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The Boeing Co. (BA)

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MANAGEMENT DISCUSSION SECTION

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

Okay. I think we are ready to go here. So I'm Doug Harned, Bernstein's Aerospace and Defense analyst. I'm very pleased to have with us Dave Calhoun, Chairman and CEO of Boeing. I mean, I'm sorry about that, CEO of Boeing.

QUESTION AND ANSWER SECTION

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

Q

But along that line to start out with, you have now been given by the board the opportunity to stay for five more years essentially. With that, what do you want to accomplish? How do you view that timeframe and what you want to do with it now?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Yeah. So it's good to be with you Doug. Yeah. I had always anticipated when I accepted this role with my eyes wide open and knowing the industry as one of the longest cycle industries that there is that you don't do anything in a year or two. Maybe an airplane get certified. But that's far from having accomplished anything meaningful. So, yeah I think about it this way. And I want that sort of future duration to be as long as the board wants it to be. I have no specific contract term or anything of the sort. They'll tell me what it is.

Stability is the most important. We have really three mountains to climb, right? The first one was recertifying the MAX. January 13 of last year, when I started, there were a lot of questions about that. And most importantly beyond the product which I have always had immense confidence was the relationship with our regulator. Them feeling pressured, us trying to call a date, nobody happy, customers not knowing when to expect an airplane, et cetera, et cetera, et cetera. So in that first year, we got the airplane recertified not just here, but with Europeans

which was very important to us. We can't just certify one place. We fly them everywhere as you well know and I feel good about having done that.

On the other hand, I feel even better about I think reestablishes the trust between the FAA and ourselves. Giving ourselves the time to do our respective work, we know we have different things that we're accountable for, but I think we did build a rapport there and that's important. That's important to continue that. You don't just recover that year and then, oh, everything is okay. You have to sustain it. And so that's one.

Number two, of course, was the one I didn't foresee which was COVID. I came in March of that first year. I want to see this through to recovery. I have always believed in a certain recovery, not as guesswork, but that it was certain we would get back to 2019 and we'd get back on a growth track because of the important missions that we serve. We connect people around the world. We supply people around the world. Our equipment is in demand. And it is and will be again supply constrained. You know that's an industry most people would like to get into and get into in a big way. So I am confident in that outcome and I want to get us to where that outcome is at least on us and that we begin to realize some of the growth investments that we've sustained during this difficult time.

And then the final hurdle for me now is another new one in a sense, and that is we've got to repair, or restore is probably a better word, our deliveries in China. We have to have a framework where our governments want to get back together, restore trade in selected areas, and I think in the case of the United States, Boeing and commercial aerospace has to be a high priority in light of the number of US jobs that are attached to it and the global leadership position that we've enjoyed as an industry for so long. That's predicated on doing business and trying to continue to do business in China. So those three mountains were still at different stages of recovering from.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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Well, talking about the recovery, I'd like to get a sense of how you see that now. It's obviously varies a lot by region of the world. We just saw Airbus come out and say they want suppliers to be ready for a 64 a month rate by – in the end of 2023 and maybe going to 75 a month in late 2025. What's your view of the pace of the recovery and what do you make of that Airbus announcement?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Well, let me start with just customers and maybe stating the obvious, in light of the number of customers that have been involved in this conference of yours. It's pretty robust recovery. It's more robust than I ever imagined when we started the evaluation of COVID and what it might mean. It is completely wrapped around the distribution and penetration of vaccines across the world. And I think as has been said, large, developed domestic markets are the first to recover, and they are recovering very quickly. China is back at their former traffic levels and will continue to grow from there. United States and you're hearing from everybody, our US carriers are back in it. They are going to be supply constrained, in my opinion, starting in the summer, bringing back schedules, getting back to those former levels of 2019 and then get back on a growth track between the rehiring and the rebuilding of their own networks and then also the supply chains that support them in all the services and other thing it's just going to feel supply constrained for a while. I think that will mean it's a healthy recovery and they'll get back to former pricing levels sooner rather than later. That's important to all the folks who care about return on the capital forward momentum. So I believe strongly in that.

