my bike, you know, makes me better as a leader. And I try to encourage that in our team as well, so.

MR. RUBENSTEIN: OK. So, you told me earlier that you flew in from Chicago and you rode 30 miles this morning. And you might ride something this afternoon when you go back to Chicago.

MR. MUILENBURG: Yeah, if the weather holds.

MR. RUBENSTEIN: So. All right. So, when did you take this up? As a young man, or you always were interested in this?

MR. MUILENBURG: Oh, I've been riding for probably 20-25 years, seriously. And you know, enjoy it every day. One of my favorite things is to go out on bike rides with Boeing teammates. So, I often travel with my bike. And I can drum up some Boeing riders at almost any one of our sites. And we hand out Boeing jerseys. It's a great way to get out with the team.

MR. RUBENSTEIN: Any other member ever go faster than you, or they're not allowed to do that? [Laughter.]

MR. MUILENBURG: Some try. Some try. [Laughter.]

MR. RUBENSTEIN: They try. They still with the company, or? [Laughter.]

MR. MUILENBURG: Yeah. Yeah. I like a challenge. (Laughs.)

MR. RUBENSTEIN: OK. One other thing that I found unusual in reading about you is that you seem to be fueled by Diet Mountain Dew. You drink enormous amounts of this.

MR. MUILENBURG: It is one of my favorite drinks, yeah.

MR. RUBENSTEIN: So, you have some here. Is there something in it that I don't know about? [Laughter.] I mean, what – I mean, if I – would I look like you if I could drink the Diet Mountain Dew? [Laughter.]

MR. MUILENBURG: Sure. [Laughter.]

MR. RUBENSTEIN: All right.

MR. MUILENBURG: No, hey, it's a good energizer for me.

MR. RUBENSTEIN: No coffee, just –

MR. MUILENBURG: Nope. Yeah, I'd say it's the equivalent of people who might drink a few cups of coffee a day. I prefer Diet Mountain Dew.

MR. RUBENSTEIN: OK.

MR. MUILENBURG: No calories, all the caffeine. It's a good combo.

MR. RUBENSTEIN: OK. All right. So, do you serve those – everywhere at Boeing, I assume, they have that.

MR. MUILENBURG: Yeah, pretty much. [Laughter.]

MR. RUBENSTEIN: So, let's talk about the company you're leading now. The company is an extraordinary success story. Started by Mr. Boeing many, many years ago. The company is how old now?

MR. MUILENBURG: We're 102 years this year. So, we celebrated our centennial 2016.

MR. RUBENSTEIN: And are there members of the Boeing family still around, or?

MR. MUILENBURG: They are. In fact, some of those members participated in our centennial event. We did a big celebration event at the Red Barn<sup>1</sup> facility, which is where The Boeing Company started back in 1916. And some of the family members joined us there.

MR. RUBENSTEIN: OK. So, the company is in very, very good shape now. You have a market value of about \$197 billion, \$198 billion. It's gone up, as I mentioned, a lot under your – under your leadership. In fact, all the aerospace defense contractors actually seem to be doing pretty well right now. You've got record demand backlogs. The government is spending more money in aerospace defense than before. People are flying more than they were. So, can it get any better than this? Is this as good as it's ever going to get for you?

MR. MUILENBURG: Well, I tell you what, this is a really strong marketplace. When I look at big industrial markets around the world, aerospace market I think is the strongest. It's growing faster than GDP<sup>2</sup>. A lot of that's driven by commercial passenger traffic, which is growing about 6-7 percent a year consistently. And one of the big drivers behind that is the population that's now entering the middle class and has the ability the fly. You know, we have 100 million new passengers every year in Asia – new passengers. And our estimates are that less than 20 percent of the world's population has even taken a single flight. So, tremendous growth opportunity ahead. And then, as you said, strength in the defense budget as well. And, you know, we're encouraged by some of the re-strengthening of the defense budget here in the U.S. and amongst some of our allies.

MR. RUBENSTEIN: So, recently the tax bill was passed. And it's a big tax cut for a lot of corporations. And you were one of the companies that I think benefitted from it and maybe were pushing for this tax cut. So, what are you going to do with all the extra money that you have?

MR. MUILENBURG: Well, first of all, I applaud the fact that tax cut, tax reform was passed. It's a big deal. And I want to thank the Administration and the Congress for taking that action. I think it was the single most important thing we could do to unleash job growth in the U.S., and really help us invest in the future. So, we plowed a lot of those savings back into innovation and R&D<sup>3</sup>. And we spend billions of dollars every year on R&D investment here in the U.S. Another big thing we did was immediately upon passage of the bill we announced an investment of \$300 million in our workforce and workplace. So, that includes \$100 million in training for our employees, \$100 million in infrastructure for the future work spaces, and then \$100 million in community giving, which is perhaps the most important part of that. And that \$100 million in community giving – in fact, today we're going to be announcing the fact that we're identifying \$54 million of specific grants that we are rolling out today as part of that investment, making it real. And as you well know also with the Kennedy Center we've accelerated our \$20 million investment there. And we're adding another \$5 million to our investment in the Kennedy Center.

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<sup>1</sup> The Red Barn is now part of the Museum of Flight at Boeing Field in Seattle. Built in 1909, it is the oldest airplane-manufacturing facility in the nation.

<sup>2</sup> Gross domestic product is a monetary measure of the market value of all final goods and services produced in a period (quarterly or yearly) of time

<sup>3</sup> Research and development

MR. RUBENSTEIN: Well, thank you very much. Appreciate it.

MR. MUILENBURG: All of that is being announced today. [Applause.]

MR. RUBENSTEIN: OK. Well, if you ever need tickets to Hamilton, call me. [Laughter.]

MR. MUILENBURG: Deal. Deal. [Laughter.]

MR. RUBENSTEIN: Great seats. [Laughter.] So –

MR. MUILENBURG: Well, it's a great, great place. And as I said, investing in the community is a big part of who we are.

MR. RUBENSTEIN: So, thank you for that. And let me ask you about some things that might not be as positive. So, yesterday the President of the United States announced that we're going to get out of the Iranian agreement. You had already sold, I think, \$20 billion worth of airplanes to Iran. What's going to happen now to that?

MR. MUILENBURG: Yeah. Well, as you know, back when the original Iranian nuclear agreement was signed, part of that package was airplane sales. And so, we signed some initial deals with Iran Air, which included both 737s and 777s. All of that is subject to U.S. licensing, as it has been throughout the process. So, we continue to stay completely inside the U.S. government process here. And we're going to continue to do that going forward. We had not made any skyline production slot commitments on those airplanes. And I think most sensitive to that was the 777 line, our widebody line. And none of those airplanes are in our backlog. So, we had been, you know, pushing some of those out to mitigate our risk. And we'll continue to follow the U.S. government's lead here. It's very important that we stay inside of this process. And we've taken the right mitigation steps to make sure our 777 line remains healthy.

