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The Boeing Co. (BA)
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OTHER PARTICIPANTS

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MANAGEMENT DISCUSSION SECTION

Unverified Participant

Everybody can make their way in to the room. A housekeeping announcement for those who are hungry. Yes, this is normally the lunch session. Dennis, if you remember we used to do this downstairs with somebody from BOD and all of that. This year a little bit different. We are serving lunch after the presentation on the lobby level in the atriums. If you're hungry, hang on for 40 minutes and food will be downstairs on the lobby level.

With that, I would like to welcome Boeing. Thank you for anchoring and being sort of cleanup on our conference. This is the last aerospace/defense session of the 2014 conference. Everything goes into other industrial sectors after this, and it is a privilege and a pleasure to have Dennis Muilenburg, who is in a different seat this year than in prior years. He's been at this conference four or five times but it was always as the Chief of the Defense Business. And now, he's here as Vice Chairman and COO and so we're going to have a conversation about everything at Boeing. And so welcome.

Dennis A. Muilenburg

Well, thank you. And Rob, great to be with you. Great to be back and thanks for the venue. Thank you all for being here as well. And just very brief opening comments and I know we have a lot of questions that we look forward to getting to.

But to take a look at Boeing today, a strong performance underway. Very positive financial performance in terms of cash generation and growth of the business. We see strong market strength as well especially in the commercial sector now as we’re ramping up production. And we’re at record backlog of about $430 billion in our commercial business. And while the environment is more challenging in the defense and space side of the business especially with sequestration here in the U.S., that business continues to do well and is winning around the world. Especially as we go to a higher international mix in the defense business to be about a third of that revenue today.

And in terms of shareholder value, overall, across the commercial defense and space sectors, continuing to return value to our shareholders both in terms of increase dividends, as well as to increase share buyback and doing that while we’re investing significant R&D for the future both in our commercial and defense lines to keep us on the innovation leading edge.

So all in all, a healthy business, a lot of opportunity ahead of us and I look forward to the questions.
QUESTION AND ANSWER SECTION

Robert Spingarn

Fantastic. And then we will take couple from the audience, but I’ll start this up. I wanted to ask you a few high-level questions to open. The first one being about the vantage point from your current position from your new seat so to speak and the components of that to the multipart question, so here we are again, would be, what it’s like, one, trying to manage two businesses at the same time? And also, what kind of strategy have you and Jim put together here, because this is essentially a seat that’s been created and didn’t exist prior. So how we think about that?

Dennis Muilenburg

Yeah. Well, thanks. And as Jim and I have talked about this role and I’ve been in the seat now for about a year. So I’m a year expert here in this role. But three key complements to it, one was just spend very direct time with Jim McNerney and frankly learn by osmosis and joined with him, partnered with him in overall, oversight of the company.

And a key part of that is driving a one Boeing perspective in culture as we like to call it and that is gaining leverage across our commercial defense and space sectors. I’ll come back to that.

The second of three parts has been on some of our big internal needle mover productivity initiatives. So these are things like Lean implementation, capturing the value quality, first-time quality, not only in the factory but in all of our office spaces as well, partnering for success, engaging with our global supply chain, development program and actually some of the big cross cutting initiatives to drive productivity and growth in the organization.

And then third of the three parts has been about engaging with stakeholders, so that includes our investor community, being with our customers both commercial and defense customers around the world, and make sure we’re spending time engaging those external stakeholders.

So all three of those have been part of the job and when it gets to your question about looking across those two sectors of the company if you will, we continue to see that as one of the unique strengths of Boeing. And as we know right now, we’re playing into a very strong commercial marketplace, frankly a record marketplace with record backlogs, a challenging defense environment as we all know, but our ability to flow technology, process this people, talent, supply chain connectedness and to do that on a global scale across commercial, defense and space sectors with critical mass in all of those sectors, I think is unique to Boeing.

