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The Boeing Co. (BA)

Investor Day

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Executive Vice President, President & Chief Executive Officer-Boeing Commercial Airplanes, The Boeing Co.

Thank you, Brian, and good morning. It's great to be here and really represent the people that bring these products to life, the employees of the Boeing Commercial Aircraft Division. I simply believe they're the best in the industry at what they do.

Let me orientate you briefly we are at the Seattle Delivery Center. There's two big things we do here. First, this is the revenue end of the engine for the 737 MAX. You saw our Renton facility yesterday. That's where we build. And then we take the airplanes and prepare them for flight on the airport over there. We bring them here and we deliver here. Also, the aircraft from the modification centers converge here for delivery. So two factories when you think about the 737 inventory production.

The second important function of this facility is our test and evaluation of commercial and military derivatives. And Greg's team gets to run that across the enterprise. But this is a very important center for that. Today, we have on display some terrific airplanes, the P-8, the derivative of the 737 that serves Navy of the US – the US Navy, as well as foreign allies. The ecoDemonstrator, this is our 10th year of running that program. We've had nine airplanes. That is all about advancing our environmental responsibility.

Small things that can make a difference to the footprint of our products in the world and make the world relative to sustainability better. This year, we have over 30 projects on that airplane. Two years ago, you may remember, we also used ecoDemonstrator to test technologies. We would make the cabin safer in this COVID environment, specifically around our confident travel initiative.

And then in the back, the 787, this is a 787-9 on display, which has become the heart of the widebody market globally and our newest member, which is in certification, the 777X program. Everybody remembers the queen of the skies, the 747. I would submit to you this is the next queen of the skies, the 777, which stands in a category of

its own, will replace the four-engined aircraft, the 747 and the A380. And then, of course, the workhorse, the 737, this is a 737-8 for the Southwest Airlines.

So anyway, coming out of this pandemic, it's really clear that travel is resilient. People have a need to connect. They have a need to want to explore the world and when you factor that with the market is still in the recovery, I believe, in the pent-up demand that people still have for travel. I believe we have some built in resilience as we continue to grow, even if economic recessionary pressures continue. And as was shown over the next 10 years, we have a large market, \$3.5 trillion that's about 20,000 aircraft. We've already captured a very large backlog of that. But we have more to go and I'll just tell you, our products are very well-positioned to capture our fair share. So we already have stability in terms of commitment to work off as we turn our focus to execution.

Our focus on executing stable rate ramp ups as well as working through and working with our supply chain to bring them through a disrupted world called COVID. When I think of the supply chain and Brian rolled the numbers out, the supply chain really is our limiter on how fast we can take rate up. And we've factored in the performance in this commitment we've provided on the financial guidance.

We're seeing shortages in the near-term. We talk about the limiting factor, the major limiting factor, the rate being through the engine manufacturers. But we've seen near-term impacts as well. You've heard about them from galleys to wires to electric components and an occasional quality escape out of our supply chain which our quality management system catches and that has been a factor for our stability in 2022.

Last month, September or month before September, you saw net output of 37, on the Boeing 737. This month we were impacted again by quality and we'll give you the early orders and deliveries numbers. We saw 23 Boeing 737s. At the last moment, our quality management system caught a defect in the fuselage, two defects and delayed deliveries. We'll recover on that quickly. We can surge and we will recover for our deliveries at the end of the year, but that adverse quality which we have to manage out of the system was an impact.

So we'll continue as we work forward to align and focus on stability of the rate on the 737 and we've rolled in the lessons we've learned of bringing the MAX from zero to its current 31 into the 787, but stability and quality will be the key metric. We manage the commercial division as we move forward through 2022 and throughout the periods of guidance we've given you.