MR. RUBENSTEIN: Let me ask you, you have – there are airplanes that are now sold, I guess, or operated by Iranian Airlines that are Boeings, presumably.

MR. MUILENBURG: Yeah.

MR. RUBENSTEIN: So, when they need spare parts, can you sell them spare parts?

MR. MUILENBURG: Only subject to U.S. government licensing. So, there are very few select parts that are considered safety of flight parts that we're allowed to sale [*sell*]. And again, all of those are subject to U.S. licensing processes.

MR. RUBENSTEIN: What about Airbus? Airbus, a big competitor of yours. Can they sell airplanes now to Iran?

MR. MUILENBURG: We believe they're subject to the same licensing requirements. Obviously a European-based company, but they have U.S. content in their airplanes that is

subject to the same licensing policies that we have. It's very important to us that, from a U.S. government standpoint, that the outcome in Iran is a level playing field between us and Airbus. We need equal treatment.

MR. RUBENSTEIN: OK. Early in the Administration, President Trump said that the Air Force One plane was too expensive, and he wasn't happy with the cost of it. He got your attention, I guess. And had you ever met him before he said that, or?

MR. MUILENBURG: That was – shortly after that was the first time we met. [Laughter.]

MR. RUBENSTEIN: OK. OK. And where did you meet? In the Oval Office or somewhere else? Or what was it like?

MR. MUILENBURG: Well, we had – we had a couple of sessions. Met up in New York once. Met down at Mar-a-Largo. And have subsequently had a – had a meeting at the White House. So, this is a – you know, a topic of discussion. And we're proud of the fact that we build and support Air Force One. It's a really important mission. The airplanes that are flying today are old 747-200s, actually delivered under George H.W. Bush's administration. They're that old. Oldest 747s flying. And we're proud to keep them flying with our customers every day.

MR. RUBENSTEIN: Where do you get the spare parts? You don't make the spare parts anymore?

MR. MUILENBURG: Well, we as part of our, you know, Boeing operations, we provide in-field support for what we call legacy aircraft – aircraft that are no longer in production. So, we support those airplanes. But it's time for a new airplane. And so, the two new 747-8s, the latest version of the 747, were just procured. And those will be modified and become the new Air Force One over the next few years.

MR. RUBENSTEIN: OK. But that's going to take a number of years.

MR. MUILENBURG: Yeah.

MR. RUBENSTEIN: So, did you convince him to take up bike riding when you were in Mar-a-Largo? [Laughter.] He didn't seem that interested in that?

MR. MUILENBURG: He is – he has his own hobby set. And we – [laughter, applause] – we respect each other's hobbies.

MR. RUBENSTEIN: OK. All right. So, let's talk about – there was unfortunately a tragic accident recently with a Southwest Airlines plane that was a Boeing – I think a 737. Well, the window popped out, I guess, or after the engine fell out. What happened there? And what's the status of it? And are these planes really safe?

MR. MUILENBURG: Yeah. Yeah. Well, you know, first of all, safety is our number-one priority. And I want to reaffirm and state again that there is no safer way to move than to fly,

right? Flying in airplanes is an extremely safe business. And it's one where safety is just mandated. It is our core principle.

Now, you know, we certainly sympathize and our deepest condolences to the families involved in the Southwest incident. And we're strong partners with the entire Southwest family. And we're supporting the investigation right now. It's a National Transportation Safety Board investigation. So, we have a process that will follow through that. But without any question, the 737 is an extraordinarily safe airplane.

MR. RUBENSTEIN: How many airplanes – or, Boeing airplanes are flying around the world at any given time? Or do you have operational?

MR. MUILENBURG: We have about 14,000 commercial airplanes that are operational around the world every day. So, at any point in time, you know, literally thousands of airplanes in the air, billions of miles being flown every year – 737 is the most popular of those. So, we've delivered 10,000 737s. Just hit that milestone a few weeks ago. It's a new Guinness record for deliveries. And just to give you a little factoid behind that, about every 1 ½ seconds, a 737 takes off somewhere in the world. So, there goes another one. [Laughter.]

MR. RUBENSTEIN: All right. So, Airbus –

MR. MUILENBURG: And another one. [Laughter.] Sorry.

MR. RUBENSTEIN: Airbus is your main competitor. Is that right?

MR. MUILENBURG: Yeah. In the commercial airplane world.

MR. RUBENSTEIN: Commercial air space. Now, they and you have had what some people might call a duopoly, which is really two manufacturers. Are you not worried that the Chinese or the Japanese will ultimately get into this business of making commercial airplanes?

MR. MUILENBURG: Well, we know that future competitors are coming, without question. And, you know, the great thing is we have a very strong marketplace. It's about a \$7.6 trillion marketplace over the next 10 years. It's a growing industrial marketplace. It's a marketplace that creates manufacturing jobs and technology ripple benefit. So, a lot of countries are interested in getting involved. And many of them are in our supply chain, and a strong part of our supply chain.

China is clearly emerging as a very important commercial market for us, part of our supply chain. Comac<sup>4</sup> in China, who's a growing aerospace entity, is in our commercial airplane supply chain. They are also a future competitor. So, the art of this business is to collaborate and compete. And, you know, competition is going to make us better. The point that the world is pursuing the aerospace market just causes us to continue to invest in innovation. We win, because we continue to invest in innovation.

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<sup>4</sup> The Commercial Aircraft Corporation of China, Ltd. is a Chinese State-owned aerospace manufacturer established in 2008 in Shanghai, China.

MR. RUBENSTEIN: Now, you're making some acquisitions lately. And one of them is you're trying to buy control of Embraer<sup>5</sup>, which is the Brazilian airline – or airplane company, manufacturing company. Why are you trying to do that?

MR. MUILENBURG: Well, we see Embraer as a very nice, strategic fit with Boeing. And we're having very good discussions and making progress on those. If you look at their commercial product lineup, it fits very nicely with our commercial product lineup. So, it would give us a broader span of products for our customers. We have complementary global services. They have some vertical capabilities, technologies, that would complement some of our Boeing technologies. And our workforces, in terms of our culture and approach to work, are well-matched. So, it's an attractive combination. It's not something that we must do. But it's something that would add to our strategy.