And that’s creating competitive advantage. It’s creating productivity. And it’s allowing us to invest in ways that other companies can’t. And that’s one of the things that Jim and I have really been pushing hard on, it’s to create that One Boeing advantage in the marketplace.
You’ve touched on a number of things there that I wanted to ask about. But one that stands out are the potential synergies you’ve already achieved and potentially achieved on the cost side, particularly things like procurement and so on.

Dennis A. Muilenburg

Yeah.

Where are you in that process? What kind of opportunity remains there?

Dennis A. Muilenburg

Yeah. A couple of big initiatives there, but the biggest one is we engage our supply chain in our procurement process what we call partnering for success. I know we have many of our supplier partners here with us today. In fact, I believe [ph] Kelly Warkburg (06:00) was up here. Just ahead of me and he and his company, one of our top supplier partners and is very engaged in this partnering for success initiative. And what we’re looking at there, is a new way of engaging with our supply chain instead of doing it as individual program-by-program, airplane-by-airplane, negotiations and dialogue with our supply chain, let’s do it at a company level.

And what we’re finding is huge opportunities for us to drive commonality of processes and complements across multiple platforms. We’re finding efficiencies in how we do business. Many of our suppliers are gaining volume advantage as a result which turns into pricing advantage for Boeing. So it adds value to both companies. And those kind of win-win solutions we see accelerating.

We’ve captured literally billions of dollars of value that way already. But I would say we’re still more in the early stages than we are in the latter stages of that. We’ve reached, I would say, mature agreements with about 40% of our global supply chain. The next 30% are pretty much done, a few details to finish up. And then the remaining 30%, we’re still working through it. But that partnering for success initiative I think is creating unique value by doing it at a global cross company scale. And while it’s been incredibly beneficial to date, I think there’s more to be done yet than what we’ve achieved so far.

That last 30% where the process is still ongoing, do you eventually convert all of them or is there a percentage or it’s just that the agendas are different and it just doesn’t work?

Dennis A. Muilenburg

I think in the end, we’ll get there with by far the large majority of our suppliers. If we need to, if we have to pursue alternatives or in some cases if we have to move from buying to making internally that makes sense, we have that option. But what I’m seeing in the behavior model is that with a large maturity of our supply base. And in some cases, it’s more challenging because we may not have a supplier who can barely make a business field base on volume advantage. We may have to reengineer some processes or look at technology components subsystems that
are may be 99% common today and with a little bit of engineering rework could be 100% common and so could result in value to both companies.

And so those more challenging cases that might require some technical work, engineering work to get to the end state will take a little longer but in the end, they're going to produce value and I think that's the general characteristic of that remaining 30%.

One of the component – as I understand it, one of the components of partnering for success, it's given your suppliers the opportunity to benefit from your expertise in Lean...

Yes.

...and things of that nature. What are the mechanics of going into a supplier's facility and helping them get where you both need to go?

So, we have teams, Lean teams that we've deployed throughout our global supply chain and in fact, we see continuing pull from our supplier base to invite us into their factory spaces and into their office spaces. But it's not a one-way pull. We're also inviting suppliers to come into our factories. And so, if you go to our Everett factory today where we're building wide-body jets, you'll find a lot of suppliers in there that are looking at our processes to say if you were to adjust, how you're doing this work or how we sequence the flows or the requirements or standards that you're flowing to us, if you were to make a small adjustment here, we could reap incredible volume in our factory.

So, it's really a two-way dialog. It's people on the ground, in-factory spaces, finding ways to drive Lean implementation throughout the supply chain. That is a very productive dialog. And that's generated a pipeline of more than 1,000 ideas, what we call accelerated opportunity capture, more than 1,000 ideas in the pipeline that are currently being processed and north of 200 of those have already been implemented in our production systems as value adders both for suppliers and Boeing, and ultimately that benefits our customers.

Does that ever been perhaps factoring a course correction in terms of make-or-buy? So somebody comes in either to Everett or St. Louis or wherever and you discovered, wait a sec, they should be outsourced or the opposite?