The next big part of it, of course, is the long-haul stuff that involves borders all around the world and the border protocols that are currently in place. I'm getting more and more optimistic that those will begin to resolve

themselves, again tied to vaccine penetration in a variety of those bigger markets. But the corridors between big developed markets, and let's just talk about the North Atlantic first maybe, those corridors are going to sort of define the recovery in my view. They will be largely based on bilateral negotiations that no longer require quarantines but are likely to require some verification and/or passport that both sides of the ocean agree on. And then around the world these bilaterals will continue to expand.

What I'm encouraged by are all the regulatory authorities that are beginning to weigh in on facts and science as opposed to anecdote and let's just keep the border closed as long as we can. That comes with politics. So I'm beginning to see a real push now for facts and science, and I do think the North Atlantic a real opening when it comes will help to find that. And then that's likely to come quickly. So by – but I think when we exit 2022 and head into 2023, we might already be talking about 2019 levels and growth from there.

And the last dimension that some people – there's a lot of supposition around is the leisure market is going gangbusters. Everyone can't wait to get out and visit all the places that they haven't been able to. I am so confident that the business market, business travel is going to be the same. I think it thrives on competition and there's plenty of it out there and people are going to want to see each other and I think the operations start quickly when it really opens up.

So that's how I feel. On the rates, so now this is – your relationship with the supply chain. That's really what rates speak to and my own view of forecasted rates and I'm only one player. So I'm not going to comment on my competitor's rate announcements. But in my opinion, the idea that we should signal to our supply chain what the rate is going to be in two or three years from now when we still do have time to respond and do have time to put things in place, the idea that we're going to compete on those forecasted rates I think creates trouble for our supply chain. Supply chains make their own judgments. They don't just take exactly what we say. I was in that supply chain. I was an important supplier into both – both sides. We make our judgments about how optimistic or aggressive our airplane manufacturers are going to do it. And then we apply that judgment. If we get it wrong, we pay a price for that. We don't satisfy demand that would otherwise be there and/or we're getting crushed because there too many inventory and all of a sudden we got to lay people off because we were ahead of ourselves, right. So we're trying to manage that process.

I don't want that process to go on like that forever. So my approach to rates are we'll announce rates when we need to announce rates. With respect to supplier capacity management, I simply want to give them every ounce of information and transparency as to exactly what the backlog looks like and what the production lines are delivering. And then allow them to weigh in on that judgment with me and those that require physical capacity meaning investments that are longer cycle than the cycles involved in the order or the simple rate adjustment. Then we'll try to get as far ahead of that as we can. But I am going to steer clear from blanket rate announcements that go out too far. I will always announce rate adjustments when I need to for the benefit of the supply chain not in terms of signaling market shares.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC



Well, when you were talking about the recovery, you talked about the leisure travel in the US, which is very strong. We heard that this morning from Delta, American, now Europe recovering. That looks good. But the single largest market out there is Asia Pacific. And so when you think about that part of the recovery, it's hard for Asia-Pacific to really recover without seeing China recover not just domestically but internationally. So can you give us a sense, you mentioned it at the beginning, but can you give us a sense of where things stand because China's always tended to split their market between Airbus and Boeing. Things have been kind of frozen there in the last four years. Where do we stand now and what needs to happen?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Well, we need the two governments to want to restore some of the trade lines that have been in place for 50 years and serve both markets, both economies incredibly well. And I'm quite constructive that that is a step both want to take and it's not ill informed. I have reached out to our new administration and members of the administration. They understand the issue and the opportunity. I think they want to be constructive. They also have a much larger construct to put that within. And they have real debates on issues between the countries that also have to get built. My hope is that the restoration of trade is a step toward building that bigger construct, which will have significant issues and debates on both sides of it. And I think it's in both parties' interests to want to do that. And I've had enough signals or I believe that they understand it well enough that I have confidence that will happen. I can definitely not pick them off. I don't know when that moment of flying on trade restoration begins with respect to the United States and China.