Our final focus remains on the development programs and we're fortunate that we have terrific leadership, Mike Fleming and a team that led the MAX to recertify, all under a single management team. We're taking that experience and using it to manage all of our development programs. And Mike also has and has quite a reputation of superior customer support. He had the ability to launch the MD-11 into service the 777, the 787 and working on the development, his passion for the customer and making sure the product works right every time it's high. So we're very fortunate, with that focus and that continuity we'll assure all the lessons working with our regulator, the FAA, in a tight relationship transition through each program.

If I can turn to the next slide. This is my fun slide. This is our product lineup and I'm very proud of this. All of us are proud of the product line. When it comes to the performance of this line up in the market, every one of our airplanes we offer has been sold this year across the family. And I'll give you a preview of orders for October. So, as we close the month of October, we netted 122 new orders across our family. That brings our total for the year of 550. In that, 122, I want to highlight, Alaska ordered another 52 that included dash-10s and IAG ordered, concluded their order on the MAX, which includes the -10 and -8200 the category killer, if you will, dubbed by Mike O'Leary. And we had orders for freighter, the 777F, we had orders for 787, unidentified.

Our customers love our product line. Talk just a little bit about the product line. We have the MAX family. We have two models in service. We have the dash-8, actually three, the 8, the 8200 and -9. They're doing well. There's 806 flying. We're well over a million revenue flights over 2.5 million flight hours since the accident. The dispatch reliability is at 99.5, higher than the current NG fleet. In fact, the highest dispatch reliability embedded in the majority of those MAX, is Stephanie's aircraft health monitoring.

I think that contributes significantly to ensure we had the highest reliability. The 787 fleet we've said it before it's most utilized widebody in the market, particularly through the pandemic and it's really a testament to the environmental capability of that airplane, the fuel burn and the features that we added for the passenger, lower pressure altitude, big windows, smooth ride through our flight control system and that airplane continues to open up new markets in it will, as the international widebody market recovers.

And we were quite proud in the month of September to announce that China Airlines added this to their fleet. In addition, it was great to see Lufthansa take delivery and rollout to their public the first 787-9. So we're expanding our base and then we have the 777-9 and 777-8, which really stand alone. There is no competition. We added a freighter version of that this year. We launched it and it will be the flagship for major international carriers as we move forward.

As I said, it's the new queen of the skies. As for freighters, we continued our long tradition of providing freighters that simply do the right mission relative to tonnage, relative to economic advantage. We are very pleased to add the 777-8 F this year with the launch order of Qatar. And since then we've grown our order book with orders from Lufthansa, ANA, Silk Way and it was great to be in Luxembourg to sign Cargolux, which will renew their entire 747 fleet over the long haul with the 777-8 F.

And of course, the 767 continues to move on with orders, orders from FedEx, orders from UPS. We're quite proud that airplane does the work and satisfies that middle 80-ton market segment. So we're now focused on development. You can see the aircraft we have in development 737-7, 737-10, 777-9, 777-8F and the 777-8. We'll continue to close major milestones on these programs. And we continue to collaborate very closely with our regulator.

On the MAX, we've talked. We continue to work the certification and we anticipate that will close either later this year or early into 2023. On the MAX 10, we'll continue to work with the FAA and we anticipate the closure of certification by late 2023 or early 2024. The 777-9 remains on track and unchanged relative to its certification. We announced that that first delivery will be in 2025. And of course, we continue to evaluate and test the airplane while we work with the regulator. As we conclude the decade, we will field the 777-8 into the market.

At the end, I'm confident we'll have a safe product line up that continues to position us for decades while we continue to work the emerging technologies will enable the next generation. But for now, our development pipeline is full. It's absolutely full. Our engineering teams are excited. They're motivated. They're working on challenging problems to usher in these airplanes.

As Dave mentioned, we have a keen focus on new technologies that will enable the next aircraft and benefit us back into our existing product line. Like in the past, once we field these products, we'll continue to improve them. That's what's next in the agenda. We already have improvement plans laid out. For instance, the 787 we will introduce an enhanced gross weight version of the 787 in the near future, adding more capability to an already superior product in the middle of the widebody market. We'll also usher in a new flight management system on the 737, one produced by Boeing, one that's integral to our strategy. Dave talked about and sets the stage for having the heart of the airplane prepared as we usher in autonomy.

