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# The Boeing Co. (BA)

Investor Day

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## MANAGEMENT DISCUSSION SECTION

### Matt Welch

*Vice President-Investor Relations, The Boeing Co.*

Right. Good morning again. Welcome to day 2 of Boeing's 2022 Investor Conference. For those of you that are in person, I hope you enjoyed the tour and the management reception yesterday. This morning, if you go ahead to the next slide, please – this morning, we do have a full agenda. We'll do management presentations. We'll take a quick break and then we'll come back for a Q&A session with the management team. Couple of housekeeping items. Just a reminder, no photos or videos while on Boeing site.

And the next slide, please, just a reminder projections, estimates and goals we include in our discussions involve risks, including those described in our SEC filings and in the forward-looking statement. Disclaimer, in addition, we refer you to our presentation and disclosures for reconciliation of certain non-GAAP measures. And with that, I'll turn it over to Dave Calhoun.

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### David L. Calhoun

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

Thank you, Matt. Welcome everyone to Renton to our delivery center. This is the source of all truths. If you want to know anything about Boeing, our customers are here. If you walk around these offices, you'll see you'll see a tag out front for pretty much everybody in the world. They all come here, they sit here, and they wait for their deliveries. They inspect the airplanes, pretty much everything they think. And boy, has that been an interesting dialogue over the last couple of years.

But this really is, in my view, one of the greatest sources of truth in our company. I want to make a couple of introductions right up front. Might have done it last night, but it just looked a little too disheveled at the reception. I have two board members with me who have been critically important to what I'll refer to as a turnaround, come back, assign whatever label you might want to assign to it through one of the most tumultuous moments in industrial history, in my view, with one of the great companies in industrial history, and that's the Boeing Company. But Larry Kellner, who is our Chairman, if you don't mind standing up for a second, he weathered that storm and he's done a remarkable job of reconfiguring the board.

I want to mention to you just a few, because I don't want to miss it. We've had seven new members of our board. All value-added, folks. Steve Mollenkopf. Mollenkopf was the first and this is all sort of that post-MAX moment an engineer's engineer smart interfaces with all of our technical programs Admiral John Richardson oversaw the naval fleet. All things nuclear in the submarine area, all things safety. They have to be great. They have been great. The record is superior. Lynne Doughtie, who joined us from KPMG and who sits on our board and the audit committee and has been a real value-add. Akhil Johri, former UTC CFO, long aerospace history. Lot of experience, runs our audit committee and does it incredibly well. David who I view as the single best propulsion guy on the planet, the best. He joined us and he leads our safety committee. He has history with safety in every way you can imagine on one of the most if not the most critical component on an airplane. He has been involved and he's retired. So we get him mostly full time. General Stayce Harris, she's a pilot both in the National Guard and then a long career at United. She knows the Boeing equipment, knows the airplanes, knows the cockpit, an incredible talent an incredible talent in every way and keeps everyone informed. And then most recently, David Gitlin, of course, runs a very successful company, at Carrier, but has real deep roots in his time with Raytheon and UTC. He knows this industry, knows it well. He's a member of the safety committee. And again, we did what we

think the governance world asked us to do, which is to populate this board with people who really know this industry and have depth and are willing to get their hands dirty. And so far, I can testify that that's been the case. So anyway, thank you, gentlemen. Glad you're with us.

Why now? Why would you do this? Supply chains are in turmoil. The Fed's going to launch another increase in maybe an hour or two. World seems to want to get tougher. Why would you do it? Well, in my discussions with all of you since the day I started this first quarter of 2020, I heard two themes. Some articulated it in different ways, but it was pretty much the same. You got to relieve the risk. These are huge. They're enormous. Many referred to them as existential. And I would too.

Retire the risks. Get to a moment where you can get back to normal, back to where you were, stable deliveries. That's what we want, particularly here at BCA. We know and we understand what the cash flows are that are attached to that moment. That's what we want you to do. That's what we're going to attempt to tell you, the timeline, how we plan to get there and why now, I feel like we've mitigated these existential moments that we've had to face.

I make a couple of – I've been told by my team, don't get emotional, be clinical, so I'll do my best. January of 2020, after a December decision which led to a leadership change and the stoppage of our production line on the MAX, we sat with 450 airplanes on the tarmac that were finished with 385 on our customers' tarmacs that could not be used in revenue service. These are huge numbers, annual rates of production, a large part that we would have to sort of rally ourselves to get back into the air. And you think that's a big risk, except there was one bigger one and that was, would the MAX ever get certified? Would it get certified, because in January we had an FAA that was out there on the record publicly of saying, stop with your predictions, Boeing, stop with your predictions, the every three months. Predict, can't do. Predict, can't do. So, that was a serious moment and everybody knows it. And I call that existential number one.

