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# Ford Motor Co. (F)

Fireside Chat - Bank of America

## CORPORATE PARTICIPANTS

### John T. Lawler

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*

### Lisa Drake

*Vice President, EV Industrialization, Ford Model e, Ford Motor Co.*

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## OTHER PARTICIPANTS

### John Murphy

*Analyst, Bank of America Merrill Lynch*

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## MANAGEMENT DISCUSSION SECTION

### John Murphy

*Analyst, Bank of America Merrill Lynch*

Great. Well, thanks, everybody, for joining us today. I'm John Murphy from Bank of America. I cover the automotive industry here at Bank of America, for those of you that don't know me. We're very happy to have a number of members, or three members of Ford's management team here to run through some of the highlights from the third quarter and get into some real good future trends and answers, hopefully, around those future trends beyond the third quarter that will drive Fords' what we call core to future transition. And I think there's a lot of progress being made there and a lot of nuggets that came out during the third quarter reporting.

We're happy to have John Lawler, Chief Financial Officer and Interim Supply Chain Officer, two very important jobs at Ford and really hot topics at the moment themselves; Lisa Drake, Vice President, EV Industrialization for Ford Model e, so obviously another really hot seat, not just inside of Ford, but in the industry at large; and Lynn Antipas Tyson, Executive Director, Investor Relations. And I'd be remiss if I didn't say happy birthday to Lynn. I think she's celebrating her 23rd or 24th birthday today. So we really enjoy and appreciate all of Lynn's efforts and answers for us. And I would sing happy birthday, but everybody, I think, on the line would drop off. So happy birthday, Lynn, and thanks for all the help.

## QUESTION AND ANSWER SECTION

### John Murphy

*Analyst, Bank of America Merrill Lynch*

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Maybe to get into something that's a little bit mundane, but obviously very important, John, here in the near term is we're getting a lot of questions around the implied guide for the fourth quarter, roughly about \$4 billion in EBIT. And I think as we kind of roundhouse and think about it versus the third quarter, we're talking about \$1.8 billion in EBIT, the valves or vehicles on wheels, the new acronym the world learned in the last few quarters, could probably throw off another \$1 billion incrementally; non-repeat of the supplier true-ups might be another \$1 billion; incremental volume sort of naturally, not just the valves, might add as much as \$0.5 billion. And then, that might be offset by lower FMCC and some other expenses that usually come in, in the fourth quarter. And that gets you to about \$4 billion. So does that all kind of jive with how you're thinking about it? And maybe you could give us a few more details around that and either confirm or deny what I just ran through there.

### John T. Lawler

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*

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Yeah, sure. Happy to, John. So when you look at Q4 versus Q3, volume is a definite key driver there. We see volume this year, in total, being up about 10%. So that means that Q4 is up about 15%, if you look at what we've done in the last three quarters. So volume would be up about 15% in the quarter on a year-over-year basis. Full year, overall, will be up 10%, which was at the low end of the guide we had given while at the start of the year, we said 10% to 15%. So we're coming in at about 10%.

We do have commodity costs, on a sequential basis, coming down. We've seen some spot prices come down. Commodity costs will be coming down a bit in the fourth quarter as well. And then, we have – as you said, Ford Credit is an offset to that. We also have weaker currencies. We do have a pretty large exposure to sterling in the UK, given the strength of our commercial vehicle business in Europe. But we also have improved mix coming in, in the quarter primarily drive those vehicles that are not wheels, which you mentioned. So there's 40,000 vehicles on wheels. We plan to draw those down by the end of the year. And they're primarily a rich mix of F-150s, both 150 and the Super Duty vehicle. So you take all of that together, you mix it all out, that brings us into a fourth quarter above the third quarter that gets us to the \$11.5 billion for the year.

### John Murphy

*Analyst, Bank of America Merrill Lynch*

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Okay. That's very helpful. And the other item that we're getting questions on is the step-up in free cash flow guide from \$5.5 billion to \$6.5 billion to \$9.5 billion to \$10 billion. \$9.5 billion to \$10 billion, that's a big year. We'll take it all day long. But what was the key driver? I mean, I know year-to-date cash flow was very strong. Third quarter, surprisingly so, especially with those valves that didn't make it out the door. What is the key driver there? And if we think about what's repeatable and maybe what is kind of one-time in that number, I mean how do we get that big step out there?

### John T. Lawler

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*

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Yeah. It is a good year from a cash standpoint. And I think that reflects – the decisions that we've been making as a team to fix our business, to right-size our business in areas where we weren't profitable, vehicle lines that weren't delivering for us, we've restructured our businesses overseas. So when you look at that, the \$9.5 billion to

\$10 billion, about \$2 billion of that is timing. So we have quite a bit of production in the fourth quarter. So we have higher payables. But then, we had timing differences around warranty and marketing, year-end accruals, et cetera, that typically we have. So that's about \$2 billion of the walk-up from what we had guided previously, \$5.5 billion to \$6.5 billion.

And then, we have a bit of lower capital spending. We're not backing off on our investments in anything. It's just timing differences of the spend relative to what we thought earlier in the year. And then, we have overseas markets that are contributing significantly.

So the way I think we should think about this, John, is when we were at Capital Markets Day, we had said that our cash conversion target was about 50% to 60%. Of course, when we print somewhere between \$9.5 billion and \$10 billion and somewhere around \$11.5 billion, you say, well, John, your conversion rate is a lot higher than that. Well, back off the \$2 billion that I would say are timing differences for payables and warranty and marketing. And you take that over the \$11.5 billion and you're around that 60% range if you just take the around \$11.5 billion, you take that from a free cash flow standpoint.

So the way to think about it is, going forward, we expect to have a conversion rate between 50% and 60% as we go forward, and that's what we expect our free cash flow to be.

