

GE Aerospace

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Doug Harned: I'm Doug Harned, Bernstein's aerospace and defense analyst, and I'm really happy to have with us again Larry Culp, Chairman and CEO of GE Aerospace. Larry's got a few things he wants to go through to start, and then we'll go into Q&A. And as you know, there's a pigeonhole if you have some questions you want to submit, feel free to do that.

Larry Culp: Great. Doug, thanks for having us. Good morning, everyone.

We're excited to be here eight weeks after having launched GE Aerospace. So, this is our first time on this stage as a standalone public company, a pure play in aerospace, fully focused on propulsion systems and services.

So, I thought what we would do once we get past the forward-looking statements is just bring everybody up to speed. I know some of you are very familiar with GE Aerospace, some of you new to our story as a standalone company.

One of the real benefits that we envisioned and are certainly realizing as a standalone company is our ability to focus more fully on our purpose of "inventing the future of flight, lifting people up, and bringing them home safely." And obviously, at this point in the industry's evolution we think that focus on safety and quality is properly placed.

We also view it as a serious responsibility. When you think about really at any point in the day we probably have upwards of 900,000 people aloft with GE Aerospace technology under wing, that's something that we think a good bit about and again why safety and quality are so paramount in our operating model.

Just a quick snapshot on the business. Thirty-two billion dollars of revenue. We operate in two segments: commercial engines and services and our defense and propulsion technology segment. Seventy percent of the revenue is derived from services, which is really all about the daily attention and support of an install base that is 70,000 engines large between commercial and defense. And I'll get into some of the dynamics in each of these segments in a moment.

When you look at our strategy as a standalone company, it really is very straightforward. Again, safety and quality at the top of the list, but we're really working hard to make sure we're supporting our customers today, preparing for tomorrow, while investing in the

future of flight. And when we think about today, it's really all about support and readiness, be it the airlines who are seeing a very strong post-pandemic demand environment, let alone many of our defense customers here in the U.S. and elsewhere around the world, given the state of affairs. And that is keeping us plenty busy today, and happily so.

All the while, we know that airlines want to modernize and expand their fleets. That has put tremendous demand on the airframers and, in turn, on us. And so, as we sit here today, we enjoy a \$150 billion backlog in our business. So, there's a lot that you've heard us reference – we'll probably get into a little bit later – all that we're working through on the supply chain front. But that really is the parallel effort today because, as many of you know, the supply chains to support readiness with the aftermarket today also support the ramp on new engine deliveries.

And all the while, we'll spend \$2 billion this year alone inventing the future of flight. And that involves a number of core technologies that will evolve into the next-generation single-aisle propulsion system, in addition to everything happening on next-generation combat engines, an area that we'll touch on here in a little bit.

But a lot going on, again very much with safety and quality at the forefront.

Strategy is wonderful, but you have to execute, and that is really where our FLIGHT DECK comes in. And this is our proprietary lean operating model that we have deployed across GE Aerospace to make sure that we're doing all that we can to systematically run the business better every day, particularly in the eyes of our customers. We've been on the lean journey for a number of years. What we wanted to do was take full advantage of the spin and the launch of GE Aerospace to make sure that we were really rededicating and accelerating our efforts in this regard.

The picture that you see on the right, one of our operations, I mentioned supply chain a moment ago. So, much of what we need to do is within our supply base and, in turn, in theirs. So, we're taking a number of these FLIGHT DECK improvement tools and principles to our suppliers. We have 15 supplier sites that represent 80% of our delivery challenges today. So, rather than finger-pointing, we're going in and doing deep problem solving at point of impact to make sure that we can contain near-term issues while building the capabilities that will allow us to ramp on a multiyear basis.

I'll do a double-click here on the commercial engines and services business. You can see \$24 billion in revenue. Good balance at the revenue line between our narrow-body and our wide-body exposure. In the lower left, you see the service breakdown, where it's even more balanced between narrow-body and wide-body. And we really like what's happening in the wide-body sector today.

Again, a significant service play here is that installed base grows, and that install base grows really on the back of our ability to deliver reliability, durability, and fuel efficiency one engine after another, one engine platform after another.