Existential number two. January the 22nd of 2020, first case of COVID report in the United States. Where was it? 20 miles from where you're sitting. In a nursing home called Kirkland. And that COVID moment and the migration into our two most important factories, two biggest factories, Renton and Everett. I mean, it's uncanny, how quickly it came. We lost our first employee March 22nd. And that was like getting your stomach punched. It was a moment for all of us. We shut down all our factories on March 23 to give ourselves time to recover and build protocols that would ultimately keep our employees safe.

We overlaid an entire management system on top of what was already a difficult moment to do what? We've got one system protecting the airplane. We had another system protecting our people. And at that moment, the people one took precedent. So, we worked that, we didn't retire that effort. Week by week by week by week protocols changing, directives from everywhere. A supply chain that touches pretty much every state in the country. And you're trying to work your way through that. Anyway, it was an incredible moment. Proud of the team because we stepped it up and what we did for our people, because everybody here knows we don't do this virtually. We don't do this virtually. So, you have to have hands on. You have to create an environment where our people are safer coming to work than they are out in their communities. And we maintain that record through that whole period of time and we're proud of it.

So now the real issues with respect to COVID as it just jumped on top of everybody here in March and April, 80% of the traffic in the world sat down, 80%, that's when everyone took a big deep breath, big deep breath. That's when survival questions started come in with respect to the Boeing Company. And we had to deal with that. And that is when the credit markets shut, credit markets shut and all the media coverage into suggestion that it would sort of require a bailout like the automotive industry and other things started to come around.

And I'll be the first to tell you, it scared our people, it scared our people. they weren't interesting moment at that time. Good news is the CARES Act moves forward and moves forward quickly. Our customers are allowed to keep the employees that would ultimately allow them to bounce back and the Fed window opened for companies that have credit where investors believe in them and we went out at the end of April and we went for a significant capital raise to the bond market that we had \$25 billion? Why \$25 billion, because in those 30 days, 45 days, we looked at every piece of data we could find with respect to what happened post-9/11, what happened in the last SARS crisis and said to ourselves, when might this market return?

It's global. That was now a dimension we had never really been able to evaluate and we suggested that in 2024 or 2025, we could get back to those 2019 levels and then ultimately grow from there and that would take that long for demand to return. And were we wrong. Demand came back much faster. Vaccines got produced much faster than we imagined in that 30 day set of analytics. And then what we didn't realize was, forget demand. The issue we would all be wrestling with collectively in light of the adjustments that had to be made at that dire moment, was going to be supply and that supply chain sort of to rebuild and building the vibrancy back in that supply chain to support now, what is a hot market that would become the challenge and that is the challenge.

So our timeframes are not that far off. But the dynamics with respect to what we thought might happen and with what is really happen are quite different. Now there's a word on here called strict compliance. I think it's underappreciated in many ways, but why does it matter to us. Strict compliance is every airplane that leaves your tarmac, it gets delivered to a customer, will be 100% conforming to the engineering spec that you delivered in certification. And I mean, precisely. In the old days. It was a very inefficient process with us and our regulator, where we looked through those things, determine no safety involved. You couldn't see it, it was no issue and we'd be able to move these things through the system no more, zero.

So 450 airplanes, a year's worth of production. Here's the punch line. It takes as many or more hours for us to prepare an airplane and return to service as it does to assemble it in first place. So we have a factory. So in January of 2021, after a November 13 cert date, where the administrator came out, flew our airplane, ex-737 pilot, confident in the airplane, confident in the certification. That was day one for us. That was day one. We relieved that risk and it was a big win for all of us.

On the other hand, we have to restart a factory that had been closed for a year. So our start was from zero. Wasn't from the rates in 2018, wasn't from the rates in 2019, it was from zero. And a workforce - I give the team here at BCA a lot of credit - we kept. We had to reallocate them to do all kinds of other things, to help us in some areas, et cetera. But most importantly, we had to keep them on the payroll. And we did. But we had to bring them all back and less than half of them went back to the same job that they started in, less than half. When you get through all the bumping and you get through all of the voluntary retirements.

So starting a factory from scratch in 2021 and starting an even tougher factory at Moses Lake to do the RTS work with all the same hours applied but less standard work. Not a lot of work instructions for everything that need be done, a lot of take apart, a lot of put back together. But we did it and we did it steadily. And in the end of the day, in light of what's happened with the MAX and its reintroduction and putting those airplanes back in the air, I could not be more proud, could not be more proud of the team that pulled it all together.