I do know that if it goes on for too long, I pay a price. I pay a price because they're the biggest part of the growth of the industry in the world. Roughly 25% over the next 10 years of the growth will come from China. And then secondly, if I'm not allowed to serve, I cede global leadership and an industry our country and our company has enjoyed for quite a long time. So and I have – I'll never give up on that. But it's going to create real issues for us in the next couple of years if we can't find some of that trade structure.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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Now switching gears a little bit. You've as a company now have over \$40 billion in net debt. You've talked about the fact that you don't see any kind of liquidity risks here anymore. And how do you then view your debt situation and does it change the way you think about managing the company, including from an investment standpoint?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Yeah. Well, the implication of that question, and everyone asks it for all the right reasons is, are you constraining, are you not spending on some things you really would like to spend on. And the answer to that question is no. We have sustained what we think are all the important investments necessary to maintain leadership in our respective markets. That's, that's always has to be the answer. And we have always had a high level of confidence in the recovery of the industry and then therefore the return of cash flows to the Boeing Company similar to the kinds of cash flows that we enjoyed before COVID for the MAX issue and that we can get there in relatively short order in aerospace and aviation terms.

So it's our confidence in that that has allowed us to continue to invest. Fortunately, we've made some great, I think, transformation decisions to lower the overall enterprise cost structure in ways that will benefit us forever. You always take a hard look at your bureaucratic stuff that gets in the way. I think we've taken a good sharp lens to that. We've saved ourselves, I think, money that will be saved forever. And then we made a few big factory decisions like the consolidation of our 787 production into Charleston and now the ability to scale around one big line in Charleston and a terrific workforce in Charleston. We don't have to move parts of that airplane across the country which is an inefficient move, historically.

COVID is sharp reduction in the rates allowed us to take that moment and consolidate production. We'll get back to the rates we used to be. But we're doing it in one footprint, and there's a lot of leverage in doing that over the long term. So there are – productivity, there are accretive things that are happening for productivity and margin

enhancement going forward that without COVID we might have been able to do. So we've been doing all that of that kind of stuff. We've taken advantage of consolidation place where we can. We know we're getting more efficient, and we think we sustain all the important investments that I think investors are counting on from the Boeing Company.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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Well, and just wanted to follow on that with respect to the 787, a couple of things. One is you said that operating on that single footprint in Charleston you could get back to the rates you were once have before. And you're five a month now. You used to be that's been a capacity limit of about seven a month in Charleston. Does that mean you can get all the way back in Charleston up to a 14 a month rate, I mean that would be double where you were?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Yeah. The answer to that is yes, that footprint, that design was a big footprint when it got – when it was started. You don't go from five to that number overnight. You get there in increments and we have plenty of cycle time to stage those increments appropriately and reconfigure the flow of airplanes to the factories such that we can accommodate those kinds of rates. We wouldn't have done this if we didn't think we could. We believe in that airplane, the most utilized of the wide-body fleet during the COVID time. And what do you do during those moments? You fly your most efficient your best airplanes. That's what you're doing. That is the 787 fleet. It's performing beautifully [indiscernible].

We will settle through the consolidation issues in simply moving equipment from one place to the other. We pretty much got – worked our way through that already in the first quarter and we will work our way and get to a stable delivery rate which is right now our biggest challenge.

In working with the FAA, as we alter some of our production control systems and other things, in ways that are designed to make us more productive long term that feel really unproductive short term, but we think we're doing this the right way and we're doing it alongside the FAA. We got to give them time to breathe on that as well. So our objective over the course of this year is to really settle that down.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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Well, can you describe what happened here because you had started – you had these issues which I know we've talked about as non-conformity issues you've dealt with them and the rework process. You got the restart, you were delegated the authority and you delivered nine airplanes in April that look good. I mean, what's happened here and do you still see the opportunity which you all have talked about before delivering 100 airplanes this year? Is that still...

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Yeah, I – yes, but let me give you the one caveat. Nothing's changed with respect to the determinations that were made, deliveries of the airplanes before this next pause and they're performing beautifully. So our issue is that the FAA rightfully wants to know more about the analytics and process controls that we put in place which are different than the ones we had previously so that we could be more perfect. That's the word I would use. But, anything that's different requires a vote and requires a deep look by the FAA. And they just have – they have questions about the approach that we took, not objections just questions. And I don't want to ever repeat the

mistake of us trying to pressure them to do things faster than they would otherwise do and as diligently as they would otherwise do. I'm still in that frame of mind. I will stay in that frame of mind. And it's going to create some instability. Probably, I hope that's measured in months and not longer than a calendar year, but again, I'm just going to let that play out. I will say this. I don't think we're going to introduce as many changes as we did in this last five month pause. We took on a lot and we did it because we thought it was in the best interests, still believe it's the best interest in a long-term stability of that plant and the productivity at that plant. So we don't regret any of that, but it's it would be unfair of us to shove it down the FAA's throat, so that wouldn't be right.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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And so, the five-month production rate, you're sort of continuing with that independently from whatever this delivery restart timing is...