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**John Murphy**

*Analyst, Bank of America Merrill Lynch*

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Okay. That's incredibly helpful. And then, another big thing that obviously came out was the write-down of Argo AI and the shift in strategy around L4 and L5 and kind of pushing that theoretically further out into the future. So, I mean, there's a lot of questions around that and trying to interpret that. I mean, I think sort of a conspiracy theory could be that you have very good technology, you don't want to share with the rest of the world and you're pulling it in-house, right? So that could be one thing. And it sounds like with Doug Field and what your – who the folks that you're pulling in from Argo AI that you're not out of the race here, right? There might be some real good progress that gets made quickly over time with that very talented set of folks.

But, I mean, how are you thinking about this? I mean – and it is a very significant change. And I guess the big concern is that you might get left behind in an L4/L5 world if there is really significant developments there that come from Cruise or Waymo or some other visioning companies out there that claim that they can do full systems. And then, you might be kind of be left out in the cold a little bit. So, I mean, how are you confident in making this shift? And is this really kind of walking away from L4 or L5 or just kind of bringing it in-house?

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**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*

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No, and we're not walking away from L4/L5. We're still very bullish on that as a potential technology. We just think it's a lot further off. And when we look at that, we believe that allocating capital is an important part of what we should do. And we don't see a profitable, scalable business in the L4/L5 space for at least five years. We also see that to get there, it's going to take billions of dollars.

So we're taking the resources that we have, both human resources and capital resources, and we're investing and accelerating our L2+ and our L3 systems. And we believe that addressable market expands our entire product portfolio from our retail customers to our commercial customers. They are already adopting ADAS with BlueCruise, which has been well-received. And we believe that that's going to be more of a breakthrough and differentiator for us in the more near-term than what the L4 technology will provide, which is down the road.

Now, we also do not believe that L4 is going to be an aha moment, but all of a sudden, it's going to come and it's going to be there and et cetera. So we're going to continue to learn from the progress that we're making on our L2+/L3, the progress that the industry is making. And quite honestly, John, we don't believe that we're going to have to necessarily be the ones that create that technology ourselves. And so, you take all of that together, a long arc, a lot of technical issues need to be resolved. To stand up a profitable, scalable business is going to take a lot of capital and a lot of time. And we believe the better play for us is to focusing on our L2+ and L3 systems at this time.

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**John Murphy**

*Analyst, Bank of America Merrill Lynch*



And then, the other item that got a decent amount of airtime, but probably not as much as it should among investors is the opportunity on the connected vehicles, and it's being explored or to taken advantage of on Ford Pro really at the moment in the biggest way. But if you think about leveraging that and building sort of this post-sale business, which we've all known has been out there for a very long time, I mean how do you dimension that on the commercial side because it's just starting to roll in and it's got a lot of success on the Pro side as to what you might be able to do on the commercial side?

I mean, when you look at sort of the iceberg of opportunity in sort of a very traditional sense, we all know there is at least another layer or 1x of what you're doing in your upfront profits over the lifespan of that vehicle, and it might be as much as 2x to 3x. We all kind of debate that over the years. But as you think about that opportunity set on the connected side for Pro and then also on the consumer side, I mean, how big is that – I hate saying the word TAM. But I mean how big is that TAM and how big is that opportunity for you?

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**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*



Yeah. So when you look at it, Ford Pro is a significant opportunity for us in that business. And there's opportunities on the retail side as well. But when you look at Ford Pro, it is a game-changer for that segment. We're a leader in commercial vehicles here in North America. We're the number one brand in Europe. So we have a really strong foothold in the commercial space.

And what we're focused on with our software is delivering a complete offering. Connected vehicles get better over time, and we'll have an integrated charging, we'll have telematics, we'll have service, we'll have financing, all about making our commercial customers more productive. So that's the suite of software that we're applying it. It's at the early days, of course, but one of the proof points we have is paid telematics subscriptions globally at Ford Pro have grown 40% sequentially through the last three quarters.

And we're only writing more software. We're only developing more solutions for our customers that are going to be more attractive for them. So it's going to get stronger over time. We have something that we're calling our Ford Pro fleet, and we've got partnership and we call them VIIZR, which has management software that's associated with it. So it's that complete suite of software to help the commercial customers become more productive.

And you're right. It's just the early stages of this, and the potential is huge. We haven't sized the TAM just yet. I think we need to spend more time unpacking that, and we'll do that in our next Capital Markets Day. But needless to say, early days are very encouraging and we see a huge potential here.

Now, when you talk about the retail side of the shop, where we really see that coming to fruition is through the ADAS technologies, right? That's the first software on the retail side that's really allowing the customer to have a

different experience with the vehicle, where it's going to free up time for them. When we get to that L3 level, where eyes are off the road, hands are off the wheels and we can take the meeting from the car and be focused on the meeting where you can read a book or whatever it is that you want to do, that's going to be a game-changer for our customers.

And right now, we got 83,000 BlueCruise vehicles on the road. We've driven 21-plus million hands-free miles. And the technology is only going to get better, and that's why we made the decision we made to focus our resources on taking our BlueCruise technology all the way up to L3+. And that's where we're focused because we believe that's going to unlock a lot of value for us as a company as well as provide the customer a differentiated experience.

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**John Murphy**

*Analyst, Bank of America Merrill Lynch*

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How far do you think you are on that L3+ realization? It seems like that actually might be in the not-too-distant future. I mean, have you guys put on a timeframe on that?

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**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*

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Yeah. I'm not going to put a timeframe out there on when we're going to have full L3. I think that's something that Doug and the team will want to talk about when we're ready to explain it and put it in the right perspective. But let me just say that that's what he and his team are going to be focused on. And with the talent we're bringing in from Argo, which we think the talent there, their skills are applicable for developing that L3. And that's why we're pleased to bring many of them into Ford Motor Company. And in the not-too-distant future, we'll be out there. And Doug will be able to explain where the mix, the timelines are and where we're headed with them.