From a demand environment, I think we're really encouraged by what we see. The bar charts capture really the '23 through '25 passenger departure growth. Narrow-bodies up high single digits through this period; again, as part of that post-pandemic recovery. And now we see that pretty much around the world. Wide-bodies came out of the pandemic a little slower, but you see our anticipated growth there in the low-double-digit range. So,

we really like, again, the exposure we have both on single-aisles and in wide-body and the return to travel that we're seeing across the fleet.

And it's not just the new fleets. We're seeing extended utilization of some of our legacy platforms like the CFM56, which we're excited about.

With respect to the narrow-body side of our business, we talk about both the CFM56 and our newer LEAP single-aisle engine. What's noteworthy here is this business really is fueled by a 50/50 joint venture that we have with Safran, called CFM International. This year is the 50th anniversary of CFM.

And these are probably the two products that are the hallmarks of the success of that joint venture. You can see with the CFM56, 19,000 engines in the field currently. Really, the workhorse of the industry, with over a 1.2 billion of flight miles. So, an important part of the industry's backbone.

But almost half of the fleet has yet to see its first shop visit. So, when we think about this as an older fleet at 14 years, on average, plenty of service opportunities still ahead, with the LEAP coming in behind it. We enjoy a sole-source position with Boeing on the 737 MAX, a win rate on the Airbus Neo's in excess of 60%. So, a tremendous opportunity here to ramp a program that's turning profitable next year, where again it's largely about reliability, durability, and fuel efficiency.

So, we like this narrow-body position, which is then complemented on the wide-body side, primarily with these two engines: the GE90 and the GENx. Again, the 90, more of a legacy platform, but still significant, with over 2,000 engines in the field. Sole source on the Boeing 777. And we see very consistent growth here going forward both with the install base and the support in the aftermarket.

The GENx, probably going to double in size with respect to its install base between now and 2030. Here we have a healthy win rate on the Boeing 787 and really think that this is a platform that's going to ramp for us, going forward. Again, as that install base grows, really supporting our service growth.

So, as we build out those installed bases with these four engine platforms, what that in turn does is give us the opportunity to fuel a high-single-digit growth rate over the next several years in our services business. As the install base grows, as utilization increases, as we get the benefit of pricing actions and productivity, we really see this as the engine, if you will, of the GE Aerospace trajectory, going forward.

FLIGHT DECK, hyper relevant here as we look to improve our turnaround times for our customers, something that we may talk a little bit more about later.

We mentioned earlier inventing the future of flight. That's where our RISE program comes in. RISE stands for "revolutionary innovation in sustainable engines." There are a host of technologies here from more efficient combustion capabilities to hybrid electric, compatibility with sustainable aviation fuels, but what we talk most about is our open fan architecture, which you see captured on the left side of this slide. This is really the architecture we envision for the next-generation narrow-body, sometime in the 2035-2040 time frame.

But we're investing now. A good bit of that \$2 billion dollars I mentioned goes in that direction. Just last week we announced we're going to hire 900 more engineers this year

alone, many of whom will be deployed on RISE projects. We've got 100 technology proof points already behind us. And as we work through a number of tests this year, like ingestion tests, acoustic testing with Airbus, we continue to build confidence here. And I suspect in two or three years we're looking at ground testing, with flight testing to follow.

So, a lot to do in the near term here in the aftermarket in supporting the airframer ramps, but we can't take our eye off making sure we're nurturing the technologies that will lead the next generation.

But that's not simply a commercial story. There's a lot we could talk about. Time won't permit us to get into our defense and propulsion technology segment, but one thing we did want to highlight is the work that we're doing in our Edison Works research organization. This is really where we're on the leading edge on the defense side of things. This is a small revenue business today: \$300 million. We think it's \$1 billion in the next five years.

We're making a number of investments in advanced materials, hypersonics, unmanned vehicles, but perhaps most importantly, in next-generation advanced combat, sixth-generation platforms. And that's where our adaptive cycle engine, we think, continues to demonstrate real capability. We just completed our fourth round of testing. And some of you may have heard us talk about the additional thrust, the additional range, the thermal management enhancements that an engine like this will allow. We're excited about this, especially with respect to some of the next-generation air dominance platforms that are moving forward within the defense community.