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Yes, yes. Yeah. Yeah, we'll stay on that clip and we're still going to deliver the lion's share of the hundred, but I hope it's all of it. I hope you can measure the difference in tiny little numbers. But I'm not – I don't want to get too predictive about that. Most important thing about all those airplanes is they have homes. I have no doubt we'll be delivering them and that they'll be productive the day they get put into use. And so whether the tail of that's measured in a month here or a month there, I'm not going to get too caught up on that one.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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Well, if we flip over to the MAX, you've restarted deliveries of the MAX. You're still, I assume, planning to be in a production rate of 31 a month in early 2022. Is that correct?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Yeah.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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And then we're now – but we're now getting a little closer to that. And then you said earlier, you didn't really want to get into long-term rates but to think about where you would be at the end of 2022. I mean the supply chain needs to know that now from an operational standpoint, can you give us any better sense on what that trajectory might look like?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Well, I don't want to get past the 31 number until I have a real clarity around China and that's a real factor in it. It does affect the recovery trajectory. And if I try to run that number on the basis of an absolute win across the board in China at a certain moment and get it wrong it's a big wrong. So I don't want to do that. We have tried to push out China deliveries in our inventory and with respect to the commitments on our line rates. We've tried to push them out of the as far as we can, risk reduce to all those kinds of things. But we're going to get within cycle pretty soon, right. And as you get within cycle, if we can't restore those, those trade routes then we're going to

have to delay going for 31 to anything until we're confident that, that is restored and so that, that's why I'm not getting ahead of itself on it.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

Q

Yeah. Yeah. So, the other big airplane is 777X.

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Yeah.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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So can you tell us what's the status of this? I mean it's been pushed back a couple of times. Can you talk about how you see the market for that airplane now? We've had some people switch out orders and what is the 777X look like to you in terms of schedule and attractiveness of that airplane.

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

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Yeah. So sometimes the way I'd like to characterize it is if I had a clean slate of paper today and it wasn't a 777X loaded in my development pipeline, would you want to do it again? The answer is absolutely, yes.

But I've seen that into the market for quite a long time. That airplane, we are still confident will be certified in the fourth quarter of 2023. We've incorporated all the timeline learning that we could possibly incorporate from the MAX recert and the architectural preferences that both the FAA and the EASA has embedded in their regulations. So those are important things with respect to how we do this and we've incorporated that and we've given ourselves time to learn as we go through this.

On the other hand, that airplane has been flying quite a bit. We know a lot about the airplane, it performs really well. We don't have like a load of technical glitches and we don't have a battery issue. We don't have that kind of stuff because we've actually been flying doing the things that we've been doing. So I like the status, I like the progress we're making against the cert. Again, we will be subject to FAA's timeline and we will not question it.

Now, when I think about the airplane, this airplane is going to have in its category an enormous cost advantage per seat, per volumetric numbers for freight and there will always be routes that want an airplane of this size and scale. The difference with this one relative to the historic competition is that it sits by itself, sits by itself. We don't have a 747 competing with it, own backyard and we don't have any A380 competing there. It is – it's on its own. So we keep refining it, we keep pushing it, we bring it to the freight market, all of which I am confident we will do. It'll have a 40- or 50-year run and I think it'll be one of the great runs of all time. So I just – I have lots of confidence in it. It's often forgotten. Oh, it got delayed. Do they really want to do it? It's quite the opposite. We love it. We want to do it. We think it fills an important part of the marketplace. It's an incredibly efficient airplane and we think it flies on its own.

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Well, you mentioned the freight market. So I take it from that that you're very confident this will have a freighter version and I ask in part because I think there will be challenges in the – from a carbon standpoint for freighters

around – existing freighters around in 2028. Yeah and so but you're pretty committed. It sounds like that this will be a freighter as well.