MR. RUBENSTEIN: Will the Brazilian government approve that?

MR. MUILENBURG: Yeah, the Brazilian government is very much involved in the process every step of the way. I think you've recently seen some of the media coverage with some encouraging, positive comments from the Brazilian government. So, we're hopeful that we'll bring this to conclusion. We still have some work to do.

MR. RUBENSTEIN: And what about the air tanker that you're manufacturing?

MR. MUILENBURG: The KC-46 tanker?

MR. RUBENSTEIN: That's correct. You won a big contract to produce air tank – these are refueling planes that enable airplanes to be refueled. But it's behind schedule, or not?

MR. MUILENBURG: Well, we've had some challenges in the development program. So, we're behind the original schedule, but we are on the cusp now of delivery. So, I'm excited to see this happen. The KC-46 tanker will replace the KC-135, which is based on the 707 air-frame of 50 years ago. So, it's time for a new tanker. This is a new combat tanker. So, it's a multi-mission capability. So, it does refueling, but also things like medevac and mobility. And we have 34 airplanes that are in production flow and in test. We're about 95-97 percent complete with the test program. And we are on the cusp of delivery. And I just had the chance to fly on one of our test aircraft about two weeks ago. This airplane is ready to go. And we're looking forward to getting it to our Air Force customer.

MR. RUBENSTEIN: But explain just how it works. You're flying along on an airplane – let's supposed it's a 737 or whatever it might be, a military plane. And you have another plane coming along that's going to refuel it. How hard is it to get that little thing in there? [Laughter.] Is that –

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<sup>5</sup> Embraer S.A. is a Brazilian aerospace conglomerate that produces commercial, military, executive and agricultural aircraft and provides aeronautical services. It is headquartered in São José dos Campos, São Paulo State.

MR. MUILENBURG: Well, that's part of – actually part of the technology that goes into the airplane. So, for combat operations or Air Force operations, obviously the skill of the pilot, the receiver of the fuel, is important. And that's a skill that those pilots hone over time. That's part of the test program. And then the new advanced systems on the new tanker assist with that. So, the refueling boom, in this case, which is one of the ways we deliver fuel, is more than 50 feet long. It extends out of the back of the airplane. It has wings on it, so you actually fly it. And there's an operator inside the tanker that flies the boom to the airplane and makes the connection. We've done, you know, more than 2,500 connections during the test program already. So, that's part of certifying the tanker.

MR. RUBENSTEIN: So, let's talk about how a farm boy from Iowa became the head of Boeing. So, you grew up in Iowa, right?,

MR. MUILENBURG: I did. Up in northwest Iowa, just outside of a little town called Sioux Center. And grew up on a farm – working on my dad's farm.

MR. RUBENSTEIN: What kind of farm was it?

MR. MUILENBURG: Well, we had a large crop farm. Mostly we raised corn, soybeans, alfalfa. And we had a lot of livestock – cattle, pigs, chickens, you name it.

MR. RUBENSTEIN: You were milking cows and everything?

MR. MUILENBURG: Every morning I had to milk cows. We milked our own cows for our family's consumption. So, that was part of my daily chores in the morning.

MR. RUBENSTEIN: Have you ever said to them: Drink some Mountain Dew and the cows will produce more – [laughter] – or the cows will be more productive or something?

MR. MUILENBURG: That wasn't part of the diet plan when I was a kid, yeah. [Laughter.]

MR. RUBENSTEIN: OK. All right. So, you went to Iowa State.

MR. MUILENBURG: I did.

MR. RUBENSTEIN: And Iowa State, you majored in aeronautical engineering?

MR. MUILENBURG: Aerospace engineering.

MR. RUBENSTEIN: OK. So, were there a lot of people doing that there?

MR. MUILENBURG: Yeah. It was at that time one of the larger aerospace engineering schools in the country, continues to be. It does have some Boeing connections too. T.A. Wilson, who was one of – one of Boeing's previous CEO's, he went to Iowa State. And I actually, when I went there, managed somehow to get his scholarship. And that led to an opportunity for a

Boeing internship. So, between my junior and senior years at Iowa State, I did an internship at Boeing in Seattle, and I got hooked. And I've been there ever since.

MR. RUBENSTEIN: OK. Well, you got a master's degree at University of Washington. Was that while you were working at Boeing?

MR. MUILENBURG: Yeah. Yeah, that was part of Boeing's education while you work plan.

MR. RUBENSTEIN: All right. So, you're from Iowa. You have this scholarship from one of the founders of Boeing. But there were a lot of people who are working at Boeing. So, what did you do that enabled you to rise up? You joined around 1985?

MR. MUILENBURG: Yeah, '85 in my internship, '86 as a full-time employee.

MR. RUBENSTEIN: OK. Right. So, you rose up. And, you know, were you smarter than other people? You're a better athlete than other people? [Laughter.] You're more personable than other people. What was it – better engineer? What was it that enabled you to rise up among all those employees to be the CEO?

MR. MUILENBURG: You're implying it's hard to tell. [Laughter, applause.]

MR. RUBENSTEIN: Well, I just wanted to give you a chance to tell everybody what I already know.

MR. MUILENBURG: [Laughs.] Well, David, you know, frankly, I never worried too much about that. So, I was thrilled to go work at the world's best aerospace company. I wanted to be a great designer of airplanes. I had the chance to work with a lot of great teams along the way. And I always tried to, you know, find the hardest things to work on and just concentrate on knocking that job out of the park. And that may not sound like much of a career strategy, but it worked out.

MR. RUBENSTEIN: It worked out. OK. So, at a very young age you were put in charge of running a program for Boeing, where they were trying to get the joint strike fighter contract, which is the biggest contract the Pentagon's ever given. Ultimately, it went to another company, called Lockheed Martin. So, you lost. When you lost, did you think your career was over?

MR. MUILENBURG: No. And it really wasn't even my, you know, construct around that program. We were very focused on winning. And I was the chief engineer for what was called the X-32 prototype. And that was an extraordinary time in my career. And I, again, worked with a fantastic team. But in four years we went from roughly a clean sheet of paper to flying two X-32 prototypes. And clearly disappointed that in the end we didn't win, but I learned a lot as a leader. And, you know, sometimes when things don't work out you learn even more. I can tell you, the technology benefit from that program, the talent benefit, all those people then subsequently spread out to the rest of Boeing, you know, it created a benefit that's lasted for decades.

MR. RUBENSTEIN: Now, you ultimately became the head of the defense division of Boeing. And it's moved to the Washington area. It was in St. Louis. And why did it move to Washington?