Dennis A. Muilenburg
It can result in that. It's not a common outcome but it can be. Generally, our decisions on make-buy are more driven by our long-term desire to be investing in the right core technology. So, I think a good example there is in the composite wing that we’re building for the 777X. That is an item that we have decided as a company to strategically pull back inside the Boeing as a make because we believe complex composites manufacturing for the long run is a capability that we need to have internally. And that is more – it generally tends to be a strategic decision as opposed to a supplier-by-supplier decision.

This may be a little bit unfair to ask because you weren’t there at the time, but was there some kind of a catharsis five, six, seven years ago where Boeing simply want to bring this composite technology in at the time that you – with the [indiscernible] (11:15) acquisition and so on. What was the thought process that was going through the company?

Dennis A. Muilenburg

That’s something that’s matured over time. Certainly, complex composites manufacturing is something that we’ve always been involved in, right, and we were at the leading edge of implementing that in aerospace.

I think some of what you’ve seen is we brought the 787 to the market and the incredible value advantage that’s been created by that material system revolution going to a highly composite airplane. It’s creating tremendous value in the marketplace and that has proven out, it further accelerated our interest in that technology as an investment for the long term. So I think it’s been a combination of maturing the technology, derisking it, understanding the value that it creates to the marketplace and then aligning that with our investments for the future. And that is all converged on complex composites manufacturing as one example of vertical capability.

May be stepping back for a second, one more question on your unique position between the two businesses which is, how do you think about one business that has half a dozen major programs and then an aftermarket business....

Dennis A. Muilenburg

Yeah.

...that goes with it or let’s call it, a sustaining business against your former domain or as we see former domain with thousands of programs?

Dennis A. Muilenburg

Yeah. So very different dynamics, right, different customer sets, different business models. On the defense side of the business, as you said we have literally hundreds of programs, but none that approach the volume of a
commercial airplane line, a few high-volume lines on the commercial side. What we do find, however, is that there are a lot of common elements underneath that different market space.

When you look at technologies that matter, information technologies, electronics technology, composite manufacturing, they play in both sectors, being able to globally support the idea of performance space logistics or gold care on the commercial airplane side. There are some common elements there about how to do efficient global support and training. So it's very clear to us there are synergies between those businesses even though the market-facing elements may be very different.

A lot of the synergies internally are very clear and that's where we unleash our Lean initiatives, Partnering for Success, how we do development programs, that is a way for us to uniquely generate value, generate productivity which in the long run, fuels our growth and also fuels our bottom line and cash.

Is there a view though and I know Partnering for Success benefits both side of the business but inherently, should the higher volume commercial – higher volume programs on the commercial side of the business have higher margins than the higher number of programs in Defense?

Dennis A. Muilenburg

Yeah. It – generally, higher volume is going to be beneficial so – in our kind of business especially when you look at the segments that are about building long-term large scale platforms, airplanes and spacecraft. Those tend to benefit from high-volume production. So I'd say, it's fair to say that generally but our ability to get that cross leveraged on things like partnering for success and Lean implementation plays into a factory whether that factory is building four a month, five a month, like we might be in helicopters or building 42 a month as we're doing in the 737 factory. There's clearly leverage we had. But the opportunity for margin generation improves as we increased volume.

That makes, always makes sense in this kind of business. Thought we'd may be turn to the cycle for a moment. Unprecedented backlog, incredible demand. We're not seeing this before. When you think about the cycle, how sustainable do you see it? Do we inevitably hit a point where book-to-bill's start to decline, simply because you've reached out so far, there's either nobody left or it's not – there's no need to get aligned at that point. And I want to highlight the fact, we all understand that if you have 10 years of backlog or 8 years of backlog, your production rates are fine. And I think that is not always understood by the market. So I wanted you to – just to see if you could talk about that a little bit.

Dennis A. Muilenburg

You bet. So when you look at that commercial cycle as it's being called, we are in a different place than we've ever been in, in terms of opportunity and position. We have about seven years of production backlog today, $430 billion, about 5,500 aircraft in backlog compared to previous cycles you might have been measured in a couple of years of production.
More than three quarters of that backlog is outside of the U.S. and Europe. In previous cycles that would have been concentrated geographically. Today it is very diversified with high quality customers. So, when you look at breadth and scale of backlog, quality of backlog, diversity of backlog, very unique position.