An investment for us is not simply about what we're going to do internally. Of course, that comes first. We see ourselves also adding to what we're doing organically with inorganic investments. But the vast preponderance of what we're going to have to deploy as a company over the next several years really is going to come back to shareholders. And we pegged that in our March investor meeting in the \$25 billion range; \$15 billion of that will come in the form of buybacks, with a healthy dividend as well. So, plenty of investment opportunities around this wonderful platform. That said, we know we're going to have significant capital that we intend to return to shareholders, which should enhance the returns that we're able to deliver to you and for you.

And then just to wrap, I think this slide really does a nice job of capturing everything that is GE Aerospace today and a look at how we see the business evolving. Clearly, we offer the preferred platforms across the industry, be it narrow-body, be it wide-body, be it combat, both in rotorcraft as well as combat.

We continue to push our reliability and our durability. We know that matters most to customers.

That install base that I talked about not only drives 70% of revenue and the related economics, it keeps us close to the product. It keeps us close to the customer on a day-to-day basis, and we just get reps that we're able to feed back in to our daily operations, let alone our R&D efforts. And that's what really enables us to drive breakthrough innovations, like I mentioned a moment ago with respect to open fan, but across the entire GE Aerospace portfolio. And all of those assets really end up, I think, being put to better and higher use through our FLIGHT DECK, through our lean operating model.

So, we're excited about the potential for this business to serve, for this business to grow. We talked in March about a \$10 billion operating profit number in 2028, with triple-digit

cash conversion. So, a lot has to play out. We've got a lot of work to do. But Doug, work we know we can do and work we're excited to do.

Doug Harned: Okay. Well, great. Well, thanks. What I'd like to do is jump right into CES.

Larry Culp: Perfect.

Doug Harned: And you've talked about over the next five years getting kind of a 10% CAGR in revenue growth at CES. But as you mentioned, like, today you're about 50% narrow-bodies, 35% wide-bodies. What do you foresee that mix being when you go forward five years, given these different growth rates?

Larry Culp: Right. Well, I think the good news is we're going to see tremendous growth on both sides of the CES house, right? Again, I think we look at LEAP. LEAP's going to double, probably more than double, in size with respect to the install base by 2030. We know we'll see a doubling in the nx, just given the backlog. And as long as we continue to see utilization and traffic where it is – and again, on a global basis I think we're fairly bullish in that regard – we think that we'll be able to grow throughout the rest of the decade.

The mix, Doug, probably a little bit more wide-body, but I don't think wide-bodies come into equilibrium with the narrow-body.

Doug Harned: Also, when you think about it, you've talked about FLIGHT DECK and a number of things where you're working on margins. So, this year, I think you're looking at about a 22% margin, I think, in CES, and that's a little off of where you've just been. So, maybe you could help us understand, when you look over that five-year period, how you think about, I would say, on one hand, what that percent margin evolves to, and then what profit dollars evolve to. How do those mix?

Larry Culp: And that's a great way to frame the outlook. Because we tend to focus more on the dollars, right? If you look at just CES, I think our guide has us up \$500 million at a minimum relative to op profit growth in 2024. We know we've got two engine programs that are going to be OE-heavy here in the short term – both LEAP and the next-generation wide-body engine, the 9X – which will serve to depress margins, at least on a relative basis. But we know LEAP is going to be profitable on a program basis in 2025, and that really helps us, I think, continue to drive profitability on the back of that growth. The margin ratios will get better.

Certainly, from a price-cost perspective, we've seen incredible inflation – everyone in the industry has – the last several years. We think that will abate. We'll have a better price-cost dynamic.

But we also think that as we go toward '28, we go toward that \$10 billion op profit level, there's all sorts of waste, there's all sorts of productivity opportunities that FLIGHT DECK will allow us to both identify and realize, be it on the OE side of the house, but frankly, in equal measure in the aftermarket. There's a lot that we do not only in parts manufacturing, but in our service operations, that we know that we can manage more efficiently.