MR. MUILENBURG: Well, I think one of the principle reasons for that was to get a little closer to our customer here in Washington, D.C. And under Leanne Caret's<sup>6</sup> leadership, she's here today as well, leading that business, we decided to make that move. It's important for us to have that close customer contact. And our defense and space business has big operations in many locations. St. Louis, but Seattle, Southern California, Huntsville, Florida, Space Coast<sup>7</sup>. A variety of areas around the country.

MR. RUBENSTEIN: Now, your company is headquartered in Chicago. It was historically based in Seattle. A number of years ago, it was decided to move to Chicago. Why Chicago?

MR. MUILENBURG: Yeah. Well, this occurred back in 2001. So, as I said, I started with Boeing in Seattle. And subsequent to the merger with McDonnell Douglas<sup>8</sup>, we evaluated a number of different sites for where we might headquarter the combined company with, you know, Boeing being in Seattle, McDonnell Douglas being in St. Louis. The desire was to find a third site that could be a place where we could host the whole enterprise. And we went through a site selection process. And that eventually ended up being in Chicago. Great global connectivity, great workforce there for the corporate-level jobs that we needed, and a place, again, where we could connect to the markets.

MR. RUBENSTEIN: Right. But you don't think any other companies based in Seattle that might want to relocate a headquarters would necessarily go to Chicago, right? They might come here.

MR. MUILENBURG: You'd have to ask those companies. [Laughter.]

MR. RUBENSTEIN: OK. All right. So, let's talk about the defense –

MR. MUILENBURG: By the way, we still have half of our people in Seattle. So, we have a very strong team in –

MR. RUBENSTEIN: And now you have about 140,000 employees?

MR. MUILENBURG: Around 140,000, yeah.

MR. RUBENSTEIN: So, let's talk about the defense business. You make the F-15.

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<sup>6</sup> Leanne Caret is an executive vice president of Boeing and president and CEO of Boeing Defense, Space & Security.

<sup>7</sup> The Space Coast is a region in Florida around the Kennedy Space Center (KSC) and Cape Canaveral Air Force Station.

<sup>8</sup> McDonnell Douglas was a major American aerospace manufacturing corporation and defense contractor formed by the merger of McDonnell Aircraft and the Douglas Aircraft Company in 1967. It merged with Boeing in 1997.

MR. MUILENBURG: F-15 Eagle, yeah.

MR. RUBENSTEIN: All right. So, how fast does that go?

MR. MUILENBURG: I can tell you it goes about Mach 2 ½.

MR. RUBENSTEIN: OK. Have you ever been in that plane, or?

MR. MUILENBURG: I have. I've had a couple of flights in the F-15 Eagle – backseat, right? So, I'm flying with a Boeing pilot. [Laughter.] But I had a chance to fly in the F-15 Eagle and in our F-18 Super Hornet. I've flown in an Apache helicopter, a few others too. It's one of the great parts of this job, is I occasionally get to fly.

MR. RUBENSTEIN: So, when they do a barrel roll, what is that like? Does that feel like fun, or is that a little nerve wracking?

MR. MUILENBURG: Oh, it's fantastic. In a fighter jet, it's not really a barrel roll. It's more of a snap roll, you know, faster. But, you know, we had a chance to go up and do a few maneuvers. And yeah it, again, crystalizes for me the incredible skill and talent of the pilots that fly these airplanes and defend our country. And we know that we work on amazing products that support important missions.

MR. RUBENSTEIN: The pilot that flies the CEO, is that a special job or do they tell the pilot, be very careful this is the CEO? [Laughter.] And if something goes wrong, your job is over?

MR. MUILENBURG: We have great test pilots. [Laughter.]

MR. RUBENSTEIN: All right.

MR. MUILENBURG: And it's nice to go up on one of these tests because you kind of get calibrated. They get you accustomed to the airplane. They say, we're going to go to two Gs<sup>9</sup>. How do you feel? We're going to go to four Gs, how do you feel? We're going to go to six Gs, how do you feel? Starting to get to my threshold, right? So, you know, you step into it.

MR. RUBENSTEIN: So, now let's take the Boeing plane that most people are probably familiar with – a 737, a 747, and so forth. And those planes, can they ever be flown without a pilot? Are you working on that? And right now we're talking about driverless cars. Will we ever have driverless or pilotless planes?

MR. MUILENBURG: Well, we're going to continue to have a strong need for pilots. In fact, pilots are in short supply worldwide for commercial airplanes. That said, we're also continuously working on these autonomous vehicle technologies. So, there's a lot of automation already in today's airplanes that can assist the pilot. And that technology continues to mature

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<sup>9</sup> Gravitational force, or more commonly, g-force, is a measurement of the type of acceleration that causes a perception of weight.

rapidly. So, we're building it into our future airplanes. Those will be decisions that ultimately customers will make, but the technology, the autonomous technology will be ready and available. And it certainly applies already today in our defense products. And it will have application in commercial products in the future.

MR. RUBENSTEIN: So, have you ever thought of having the bathrooms in the planes bigger, because I noticed they're really small. [Laughter.] You know, if you want to change clothes or something to get ready for something else, that's really hard. Has that ever been a problem anybody's mentioned when you design these planes?

MR. MUILENBURG: Yeah. Well, again, our airline customers typically select the lavatory geometry.

MR. RUBENSTEIN: I see.

MR. MUILENBURG: And we support that. [Laughter.] I will say, if you'd like to get a BBJ<sup>10</sup>, we can tailor the lavatory for you, so.

MR. RUBENSTEIN: OK.

MR. MUILENBURG: More flexibility.

MR. RUBENSTEIN: Do you have people that you can try it out for, like, six months and see if you like the BBJ – [laughter] – before you – you don't have that program?

MR. MUILENBURG: For select customers.

MR. RUBENSTEIN: OK. So, let's talk about the space program.

MR. MUILENBURG: Yeah.

MR. RUBENSTEIN: Now, you are involved in the space program.

MR. MUILENBURG: Yeah, yeah.

MR. RUBENSTEIN: Now, to be very serious, NASA really ran the space program for many, many years and now NASA isn't doing everything it used to do. Is the commercial sector, are you now actually designing the rockets? And what is the plan that you have, is to take a rocket to the moon again and to Mars?

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<sup>10</sup> Boeing Business Jets are variants of Boeing jet airliners for the corporate jet market. The Boeing Business Jet is a 50/50 partnership between Boeing Commercial Airplanes and GE Aviation. The BBJ designation denotes the business jets based upon the 737 series airliners. These aircraft usually seat between 25 and 50 passengers within a luxurious configuration. This may include a master bedroom, a washroom with showers, a conference/dining area, and a living area.