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**John Murphy**

*Analyst, Bank of America Merrill Lynch*

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And John, the losses on Mobility have been about \$1 billion annually. I mean, bringing those folks even from Argo and what you're spending, I would imagine that that would remain sort of a reasonable run rate. I think that you're going to continue spending there. It's going to be happening in maybe a different way. Is that ballpark correct? Or I mean – is, all of a sudden, this going to go down dramatically because Argo is going to be more disciplined inside of Ford than it was maybe outside. I don't know if maybe you can comment on that.

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**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*

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Yeah. The way I'd look at that, John, is the run rate in the Mobility business was about \$1 billion of earning here. Now, not all of that was Argo. There's a piece in there that are other Mobility projects that we're working on. But there was a large part in there that was associated with the AV development, but was not Argo-specific. So the prototypes that you see running around the road for Argo, those are all Ford developed prototype vehicle. They all have to be retrofitted. They require engineering changes to convert them from a regular vehicle into an AV compatible vehicle with the integrated systems. So that's going to go away as well.

And so, the way to think about it is the \$1 billion is going to come down significantly in Mobility. And then, there will be some cost increase for the increased engineers will have in the Ford engineering group to develop – further develop the L2 and L3. So you will see a dramatic reduction in the Mobility space. We'll reinvest some of that into the L2/L3, which will be picked up for Ford engineering and you'll have a net save for the company.

**John Murphy**

*Analyst, Bank of America Merrill Lynch*



Okay. That's incredibly helpful. And then, if we think about Model e, which it seems like some of the research is going to be reallocated in that direction on capital and human capital, we keep hearing from Jim that that business could be more profitable than the ICE business as it scales up. I mean, when do we get to breakeven? I mean, there's going to be losses for a while, right, as the volumes ramp. I mean, it's going to be a heavy transition period.

When do we get to roughly breakeven? Is there a timeframe or a volume number that we should think about? And when do you eventually get to sort of these margins that are equal to or potentially higher than the ICE business that Jim keeps alluding to? And I'll put you on the hook for Jim's comments, not yours on that.

**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*



That's okay. We're one team. We're all aligned. And so, when you look at the e business, one of the interesting things, John, next year is when we start breaking out Pro, Blue and e separately, and we start reporting the segment separately, Q1 2023. I've heard some folks say, well, that's a mistake because your electric vehicles are going to lose money. Yes, they are losing money. We've been very transparent about that. But that's in our numbers today, right? And that would be in our numbers tomorrow even if we didn't break it out. So I think that transparency is going to be helpful.

We have said that we need scale, right? We have to scale to start to move towards a positive EBIT margin. But we also need the second generation of products, which are a significant step function improvement in efficiency, engineering design. And by the time we get out of that, 2026, we'll be scaling. So what we've said is we should be around the 8%, in fact, margin or better on our EVs by 2026, where we'll have scale, we'll have the right mix of battery chemistries, and Lisa could talk about that a lot bit, and we will have the second generation of products.

And what you'll see over time, as we start breaking that out next year is you should see us making progress as we scale and as we start to bring out our second-generation platform. So I think that transparency is going to be important. We'll have key metrics that we'll share with everybody that we can track to show the progress that we're making across all three businesses. And I think that's something that is going to be – it's going to allow us to separate and talk about each of those businesses uniquely. We talk about the customers, what's happening with the business, the Argo profitability, et cetera, et cetera. So I'm excited about what we're going to do in 2023 relative to being able to talk about each of the key business segments, especially our EV business.

**John Murphy**

*Analyst, Bank of America Merrill Lynch*



So that brings us to getting into EVs even further. I mean the IRA kind of surprised a lot of folks and is much more constructive, I think, than even the most optimistic folks thought it might be. It caught, I think, a lot of folks off guard and it seems like it's sort of a left and right collaborative build around the environment and energy security. It's a really interesting piece of legislation that we're all still trying to figure out.

But as you think about this, I mean you really elucidated the significance, I think as much as \$7 billion from 2023 to 2026 that you think you'll get on the battery side and then more afterwards. But, I mean, how much does this accelerate your transition or your plan on ramping EVs? And was it kind of replacement capital, or is it incremental capital to accelerate the plan? And how much of it lands in the sphere of value capture at Ford or value capture at the consumer by newer, better product, faster? A lot in there.

**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*

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Yeah. As Jim said last time, it's definitely going to accelerate, the transition to battery electric vehicles. And I think it can be all of the above. And I'm not trying to be cheap with that answer. I think there will be benefit that's flowing through to customers. I think there will be benefit that flows through to us as a company. There will be benefit that flows through to the battery manufacturers. And when you take all that together, I think that means it's going to move a lot faster and it's going to accelerate the transition.

I think we're sitting in a very good position, as we talked about last night. Battery production tax credit is positive for us. And the one thing that folks really don't appreciate is the commercial EV tax credit. And us being a leader in commercial vehicles, that could potentially apply across 55% to 65% of our customers at the full tax credit. So there's meaningful opportunity across the board. And so, I would say it's going to accelerate where we're headed.

Lisa, anything you want to add into that?

**Lisa Drake**

*Vice President, EV Industrialization, Ford Model e, Ford Motor Co.*

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Yeah. I'll say our intent was always to localize. Well before the IRA, we brought the lightning battery cell production to Atlanta. I mean, we're supplying the lightning out of a US facility, and that was very intentional. And that was even well before the Section 301 tariff came about in USMCA. So it's really important with the global supply chain. And the way you need to manage it, you really want to localize where you build as just the general strategy.