Doug Harned: And when you look at the growth, I mean, the supply chain side of this, I mean, last year it looked like the supply chain held you back some in terms of deliveries. You went down a little bit in the range of guidance you had given. So, where are you now? In other

words, are you still seeing the same level of constraints? Do you think you're kind of out of the woods yet on supply chain?

Larry Culp:

Doug, I don't think anybody's out of the woods. If they say so, I think they're out of their minds. It's tough. It is still tough. I would say that where I think we have made the most progress is really, if you will, inside the four walls of our respective facilities, where it really is about managing flow, it's really about managing labor productivity, and minimizing a new capital investment. And that's really core lean in many ways, and that's what FLIGHT DECK is about.

I mentioned in one of the slides that as we look at where we are today, 80% of what keeps us from continuing to ramp both in the aftermarket and with new-make is tied to supplier deliveries. It just is what it is. And that's not meant to finger-point in any way. But we've got these 15 sites where we're really going deep. We've got over, I think, now 550 of our engineers deployed with these suppliers – and in some cases, their suppliers – to really identify these constraints, these bottlenecks, put our crosshairs on them so we can get after real root cause and unleash the volume that's there.

You've heard all the reasons why post-pandemic we're all wrestling through this. I won't belabor that point. But shop by shop, line by line, what we're trying to do is help people help us improve the delivery operation.

I think if you just look at what we have seen in a number of these engagements – one comes immediately to mind that we were on the phone reviewing yesterday. We've seen a 25% increase in throughput by breaking some of these bottlenecks, both that are process-related and labor-related. But that's just one example.

So, you've seen, I think, us talk a lot less about this with respect to our parts business, because a parts business is just that: it's parts. We don't need everything in order to get product out.

I think we're off to a better start here in the second quarter with respect to shop visits than we were in the first quarter, again in part because you don't need everything to complete a shop visit, but you need most of that kit.

Where I think the real struggle for us across the portfolio really is with new units, because we need everything and we need everything in a linear way. And that continues, I think, to be the challenge. As we look at the back half, Doug, we're going to have to be a lot better in the back half of this year than I think we've seen here in the first half to keep moving in the way that we want.

So, I think we're going to talk about this for a while. The good news is it's a moving target, right? It's a moving upward target. So, the status quo will never hold, but it's a challenge. And I want progress.

Doug Harned:

And I want to hit on actually two of those things here, on the parts and the new deliveries. On the parts side, one of the big challenges in MRO has been time in the shop. A lot of that time, I mean, if I – and just throwing out a number – I mean, you could imagine in a kind of normal world you're looking at maybe 100-day shop visits, something on that order. But today, everyone that at least we talk to, it's much longer. And the reason is you can be missing one part. You open up the engine. You didn't know you were going to need it. You've got to replace something. When you look at the turn times – and either wing-to-wing or time in shop – how do you see that evolving?

Larry Culp: Well, if you look at the shop TATs, the shop turnaround time, or wing on wing, we are basically static with where we were a year ago, Doug. So, what you described applies at GE Aerospace, unfortunately. Really, with one exception. I think if you look at LEAP, I think we've come down from last year about 104 days to 90 days. So, about a two-week improvement.

Doug Harned: In the shop.

Larry Culp: In the shop. But you're exactly right, we need to do better, right? It's better for our customers and it's better for us if that's a more lubricated process. And I think there are things that we can do in that regard. You mentioned opening up an engine and realizing you need something that you don't have. This is where AI, we think, will be a real enabler to help us anticipate what we need, rather than solely waiting for that engine to arrive and opening it up.

Again, there are a host of things we're doing with the supply base which we think will improve the flow and, in turn, allow us to make sure we don't have an engine there kind of waiting for a part. And that happens, right? And that shop turnaround timer, it's running, even if that engine might be sidelined.

But there are also things that we can do. Again, back to FLIGHT DECK. There's a host of ways in which we waste time in the course of a shop visit. So, part of the reason we have that improvement in LEAP is, in our Malaysia shop, the team went in and really just did a value stream map to identify where we add value and maybe where we don't. Eliminate that non-value-added time. The pace quickens. The cycle time reduces. All good.