MR. MUILENBURG: Yeah. I think this is the most exciting time in our country's space program in decades. And we're literally working on things now that are bigger than the Apollo program. I'm not sure it's as well-known across the country. But we are in the midst of a space transformation in this country.

And the commercial entrants here are adding energy -- Blue Origin, SpaceX. In some cases we compete, in some cases we partner, but they're adding energy. Boeing is making investments. We're building a new CST-100 Starliner which will be the first American-made capsule to get us back to the space station. We're going to celebrate 20 years on orbit at the International Space Station over the next couple of years. And we're building the new rocket to Mars with NASA.

And I think in particular, as we look at deep-space exploration, NASA has an incredibly important job there. And this new space launch system is a rocket that's about 38 stories tall, about 9.2 million pounds of thrust. If you want to put that in car terms, it's about 207,000 Corvette engines. And we're going to do first test launch here over the next couple of years. We're going to do a slingshot mission to the moon, a return to the moon, set up a lunar gateway and then we're going to go to Mars. And the first person to step foot on Mars is going to get there on a Boeing rocket.

MR. RUBENSTEIN: Really?

MR. MUILENBURG: Yeah.

MR. RUBENSTEIN: Will they come back on a Boeing rocket, though? [Laughter.]

MR. MUILENBURG: Yes. [Applause.]

MR. RUBENSTEIN: OK, all right.

MR. MUILENBURG: In Boeing's version of the space business, it's always a two-way trip. [Laughter.]

MR. RUBENSTEIN: OK. But it takes six months to get to Mars, more or less, right? Six months?

MR. MUILENBURG: On that order, yeah.

MR. RUBENSTEIN: OK. So, I actually read that there are hundreds of thousands of people who signed up to go to Mars being told that they wouldn't come back.

MR. MUILENBURG: Yeah.

MR. RUBENSTEIN: But I don't know who these people are, but --

MR. MUILENBURG: Yeah, that's why I tell you we're in the roundtrip business.

MR. RUBENSTEIN: OK roundtrip. [Laughter.] So, what is the reason we want to go to Mars? Because, really, is there anything there that we really need other than to say we did it?

MR. MUILENBURG: Yeah, yeah. Well, I think there are multiple reasons. One is there is a certain inspiration quotient, right? There is the exploring the universe and the significance of that. I think it's something that inspires people and inspires what we do.

It's very clear that the investments we make in the space program, putting humans into space and deep-space exploration, creates the biggest technology ripple benefit of anything that we invest in – medical technologies today, mobile devices, new materials. It is the hardest thing we do, and by doing those hard things we create great ripple benefit. And I think it's great for future talent generation. It is something that inspires the next generation of STEM<sup>11</sup> talent like nothing else.

MR. RUBENSTEIN: Explain this to me. Right now, we have disputes with Russia from time to time and sometimes we have some very serious political disputes, election disputes and so forth, yet we have to send our astronauts up on missiles that they –

MR. MUILENBURG: On Soyuz capsules.<sup>12</sup>

MR. RUBENSTEIN: Right. Isn't that embarrassing for the United States to have to depend on the Russians to get our astronauts up to the space station?

MR. MUILENBURG: That's part of why we're building that new CST-100 Starliner. So, this is jointly with NASA and there are other competitors as well. But we'll be doing first launch of that – of that Starliner here later this year. And that will give us a U.S.-made capability to get back and forth from the space station.

MR. RUBENSTEIN: So, let's talk about Washington, D.C. for a moment. As the CEO of Boeing, presumably you have a lot of customers here, how much time do you come to Washington, ever?

MR. MUILENBURG: I'm here quite often. So, we have a lot of customers here, a lot of engagements. I was just at the Pentagon earlier today talking with customers, frequent visits to the Hill, to the Administration. So, it's important for us to be engaged in the political process, important for us to spend time with our customers.

MR. RUBENSTEIN: Well, when you meet people in Congress, are you ever inspired to say you want to be a member of Congress? Have you ever said, geez, I like these people so much, I want to be like them? Has that ever happened to you?

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<sup>11</sup> Science, Technology, Engineering & Math

<sup>12</sup> Soyuz is a series of spacecraft designed for the Soviet space program by the Korolev Design Bureau (now RKK Energia) in the 1960s that remains in service today. The Soyuz spacecraft is launched on a Soyuz rocket, the most reliable launch vehicle in the world to date. All Soyuz spacecraft are launched from the Baikonur Cosmodrome in Kazakhstan.

MR. MUILENBURG: I'd say I prefer my job. [Laughter.]

MR. RUBENSTEIN: OK. So, when you're talking to members of Congress or people in the Administration, what is the biggest concern that you have? Educating them about what you actually do?

MR. MUILENBURG: Yeah. Well, I think, you know, we're a well-known company and I think most people understand what we do. But connecting it to government policies and the significance of those policies, you know, right now trade policy is a really important item for us. And as we think about effective trade agreements around the world – and certainly, we want a level playing field around the world – we want to be able to compete and win.

We have about 90 percent of our manufacturing here in the U.S., but we sell about 70 percent of our products outside the U.S. So, think about trade surplus. The aerospace sector creates the biggest trade surplus of any sector in the country, and so we need trade agreements that allow us to compete globally, to sell globally, and that's part of what creates U.S. manufacturing jobs. So, that's an area of discussion, active discussion right now in D.C.

MR. RUBENSTEIN: Well, what about the tariffs? The tariffs, I'm presuming they hurt you because are you not importing some of the aluminum and steel that –

MR. MUILENBURG: Yeah, we have a combination of domestic and international suppliers. Steel is not as much of an issue to us, aluminum is a more important material for us. But the way we risk manage that and hedge our positions, we don't see the current tariffs as having a material effect on our business, but it is something we're watching because it's the broader question of trade relationships and effective trade agreements around the world.

MR. RUBENSTEIN: And what about the Export-Import Bank? Boeing has been a big supporter of it, now it's essentially not able to do very much.

MR. MUILENBURG: Yeah.

MR. RUBENSTEIN: So, are you lobbying for it? And why should the United States Congress be interested in Boeing being able to help its customers finance its sales?

MR. MUILENBURG: Yeah. Well, we're very strong supporters of the Ex-Im Bank and we're still hopeful it'll get back up to full operations. We do have four nominees for the Ex-Im board that are at the Senate right now and we're encouraging the Senate to move forward so the bank can restart its operations.

But the Ex-Im Bank makes great sense for U.S. jobs. This is a credit agency that allows international airlines to buy airplanes and provides backstop financing. And those are U.S. manufacturing jobs.