And in addition, you've seen we announce that by 2030, we'll reinvest in every one of our active production airplanes to make it 100% SAF capable. So in summary, we have a well-performing portfolio. We've got the right developments in the pipeline. So let's turn to the next chart.

We have a clear path to returning BCA to double-digit margins and a robust free cash flow. I want to orientate Brian gave you the numbers, but I want to give you a framing to think about how to view us, think of us as having two major factories, the production output, represented in the blue through our build and final assembly and delivery. And then the white representing the cumulative inventory of airplanes, both on the 737 and the 787.

For that inventory, Dave already mentioned the 737 that inventory carries about on average as many hours with it to prepare the airplane as it did to build and on the 787, it's actually greater than the assembly hours. All that works necessarily the 787, it's about the rigorous tip-to-tail strict compliance. And you will see we have a rhythm where we put lean even in those factories for preparing and modifying airplanes earlier in the year that was a challenge to throughput. We've resolved it and those benefits are being applied to the 787.

So we'll liquidate that inventory largely through 2024, a few that spill into 2025 and that will eliminate the disruption relative to the financials that Brian expressed. And you'll see the return of our real factory performance, the underlying performance. But that doesn't happen without work. We have to reinvest. And I'll talk about that with the supply chain. It's about working with the supply chain. Multiple things we're doing to help the supply chain recovery. We learned the challenges of re-staffing. It takes tenacity. This is a highly competitive market. We're sharing those approaches. We're sharing the techniques of how we alter comp and benefits in our recruiting with our supply chain.

But that remains a lingering issue and will be out and helping. We deployed over 320 people commercially out of our supply chain team into the supply chain. You may know we have a robust fabrication division in our commercial operation that fab divisions not only capacitate to produce the parts for the airplanes we have here, but we carry excess capacity to bail out and rescue distressed suppliers. And we've had a number of situations where we pour that capacity back into the supply chain in order to recover and assure the continuity of parts supply.

In addition, we've had to use some of the inventory engines, Boeing aircraft that already had engines in inventory to ensure continuity of production, avionics and we'll do that as a last resort. We have also been preparing our own factories. That journey started while we were in COVID. You saw, we made the difficult decision to consolidate the 787 in South Carolina and when it came to office space. We eliminated our excess office space. We had a commercial headquarters building. It was remote. It wasn't around the site. We eliminated that building. We liquidated, I've redeployed here right where the revenue occurs. And I've had my leadership deployed out in the factory. We're getting our teams closer to the factory, closer to the people where the great ideas get unlocked and inspired to build these airplanes.

And we've embarked on the lean mission. We never stopped. But clearly during COVID, we were focused on recovery, we were focused on getting the products recertified to a reinvigorated lean. Scott Stocker and Elizabeth Lund, who you saw yesterday, work that in tandem. We've started with a natural two big drivers for the company, the 737 and the 787. And to date, after our kickoff, we've had 24 Kaizen events just on the 737 alone, 14 more to go this year. And about 121 improvements that already are in work, which will lower the flow time, improve quality and lower unit hours, all about productivity that we can take to the bottom line.

You've also seen on the 737 – well, we'll invest in lean, we'll also invest in new technologies, the panel assembly, the automation you saw and actually was invested on several years ago is now paying dividends, our

horizontal build automation on the 737 which now will roll into the 777 wing line. So it's going to be a combination of lean and reinvestment in production technologies. And all of those capabilities will apply as we think about work to enable the next product. The outcome of all those enablers, the work in the supply chain, the work in our four factories will allow us to recover the rate that Brian outlined, to get us well into 800 aircraft of output. As we think about the 2026 timeframe and return us to double-digit margins with free cash flow.