Harder to do if you don't have all the parts and you're running around, but those are the sorts of efforts that are underway at our company.

Doug Harned: And if I flip back to the engine delivery part of this, one of the big issues that you face and a lot of people have faced has been basically the slowdown at Boeing, both on the MAX and on the 787. So, I know you all brought down your expectation for, like, LEAP-1B deliveries some. Can you comment on how these changes at Boeing and their effort to recover here, how that's affected what you're doing on both those platforms?

Larry Culp: Right. Well, I think we're shoulder to shoulder with the Boeing team, rest assured, as they work through all that they've talked about with respect to safety and quality. I think we're of like minds in that regard. We're helping where we can and redoubling our own effort.

With respect to the ramp, there is a slowdown. But I think the key for us – we're still going to ramp, right? It's just a matter of when and at what pace. So, what we want to avoid is sending mixed signals into the supply base, to avoid any of that herky-jerky dynamic that I think led to some of what we're dealing with today, given where demand was during the course of the pandemic.

So, what we've done, we've slowed receipts in some commodity areas, not so much in others. If we have a supplier that we need to help, we'll do that. So, we've tried to be as nimble and as flexible, as creative as possible, Doug, to make sure that that supply base knows that we have a little bit of a slowdown here, but if we look over the next several years – again, given the backlog – we've got a lot of ramping to do with the MAX between here and 2030.

Doug Harned: And when you look at the slowdown on the LEAP-1B, knowing that, I mean, there are a lot of differences between the 1A and the 1B in terms of part commonality, how does the slowdown in a sense on the LEAP-1B affect you, if at all, in terms of your operating leverage and overall performance on the LEAP?

Larry Culp: Well, I think that, be it the 1B with LEAP or really any other engine, if build rates are moving around, we need to respond to that both with our customer and with our supply base. While the supply base isn't completely fungible, it too is flexible. So, we need to move any of that unneeded capacity around to the extent that we can do that.

So, that's what we're in the process of doing, not only today given some of the Boeing dynamics but, frankly, all the time, as we try to make sure we're bringing in all that we can to support our airframer customers and at the same time support the aftermarket.

Doug Harned: Now, one thing about any new engine – and the LEAP would be one of these – is, I would say, the LEAP has not had sort of the time on wing in service from a durability standpoint that customers might want. Now, that's not surprising for a new engine.

Larry Culp: Right.

Doug Harned: And you've gone through and addressed a number of issues – the HPT shroud, the radial drive shaft, the fuel nozzle – and now you're working on the new blades.

Larry Culp: HPT blades.

Doug Harned: HPT blades. So, you work through those. So, when you look at the status of the LEAP right now, is there a next issue you're concerned about? Or do you feel you've gotten really the big ones behind you?

Larry Culp: Doug, I don't think we ever take anything for granted, but I think you did a nice job there walking through the four major enhancements to the platform really since 2019, right? So, with the shroud, with the RDS in the field by and large on a retrofit basis, that we've seen that medicine take effect. We know we've got the nozzle now and over 100 delivered 1As. Encouraged by what we've seen not only in testing but now in the field. And with the HPT blade going into service later this year on the 1A, next year on the 1B, we think we will be very much in line with CFM56 performance in that regard.

It's important to note that LEAP got to a place akin to the CFM56 far quicker in its life cycle than the CFM did. So, again back to reps, back to learning, back to innovation. A real advantage that I think we've been able to deploy on the LEAP. But as we go forward, I think we feel very good about durability and reliability performance with the LEAP. But the beauty of watching those engines on a daily basis is that we're always learning and always looking for improvements.

Doug Harned: Well, I will say when you look at the origin of some of the past programs, like the CFM56-5, you really wouldn't want to be where that was when it came out, as far as a goal. But it's great that you're on, and it feels like you've got these big issues behind you now. But one of the questions that comes up, I find, a lot, more with technical people, is when you look at the operating environment of the LEAP, you're at higher pressures, higher temperatures. Those have always been associated with lower durability. And how do you get confident that you can ultimately have LLPs that last as long as the CFM56, which has been a remarkable engine?