Our estimate right now is that there's about \$35 billion of deals waiting in the hopper at the Ex-Im Bank, well beyond Boeing deals, and those benefit jobs across the U.S. and primarily they benefit small and medium-sized businesses.

MR. RUBENSTEIN: But Boeing has done – you have seven years of backlog on commercial airplanes.

MR. MUILENBURG: Yeah.

MR. RUBENSTEIN: So, you have so much backlog, has it really hurt you that the Ex-Im Bank hasn't been operational?

MR. MUILENBURG: Well, it hurts us because competitors around the world have access to that. Airbus alone has three equivalent agencies in Europe. And sometimes we have international customers, when they're trying to pick between a Boeing or an Airbus jet, credit financing can be the deciding factor.

So, even though we have a strong backlog – and as you say, we have about 5,800 commercial airplanes in backlog, a long view – certainly, that's an advantage. But every day, we are competing. And Ex-Im Bank is about competing today, so we create jobs for tomorrow.

MR. RUBENSTEIN: All right. Suppose I'm a customer and I want to buy 10 airplanes, I want to buy 10 Boeings or 10 Airbuses. Prices are going to be the same. What is your argument about why Boeing is a better airplane manufacturer than Airbus? Tell me why your planes are better than the Airbus planes.

MR. MUILENBURG: Well, our planes are a better value, right? They are better operational capability, they are more reliable in the field, more supportable. If you take a look at narrow bodies where it's the toughest competition between our 737 MAX family and Airbus' A320 family, our airplanes are generally 5 to 7 percent lower operating cost for airlines. So, we bring more value to the table. And frankly, I'd put – I'd put our money on our team. We have an incredible team, skilled workers, a supply chain that's best in the world.

MR. RUBENSTEIN: So, have you ever tested out any Airbuses? Do you ever fly on a plane that's an Airbus just to see what it's like or you don't need to do that?

MR. MUILENBURG: I have flown on them. You know, it's not something I spend a lot of time pursuing. [Laughter.] But I would – I would suggest, if you were to, you know, survey the crowd, people that have flown on both Airbus and Boeing, generally the reports I hear, people like flying on a Boeing airplane.

MR. RUBENSTEIN: All right. Well, let's see. How many people here prefer Boeing? [Applause.] OK, OK. I guess you're right on that. [Laughter.]

So, what about supersonic transport?

MR. MUILENBURG: Yeah.

MR. RUBENSTEIN: I remember there was a plane called the Concorde.<sup>13</sup>

MR. MUILENBURG: Yeah, yeah.

MR. RUBENSTEIN: And I think they made maybe – did they make 10 of them or how many? I forget how many they actually made, but now they don't exist any longer except in museums. So, why do we not have a supersonic transport any longer?

MR. MUILENBURG: Well, it's the economic hurdle that goes with it. That airplane was never economically viable on its own. You know, it was – it was created as a project, a worthy project, but not something that would satisfy a normal business case. And to fly supersonic, you burn two to three times as much fuel. It's hard to make that business case close.

Now, that said, we are working on technologies for next-generation commercial airplanes. I do envision a day where not only will we see commercial airplanes that look like today's airplanes, but we'll see high-speed airplanes that can connect any two cities in the world in about two hours. And then we'll see that span up to space tourism and eventually we'll see an economically viable space ecosystem in low-earth orbit. And you'll see an intersection between commercial air travel, high-speed travel and space travel. And that's all going to evolve over the next couple of decades.

MR. RUBENSTEIN: What about jetlag? Can you work on that? [Laughter.] How do you deal with that? Is there something you can do on the air pressure that reduces jetlag? Is that a problem?

MR. MUILENBURG: Well, I will tell you, one of the – that actually helps. One of the secrets that we found, the new 787 Dreamliner, because of its composite material fuselage, it operates at a higher humidity level and a higher pressure level. And customers will often report that on the back end of a 787 Dreamliner flight they feel much better, a lot less jetlag. It's a much better experience. So, that's one of the ways we do it.

MR. RUBENSTEIN: Yeah, now, the Dreamliner was, I think, one of the first planes you made that was so-called composite.

MR. MUILENBURG: Yeah.

MR. RUBENSTEIN: Now, I used to think that airplanes were aluminum and steel.

MR. MUILENBURG: Yeah.

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<sup>13</sup> The Aérospatiale/BAC Concorde is a British-French turbojet-powered supersonic passenger airliner that was operated from 1976 until 2003. It had a maximum speed over twice the speed of sound at Mach 2.04, with seating for 92 to 128 passengers.

MR. RUBENSTEIN: Then when you said you were doing composite, what was that and what is that that's actually in that plane?

MR. MUILENBURG: Yeah, yeah. So, these are carbon-based fiber materials. Think of them as advanced, hardened plastics, if you will. But they are carbon-fiber machines. So, rather than taking sheets of metal and fastening them together, we use carbon winding machines that create structures in a different way.

The advantage, generally, is lighter weight, it's more robust in the field, more reliable, not subject to corrosion. It can be more challenging to build. But as we've broken through the technology hurdles on how you build and design composite airplanes, it's a great business case. It's one of the reasons that the 787 is about 30 percent more fuel efficient than the airplanes it's replacing.

MR. MUILENBURG: So, you had a very nice name called Dreamliner.

MR. MUILENBURG: Yeah.

MR. RUBENSTEIN: I mean, if somebody thought that up, it sounds great. But how come you didn't name your other planes, like the 747 doesn't have a nice name like that or the 737? How come you don't have a name for all of them?

MR. MUILENBURG: Yeah. Well, maybe that's something we'll look at in the future.

MR. RUBENSTEIN: OK. All right, well –

MR. MUILENBURG: 787 was the first of that generation of naming. As you can see, we used Dreamliner there. We're using Starliner on our new CST-100.

MR. RUBENSTEIN: OK.

MR. MUILENBURG: So, there are other opportunities.

MR. MUILENBURG: OK. Well, can I get a fee for coming up with that idea or something? [Laughter.]

MR. MUILENBURG: Yeah, we could consider that.

MR. RUBENSTEIN: OK. All right. OK.

MR. MUILENBURG: It could be – you know, again, if you want to get into the BBJ market, that could be some consideration.

MR. MUILENBURG: Well, I'm thinking about it. I just need a six-month trial. [Laughter.]

So, today, how do you divide your time? How much do you spend of your time with customers, employees, government? How do you divide your day or week?