You know final risk here that I unfortunately we think we covered here in the third quarter these fixed price development. I don't want anybody to think that these cropped up in the third quarter of this year. That's not what happened. You all know it. These programs have been with us for quite a long time. We have made significant

progress on the airplanes themselves, the technical developments that are embedded in the development process. We've made great progress.

The tanker, which was the biggest of the contracts and the biggest of the issues on my first day. So before I even met with the president on subjects like MAX, I had to go meet with the Pentagon on the subjects like tanker. We need this airplane. It is the most important airplane for us to project to project. And ultimately, we promised them we do everything in our power to make it work. And as everybody, I hope has read, that airplane, the tanker, now satisfies all its use cases in all theaters in the world. So it's a proof for all of those things.

We still have work to deliver the remaining airplanes. That is what the charge represents. And then ultimately we believe that franchise is going to be a significant payoff for shareholders of record during that period and unfortunately know that we will not recover the enormous investment we made over these last bunch of years.

So we try to be as candid as we can about that, but we think we're close to that moment. And of course, we have the President's airplanes. I'm not going to do a lot of talk other than to tell you we're going to deliver to greater planes. And we think we've covered the risk and the other two development programs we love. And I do it all again tomorrow. I'd do it all again tomorrow. So I'll let Ted talk about that.

So it's not like we don't have few risks ahead, but these risks feel to me a lot more manageable than risks that we had to rearview mirror. And it is our time to give you some guidance, so that we can live up to it, right, to really measure. Everybody here knows we haven't been in the guidance business for quite some time. So here we are. Oh, sorry. I missed the best part of that last one. Just a couple of comments with respect to leadership philosophy and maybe I'm talking to the media, maybe I don't know who I'm talking to.

What happened on culture during that period of time? What happened on culture? Number one, day one, transparency. We were in a significant public trust moment, significant public trust moment. We all knew it. The board knew it. They knew it clearly. Job one, when it comes to public trust, anybody's trust is perfect transparency. Tell them everything you know, every minute of every day. Tell them all. Start with your own people at every level. Know where the issues are.

Know where they are, deal with them. Deal with them. Don't be afraid to tell the regulator, day one. Don't be afraid to tell the regulator. Don't be afraid to tell the customer and don't be afraid of the media coverage that tries to inform the flying public. It is what it is. Just deal with it. Transparency from day one. I think of all the things that we talk about with respect to culture and leadership that one might be the most powerful with respect to the reemergence of our company.

Two, patience, a word I'll bet you've never heard from a CEO, it's not our pedigree. It's not what we do. We're usually impatient. On pretty much every front and I know I'm talking to a whole bunch of type As. The issue with patience is when you're dealing with a flying public that's worried about trusting you and you're hearing from a regulator who's feeling like they're getting pushed into a corner at every turn with respect to delivery dates, certification moments, all those things without thinking about the discovery that the regulator has to go through themselves to make that certification.

That's a problem. And there is only one answer. Be patient. Give them everything you got. Give them everything you got. Some is great and some isn't. Get the feedback. Let them go through their own discovery no matter how inefficient you think it is. And that's the process we went about. Frustrating everybody. Certification took a year. Startup of these two factories, we're still in the throes of starting them up. That's my view, still more training to be

had. Still more to do. Don't force them. Don't let them travel work. Don't let them do the things that get you in difficult, long-term predicaments. Do this the right way and stay patient. And then most importantly, I'll make a comment with respect to culture, and then I'll talk about it later in a different context. Safety.

Safety dominates Boeing, anybody, anybody, whose thinks, we don't remember those accidents and I'm not talking about me, I'm talking about every employee in the Boeing Company. We don't remember those? We don't remember the discussion that went around it? You're crazy. We all remember it. And pretty much everything we've done since that day, everything that we've done. Larry, and I started a memorial service. We went through every single name. Every soul that was lost in these two accidents. Tears everywhere by everybody. We'll never forget it, nor should we ever forget it.

And all the work we do around safety, which has been the dominant theme in our company during this whole period of time, all the work we do around safety is built around that premise. It's a testament to the industry because the industry does this. I can promise you Boeing does it and it's a big deal. All right. These are the charts you all are familiar with, so I'm not going to spend more than a minute. We serve giant markets. This is ten years' worth of numbers. It's \$10 trillion. These are huge. We don't have to go hunting for adjacencies. We don't have to sort of broaden our mix. We can go with the tried and true. We can go with the portfolio we've got. We can run the play and run it well. And we've got a giant market to serve.