Larry Culp: Right. Well, again, Doug, I think it really goes back to learning curves and reps. And again, with that 70,000-strong install base, we've just had more reps than anybody else. We've been able to, in turn, invest across an array of technologies. I think on one of the slides we flagged our material sciences. As you know, a lot of what happens in the hot sections of an engine comes down to the material capability. And that has been something that has really been a GE hallmark, I think, for multiple generations. And this is where we even cross between narrow-body and wide-body to accelerate our learning.

There's no question that as we pursue improvements in efficiency, let alone operate in some of the so-called hot and harsh environments, the engines are tested. But again, through the learning, through the testing that we have put forward, I think we have conviction – I think, in turn, you see that with customers and the decisions that they're making – that this is the narrow-body engine of choice for this generation.

Doug Harned: And on that point, your competitor on the A320 has had, I would characterize it as, some more durability issues than you've had. When you look at your position on the A320 right now, which looks like it's about a 60% market share, do you look at your performance and think maybe we can gain share? If you're advantaged there, does it position you to gain share? Perhaps better pricing? How do you look at that competitive environment?

Larry Culp: Well, again, I don't think we take anything for granted, but we have been encouraged to see the uptick in the win rate on the Airbus 320neo platform over the last several years. We think that's really been a strong customer endorsement of the LEAP; in that instance, the 1A.

I think for us, all the more as a standalone company, we're not going to be share junkies, where we chase share for shares sake. I've just never seen that really be a winning strategy. I think what we want to do is make sure that we take excellent care of our customers. I think we want to make sure that we are rewarded for the investments that we make, the value that we provide, the risks we take on through the course of a life cycle here. And that's really the mindset that we take in to any customer negotiation, any new sales opportunity.

Share will fall where it will. I think what we want to do is make sure we're with the right customers on the right platforms, this generation and the next one.

Doug Harned: Now, you've projected to be profitable on the LEAP aftermarket this year...

Larry Culp: Yes.

Doug Harned: ...which that's impressive on a new engine like this. But how do you get the confidence in your profitability trajectory on the LEAP, given that you've still – you've got engines coming in early still. And you mentioned one of the hallmarks of GE being advanced materials and that's allowed you to go to some of these higher temperatures and pressures. But at the same time, those advanced materials can be more expensive. So, when you look at the outlook for LEAP profitability, what goes into your view that that's going to ramp in an attractive way?

Larry Culp: Well, I think if you step back, it's good for everybody to maybe understand how we think about profitability on the platform. We look at it both in terms of the aftermarket and new units. New units obviously not being particularly profitable early on, a little bit of that

mix headwind that I referenced earlier. But we will go positive this year. The program will be positive next year, with OE going positive in 2026.

Doug, I think it gets back to what you were talking about earlier. We have had a lot of, if you will, quick-turn or warranty shop visits as we've been working through the shroud, the radial drive shaft retrofits. That has impacted time on wing. It's impacted cost. Performing well in the field. Largely behind us. We'll have some of those same improvements again with the nozzle and the HPT blade.

So, we think we are on the path toward improved time on wing. We think we are through many of those early quick-turn visits which are costlier. And given the projection, let alone how we've looked to price these contracts, you get the financial outlook both for the services and for the program that we talked about in March.

Doug Harned: Well, and then also on that, you've moved from pretty much all power-by-the-hour type customer service agreements early on. I know a lot of those are shifting to more time-and-materials-oriented ones. Can you talk about how that shift is going and how that plays into your profitability in the aftermarket?

Larry Culp: Sure. Thank you. I should have hit on that. Doug, as you know, early on, I think customers understandably want the manufacturer there. They want that support. They want that insurance. But we're no longer in launch mode with the LEAP. So, we have begun – over the last several years have been working hard to begin to replicate for the LEAP the aftermarket optionality for customers that they enjoy with the CFM56. Now, again back to one of the earlier slides, the CFM56, much further down the path in terms of its life cycle.