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Well, it's another reason why when you've led as much – as long as we've led in the freight market with our portfolio of airplanes, it's another very important reason to do it because it will meet the standards. And so that's just another arrow in the quiver of wanting to do it. So haven't been announced, hasn't been approved by our board, but I am confident that this one will move down that path.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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Yes, I know and you've – Boeing has really just dominated the freight market. On the last Airbus earnings call, I asked Faury about that question. He said that whilst they're not well-positioned there, but it's important for them to get there. My understanding is they're looking at a potential A350 freighter. I mean, how do you see Airbus right now as a competitor in that market? And if you...

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

I see them as a direct competitor, right? I think they are going to go after the market. I have no worries about that. And they're going to work with airfreight they know. And so – and then we have to compete against that. And we like our chances. We really do. And it's not just based on the knowledge and history and all the things that we've learned in our – with our experiences in the freight world. It's just a raw performance of the airplane at that size and scale. It's an incredibly efficient smart choice for the really great operators out there. So, it's – will we win them all? No. Will we win a lot of them? Yes. And we're confident of that. So – and I have no doubt that our competitor will want that market and will come after.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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And so stay on the competition here, you've acknowledged that the one spot in your portfolio where you're not as competitive is around the A321XLR.

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

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Yeah.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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How do you think about that airplane today and how you respond to it?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

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Well, it doesn't – it's a good airplane. I like everything about it. And it definitely fills up a select part of the market. Our view of that market is it's a select part of the market where it enjoys a performance advantage. And then there's a whole another part of the market, which is much bigger where our airplanes enjoy a performance advantage. And that hasn't changed that much. It really hasn't. So the notion that the A321XLR somehow sweeps

the market of some sort or garner some giant share that differentiates the portfolio shares of our two great companies, I don't think so. I don't see that as a market mover in that regard. And then, it won't be all that long before we'll announce ours. And ours will not be predicated on replacing that because of what I just said. If we believe it's a – if it's a select and niche market, we're going to tackle something much bigger than that.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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Maybe you could talk a little more about that? What are the things you're thinking about with respect to how you go after a new airplane eventually, I'm not sure what the timeframe is, but what do you want to see before you make that move?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Yeah. So, on timeframes, as you know, you and I have talked about the timeframes of this industry. We got lots of time because these are big bets that last for 30 to 50 years. So when we call out that next point-design, we're not going to rush. We're going to do it the right way and the smart way. But I think there is something very different about the next airplane for me, for Boeing, and the next airplane for our competitor. And that is, for the first time, we're not going to get an instant 15% or 20% hit on the basis of a more efficient propulsion package. I just don't think that's going to happen. I grew up in that industry; they have good things on the drawing board. But in the timeframe over this next remaining part of this decade, I just don't see it. Therefore, whatever advantages ultimately are enjoyed by that airplane are going to have to come out of the design and assembly or build of the airplane. And that is going to have to result in a lower seat cost mile and trip cost for airline customers because I've never known them to ever evaluate an airplane on anything but that.

And I also believe that the engineering technologies, meaning modeling, the idea that you're going to build this into a model, it's going to be a robust model that can test parts of the airplane performance in ways that don't require the old physical forms. I think it's going to be an amazing contribution, both in terms of the speed of the design and then the resilience of that design first out.

And then, secondly, using that same modeling, that digital models, to use assembly techniques that have not yet been used at scale on this kind of airplane, that simply result in the lower cost airplane, lower investment, lower cost, so that we can then give the customer what they want.

The two things I just said we define as programs where you've got program develop an airplane. Our program is to develop a model that is resilient enough that we can say, this can be used on the development of the next airplane. And then, secondly, to perfect some what we call large scale determining the assembly techniques using our long experience and learning curve and composites to be able to demonstrate that at scale and repeatability such that it can be used on that airplane. And if we can do those two things, that next point-design will accomplish its mission.

So, I'm sequencing to these two programs before I call out a point-design and, I use the word I, we, and we'll call out a great point-design when we call it out. But it's got to be predicated on much more efficient way of design and build.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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So I take it from that it's not about we want this range payload, it's about getting the underlying manufacturing and technology right and that would allow you to make the right choice, the [indiscernible] payload.