So we were pretty well positioned to take advantage of the IRA because we had Atlanta, where we supplied lightning and e-transit. And then obviously, we have the three plants in the US that, again, were already underway in Tennessee and Kentucky. And the beauty of those is their joint ventures. So we have an ability to see the cost, to control the cost, and then, obviously, to get a benefit from the IRA as a producer of those cells. It's not a buy/sell relationship there. And that's really important.

And then, we had already planned on bringing another battery cell plants in North America. We announced that earlier this year. I would say the IRA gave us clarity on where we needed to put it, which was great. There was some acceleration on the site selection due to that. And then, all the raw materials that we need in the US, not just for supply security for ourselves, but security for the nation to make sure that we can sustain these EVs. This is mission-critical. It is so critical. And it's not just a financial benefit. Yeah, we can avoid the Section 301 tariffs and localize more, but we're in control of our own destiny now in the US.

And the more I talk to the depth of the supply chain, the more they are willing to put their capital now in the United States and in Canada as well. And it's just going to allow us to accelerate faster than we had planned before, no doubt.

**John Murphy**

*Analyst, Bank of America Merrill Lynch*

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So – and with that acceleration, Lisa, brings scale maybe faster than we would have thought. But in addition to scale, I mean, what are the other ways that you think you're going to drive battery costs down? And where do you think you need to get them to, to be really competitive with ICE and maybe drive this EV tipping point? I mean, obviously, there's a lot of concern about raws inflating like crazy, and they kind of eased a little bit. But then, as demand goes back up, they might go back up. So that's kind of an unpredictable portion of the cost curve. I mean,

how do you deal with that? And then, how do you drive costs down on batteries to make the EVs price competitive, right?

I mean, because everybody's raising prices right now, and that's kind of going in the wrong direction to drive demand, although it's not tamping down demand much right now. So there's a lot of pricing power in the market. But how do you drive these battery costs down?

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**Lisa Drake**

*Vice President, EV Industrialization, Ford Model e, Ford Motor Co.*

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It's relentless work. There's no one answer to this. The first one is the chemistry. You need to be able to control the chemistry you have. You need multiple chemistries. There's no way that you're going to be able to scale and serve all of the different customers in the most efficient manner with one chemistry solution. So having multiple chemistries available is critical.

There's such advancement on hub batteries becoming a structural part of the car. Everybody sort of started with battery packs, then we started going to like something called cell-to-pack, where you get rid of all the internal array structure. You put the cells straight to the pack. And now, we're already advanced. We've skipped over a generation almost and now we sell the structure, where now the battery cells are being put inside of the structure that makes up the structure of the car, or the truck. And those advancements are just continuing to progress and take out, what I'll call, stair steps, of cost.

Then, you have manufacturing efficiency, and I think it's under-appreciated; the dollar per kilowatt hour that's involved in the manufacturing processes of these cells. And when you can scale a cell facility to a very good OEE, there's a big difference in cell comps between a plant that runs at 70% OEE, 75% or 80% OEE parts per minute, a plant that can run 18 parts per minute versus 20 versus 22. And there's a lot of emphasis now.

And that's what I've seen from our Ford team partnering with SK is that that's what we've done for decades is manufacturing efficiency, work and taking waste out of the system. And that work, partnered with SK's knowledge of the cell, technology and production, is how we're now laying out three plants in Tennessee and Kentucky. They are very different. And each one is actually a bit of a generation different than the other, even though they are only about six months apart in development. We're using each one as the test bed and then the next one and then the next one.

And then, you have the raw materials, which now we're – I mean, we're sourcing directly, all the nickel directly, lithium hydroxide or carbonate that we might need. And then, we're being very careful not to – there's a lot of emphasis on IRA-compliant material. But you really want to be careful because not all of your products need IRA-compliant material. John just talked about commercial vehicle. It's not subject to the foreign entity of concern. You wouldn't want to go out and pay a premium for nickel or lithium to be compliant when, at the end of the day, it's not necessarily on a large part of the fleet.

So our strategy is to have IRA compliance where it matters, and then have non-IRA-compliant material where it might not matter and where you can get much less expensive and be very competitive on battery cell price.

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**John Murphy**

*Analyst, Bank of America Merrill Lynch*

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Lisa, you just mentioned something very interesting about sort of the stair step knowledge you're getting as you're going from one plant to the next and even if there was just a tape delay or a gap of six months between the two of

them in start time. You're learning a lot and maybe doing a fair amount different. As we think about this, is there risk that that will keep happening? And some of these plants, these older plants might, whether it be technologies or plants, get a little bit dated relatively quickly?

And then, if we think about sort of that in addition to potentially the step forward to solid-state, if that ever happens, I'd love to hear your views on that, where that could ultimately take the industry and sort of the penetration of EVs and where you stand on solid-state. So obsolescence of your plans that you may be doing yourself very quickly and then also maybe obsolescence of the technology itself in that move towards solid-state?

**Lisa Drake**

*Vice President, EV Industrialization, Ford Model e, Ford Motor Co.*

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Yeah. I think some of the things we're learning are optimization of square footage. So the \$1 million per gigawatt hour that we spend to build a plant, we're getting more efficient as we go. And in that case, yeah, is it a bit harder to go back and unwind the square footage that you put in? It likely is. Other things are optimization in the process, faster drying times through the formation process. And the faster you can do that, you can backward integrate those lessons learned into the other plants. So there is both types. And we're seeing that in Atlanta. We have two different buildings in Atlanta to build the lightning cells. And as we're learning things in the second plant, we're actually backwards integrating them into the first to become even more efficient. And that's just natural. That's natural manufacturing process knowledge.