But I think what we have successfully done is really create, if you will, an open network of service providers that we will provide parts and the like to. But it allows an airline to shop its aftermarket requirements. And every airline is a little bit different. And that market dynamic is something that we have supported. We think customers have enjoyed it. And that's really what's evolving now. LEAP is no longer in launch mode. So, what we're working to do is help stand up these providers – some of whom may be new, some of whom may have CFM56 franchises – so that we can create that open market.

I think back in March, we talked about LEAP at maturity probably is supported by third parties on the order of 40% or 50%. So, we won't do all that work. We'll do some of it in-house as GE. Our partners at Safran will do some of it. But there'll be a thriving aftermarket, and that's really what you see us investing in and I think nurturing at the moment, those third-party providers.

Doug Harned: And what that requires also, it requires part availability. It requires IP that those guys can get a hold of more easily perhaps than it is right now. Is that fair?

Larry Culp: Yes. And that's – again, I think that's where we are in the life cycle and, again, where I think FLIGHT DECK is going to be a real differentiator for us. Because we not only want to have the commercial and the contractual arrangements with those third parties, we want to be the best possible provider into them so they, in turn, are keeping those LEAP customers flying.

Doug Harned: Now, one of the things that has really benefited you has been, I mean, in a sense, the, I'd call it, behind schedule in terms of deliveries by Airbus and way behind by Boeing, which has meant a lot of life extensions for aircraft in service. So, your CFM56 shop visit

peak keeps moving out in time; and obviously, very good margin. Can you update us on where we should expect that shop visit peak to occur? And is that coincident with the revenue peak, given that you've done pretty well on pricing as well?

Larry Culp: Right. Well, I think you're right, Doug. In part because of the challenges on the new unit side that we've talked about with both of the major airframers, we've seen that peak CFM56 shop visit outlook continue to push. Utilization, up; retirements, thus, down. The engines are getting worked, and that's been good for us. I think next year could be extended out a little bit longer. We'll see how traffic and the OE ramps play out, right? Those are going to be a little bit of the swing factors.

But the point you touched on there at the end is an important one. We'll probably see some weakening inevitably with respect to unit volumes with respect to shop visits. But again because of both price – you mentioned price – but also scope, there'll be more calories, there'll be more dollars in those shop visits. I don't think we'll see revenue move in concert with unit volume. We'll have a little bit of a push in our buffer.

Doug Harned: A later peak.

Larry Culp: Exactly.

Doug Harned: So, when you look at the future here, sort of two things, I guess. Next-gen products. But first, I would start with the current generation. And we looked at – if you look at, like, the CFM56-7, it looked to us that you've had about 7% fuel burn improvement over time with incremental improvements. Do you have a current plan or do you see an evolution of the LEAP that could do a similar kind of performance improvement path over the next few years?

Larry Culp: Well, 7%, as you know, is a big number in this space. Not everybody may appreciate that. Doug, I don't think we've got our sights set on 7%, per se. But a little bit like what we've touched on in terms of some of the durability and reliability improvements, we will continue to invest in the LEAP engine, even after the HPT blade comes online. Some of that will again be aimed toward performance, some of it will be aimed at improving efficiency. Can we get to 7% over the remaining of the life cycle? I don't think we'd want to commit to that just yet. But we're not done. I'll leave it there.

Doug Harned: And then when you look at – when you talked about the RISE program, I mean, I'll have to say, I know there are a lot of other things that are involved there, but I always think of the open rotor as the kind of main part of this. But I think you all have talked about 2035 as kind of a time frame for when something like that could be in service. So, if you look at the path from here to there, first, are there any other things that can happen in the interim that could lead to a step-change in engine performance before you get to that point? And then, also, how do you work with, say, Airbus and Boeing on this? Because that kind of engine design requires a fundamentally different airframe design.

Larry Culp: Exactly. Well, to take the first question first, I think that between now and 2035, to the earlier question, the enhancements, the improvements will be more modest. I don't think we really see anything that would constitute step-function improvements. That's really what a new platform is aimed at doing. We'll see that, we think, in the wide-body space with the 9X, which is due to EIS in 2025.