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

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Listen, [indiscernible] payload is a – what collection of routes are you trying to outcompete the other guy, the known alternatives. You look at a collection of routes some within one customer, some across customers, and you ask yourself that market is X, is it big enough for us to make this bet, make this investment, enjoy our advantage, and get on with life? I mean that's how those point-designs are ultimately determined. That's why I say it will not be, oh, let's create an overlay on the A321XLR. That's not justification for a point-design on a new airplane.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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One other design aspect of this is environmental. You've talked about sustainable fuels. There's been a lot of talk about hydrogen. How are you thinking about this now? How do you see the timeframe and how do you see investment in this area?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Yeah. First of all, I like the story we have, and it's not a story. I like the tools and the path that's available to the aviation industry plus ourselves, our customers, everybody. And so, our job really is to how do you execute, what set of customers who works with you that defines some of the new specs, and then how do you begin to change the footprint. My path will not include – between now and 2050, will not include the introduction of a hydrogen-powered airplane in the scale of airplanes that we're referring to. We have experience with hydrogen. We test it. We use it. We've had experience on military platforms. We've got experience on commercial platforms. We don't think it works for that climate and that scale and size. It will work for some very small packages. And my guess is a few things will get introduced. I don't think that's what we're talking about.

Couple of thoughts. Number one, fleet renewal still represents the biggest first step the industry can take in light of all of those big propulsion advantages that were enjoyed when the last generation of airplanes was developed and is now being delivered.

So, COVID gave the industry a big opportunity to lay down the most inefficient parts of its fleet. Now the question is, what policies will be in place to make sure that older, inefficient power doesn't come back at the same rate it used to, right? It used to go down and it's come back. I believe there's enough sustainability pressure on the world to not allow it to come back at that same rate and therefore, increase fleet renewal. So that's step one for the industry.

Step two is sustainable aviation fuel. The technologies work, we know it. We've all run them in our power plants. I'm sure my competitor has too. It works. The question is cost and scale. That will get solved when a couple of the important players made up of probably airplane guys like us, propulsion guys like GE and Pratt, Rolls decide on the spec that they want for sustainable aviation fuel that does not in any way shape or form decrease the performance of that propulsion package in the air, reliability, all those things. That will get that done, it will be done. And we'll have a selection of technologies. And then policies are going to get called out. It suggests through the industry that 35% or 40% or 50% of their aviation fuel will be sustainable. And then money will flock

to the players that can do that and plants will get built, scale will get provided and competitive costs will be attained. That's the way I think this all plays out.

It would have played out that way with ethanol except because it's ground base they had a better option yet which was a battery, right? We are not going to have battery packages that fly 777s, right? So we don't have that option. So we're going to have to stick with that one option, build it to scale, get to the cost, create the specs, control the specs, and it's going to be I think a great answer and get us a lion's share of the way to our road to net-zero.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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I want to switch gears for a little bit. Several questions have come in on this and it was the next topic I want to go into, and that's Boeing Global Services. If you look back at statements several years ago by Boeing, this is going to be a \$50 billion a year revenue business. You and I have talked about this. It's also an area where Boeing has long sought to try and get the kind of aftermarket and margins that you once enjoyed at GE engines. How do you think about BGS now with the growth potential? Is there – and can you get this higher aftermarket margins?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Yeah. So, it's a great question. And it's another I think the change are – all the changes that have occurred as a result of the things that Boeing has been faced with allows us to look at it with a quite a different lens. And I come at it with a very different lens in light of my history in the services world in aviation. The most important lens that's different now than where we were a few years ago is the return on capital.

We have to have a discipline lens that suggests if you're not creating enough value that ultimately gives you a return on every next dollar invested, then it's probably not worth doing. We're not in the value destruction game. But the bigger thing is it points to what do you really bring to the party that differentiates. In our case, it is always technology and IP related the airframe itself, right? It's always that. It is also some of the acquisitions that we made that bring us some really important flight management tools, Jeppesen as you know is a very important technology and footprint that almost all of the aviation industry uses and enjoys in many ways.

So, our job is to invest heavily in those things, take advantage of Boeing IP, take advantage of a real technology differential, as in the case of Jeppesen, package more value-added services on that digital footprint and then deliver them to our customers in more ways. That is happening and I feel very good about that. And I believe we can achieve a very sustainable double-digit growth rate on that because of the productivity it delivers to our customers. So that piece I feel good. There are pieces of our portfolio that I am not likely to continue that really relate to delivering somebody else's parts with no value added to a customer and suggesting that we add value especially when it means I've got to invest a lot of capital over the [indiscernible]. That's not my idea of a big win.