The other thing we're seeing is that traffic growth. You're just seeing tremendous overall growth in the traveling, the number of people that need to travel. 5% year-over-year sustained growth, with still a lot of places to grow. If you take the combination of China, India and Indonesia for example, 40% of the world's population, 14% of the airplanes, right? We'll have another $1 billion travelers in China come into the marketplace over the next 20 years. So all of that speaks to sustain growth in the market, right?

On top of that, the new products that we're bringing to bear, this next generation of airplane products from the MAX, to the 787, to the 777X are bringing step function capability improvements in terms of operating cost way beyond what you've seen in previous cycles, that's driving replacement demand. So when you look at traffic growth and associated fleet growth, combine that with replacement growth, that is a long-term sustainable cycle.

And we're trying to be very mindful about how we drive our rate structure as we do rate-ups. We're rating up to 12 a month on 787 in 2016, 14 a month before the end of the decade, ramping to 47 a month on 737 by 2017, now going to 52 in 2018. That should give you a sense of our confidence that this is not some kind of a short-term cycle. This is a long-term sustaining growth market and we're designing our rate structure to satisfy that market and I think doing a good job of keeping supply and demand in line.

Now might be a good time to talk about the ebb and flow in the order case.

Dennis A. Muilenburg

Yeah.

So just top of mind, I don't have numbers memorized, but 787 book filled very quickly, record...

Dennis A. Muilenburg

Yeah.

...orders in the timeframe, went into certification and entry into service with a higher number of orders, I think, with any other wide body, and therefore – and nearly a decade of demand or whatever...

Dennis A. Muilenburg

More than 800 in backlog right now.
That's right. And therefore, the frequency of orders recently is lower and so given the fact that you've raised the rates to 12% and then 14%, should we expect that this is normal for a period of time, maybe even a couple of years before the next wave of 787 demand materializes?

Dennis A. Muilenburg

Yeah. Typically you'll see some of that wave characteristic in the order cycle. But I do think it's worth remembering that if you look at this year, right, we're going to be at book-to-bill of over 1, as we've announced through the end of third quarter, we're already at more than 1,000 orders for the year. And as we guided to, we're going to produce 715 to 725 aircrafts in total this year, record production levels.

Even at record production, our book-to-bill this year is higher than 1. We're adding to backlog. So well, 787, might be in a certain wave of order cycle. You've seen very strong orders of 737. You've seen some good 777 orders coming in recently as we build the bridge. All of that tells us that the overall strength of the market and the fact that we're continuing to add to backlog even as we're at record production rates, gives us some sense of confidence where we're at. We're not seeing any kind of book-to-bill bleed off, in fact we're seeing backlog addition even this year.

Robert Spingarn

I remember going back years ago now to Harry Stonecipher. I think he said at one point he saw the 787 market and this is before there was an A350 like 2,500 units. How do you feel about that today?

Well, I'm not going to give you a number out there, Rob, but as you know our accounting quantity out there today is 1,300 aircraft. And what we're seeing in the marketplace is that airplane as our customers are getting experienced with it flying in their networks.

The value add is very clear. And we knew there was big value proposition, 15% to 20%, even north of that in terms of operating advantage, both compared to current fleet as well as our competitors' offerings. That is showing up as real in the marketplace as airlines are flying in their network. We did 17 new customer intros this year on 787 and continuing to get that kind of feedback.

And now what we're seeing is the predominant is delivering so far have been the Dash 8 model as we roll to Dash 9 and the Dash 10 stretches into the marketplace, the value proposition gets even better for those airplanes. And we'll deliver the first half dozen Dash 9s this year. And as we look out over 2015 and 2016, Dash 9s would become about half of the total delivery profile and the value that's creating to the marketplace is even stronger.