In terms of solid-state, we chose our solid-state strategy to make sure that, at the end of the day, we could utilize the assets that we were already putting in place. And we were first working with Solid Power as we announced last year. And that was because the type of technology they were pursuing was something we could integrate into our plants without a lot of capital. I still don't see solid-state heavy commercialization by the end of the decade. It's still in the advanced research stage. We haven't landed it into our product program yet. We need to do more work on it. It's very promising. We think it will be the next step. It will be the next step, but it's just not there yet.

**John Murphy**

*Analyst, Bank of America Merrill Lynch*

Q

And, Lisa, my understanding on solid-state is one of the big benefits is ultrafast charging potential, which means you can then take advantage of regen breaking in a way that's not really possible in batteries right now because they can't absorb that energy fast enough. Is that true? I mean that's my understanding. And is there any other sort of interim changes in the battery chemistry where fast-charging – they charge faster and you can actually take more advantage of the parasitic loss and take advantage of regen breaking in the vehicle to create a much more efficient ecosystem. I feel it's a lot of ways that people kind of just focus on battery, battery, battery, but there's a lot of parasitic loss in the vehicle like there is on the ICE vehicle where there may be opportunities to really optimize stuff. And Lucid has been pretty good at some of the stuff in just vehicle optimization. I'm just curious on the battery side that's where one of the big advantages of solid state and is there anything in the interim that might get you those benefits as well?

**Lisa Drake**

*Vice President, EV Industrialization, Ford Model e, Ford Motor Co.*

A

Yeah. So it is an advantage of solid-state. And I would say we are working on other steps. There are certainly other steps. I'm not going to talk about them here. Obviously, they are a competitive advantage for us. But I would say, in the future, we may discuss a bit of that. I don't know if it's at a battery day or a tech day in the future, but there are steps that we're taking in the interim. I don't want to talk about them now. But because they are work that we're doing, specifically with our cell suppliers to increase the ability of fast charge and the routine fast charge that our customers are now demanding, there are some cell technologies out there.

**John Murphy**

*Analyst, Bank of America Merrill Lynch*



Okay. If we think about what's going on in Global City in Tennessee, if you can give us an update on how that's progressing? Obviously, big greenfield facility. So, I mean, that's not retrofitting plants. I mean there's a lot of new stuff there. How is that going? I mean, I think we're talking about non-union labor, too. So I mean, that's – I'm not sure if that impacts the process there or not, and I might be right or wrong about that. But what is the state of Global City? How fast is it moving? What are the lessons learned and what are the big advantages that you're finding from it?

**Lisa Drake**

*Vice President, EV Industrialization, Ford Model e, Ford Motor Co.*



Yeah. No, it's moving quite well. We're about a year in. We have multiple facilities. So there's a final assembly, body shop, paint shop. We have an integrated stamping plant that's right on site to make sure that we're very efficient on the stampings going into the plant. It's a high-volume, high-scale plant. So it's fairly vertically integrated. It's got the battery cell plant right there along with battery tray. And everything is on track. It's a lot of work, don't get me wrong.

I mean, when you see day-in and day-out, it starts at – as soon as the sun comes up and these guys are working under lights at night, guys and girls working under lights at night. And it's a monumental undertaking. We have great support from the community down there, which you need to have. We pride ourselves on being a good neighbor. We listen. We are helping with transportation in the area, are ultimately developing daycare in the area. Workforce education is huge. We will have a training facility on-site that is jointly funded with the state of Tennessee. And we're really excited. We've got our plant managers hired, HR managers hired, and hiring fairs going on right now. So it's quite remarkable, but so far, so good.

**John Murphy**

*Analyst, Bank of America Merrill Lynch*



Okay. Maybe switching gears a little bit, and I have a bunch of follow-ups along the way here for both of you. But John, I mean, there's been a lot around supply chain constraints around semis that we've all been well versed in, although not well versed how it's going to actually recover because it hasn't recovered too much yet. But just curious on that. You mentioned yesterday that there were other pinch points in the supply chain. And we've been hearing about that from some of the private companies for a while, but they seem to be very random and dispersed around not any specific product area.

I just wonder if you can comment on what you're coming across there. I think they're ramping up a little bit or easing a little bit from the semi side, but you're seeing these other pinch points. Are there any specific areas, or is this really kind of a patchwork quilt of little issues popping up here and there?

**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*



It's a patchwork quilt. It's dependent on our supplier. I wouldn't say that it's any one category than the other. But we are seeing it pop up as some of the chip issues, the constraints have eased a bit. And the other thing that's really impacted the supply base is the tight labor market. Retaining labor, training that labor, that's an important part of what they need to do because some of their processes are quite complex. And so, there's options and choices that people have. So that's been another factor.

And I'll have to say COVID didn't help the situation out. As we've gone in, as I said last night, we're going into close to 300 suppliers with our technical assistance team. We've done deeper views on their fitness in their state versus Q1 and their ability to meet our production schedules and ramp. And what we've seen is that some of them weren't necessarily managing their maintenance schedules, et cetera, as they should have, and that's limiting their ability now to ramp up as some of the constraints are easy, first coming out of COVID, then we have the chip constraints. And now, for some of those commodities, we're asking them to ramp up and they're just not able to do it. So they're running into problems.

But I'd say that overall and from us – and we talked about it last night, and Jim has not been shy about the fact that there's things that we need to do to improve our operational fitness. One of the things that's compounding that for us with our supply base, which impacted us this year and in the quarter, third quarter was the fact that we're complex. We have a very complex lineup, and as well as our production stability hasn't been as stable as it needs to be for those suppliers.

So I think there's a combination of all of that that's driving some of this disruption that we've seen. So we're on it. We're working it. I think it's going to take time. Some suppliers will be a longer arc. If you think about casting suppliers, et cetera, that's a longer path to getting that back into shape versus if it's just a standard injection molding supplier or something like that.