So, anyway, we're just going to be – we're just going to have a tougher lens on it. We're going to mandate return on capital, medium, long-term. I love what the leadership team is doing. I also love the step they took to combine it with the government services. We got some real efficiencies out of that one. And today, government services has 60% of the portfolio. So, it's a – it's held up as well as any services business that touches commercial aviation can because of that government footprint.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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Yeah. And I would think you also – you have an advantage with a lot of the foreign sales supporting that out of government services too. So, if you go over to Boeing Defense and Space systems, this has been a relatively slow growth business compared to others in the industry. I mean, can you give us a sense of what kind of growth rate you foresee for BDS?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Yeah. First of all, there was a day when that term slow growth would just crush me. Over the last two years, I have never appreciated slow growth more in my life, quite frankly. So there is a steadiness and there's a predictability associated with it and there's a capital efficiency attached to our government business that is actually quite good and quite important to us as we've learned. So there's a lot I appreciate about that.

I do think we have a portfolio both in terms of near-term programs that show up in the budgets, programs that are classically added on by Congress as we move forward to support a low single-digit maybe to a mid-single-digit growth rate. And I'm okay with all that, I like it. Again, it's predictable. But there are also some really burgeoning things going on now in the government side that I think are going to lead to export of technology and knowhow to the commercial markets and I'm sure of it. And we are – we're playing a real hand in that and I can't talk about all that stuff as you know, I can't even scale it for you as you know, but it's going on and it's really quite important. And I really I like the feedback I get from our customers with respect to how we're doing on that front. So that's pretty much all I can say.

Space has a whole new life. I hate that the other guy gets talked about more than we do. We have a good business there. It's rock solid. Everyone likes the new players. Okay, fine. But that's also bringing a lot of attention and a lot of support into programs that I think are going to bring new meaning back to space, and Boeing will be a player there. We're committed to that. And then secondly, satellite world, communications, connectedness. We have a great footprint there. Very high end technology plays. And we're doing quite well, and I'm confident we can continue to do well there.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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Now, one of the things – there are a couple of questions on this, but I'm going to broaden the topic because there's a question – couple of questions coming in about what you think about supersonic aircraft, and you have this Aeron investment. But I wanted to – I was going to broaden that to say you also invested at one point in Virgin Galactic there. How do you think about participating in startups in some of these different areas as it relates to the core of your business?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Well, I love the thought, and we've done it. At a different day and with a different lens, we may have done a little too much of it. In light of our current situation, it's sort of easy to evaluate a few of those and ask yourselves is it ever going to matter to the people attending this conference. We have to answer that question. Is it going to be big enough and meaningful enough to Boeing? And maybe not just in terms of share of market and served market, but also in terms of return on capital. And does it bring any technology? Does it bring any technology to our existing core business? And if it doesn't, then it's got to really stand on its own, et cetera, et cetera. And our decision on supersonic was that. We couldn't get there with respect to the market, with respect to the needed

investment even though we were invested, we value added it year-in and year-out, we got to a decision where, yeah, we just – we didn't believe in it as quite as much as we thought we could. I applaud the decision by Scott and the team at United to go after technologies like these. If the technology comes out and comes to bear on the marketplace in some timeframe that matters, congratulations. There'll be at the front-end there and all for it.

We don't have to compete on every single form of aircraft. We did make a decision to stick with Wisk. We love it. It's an incredible airplane. I've been out to see it. It's got 1,500 perfect flights with respect to test, autonomy, demonstrating autonomy, demonstrating quiet, all those things. It's not going to displace anything in the portfolio we're talking about today. But there is a gigantic urban helicopter market out there that wants to get replaced as fast as it can and a wing makes all the difference in the world, practically eliminates noise, right?

Electric is all things sustainable and the design of this thing and the packaging of it is incredible in terms of our ability to design it and repeat it by way of manufacturing. So there are just some wonderful things about it. And then, autonomy, while that first one isn't going to be flown by – flying on its own, it's designed to fly on its own, it can fly on its own. In the beginning, it might have a concierge onboard. Someone who knows how to – can hold hands with customers and do all the things you've got to do. But it's got lots of tentacles back into bigger Boeing, lots of them.