Strategy. Normally in a strategic discussion and certainly the strategic discussions a lot of you would like to have with me or the predecessors is pull out the airplane chart. Which airplane are you going to build? How are you going to build it, right. Exactly what's the market share going to be when you get there? When with respect to every external plane which occurs in our industry, above 15, 20 years in between, what matters is the capability to bring that airplane. Is it differentiable enough to put you in the leadership position? I don't want to fill a gap in a product line.

I want to build a product that's going to differentiate in a way that absolutely substitutes the airplanes that came before it. That number has to be at least 20%, 25%, maybe 30% better than airplanes it replaces. And there are technologies and concepts that go with that and underlying ways of building it that can get you to that answer and they all take time and they all have to be proven. These are the areas we talk about. I'm going to just comment on safety first.

We see other part of safety, people underestimate. Culture would be great. Everybody could just feel like this, we got to be safe. This is the most complex, difficult program that we have at our company and most players in the industry have in theirs. This is assessing data from every use case, every flight, everywhere in the world understanding what anomalies occur in every one of those flights, putting them together, analyzing the data every way you can, and get it to the engineers as fast as you can to make determinations and assessments about what it means to safety and then take action to do something about it.

It is a program of all programs. We have our best leadership team working on it. They've invested in a whole variety of new sources of data and most importantly, the integration of our safety management system with the safety management systems that exist in the airlines. That integration gets us more current, more data, and ultimately better on avoiding safety incidents that may occur sometime in the distant future.

Digitally enabled. We're not that far from autonomy. We're not. It's not unreasonable for us to think about autonomy on the next commercial airplane. I'm not sure the first one goes with autonomy, but it sure should be capable of it. It sure should be capable of it. This isn't a pie in the sky. This isn't the automotive industry 10 years ago. We have our planes out there doing dramatically dramatic things in our military fleets.



You saw our little Wisk airplane out here. We intend to invest in that Wisk product because there's a discrete small market not going to move the needle a whole bunch for everybody. It will educate the FAA on how to certify autonomy in the commercial airplane. So together on a manageable project, we can work our way through that taxonomy of issues and ultimately the methods and process they want to use to certify autonomy. In the meantime, we'll keep running autonomy technology through everything we have in the defense portfolio because it requires it and we'll keep developing it.

I think we can be the leader in the world if we're not already, and we're going to stay focused on it. Unmatched producibility, I'll let Greg Hyslop in his discussion, just comment on it. Producibility is going to matter a lot for all of us. It's going to matter a lot for all of us. The card we'll play and the one I think is going to benefit us the most is our long experience curve in the composites arena. We've been at it a long time. It offers real benefits, offers real benefits. You build more functionality into it. And the application of composites is mostly about the learning curve and processing and applying it.

It's not the design of the matrix itself. My friend David over here knows more about this than anybody because he use it in a fan blade on the GE90 that has turned out to be the world's best fan blade by a long shot. And we all remember taking deep breaths when we started that process. Sustainable aerospace, I'll let Chris talk about it. That next airplane. And this might be the long pole in the tent on when a next airplane comes along. This might be it, because if it doesn't have a sustainability wrapper all around it, if it can't meet the emissions tests, if it can't deliver significant performance advantages, then there won't be an airplane. It just won't. We may not even be allowed to introduce airplane that doesn't do something like that.

So we have to prepare for it and we have to be good at it. You'll hear from Chris. We don't think hydrogen's the answer. It doesn't mean we're not going to work on hydrogen. We've got a long history of working on it. But I don't think hydrogen is going to get us from here to there in the 2050 timeframe. Anyway, sustainability, we've got a lot of investments Chris will talk to you about. Then finally, global talent and culture, just to comment on this one. In the early stages and in the early stages of this year, comments about the exodus, exodus of our experienced talent here, there and everywhere, blah, blah, blah. I view this one complete opposite. We had voluntary layoffs. Of course, many people took advantage of that experienced talent. When they do take advantage of it, if we ever need them for anything.

I mean, they're at the end of a phone or in our offices within a minute, they do what they do. What really happened in this process is we were forced to hire 10,000 engineers. Everybody's been talking about the demographic curve in the aerospace industry and in our industry. Our company, they were talking about the demographics of the engineering workforce and oh boy, it's going to bleed away. Now, we had 10,000 new ones and I get to visit them. I get to see what they're working with.