So a lot of work to do in that space. But again, I don't want to go encoded for it, but it is contributing faster. Labor is a contributing factor. Complexity, concentration, risk, all of its coming together and it's making in certain areas a difficult situation that we need to manage through.

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**John Murphy**

*Analyst, Bank of America Merrill Lynch*



So if you think about that from two different prongs, the consistency of your production schedule is something you're – obviously, it's very important for you and your suppliers, right? So it's not just for – I mean it's for the whole ecosystem. I mean, how much of this will impede that push towards more consistent schedules, even if they aren't significantly higher, right? I mean, we can debate where the industry – what you can actually get to, but the consistency, how much does it disrupt that?

And then also, you mentioned that of the \$1 billion of incremental sort of inflation costs that included these sort of recoveries to suppliers where you weren't necessarily aware of how much the volatility was actually costing them. So you had to backfill a little bit more than you're expecting. That was a big chunk of a surprise. How much of that \$1 billion could be viewed as – I mean should we spread that \$1 billion over the first three quarters of the year and kind of consider a bit of a true-up but then also consider it as not something that's going to be ongoing, it's hopefully just based on sort of this instability and this big cost inflation we've seen? And then, as we go forward – I'm not asking for 2023 guidance, but as we go forward, theoretically, that gets tamped down and is really not too big a number, if at all, going forward.

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**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*



Yeah. There are several things that we can do going forward. So one of the things that we did is we paid lump sums as opposed to baking it into a higher run rate of the key spreads because we saw these as individual events, let's say, that we would pay lump sums for those. And you're right. As I said last night, it has impacted the supply base.

And I would say that spreading the impact of the \$1 billion over the first three quarters is a prudent thing because part of that was catch-up. It just didn't happen in the third quarter. Suppliers were experiencing it. We needed to get through the data. We have the negotiations with the supplier base. And quite frankly, when we have the data and then until we have our discussions, we needed to support our supplier partners, and we did it. And we told you guys about it as soon as we did it, which I think was important for us to get that out there and let you know.

And so, going forward, there are things we can do. We can work on schedule stability. There's things that we can do to lessen that proverbial bullet that flows down the chain and closing to our Tier 1 suppliers. And then, if they let that flow through the Tier 2s into the Tier 3s, that has a dramatic impact. So there's things that we can do to balance that out better than we had been and we're doing back now. And then, there's other things that we can do with our suppliers to work on labor, complexity reduction and other things that will help them out.

So I wouldn't say that it's a straight flow-through into next year. Some of the elements around the other inflationary pressures around labor costs or freight costs, et cetera. That's something that we'll have to deal with into next year. But the other flip side of that, as we've talked about, John, is the fact that what's happening macro economically, how are things slowing down, what's happening with inflation as we go forward, et cetera, how quickly will commodity prices come down. So it's all of that together.

So don't think about it as just a true flow-through. There's things that we can do to offset some of that, and we're working those actions in this quarter and the fourth quarter as well.

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**John Murphy**

*Analyst, Bank of America Merrill Lynch*

Q

So if we think about that side, and then we get to the factory gate, get the vehicles out and they're delivered to dealers, how do you think about that ultimate inventory over time? It's very constrained, obviously, at the moment because of these supply chain issues. There are some of your competitors that maybe thought it was crosstown rivals; one of them, not both of them. That it's getting a little bit more aggressive on incentives as some of the inventory builds. It's a little odd that they would do this at this point. But we're starting to see a little bit of competitive action on incentives, nothing wild yet. How do you think you're sort of balancing the inventory, your competitive pressures and then, ultimately, what it could mean for pricing and margins go forward?

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**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*

A

So we ended the third quarter with 19 retail days supply. There was quite a bit in the pipeline on the road to the dealers. But what I would say is that we've got the freshest lineup we've had in a long time. And those vehicles are turning very quickly. We have not seen that change. Our order bank remains extremely strong. So I think you know this better than anybody else, with a fresh product lineup, products that are in high demand, that is very positive for us as we move forward.

So I would say that the strength of the product line is the best we've had in a long time, as I said earlier. And so, we're not seeing the same thing that others may be seeing. We are seeing a little bit minor signs, as you've talked about last night, that the inflation, higher transaction prices may be starting to impact the consumer in certain spaces. But it's just early days. It's nothing that is substantial. We're gaining a lot of traction, but we're watching it.

So I think it's just going to be that overall dynamic market as we go forward, John. And I like the position vein because of the strength of our products. Order bank is strong. We sold out Maverick. 97% of those orders were from retail orders direct through Ford. Same thing is happening with Bronco, F-Series demand remains very

strong. We've got the new Super Duty coming out. So again, when we look forward, the pent-up demand is going to be a benefit for us for the near term.

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**John Murphy**

*Analyst, Bank of America Merrill Lynch*



That circles back to a question that I'm going to circle back to on Ford Blue, right? I mean, I think there's a lot of people who think it's down and out and being phased out over time. But the reality is what we're seeing in the short-run, ironically, even in some suppliers, is that the ICE business is much more robust and profitable, and you're seeing – certainly see this in the vehicle business than people had ever anticipated and there's opportunities on special editions.

I mean, I think this Mustang Black Horse is a stunning Mustang, but probably has got some pretty good variable margins on it for you. So there's a lot of opportunity maybe over in the Blue business to – I don't mean to say it in the pejorative, but the juice profits can really drive profits a bit higher here in the short-run that people are realizing with even lower volume.