And so there are all the reasons in the world for us to want to play in that. And it is a big contribution to sustainability if we can displace that urban helicopter market. And that's a relatively big market. It's measured in billions. It's not a tiny little niche. Anyway, so there's a lot of things about that we like and we sustained our investments and we continue to invest.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

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Well, someone that I'm sure was looking in a lot of those investments was Greg Smith. So several questions on that. He's leaving soon. What are you looking for in terms of a new CFO internally, externally? What do you think?

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

A

Well, first of all, we're definitely not pursuing a change of direction with respect to our finance function now that supports our company broadly, et cetera. So we're not – we've got none of that going on.

So we're just looking for someone as competent as Greg who preferably has manufacturing experience in addition to familiarity with the aviation world. The former is more important than the latter. I think we can get a very accomplished CFO to help us and there are plenty of avenues to learn the industry with respect to decision making. But we make stuff. We make planes. We have a giant supply chain. We have operating systems spread throughout the company, some from legacy companies that we bought, some from our – the company we built. And there's an awful lot of opportunity for us to continue to get that all rationalized and right. So I want somebody who has experience and knows how to do all that.

And then secondly, a capital markets expertise I think would be enormously helpful to us because we are still having to do more capital market work than we would normally have to do in our former life. We have a debt paydown scenario that we want to get after aggressively. So these are all decisions that a CFO will weigh in on. But as I said, if I could duplicate Greg I'd do it.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

Is there a timeframe?

Q

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

Greg is going to retire in the middle of July. I mean, that is – that was the date we discussed the day we announced this and of course that he called me and we're going to be in good order to announce a replacement, in my view, get someone in place very quickly, yes.

A

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

Well, we're about out of time. So, I would say to wrap up perhaps you could just give us a sense of when everybody – all the investors here are looking ahead, what are the things that we should look for to show that we're – Boeing is really on the track and meet – to meet the goals that you're laying out here?

Q

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

Yeah, it's probably just a couple of things. Let's just start with this. As I described at the outset, we've been roughly on a track to get over three mountains, the first one, the cert of the MAX we did, and we did it with a lot of confidence, that airplane is up. I mean it's flying beautifully. Its reliability rate is 99%. It's doing its job. People love the efficiency associated with it.

A

The second mountain is COVID. I feel like we are over the top of the mountain and begin to slide our way down to the other side and are probably more confident than I've ever been with respect to that outcome and a return of travel, broadly in the world. We can all debate whether it's at the end of what year or the middle of what year, but I don't debate and I have no concern about – my conviction about a certain outcome. We're going to get back on the, at least, a level of traffic before we're going to get back on a growth rate as well. I just believe in the essential service of the industry. And I also believe that it's going to end up getting served by the same two suppliers for quite some time.

China will appear someday, but it's – they'll get accepted in the world. But that's a long track. There's plenty of growth in the markets to support three players. So, I don't think that should get started. I will say the two things I think about as I get to the finish line of this year and move into next year where I think recovery is now on us, it's, number one, China re-establishing those trade routes. We need to do that because that, as we discussed on the rate numbers, that will be the guiding influence on recovery of rates.

So, we've gotten to a low on rates. I always call it sort of our essentials, what we can be productive at and generate cash at. We have no intentions to stay there. But let's not jump until we know that market is right in front of us. And so, anyway, I think that China moment. And then – I'm as frustrated as everybody is with the stability of our delivery rate month to month to month to month to month to month to month. We have to now begin to do that at a narrow band – within a narrow band right now or anything above that. There are good reasons why and we are working with our regulator I think as constructively as we can, and we're going to continue on this path. But I think by the nature of the issues that we've had to wrestle within this early going, the return to the market, lots of reasons, I believe that stability will come back. That is exactly why I'm holding our teams accountable to both in our commercial and in our military practices. So when we cross the end of this year, one, we will have –

have demonstrated rate stability and we need to project rate stability so that investors have more clarity on their models.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

Okay. Well, great. Well, Dave, thanks for joining us. Hopefully next year it's in person, but this was really good. Thank you.

David L. Calhoun

President, Chief Executive Officer & Director, The Boeing Co.

Yeah. Appreciate it, Doug. Yeah. Thank you.

Douglas S. Harned

Analyst, Sanford C. Bernstein & Co. LLC

Thanks.

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