MR. MUILENBURG: Well, you know, it's different every week. But, you know, I thrive on spending time with our people, so I want to make sure I carve out enough time to do that. That's usually the first thing I put on my list, is I think about what time am I going to spend during the week investing in our people. As a leader, I think it is the most important investment I can make, what I like to call our "people first" strategy. And I think it has the biggest multiplying effect for the business.

And then – and then I line up my customer visits. And I try to spend, you know, about a third of my time with customers. And then a third of my time, you know, running the business. And the fact is, I can't do all of that. I have a great team, right? And several of my teammates are here with us today. But you're just reminded more and more at, you know, these kind of jobs you're very reliant on your team. So, investing in your team is important.

MR. RUBENSTEIN: So, when you became a CEO, you succeeded a man named Jim McNerney who had been the CEO for quite some time, previously been the CEO of 3M and also been at GE. So, when you succeed a person who has done a pretty good job -- I think he did a very good job -- how do you go in and say, well, he did a good job, but I'm going to do a better job and I'm going to change what he did, I'm going to get rid of people that he had? Is that awkward?

MR. MUILENBURG: Well, I'll tell you what, Jim and I worked very closely, so I had the privilege of, before I took this job, I spent about a year-and-a-half as his COO learning from him. And, you know, Jim is a fantastic leader. I will always be grateful for what I learned from him.

And so, I was involved in the strategy and what Jim had been implementing. We had worked together for a decade. Now, that all said, right, we were at that point wrapping up our first century, thinking about our second century and there were several things that I wanted to accelerate and bring some new innovation to the table. But I put this more in the – in the character of a great foundation that I'm building on, rather than fundamentally changing direction.

And as I said, I got just a fantastic handoff from Jim.

MR. RUBENSTEIN: So, you are, by my standards, a teenager, you're very, very young for this job. [Laughter.]

MR. MUILENBURG: Thank you.

MR. RUBENSTEIN: You're 54 years old and you look like you're 44 or 34 because –

MR. MUILENBURG: Bike riding.

MR. RUBENSTEIN: Bike riding that you're doing, or the Mountain Dew, either one, I don't know. [Laughter.]

MR. MUILENBURG: It's a combination, yeah.

MR. RUBENSTEIN: So, most CEOs of Fortune 500 companies today, they probably are the CEO for maybe five years or so, sometimes longer, of course – Warren Buffett being an exception – so you're very young. You could do this for another – your retirement age is more or less 65, 66 at Boeing, but you can make a big difference, you can make a change. But given your age, you could do this for another decade or so. Is that what you'd like to do?

MR. MUILENBURG: I'd love to do that.

MR. RUBENSTEIN: OK.

MR. MUILENBURG: It's a fantastic job. And in my world, this is – this is the best job you can imagine. It's a great company. We do amazing things for the world. We have an amazing team. And I can't think of a better job in the world.

MR. RUBENSTEIN: OK.

MR. MUILENBURG: T.A. Wilson, who I mentioned earlier, by the way, he was CEO of Boeing for 17 years. So, you know, a long-term CEO job is not unusual.

MR. RUBENSTEIN: OK. So, if President Trump said you're doing a great job and I would like you to be my secretary of something, you would say?

MR. MUILENBURG: I'm not going to answer a hypothetical. [Laughter.] I love what I do. I have no desire to go do anything else.

MR. RUBENSTEIN: OK.

MR. MUILENBURG: And as I said, it's a fantastic job. And knowing that I work for a company that really makes a difference in the world is something that I take a lot of pride in.

MR. RUBENSTEIN: Now, you have a number of outside activities that are not-for-profit activities. You are chair of the Corporate Fund of the Kennedy Center, which is the highest calling of mankind, I think – [laughter] – is working for the Kennedy Center.

MR. MUILENBURG: Clearly, clearly.

MR. RUBENSTEIN: I appreciate your doing that.

MR. MUILENBURG: Thank you.

MR. RUBENSTEIN: But you're involved – you're involved with a number of other things. What are the things that you're most interested in in the nonprofit world?

MR. MUILENBURG: Well, I have a – I operate on a couple of university boards, one at Northwestern Medicine in Chicago, one at Washington University in St. Louis. So, that's a connection to education that I find valuable. I participate on the World War II Museum board down in New Orleans, so a really important part of our history and honoring that generation. I also had a chance to participate in a Congressional Medal of Honor board. And that one is just a, you know, a fantastic recognition of the people who have given the ultimate sacrifice for our country.

And then I love to invest in the next generation. So, First Robotics, I sit on the board of directors for that. I think that is one of the best investments we make in STEM education. And we have hundreds of Boeing-sponsored teams that are part of that global fabric.

MR. RUBENSTEIN: So, you've seen a lot of leaders up front, business leaders, government leaders. What do you think makes a great leader?

MR. MUILENBURG: Well, you know, I get asked that question quite often.

MR. RUBENSTEIN: I thought that was original. I thought nobody else ever asked you that before. [Laughter.]

MR. MUILENBURG: It's a good question. Well, you know, when I – when I look at all the dimensions of being a leader, frankly, it goes back to a lot of what I learned growing up on that farm in Iowa. I learned a lot from my parents and the value of hard work, integrity, how you treat other people, how we respect others, our willingness to bring, you know, diverse ideas to the table. Those all sound simple. And, you know, things I learned from my dad, who was never a businessman, but they apply in the business world. And I think sticking to those fundamentals and always reminding yourself the importance of integrity, your reputation, how you treat others. And then having an element of being able to inspire, you know, those that work around you.

And we try to codify those at Boeing in what we call our enduring values and our Boeing behaviors. But they get back to those fundamentals of who you are as a person and how you treat others.

MR. RUBENSTEIN: Now, did your parents live to see your success?

MR. MUILENBURG: They did. My father passed away a couple of years ago, but he lived a long, robust life. And my mom is still around.

MR. RUBENSTEIN: And is she –

MR. MUILENBURG: I'm never quite sure they knew exactly what I did. And when I started at Boeing – of course, coming from the farm – I started at Boeing as an engineer and my dad would often ask me, he'd say, so, Dennis, how did it go today, you know, what did you do? And I'd describe it. And, you know, he would kind of get it. And, you know, I was designing airplanes, it was real stuff. And then as I got to more elevated positions, got to executive positions, he'd ask me the same questions and say, Dennis, what did you do today, and I'd describe it and, you

know, I was excited about it. And he would pause and say, well, Dennis, what did you actually do today? [Laughter.] So, it's a good reminder.

MR. RUBENSTEIN: Does your mother ever call you to say, well, she just flew in a plane today, it was a Boeing and this problem was here or that problem? She doesn't give you advice or anything about Boeing?