So, I mean, how much opportunity is there still on the Blue side? And when we think – and it always sounds like a small question, but I think it's a very important one on things like the Dark Horse or maybe even the Raptor versions of the Bronco. I mean, these might be thousands or tens of thousands of units that don't register in a big way. But these are kind of things that could have \$30,000, \$40,000, \$50,000 variable margins on them. They could add hundreds of millions of dollars to the profit. I mean, how do you think about these things and how much opportunity is there? It seems maybe lost in the shuffle here, but a big deal.

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**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*



It is a big deal. What you just said, it sounds like you read the strategy paper we talked about.

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**John Murphy**

*Analyst, Bank of America Merrill Lynch*



You, obviously, didn't give it to me.

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**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*



No, I know. I know. It's been a strength of ours, right? And that's why we've leaned into our iconic brands. We have Mustang, we have Bronco series. And Maverick is now even a hit and it's got a vibe to it that's really interesting. So doing these specialty vehicles – and you're right. They may be lower volumes, 5,000, 10,000, 15,000, 20,000 units, but the margins are really high. And our customers love them because they can customize them. They can make them their own, it's unique, it says something about them.

And I think we do it really well. It's a strength of ours. And why not lean into that strength? Jim is such a hard nut. He gets so excited when we start talking about the specialty vehicles because that's just – that's him. It's in his blood. And it's exciting from my standpoint to step back and watch that as the CFO because I will get to look at the margins and I get to look at the feedback from the consumers and I get to look at what it means to us from a business standpoint. So definitely, John, it's a bright spot of ours.

And that's why Jim talks about the Blue business as a growth business. There's an opportunity in there for us to grow, and that's going to happen over the next few years. So we're really excited about what it means for us and what it's going to bring to the Ford Blue business. And you'll see that when we start bringing it out next year.

**John Murphy**

*Analyst, Bank of America Merrill Lynch*

Q

Yeah. I look forward to you breaking out the Black Horse. That will be interesting to see what the profits are there. I don't think you'll get to that level of detail, but we'd love to see it.

**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*

A

I don't think we'll get into that detail, but...

**John Murphy**

*Analyst, Bank of America Merrill Lynch*

Q

So maybe some follow-up questions that we're getting on the EV side. Lisa, I don't know if you can comment on when the first cell structured vehicle will come out or what it might be. And then, in addition to that, as we think about EV scale, the 8% margins in 2026 at 2 million units are pretty good and respectable. But you could argue the biggest EV company in the world at the moment, which I believe you probably will overtake sometime mid to late decade in the US, is putting up margins that are almost 2x that at volumes that are lower than that 2 million units. So, I mean, is there an opportunity for this 8% to be particularly or a lot higher than that? And is Tesla the benchmark you're going after for margins; not on product, but on margins?

**Lisa Drake**

*Vice President, EV Industrialization, Ford Model e, Ford Motor Co.*

A

Yeah. Yeah. No, I'll answer the first question. So, no, I can't talk to you about the first product that would have cell-to-pack – I'm sorry, cell-to-structure. But as you can imagine, the entire Ford Ion Park team is constantly iterating. This is where the material cost comes out. And the more new product programs we do, the more we're integrating manufacturing process, the design process and the battery into the product. So these teams are working together in tandem and they're moving quite quickly through the process and finding efficiencies, but I can't tell you when we're going to bring that out.

In terms of Tesla, yeah, it's a benchmark. There's no doubt. But it took them time and it took them scale. And that's the key. Yes, we will have the units in 2026. So we do think that's going to now help us unlock some of that cost efficiency that we need. I can tell you in the Tennessee site, also in the brownfield sites, where we will be bringing out new product and putting them in brownfield plants. Even though the plant four walls might be there, it's clean sheet inside. And the labor and overhead targets that we're now seeing that are deliverable are substantially less than at ICE. And so, we know that we can attack that contribution from labor and overhead. We understand that a lot.

Now, the complexity reduction for us should not be underestimated. It really shouldn't be underestimated. We service – and we're proud to service all of our F-150 customers, that we do, but we have too much complexity available to do it, and we know it. And Dearborn Truck Plant, as efficient as it is, one of the most efficient plants in our system, but it's one of the most complex. And in Tennessee, the complexity of the product in that plant is – and when I say radically, I mean radically reduced over Dearborn to the point that we take away all the waste in our material cost on sequencing, on double handling, the quality improvements that you get, when a supplier doesn't have to make changeovers of tools to make different varieties, the quality you get when you just don't

have as many variety of parts that you have to sign off as an engineering organization. So the focus around what you are building is much more precise.

And there's a large unlock there, and we are driving that. That material cost efficiency that we have to get through that complexity reduction, is that something to be understated? And so, those are some of these areas where we've seen that, yes, some of our competitors have lower complexity in the space because the product is more digital in nature. Some of the things and the services and that surprise and delights and the unique selling points are now digital for us. Through Doug Field and the team that he has built out, we can use more of that to our advantage.

And then, you heard Jim talk about the dealer and John talked about it as well. I mean, the dealers, we have to restructure how we work with the dealers as well, and that's a big part of it. So I would say, generally speaking, there's not one line item on the income statement that is off limits from being modernized inside of Model e. It's everything. It's material cost. It's the dealer markups. It's labor and overhead. It's our look at warranty. It's our engineering expense per unit built. When you go from the complexity out of an F-150 that we used to engineer to the next generation in Tennessee, that engineering dollar billions is far different. And so, your dollar per engineering spend per unit is less.

Vendor tooling. You don't tool up as many new tool-end items. All of this, I mean, the auto business is remarkable when you think about what we do to build a product. And when you can be much more simplified, the amount of waste and cost you can take out is pretty compelling.

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### John Murphy

*Analyst, Bank of America Merrill Lynch*

Q

And so, when you think of that process, does that start with your ICE design, R&D logistics and into the manufacturing facility? And is that kind of where you start that process? Or are you starting that process from a clean sheet where you kind of have some of this knowledge because it's important, right, and it's still very valuable despite what some people might believe? And you kind of clean sheet it with a background knowledge, and then that's how you're approaching it as opposed to kind of engineering out the complexity. You're taking some of the best practices there and then starting from a clean sheet. And is that how that is happening internally at Ford?