So, in the end could it be more than what we have in the accounting quantity today. It could be. And we'll make those decisions as we go, but it's very clear that the product is proving itself in the marketplace.
And you probably only need another couple of hundred orders before you have to look at – you’d be bumping into that accounting quantity.

Yeah, as I’ve said we’ve got north of 800 in backlog right now plus about 200 – roughly 200 that were delivered so far.

Right. One thing I tend to ask about with Boeing, sometimes you, sometimes Greg, Jim is cash cost of airplanes and learning curve.

Dennis A. Muilenburg

Yes.

We all know that the Dash 8 went through to its perturbations and a lot of lessons were learned heading into 9 and I imagine even more lessons into 10. So from a high level volume decide, I would imagine that each airplane has the potential to be more profitable than the last.

Dennis A. Muilenburg

Yes.

On an earnings basis, it’s all in one block, it’s all melded together. But one of the things that we’ve been looking for and when I say we I speak about – I’m referring to us here at Credit Suisse but I think in the market in general, is how that learning curve works on the 787 where the real slope adjustment might be. Is it simple as saying when the Dash 9 is equal or more than half of production? Is there a way to think about this? Because I’m thinking that aircraft is more cash profitable than a lease-up rate.

Dennis A. Muilenburg

Yeah. So, great question, and the way you’re thinking about is similar to the way we think about. And the model here is you think about the mature production programs that we have in place today, high volume, 737, 777, that kind of cash generation, earnings generation that goes with those mature production line.
So we, over the last few years, we've gone from cold start to ramping to 4 to 7 to now 10 a month on 787. We hit that at April of this year. So now we've got a production system that's stabilized at 10 with steps to 12 and 14 later. And what we're seeing is the learning curves in the factory are behaving exactly as you said.

Right on plan, and what we're seeing is every airplane coming down that unit cost curve and cash generation terms as we've come down that cost curve, that begins to spin out cash. And the program, 787 program, will go cash flow positive in 2015. So we're approaching that cutover point. And the key here is just continue to hit those learning curves.

So as we think about investments we're making to bring the Dash 9 into the production flow smoothly which we did. We delivered the first Dash 9 to New Zealand this year, a month ahead of schedule, new model introduction. While we're ramping up. So we've done that successfully and we've seen that in the learning curve.

So making these targeted investments in the production system, some of the inventory investments we've made are turning into cash generation. They turn into learning curve performance and you're going to see that happening on the 787. So going cash flow positive in 2015 with our whole supply base and as we continue to ramp up and continue to come down learning curves, you're going to see that program become more and more cash flow positive in the future. And that's one of the big levers in long-term cash generation. And so we're not anticipating any kind of peaked cash generation. We're looking at 2015 cash being strong and growing over 2014. And then, in 2016 and beyond, continued strong cash generation.

Robert Spingarn

How do we think about the slope of that curve going into the peak, I think it's a cash burn of $1 billion - roughly 787, roughly a $1 billion a quarter and some of that were pulled forward on the inventory. So I think on the aircraft itself, $700 million, $800 million give or take a quarter. When you get over the peak, do you [ph] decay (25:35) at that level. It will be a similar order of magnitude. So if you want to look at the shape of that inventory - deferred inventory production profile, the ramp-up to the roughly $25 billion number where we're going to peak out.

Robert Spingarn

Right.

Dennis A. Muilenburg

That deferred inventory production profile will flatten out in 2015 as we've always said. And then when we hit 12 a month, we'll come down the back side of that profile. And the slope on the back side is similar to the slope on the front side. It will - as we think about getting to 12% a month and then 14% a month, and the exact sequencing of those investments, that will move that slope a bit, but it will be a similar order of magnitude. So the opportunity is very clear.