MR. MUILENBURG: I only hear those kind of complaints when she gets stuck flying on an Airbus. [Laughter, applause.] Right now, yeah, when she flies on a Boeing –

MR. RUBENSTEIN: Have no problems.

MR. MUILENBURG: No, she loves it. She loves it.

MR. RUBENSTEIN: So, let me just ask you a final question. So, you obviously love what you're doing. What would you like to see as your legacy? When you ultimately do step down 25 years from now or whenever it might be and you're just doing bike racing full time, what – and by the way, you have never actually been in bike racing? You don't do racing, do you? You just do riding?

MR. MUILENBURG: I compete in quite a few races. I love long-distance century races. So, I'll do – this summer, I'll do the Chelan Century up near Seattle in the Cascade Mountains. And I have the Tour de Blast scheduled. The Tour de Blast is Mount St. Helens, up to the lip and back.

MR. RUBENSTEIN: Wow.

MR. MUILENBURG: I love – I love long-distance racing. Yeah.

MR. RUBENSTEIN: Really? And these are – you go against people who are in their 20s?

MR. MUILENBURG: Absolutely.

MR. RUBENSTEIN: Really?

MR. MUILENBURG: Yeah.

MR. RUBENSTEIN: Wow, OK. [Laughter.]

MR. MUILENBURG: And by the way, for locally here, we're also helping to sponsor the Armed Forces Cycling Classic which is coming up here in June. Not quite a century, but I think it's about a 60, 70-mile ride Crystal City, Pentagon loop. And a great place where we're investing in veterans and we'll have a lot of wounded warriors riding in that ride.

MR. RUBENSTEIN: Wow, wow.

MR. MUILENBURG: So, that's another thing I love to do. Yeah.

MR. RUBENSTEIN: OK. So eventually, you would like to see your legacy be what when you ultimately retire and you go to bike racing full time?

MR. MUILENBURG: Well, you know, I'll let others determine legacy. But, you know, what's important to me in terms of reputation is, one, I want to be known as somebody who invests in people, right? A leader who really invests in people and talent and takes that seriously and raised the level of the team.

This theme of innovation, right? Innovating for our second century and that we made the changes we needed to make to, you know, disrupt ourselves and bring the right technology innovation to stay on the leading edge. You know, we've won for a century because of innovation. We'll, you know, continue to win because of innovation.

And then I also talk to my team a lot about continuing to raise the bar for ourselves, not only to be the best in aerospace, which is, you know, an important measure for us, but to be a global industrial champion and to continue to scale up at that level.

So, you know, those are a few of the characteristics of the company I'd like to see when my time is done.

MR. RUBENSTEIN: So, have you ever thought that the Wright brothers, they were actually bicycle manufacturers.

MR. MUILENBURG: You got it, that's a great connection.

MR. RUBENSTEIN: And have you ever thought maybe Boeing could make some bicycles?

MR. MUILENBURG: I have been thinking about that. No, actually –

MR. RUBENSTEIN: Not a high margin, I know.

MR. MUILENBURG: Actually, with my – with my friends over at Trek and with their headquarters in Waterloo, Wisconsin, I've worked on a Project One bike with them, which is a specialty bike. So, taking their latest Madone composite frame, using aerospace technology with a Boeing Centennial paint job, that is my favorite bicycle. So, there is an intersection between aerospace and cycling.

MR. RUBENSTEIN: Well, maybe I'll take up cycling if you have – you have, like, the little bells on it and the brakes and the mirrors. [Laughter.]

MR. MUILENBURG: I'll get you one with bells and a basket.

MR. RUBENSTEIN: I need a basket, I need everything. [Laughter.]

So, look, Dennis, you're obviously a very accomplished executive, you've done a great job for Boeing and its shareholders.

MR. MUILENBURG: Thank you.

MR. RUBENSTEIN: I wish I had bought the stock when you took over.

MR. MUILENBURG: It's still a good deal.

MR. RUBENSTEIN: Still a good deal.

MR. MUILENBURG: Yeah.

MR. RUBENSTEIN: Thank you very much for everything you've done.

MR. MUILENBURG: Thanks, David. [Applause.]

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**Dennis Muilenburg**  
**Chairman of the Board, President & CEO**  
**The Boeing Company**

Dennis Muilenburg, 54, oversees the strategic direction of the Chicago-based, \$93.4 billion aerospace company. With roughly 140,000 employees across the United States and in more than 65 countries, Boeing is the world's largest aerospace company and top U.S. exporter. It is the leading manufacturer of commercial airplanes, military aircraft, and space and security systems, and a provider of global services; it supports airlines and U.S. and allied government customers in more than 150 nations.

Muilenburg became chairman of the board in March 2016, chief executive officer in July 2015 and president in December 2013.

Until July 2015, Muilenburg served as vice chairman, president and chief operating officer of Boeing, where he supported the company's aerospace business operations and focused on specific growth enablers, including important global relationships, leadership initiatives and development program performance.

Before that, Muilenburg served as president and chief executive officer of Boeing Defense, Space & Security (BDS).

Earlier, Muilenburg was president of BDS's Global Services & Support business, vice president and general manager of the Boeing Combat Systems division, and program manager for Future Combat Systems. Prior to that, he served as vice president of Programs & Engineering for Boeing Air Traffic Management and director of Weapon Systems for the proposed Boeing Joint Strike Fighter aircraft. He also held program management and engineering positions on F-22, Airborne Laser, High Speed Civil Transport and the Condor reconnaissance aircraft, among others.

Muilenburg, who joined Boeing in 1985, spent the first 15 years of his career in the Puget Sound region of Washington, where he held a number of program management and engineering positions in support of both the commercial airplanes and defense businesses.

Muilenburg is a member of the board of directors of Caterpillar Inc., the U.S.-China Business Council, the Congressional Medal of Honor Foundation, Northwestern Memorial Hospital and FIRST (For Inspiration and Recognition of Science & Technology). He is past chairman of the Aerospace Industries Association (AIA) board of governors and a current AIA executive committee member. He also is an executive committee member of Business Roundtable, an association of chief executive officers of leading U.S. companies. He serves on the boards of trustees for the National World War II Museum and Washington University (St. Louis).

He is a fellow of the American Institute of Aeronautics and Astronautics (AIAA) and the Royal Aeronautical Society.

A native of Iowa, Muilenburg holds a bachelor's degree in aerospace engineering and an honorary Doctor of Science degree from Iowa State University as well as a master's degree in aeronautics and astronautics from the University of Washington.