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### Lisa Drake

*Vice President, EV Industrialization, Ford Model e, Ford Motor Co.*

A

That's exactly right. It's actually somewhat unrecognizable for us, veterans who've been here 28 years and led product programs our whole lives. It's clean sheet. We started with actually sizing the Tennessee facility and the footprint of Tennessee with a number of workstations that we thought would be the most efficient to build a truck. And we told the design engineering teams, you only can have this many parts in the plant. And so, they are now in groups where they have to essentially believe their part is what they're being challenged and rewarded to do now. And it's really paying off through the whole supply base like nothing I've really experienced before.

It's hard and it breaks a lot of conventions to do it. But when we say we're like re-founding the company, we're re-founding how we have to work because you can't be profitable in the EV space, if you know. You can't use your same development, manufacturing and supply chain processes from ICE and just rely on a battery cost line path to get you to profitability. That's why Model e is separate from Ford Blue a bit because we had to change the way we worked. And that's the unlock, frankly.

**John Murphy**

*Analyst, Bank of America Merrill Lynch*



So one of the things you're getting at is, ultimately, reducing increasing scale, reducing complexity and driving cost down, so you can take pricing down, so you can have higher penetration at the consumer level. And it seems like you and the industry are moving reasonably quickly. There are some bottlenecks and constraints that are getting, hopefully, broken over time. But when you think about the 600,000 units by 2023 and then 2 million units by 2026, I mean if you have demand that is significantly higher than that, is there room – and I'm putting you on a spot here – to push that capacity maybe a bit higher? Or are you going to take the opportunity to price up because demand would be so much higher than supply? And that might be a question more for John and sort of the second half of that.

But, I mean, if suddenly certainly things are just on fire on EVs, we're reaching a tipping point, the consumer just wants an EV and not an ICE, I don't believe that. But I mean – but more and more consumers are heading in that direction at that point, what kind of opportunity do you have to potentially break some bottlenecks and get beyond 2 million units on capacity in 2026, if at all? Or is this as – I mean I'm sure you're working nights and days and weekends on this to get it done. But, I mean, is there room potentially to upsize this? I'm sure John will give you the capital if the opportunity is there.

**Lisa Drake**

*Vice President, EV Industrialization, Ford Model e, Ford Motor Co.*



Yeah. I never worry about John giving us capital. We have a fantastic finance support. But honestly, John, we're very focused right now on getting to the 600,000. We're on track, as Jim mentioned. The team is very excited about that. It's very hard work. It's very, very hard work. Scaling battery plants, scaling eDrive plants, scaling all of the supply base, battery trays, inverters, chargers, this is incredibly difficult work. And we're doing it also combating with the parts supply conversation that John just had, the chip shortage that's still hanging out there. We have to do it while handling all of that.

Now, one of the benefits we have is our plants are separate from our ICE. And so, we're able to manage that scaling a bit differently because we're not integrated ICE and EVs. But right now, we're just focused relentless on the 600,000, and then on the 2 million. And if and when the time comes, if we have an opportunity ahead of us, we'll make the right decision inside of Ford.

**John Murphy**

*Analyst, Bank of America Merrill Lynch*



I'm going to sneak one last in, and we got four minutes, John, here. If we think about the market in 2023, at largest in the US, do you think we're going to be in an environment where it's still supply constrained? And where do you think the market may land?

I think Jim made some comments that they thought 15 million units, including commercials, was a reasonable number to start thinking about for next year. Our official light vehicle number is 15.3 million. We might be wrong. But, I mean, as you think about the business heading in next year and sizing what the market is going to be and just kind of myopically looking at just the US market, do you have a view on that yet that you can share and it might be demand constrained or supply constrained? I mean, there's a lot of ways to think about it.

**John T. Lawler**

*Chief Financial Officer and Interim Chief Supply Chain Officer, Ford Motor Co.*



Yeah. I would say, John, that the probability of seeing some form of recession is increasing. So is it a mild recession? And then, does that mean that demand stays around that 15 million, but you have a little bit of give-back on the pricing side of the shop? Or is it that we continue to go, we're just in the scarcity situation again? As I said earlier, we expect the chip issue to continue into 2023. We don't think there's going to be a significant relief from that standpoint. So we're going to be constrained.

Now, does that constraint bring us below natural demand or not if the economy slows, I think that's the key question. What we're thinking about is where we see more risk is in Europe. We see risk – a higher probability of a mild to moderate recession in the European Union and in the UK. And so, we're planning for both of those. Could you see the European industry down below where it is today? Yeah, there's a good probability that could happen. And again, it comes back to how far, what does it mean from a pricing standpoint, et cetera.

And so, there's a lot of puts and takes on 2023. It's a really volatile environment that everybody is dealing with, inflation, currency, demand, the consumer, will they start to weaken. So there's a lot we need to frame up for that, and we'll be doing that as we start out 2023. And as we usually do, we'll give a really good backdrop of how we see the year unfolding when we start to talk about 2023.

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## John Murphy

*Analyst, Bank of America Merrill Lynch*

Well, with that, we're just about at the top of the hour. So John, Lisa and Lynn, we really appreciate the time, as always, and all the insight, and look forward to the – that outlook when we get it early next year along with all the new re-segmentation. It'll be a lot of fun for all of us to work through, but also very elucidating. So we are actually dorkishly looking forward to it.

So thank you so much for the time. Thank you, everybody, for joining us. We really appreciate everybody's time in this busy earnings season. So thank you so much. Have a good one.

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