The other thing that happens while we're coming off the back side of that inventory profile is that we are ramping up in rate. So the total number of airplanes coming out is going up, right, which is cash additive. And as I said previously, as you look at Dash 9 and Dash 10, the value they're generating in the marketplace is also beneficial. So all of those parameters, if you look at in the deposit, you have a strong cash-generation machine and it's going to be strong for a long time with the kind of backlog we're looking at.
Robert Spingarn

And then I suppose there's an additional component which is – I'm not sure exactly how to categorize this. But it's unit costs aside from the allocated costs. So what's coming down? As you go from 10 to 12, you basically increase the velocity of an airplane through the system by 20% and so you should have a like – benefit in unit cash costs but then, at the same time, it sounds like what you're saying is the value proposition is there. So to the extent that pricing is a factor, that's a positive. But then there's also the individual cost per unit.

Dennis A. Muilenburg

You got it. And that's where the productivity machine kicks in.

Robert Spingarn

Right.

Dennis A. Muilenburg

So it goes back to why I talked about the Lean implementation everywhere including the supply chain, partnering for success because that shows up as incremental cost reduction steps in our production profile that we've agreed to with our partners as we implement Lean in their systems and how efficiently we use our development resources.

So, all of that Lean implementation, what it really goes after is unit cost. And by driving unit cost down, it produces cash, it produces earnings and it also produces our investment capacity for the future. And as we said before, the uses of cash our top priority continues to be investing in R&D, that future product line keeping that healthy, closely followed by returning cash to shareholders and both in terms of increased dividends and increased share buyback, and you've seen that in our behavior this year.

So it sounds like, and I don't want to get too far out on your skis, but at the same time, we all like to look out forward. It sounds like the real juice in this thing is in 2016.

Dennis A. Muilenburg

Well, you're going to see improvements in 2015. As I said, don't anticipate a peaky cash profile or big year-to-year changes. What we want to have is steady, strong growth, year-over-year for the long-term.

Right.
Dennis A. Muilenburg

And you're going to see that in 2015. You're going see it in 2016. You're going see it beyond and demands, the demands that we execute our production ramp up successfully and that we are absolutely relentless on our productivity initiatives. And we are locked in to do that.

Well so here, having heard that, the framework I think about is you're earning $5, $6 in free cash flow this year in 2014. And depending on who you are in the marketplace, people are not a Boeing target but the market's target are somewhere in the mid-teens for [ph] bulls (29:29) that might be above $15, for some people might a little bit below. So getting from five to somewhere in that neighborhood on a steady basis could take five or six years or it could take three, and that's I think part of the question. Any thoughts on that?

Dennis A. Muilenburg

Yeah. And of course I won't give you a 2015 guidance. I mean, we'll do that later. But we're going to do that in a way that makes good business sense. This is a very disciplined plan. The opportunity we have ahead of us here in terms of executing this backlog with the product line that we have could do tremendous opportunity.

Right.

Dennis A. Muilenburg

So it needs to be executed well in a steady growing way. So, yeah, it will be measured in years. This is a long-term sustained effort. But it's also not one that's we're going to have to wait to see the results. There are near term and long-term results. We also have to be mindful that there are some cash headwinds as we've been very transparent about it that we're going to have to deal with.

We've got model mix questions that could be dilutive on earnings as 787 becomes a bigger portion of the overall delivery profile. As that program goes cash flow positive, cash taxes will increase. That create some headwind. You think about delivery profiles as we ramp down the C-17 line, for example. We know that we're building ahead. We're very confident that we're going to find customers for those last 10 airplanes, but will they be delivered and paid for in 2015 or in 2016, an open question.

So you could have five or six C-17s that are built in 2015 but don't be delivered until 2016. That could create some cash headwind in 2015. So we want to be transparent with some of those headwinds, but the underlying machine here is a very strong machine.
Just last question on 78 and then I'm going to ask you a couple of questions on what we just talked about with some of the other programs and then quickly as we are moving pretty fast here on defense. But 787, I think the November deliveries might have been viewed as a little bit lighter. Are you still comfortable with the 110 for the year?

Dennis A. Muilenburg

Very, yeah. November, you've seen the 7 number that's out there. Reminder back in June, we delivered 15. So there's always month-to-month variability on deliveries and customer intros. But our guidance were 110 for the year, very firm and we'll meet that.

Robert Spingarn

Okay, that's good. You don't happen to know off hand how many EMC airplanes that'll leave...