But with respect to narrow-bodies, I think we're really going to wait – need to wait for the open fan. We talk about a 20% improvement in fuel efficiency and, thus, emissions with that engine. That is a step-function in our eyes.

It's going to be a great engine. It won't fly without a plane. So, to your second question, it really is an iterative multiyear conversation with both airframers, right? And they're very close to what we're doing from a technology development perspective. Those 100 technology milestones I mentioned earlier, rest assured that we share that, those results, in some detail with the right people in both organizations. So, as they're thinking through product planning, both concepts and timing, they understand where the next propulsion breakthrough resides.

Doug Harned: Now, I want to just touch on defense briefly here. Because, I mean, you're expecting some pretty good growth, kind of mid- to high-single digits, on the defense side. And you had a good book-to-bill in the first quarter. I mean, what's driving this expectation in defense, particularly given the constrained budgets right now?

Larry Culp: Yes, acutely aware of that. Was in Washington last week on that very topic. Well, I think our book-to-bill not just in the first quarter, but over the last couple of years, has been encouraging. It's been at about 1.2. Now, we should be shipping more engines back to supply chains. So, maybe it's a little higher than it would normally be. But it really is a function of expansion of the rotorcraft fleet, the Blackhawks, the Apaches, the upgrades there. We're excited about from a combat perspective, the F-15EX, the -16 are core platforms for us. And that's before we talk about NGAD and everything that's going to happen in next generation.

And we think we're running this business, Doug, frankly, better. Commercial has tended to crowd out, I think, at times some of the things that we could do in defense. I say that despite the fact that I think we have got two-thirds of the flying fleet today with our propulsion technologies. But there's just a lot more that we think we can do with FLIGHT DECK in supporting our defense customers in the aftermarket, let alone with the expansion of these fleets.

So, there's a lot there, and it won't simply be top line growth. We think that'll be nicely profitable growth as well. We should see, I think, \$250 million of op profit growth at the midpoint just in 2024, with good margin expansion potential from here.

Doug Harned: Now, other engine companies – look at RTX, look at Safran – I mean, they have, through acquisition, they've built out equipment businesses beyond engines. Fifteen years ago, GE bought the Smiths business. It appeared at the time like you might be building, back then, a similar path to a larger equipment-type business. What is that today? How do you think about that?

Larry Culp: Well, I think – those businesses were what we called systems just a couple of years ago, and it was really a group of four P&Ls of different sizes that we've really run the decentralization play on. And rather than thinking about having a systems strategy, we've said we've got a wonderful electrical power business that has an important role to play in the evolution of hybrids. Our avionics business is on some important platforms, and we can do more there. We look at our Dowty business, for example, in heavy-duty propellers, back to open fan. They've got capability that's going to be pretty important. Let alone Unison, which touches on a number of electrical applications.

So, we're really running not a systems business on a horizontal basis, but these four P&Ls. They've all got organic potential as part of our defense and propulsion technologies segment. And if there's some inorganic opportunities there over time, we'll certainly take a hard look at them.

Doug Harned: Well, to wrap up, I want to go back to five years ago when we were sitting here. You had just taken the role. And I asked you a question that another CEO asked me to ask you – and I'll give you the clean version – why the heck did you take this job? When you look back over the five years, are there – did you think you'd be sitting here in this position today? And are there some things that you think "maybe I should have done differently"? How do you look at it?

Larry Culp: Well, no. I didn't think I would be here, in all good ways, but happily so. It has been the gift of a lifetime, these last five and a half years, Doug, rest assured.

I think whenever you look back, I think any operator will tell you what you wish you could do over are some of the people decisions. They're the most important decisions you make, and I don't know a CEO above ground who's got them all right, myself included.

I think the other thing that's always clear is that, as a CEO, you try to push, but you try not to push too hard. In hindsight, there are always things you could have done sooner and you wish you had moved faster in the moment. And I was a CEO for 14 years before I came here, right? I knew all of that, but it's still what comes to mind when you ask that question.

But we did okay. And we're just getting started.

Doug Harned: All right. Great. Well, thank you very much, Larry. It's been great.

Larry Culp: You bet. Thanks, Doug. Thank you.