We visited our autonomy center at MIT here recently, and I saw the most brilliant set of resources that I've ever seen, sitting around talking about autonomy and the application of autonomy in our world. And these are all software engineers, AI experts, blah, blah, blah, blah, blah and they joined because of the mission. And they're here and they're now. And our job is to get them all lined up with all of the important strategic efforts that we have underway, all the development projects, all those things make them real contributors as fast as we can.

And when we do it well, we won't hear about demographic problems anymore. We just won't. So I view this as a moment in time where we get ahead of that. Greg will talk to you a little bit about it, and some of the methods by which we retain all the information experience that we do have, how we retain it and how we use – how we



disseminate that to our new people. So this is strategy for us, capabilities. And then there'll be a moment in time where we'll pull a rabbit out of the hat and introduce some new airplanes sometime in the middle of next decade.

There'll be a moment in time when we do that and if we bring any of the capabilities that I am suggesting will be available to us at that moment, will be differentiated. And leadership will be well within our grasp. All right, this is probably why most of you're here. Let me just describe the track. We were at – everybody knows 2020, when your factories aren't delivering airplanes and you're fighting through COVID and doing all the things that we're doing, it was one of the all-time cash burn years. We did everything that you're supposed to do. We've restructured a lot. We're not going to have a long discussion on restructuring, but a lot of those restructuring actions are leverageable in this equation in a pretty significant way.

2021, another rough one. We finally crossed the start generating cash in the 2022 timeframe. And we think this \$10 billion number which I call normalized, this isn't a pie in the sky. Everything that underlies normalized for you, you've seen before. In terms of quantities, in terms of what we do, the hours we put into airplanes, blah, blah, blah. So our objective is to get back to that. More importantly, all of the characteristics of what that looks like, stable deliveries, predictable deliveries, satisfied customers because they get the airplane when they want it, where they want it.

That path to normalization, I'll let Brian talk about it, it's largely built around things we control, like pretty much everything. And I do suggest that we control the supply chain and how it advances to support our needs. So I submit I'm responsible for that. And our team is responsible for that. And we believe we can do that. So it's not somebody else's problem. We get back to where we need to be on the 737/787 deliveries, I'll Brian cover the stats et cetera. But this we could do and the defense fixed price programs for all of you know, we aren't taking them. We're not. We haven't in quite a while. And we're not. So, we'll maintain discipline with respect to contract type, but we will be aggressive going after some programs that we're well invested in already that none of us can talk about.

We'll stay disciplined on investments. Again, everybody thinks there's a giant ticket out there somewhere in this timeframe or even five years beyond this timeframe to do some new fancy airplane. It's not going to happen. Not going to happen. Technologies won't be ready to make that happen. So, make sure that's understood. End of the day, always highest levels of quality and safety, I hope, I hope in light of the actions we've taken, we have given you proof points about how serious we are on safety and quality, our willingness to pause lines, our willingness to self-disclose the most minute non-conformances you've ever seen that required the most aggressive rework to ultimately remedy so that we can restart the delivery of our 787s.

All of those issues, all of them, self-disclose, self-examination, post-MAX, our willingness to go down that path, our willingness to deal with it and not complain about policies or how strict is strict. I think that's a testament to our determination to see through safety and quality in every way I can think of.

What happens after 2026? In our industry, that's tomorrow. In our industry, that's tomorrow. We had a few of these things behind us. We have a very robust aerospace systems, I cannot wait to get the full integration of the SMS systems our customers use everywhere around the world, fully integrated with our own system. Now human intervention data on data. AI being applied at every level to figure out where every anomaly exists, an informed experienced team that can look at the data, pull out the things that they believe are going to matter and go to work on them.

So there's a lot to be said for that. Derisk the product portfolio, we'll have a -7, we'll have a -10, we'll have a 777 family, it's a loaded product development line. It is. We'll have them all at our disposal. I love the way they

compete because I compete them now. Stan's out there with this team every day looking at deals. We win our share that airplane performs, it performs. Make no mistake. We talked about capabilities. I want nothing more than return money to you.

This company is big enough. It serves a big enough market. It's profitable enough to be able to do that and do that predictably and where we are on a march to go do it. And then finally, just one last word, and Brian will probably emphasize it a couple of times. I do not need, we do not need equity to do it. So everybody, write that down, please. Anyway, I'm excited about all this. It's been tough. It's been a heavy haul for everybody. You may or may not like this outlook, it is the outlook. It's what we believe we can do. It's what we believe we owe the shareholders.

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