Dennis A. Muilenburg

We have a handful to go. So again, that's not a big mover on the overall delivery profile. We'll continue to work those off over the next couple of years. But we'll hit our 110 this year. We'll continue ramp up. We're at 10 a month next year. And we'll be getting ready to ramp to 12 in 2016. Very confident in that production machine right now. Our key is, while we're hitting rate, hitting deliveries, continuing to take the learning curve path as well as we take flow time and hours out of each individual jet.

Robert Spingarn

Right. 777 bridge, you talked about that. You've gotten the number of deliveries – of orders lately. That backlog is beginning to firm up some more. I don't have the numbers in front of me, obviously, but you want to deliver about 300 airplanes in the period, 2017 to 2019 where you start delivering the new aircraft [indiscernible] (32:58) to deliver in 2020 as well. I think you're about halfway there.

Dennis A. Muilenburg

Yeah. Let me just paint that picture for you. So we'll go entry into service on the 777, actually 2020. So the bridge that we need to build between now and then is about 600 airplanes in total including the feathering at the edges. 300 of those are in firm backlog today. So, it leaves 300 to go. Of those, we have about 150 that are in options that customers can exercise. We also have about 12 – a little more than a dozen very incredible proposals underway to sell those remaining slots. We need to sell them at about 40 to 60 a year over the timeframe to hit the mark. This year, we've sold 57 so far, so on track, maybe a little ahead of the average. And we expect to sustain that. So we're very confident we'll be able to fill that bridge. We've been in essence filled out through 2016, little work to do there yet, really concentrating on filling out 2017, 2018 slots right now, which is a very normal wide-body behavior.

And the thing to remember is the 777, the 300ER of today's airplane is unique in the marketplace. It's got 100 seats more than the A330 Neo. There really is nothing else that creates that kind of value and capacity that it creates in the marketplace. The installed fleet is about 1,200 aircraft, 40% of which are more than 10 years old. So just the replacement demand on the existing 777 in-service fleet is also going to help us build on that timeframe.
How important is recovery of the freighter market to take some of the aircraft that might be coming off lease out of the equation before you opt to sell?

Dennis A. Muilenburg

It’s an important parameter but it’s not a dominating factor. If that happens, it’s helpful, but we’re not banking on it happening. I will say we’re seeing some return in the cargo market, some re-strengthening. I think year-to-date, we’re about 4.5% up cargo demand compared to last year, so returning to a more nominal historical cargo growth rate. That certainly is helpful to the equation. We also see some customers who are exhibiting a buying behavior where they want to get a combination of 777s that will fill that need over the next six, seven years and also placing order for 777Xs.

So, what we saw from a A&A and [indiscernible] (35:25) for example are good examples of that.

Okay. Any kind of commentary on what happened with the Delta campaign, in other words, how do we think about that?

Dennis A. Muilenburg

Well, you start with public comments on that. It's a challenging competitive marketplace. We put some very good offerings on the table. We believe our airplanes do provide superior customer value in the marketplace, but there are also some challenges on slot availability and I think in this case, we had a customer who needed airplane sooner than we had slots available.

And so as part of our disciplined production system again, we're going to be very financially disciplined here. And we're going to manage our production system well. It's going to efficient. It's going to be effective. We're going to do everything we can to meet our customer needs, but we're also not going to do things that would create iterations or anomalies in our production system for single campaigns. We owe it to all of our stakeholders to have a good solid reliable production system. And we'll continue to compete. We certainly stand behind the products we're bringing to the marketplace.

Just briefly, when Max comes into play, 777-X comes into play, those might be some of the cash events that you're thinking of, but I wanted to ask if they are, so we get into that 2017, 2018 period. You go from building the AMG which is so mature and so profitable and with such scale there than the Max. Again margins – both margins we shouldn't see much of an interruption there because they're all part of the same block. How do we think about the cash as we switch from one model to the next? There's got to be some learning curve on that.
There will be some learning curve, but again with the offsets we've got on overall rate-ups, so while we're rolling to Max into the line, we'll roll that into the Renton Factory where we're doing the 737 today. While we're doing that, we're going from 42 to 47 to 52, so that the rate ups were certainly cash generators. And you're right. There's a learning curve which introduces a new airplane that can pull back on earnings and cash. But we're getting very experienced on how to do those model implementations efficiently. We just got on the Dash 9 model on the 787 line. So the dominating factor in terms of cash generation tends to be overall rate of the production line and the rate-ups will more than compensate for the fact that we'll be introducing a new model.

Robert Spingarn

Just briefly switching to defense and missile, we're bumping up here. So I want to see if anybody out there has a question. But just high level, Dennis, going back to your prior sector, the budget...

Dennis A. Muilenburg

Yeah.

Robert Spingarn

...Boeing's exposure, if we have – what sort of the binary outlook, sequester, no sequester? How are you thinking about the PA, PF-18?

Dennis A. Muilenburg

Yeah. So our overall view there is it's a challenging market that's not going to get any easier soon, right? Sequestration, [ph] the law, the land (38:25), could there be some alteration to that? We hope so. We're hearing a lot of voices calling for it. We think sequestration as it exists today is destructive to both national security and the industrial base. That said, we can't depend on it changing.

So we've assumed that sequestration will play out in full. We're continuing to take affordability actions – productivity actions in our defense business, $4 billion of cost structure taken out already, another $2 billion plan. Partnering for Success is frankly helping us with the defense business as well. So we're going to continue to drive affordability productivity in the defense business assuming a sequestered environment and if it plays out better than that, it creates some potential upside.

In terms of product mix, so we said C-17 is going to roll out. P-8 and tanker are coming up. So it's going to more than replace that sale volumes problem there on the PA as we get into a more normalized budget environment.

Dennis A. Muilenburg

There's some year-to-year puts and takes, if you look at the annual production profile. But that is a long-term stable production line now. Especially when you put it into context, the 737 commercial line. We're rolling the
airplanes out the same line. So it's between tanker and P-8, that will create some good solid volume for the future. Helicopters are very healthy across P-22, Apache, Chinook, international growth, very solid. About a third of our defense business now. Services is strong. Commercial satellites, very strong business.

So, the majority of the sectors there are – we're in a good market position. And if you look about investing in the future, there aren't a lot of new opportunities out there. But the few that are out there, we're pursuing aggressively including things like Long Range Strike, UCLASS and T-X.

Robert Spingarn

Just to address something that's out there in the wind in the marketplace is KC-46. You guys have a very long term view on that product. Maybe you could put that into context what the current discussion of cost growth, really how we should be thinking about this?

Yeah, you saw the – what we disclosed in 2Q, the writedown due to some technical issues, wiring issues on the first airplane. Those have now been resolved, closed out that airplanes done. We completed factory functional test which is our ultimate test for full-leased integrated system. That airplane is now rolled out of the factory. It's gone through fuel dock which is a preparatory step getting ready for flight testing. It's actually on the flight line now. So we're doing final prep for first flight on tanker, feeling very good about where that program's at now. We have some of those technical issues behind us. We'll now focus on executing the flight test program under development and getting the program into production.

And our Air Force customers told us at a minimum, they need 179 of these aircraft. So that's going to be a long, strong production profile for that program. And so we put it in that context. And frankly, if you look at the total U.S. need and international need, it's probably closer to a 400 to 500-aircraft opportunity, and that's the context that we put tanker in.

Robert Spingarn

You feel good about the first – was it 18 over the next four years...

Dennis A. Muilenburg

Yeah. And so the next big milestones is the first pool of tanker flights will occur in second quarter of next year and then milestone seat production decision by the customer in the third quarter, and then we'll deliver the first 18 tankers by 2017. And very confident that we'll hit the mark on all three.

Robert M. Spingarn

Excellent. Well, unfortunately, I think we hit the clock before we finish all the questions. But I want to thank you so much for spending some time with us.
You bet. Thank you, Rob. Appreciate it.